UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F

☐ **Registration statement pursuant to Section 12(b) or (g) of the Securities Exchange Act of 1934**

or

☒ **Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 2018

or

☐ **Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from _____ to _____

or

☐ **Shell company report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

Date of event requiring this shell company report: _____

Commission file number: 1-14832

CELESTICA INC.

(Exact name of registrant as specified in its charter)

Ontario, Canada

(Jurisdiction of incorporation or organization)

844 Don Mills Road
Toronto, Ontario, Canada M3C 1V7
(Address of principal executive offices)

Curtis Cheam
416-448-2211
clsir@celestica.com
844 Don Mills Road
Toronto, Ontario, Canada M3C 1V7
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

SECURITIES REGISTERED OR TO BE REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each class:	*Name of each exchange on which registered:*
Subordinate Voting Shares	The Toronto Stock Exchange New York Stock Exchange

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SECURITIES REGISTERED OR TO BE REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:
N/A

SECURITIES FOR WHICH THERE IS A REPORTING OBLIGATION PURSUANT TO SECTION 15(d) OF THE ACT:
N/A

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

117,692,169 Subordinate Voting Shares
18,600,193 Multiple Voting Shares
0 Preference Shares

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

†The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the statements included in this filing:

U.S. GAAP ☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☒ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

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Part I.

In this Annual Report on Form 20-F for the year ended December 31, 2018 (referred to herein as "this Annual Report"), "Celestica," the "Corporation," the "Company," "we," "us" and "our" refer to Celestica Inc. and its subsidiaries.

In this Annual Report, all dollar amounts are expressed in United States dollars, except where we state otherwise. All references to "U.S.$" or "$" are to United States dollars and all references to "C$" are to Canadian dollars. Unless we indicate otherwise, any reference in this Annual Report to a conversion between U.S.$ and C$ is a conversion at the average of the exchange rates in effect for the year ended December 31, 2018. During that period, based on the relevant noon buying rates in New York City for cable transfers in Canadian dollars, as certified for customs purposes by the Board of Governors of the U.S. Federal Reserve Bank, the average daily exchange rate was U.S.$1.00 = C$1.2957.

Unless we indicate otherwise, all information in this Annual Report is stated as of February 13, 2019.

Forward-Looking Statements

Item 3, "Key Information — Risk Factors," Item 4, "Information on the Company," Item 5, "Operating and Financial Review and Prospects" and other sections of this Annual Report contain forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933, as amended, or the U.S. Securities Act, Section 21E of the U.S. Securities Exchange Act of 1934, as amended, or the U.S. Exchange Act, and forward-looking information within the meaning of applicable Canadian securities laws (collectively, forward-looking statements), including, without limitation, statements related to: our future growth, including in our Advanced Technology Solutions (ATS) segment; the potential for increased expansion and integration costs in our ATS segment; our priorities, intended areas of focus, objectives, targets and goals (including, but not limited to, those set forth under the caption "Celestica's Strategy" in Item 4B., and the caption "Operating Goals and Principles" in Item 5); trends in the electronics manufacturing services (EMS) industry, generally and in relation to our business, including the anticipated continuation and impact of adverse market conditions, particularly in our Connectivity and Cloud Solutions (CCS) segment; adverse market conditions in, and the cyclical nature of, our capital equipment business, in particular our semiconductor business; our anticipated financial and/or operational results; the anticipated impact, range and timing of, our cost efficiency initiative; the anticipated impact of our comprehensive CCS segment portfolio review (CCS Review); our growth and diversification strategies and plans (and potential hindrances thereto); the expected continuation, and adverse impact on our business, of materials constraints; supplier lead times; the anticipated impact of completed acquisitions and program wins, transfers, losses or disengagements on our business; the timing of the valuation of certain recently-acquired assets and the finalization of the related purchase price allocations; anticipated expenses, restructuring actions and charges, capital expenditures, and other anticipated working capital requirements, including the anticipated amounts, timing, impact and funding thereof; the anticipated impact on our operations of any new significant tariffs on items imported into the U.S. and related countermeasures; the anticipated repatriation of undistributed earnings from foreign subsidiaries; the impact of tax and litigation outcomes; our anticipated ability to use certain net operating losses; intended investments in our business and associated risks; the anticipated impact of the pace of technological changes, customer outsourcing, program transfers, and the global economic environment on our business; raw materials prices; the timing, quantity and intended method of funding subordinate voting share repurchases; our intention to settle outstanding equity awards with subordinate voting shares; the impact of outstanding indebtedness under our credit facility on our business; the anticipated aggregate cost of relocating our Toronto manufacturing operations and corporate headquarters; the timing of relocating our corporate headquarters; our expectation that the costs of our Toronto manufacturing and corporate office relocations will be more than offset by the cash proceeds from the property sale; the anticipated impact of recent U.S. tax reform on our business; transition activities related to, and the anticipated impact of, newly-issued accounting standards; the impact of price reductions and longer-term contracts on our business; the potential use of cash, securities issuances and further increases in third-party indebtedness to fund our operations or acquisitions, and the anticipated and potential adverse impacts of such uses and/or increase; the potential adverse impacts of Britain's intention to leave the European Union (Brexit) and/or policies or legislation proposed or instituted by the current administration in the U.S.; our expectations with respect to future pioneer incentives for limited portions of our Malaysian business; the timing of, and potential true-up premium on, annuities purchased for our U.K pension plans; our intentions with respect to our U.K Supplementary pension plan; the expected impact of the expiration of one of our income tax incentives in Thailand; our intention to sell a lower amount of accounts receivable under a customer's supplier financing program; our future warranty obligations; our expectations with respect to cybersecurity threats; our intentions with respect to environmental assessments for newly-leased or acquired properties; our expectations with respect to expiring leases; anticipated insignificant hedge ineffectiveness of our interest rate swap agreements; the pay-for-performance alignment of our executive compensation program; our intention to retain earnings for general corporate purposes; our pension obligations; the expectation of continued adverse impacts from costs incurred in connection with our pursuit of acquisitions and strategic transactions; and the anticipated impact of the integration of Impakt Holdings, LLC on our internal controls. Such forward-looking statements may, without limitation, be preceded by, followed by, or include words such as "believes," "expects," "anticipates," "estimates," "intends," "plans," "continues," "project," "potential," "possible," "contemplate," "seek," or

similar expressions, or may employ such future or conditional verbs as "may," "might," "will," "could," "should" or "would," or may otherwise be indicated as forward-looking statements by grammatical construction, phrasing or context. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the U.S. Private Securities Litigation Reform Act of 1995, where applicable, and applicable Canadian securities laws.

Forward-looking statements are provided to assist readers in understanding management's current expectations and plans relating to the future. Readers are cautioned that such information may not be appropriate for other purposes. Forward-looking statements are not guarantees of future performance and are subject to risks that could cause actual results to differ materially from those expressed or implied in such forward-looking statements, including, among others, as is described in more detail in Item 3 (D), "Key Information — Risk Factors" and elsewhere in this Annual Report, risks related to:

- our customers' ability to compete and succeed with our products and services;
- customer and segment concentration;
- challenges of replacing revenue from completed or lost programs or customer disengagements;
- changes in our mix of customers and/or the types of products or services we provide;
- the impact on gross profit of higher concentration of lower margin programs;
- price, margin pressures, and other competitive factors affecting, and the highly competitive nature of, the EMS industry in general and our CCS segment in particular;
- the cyclical nature of our capital equipment business, in particular our semiconductor business;
- delays in the delivery and availability of components, services and materials;
- the expansion or consolidation of our operations;
- defects or deficiencies in our products, services or designs;
- integrating acquisitions and "operate-in-place" arrangements, and achieving the anticipated benefits therefrom;
- negative impacts on our business resulting from recent increases in third-party indebtedness;
- our response to changes in demand, rapidly evolving and changing technologies, and changes in our customers' business and outsourcing strategies;
- customer, competitor and/or supplier consolidation;
- compliance with social responsibility initiatives;
- challenges associated with new customers or programs, or the provision of new services;
- the impact of our restructuring actions;
- the incurrence of future restructuring charges, impairment charges or other write-downs of assets;
- managing our operations, growth initiatives and our working capital performance during uncertain market and economic conditions;
- disruptions to our operations, or those of our customers, component suppliers and/or logistics partners, including as a result of global or local events outside of our/their control and the impact of significant tariffs on items imported into the U.S.;
- changes to our operating model;
- changing commodity, materials and component costs as well as labor costs and conditions;
- retaining or expanding our business due to execution and quality issues (including our ability to successfully resolve these challenges);

- non-performance by counterparties (including the financial institutions party to our purchased annuities and other financial counterparties, key suppliers and/or customers);
- maintaining sufficient financial resources and working capital to fund currently anticipated financial obligations and to pursue desirable business opportunities;
- negative impacts on our business resulting from any significant uses of cash, securities issuances, and/or additional third-party indebtedness for acquisitions or to otherwise fund our operations;
- our financial exposure to foreign currency volatility;
- recruiting or retaining skilled talent;
- our dependence on industries affected by rapid technological change;
- increasing taxes, tax audits, and challenges of defending our tax positions;
- obtaining, renewing or meeting the conditions of tax incentives and credits;
- the relocation of our corporate headquarters;
- computer viruses, malware, hacking attempts or outages that may disrupt our operations;
- the management of our IT systems and our ability to protect confidential information;
- the variability of revenue and operating results;
- compliance with applicable laws, regulations, and government grants;
- our pension obligations;
- interest rate fluctuations and changes to LIBOR; and
- current or future litigation, governmental actions, and/or changes in legislation.

The foregoing and other material risks and uncertainties are discussed in our public filings, which can be found at www.sedar.com and www.sec.gov, including in this Annual Report, and subsequent reports on Form 6-K furnished to, the U.S. Securities and Exchange Commission, and as applicable, the Canadian Securities Administrators.

Our forward-looking statements contained in this Annual Report are based on various assumptions, many of which involve factors that are beyond our control. Our material assumptions include those related to the following:

- fluctuation of production schedules from our customers in terms of volume and mix of products or services;
- the timing and execution of, and investments associated with, ramping new business;
- the successful pursuit, completion and integration of acquisitions;
- the success of our customers' products;
- our ability to retain programs and customers;
- the stability of general economic and market conditions, currency exchange rates and interest rates;
- supplier performance, pricing and terms;
- compliance by third parties with their contractual obligations and the accuracy of their representations and warranties;
- the costs and availability of components, materials, services, equipment, labor, energy and transportation;
- that our customers will retain liability for recently-imposed tariffs and countermeasures;
- our ability to keep pace with rapidly changing technological developments;
- the impact of recent U.S. tax reform on our operations;

- the timing, execution and effect of our restructuring actions, including our cost efficiency initiative;
- the successful resolution of quality issues that arise from time to time;
- our having sufficient financial resources and working capital to fund currently anticipated financial obligations and to pursue desirable business opportunities;
- our ability to successfully diversify our customer base and develop new capabilities;
- the availability of cash resources for repurchases of outstanding subordinate voting shares;
- that we achieve the expected benefits from our recent acquisitions;
- the impact of the CCS Review on our business; and
- the magnitude of anticipated losses in our capital equipment business in the first quarter of 2019.

While management believes these assumptions to be reasonable under current circumstances, they may prove to be inaccurate, which could cause actual results to differ materially (and adversely) from those that would have been achieved had such assumptions been accurate.

Forward-looking statements speak only as of the date on which they are made, and we disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law. You should read this Annual Report, and the documents, if any, that we incorporate herein by reference, with the understanding that our actual results may be materially different from what we expect.

All forward-looking statements attributable to us are expressly qualified by the cautionary statements included in this Annual Report.

Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

Item 2. Offer Statistics and Expected Timetable

Not applicable.

Item 3. Key Information

A. Selected Financial Data

You should read the following selected financial data together with Item 5, "Operating and Financial Review and Prospects," the Consolidated Financial Statements in Item 18, and the other information in this Annual Report. The selected financial data presented below is derived from our Consolidated Financial Statements, which are prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). See Item 18. No dividends have been declared by the Corporation.

	Year ended December 31				
	2014	2015	2016	2017	2018
			(restated)*	(restated)*	
	(in millions, except per share amounts)				
Consolidated Statements of Operations Data[1]:					
Revenue[1]	$ 5,631.3	$ 5,639.2	$ 6,046.6	$ 6,142.7	$ 6,633.2
Cost of sales[1]	5,225.9	5,248.1	5,617.0	5,724.2	6,202.7
Gross profit[1]	405.4	391.1	429.6	418.5	430.5
Selling, general and administrative expenses (SG&A), including research and development[2]	230.0	230.7	236.0	229.4	247.8
Amortization of intangible assets	10.6	9.2	9.4	8.9	15.4
Other charges[3]	37.1	35.8	25.5	37.0	61.0
Earnings from operations[1]	127.7	115.4	158.7	143.2	106.3
Refund interest income[4]	—	—	(14.3)	—	—
Finance costs[5]	3.1	6.3	10.0	10.1	24.4
Earnings before income taxes[1]	124.6	109.1	163.0	133.1	81.9
Income tax expense (recovery)[1]	16.4	42.2	24.7	27.6	(17.0)
Net earnings[1]	$ 108.2	$ 66.9	$ 138.3	$ 105.5	$ 98.9
Other Financial Data[1]:					
Basic earnings per share[1]	$ 0.61	$ 0.43	$ 0.98	$ 0.74	$ 0.71
Diluted earnings per share[1]	$ 0.60	$ 0.42	$ 0.96	$ 0.73	$ 0.70
Property, plant and equipment and computer software cash expenditures	$ 61.3	$ 62.8	$ 64.1	$ 102.6	$ 82.2
Shares used in computing per share amounts (in millions):					
Basic	178.4	155.8	141.8	143.1	139.4
Diluted	180.4	157.9	143.9	145.2	140.6

	As of December 31				
	2014	2015	2016	2017	2018
			(restated)*	(restated)*	
			(in millions)		
Consolidated Balance Sheet Data[1]					
Cash and cash equivalents	$ 565.0	$ 545.3	$ 557.2	$ 515.2	$ 422.0
Working capital[1][6]	1,049.9	990.6	1,121.5	1,210.1	1,203.2
Property, plant and equipment	312.4	314.6	302.7	323.9	365.3
Total assets[1]	2,583.6	2,612.0	2,841.9	2,964.2	3,737.7
Borrowings under credit facility[7]	—	262.5	227.5	187.5	757.3
Capital stock	2,609.5	2,093.9	2,048.2	2,048.3	1,954.1
Total equity[1]	1,394.9	1,091.0	1,257.8	1,370.2	1,332.3

* Financial information for 2016 and 2017 has been restated to reflect our January 1, 2018 adoption of IFRS 15. See footnote (1) below.

(1) Changes in accounting policies:

Effective January 1, 2014, we adopted IFRIC Interpretation 21, Levies, which clarified when the liability for certain levies should be recognized and required retroactive adoption, and IAS 32, Financial Instruments — Presentation (revised), which clarified the requirements for offsetting financial assets and liabilities. The adoption of these standards did not have a material impact on our Consolidated Financial Statements.

Effective January 1, 2018, we adopted IFRS 15, Revenue from Contracts with Customers, which established a comprehensive framework for determining whether, how much, and when revenue should be recognized. In connection with the adoption of this standard, we elected to apply the retrospective method, and recognized the transitional adjustments through equity at January 1, 2016, the start of the first comparative reporting period included in our Consolidated Financial Statements in Item 18 of this Annual Report. The new standard changed the timing of our revenue recognition for a significant portion of our business, resulting in the recognition of revenue for certain customer contracts earlier than under the previous revenue recognition rules (which was generally upon delivery of final products to our end customer). The new standard has materially impacted our Consolidated Financial Statements, primarily in relation to inventory and accounts receivable balances. See note 2 to the Consolidated Financial Statements in Item 18 for the transitional impacts of adopting IFRS 15.

Effective January 1, 2018, we adopted IFRS 9, Financial Instruments, which introduced a new model for the classification and measurement of financial assets, a single expected credit loss (ECL) model for the measurement of the impairment of financial assets, and a new model for hedge accounting that is aligned with a company's risk management activities. In connection with the adoption of IFRS 9, we also complied with the transitional rules of IAS 1, Presentation of Financial Statements and IFRS 7, Financial Instruments Disclosures. In accordance with the transitional provisions of the rule, we have applied the changes of IFRS 9 retrospectively, with the exception of the hedge accounting policies, which we have applied prospectively as required by the standard. The adoption of this standard did not result in any adjustments to our Consolidated Financial Statements.

(2) SG&A expenses include research and development costs of $28.8 million in 2018, $26.2 million in 2017, $24.9 million in 2016, $23.2 million in 2015, and $19.7 million in 2014.

(3) Other charges in 2014 totaled $37.1 million, comprised primarily of: (a) a non-cash impairment of $40.8 million against the goodwill of our semiconductor business resulting from our annual impairment assessment; and (b) a non-cash settlement loss of $6.4 million relating to the purchase of annuities for the defined benefit component of a certain pension plan, offset in part by: (i) an $8.0 million recovery of damages resulting from the settlement of class action lawsuits in which we were a plaintiff; and (ii) a $2.1 million net reversal of restructuring charges.

Other charges in 2015 totaled $35.8 million, comprised primarily of: (a) $23.9 million in restructuring charges, and (b) an aggregate non-cash impairment of $12.2 million against the property, plant and equipment of our CGUs (defined herein) in Japan and Spain (recorded in the fourth quarter of 2015).

Other charges in 2016 totaled $25.5 million, comprised of: (a) $31.9 million in restructuring charges, offset in part by (b) $6.4 million, consisting primarily of net legal recoveries. See note 16 to the Consolidated Financial Statements in Item 18.

Other charges in 2017 totaled $37.0 million, comprised of: (a) $28.9 million in restructuring charges, (b) a $1.9 million non-cash loss incurred on the purchase of pension annuities, (c) $1.6 million in transition costs relating to the relocation of our Toronto manufacturing operations, and (d) $4.6 million, primarily for acquisition-related costs and activities. See note 16 to the Consolidated Financial Statements in Item 18.

Other charges in 2018 totaled $61.0 million, comprised of: (a) $35.4 million in restructuring charges pertaining to our cost efficiency initiative, (b) $13.2 million in transition costs relating to the relocation of our Toronto manufacturing operations and corporate headquarters, (c) $1.2 million of accelerated amortization of unamortized deferred financing costs and (d) $11.2 million, primarily for acquisition-related costs and activities. See note 16 to the Consolidated Financial Statements in Item 18.

(4) Refund interest income represents the refund of interest on cash then-held on account with tax authorities in connection with the resolution of certain previously-disputed tax matters in 2016. See notes 17 and 20 to the Consolidated Financial Statements in Item 18.

(5) Finance costs are comprised primarily of interest expenses and fees related to our credit facility (including our term loans commencing in 2015), our interest rate swaps (commencing in 2018), our accounts receivable sales program, and a customer supplier financing program. See notes 5, 12 and 17 to the Consolidated Financial Statements in Item 18.

(6) Calculated as current assets less current liabilities.

(7) Borrowings under our credit facility do not include our finance lease obligations.

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

Any of the following risk factors, or any combination of them, could have a material adverse effect on our business, financial condition, and/or operating results. Our shareholders and prospective investors should carefully consider each of the following risks and all of the other information set forth in this Annual Report.

We are dependent on our customers' ability to compete and succeed in the marketplace with the products and services we provide.

Our operating results are highly dependent upon our customers' ability to compete and succeed in the marketplace with the services we provide and the products we manufacture. Factors that may adversely affect our customers include: rapid changes in technology, evolving industry standards, and short product life cycles; seasonal demand; our customers' failure to successfully market their products; a lack of widespread commercial acceptance of their products; supply chain issues; dramatic shifts in demand which may cause our customers to lose market share or exit businesses; and/or recessionary periods in our customers' markets. In addition, certain of our customers have experienced, and may in the future experience, severe revenue erosion, pricing, margin and cash flow pressures, and excess inventories that, in turn, have adversely affected (and in the future may adversely affect) our operating results. If technologies or standards supported by our customers' products and services or their business models become obsolete, fail to gain widespread acceptance or are canceled, our business would be adversely affected.

Demand patterns are volatile across our end markets, particularly in our CCS segment and our semiconductor business. Rapid shifts in technology, model obsolescence, commoditization of certain products, the emergence of new business models, shifting demand, including from traditional network infrastructures to highly virtualized and cloud-based environments, the prevalence of solid state or flash memory technology as a replacement for hard disk drives, as well as the proliferation of software-defined technologies enabling the disaggregation of software and hardware, increased competition, the oversupply of products, pricing pressures, and the volatility of the economy, all contribute to the complexity of managing our operations and fluctuations in our financial results. In our CCS segment, cloud-based service providers have increased their use of our products in recent periods. These customers and markets are cyclically different from our traditional original equipment manufacturer (OEM) customers, creating more volatility and unpredictability in our revenue patterns as we adjust to this shift, and additional challenges with respect to the management of our working capital requirements.

See **"*Our customers may be negatively affected by rapid technological changes, shifts in business strategy and/or the emergence of new business models, and new entrants/competition with disruptive products and/or services*"** below.

We are dependent on a limited number of customers and end markets. A decline in revenue from, or the loss of, any significant customer, could have a material adverse effect on our financial condition and operating results.

Our customers include OEMs, service providers (including cloud-based service providers) and other companies in a wide range of industries. We depend upon a small number of customers for a significant portion of our revenue. During each of 2016, 2017 and 2018, two customers individually represented more than 10% of our total revenue, and our top 10 customers in 2018 represented 70% (2017 — 71%; 2016 — 68%) of our total revenue. We also remain dependent upon revenue from our CCS segment (consisting of our Communications and Enterprise end markets), which represented 67% of our consolidated revenue in 2018 and 68% of our consolidated revenue in each of 2017 and 2016. To reduce our reliance on any one customer or end market (including the concentration of our revenues in our CCS segment), we continue to target new customers and services, including a continued focus on the expansion of our ATS segment (which in 2018 consisted of our aerospace and defense, industrial, smart energy, healthtech, and capital equipment businesses), including through acquisitions. However, see ***"We may encounter difficulties expanding or consolidating our operations or introducing new competencies or new offerings, which could adversely***

***affect our operating results*"** below. Notwithstanding our expansion efforts, we remain dependent on our CCS segment for a large portion of our revenue, which is subject to the various factors described above and continues to experience slower growth rates, increased pricing pressures and a highly competitive marketplace, including from original design manufacturers (ODMs).

A decline in revenue from, or the loss of, any significant customer could have a material adverse effect on our financial condition and operating results. We cannot assure the replacement of completed, delayed, cancelled or reduced orders with new business. In addition, the ramping of new programs can range from several months to over a year before production starts, and often requires significant up-front investments and increased working capital. During this start-up period, these programs may generate losses or may not achieve the expected financial performance due to production ramp inefficiencies, lower than expected volume, or delays in ramping to volume. Our customers may significantly change these programs, or even cancel them altogether, due to decreases in their end-market demand or in the actual or anticipated success of their products in the marketplace.

There can be no assurance that our efforts to secure new customers and programs in our traditional or new markets, including through acquisitions, will succeed in reducing our customer concentration. Acquisitions are also subject to integration risk, and revenues and margins could be lower than we anticipate. Failure to secure business from existing or new customers in any of our end markets would adversely impact our operating results.

Any of the foregoing may adversely affect our margins, cash flow, and our ability to grow our revenue, and may increase the variability of our operating results from period to period. See **"*Our revenue and operating results may vary significantly from period to period*"** below.

A change in the mix of customers and/or the types of products or services we provide could have a material adverse effect on our financial condition and operating results.

The mix of our customers and the type of products or services we provide may have an impact on our financial condition and operating results from period-to-period. For example, in 2018, a higher concentration of fulfillment services (that contribute significantly lower gross profit than our historical full-service traditional EMS programs), as well as adverse market conditions (mostly significantly in our CCS segment and our semiconductor business), negatively impacted our margins and operating results for such year. As a result of the high concentration of our business in our CCS segment (67% of total revenue in 2018), we expect this demand shift, as well as competitive pressures and aggressive pricing, to continue to negatively impact this segment in future periods to the extent we cannot offset such impacts with increases in higher-margin services, cost reductions or otherwise. In addition, certain customer agreements in both of our segments require us to provide specific price reductions over the contract term, which may also negatively impact our financial condition and operating results if they cannot be offset. We also expect the weaker semiconductor demand environment that we experienced during the second half of 2018 to continue throughout 2019. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Overview — *Celestica's business*" for a discussion of a comprehensive review of our CCS business intended to improve operating results in this segment, as well as actions we are taking to address the current semiconductor demand environment.

We operate in an industry comprised of numerous competitors and aggressive pricing dynamics.

We operate in a highly competitive industry. Our competitors include Benchmark Electronics, Inc., Flex Ltd., Hon Hai Precision Industry Co., Ltd., Jabil Circuit, Inc., Plexus Corp., and Sanmina Corporation, as well as ODMs and smaller EMS companies that often have a regional, product, service or industry-specific focus. In recent years, we have expanded our joint design and manufacturing (JDM) offering, which encompasses advanced technology design solutions that customers can tailor to their specific platform applications. We also face increased competition from ODMs, who also specialize in providing internally designed products and manufacturing services, as well as component and sub-system suppliers, distributors and/or systems integrators. As part of our JDM offering, we also provide complete hardware platform solutions, which may compete with those of our customers. Offering products or services to customers that compete with the offerings of other customers may negatively impact our relationship with, or result in a loss of business from, such other customers. We face indirect competition from the manufacturing operations of our current and prospective customers who may choose to manufacture products internally rather than outsource to EMS providers, or who may decide to insource previously outsourced business, particularly where internal excess capacity exists. In addition to the foregoing, we may face competition from distribution and logistics providers expanding their services across the supply chain.

The competitive environment in our industry is intense and aggressive pricing is a common business dynamic. Some of our competitors have greater scale and offer a broader range of services. While we have increased our capacity in lower-cost regions to reduce our costs, these regions may not provide the same operational benefits that they have in the past due to rising costs and a continued aggressive pricing environment. Additionally, our current or potential competitors may: increase or shift their presence in new lower-cost regions to try to offset continuous competitive pressure and increasing labor costs or to secure new business; develop or acquire services comparable or superior to ours; consolidate to form larger competitors; or adapt more quickly than

we do to new technologies, evolving industry trends and changing customer requirements. In addition, our competitors may be more effective than we are in investing in IT solutions to differentiate their offerings to capture a larger share of the market. Some of our competitors have increased their vertical capabilities by manufacturing modules or components used in the products they assemble, such as metal or plastic parts and enclosures, backplanes, circuit boards, cabling and related products. Although we have also expanded our capabilities, including through our acquisitions of Lorenz, Inc. and Suntek Manufacturing Technologies, SA de CV, collectively known as Karel Manufacturing (Karel), Atrenne Integrated Solutions, Inc. (Atrenne) and Impakt Holdings, LLC (Impakt), as well as recent "operate-in-place" arrangements, our competitors' expansion efforts may be more successful than ours. Competition may cause pricing pressures, reduced profits or a loss of market share (for example, from program losses or customer disengagements). We may not be able to compete successfully against our current and future competitors. See "Overview — *Celestica's business"* and "Recent developments — *Segment Reorganization and Segment Environment"* in Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations.

We are dependent on third parties to supply certain materials, and our results can be negatively affected by the availability and cost of such materials.

The purchase of materials and electronic components represents a significant portion of our costs. We rely on third parties to provide such items. Although our customers often dictate the materials to be used in their products, materials shortages or other issues affecting timely access to these materials (which often occur in our industry) may impact our ability to successfully complete a program. A delay or interruption in supply from a component supplier, especially for single-sourced components, could have a significant impact on our operations and on our customers if we are unable to deliver finished products in a timely manner. If the amount we are required to pay for equipment and supplies exceeds what we have estimated, especially in a fixed price contract, we may suffer losses on these contracts. If a supplier or manufacturer fails to provide supplies or equipment as required under a contract for any reason, we may be required to source these items from other third parties on a delayed basis or on less favorable terms, which could impact our profitability. Additionally, quality or reliability issues at any of our component providers, or financial difficulties that affect their production and ability to supply us with components, could halt or delay production of a customer's product, or result in claims against us for failure to meet required customer specifications, which could materially adversely impact our operating results. Shortages may also result in our carrying higher levels of inventory and extended lead-times, or result in increased component prices, which may require price increases in the products and services that we provide. Any increase in our costs that we are unable to recover would negatively impact our margins and operating results. Changes in forecasted volumes or in our customers' requirements can also negatively affect our ability to obtain components and adversely impact our operating results. We continue to experience materials constraints from certain suppliers in both of our segments, due in part to industry-wide shortages for certain electronic components. These shortages caused delays in the production of customer products in both of our segments, and required us to carry higher than expected levels of inventory, commencing in 2017 and continuing throughout 2018. The shortages, in combination with volatile market demand, negatively impacted our margins for each such year. Although we expect these materials constraints and resulting adverse impacts to continue in the near term, we have begun to see improvements in the availability of certain previously constrained items. Nonetheless, only minor improvements in supplier lead times are currently expected.

We may encounter difficulties expanding or consolidating our operations or introducing new competencies or new offerings, which could adversely affect our operating results.

As we expand our business, open new sites, enter into new markets, products and technologies, invest in research, design and development, acquire new businesses or capabilities, transfer business from one location to another location within our network, consolidate certain operations, and/or introduce new business models or programs, we may encounter difficulties that result in higher than expected costs associated with such activities. Potential difficulties related to such activities include our ability: to manage growth effectively; to maintain existing business relationships during periods of transition; to anticipate disruptions in our operations that may impact our ability to deliver to customers on time, produce quality products and ensure overall customer satisfaction; and to respond rapidly to changes in customer demand or volumes.

We may also encounter difficulties in ramping and executing new programs. We may require significant investments to support these new programs, including increased working capital requirements, and may generate lower margins or losses during and/or following the ramp period. For example, we incurred higher costs in 2017 and 2018 with respect to ramping new programs, including aerospace and defense programs, as well as programs that required the establishment of infrastructures in multiple jurisdictions. We may incur similar additional ramping costs as we further expand our ATS segment and integrate new acquisitions. There can be no assurance that our increased investments will benefit us or result in business growth. As we pursue opportunities in new markets or technologies, we may encounter challenges due to our limited knowledge or experience in these areas. In addition, the success of new business models or programs depends on a number of factors including: understanding the new business or markets; timely and successful product development; market acceptance; the effective management of purchase commitments and inventory levels in line with anticipated demand; the development or acquisition of appropriate intellectual property and capital investments, to the extent required; the availability of materials in adequate quantities and at appropriate costs

to meet anticipated demand; and the risk that new offerings may have quality or other defects in the early stages of introduction. Any of these factors could prevent us from realizing the anticipated benefits of growth in new markets or technologies, which could materially adversely affect our business and operating results.

For example, we made the decision in the fourth quarter of 2016 to exit the solar panel manufacturing business. In connection therewith, we recorded $21.2 million in restructuring charges in the fourth quarter of 2016 to close our solar panel manufacturing operations at our two locations, including $19.0 million in impairment charges to write down the carrying value of our solar panel manufacturing equipment to then-recoverable amounts. During 2017, we incurred operating losses related to the wind-down of our solar panel manufacturing operations, and we recorded a net aggregate of $5.2 million in additional provisions/impairment charges to write down our inventory, accounts receivable and solar panel manufacturing equipment to recoverable amounts.

As part of our strategy to enhance our end-to-end service offerings, we intend to continue to expand our design and engineering capabilities (including our JDM capabilities). Providing these services may expose us to different or greater potential risks than those we face when providing our manufacturing services. Our design services offerings require significant investments in research and development, technology licensing, testing and tooling equipment, patent applications and talent recruitment. Our margins may be adversely impacted if we incur higher than expected investment costs, or if our customers are not satisfied with our progress, or do not approve our completed designs. In addition, our design activities often require the purchase of inventory for initial production runs before we have a firm purchase commitment from a customer. Furthermore, we may face increased competition with respect to this offering from ODMs and other companies providing similar services, including our own customers. As we anticipate continuing to grow this business, costs required to support our design and engineering capabilities may adversely affect our profitability. In addition, some of the products we design and develop must satisfy safety and regulatory standards and some must receive government certifications. If we fail to obtain these approvals or certifications on a timely basis, we would be unable to sell these products, which would harm our revenues, profitability and reputation.

There can be no assurance that our expansion into new markets or new business will be successful, or that we will achieve the anticipated benefits.

There may be problems with the products we design or manufacture that could result in liability/warranty claims against us, which may reduce demand for our services, damage our reputation, and/or cause us to incur significant costs.

In most of our sales contracts, we provide warranties against defects or deficiencies in our products, services, or designs. The extent of the warranties varies by customer, and warranties generally range from one to three years. However, the warranty period for our JDM designs, and our solar panel products (which remain in force notwithstanding our exit from this business), are generally longer. We generally design and manufacture products to our customers' specifications, many of which are highly complex, and include products for industries, such as healthcare, aerospace and defense, that tend to have higher risk profiles. The customized design solutions that form a part of our JDM offering also subject us to the risk of liability claims if defects are discovered or alleged. Despite our quality control and quality assurance efforts, problems may occur, or may be alleged, in or resulting from the design and/or manufacturing of these products. Whether or not we are responsible, problems in the products we design and/or manufacture, or in products which include components we manufacture, whether real or alleged, whether caused by faulty customer specifications, the design or manufacturing processes or a component defect, may result in increased costs to us, as well as delayed shipments to our customers, and/or reduced or canceled customer orders. These potential claims may include damages for the recall of a product and/or injury to person or property, including consequential and/or punitive damages.

Even if customers or third parties, such as component suppliers, are responsible for defects, they may not, or may not be able to, assume responsibility for any such costs or required payments to us. While we seek to insure against many of these risks, insurance coverage may be inadequate, not cost effective or unavailable, either in general or for particular types of products or issues.

As we expand our service offerings (including our JDM offerings) and pursue business in new end markets, our warranty obligations are likely to increase and we may not be successful in pricing our products to appropriately cover our warranty costs. A successful claim for damages arising from defects or deficiencies for which we are not adequately insured, and for which indemnification from a third party is not timely (or otherwise) available, could have a material adverse effect on our reputation and/or our operating results and financial condition.

We may encounter integration and other significant challenges with respect to our acquisitions and strategic transactions which could adversely affect our operating results.

We intend to continue to expand our capabilities and presence in new end markets, some of which have (and may in the future) occur through acquisitions. These transactions may involve acquisitions of selected assets or entire companies. We have also completed numerous strategic transactions, including multi-year "operate-in-place" arrangements, where we manage certain production, assembly or other services for customers directly from their locations, acquire their inventory, equipment and/or other assets, hire their employees, and lease or acquire their manufacturing sites. Potential challenges related to these acquisitions and

transactions include: integrating acquired operations, systems and businesses (which may include transferring production from acquired operations to our existing network, or downsizing or closing acquired locations, in each case to obtain anticipated operational synergies); meeting customers' expectations as to volume, product quality and timeliness; supporting legacy contractual obligations; retaining customer, supplier, employee or other business relationships of acquired operations; addressing unforeseen liabilities of acquired businesses; limited experience with new technologies and markets; failure to realize anticipated benefits, such as cost savings and revenue enhancements; failure to achieve anticipated business volumes or operating margins; valuation methodologies not accurately capturing the value of the acquired business; the effects of diverting management's attention from day-to-day operations to matters involving the integration of acquired businesses; incurring potentially substantial transaction costs associated with these transactions; increased burdens on our staff and on our administrative, internal control and operating systems, which may hinder our legal and regulatory compliance activities; overpayment for an acquisition; and potential impairments resulting from post-acquisition deterioration in, or reduced benefit from, an acquired business. While we often obtain indemnification rights from the sellers of acquired businesses, such rights may be difficult to enforce, the losses may exceed any dedicated escrow funds, and the indemnitors may not have the ability to financially support the indemnity. Any of these factors may prevent us from realizing the anticipated benefits of an acquisition, including additional revenue, operational synergies and economies of scale. Any delay or failure to realize the anticipated benefits of acquisitions may adversely affect our business and operating results and may require us to write-down the carrying value of any related goodwill and intangible assets in periods subsequent to the acquisitions.

In addition, there is no assurance that we will find suitable new acquisition targets, that we will be able to consummate any such transactions on terms and conditions acceptable to us, or that we will be able to fund any such acquisitions with existing cash resources or through financing provided by external lenders. We may require additional capital to grow our business through acquisitions. We may be unable to obtain additional capital if and when required on terms acceptable to us or at all. We may pursue sources of additional capital through various financing transactions or arrangements, including debt financing, equity financing or other means. We may not be successful in consummating suitable financing transactions in the time period required or at all, and we may not be able to obtain the capital we require by other means. If the amount of capital we are able to raise from financing activities, together with the cash from our operations, is not sufficient to consummate an acquisition we have deemed desirable, we may not be able to implement our intended business plan, which could adversely affect our business, results of operations and financial condition. See "***We have incurred substantial third-party debt in recent periods, which has increased our debt service requirements, reduced our ability to fund future acquisitions and/or to respond to unexpected capital requirements, and may have other adverse impacts on our business" and "We may use cash on hand, issue debt or equity securities, and/or incur additional third-party debt (or any combination thereof) to complete future acquisitions or otherwise fund our operations, which may adversely affect our liquidity, credit ratings, financial condition and/or results of operations***" below.

Acquisitions may also involve businesses we are not familiar with, and expose us to additional business risks that are different than those we have traditionally experienced or anticipated at the time of acquisition. In addition, we may incur costs to support our pursuit of acquisitions and/or other strategic opportunities, which may not result in the consummation of any such transactions, and are expected to continue to adversely impact our operating results.

We have incurred substantial third-party debt in recent periods, which has increased our debt service requirements, reduced our ability to fund future acquisitions and/or to respond to unexpected capital requirements, and may have other adverse impacts on our business.

We have recently incurred an aggregate of approximately $757.3 million of debt under our credit facility to fund our acquisitions of Atrenne and Impakt, and for general working capital purposes. As a result, our debt leverage and debt service requirements have each increased. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity — Cash requirements." We do not believe that the current aggregate amounts outstanding under our credit facility have had (or will have) a significant adverse impact on our liquidity, our results of operations or financial condition. However, our increased indebtedness, together with the mandatory prepayment provisions of our credit facility, have reduced our ability to fund future acquisitions and/or to respond to unexpected capital requirements. Such increases may also: require us to pursue additional term financing for potential investments, which may not be available on acceptable terms or at all; limit our ability to obtain additional financing for working capital, business activities, and other general corporate requirements; limit our ability to refinance our indebtedness on terms acceptable to us or at all; limit our flexibility to plan for and adjust to changing business and market conditions, increase our vulnerability to general adverse economic and industry conditions; and will require us to dedicate a portion of our cash flow to make interest and principal payments on such indebtedness, thereby limiting the availability of our cash flow for other purposes. In addition, such increased indebtedness could have a variety of other adverse effects, including: (i) default and foreclosure on our assets if we have insufficient funds to repay the debt obligations; (ii) acceleration of such indebtedness or cross-defaults if we breach financial or other covenants under applicable debt agreements; (iii) increased vulnerability to adverse changes in competitive conditions or government regulation; and (iv) other disadvantages compared to our competitors who have less debt.

In addition, our credit ratings impact the cost and availability of future borrowings and, accordingly, our cost of capital. Our ratings reflect the opinions of the ratings agencies of our financial strength, operating performance and ability to meet our debt obligations. There can be no assurance that we will achieve a particular rating or maintain a particular rating in the future, which could place us at a competitive disadvantage compared to our competitors and prevent us from taking actions that could benefit us in the long term. See "***Our credit rating may be downgraded***" below. We may not be able to obtain financing arrangements on acceptable terms or in amounts sufficient to meet our needs in the future, which could harm our ability to grow our business, internally or through acquisitions.

Inherent challenges in managing unanticipated changes in customer demand may impact our planning, supply chain execution and manufacturing, and may adversely affect our operating performance and results.

Our customers expect rapid response times to meet changes in their volume requirements. Although we generally enter into master supply agreements with our customers, the level of business to be transacted under those agreements is not guaranteed. Instead, we bid on a program-by-program basis and typically receive customer purchase orders for specific quantities and timing of products. Most of our customers typically do not commit to production schedules for more than 30 to 90 days in advance and we often experience volatility in customer orders and inventory levels. There can be no assurance that present or future customers will not terminate their manufacturing or service arrangements with us, or that they will not significantly change, reduce or delay the volume of manufacturing or other services they order from us, any of which would adversely affect our operating results. Customers may also shift business to our competitors, in-source programs, or adjust the concentration of their supplier base. The global economic environment, political pressures, negative sentiment from our customers' customers or changes made by local governments (such as tax benefits or income tax rate reductions) may also impact our customers' business decisions. These and other factors could adversely affect the rate of outsourcing generally, or to EMS providers like Celestica. Additionally, a significant portion of our revenue can occur in the last month of the quarter, and purchase orders may be subject to change or cancellation, all of which affect our operating results when they occur. In the second half of 2018, we experienced weaker-than-expected demand in our capital equipment business, in particular from our semiconductor customers, which negatively impacted our operating results in 2018. Although we expect these adverse market conditions to continue throughout 2019, we cannot predict their exact impact. Accordingly, our forecasts of customer orders may be inaccurate, and may make it difficult to order appropriate levels of materials, schedule production, and maximize utilization of our manufacturing capacity and resources.

Our customers may change their forecasts, production quantities or product type requirements, or may accelerate, delay or cancel production quantities for various reasons. When customers change production volumes or request different products to be manufactured from those in their original forecast, the unavailability of components and materials for such changes could also adversely impact our revenue and working capital performance. See ***"We are dependent on third parties to supply certain materials, and our results can be negatively affected by the availability and cost of such materials"*** *above.*

Further, to guarantee continuity of supply for many of our customers, we are required to manufacture and warehouse specified quantities of finished goods. The uncertainty of demand in our customers' end markets, intense competition in our customers' industries and general order volume volatility may result in customers delaying or canceling the delivery of products we manufacture for them or placing purchase orders for lower volumes of products than previously anticipated.

Order cancellations, or changes or delays in production, may result in higher than expected levels of inventory, which could in turn have a material adverse impact on our operating results and working capital performance. Although we required additional inventory to support new program ramps during 2017 and 2018, we also experienced demand volatility and significant product mix changes in our CCS segment during each such year, including late changes from certain customers, as well as materials constraints from suppliers, all of which resulted in us carrying higher than expected levels of inventory at each of December 31, 2017 and 2018. We may not be able to return or re-sell this inventory, or we may be required to hold the inventory for a period of time, any of which may result in our having to record additional reserves for the inventory if it becomes excess or obsolete. For example, unprecedented declines in the pricing of solar panels, a slowing of demand, and related deferred and cancelled orders from customers resulted in us recording aggregate net inventory provisions of $12.0 million in 2016, primarily to write down our solar panel inventory to applicable market prices. In addition, increased levels of overall aged inventory in 2018 compared to 2017 resulted in approximately $10 million in higher inventory provisions in 2018. Order cancellations and delays could also lower our asset utilization, resulting in higher levels of unproductive assets, lower inventory turns, and lower margins.

Our customers may be negatively affected by rapid technological changes, shifts in business strategy and/or the emergence of new business models, and new entrants/competition with disruptive products and/or services.

Many of our customers compete in markets that are characterized by rapidly changing technology, evolving industry standards, continuous improvements in products and services, commoditization of certain products, changes in preferences by end customers or other changes in demand, and the emergence of new entrants or competitors with disruptive products, services, or new business models that deemphasize traditional OEM distribution channels. These conditions frequently result in shorter product

lifecycles and may lead to shifts in our customers' business strategies. Our success will depend on the success achieved by our customers in developing, marketing and selling their products.

For example, declines in end-market demand for customer-specific proprietary systems in favor of open systems with standardized technologies has had an adverse impact on our customers, and consequently, our business. Other examples are described in ***"We are dependent on our customers' ability to compete and succeed in the marketplace with our products and services"*** above. The highly competitive nature of our customers' products and services could also drive further consolidation among OEMs, and result in product line consolidation that could adversely impact our customer relationships and our revenue.

Consolidation within the EMS industry, or among our customers or suppliers, may adversely affect our business relationships or the volume of business we conduct with our customers.

Our customers, competitors and/or suppliers may be subject to consolidation. Increasing consolidation in industries that utilize our services may occur as companies combine to achieve economies of scale and other synergies, which could result in an increase in excess manufacturing capacity as companies seek to divest manufacturing operations or eliminate product lines. Excess manufacturing capacity may increase pricing and competitive pressures in our industry as a whole and for us in particular. Consolidation could also result in an increasing number of very large companies offering products in multiple industries. The significant purchasing power and market power of these large companies could increase pricing and competitive pressures for us. If one of our customers is acquired by another company that does not rely on us to provide services, has its own production services, or relies on another provider of similar services, we may lose that customer's business. Such consolidation may reduce the number of customers from which we generate a significant percentage of our revenue, and further expose us to increased risks relating to our dependence on a small number of customers. Any of the foregoing results of industry consolidation could adversely affect our business. Consolidation among our competitors may create a competitive advantage over us, which may also result in a loss of business and revenue if customers shift their production. Such consolidation may also result in pricing pressures, which could negatively impact our profit margins. Changes in OEM strategies, including the divestiture or exit from certain of their businesses, may also result in a loss of business for us.

Any failure to comply with customer-driven policies and standards, and third party certification requirements, including those related to social responsibility, could adversely affect our business and reputation.

In addition to government regulations and industry standards, our customers may require us to comply with their own social responsibility, conflict minerals, quality or other business policies or standards, which may be more restrictive than current laws and regulations and our pre-existing policies, before they commence, or continue, doing business with us. Such policies or standards may be customer-driven, established by the industries in which we operate, or imposed by third party organizations. For example, we are a member of the Responsible Business Alliance (RBA), formerly known as the Electronic Industry Citizenship Coalition. The RBA is a non-profit coalition of electronics companies that, among other things, establishes standards for its members in responsible and ethical practices in the areas of labor, environmental compliance, employee health and safety, ethics and social responsibility. Our compliance with these policies, standards and third-party certification requirements could be costly, and our failure to comply could adversely affect our operations, customer relationships, reputation and profitability.

Challenges associated with new customers or programs, or the provision of new services, could adversely affect our operations and financial results.

In determining whether to pursue a potential new customer, program or service, we evaluate whether it fits with our value proposition as well as its potential end-market success. Where we proceed, our goal is to ensure that our terms of engagement appropriately reflect anticipated costs, risks and rewards. The failure to make prudent engagement decisions or to establish appropriate contractual terms could adversely affect our profitability and margins.

There are also risks associated with the timing and ultimate realization of anticipated revenue from a new program or service. Certain new programs or services require us to devote significant capital and personnel to new technologies and competencies. We may not meet customer expectations, which could damage our relationships with such customers and impact our ability to timely deliver conforming products or services. The success of new programs may also depend heavily on factors including product reliability, market acceptance, regulatory approvals and/or economic conditions. Any failure to meet expectations on these factors could adversely affect our results of operations.

We have incurred significant restructuring charges in recent periods, and expect to incur further significant restructuring charges during 2019 in connection with our cost efficiency initiative (CEI); we may not achieve some or all of the expected benefits from our CEI and other restructuring activities, these activities may adversely affect our business, and we may implement additional restructuring actions subsequent to the completion of our CEI.

We perform ongoing evaluations of our business, operational efficiency and cost structure, and implement restructuring actions as we deem necessary. We are currently implementing restructuring actions (which commenced in the fourth quarter of

2017) under our CEI, including actions related to our CCS segment portfolio review and in response to the demand environment in our capital equipment business. We estimate that we will incur aggregate restructuring charges under the CEI within the previously disclosed range of between $50.0 million and $75.0 million (consisting primarily of cash charges), and that such actions will continue through the end of 2019. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Operating results — Other charges." Implementation of our CEI may be costly and disruptive to our business, and we may not be able to achieve the cost savings and benefits that we anticipate in connection therewith. We may not be able to retain or expand existing business due to execution issues relating to anticipated headcount reductions, plant closures or product/service transfers, and we may incur higher operating expenses during the periods of transition. Additionally, restructuring actions related to the CEI may result in a loss of continuity and accumulated knowledge in our workforce and related operational inefficiencies, as well as negative publicity. Headcount reductions can also have a negative impact on morale and our ability to attract and hire new qualified personnel in the future. Our CEI is expected to require a significant amount of management and other employees' time and focus, which may divert attention from operating and growing our business.

We recorded restructuring charges of $35.4 million in 2018, $28.9 million in 2017 and $31.9 million in 2016. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Operating results — *Other charges*" for detail.

Any failure to achieve some or all of the expected benefits of our CEI or any other restructuring activities, including any delay in implementing planned related restructuring actions, may have a material adverse effect on our competitive position and operating results. In addition, we may implement additional future restructuring actions or divestitures as a result of changes in our business, the marketplace and/or our exit from less profitable, under-performing, non-core or non-strategic operations.

We have incurred significant impairment charges and operating losses in recent periods, and may incur such charges and losses in future periods.

We have recorded charges in recent periods relating to the impairment of property, plant and equipment, goodwill and other intangible assets, and have incurred operating losses for certain of our businesses (including operating losses in 2017 resulting from the wind-down of our solar panel manufacturing business, and an operating loss in our semiconductor capital equipment business in the fourth quarter of 2018). These amounts have varied from period to period.

We evaluate the recoverability of the carrying amount of our goodwill, intangible assets, and property, plant and equipment on an ongoing basis, and we may incur impairment charges, which could be substantial and could adversely affect our financial results. Impairment assessments inherently involve judgment as to assumptions about expected future cash flows and the impact of market conditions on those assumptions. Future events and changing market conditions may impact our assumptions as to prices, costs, or other factors that may result in changes in our estimates of future cash flows. Factors that might reduce the recoverable amount of goodwill, intangible assets, and property, plant and equipment below their respective carrying values include declines in our stock price and market capitalization, reduced future cash flow estimates, and slower growth rates in any of our businesses. During 2016, we recorded impairment charges of $21.2 million (through restructuring charges), primarily to write down our solar panel manufacturing equipment to estimated recoverable amounts. During 2017, we recorded net impairment charges of $3.8 million (through restructuring charges) to further write down the carrying value of such solar panel manufacturing equipment based on executed sale agreements (such equipment has all been sold). See notes 8, 9 and 16(a) to the Consolidated Financial Statements in Item 18.

Sustained market price decreases, demand softness, and/or failure to realize future revenue at an appropriate profit margin in any cash generating unit (CGU) could negatively impact our operating results, including restructuring actions and/or impairment losses for such CGU, in future periods.

We continue to operate in an uncertain global economic and political environment.

Concerns over global economic conditions and geopolitical issues, energy costs, inflation, the availability and cost of credit, and the European, Asian and the U.S. financial markets have contributed to increased global economic and political uncertainty. Brexit, the current U.S. administration, and tensions between the U.S. and North Korea, China, Russia and/or other countries have contributed to such uncertainty. See ***"Our operations could be adversely affected by global or local events outside our control" and "Policies or legislation proposed or instituted by the current U.S. administration could have a material adverse effect on our business, results of operations and financial condition"*** below. Changes in policies by the U.S. or other governments could negatively affect our operating results due to changes in duties, tariffs or taxes, or limitations on currency or fund transfers, as well as government-imposed restrictions on producing certain products in, or shipping them to, specific countries. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Overview — *Overview of the business environment.*" Uncertain global economies have adversely impacted, and may continue to unpredictably impact, currency exchange rates. See **"*We are exposed to translation and transaction risks associated with foreign currency exchange rate fluctuations; hedging instruments may not be effective in mitigating such risks*"**

below. Financial market instability may result in lower returns on our financial investments, and lower values on some of our assets. Alternately, inflation may lead to higher costs for labor and materials and/or increase our costs of borrowing and raising capital. Uncertainty surrounding the global economic environment and geopolitical outlook may impact current and future demand for some of the products we manufacture or services we provide, the financial condition of our customers and/or suppliers, as well as the number and pace of customer consolidations. If any of the foregoing impacts the financial condition of our customers, they may delay payments to us or request extended payment terms, which could have an adverse effect on our financial condition and working capital. If any of the foregoing impacts the financial condition of our suppliers, this may have an adverse effect on our operations, financial condition and/or customer relationships.

We cannot predict the precise nature, extent, or duration of these economic or political conditions or if they will have any impact on our financial results. A deterioration in the economic environment may accelerate the effect of the various risk factors described in this Annual Report and could result in other unforeseen events that may adversely impact our business and financial condition.

Our operations could be adversely affected by global or local events outside our control.

Our operations and those of our customers, component suppliers and/or our logistics partners may be disrupted by global or local events outside our control, including: natural disasters and related disruptions; political instability; terrorism; armed conflict; labor or social unrest; criminal activity; disease or illness that affects local, national or international economies; unusually adverse weather conditions; and other risks present in the jurisdictions in which we, our customers, our suppliers and/or our logistics partners operate. These types of events could disrupt operations at one or more of our sites or those of our customers, component suppliers and/or our logistics partners. Any such disruption could lead to higher costs, supplier shortages, delays in the delivery of components to us, and/or our inability to provide finished products or services to our customers, any of which could adversely affect our operating results materially. We carry insurance to cover damage to our sites and interruptions to our operations, including those that may occur as a result of natural disasters, such as flooding, earthquakes or other events. Our insurance policies, however, are subject to deductibles, coverage limitations and exclusions, and may not provide adequate (or any) coverage should such events occur.

Increased international political volatility, including changes to previously accepted trading or other government policies or legislation in the United States and Europe, instability in parts of the Middle East, as well as the ongoing refugee crisis, anti-immigrant activities, social unrest and fears of terrorism, enhanced national security measures, armed conflicts, security issues at the U.S./Mexico border related to illegal immigration or criminal activities associated with illegal drug activities, labor or social unrest, strained international relations, including tensions between the United States and North Korea, China, Russia and/or other countries, and any related decline in consumer confidence arising from these and other factors may materially hinder our ability to conduct business, or may reduce demand for our products or services. Any escalation in these events or similar future events may disrupt our operations or those of our customers and suppliers and could adversely affect the availability of materials needed to manufacture our products or the means to transport those materials to manufacturing sites and finished products to customers.

The June 2016 Brexit referendum led to, among other things, volatility in currency exchange rates that resulted in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. Given the lack of comparable precedent, it is unclear what financial, trade and legal implications the withdrawal of the United Kingdom from the European Union will have and how such withdrawal will affect us, our customers and their demand for our services. We cannot predict changes in currency exchange rates, the impact of exchange rate changes on our operating results, nor the degree to which we will be able to manage the impact of currency exchange rate changes, and any of these effects of Brexit, among others, could materially adversely affect our business, results of operations and financial condition. Also see ***"Policies or legislation proposed or instituted by the current U.S. administration could have a material adverse effect on our business, results of operations and financial condition"*** below for a discussion of uncertainties, and potential adverse impacts on our business, that may arise out of actions of the current U.S. administration.

We rely on a variety of common carriers for the transportation of materials and products and for their ability to route these materials and products through various international ports and other transportation hubs. A work stoppage, strike or shutdown of any important supplier's site or operations, or at any major port or airport, or the inability to access any such site for any reason, could result in manufacturing and shipping delays or expediting charges, which could have a material adverse effect on our operating results.

Such events have had and may in the future have an adverse impact on the U.S. and global economy in general, and on consumer confidence and spending, which may adversely affect our revenue and financial results. Such events could increase the volatility of the market price of our securities and may limit the capital resources available to us and our customers and suppliers.

Policies or legislation proposed or instituted by the current U.S. administration could have a material adverse effect on our business, results of operations and financial condition.

The current U.S. administration has created uncertainty with respect to, among other things, existing and proposed trade agreements, free trade generally, and significant increases on tariffs on goods imported into the U.S. from specified countries. The United States, Canada and Mexico have agreed on a revised trade deal (USMCA) to replace the North American Free Trade Agreement. The USMCA was executed at the end of 2018, but is subject to ratification by the legislatures of the three countries. We cannot currently quantify the impact on our business of the USMCA, if ratified. In addition, the current U.S. administration has increased tariffs on certain items imported into the U.S. from several countries, including China, Canada, Mexico, and the European Union (many of which are not addressed by the USMCA). Each of these countries has imposed retaliatory tariffs on specified items, which have been challenged by the U.S. These actions, or other governmental actions related to tariffs or international trade agreements, could increase the cost to our U.S. customers who use our non-U.S. manufacturing sites and components, and vice versa, which may materially and adversely impact demand for our services, our results of operations or our financial condition. We currently ship a significant portion of our worldwide production to customers in the U.S. from other countries. Increased tariffs, and/or changes to international trade agreements, may cause our U.S. customers to insource programs previously outsourced to us, transfer manufacturing to locations within our global network that are not impacted by such actions (potentially increasing production costs), and/or shift their business to other EMS providers. Additionally, tariffs on imported components for use in our U.S. production could have an adverse impact on demand for such production. Retaliatory tariffs could reduce demand for our U.S.-based production or make such production less profitable. Given the uncertainty regarding the scope and duration of these trade actions by the U.S. and other governments, whether trade tensions will escalate further, and whether our customers will bear the cost of the tariffs, their impact on our operations and results cannot be currently quantified, but may be material.

The U.S. Tax Cuts and Jobs Act (U.S. Tax Reform) became effective January 1, 2018. The legislative changes are extensive, and uncertainties remain as to how such changes will be implemented. We do not currently expect the U.S. Tax Reform to have a significant impact on our future global tax rate, but we will continue to assess additional impacts, if any, throughout 2019 as they become known due to changes in our interpretations and assumptions, as well as applicable changes in our business and additional regulatory guidance that may be issued.

In general, tax reform efforts, including with respect to tax base or rate, transfer pricing, inter-company dividends, cross border transactions, controlled corporations, and limitations on tax relief allowed on the interest on inter-company debt, require us to continually assess our organizational structure against tax policy trends, and could lead to an increased risk of international tax disputes and an increase in our effective tax rate, and could adversely affect our financial results.

It is unknown at this time to what extent other new laws will be passed or pending or new regulatory proposals will be adopted, if any, or the effect that such passage or adoption may have on the economy and/or our business. However, changes in U.S. social, political, regulatory and economic conditions or in laws and policies governing foreign trade, taxes, manufacturing, clean energy, the healthcare industry, development and investment in the jurisdictions in which we and/or our customers or suppliers operate, could materially adversely affect our business, results of operations and financial condition.

Changes to our operating model may adversely affect our business.

We continuously work to improve our productivity, quality, delivery performance and flexibility. In connection therewith, we are implementing our CEI to further streamline our business and improve our margin performance. Charges related to these initiatives may adversely impact our financial condition and results of operations in the periods incurred. In addition, we commenced a comprehensive review of our CCS revenue portfolio in the second half of 2018 to address under-performing programs and to disengage from customer programs that do not meet our strategic objectives. This review is currently expected to result in a decline in our CCS segment revenue of approximately $500 million over the next 12 to 18 months, and a corresponding decline in overall company revenue in the single digit percentage range in 2019 (subject to change based on the growth or contraction of CCS programs not subject to the review). The review is substantially complete and the customer programs that comprise the approximate $500 million in revenue have been identified. We expect to complete the majority of the related actions in 2019, including the intended restructuring activities (which have been built into our CEI) and changes to our global manufacturing network. See "Operating Results — *Other Charges*" and "Overview — *Celestica's business*" in Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations."

Implementation of these initiatives presents a number of risks, including: (i) actual or perceived disruption of service or reduction in service levels to customers; (ii) potential adverse effects on our internal control environment with respect to general and administrative functions during transitions resulting from such initiatives; (iii) actual or perceived disruption to suppliers, distribution networks and other important operational relationships and the inability to resolve potential conflicts in a timely manner; (iv) diversion of management attention from ongoing business activities and strategic objectives; and (v) failure to retain key employees. Because of these and other factors, we cannot predict whether we will fully realize the purpose and anticipated

benefits or cost savings of these initiatives and, if we do not, our business and results of operations may be adversely affected. Furthermore, adverse changes to our business may require additional restructuring or reorganization activities in the future. See ***"We have incurred significant restructuring charges in recent periods, and expect to incur further significant restructuring charges during 2019 in connection with our cost efficiency initiative (CEI); we may not achieve some or all of the expected benefits from our CEI and other restructuring activities, these activities may adversely affect our business, and we may implement additional restructuring actions subsequent to completion of our CEI"*** *above.*

Our results may be negatively affected by rising labor costs.

There is some uncertainty with respect to the pace of rising labor costs in various regions in which we operate. Any increase in labor costs that we are unable to recover in our pricing to our customers would negatively impact our margins and operating results.

Volatility in commodity prices may negatively impact our operating results.

We rely on various energy sources in our production and transportation activities. The price of commodities can be volatile. Increases in prices for energy and other commodities could result in higher raw material and component costs and transportation costs. Any increase in our costs that we are unable to recover in our pricing to our customers would negatively impact our margins and operating results.

Quality and execution issues may reduce demand for our services, damage our reputation, and/or have a material adverse effect on our business and operating results.

In any given quarter, we can experience quality and process variances related to materials, testing, or other manufacturing or supply chain activities. Although we are successful in resolving the majority of such issues (including those that arose in 2018), the existence of these variances could cause us to incur significant costs in relation to corrective actions, have a material adverse impact on the demand for our services in future periods from any affected customers, damage our reputation, and/or have a material adverse effect on our business and operating results.

We may experience increased financial and reputational risk due to non-performance by counterparties.

A failure by counterparties, including customers, suppliers, financial institutions (including the issuers of our purchased annuities), or other third parties with whom we conduct business, to fulfill their contractual obligations, may result in financial loss to us and may have adverse effects on our business.

We have key suppliers that are important to our sourcing activities. If a key supplier, or any company within that supplier's supply chain, were to experience financial difficulties, it may affect their ability to supply us with materials, components or services, which could halt or delay the production of a customer's products, which could in turn have a material adverse impact on our operations, financial results, and customer relationships.

Our ability to collect outstanding accounts receivable is contingent, in part, on the financial strength of our customers. We provide flexible payment terms to most of our customers (generally ranging from 30 to 90 days), however, we extend or provide longer payment terms from time to time when deemed commercially reasonable. Longer payment terms, which have become more prevalent, could adversely impact our working capital requirements, and increase our financial exposure and credit risk. Our accounts receivable balance at December 31, 2018 was $1,206.6 million (December 31, 2017 — $1,023.7 million), with two customers individually representing more than 10% of total accounts receivable (December 31, 2017 — two customers). Customers having financial difficulties may result in payment delays, defaults in payments, or requests for extended payment terms, any of which could adversely impact our short-term cash flows, financial performance and/or operating results. In addition, customer financial difficulties may result in purchase order cancellations or volume reductions, resulting in increased inventory levels, which could have a material adverse impact on our operating results and working capital performance. We may not be able to return or resell this inventory, or we may be required to hold the inventory for an extended period of time, which may result in inventory obsolescence and the need to record additional inventory reserves. We may also be unable to recover all of the amounts owed to us by a customer, including amounts to cover unused inventory or capital investments incurred to support a customer's business. Furthermore, if a customer bankruptcy occurs, our profitability may be adversely impacted if affected accounts receivable are in excess of our allowance for doubtful accounts. Additionally, our future revenues could be adversely impacted by a customer bankruptcy. Inability to collect accounts receivable and/or the loss of one or more major customers could adversely impact our operating results, financial position and cash flows. We cannot reasonably determine the extent to which a customer or supplier may have financial difficulties, or whether we will be required to adjust customer pricing, payment terms and/or the amounts we pay to suppliers for materials and components.

To mitigate the actuarial and investment risks of our defined benefit pension plans, we purchase annuities (using existing plan assets) from time to time from third party insurance companies for certain, or all, of our obligations under specified pension

plans. See note 19 to the Consolidated Financial Statements in Item 18. Although these annuities substantially hedge the financial investment risk associated with the related pension obligations, failure by the insurance companies to fulfill their contractual obligations would result in a financial loss to us, as we retain ultimate responsibility for the payment of benefits to plan participants unless and until such pension plans are wound-up.

We may use cash on hand, issue debt or equity securities, and/or incur additional third-party debt (or any combination thereof) to complete future acquisitions or otherwise fund our operations, which may adversely affect our liquidity, credit ratings, financial condition and/or results of operations.

Any significant use of cash (for future acquisitions or otherwise) would adversely impact our cash position and liquidity. In addition, we may choose to issue debt securities or otherwise incur additional debt, to fund future acquisitions or otherwise fund our operations. Any additional incurrence of debt (either through the issuance of debt securities or through a new or refinanced credit facility) would increase our debt leverage and debt service requirements, and could have a variety of additional effects, including, but not limited to, those described in ***"We have incurred substantial third-party debt in recent periods, which has increased our debt service requirements, reduced our ability to fund future acquisitions and/or to respond to unexpected capital requirements, and may have other adverse impacts on our business"*** above, as well as the potential imposition of additional restrictive covenants on our operations. To the extent we sell equity or convertible debt securities, the issuance of these securities (the pricing of which would be subject to market conditions at the time of issuance) could result in material dilution to our stockholders. Sales of our equity securities or convertible debt, or the perception that these sales could occur, could also cause the market price for our subordinate voting shares to fall, and new securities could have rights, preferences and privileges senior to the holders of our subordinate voting shares.

We are exposed to translation and transaction risks associated with foreign currency exchange rate fluctuations; hedging instruments may not be effective in mitigating such risks.

Global currency markets can be volatile. Although we conduct the majority of our business in U.S. dollars (our functional currency), our global operations subject us to translation and transaction risks associated with fluctuations in currency exchange rates that could have a material adverse impact on our operating results and/or financial condition. A significant portion of our operational costs (including payroll, pensions, site costs, costs of locally sourced supplies and inventory, and income taxes) are denominated in various currencies other than the U.S. dollar. Fluctuations in currency exchange rates may significantly increase the amount of translated U.S. dollars required for costs incurred in other currencies or significantly decrease the U.S. dollars received from non-U.S. dollar revenues. Our non-U.S. currency exposures include the Canadian dollar, Thai baht, Malaysian ringgit, Mexican peso, British pound sterling, Chinese renminbi, Euro, Romanian leu, Korean won, and Singapore dollar.

Although our functional currency is the U.S. dollar, currency risk on our income tax expense arises as we are generally required to file our tax returns in the local currency for each country in which we have operations. A weakening of the local currency against the U.S. dollar could have a negative impact on our income taxes payable (related to increased local-currency taxable profits) and on our deferred tax costs (primarily related to the revaluation of non-monetary foreign assets from historical average exchange rates to the period-end exchange rates). See note 21 to the Consolidated Financial Statements in Item 18. While our hedging programs are designed to mitigate currency risk vis-à-vis the U.S. dollar, we remain subject to taxable foreign exchange impacts in our translated local currency financial results relevant for tax reporting purposes.

As part of our risk management program, we enter into foreign exchange forward contracts to lock in the exchange rates for future foreign currency transactions, which is intended to reduce the variability of our operating costs and future cash flows denominated in local currencies. While these contracts are intended to reduce the effects of fluctuations in foreign currency exchange rates, our hedging strategy does not mitigate the longer-term impacts of changes to foreign exchange rates. We do not enter into these contracts for trading purposes or speculation, and our management believes all such contracts are entered into as hedges of underlying transactions. Nonetheless, these instruments involve costs and risks of their own in the form of transaction costs, credit requirements and counterparty risk. If our hedging program is not successful, or if we change our hedging activities in the future, we may experience significant unexpected expenses from fluctuations in exchange rates.

Our financial results have, in prior periods, been adversely impacted by negative foreign currency translation effects, and such adverse effects, some of which may be substantial, are likely to recur in the future.

Our ability to successfully manage unexpected changes or risks inherent in our global operations and supply chain may adversely impact our financial performance.

We have sites in the following countries: Canada, the United States, China, Ireland, Japan, Laos, Malaysia, Mexico, Romania, Singapore, South Korea, Spain and Thailand. During 2018, approximately 80% of our revenue was produced at locations outside of North America. We also purchase the majority of our components and materials from international suppliers.

Global operations are subject to inherent risks which may adversely affect us, including:

- changes in local tax rates and tax incentives and the adverse tax consequences of repatriating earnings;
- labor unrest and differences in regulations and statutes governing employee relations, including increased scrutiny of labor practices within our industry;
- cultural differences and/or differences in local business customs;
- negative impacts, or ineffectiveness, of executing restructuring activities;
- changes in regulatory requirements;
- inflationary trends and rising costs;
- changes in international political relations;
- difficulty in staffing (including skilled labor availability and cost) and managing foreign operations;
- challenges in building and maintaining infrastructure to support operations;
- compliance with a variety of foreign laws, including import and export tariffs and regulations;
- adverse changes in trade policies and/or agreements between countries in which we maintain operations;
- changes in logistics costs;
- changes in the availability, lead time, and cost of components and materials;
- weaker laws protecting intellectual property rights and/or greater difficulty enforcing such rights;
- global economic, political and/or social instability;
- potential restrictions on the transfer of funds and/or other restrictive actions by foreign governments;
- the effects of terrorist activity, armed conflict, natural disasters and epidemics; and
- global currency fluctuations.

Any of these risks could disrupt the supply of our components or materials, slow or stop our production, and/or increase our costs. Compliance with trade and foreign tax laws may increase our costs and actual or alleged violations of such laws could result in enforcement actions or financial penalties that could result in substantial costs. In addition, the introduction or expansion of certain social programs in foreign jurisdictions may increase our costs, and certain supplier's costs, of doing business.

We currently ship a significant portion of our worldwide production into the U.S. from other countries. Changes to, among other things, laws or policies in the U.S. regarding foreign trade, import/export duties, tariffs or taxes, manufacturing and/or investments, could materially adversely affect our U.S. and foreign operations. See ***"Policies or legislation proposed or instituted by the current U.S. administration could have a material adverse effect on our business, results of operations and financial condition"*** above.

If we are unable to recruit or retain highly skilled talent, our business could be adversely affected.

The recruitment of personnel in the EMS industry is highly competitive. We believe that our future success depends, in part, on our ability to attract and retain highly skilled executive, technical and management talent in the various geographies in which we operate. The time required to replace or redistribute responsibilities related to the loss of the services of certain executive, management and technical employees, individually or in the aggregate, could have a material adverse effect on our operations, and there can be no assurance that we will be able to retain their services. Organizational changes may impact our relationships with customers, vendors, and employees, potentially resulting in loss of business, loss of vendor relationships, and the loss of key employees or declines in employee productivity. Uncertainties associated with any senior management transitions could lead to concerns from current and potential third parties with whom we do business, any of which could hurt our business prospects. Turnover in key leadership positions within the Company, or any failure to successfully integrate key new hires or promoted employees, may adversely impact our ability to manage the Company efficiently and effectively, could be disruptive and distracting to management and may lead to additional departures of existing personnel, any of which could have a material adverse effect on our business, operating results, financial results and internal controls over financial reporting.

We may not keep pace with rapidly evolving technology.

Many of the markets for our manufacturing and engineering services are characterized by rapidly changing technology and evolving process development. We believe our future success depends, in part, upon our ability to: continually develop and deliver electronic and complex mechanical manufacturing services that meet our customers' evolving needs; hire, retain and expand our qualified engineering and technical personnel; maintain and continually improve our technological expertise; and successfully anticipate or respond to technological changes in manufacturing processes on a cost-effective and timely basis.

Although we believe that our operations use the assembly and testing technologies, equipment and processes that are currently required by our customers, we cannot be certain that we will maintain or develop the capabilities required by our customers in the future. The emergence of new technologies, industry standards or customer requirements may render our equipment, designs, inventory or processes obsolete or noncompetitive. In addition, we may have to invest in new processes, capabilities or equipment to support new technologies used in our customers' current or future products, and to support their supply chain processes. Additionally, as we expand our service offerings or pursue business in new markets where our experience may be limited, we may be less effective in adapting to technological change. Our manufacturing, engineering, supply chain processes, and test development efforts and design capabilities may not be successful due to rapid technological shifts in any of these areas. The acquisition and implementation of new technologies and equipment and the offering of new or additional services to our customers may require significant expense or capital investment, which could reduce our operating margins and our operating results. Our failure to anticipate and adapt to our customers' changing technological needs and requirements or to hire and retain a sufficient number of engineers and maintain our engineering, technological and manufacturing expertise could have a material adverse effect on our operations.

Various industry-specific standards, qualifications and certifications are required to produce certain types of products for our customers. Failure to obtain or maintain those certifications may adversely affect our ability to maintain existing levels of business or win new business.

We may not adequately protect our intellectual property or the intellectual property of others.

We believe that certain of our proprietary intellectual property rights and information provide us with a competitive advantage. Accordingly, we take steps to protect this proprietary information, including entering into non-disclosure agreements with customers, suppliers, employees and other parties, and by implementing security measures. However, our protection measures may not be sufficient to prevent or detect the misappropriation or unauthorized use or disclosure of our property or information.

There is also a risk that claims of intellectual property infringement could be brought against us, our customers and/or our suppliers. If such claims are successful, we may be required to spend significant time and financial resources to develop processes that do not infringe upon the rights of another person or to obtain licenses for the technology, process or information from the owner. We may not be successful in such development, or any such licenses may not be available on commercially acceptable terms, if at all. In addition, any litigation could be lengthy and costly and could adversely affect us even if we are successful. As we expand our JDM and other service offerings and pursue business in new end markets, we may be less effective in anticipating or mitigating the intellectual property risks related to new manufacturing, design and other services, which could be significant.

We are subject to the risk of increasing income and other taxes, tax audits, and the challenges of successfully defending our tax positions, and obtaining, renewing or meeting the conditions of tax incentives and credits, any of which may adversely affect our financial performance.

We conduct business operations in a number of countries, including countries where tax incentives have been extended to encourage foreign investment or where income tax rates are low. Our income tax expense could increase significantly if certain tax incentives from which we benefit are retracted. A retraction could occur if we fail to satisfy the conditions on which these tax incentives are based, or if they are not renewed or replaced upon expiration. Our income tax expense could also increase if tax rates applicable to us in such jurisdictions are otherwise increased, or due to changes in legislation or administrative practices. Changes in our outlook in any particular country could impact our ability to meet the required conditions. See Item 5 "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Income taxes" and note 20 to the Consolidated Financial Statements in Item 18 for a discussion of recently expired tax incentives, the status of existing tax incentives, and a challenge to our Brazilian sales tax levy rates.

We develop our tax filing positions based upon the anticipated nature and structure of our business and the tax laws, administrative practices and judicial decisions currently in effect in the jurisdictions in which we have assets or conduct business, all of which are subject to change or differing interpretations, possibly with retroactive effect.

Certain of our subsidiaries provide financing or products and services to, and may from time-to-time undertake certain significant transactions with, other subsidiaries in different jurisdictions. Moreover, several jurisdictions in which we operate have

tax laws with detailed transfer pricing rules which require that all transactions with non-resident related parties be priced using arm's-length pricing principles, and that contemporaneous documentation must exist to support such pricing.

We are subject to tax audits globally by various tax authorities, which could result in additional tax expense in future periods relating to prior results. Any such increase in our income tax expense and related interest and/or penalties could have a significant adverse impact on our future earnings and future cash flows. The successful pursuit of assertions made by any taxing authority could result in our owing significant amounts of tax, interest, and possibly penalties. We believe we adequately accrue for any probable potential adverse tax ruling. However, there can be no assurance as to the final resolution of any claims and any resulting proceedings. If any claims and any ensuing proceedings are determined adversely to us, the amounts we may be required to pay could be material, and could be in excess of amounts accrued.

As at December 31, 2018, a significant portion of our cash and cash equivalents was held by foreign subsidiaries outside of Canada, a large part of which may be subject to withholding taxes upon repatriation under current tax laws. We currently expect to repatriate approximately $30 million from various foreign subsidiaries in the near term, and have recognized any applicable deferred tax liabilities with respect thereto. At December 31, 2018, we had approximately $355 million (December 31, 2017 — $351.0 million) of cash and cash equivalents held by foreign subsidiaries outside of Canada that we do not intend to repatriate in the foreseeable future.

Our operations and our customer relationships may be adversely affected by disruptions to our information technology (IT) systems, including disruptions from cybersecurity breaches of our IT infrastructure.

We rely on information technology networks and systems, including those of third-party service providers, to process, transmit and store electronic information. In particular, we depend on our IT infrastructure for a variety of functions, including worldwide financial reporting, inventory and other data management, procurement, invoicing and email communications. Any of these systems may be susceptible to outages due to fire, floods, power loss, telecommunications failures, terrorist attacks, sabotage and similar events. Global cybersecurity threats and incidents can range from uncoordinated individual attempts to gain unauthorized access to our IT systems to sophisticated and targeted measures known as 'advanced persistent threats'. The ever-increasing use and evolution of technology, including cloud-based computing and the rise of the 'Internet of Things,' creates opportunities for the unintentional dissemination or intentional destruction of confidential information stored in our systems or in non-encrypted portable media or storage devices. We could also experience a business interruption, information theft of confidential data, or reputational damage from industrial espionage attacks, malware or other cyber-attacks, which may compromise our system infrastructure or lead to data leakage, either internally or at our third-party providers. Despite the implementation of advanced threat protection, information and network security measures and disaster recovery plans, our systems and those of third parties on which we rely may also be vulnerable to computer viruses, break-ins and similar disruptions. If we or our vendors are unable (or are perceived as unable) to prevent or promptly identify and remedy such outages and breaches, our operations may be disrupted, our business reputation could be adversely affected, and there could be a negative impact on our financial condition and results of operations.

We expect that risks and exposures related to cybersecurity attacks will remain high for the foreseeable future due to the rapidly evolving nature and sophistication of these threats.

We may not be able to prevent or detect all errors or fraud.

Due to the inherent limitations of internal control systems, misstatements due to error or fraud may occur and may not be detected in a timely manner or at all. Accordingly, we cannot provide absolute assurance that all control issues, errors or instances of fraud, if any, within (or otherwise impacting) the Corporation have been or will be prevented or detected. In addition, over time, certain aspects of a control system may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate, which we may not be able to address quickly enough to prevent all instances of error or fraud.

Our revenue and operating results may vary significantly from period to period.

Our quarterly and annual results may vary significantly depending on various factors, certain of which are described below, and many of which are beyond our control.

- the volume and timing of customer demand relative to our capacity;
- the typical short life cycle of our customers' products and success in the marketplace of our customers' products;
- the cyclical nature of customer demand in several of our businesses;
- customers' financial condition;

- changes to our mix of customers, programs and/or end market demand;
- how well we execute on our operational strategies, and the impact of changes to our business model;
- varying revenues and gross margins among geographies and programs for the products or services we provide;
- pricing pressures, the competitive environment and contract terms and conditions;
- upfront investments and challenges associated with the ramping of programs for new or existing customers;
- provisions or charges resulting from unexpected changes in market conditions impacting our industry or the end markets we serve;
- customer disengagements or terminations of customer programs;
- the timing of expenditures in anticipation of future orders;
- our effectiveness in planning production and managing inventory, fixed assets and manufacturing processes;
- operational inefficiencies and disruptions in production at individual sites;
- changes in cost and availability of commodities, materials, components, services and labor;
- current or future litigation;
- seasonality in quarterly revenue patterns across some of our businesses;
- governmental actions or changes in legislation;
- currency fluctuations; and
- changes in U.S. and global economic and political conditions and world events.

Our mix of revenue by end market is also impacted by, among other factors, overall end market demand, the timing and extent of new program wins, program completions or losses, customer disengagements, or follow-on business from customers and from acquisitions. Changes to our mix of revenue by end market, and the conditions that are specific to each end market, could lead to volatility in our revenue and margins from period to period and adversely impact our financial position and cash flows.

Materials constraints from certain suppliers throughout 2017 and 2018 led to volatility in our revenue and margins, and resulted in us carrying higher than expected levels of inventory at each of December 31, 2017 and 2018. Although we expect these materials constraints and resulting adverse impacts to continue in the near term, we have begun to see improvements in the availability of certain previously constrained items. Nonetheless, only minor improvements in supplier lead times are currently expected.

Compliance with governmental laws and obligations could be costly and may negatively impact our financial performance.

We are subject to various federal/national, state/provincial, local, foreign and supra-national environmental laws and regulations. Our environmental management systems and practices have been designed to provide for compliance with these laws and regulations. Maintaining compliance with and responding to increasingly stringent regulations requires a significant investment of time and resources and may restrict our ability to modify or expand our manufacturing sites or to continue production. Any failure to comply with these laws and regulations may potentially result in significant fines and penalties, our operations may be suspended or subjected to increased oversight, and our cost of related investigations could be material in any period.

More complex and stringent environmental legislation continues to be imposed, including laws that place increased responsibility and requirements on the "producers" of electronic equipment and, in turn, their providers and suppliers. Such laws may relate to product inputs (such as hazardous substances and energy consumption), product use (such as energy efficiency and waste management/recycling), and/or operational outputs/by-products from our manufacturing processes that can result in environmental contamination (such as waste water, air emissions and hazardous waste). Noncompliance with these requirements could result in substantial costs, including fines and penalties, and we may incur liability to our customers and consumers.

Where compliance responsibility rests primarily with our customers rather than with EMS companies, they may turn to EMS companies like Celestica for assistance in meeting their obligations. Our customers remain focused on issues such as waste management (including recycling), climate change (including the reduction of carbon emissions) and product stewardship, and expect their EMS providers to be environmental leaders. We strive to meet such customer expectations, although these demands may extend beyond our regulatory obligations and require significant investments of time and resources to attract and retain customers.

We generally conduct environmental assessments, or review assessment reports undertaken by others, for our manufacturing sites at the time of acquisition or leasing. However, such assessments may not reveal all environmental liabilities, and assessments have not been obtained for all sites. In addition, some of our operations involve the use of hazardous substances that could cause environmental impacts. While we have operational systems to provide environmental management, we cannot rule out all risk of non-compliance and could incur substantial costs to comply. Although if deemed necessary, we may investigate, remediate or monitor emissions and site conditions at some of our owned or leased sites (such as air, soil and/or groundwater conditions), we may not be aware of, or adequately address, all such emissions and conditions, and we may incur significant costs should such work be required. In many jurisdictions in which we operate, environmental laws impose liability for the costs of removal, remediation or risk assessment of hazardous or toxic substances on an owner, occupier or operator of real estate, even if such person or company was unaware of or not responsible for the discharge or migration of such substances. In some instances where soil or groundwater contamination existed prior to our ownership or occupation, landlords or former owners may have retained some contractual responsibility or regulatory liability, but this may not provide sufficient protection to reduce or eliminate our liability. Third-party claims for damages or personal injury are also possible and could result in significant costs to us. If more stringent compliance or cleanup standards under environmental laws or regulations are imposed, or the results of future testing and analyses at our current or former operating sites indicate that we are responsible for the release of hazardous substances into the air, ground and/or water, we may be subject to additional liability. Additional environmental matters may arise in the future at sites where no problem is currently known or at sites that we may acquire in the future.

Our healthtech business is subject to regulation by the U.S. Food and Drug Administration (FDA), Health Canada, the European Medicines Agency, the Brazilian Health Surveillance Agency, and similar regulatory bodies in other jurisdictions, relating to the medical devices and hardware we manufacture for our customers. Our sites that deliver products to the healthcare business are certified or registered in quality management standards applicable to the healthcare industry. We are required to comply with various statutes and regulations related to the design, development, testing, manufacturing and labeling of our medical devices in addition to reporting of certain information with respect to the safety of such products. Any failure to comply with these regulations could result in fines, injunctions, product recalls, import detentions, additional regulatory controls, suspension of production, and/or the shutting down of one or more of our sites, among other adverse outcomes. Failure to comply with these regulations may also materially affect our reputation and/or relationships with customers and regulators.

We provide design, engineering and manufacturing related services to our customers in the aerospace and defense end market. As part of these services, we are subject to substantial regulation from government agencies including the U.S. Department of Defense (DOD) and the U.S. Federal Aviation Administration. Our aerospace and defense sites are certified in quality management standards applicable to the aerospace and defense industry. Failure to comply with these regulations or the loss of any of our quality management certifications may result in fines, penalties and injunctions, and could prevent us from executing on current or winning future contracts, any of which may materially adversely affect our financial condition and operating results. In addition to quality management standards, there are several other U.S. regulations with which we are required to comply, including the Federal Acquisition Regulations (FAR), which provides uniform policies and procedures for acquisition; the Defense Federal Acquisition Regulation Supplement, a DOD agency supplement to the FAR that provides DOD-specific acquisition regulations that DOD government acquisition officials, and those contractors doing business with DOD, must comply with in the procurement process for goods and services; and the Truth in Negotiations Act, which requires full and fair disclosure by contractors in the conduct of negotiations with the government and its prime contractors. These rules are complex, our performance under them is subject to audit by the U.S. Defense Contract Audit Agency, the U.S. Office of Federal Contract Compliance Programs and other government regulators, and in most cases must be complied with by our suppliers. If an audit or investigation reveals a failure to comply with regulations, we could become subject to civil or criminal penalties and administrative sanctions by either the government or the prime customer, including government pre-approval of our government contracting activities, termination of the contract, payment of fines and suspension or debarment from doing further business with the U.S. government. Any of these actions could increase our expenses, reduce our revenue and damage our reputation as a reliable U.S. government supplier. We are also subject to the export control laws and regulations of the countries in which we operate, including, but not limited to, the U.S. International Traffic in Arms Regulations (ITAR) and the Export Administration Regulations (EAR).

Our international operations require us to comply with various anti-bribery laws, including the U.S. Foreign Corrupt Practices Act (FCPA) and the Corruption of Foreign Public Officials Act (Canada) (CFPOA). In some countries in which we operate, it may be customary for businesses to engage in business practices that are prohibited by the FCPA, CFPOA or other laws and regulations. Although we have implemented policies and procedures designed to ensure compliance with the FCPA, CFPOA and similar laws in other jurisdictions, there can be no assurance that all of our employees and agents, as well as those companies to which we outsource certain business operations, will not be in violation of these laws and our policies or procedures. In addition to the difficulty of monitoring compliance, any suspected or alleged activity would require a costly investigation by us and may result in the diversion of management's time, resources and attention. Failure to comply with these laws may subject us to, among other things, adverse publicity, penalties and legal expenses that may harm our reputation and have a material adverse effect on our business, financial condition and operating results.

As a public company, we are subject to stringent laws, regulations and other requirements, including the U.S. Sarbanes-Oxley Act and the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank), affecting, among other areas, our accounting, internal controls, corporate governance practices, securities disclosures and reporting. For example, Dodd-Frank contains provisions concerning specified minerals originating from the Democratic Republic of Congo or adjoining countries (referred to as "conflict minerals"). As required by Dodd-Frank, the U.S. Securities and Exchange Commission (SEC) has adopted due diligence, disclosure and reporting requirements for companies that manufacture, or contract to manufacture, products that include conflict minerals. We manufacture such products for our customers. Due to our complex supply chain, compliance with these rules is time-consuming and costly. If we are unable to ascertain the origins of all such minerals used in the manufacturing of our products through the due diligence procedures we implement, we may be unable to satisfy our customers' certification requirements. This may harm our reputation, damage our customer relationships and result in a loss of revenue. If the SEC rules or other new social or environmental standards limit our pool of suppliers in order to produce "conflict free" or "socially responsible" products, or otherwise adversely affect the sourcing, supply and pricing of materials used in our products, we could also experience cost increases and a material adverse impact on our operating results.

In addition, whenever we pursue business in new end markets, or our customers pursue new technologies or businesses, we are required to navigate the potentially heavy regulatory and legislative burdens of such end markets or technologies, as well as applicable quality standards with respect thereto.

The regulatory climate can itself affect the demand for our services. For example, government reimbursement rates and other regulations, as well as the financial health of healthcare providers, changes in how healthcare in the U.S. is structured, including as a result of the U.S. Affordable Care Act (or any successor legislation), and how medical devices are taxed, could affect the willingness and ability of end customers to purchase the products of our customers in this market as well as impact our margins.

Our customers are also required to comply with various government regulations, legal requirements and industry standards, including many of the industry-specific regulations discussed above. Our customers' failure to comply could affect their businesses, which in turn would affect our sales to them. In addition, if our customers are required by regulation or other requirements to make changes in their product lines, these changes could significantly disrupt particular programs for these customers and create inefficiencies in our business.

In addition, a failure by a supplier or manufacturer to comply with applicable laws, regulations or customer requirements could negatively impact our business, and for governmental customers, could result in fines, penalties, suspension or even debarment being imposed on us, which could have a material adverse impact on our business, financial condition and results of operations.

Also see ***"Policies or legislation proposed or instituted by the current U.S. administration could have a material adverse effect on our business, results of operations and financial condition"*** above for a discussion of potential adverse impacts on our business that may result from changes to U.S. laws, regulations and/or policies proposed or implemented by the current U.S. administration.

Compliance or the failure to comply with employment laws and regulations may negatively impact our financial performance.

We are subject to a variety of domestic and foreign employment laws, including those related to: workplace safety, discrimination, harassment, whistle-blowing, wages and overtime, personal taxation, classification of employees, work authorizations and severance. Compliance with such laws may increase our costs. In addition, such laws are subject to change, and enforcement activity relating to these laws, particularly outside of the United States, may increase as a result of greater media attention due to alleged violations by other companies, changes in law, political and other factors. There can be no assurance that, in the future, we will not be found to have violated elements of such laws. Any such violations could lead to the assessment of fines or damages against us by regulatory authorities or claims by employees, any of which could adversely affect our operating results and/or our reputation.

An inability to successfully manage the procurement, development, implementation or execution of IT systems, or to adequately maintain these systems and their security, as well as to protect data and other confidential information, may adversely affect our business and reputation.

As a complex, global company, we are heavily dependent on our IT systems to support our customers' requirements and to successfully manage our business. Any inability to successfully manage the procurement, development, implementation, execution or maintenance of such systems, including matters related to system and data security, cybersecurity, privacy, reliability, compliance, performance and access, as well as any inability of these systems to fulfill their intended purpose, could have an adverse effect on our business. See "***Our operations and our customer relationships may be adversely affected by disruptions to our information technology (IT) systems, including disruptions from cybersecurity breaches of our IT infrastructure***" above.

In addition, we must comply with increasingly complex and rigorous regulatory standards enacted to protect business and personal data in various jurisdictions. For example, the European Union recently adopted the General Data Protection Regulation (GDPR). The GDPR imposes additional obligations on companies regarding the handling of personal data and provides certain individual privacy rights to persons whose data is stored. Compliance with existing, proposed and recently enacted laws and regulations can be costly; any failure to comply with these regulatory standards could subject us to legal and reputational risks. Misuse of or failure to secure personal information could also result in violation of data privacy laws and regulations, proceedings against the Company by governmental entities or others, fines and penalties, damage to our reputation and credibility and could have a negative impact on our business and results of operations.

We may be required to make larger contributions to our defined benefit pension and other pension plans in the future.

We maintain defined benefit and defined contribution pension plans, as well as other pension plans globally. Our pension funding policy for our defined benefit and defined contribution pension plans is to contribute amounts sufficient, at minimum, to meet local statutory funding requirements that are based on actuarial calculations. Our obligations are based on certain assumptions relating to plan asset performance, salary changes, employee turnover, retirement ages, life expectancy, expected healthcare costs, the performance of the financial markets, future interest rates, and plan and legislative changes. If actual results or future expectations differ from these assumptions or if statutory funding requirements change, the amounts we are obligated to contribute to the pension plans may increase and such increase could be significant. We are also required to contribute amounts to our other pension plans to meet local statutory or such pension plans' funding requirements. The amounts we are obligated to contribute may increase due to legislative and other changes.

Failure to comply with the conditions of government grants may lead to grant repayments and adversely impact our financial performance.

We have received grants from government organizations or other third parties as incentives related to capital investments or other expenditures. These grants often have future conditions with which we must comply. If we do not meet these future conditions, we could be obligated to repay all or a portion of the grant, which could adversely affect our financial position and operating results.

There are inherent uncertainties involved in the estimates, judgments and assumptions used in the preparation of our financial statements. Any changes in estimates, judgments and assumptions could have a material adverse effect on our financial position and results of operations.

Our Consolidated Financial Statements are prepared in accordance with IFRS. The preparation of our financial statements in conformity with IFRS requires management to make estimates, judgments and assumptions that affect the reported amounts of our assets, liabilities and related reserves, revenues and expenses. Estimates, judgments and assumptions are inherently subject to change in future periods, which could have a material adverse effect on our financial position and results of operations.

Our credit agreement contains restrictive covenants that may impair our ability to conduct business, and the failure to comply with such covenants could cause our outstanding debt to become immediately payable.

Our credit agreement contains restrictive covenants that limit our management's discretion with respect to certain business matters. Among other factors, these covenants limit our ability and our subsidiaries' ability to incur additional debt, create liens or other encumbrances, change the nature of our business, sell or otherwise dispose of assets, merge or consolidate with other entities, or effect specified changes in control. This agreement also contains certain financial covenants related to indebtedness and interest coverage. If we are not able to comply with these covenants, our outstanding debt could become immediately due and payable, and the incurrence of additional debt under our revolving credit facility would not be allowed, either of which could have a material adverse effect on our liquidity and ability to conduct our business. Acquisitions are part of our diversification strategy and we have, and may in the future, incur additional debt to finance these transactions, at least in part. See "***We have incurred substantial third-party debt in recent periods, which has increased our debt service requirements, reduced our ability to fund future acquisitions and/or to respond to unexpected capital requirements, and may have other adverse impacts on our business" and "We may use cash on hand, issue debt or equity securities, and/or incur additional third-party debt (or any combination thereof) to complete future acquisitions or otherwise fund our operations, which may adversely affect our liquidity, credit ratings, financial condition and/or results of operations"*** above for a discussion of potential negative impacts resulting from the incurrence of additional debt.

We are subject to interest rate fluctuations.

In June 2018, we entered into an $800.0 million credit facility (New Credit Facility), which consists of a $350.0 million term loan (June Term Loan) that matures in June 2025, and a $450.0 million revolving credit facility (New Revolver) that matures in June 2023. In November 2018, we added an incremental $250.0 million term loan (November Term Loan) under the New Credit Facility, maturing in June 2025. Borrowings under the New Revolver bear interest at LIBOR, Canadian Prime, or Base Rate (each

as defined in the New Credit Facility), plus a specified margin, or in the case of any bankers' acceptance, at the B/A Discount Rate (as defined in the New Credit Facility). The margin for borrowings under the New Revolver ranges from 0.75% to 2.5%, depending on the rate we select and our consolidated leverage ratio. The June Term Loan currently bears interest at LIBOR plus 2.125%. The November Term Loan currently bears interest at LIBOR plus 2.5%. Borrowings under the New Credit Facility expose us to interest rate risks due to fluctuations in these rates and margins. Because the amounts we have borrowed under our credit facility has increased in recent periods, an increase in interest rates would have a more pronounced impact on our interest expense than in prior periods. At December 31, 2018, we had an aggregate of $598.3 million outstanding under the June Term Loan and the November Term Loan, and other than ordinary course letters of credit, $159.0 million outstanding under the New Revolver. To partially hedge against our exposures to interest rate variability on our term loans, we entered into 5-year agreements with a syndicate of third-party banks in August and December 2018 to swap the variable interest rates with fixed rates of interest on $350.0 million of the total borrowings thereunder. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity — Cash requirements and Capital Resources." Significant interest rate fluctuations may adversely affect our business, operating results and financial condition.

Changes to LIBOR may negatively impact us.

LIBOR, the London interbank offered rate, is the basic rate of interest used in lending between banks on the London interbank market and is widely used as a reference for setting the interest rate on loans globally. Our term loans currently bear interest based on LIBOR, and the New Revolver bears interest at specified rates (at our option) which include LIBOR. The U.K. Financial Conduct Authority, which regulates LIBOR, has announced that it intends to stop encouraging or requiring banks to submit LIBOR rates after 2021, and it is unclear if LIBOR will cease to exist or if new methods of calculating LIBOR will evolve. If LIBOR ceases to exist or if the methods of calculating LIBOR change from their current form, interest rates on our current or future indebtedness may increase, and we may need to renegotiate our New Credit Facility to replace LIBOR with a new standard. In addition, the issues that may lead to the discontinuation or unavailability of LIBOR may make one or more of the alternative methods impossible or impracticable to determine. Further, there can be no guarantee that a transition from LIBOR to an alternative will not result in financial market disruptions, significant increases in benchmark rates, or borrowing costs to borrowers, any of which could have an adverse effect on our liquidity, results of operations or financial condition.

Deterioration in financial markets or in the macro-economic environment may adversely affect our ability to raise funds or increase the cost of raising funds.

We currently have access to the New Revolver, which matures in June 2023. We may also issue or wish to incur additional debt or issue equity securities to fund our operations or make additional acquisitions. Our ability to borrow or raise capital, or renew or increase the New Credit Facility, may be impacted if financial markets are unstable. Disruptions in the capital and credit markets could adversely affect our ability to draw on our New Revolver (or any successor or additional facility). Our access to funds under the New Credit Facility (or any successor or additional facility) will be dependent on the ability of our senior lenders to meet their funding commitments. They may not be able to meet their funding commitments to us if they experience shortages of capital and liquidity or if they experience excessive volumes of borrowing requests from us and other borrowers within a short period of time. Longer term disruptions in the capital and credit markets as a result of uncertainty, changing or increased regulation, reduced alternatives, or failures of significant financial institutions could adversely affect our access to liquidity needed for our business. Any disruption could require us to take measures to conserve cash until the markets stabilize or until alternative credit arrangements or other funding sources can be arranged. Such measures could include deferring capital expenditures, and reducing or eliminating discretionary uses of cash.

Our credit rating may be downgraded.

Any negative change in our credit rating or outlook may make it more expensive for us to raise additional capital in the future on terms that are acceptable to us, if at all. See "***We have incurred substantial third-party debt in recent periods, which has increased our debt service requirements, reduced our ability to fund future acquisitions and/or to respond to unexpected capital requirements, and may have other adverse impacts on our business."***

The interest of our controlling shareholder, Onex Corporation, with an approximate 80% voting interest, may conflict with the interests of other shareholders.

Onex Corporation (Onex) beneficially owns all of our outstanding multiple voting shares and less than 1% of our outstanding subordinate voting shares. The number of subordinate voting shares and multiple voting shares beneficially owned by Onex represents approximately 80% of the voting interest in Celestica. Accordingly, Onex has the ability to exercise significant influence over our business and affairs and generally has the power to determine all matters submitted to a vote of our shareholders where our shares vote together as a single class. Onex may make decisions regarding Celestica and our business that are opposed to other shareholders' interests or with which other shareholders may disagree. Onex's voting power could have the effect of deterring or preventing a change in control of our Corporation that might otherwise be beneficial to our other shareholders.

Through its shareholdings, Onex has the power to elect our directors and its approval is required for significant corporate transactions such as certain amendments to our Restated Articles of Incorporation (Articles), the sale of all or substantially all of our assets and plans of arrangement. The directors so elected have the authority, subject to applicable laws, to appoint or replace senior management, cause us to issue additional subordinate voting shares or multiple voting shares or repurchase subordinate voting shares or multiple voting shares, declare dividends or take other actions.

Gerald W. Schwartz, the Chairman of the Board, President and Chief Executive Officer of Onex, indirectly owns shares representing the majority of the voting rights of the shares of Onex. The interests of Onex and Mr. Schwartz may differ from the interests of the remaining holders of subordinate voting shares. For additional information about shareholder rights and restrictions relative to our subordinate voting shares and multiple voting shares, see Item 10(B), "Memorandum and Articles of Incorporation." For additional information about our principal shareholders, see Item 7(A), "Major Shareholders." Also see Item 7(B), "Related Party Transactions" for a description of Mr. Schwartz's ownership interest in the Property Purchaser, and the post-assignment option to obtain a non-voting interest in the assignee of the Property Sale Agreement granted by such assignee to the Property Purchaser.

Onex has, from time-to-time, issued debentures exchangeable and redeemable under certain circumstances for our subordinate voting shares, entered into forward equity agreements with respect to our subordinate voting shares, sold our subordinate voting shares (after exchanging multiple voting shares for subordinate voting shares), or redeemed these debentures through the delivery of our subordinate voting shares, and could take similar actions in the future. These sales may impact our share price or have consequences on our debt and ownership structure.

We are subject to litigation, which may result in substantial litigation expenses, settlement costs or judgments, require the time and attention of key management resources, and result in adverse publicity, any of which may negatively impact our financial performance.

We are from time to time party to various copyright, patent and trademark infringement, unfair competition, breach of contract, customs, employment and other legal actions incidental to our business, as plaintiff or defendant, as well as various other claims, suits, investigations and legal proceedings (including securities class action and shareholder derivative lawsuits which have been settled or dismissed). Additional legal claims or regulatory matters may arise in the future and could involve matters relating to commercial disputes, government regulation and compliance, intellectual property, antitrust, tax, employment or shareholder issues, product liability claims and other issues on a global basis. Regardless of the merits of the claims, litigation may be both time-consuming and disruptive to our business. The defense and ultimate outcome of any lawsuits or other legal proceedings may result in higher operating expenses and a decrease in our margins, which could have a material adverse effect on our business, financial condition, or results of operations. We cannot predict the final outcome of such lawsuits or the likelihood that other proceedings will be instituted against us. Accordingly, the cost of defending against such lawsuits or any future lawsuits or proceedings may be high and, in any event, these legal proceedings may result in the diversion of our management's time and attention away from our business. In the event that there is an adverse ruling in any legal proceeding, we may be required to make payments to third parties that could have a material adverse effect on our reputation, financial condition and results of operations.

Changes in accounting standards enacted by the relevant standard-setting bodies may adversely affect our reported operating results, profitability and financial performance.

Accounting standards are revised periodically and/or expanded upon by applicable standard-setting bodies. We are required to adopt new or revised accounting standards and to comply with revised interpretations issued from time-to-time by these authoritative bodies, including the Canadian Accounting Standards Board (CASB), the IASB, and the SEC. While these accounting changes do not typically affect the economics of our business, such standards could have a significant effect on our accounting methods and reported results. For example, the IASB issued a new revenue recognition standard and amended the standard relating to the classification, measurement and impairment of financial assets and hedge accounting; both of these standards became effective as of January 1, 2018. The new revenue recognition standard changed the timing of revenue recognition for a significant portion of our business, and the adoption of such standard had a material impact on our Consolidated Financial Statements, primarily in relation to inventory and accounts receivable. See note 2(y) to the Consolidated Financial Statements in Item 18. Additionally, the standard relating to leases was also amended to bring most leases onto the balance sheet for lessees, eliminating the distinction between operating and finance leases. This standard became effective January 1, 2019. Although we are completing our analysis of the impact of adopting this standard, we anticipate that its initial application will have a material impact on our Consolidated Financial Statements. See note 2(x) to the Consolidated Financial Statements in Item 18. Changes in accounting standards could materially affect (either positively or negatively) our reported operating results or financial condition. Our Consolidated Financial Statements are prepared in accordance with IFRS. Our reported financial information may not be comparable to the information reported by our competitors or other public companies that use different accounting standards.

Shares eligible for public sale may adversely affect our share price.

Future sales of our subordinate voting shares in the public market, or the issuance of subordinate voting shares in connection with our equity-based compensation plans or otherwise, could adversely affect the market price of the subordinate voting shares.

At February 13, 2019, we had approximately 118.1 million subordinate voting shares and approximately 18.6 million multiple voting shares outstanding. In addition, as of such date, there were approximately 10.5 million subordinate voting shares reserved for issuance from treasury for outstanding awards under our employee and director equity-based compensation plans, including approximately 0.3 million subordinate voting shares underlying stock options (vested and unvested), approximately 0.4 million subordinate voting shares underlying unvested restricted share units, approximately 0.7 million subordinate voting shares underlying unvested performance share units (assuming vesting of 100% of the target amount granted), and approximately 0.04 million subordinate voting shares underlying deferred share units (granted prior to January 1, 2017) that have not been settled. Moreover, pursuant to our Articles, we may issue an unlimited number of additional subordinate voting shares without further shareholder approval (subject to any required stock exchange approvals). Sales of a substantial number of our subordinate voting shares in the public market by holders of exercised vested options or vested share units settled in or exercised for subordinate voting shares may lower the prevailing market price for such shares and could impair our ability to raise capital through the future sale of our equity securities. Additionally, if we issue additional subordinate voting shares, or if holders of outstanding vested options exercise those options or if vested shares units are settled in newly-issued subordinate voting shares, our shareholders will incur dilution. See ***"We may use cash on hand, issue debt or equity securities, and/or incur additional third-party debt (or any combination thereof) to complete future acquisitions or otherwise fund our operations, which may adversely affect our liquidity, credit ratings, financial condition and/or results of operations"*** above. The exercise price of all options is subject to adjustment upon stock dividends, splits and combinations, if any, as well as anti-dilution adjustments as set forth in the relevant award agreement.

The market price of our stock may be volatile.

Volatility in our business can result in significant price and volume fluctuations in the market price of our stock. Factors such as changes in our operating results, announcements by our customers, competitors or other events affecting companies in the electronics industry, currency fluctuations, general market fluctuations, and macro-economic conditions may cause the market price of our subordinate voting shares to decline. In addition, if our operating results do not meet the expectations of securities analysts or investors, the price of our stock could decline. Furthermore, the existence of our normal course issuer bid (NCIB) could cause our subordinate voting share price to be higher than it would be in the absence of such a program, and repurchases under the NCIB expose us to risks resulting from a reduction in the size of our "public float," which may reduce our trading volume as well as our stock price.

There can be no assurance that we will continue to repurchase subordinate voting shares for cancellation.

Although we currently have an NCIB in effect, whether we repurchase shares under such NCIB for cancellation and the amount and timing of any such share repurchases, is subject to capital availability and periodic determinations by our Board that share repurchases are in the best interest of our shareholders and are in compliance with all applicable laws and agreements. Future share repurchases, including their timing and amount, may be affected by, among other factors: our views on potential future capital requirements for strategic transactions, including acquisitions; debt service requirements; our credit rating; changes to applicable tax laws or corporate laws; and changes to our business model. In addition, the amount we spend and the number of shares we are able to repurchase under our NCIB and any future substantial issuer bid may further be affected by a number of other factors, including the shares we repurchase to satisfy stock-based compensation awards, the price of our subordinate voting shares and blackout periods in which we are restricted from repurchasing shares. Our share repurchases may change from time to time, and we cannot provide assurance that we will continue to repurchase subordinate voting shares for cancellation in any particular amounts or at all. A reduction in or elimination of our share repurchases could have a negative effect on our stock price.

Potential unenforceability of judgments.

We are incorporated under the laws of the Province of Ontario, Canada. Our controlling persons, a majority of our directors, and several of our officers are residents of (or are organized in) Canada. Also, a substantial portion of our assets and the assets of these person are located outside of the United States. As a result, it may be difficult to effect service of process within the United States upon those directors, officers, or controlling persons who are not residents of the United States, or to enforce judgments in the United States obtained in courts of the United States. It may also be difficult for shareholders to enforce a U.S. judgment in Canada predicated upon the civil liability provisions of U.S. federal or state securities laws or to succeed in a lawsuit in Canada based only on U.S. federal or state securities laws.

Negative publicity could adversely affect our reputation as well as our business, financial results and share price.

Unfavorable media related to our industry, company, brand, marketing, personnel, operations, business performance, or prospects may affect our share price and the performance of our business, regardless of its accuracy or inaccuracy. The speed at which negative publicity can be disseminated has increased dramatically with the capabilities of electronic communication, including social media outlets, websites, blogs, and newsletters. Our success in maintaining, extending, and expanding our brand image depends on our ability to adapt to this rapidly changing media environment. Adverse publicity or negative commentary from any media outlet could damage our reputation and reduce the demand for our products, which would adversely affect our business.

Our business could be negatively impacted as a result of actions by activist shareholders or others.

Although Onex controls a substantial majority of the voting power of our securities, we may be subject to challenges in the operation of our business due to actions instituted by activist shareholders or others. Responding to such actions could be costly and time-consuming, may not align with our business strategies and could divert the attention of our Board and senior management from the pursuit of our business strategies. Perceived uncertainties as to our future direction as a result of shareholder activism may lead to the perception of a change in the direction of the business or other instability and may make it more difficult to attract and retain qualified personnel and business partners and may adversely affect our relationships with vendors, customers and other third parties.

Our business and operations could be adversely impacted by climate change initiatives.

Concern over climate change has led to international legislative and regulatory initiatives directed at limiting carbon dioxide and other greenhouse gas emissions. Proposed and existing efforts to address climate change by reducing greenhouse gas emissions could directly or indirectly affect our costs of energy, materials, manufacturing, distribution, packaging and other operating costs, which could adversely impact our business and financial results.

Item 4. Information on the Company

A. History and Development of the Company

We were incorporated in Ontario, Canada on September 27, 1996. Our legal and commercial name is Celestica Inc. We are a corporation domiciled in the Province of Ontario, Canada and operate under the *Business Corporations Act* (Ontario) ("OBCA"*)*. Our principal executive offices are currently located at 844 Don Mills Road, Toronto, Ontario, Canada M3C 1V7, and as of April 1, 2019, will be located at 5140 Yonge Street, Suite 1900, Toronto, Ontario, Canada M2N 6L7. Our telephone number is (416) 448-5800, and our internet address is www.celestica.com. Information on our website is not incorporated by reference into this Annual Report.

Prior to our incorporation, we were an IBM manufacturing unit that provided manufacturing services to IBM for more than 75 years. In 1993, we began providing electronics manufacturing services to non-IBM customers. In October 1996, we were purchased from IBM by an investor group led by Onex, and in 1998, we completed our initial public offering.

A description of our acquisition activities (including our 2018 acquisitions of Atrenne and Impakt), our principal capital expenditures (including property, plant and equipment), and financing activities, over the last three fiscal years is set forth in notes 3, 4, 5, 12, 13, 22, and 24 to the Consolidated Financial Statements in Item 18, and Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations." A description of our divestiture activities (including our restructuring activities) over the last three fiscal years is set forth in notes 4, 7, 8, and 16 to the Consolidated Financial Statements in Item 18, and Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations," including a discussion of the consummation of the sale of our real property located in Toronto, Ontario, and related transition matters.

See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity — Additional Commitments" for a description of our significant commitments for capital expenditures as at December 31, 2018 and those planned for 2019.

See "Business Overview" below for a description of the reorganization of our reporting structure, including our sales, operations and management systems, into two operating and reporting segments, commencing in the first quarter of 2018.

See "Overview — *Celestica's business"* and "Recent Developments" of Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations" for a discussion of our

comprehensive review of our CCS segment revenue portfolio, commenced in the second half of 2018, recent adverse trends impacting our semiconductor capital equipment customers, and the status of our CEI.

There were no public takeover offers by third parties in respect of the Corporation's subordinate voting shares or multiple voting shares or by the Corporation in respect of other companies' shares which occurred during the last or current financial year.

The U.S. Securities and Exchange Commission (SEC) maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is http://www.sec.gov.

B. Business Overview

General

As previously disclosed, during the first quarter of 2018, we completed a reorganization of our reporting structure, including our sales, operations and management systems, into two operating and reporting segments: ATS and CCS. Prior to this reorganization, we operated in one reportable segment (Electronic Manufacturing Services), which was comprised of multiple end markets (ATS, Communications and Enterprise during 2017). See note 25 to our Consolidated Financial Statements in Item 18.

Our ATS segment consists of our ATS end market, and is comprised of our aerospace and defense, industrial, smart energy, healthtech, and capital equipment businesses. Our capital equipment business is comprised of our semiconductor, display, and power & signal distribution equipment businesses. Our CCS segment consists of our Communications and Enterprise end markets, and is comprised of our enterprise communications, telecommunications, servers and storage businesses. All period percentages and financial information in this Annual Report reflect the current presentation.

We believe our services and solutions create value for our customers by accelerating their time-to-market, and by providing higher quality, lower cost, and reduced cycle times in our customers' supply chains as compared to their insourcing of these activities. We believe this results in lower total cost of ownership, greater flexibility, higher return on invested capital and improved competitive advantage for our customers in their respective markets.

Our global headquarters is located in Toronto, Canada. We operate a network of sites and centers of excellence (discussed below) strategically located in North America, Europe and Asia, with specialized end-to-end supply chain capabilities tailored to meet specific market and customer product lifecycle requirements.

We offer a comprehensive range of product manufacturing and related supply chain services to our customers in both of our segments, including design and development, new product introduction, engineering services, component sourcing, electronics manufacturing and assembly, testing, complex mechanical assembly, systems integration, precision machining, order fulfillment, logistics, asset management, product licensing, and after-market repair and return services. Within design and development, our JDM offering includes the creation of hardware platforms and design solutions in collaboration with customers, as well as the management of aspects of the supply chain and manufacturing.

Although we supply products and services to over 100 customers, we depend upon a small number of customers for a substantial portion of our revenue. In the aggregate, our top 10 customers represented 70% of our total 2018 revenue. In 2018, we had two customers that individually represented more than 10% of total revenue (Cisco Systems, Inc. and Dell Technologies accounted for 14% and 10%, respectively, of our total revenue for 2018). Significant reductions in, or the loss of, revenue from these or any of our major customers may have a material adverse effect on us. See Item 3(D) — Key Information — Risk Factors — "***We are dependent on a limited number of customers and end markets. A decline in revenue from, or the loss of, any significant customer, could have a material adverse effect on our financial condition and operating results.***"

Revenue from our ATS segment currently represents approximately one-third of our aggregate revenue but generated just under one-half of our total segment income in 2018. Products and services in this segment are extensive and are often more regulated than in our CCS segment, and can include the following: government-certified and highly-specialized manufacturing, electronic and enclosure-related services for aerospace and defense-related customers; high-precision equipment and integrated subsystems used in the manufacture of semiconductors and displays; a wide range of industrial automation, controls, test and measurement devices; advanced solutions for surgical instruments, diagnostic imaging and patient monitoring; and efficiency products to help manage and monitor the energy and power industries. Our ATS segment businesses typically have a higher margin profile and longer product life cycles than the businesses in our CCS segment. Revenue from our CCS segment currently represents approximately two-thirds of our aggregate revenue and generated just over one-half of our total segment income in 2018. Products and services in this segment consist predominantly of enterprise-level data communications and information processing infrastructure products, and can include routers, switches, servers and storage-related products used by a wide range of businesses

and cloud-based service providers to manage digital connectivity, commerce and social media applications. Our CCS segment businesses typically have a lower margin profile and higher volumes than the businesses in our ATS segment, and have been impacted in recent periods (and continue to be impacted) by aggressive pricing, rapid shifts in technology, model obsolescence and the commoditization of certain products.

To increase the value we deliver to our customers, we continue to make investments in people, value-added service offerings, new capabilities, capacity, technology, IT systems, software and tools. We continuously work to improve our productivity, quality, delivery performance and flexibility in our efforts to be recognized as a leading company in the EMS industry. We have invested in automation and the "Digital Factory" to streamline our processes and reduce costs. Our current CEI, and related restructuring actions, are also intended to further streamline our business, increase operational efficiencies and improve our productivity.

Our current priorities are focused on evolving our revenue portfolio; expanding our non-IFRS operating margin and segment margins; and maintaining a balanced approach to capital allocation. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Operating Goals and Principals" for further detail. Operating margin is a non-IFRS measure without a standardized meaning, and may not be comparable to similar measures presented by other companies. See "Non-IFRS measures" in Item 5 — Operating and Financial Review and Prospects, for a discussion of this and other non-IFRS measures included in this Annual Report, and a reconciliation of our non-IFRS measures to the most directly comparable IFRS measures.

We believe that continued investments in these areas support our long-term growth strategy, and will strengthen our competitive position, enhance customer satisfaction, and increase long-term shareholder value. We intend to continue to focus on expanding our revenue base in our higher-value-added services, such as design and development, engineering, and after-market services. However, as we are experiencing slower growth rates and increased pricing pressures in our traditional markets, which account for a substantial portion of our revenue, we will also focus on expanding our business beyond our traditional end markets, including by pursuing new customers and acquisition opportunities in our ATS segment to expand our end market penetration, to diversify our end market mix, and to enhance and add new technologies and capabilities to our offerings.

Electronics Manufacturing Services Industry

Overview

Leading EMS companies manage global networks that are capable of delivering customized supply chain solutions. They offer end-to-end services for the entire product lifecycle, including design and engineering services, manufacturing, assembly and test, systems integration, fulfillment and after-market services. Our customers, which include OEMs, service providers (including cloud-based service providers) and other companies in a wide range of industries, use these services to enhance their competitive positions. Outsourcing manufacturing and related services can help our customers to address their business challenges related to cost, asset utilization, quality, time-to-market, demand volatility, customer support, and rapidly changing technologies.

We believe outsourcing by these companies will continue across a number of industries as a means to:

Reduce Operating Costs and Invested Capital. Companies that use our services are under continuous pressure to reduce total product lifecycle costs, and property, plant and equipment expenditures. The manufacturing process for electronics products has become increasingly automated, requiring greater levels of investment in property, plant and equipment. EMS companies help enable such companies to gain access to a global network of manufacturing sites with supply chain management expertise, advanced engineering capabilities, flexible capacity and economies of scale. By working with EMS companies, they can reduce their overall product lifecycle and operating costs, working capital and property, plant and equipment investment requirements, and thereby improve their financial performance.

Focus Resources on Core Competencies. Our customers operate in highly competitive environments, characterized by rapid technological change and short product lifecycles. As a result, many customers prioritize their resources on their core competencies of product development, sales, marketing and customer service, by outsourcing design, engineering, manufacturing, supply chain, product lifecycle management, and other product support requirements to their EMS partners.

Improve Time-to-Market. Electronic products generally experience short lifecycles, requiring companies that use our services to continually reduce the time and cost of bringing products to market. We believe that such companies can significantly improve their product development cycles and enhance time-to-market by benefiting from the expertise and infrastructure of EMS providers, including their capabilities relating to design and engineering services, prototyping and the rapid ramp-up of new products to high-volume production, all with the critical support of global supply chain management and manufacturing networks.

Utilize EMS Companies' Procurement, Inventory Management and Logistics Expertise. We believe that the successful manufacturing of electronic products requires significant resources to manage the complexities in planning, procurement and inventory management, frequent design changes, short product lifecycles and product demand fluctuations. Companies can help manage these complexities by outsourcing to those EMS providers that (i) possess sophisticated IT systems and global supply chain management capabilities and (ii) can leverage significant component procurement advantages to lower product costs.

Access Leading Engineering Capabilities and Technologies. Electronic products and the electronics manufacturing technology needed to support them are complex and require significant investment. As a result, some companies rely on EMS providers for design and engineering services, supply chain management, and manufacturing and technological expertise. Through their design and engineering services, and through the knowledge gained from manufacturing and repairing products, EMS providers can assist such companies in the development of new product concepts, or the re-design of existing products, as well as assist with improvements in the performance, cost and time required to bring products to market. In addition, companies can gain access to high-quality manufacturing expertise and capabilities in the areas of advanced process, interconnect and test technologies.

Improve Access to Global Markets. Some of our customers provide products or services to a global customer base. EMS companies with global infrastructure and support capabilities help to provide customers with efficient world-wide manufacturing solutions, distribution capabilities and after-market services.

Access Value-Added Service Offerings. EMS providers strive to expand their offerings to include services such as design, fulfillment and after-market services, including repair and recycling, to encourage companies to outsource more of their cost of goods sold.

Celestica's Strategy

We are focused on building solid partnerships and delivering informed, flexible solutions intended to contribute to our customers' success. To achieve this, we collaborate with our customers in an effort to identify and meet their current and future requirements. We offer a range of services designed to deliver lower costs, increased flexibility and predictability, improved quality and responsive service. We constantly seek to advance our quality, engineering, manufacturing and supply chain capabilities to help our customers achieve a competitive advantage. We will continue to focus on our pursuit of the following, intended to strengthen our competitive position and enhance customer satisfaction and shareholder value:

Increase Penetration in our End Markets. We strive to establish a diverse customer base across several industries. We believe our expertise in technology, quality and supply chain management, in addition to our service offerings and centers of excellence, have positioned us as an attractive partner to companies across various markets. Our goal is to grow across our end markets, with particular emphasis on expanding our ATS segment, both organically and through acquisitions. Revenue dollars from our ATS segment increased by 13% from 2016 to 2018, while representing 33% of our total revenue over the same period.

Our revenue by end market as a percentage of total revenue is as follows:

	2016	2017	2018
ATS	32%	32%	33%
Communications	42%	43%	41%
Enterprise	26%	25%	26%

Selectively Pursue Acquisitions and Strategic Transactions. We will continue to selectively seek acquisition opportunities and strategic transactions in order to (i) profitably grow our revenue, (ii) further develop strategic relationships with customers in our end markets and (iii) enhance the scope of our capabilities and service offerings. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Recent developments" for a discussion of our recent acquisitions of Atrenne and Impakt in our ATS segment.

Continuously Improve Operational Performance. We will continue to focus on (i) managing our mix and volume of business and service offerings to improve our overall margins, (ii) leveraging our supply chain practices globally to lower materials costs, minimize lead times and improve our planning cycle to better meet volatility in customer demand and improve asset utilization and inventory levels, and (iii) improving operating efficiencies to reduce costs and improve margins, including through our CEI and our CCS portfolio review. In order to help us streamline our processes, we have been increasing our investments in the "Digital Factory", and automating and connecting our equipment, people and systems throughout our global network, including our customers and suppliers. Nonetheless, the mix of our business can impact our revenue and overall margins. Although our revenues increased in 2018 compared to 2017, our mix of programs negatively impacted our gross margins, as certain new programs

contributed lower gross profit than past programs (including a higher concentration of fulfillment services in 2018 that contributed significantly lower gross profit than our historical full-service traditional EMS programs). We also intend to continue to invest in higher margin services (including our JDM offering), continue our focus on driving better inventory performance in the constrained materials environment, and completing our CEI. Although revenue from our ATS segment in 2018 increased by 13% compared to 2017, ATS segment income increased 6% for the same period, impacted in part by sharp demand decreases in the cyclical semiconductor market we experienced in the second half of 2018. Our CEI includes actions to align this business to the current demand environment to improve its profitability. See Item 5, "Operating and Financial Review and Prospects."

Develop and Grow Trusted Relationships with Leading Customers. We continue to seek to build profitable, strategic relationships with industry leaders that we believe can benefit from our services and solutions. We strive to respond to our customers' needs with speed, flexibility and predictability in delivering results. We have established and maintain strong relationships with a diverse mix of leading OEMs, service providers (including cloud-based service providers) and other companies across our end markets. We believe that our customer base is a strong potential source of growth for us as we seek to strengthen these relationships through the delivery of additional services.

Expand Range of Service Offerings and Continue to Invest in Developing New Technology, Quality Products and Supply Chain Solutions and Services. We continually seek to expand the services we offer to our customers, and we are committed to meeting our customers' needs in the areas of technology, quality and supply chain management. We believe our expertise in these areas enables us to meet the rigorous demands of our customers, allows us to produce a variety of electronic products ranging from high-volume electronics to highly complex technology infrastructure products used in a broad array of end markets, and allows us to deliver consistently reliable products to our customers. We also believe the systems and collaborative processes associated with our expertise in supply chain management help us to adjust our operations to meet the lead time requirements of our customers, and quickly and effectively deliver products directly to end customers. We collaborate with our suppliers to influence component design for the benefit of our customers. As a result of the successes that we have had in these areas, we have been recognized with numerous customer and industry achievement awards.

See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Operating Goals and Principals" for a discussion of our current priorities and areas of focus pertaining to evolving our revenue portfolio, expanding our non-IFRS operating margin and segment margins, and maintaining a balanced approach to capital allocation.

Celestica's Business

Innovative Supply Chain Solutions and Services

We are a global provider of innovative supply chain solutions. We offer a range of services including design and development , engineering services, supply chain management, new product introduction, component sourcing, electronics manufacturing, assembly and test, complex mechanical assembly, systems integration, precision machining, order fulfillment, logistics, asset management, product licensing, and after-market repair and return services. Our design and development services include our JDM offering, which consists of developing hardware platforms and design solutions in collaboration primarily with CCS segment customers, as well as managing aspects of the supply chain and manufacturing. We believe that our JDM offering differentiates us from other EMS providers, by encompassing advanced technology design solutions that customers can tailor to their specific platform applications. We execute our business in our global network of sites, including our designated centers of excellence, strategically located in North America, Europe and Asia. We leverage these sites and centers of excellence, information technology, and our supply chain expertise using collaborative processes and a team of highly skilled, customer-focused employees. We believe that our ability to deliver a range of supply chain solutions, including hardware platforms, to our customers provides them with a competitive lead time, and advantages in quality, flexibility and total cost of ownership.

The objective of our centers of excellence program is to help ensure that our operations reflect a solid understanding of the markets we serve, have current capabilities and standardized practices, and are positioned to provide efficiency, consistency, and value to our customers around the globe. To obtain "center of excellence" status, our sites must meet our defined criteria pertaining to quality, supply chain capabilities, Lean and Six Sigma, market specific certifications (to the extent applicable), and other matters regarding their operations.

Quality, Lean and Six Sigma Culture

We believe one of our strengths is our ability to consistently deliver high-quality services and products. We have an extensive quality management system that focuses on continual process improvement and achieving high levels of customer satisfaction. We employ a variety of advanced statistical engineering techniques and other tools to assist in improving product and service quality. Most of our principal sites are ISO 9001 and ISO 14001 certified (international quality management standards), and have other required industry-specific certifications.

In addition to these standards, we deploy Lean and Six Sigma initiatives throughout our operations network to deliver customer value and eliminate defects and waste. Implementing Lean initiatives across our manufacturing processes helps drive efficiencies, cycle times velocities and improve product quality. We use Six Sigma extensively in an effort to reduce process variation and to drive root cause problem-solving. Lean and Six Sigma methods are also used in non-production areas to streamline our processes and eliminate waste. For example, our completed Global Business Services (GBS) initiative focused on integrating, standardizing and optimizing our end-to-end business processes throughout our organization. We apply the knowledge we gain in our after-market services to help improve the quality and reliability of next-generation products. Success in these areas helps our customers to lower their costs, positioning them more competitively in their respective markets.

Design and Engineering Services

Our global design teams are focused on delivering flexible solutions and expertise, intended to help customers reduce overall product costs, improve time-to-market, and introduce competitively differentiated products. For customer-owned designs, we partner with our customers to augment their design teams, and utilize our proprietary design analysis tools to minimize design revisions and to achieve improved manufacturing yields. Our JDM service involves developing hardware platforms and design solutions in collaboration with customers, managing aspects of the supply chain, and manufacturing their products. We continue to invest in leading-edge product roadmaps and design capabilities aligned with both market standards and emerging technologies in support of our JDM offering. We are currently delivering both partially customized JDM products, and complete hardware platform solutions to customers in the storage, servers, communications, and industrial markets. These products are intended to help our customers reach their markets faster, while reducing product costs and building valuable IP for their product portfolios. Through our collective experience with common technologies across multiple industries and product groups, we believe we provide quality and cost-focused solutions for a wide range of our customers' design needs. Revenue attributable to our JDM business grew approximately 30% in 2018 as compared to the prior year.

We collaborate with some of our core customers' product designers in the early stages of product development, using advanced tools to enable new product ideas to progress from electrical and application-specific integrated circuit design, to simulation, physical layout and design review, all intended to ensure readiness for manufacturing. We leverage our design expertise to create innovative technologies and hardware product solutions, and leverage key ecosystem partners to drive both innovation and supply chain leverage. Our JDM offerings encompass advanced technology hardware design solutions that customers can tailor to their specific platform applications. We believe that collaboration between our customers' teams, key ecosystem partners, and our design and manufacturing groups helps to ensure that new designs are released rapidly, smoothly and cohesively into production.

Our engineering services team works with our customers throughout the product life-cycle. We believe our engineering expertise and experience in design review, product test solutions, assembly technology, automation, quality and reliability, position us to deliver the services required to address the challenges facing our customers. We maintain ties with key industry associations and engineering firms to help us stay apprised of advances in technical knowledge.

Prototyping and New Product Introduction

Prototyping is a critical early-stage process in the development of new products. Our engineers collaborate with our customers' engineers to provide quick responses in the early stages of the product development lifecycle.

Supply Chain Management and Services

We use advanced planning, analytics, enterprise resource planning, and supply chain management systems to optimize materials management from suppliers to our customers' customers. We believe that the effective management of the supply chain is critical to our customers' success, as it directly impacts the time and cost required to deliver products to market and the capital requirements associated with carrying inventory.

We strive to reduce our customers' total cost of ownership by providing lower costs and reduced cycle times in their supply chain, and by delivering higher quality products. We also strive to align our preferred suppliers in close proximity to our centers

of excellence to increase the speed and flexibility of our supply chain, to deliver higher quality products and to reduce time-to-market. We believe we deliver a differentiated supply chain offering.

Through our global supply chain management processes and integrated IT tools, we endeavor to provide our customers with enhanced visibility to balance their global demand and supply requirements, including inventory and order management.

Manufacturing Services

Printed Circuit Board Assembly

Printed circuit board assembly includes the attachment of electronic components, such as capacitors, microprocessors, resistors and memory modules, to printed circuit boards. Our global network of engineers helps us to provide our customers with full printed circuit board ("PCB") assembly technology capabilities. These capabilities include design for manufacturing, PCB layout, packaging, assembly (circuit card assembly or CCA), lead-free soldering, test development, and data analytics for complex flexible and rigid-flex circuits and hybrid PCBs.

Complex Mechanical Assembly

We provide systems integration and precision machined components to our capital equipment customers. Complex mechanical systems integration consists of multiple interconnected subsystems that interact with various materials, e.g., fluids, solids, particles and rigid bodies. Such systems are often used in advanced manufacturing applications such as semiconductor manufacturing, display manufacturing (including LCD, OLED, QLED and other displays), medical applications using robotics, and other applications such as cash handling machines where precise standards are required.

As a result of our acquisition of the assets of Karel, we now also provide complex mechanical assembly primarily to our aerospace customers, including wire harness assembly, systems integration, sheet metal fabrication, welding and machining.

Precision Machining

We utilize specialized computer-controlled machines to manufacture high quality components to tight tolerance requirements. Such components are often used in applications similar to those noted above for complex mechanical assembly.

Smart Energy Services

We provide integrated smart energy solutions and services to our renewable energy customers in the areas of power generation, conversion and monitoring. We deliver complete product lifecycle solutions, including design, manufacturing and reliability services for power inverters, metering and controls electronics, and energy storage subsystems. Although we have exited the solar panel manufacturing business, we remain committed to growing the other areas within our smart energy market portfolio, which include power inverters, energy storage products, smart meters and other electronic componentry.

Systems Assembly and Test

We use sophisticated technologies in the assembly and testing of our products. We continue to make investments in the development of automated solutions, as well as new assembly and test process techniques intended to enhance product quality, reduce cost and improve delivery time to customers. We work independently and also collaborate with customers and suppliers to develop assembly and test technologies. Systems assembly and testing require sophisticated logistics capabilities to rapidly procure components, assemble products, perform complex testing and distribute products to customers around the world. Our full systems assembly services involve combining and testing a wide range of sub-assemblies and components before shipping them to their final destination. Increasingly, customers require custom build-to-order system solutions with very short lead times and we are focused on using our advanced supply chain management capabilities to respond to our customers' needs.

Quality and Product Assurance

We provide complete product reliability testing, inspection and qualification capabilities to support our customers' full product lifecycle requirements. Our quality and product assurance teams perform product testing to ensure that designs meet or exceed required specifications. We are capable of testing to various industry standards, and we work closely with our customers to execute unique test protocols. We believe that this service allows our customers to assess certification risks early in the product development lifecycle, reducing cost and time-to-market.

Failure Analysis and After-Market Services

Our extensive failure analysis capabilities concentrate on identifying the root cause of product failures and determining corrective actions. The root causes of failures typically relate to inherent component defects and/or deficiencies in design specifications. Products are subjected to various environmental extremes, including temperature, humidity, vibration, voltage and contamination. Field conditions are simulated in failure analysis laboratories which employ electron microscopes, spectrometers and other advanced equipment. Our engineers work proactively in partnership with suppliers and customers in an effort to discover product failures before products are shipped, and to develop and implement resolutions if required.

We also seek to provide value to our customers through our after-market services offerings which include repair, fulfillment, reverse logistics, asset management, reclamation and returns processing and prevention. Our fulfillment offering includes the design and management of integrated supply chain and materials management for light manufacturing and final assembly and reclamation. Our reverse logistics offering includes the design and management of transportation networks, warehousing and distribution of products, asset recovery services, and transportation and supply chain event monitoring. Our returns processing and prevention offering provides our customers with product screening and testing and product design and process analysis. Our reclamation offering includes product disassembly, reassembly and re-use, as well as certified scrap disposition processing. We offer these services individually or integrated through a 'Control Tower' model which coordinates our people, systems and processes with those of our customers to improve service levels by providing an increased level of visibility and analytics throughout the entire after-market value chain.

Geographies

For each of 2016, 2017 and 2018, approximately 70% of our revenue was produced in Asia and approximately 20% of our revenue was produced in North America. Revenue produced in Canada represented 9% of revenue in 2018 (2017 — 8%; 2016 — 8%). Our property, plant and equipment in Canada represented 9% of our property, plant and equipment at December 31, 2018 (December 31, 2017 — 6%; December 31, 2016 — 7%). A listing of our principal locations is included in Item 4(D), "Information on the Company — Property, Plants and Equipment." Certain geographic information for countries exceeding 10% of our external revenue, property, plant and equipment, and intangible assets and goodwill is set forth in note 25 to the Consolidated Financial Statements in Item 18.

Marketing and Customer Experience

We structure our business development teams by end market, with a focus on offering market insight and expertise, and complete manufacturing and supply chain solutions to our customers. We have customer-focused teams, each headed by a group general manager who oversees the global relationship with our key customers. These teams work with our Solutions Architects to meet the requirements of each customer's product or supply chain. Our global network is comprised of customer-focused teams, operational and project managers, and supply chain management teams, as well as senior executives.

Our goal is to effectively collaborate with our customers, and towards that end, we provide comprehensive support before, during and after the delivery of our products and services. We seek to deepen and grow our customer relationships by providing consistent, high-quality implementation and customer support services, which we believe drives higher customer retention and additional opportunities within our existing customer base.

Customer Concentration and Relationship Management

As stated above, we supply products and services to over 100 customers. We target industry-leading customers in each of our segments. Our CCS segment customers include Cisco Systems, Inc., Dell Technologies, Hewlett-Packard Enterprise, Hewlett-Packard Inc., IBM Corporation, Juniper Networks, Inc., NEC Corporation, Oracle Corporation, Polycom, Inc., and Western Digital Corporation. Our ATS segment customers include Applied Materials, Inc. and Honeywell Inc. We are focused on strengthening our relationships with these and other strategic customers through the delivery of new and expanding end-to-end solutions.

During 2018, two customers (Cisco Systems, Inc., which accounted for 14% of total 2018 revenue, and Dell Technologies, which accounted for 10% of total 2018 revenue) individually represented more than 10% of total revenue (2017 — two customers: Cisco Systems, Inc., (18%) and Juniper Networks, Inc. (13%); 2016 — two customers: Cisco Systems, Inc. (19%) and Juniper Networks, Inc. (11%)). Each of these customers are in our CCS segment. Our top 10 customers represented 70%, 71% and 68% of total revenue for 2018, 2017 and 2016, respectively.

We generally enter into master supply agreements with our customers that provide the framework for our overall relationship, although the level of business under those agreements is not guaranteed. Instead, we bid on a program-by-program basis and typically receive customer purchase orders for specific quantities and timing of products. A majority of these agreements also

require the customer to purchase unused inventory that we have purchased to fulfill that customer's forecasted manufacturing demand. Some of these agreements require us to provide specific price reductions to our customers over the term of the contracts. We expect such price reductions to become more prevalent as customers increasingly seek longer-term contracts to lock in their supply, terms and pricing. This has, and could continue to, adversely impact our operating results in future periods.

Research and Technology Development

We use advanced technology to design, assemble and test the products we manufacture. We continue to increase investment in our global design services and capabilities to conceive differentiated JDM product solutions for our customers.

We believe that our customer-focused factories are flexible and can be reconfigured as needed to meet customer-specific product requirements and fluctuations in volumes (although we do incur increased production costs from time to time in connection with unexpected demand changes). We have extensive capabilities across a broad range of specialized assembly, configuration and test processes. We work with a variety of substrates based on the products we build for our customers, from thin, flexible printed circuit boards to highly complex, dense multi-layer printed circuit boards, as well as a broad array of advanced component and attachment technologies employed in our customers' products and our own product designs. We believe that increasing demand for full-system assembly solutions continues to drive technical advancement in complex mechanical assembly and configuration. We also develop and manufacture sub-components, such as optical modules and complex machined parts, intended to drive targeted technical advancements to support these opportunities.

Our automated electronics assembly lines are continuously refreshed with the latest generation technology, with a focus on flexible lines with quick changeover, large board capability, and small component capability. Our assembly capabilities are complemented by advanced test capabilities. The technologies we use include high-speed functional testing, optical, burn-in, vibration, radio frequency, and in-circuit and in-situ dynamic thermal cycling stress testing. Our inspection technology includes X-ray computed tomography, advanced automated optical inspection, three-dimensional paste volumetric inspection and scanning electron microscopy. We work directly with leaders in the equipment industry to optimize their products and solutions or to jointly design solutions to meet the needs of our customers. We apply automation solutions for higher volume products, where possible, to help improve product quality, lower product costs, and increase manufacturing efficiencies.

Our ongoing research and development activities include the development of processes and test technologies, as well as focused product development and technology building blocks that can be used by customers in the development of their products, or to accelerate their products' time-to-market. Our JDM offering is focused on developing these design solutions and subsequently managing the other aspects of the supply chain, including manufacturing of the products. We focus our solutions on developing current and next generation storage, server and communications products (in particular, elements of data centers, which include the development of complete hardware platform solutions to reduce product costs and accelerate time to market, and which we believe will continue to grow). We work directly with our customers to understand their product roadmaps and to develop technology solutions intended to meet their particular needs. We are proactive in developing manufacturing techniques that take advantage of the latest component, product and packaging designs. We have worked with, and have taken leadership roles in, industry and academic groups that strive to advance the state of technology in the industry. As we continue to pursue deeper relationships with our customers, and participate in additional services and revenue opportunities with them, we anticipate an increase in our spending in these development areas.

Supply Chain Management

We share data electronically with our key suppliers, and help ensure speed of supply through strong relationships with our component suppliers and logistics partners. We view the size and scale of our procurement activities, including our IT systems, as an important competitive advantage, as they enhance our ability to obtain better pricing, influence component packaging and designs, and obtain a supply of components in constrained markets. We procure substantially all of our materials and components on behalf of our customers pursuant to individual purchase orders that are generally short-term in nature.

Components and raw materials are sourced globally, with a majority of electronic components originating from Asian countries. We continue to experience materials constraints from certain suppliers in both our segments, due in part to industry-wide shortages for certain electronic components. These shortages caused delays in the production of customer products, and required us to carry higher than expected levels of inventory, commencing in 2017 and continuing throughout 2018. Although we expect these materials constraints and resulting adverse impacts to continue in the near term, we have begun to see improvements in the availability of certain previously constrained items. Nonetheless, only minor improvements in supplier lead times are currently expected. See Item 3(D) — "Key Information — Risk Factors" for a discussion of various risks related to our foreign operations. All of the products we manufacture or assemble require one or more components. In many cases, there may be only one supplier of a particular component. Some of these components could be rationed in response to supply shortages. We work with our suppliers

and customers to attempt to ensure continuity in the supply of these components. In cases where unanticipated customer demand or supply shortages occur, we attempt to arrange for alternative sources of supply, where available, or defer planned production in response to the availability of the critical components. Notwithstanding these efforts, however, materials constraints from certain suppliers caused delays in the production of customer products during 2018. See Item 3(D) Key Information — Risk Factors, ***"We are dependent on third parties to supply certain materials, and our results can be negatively affected by the availability and cost of such materials."***

We utilize our enterprise systems, as well as specific supply chain IT tools, to provide comprehensive information on our logistics, financial and engineering support functions. These systems provide management with the data and analytics required to manage the logistical complexities of our business and are augmented by and integrated with other applications, such as shop floor controls, component and product database management, and design tools.

To minimize the risk associated with inventory, we primarily order materials and components only to the extent necessary to satisfy existing customer orders and forecasts covered by the applicable customer contract terms and conditions. We have implemented specific inventory management strategies with certain suppliers, such as "supplier managed inventory" (pulling inventory at the production line on an as-needed basis) and on-site stocking programs. Our initiatives in Lean and Six Sigma also focus on eliminating excess inventory throughout the supply chain. Notwithstanding the foregoing, however, as a result of demand volatility from our customers and the materials constraints from certain suppliers discussed above, we carried higher than expected levels of inventory at December 31, 2018. We expect these adverse market conditions to continue in the near term.

Intellectual Property

We hold licenses to various technologies which we have acquired in connection with acquisitions. In addition, we believe that we have secured access to all required technology that is material to the current conduct of our business.

We regard our manufacturing processes and certain designs as proprietary trade secrets and confidential information. We rely largely upon a combination of trade secret laws, non-disclosure agreements with our customers, suppliers, employees and other parties, and upon our internal security systems, confidentiality procedures and employee confidentiality agreements to maintain the trade secrecy of our designs and manufacturing processes. Although we take steps to protect our trade secrets, there can be no assurance that misappropriation will not occur. See Item 3(D) Key Information — Risk Factors, ***"We may not adequately protect our intellectual property or the intellectual property of others."***

We currently have a limited number of patents and patent applications pending to protect our intellectual property. However, we believe that the rapid pace of technological change makes patent protection less significant than such factors as the knowledge and experience of management and personnel, and our ability to develop, enhance and market electronics manufacturing services.

Each of our customers typically provides us with a license to its technology for use in providing electronics manufacturing services to such customer. Generally, the agreements governing such technology grant to us non-exclusive, worldwide licenses with respect to the subject technologies, are typically provided without charge, and terminate upon a material breach by us of the terms of such agreements, or termination of the program to which such licenses relate.

We also license some technology from third parties that we use in providing electronics manufacturing services to our customers. We believe that such licenses are generally available on commercial terms from a number of licensors. Generally, the agreements governing such technology grant to us non-exclusive, worldwide licenses with respect to the subject technologies and terminate upon expiration, or a material breach by us of the terms, of such agreements.

Competition

The EMS industry is highly competitive with multiple global EMS providers competing for customers and programs. Our competitors include Benchmark Electronics, Inc., Flex Ltd., Hon Hai Precision Industry Co., Ltd., Jabil Circuit, Inc., Plexus Corp., and Sanmina Corporation, as well as smaller EMS companies that often have a regional, product, service or industry-specific focus, and ODMs that provide internally designed products and manufacturing services. As part of our JDM offering, we also provide complete hardware platform solutions, which may compete with those of our customers. Offering products or services to customers that compete with the offerings of other customers may negatively impact our relationship with, or result in a loss of business from, such other customers.

We also face indirect competition from current and prospective customers who evaluate our capabilities and commercial models against the merits of manufacturing products internally, and from distribution and logistics providers expanding their services across the supply chain, including assembly, fulfillment, logistics and in some cases, engineering services. We compete with different companies depending on the type of service or geographic area. Some of our competitors have greater scale and

provide a broader range of services than we provide. We believe our competitive advantage is our track record in manufacturing technology, quality, complexity, responsiveness and cost-effective, value-added services. To remain competitive, we believe we must continue to provide technologically advanced manufacturing services and solutions, maintain quality levels, offer flexible delivery schedules, deliver finished products and services on time and compete favorably on price.

The competitive landscape in the CCS area remains aggressive, as demand growth continues to move from traditional enterprise network infrastructure providers to cloud-based service providers, resulting in aggressive bidding from EMS providers and increased competition from ODMs as they further penetrate these markets. As a result of the high concentration of our business in the CCS marketplace, we expect continued competitive pressures, aggressive pricing and technology-driven demand shifts, as well as certain materials constraints, to negatively impact our CCS businesses in future periods. We intend to continue to monitor these dynamics and focus on cost management in response to these factors. To enhance our competitiveness, we continue to focus on expanding our service offerings and capabilities beyond our traditional areas of EMS expertise.

See Item 3(D) Key Information — Risk Factors — ***"We operate in an industry comprised of numerous competitors and aggressive pricing dynamics"*** and Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Recent developments — *Segment Reorganization and Segment Environment.*"

Environmental Matters

We are subject to various federal/national, state/provincial, local, foreign and supra-national laws and regulations, including environmental measures relating to the release, use, storage, treatment, transportation, discharge, disposal and remediation of contaminants, hazardous substances and waste, and health and safety measures related to practices and procedures applicable to the construction and operation of our sites. We have management systems in place designed to maintain compliance with such laws and regulations.

Our past operations and the historical operation by others of our sites may have resulted in soil and groundwater contamination on our sites, and in many jurisdictions in which we operate, environmental laws impose liability for the costs of removal, remediation or risk assessment of hazardous or toxic substances on an owner, occupier or operator of real property even if such person or company was unaware of or not responsible for the discharge or migration of such substances. From time-to-time we investigate, remediate and monitor soil and groundwater contamination at certain operating sites. We generally obtain Phase I or similar environmental assessments (which involve general inspections without soil sampling or groundwater analysis), or review assessment reports undertaken by others, for our manufacturing sites at the time of acquisition or leasing. However, such assessments may not reveal all environmental liabilities (due, for example, to limited available information about prior operations at the properties or other gaps in information at the time we acquire or lease such sites), and assessments have not been obtained for all sites. Where contamination is suspected at sites being acquired or leased, Phase II intrusive environmental assessments (that can include soil and/or groundwater testing) are usually performed. We expect to conduct Phase I or similar environmental assessments in respect of future property acquisitions or leases and intend to perform Phase II assessments where appropriate. Past environmental assessments have not revealed any environmental liability that we believe will have a material adverse effect on our operating results or financial condition, in part because of contractual retention of liability by landlords and former owners at certain sites. However, any such contractual retention of liability may not provide sufficient protection to reduce or eliminate our liability. Third-party claims for damages or personal injury are also possible and could result in significant costs to us. If more stringent compliance or cleanup standards under environmental laws or regulations are imposed, or the results of future testing and analyses at our current or former sites indicate that we are responsible for the release of hazardous substances into the air, ground and/or water, we may be subject to additional liability. Environmental matters may arise in the future at sites where no problem is currently known or at sites that we may acquire in the future. See Item 3(D) Key Information — Risk Factors — ***"Compliance with governmental laws and obligations could be costly and may negatively impact our financial performance."***

Environmental legislation also occurs at the product level. Celestica works with its customers in connection with compliance with applicable product-level environmental legislation in the jurisdictions where products are manufactured and/or offered for use and sale by our customers.

Backlog

Although we obtain purchase orders from our customers, they typically do not commit to delivery of products more than 30 to 90 days in advance. We do not believe that the backlog of expected product sales covered by purchase orders is a meaningful measure of future sales, since generally orders may be rescheduled or canceled.

Seasonality

Seasonality is reflected in the mix of products we manufacture from quarter-to-quarter. From time to time, we experience some level of seasonality in our quarterly revenue patterns across certain of our businesses. The addition of new customers may also introduce different demand cycles than our existing businesses. For example, cloud-based service providers have increased their use of products in our CCS segment in recent periods. These customers and markets are cyclically different from our traditional OEM customers, creating more volatility and unpredictability in our revenue patterns as we adjust to this shift, and additional challenges with respect to the management of our working capital requirements. The pace of technological change, the frequency of customers transferring business among EMS competitors and the constantly changing dynamics of the global economy will also continue to impact us. As a result of these factors, the impact of new program wins or program losses, overall demand variability, and limited visibility in technology end markets, it is difficult to isolate the impact of seasonality on our business. In recent periods, revenue from the storage component of our CCS segment has increased in the fourth quarter of the year compared to the third quarter, and then decreased in the first quarter of the following year, reflecting the increase in customer demand we typically experience in this business in the fourth quarter. In addition, we typically experience our lowest overall revenue levels during the first quarter of each year. There is no assurance that these patterns will continue. See also Item 3D Key Information — Risk Factors — ***"Our revenue and operating results may vary significantly from period to period."***

Controlling Shareholder Interest

Onex is our controlling shareholder with an approximate 80% voting interest in Celestica. Accordingly, Onex has the ability to exercise a significant influence over our business and affairs and generally has the power to determine all matters submitted to a vote of our shareholders where the subordinate voting shares and multiple voting shares vote together as a single class. Such matters include electing our Board and thereby influencing significant corporate transactions, including mergers, acquisitions, divestitures and financing arrangements. Gerald W. Schwartz, the Chairman of the Board, President and Chief Executive Officer of Onex, indirectly owns shares representing the majority of the voting rights of the shares of Onex. For further details, refer to Item 3D Key Information — Risk Factors — ***"The interest of our controlling shareholder, Onex Corporation, with an approximate 80% voting interest, may conflict with the interests of other shareholders"*** and footnotes 2 and 3 of Item 7(A) "Major Shareholders and Related Party Transactions — Major Shareholders."

Government Regulation

Information regarding material effects of government regulations on Celestica's business is provided in the risk factors entitled ***"We are subject to the risk of increasing income and other taxes, tax audits and the challenges of successfully defending our tax positions, and obtaining, renewing or meeting the conditions of tax incentives and credits, any of which may adversely affect our financial performance***," ***"Compliance with governmental laws and obligations could be costly and may negatively impact our financial performance***," ***"Compliance or the failure to comply with employment laws and regulations may negatively impact our financial performance," and "Policies or legislation proposed or instituted by the current U.S. administration could have a material adverse effect on our business, results of operations and financial condition"*** in Item 3(D) Key Information — Risk Factors.

Sustainability

Celestica's strategy in regard to sustainability is to integrate the elements of our sustainability program into every aspect of our business. The five elements of our strategy are employee sustainability, environmental sustainability, materials stewardship, sustainable solutions and sustainable communities.

Our guiding policies and principles include:

- Our Values, developed with input from our employees to reflect the characteristics and behaviors that are core to Celestica;
- Our Business Conduct Governance Policy, which outlines the ethics and practices we consider necessary for a positive working environment and the high legal and ethical standards to which our employees are held accountable; and
- The Code of Conduct of the RBA, of which we were a founding (and remain a) member. The RBA's Code of Conduct outlines industry standards intended to ensure that working conditions in the supply chain are safe, workers are treated with respect and dignity, and manufacturing processes are environmentally responsible. We are continually working to implement, manage and audit our compliance with the RBA's Code of Conduct.

We publish a Sustainability Report and a Business Conduct Governance Policy, both of which are available (along with our Values) on our corporate website at www.celestica.com. These documents outline our sustainability strategy, our high standards for business ethics, the policies we value and uphold, the progress we have made as a socially responsible organization and the key milestones we are working to achieve in 2019 and beyond.

Financial Information Regarding Geographic Areas

Details of our financial information regarding geographic areas are disclosed in note 25 to the Consolidated Financial Statements in Item 18, in Item 4(B) "Information on the Company — Business Overview — Geographies," and in Item 4(D) "Information on the Company — Property, Plants and Equipment." Risks associated with our foreign operations are disclosed in Item 3(D) "Key Information — Risk Factors", including "***Our ability to successfully manage unexpected changes or risks inherent in our global operations and supply chain may adversely impact our financial performance***."

C. Organizational Structure

Onex, an Ontario corporation, is the Corporation's controlling shareholder with an approximate 80% voting interest in Celestica (via its direct and indirect beneficial ownership of approximately 18.6 million (100%) of the Corporation's multiple voting shares, and approximately 0.4 million of the Corporation's subordinate voting shares). Gerald W. Schwartz is the Chairman of the Board, President, and Chief Executive Officer of Onex, and indirectly owns multiple voting shares of Onex carrying the right to elect a majority of the Onex Board of Directors (see footnotes 2 and 3 to the Major Shareholders Table in Item 7(A) below).

Celestica conducts its business through subsidiaries operating on a worldwide basis. The following companies are considered significant subsidiaries of Celestica, and each of them is wholly-owned, directly or indirectly, by Celestica:

Celestica Cayman Holdings 1 Limited, a Cayman Islands corporation;

Celestica Cayman Holdings 9 Limited, a Cayman Islands corporation;

Celestica (Dongguan-SSL) Technology Limited, a China corporation;

Celestica Holdings Pte Limited, a Singapore corporation;

Celestica Hong Kong Limited, a Hong Kong corporation;

Celestica LLC, a Delaware, U.S. limited liability company;

Celestica (Suzhou) Technology Co. Ltd, a China corporation;

Celestica (Thailand) Limited, a Thailand corporation;

Celestica (USA) Inc., a Delaware, U.S. corporation;

Impakt Holdings LLC, a Delaware, U.S. limited liability company; and

2480333 Ontario Inc., an Ontario, Canada corporation.

D. Property, Plants and Equipment

The following table summarizes our principal owned and leased properties as of February 13, 2019. These sites are used to provide manufacturing services and solutions, such as the manufacture of printed circuit boards, assembly and configuration of final systems, complex mechanical assembly, precision machining as well as other related services and customer support activities, including design and development, warehousing, distribution, fulfillment and after-market services.

Major locations	Square Footage[1] (in thousands)	Owned/Leased (2)	Lease Expiration Dates
Canada[5]	888	Owned	N/A
Canada [3][5]	341	Leased	between 2020 and 2028
Arizona	111	Leased	2027
California[3]	506	Leased	between 2019 and 2023
Oregon	188	Leased	2021
Massachusetts	55	Owned	N/A
Minnesota[3]	60	Leased	between 2019 and 2021
Mexico[3]	476	Leased	between 2019 and 2023
Ireland[3]	171	Leased	between 2020 and 2024
Spain	109	Owned	N/A
Romania	297	Owned	N/A
China[3][4]	1,147	Owned/Leased	between 2020 and 2056
Malaysia[3][4]	1,350	Owned/Leased	between 2019 and 2060
Thailand[3][4]	903	Owned/Leased	between 2019 and 2048
Singapore[3]	202	Leased	between 2019 and 2021
South Korea [3]	279	Owned/Leased	between 2019 and 2024
Japan[3]	563	Owned/Leased	between 2020 and 2022
Laos	121	Leased	between 2021 and 2023

(1) Represents estimated square footage being used.

(2) No owned or leased real properties are pledged as security under the New Credit Facility.

(3) Represents multiple locations.

(4) With respect to these locations, the land is leased, and the buildings are either owned or leased by us.

(5) On July 23, 2015, we entered into an agreement (which was amended in September of 2018) to sell our real property located in Toronto, Ontario, which includes the site of our corporate headquarters and our Toronto manufacturing operations. The closing of the transaction occurred on March 7, 2019. In anticipation of the sale, in November 2017, we entered into a long-term lease in the Greater Toronto area for our new manufacturing operations. We completed this relocation in February 2019. As part of the sale, we will enter into a long-term lease for our new corporate headquarters on commercially reasonable arm's-length terms. In connection therewith, we are relocating our corporate headquarters to a temporary location while space in a new office building (to be built by the purchaser of the property on the site of our current location) is under construction, and entered into a three-year lease for such temporary offices in September 2018. The temporary office relocation is currently expected to be completed by the end of the first half of 2019. We have incurred significant capitalized and transition costs throughout the transition period (which commenced in the fourth quarter of 2017) in connection with these relocations. We incurred approximately $17 million in capitalized building improvement and equipment costs for the new manufacturing location through February 13, 2019, and expect to incur: (i) approximately $6 million in capitalized building improvement costs in connection with our temporary office relocation (approximately $1 million of which has been incurred through February 13, 2019), and (ii) up to approximately $20 million in transition costs through the end of the second quarter of 2019 (approximately $16 million of which has been incurred through February 13, 2019). All of such costs have been, and the remainder are expected to be, funded from cash on hand. See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity — *Toronto Real Property and Related Transactions*."

We consider each of the properties in the table above to be adequate for its purpose and suitably utilized according to the individual nature and requirements of the relevant operations. We currently expect to be able to extend the terms of expiring leases or to find replacement sites on commercially acceptable terms. Also see "Environmental Matters" in Item 4(B) above.

Our principal executive office is currently located at 844 Don Mills Road, Toronto, Ontario, Canada M3C 1V7, and as of April 1, 2019, will be located at 5140 Yonge Street, Suite 1900, Toronto, Ontario, Canada M2N 6L7.

Our material tangible fixed assets are described in note 8 to the Consolidated Financial Statements in Item 18.

Item 4A. Unresolved Staff Comments

None.

Item 5. Operating and Financial Review and Prospects

CELESTICA INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS
OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2018

The following Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) should be read in conjunction with our 2018 audited consolidated financial statements (2018 AFS), which we prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). Unless otherwise noted, all dollar amounts are expressed in U.S. dollars. The information in this discussion is provided as of February 13, 2019 unless we indicate otherwise.

Certain statements contained in this MD&A constitute forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933, as amended, and Section 21E of the U.S. Securities Exchange Act of 1934, as amended (U.S. Exchange Act), and contain forward-looking information within the meaning of Canadian securities laws. Such forward-looking information includes, without limitation, statements related to: our priorities, intended areas of focus, targets, objectives and goals; trends in the electronics manufacturing services (EMS) industry and our segments; the anticipated continuation and impact of adverse market conditions, particularly in our Connectivity & Cloud Solutions (CCS) segment; adverse market conditions in, and the cyclical nature of, our capital equipment business, in particular our semiconductor business; our anticipated financial and/or operational results; benefits anticipated from, and the range and timing of, our cost efficiency initiative; the anticipated impact of our comprehensive CCS segment portfolio review (CCS Review) on our business; the timing, quantity, and intended method of funding of purchases of subordinate voting shares under our current normal course issuer bid (NCIB); the timing of the valuation of certain recently-acquired assets and finalization of the related purchase price allocations; our growth and diversification strategies and plans (and potential hindrances thereto); the expected continuation, and adverse impact on our business, of materials constraints; supplier lead times; the anticipated impact of completed acquisitions (Atrenne Integrated Solutions, Inc. (Atrenne) and Impakt Holdings, LLC (Impakt)) and program wins, transfers, losses or disengagements on our business; anticipated expenses, restructuring actions and charges, capital expenditures and other anticipated working capital requirements, including the anticipated amounts, timing, impact and funding thereof; the anticipated impact on our operations of any new significant tariffs on items imported into the U.S. and related countermeasures; the anticipated repatriation of undistributed earnings from foreign subsidiaries; the impact of tax and litigation outcomes; our anticipated ability to use certain net operating losses; intended investments in our business and associated risks; the anticipated impact of the pace of technological changes, customer outsourcing, program transfers, and the global economic environment on our business; raw materials prices; the impact of outstanding indebtedness under our credit facility on our business; our intention to settle outstanding equity awards with subordinate voting shares; the anticipated aggregate cost of relocating our Toronto manufacturing operations and corporate headquarters; the timing of relocating our corporate headquarters; our expectation that the costs of our Toronto manufacturing and corporate office relocations will be more than offset by the cash proceeds from the property sale; the anticipated impact of recent U.S. tax reform on our business; transition activities related to, and the anticipated impact of, newly-issued accounting standards; the impact of price reductions and longer-term contracts on our business; our intention to sell a lower amount of accounts receivable under a customer's supplier financing program; the potential use of cash, securities issuances and further increases in third-party indebtedness to fund our operations or acquisitions, and the anticipated and potential adverse impacts of such uses and/or increase; the potential adverse impacts of Britain's intention to leave the European Union (Brexit) and/or policies or legislation proposed or instituted by the current administration in the U.S.; our pension obligations; our intentions with respect to our U.K. supplemental pension plan; the potential true-up premium on annuities purchased for our U.K. pension plans; the anticipated impact of the integration of Impakt on our internal controls; and the expected impact of the expiration of one of our income tax incentives in Thailand. Such forward-looking statements may, without limitation, be preceded by, followed by, or include words such as "believes," "expects," "anticipates," "estimates," "intends," "plans," "continues," "project," "potential," "possible," "contemplate," "seek," or similar expressions, or may employ such future or conditional verbs as "may," "might," "will," "could," "should" or "would," or may otherwise be indicated as forward-looking statements by grammatical construction, phrasing or context. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the U.S. Private Securities Litigation Reform Act of 1995 and applicable Canadian securities laws.

Forward-looking statements are provided to assist readers in understanding management's current expectations and plans relating to the future. Readers are cautioned that such information may not be appropriate for other purposes. Forward-looking statements are not guarantees of future performance and are subject to risks that could cause actual results to differ materially from those expressed or implied in such forward-looking statements, including, among others, risks related to: our

customers' ability to compete and succeed with our products and services; customer and segment concentration; challenges of replacing revenue from completed or lost programs or customer disengagements; changes in our mix of customers and/or the types of products or services we provide; the impact on gross profit of higher concentrations of lower margin programs; price, margin pressures, and other competitive factors affecting, and the highly competitive nature of, the EMS industry in general and our CCS segment in particular; the cyclical nature of our capital equipment business, in particular our semiconductor business; delays in the delivery and availability of components, services and materials; the expansion or consolidation of our operations; defects or deficiencies in our products, services or designs; integrating acquisitions and "operate-in-place" arrangements, and achieving the anticipated benefits therefrom; negative impacts on our business resulting from recent increases in third-party indebtedness; our response to changes in demand, rapidly evolving and changing technologies, and changes in our customers' business and outsourcing strategies; customer, competitor and/or supplier consolidation; compliance with social responsibility initiatives; challenges associated with new customers or programs, or the provision of new services; the impact of our restructuring actions; the incurrence of future restructuring charges, impairment charges or other write-downs of assets; managing our operations, growth initiatives, and our working capital performance during uncertain market and economic conditions; disruptions to our operations, or those of our customers, component suppliers and/or logistics partners, including as a result of global or local events outside our/their control and the impact of significant tariffs on items imported into the U.S; changes to our operating model; changing commodity, materials and component costs as well as labor costs and conditions; retaining or expanding our business due to execution or quality issues (including our ability to successfully resolve these challenges); non-performance by counterparties (including the financial institutions party to our purchased annuities and other financial counterparties, key suppliers and/or customers); maintaining sufficient financial resources and working capital to fund currently anticipated financial obligations and to pursue desirable business opportunities; negative impacts on our business resulting from any significant uses of cash, securities issuances, and/or additional increases in third-party indebtedness for additional acquisitions or to otherwise fund our operations; our financial exposure to foreign currency volatility; recruiting or retaining skilled talent; our dependence on industries affected by rapid technological change; increasing taxes, tax audits, and challenges of defending our tax positions; obtaining, renewing or meeting the conditions of tax incentives and credits; the relocation of our corporate headquarters; computer viruses, malware, hacking attempts or outages that may disrupt our operations; the management of our IT systems and our ability to protect confidential information; the variability of revenue and operating results; compliance with applicable laws, regulations, and government grants; our pension obligations; interest rate fluctuations and changes to LIBOR; and current or future litigation, governmental actions, and/or changes in legislation. The foregoing and other material risks and uncertainties are discussed in our public filings at www.sedar.com and www.sec.gov, including in this MD&A, our most recent Annual Report on Form 20-F filed with, and subsequent reports on Form 6-K furnished to, the U.S. Securities and Exchange Commission (SEC), and as applicable, the Canadian Securities Administrators.

Our forward-looking statements are based on various assumptions, many of which involve factors that are beyond our control. Our material assumptions include those related to the following: fluctuation of production schedules from our customers in terms of volume and mix of products or services; the timing and execution of, and investments associated with, ramping new business; the successful pursuit, completion and integration of acquisitions; the success of our customers' products; our ability to retain programs and customers; the stability of general economic and market conditions, currency exchange rates, and interest rates; supplier performance, pricing and terms; compliance by third parties with their contractual obligations and the accuracy of their representations and warranties; the costs and availability of components, materials, services, equipment, labor, energy and transportation; that our customers will retain liability for recently-imposed tariffs and countermeasures; our ability to keep pace with rapidly changing technological developments; the impact of the recent U.S. tax reform on our operations; the timing, execution, and effect of restructuring actions; the successful resolution of quality issues that arise from time to time; our having sufficient financial resources and working capital to fund currently anticipated financial obligations and to pursue desirable business opportunities; our ability to successfully diversify our customer base and develop new capabilities; the availability of cash resources for repurchases of outstanding subordinate voting shares; that we achieve the expected benefits from our acquisitions of Atrenne and Impakt; the impact of the CCS Review on our business; and the magnitude of anticipated losses in our capital equipment business in the first quarter of 2019. Although management believes its assumptions to be reasonable under the current circumstances, they may prove to be inaccurate, which could cause actual results to differ materially (and adversely) from those that would have been achieved had such assumptions been accurate. Forward-looking statements speak only as of the date on which they are made, and we disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

All forward-looking statements attributable to us are expressly qualified by these cautionary statements.

Overview

Celestica's business:

We deliver innovative supply chain solutions globally to customers in two operating and reportable segments: Advanced Technology Solutions (ATS) and Connectivity & Cloud Solutions (CCS). Our ATS segment consists of our ATS end market, and is comprised of our aerospace and defense, industrial, smart energy, healthtech, and capital equipment businesses. Our capital equipment business is comprised of our semiconductor, display, and power & signal distribution equipment businesses. Our CCS segment consists of our Communications and Enterprise end markets and is comprised of our enterprise communications, telecommunications, servers and storage businesses. Our customers include original equipment manufacturers (OEMs), service providers (including cloud-based service providers) and other companies in a wide range of industries. All period percentages and financial information herein reflect the current presentation. Information regarding our reportable segments is included in note 25 to our 2018 AFS.

Our global headquarters is located in Toronto, Ontario, Canada. We operate a network of sites and centers of excellence strategically located in North America, Europe and Asia, with specialized end-to-end supply chain capabilities tailored to meet specific market and customer product lifecycle requirements.

We offer a comprehensive range of product manufacturing and related supply chain services to customers in both of our segments, including design and development, new product introduction, engineering services, component sourcing, electronics manufacturing and assembly, testing, complex mechanical assembly, systems integration, precision machining, order fulfillment, logistics, asset management, product licensing, and after-market repair and return services. Within design and development, our Joint Design and Manufacturing (JDM) offering includes the creation of hardware platforms and design solutions in collaboration with customers, as well as management of aspects of the supply chain and manufacturing.

Revenue from our ATS segment currently represents approximately one-third of our aggregate revenue but generated just under one-half of our total segment income in 2018. Products and services in this segment are extensive and are often more regulated than in our CCS segment, and can include the following: government-certified and highly-specialized manufacturing, electronic and enclosure-related services for aerospace and defense-related customers; high-precision equipment and integrated subsystems used in the manufacture of semiconductors and displays; a wide range of industrial automation, controls, test and measurement devices; advanced solutions for surgical instruments, diagnostic imaging and patient monitoring; and efficiency products to help manage and monitor the energy and power industries. Our ATS segment businesses typically have a higher margin profile and longer product life cycles than the businesses in our CCS segment. Revenue from our CCS segment currently represents approximately two-thirds of our aggregate revenue and generated just over one-half of our total segment income in 2018. Products and services in this segment consist predominantly of enterprise-level data communications and information processing infrastructure products, and can include routers, switches, servers and storage-related products used by a wide range of businesses and cloud-based service providers to manage digital connectivity, commerce and social media applications. Our CCS segment businesses typically have a lower margin profile and higher volumes than the businesses in our ATS segment, and have been impacted in recent periods (and continue to be impacted) by aggressive pricing, rapid shifts in technology, model obsolescence and the commoditization of certain products.

Our CCS segment generally experiences a high degree of volatility in terms of revenue and product/service mix, and has been affected by sustained negative pricing pressures, which have significantly impacted our profitability in recent quarters. These factors, which are characteristic of the highly competitive nature of this market, are not expected to abate. As part of our strategy to continue to diversify our business and improve shareholder returns, we commenced a comprehensive review of our CCS revenue portfolio (CCS Review) in the second half of 2018, with the intention of addressing under-performing programs, as well as better aligning our investments with our strategic and financial priorities. As a result of this review, we intend to disengage from certain CCS customer programs that are not anticipated to contribute to improved consistency in our revenues and CCS segment margin. The review of our CCS business, which generated $4.4 billion of revenue in 2018, is currently expected to result in a decline in our CCS segment revenue of approximately $500 million over the next 12 to 18 months, and a corresponding decline in overall company revenue in the single digit percentage range in 2019 (subject to change based on the growth or contraction of CCS programs not subject to the review). The CCS Review is substantially complete, and the customer programs that comprise the approximate $500 million in revenue have been identified. We expect to complete the majority of related actions in 2019, including the intended restructuring actions (which have been built into our current cost efficiency initiative), and changes to our global manufacturing network. Although we expect reduced revenue in our CCS business as a result of the CCS Review, we intend to maintain a significant majority of our CCS business, and continue to invest in areas we believe are key to the long-term success of our CCS segment, including our JDM offering, to help drive improved CCS financial performance in future periods. Revenue attributable to our JDM business grew approximately 30% in 2018 as compared to 2017.

Within our capital equipment business, revenue from our semiconductor capital equipment customers has been adversely impacted by cyclical decreases in demand, primarily in the second half of 2018. The swift decrease in demand in the fourth quarter of 2018 drove lower utilization, resulting in operating losses in our capital equipment business in the mid-single digit million dollar range for that quarter. We expect the weaker semiconductor demand to continue throughout 2019 and have estimated a single digit million dollar operating loss in our capital equipment business for the first quarter of 2019. In response to this demand softness, we are undertaking actions (as part of our current cost efficiency initiative) to align this business to the current demand environment and to improve profitability. However, despite the current soft demand environment, we believe that new program wins, anticipated market share gains, anticipated growth in electronic content and connectivity, and our recent acquisition of Impakt Holdings, LLC (Impakt) position us favorably to benefit from potential growth in this business in the future. More generally, we continue to pursue new customers and acquisition opportunities in our ATS segment to expand our end market penetration, to diversify our end market mix, and to enhance and add new technologies and capabilities to our offerings.

Within both our CCS and ATS segments, we are focused on higher-value added services, including design and development, engineering, and after-market services. In support of our expansion efforts, we have executed two "operate-in-place" outsourcing agreements with existing aerospace and defense customers, pursuant to which we provide manufacturing and after-market repair services for specific product lines at such customers' sites. In addition, in our ATS segment, we completed the acquisitions of Lorenz, Inc. and Suntek Manufacturing Technologies, SA de CV, collectively known as Karel Manufacturing (Karel) in November 2016, Atrenne Integrated Solutions, Inc. (Atrenne) in April 2018, and Impakt in November 2018 (see "Recent developments" and "Operating Results — *Acquisition Activity and Program Transfer*" below).

To increase the value we deliver to our customers, we continue to make investments in people, value-added service offerings, new capabilities, capacity, technology, IT systems, software and tools. We continuously work to improve our productivity, quality, delivery performance and flexibility in our efforts to be recognized as a leading company in the EMS industry. We have invested in automation and the "Digital Factory" to streamline our processes and reduce costs. Our current cost efficiency initiative, and related restructuring actions, are also intended to further streamline our business, increase operational efficiencies and improve our productivity.

As we expand our business, open new sites, or transfer business within our network to accommodate growth or achieve synergies, however, we may encounter difficulties that result in higher than expected costs associated with such activities. Potential difficulties related to such activities include our ability: to manage growth effectively; to maintain existing business relationships during periods of transition; to anticipate disruptions in our operations that may impact our ability to deliver to customers on time, produce quality products and ensure overall customer satisfaction; and to respond rapidly to changes in customer demand or volumes. We may also encounter difficulties in ramping and executing new programs. We may require significant investments in additional capabilities and increased working capital to support these new programs, including those associated with business acquisitions, and may generate lower margins or losses during and/or following the ramp period. There can be no assurance that our increased investments will benefit our financial performance or result in business growth. As we pursue opportunities in new markets or technologies, we may encounter challenges due to our limited knowledge or experience in these areas. In addition, the success of new business models or programs depends on a number of factors including: understanding the new business or markets; timely and successful product development; market acceptance; the effective management of purchase commitments and inventory levels in line with anticipated demand; the development or acquisition of appropriate intellectual property and capital investments, to the extent required; the availability of materials in adequate quantities and at appropriate costs to meet anticipated demand; and the risk that new offerings may have quality or other defects in the early stages of introduction. Any of these factors could prevent us from realizing the anticipated benefits of growth in our business, including in new markets or technologies, which could materially adversely affect our business and operating results.

Operating Goals and Principles:

Our current priorities are focused on evolving our revenue portfolio; expanding our non-IFRS operating margin* and segment margins; and maintaining a balanced approach to capital allocation. Management believes that each of these goals and principles is reasonable.

Evolving our Revenue Portfolio — To evolve our revenue portfolio, we intend to continue to focus on: (i) realigning our portfolio towards more diversified revenue, (ii) driving sustainable profitable revenue growth, (iii) growing our ATS segment revenue organically by an average of 10% per year over the long term, (iv) supplementing our organic growth with disciplined and targeted acquisitions intended to expand capabilities, and (v) optimizing and reshaping our portfolio to drive more consistent returns and profitability.

Expanding Margins — With respect to expanding margins, we intend to focus on achieving, by the first half of 2020: (i) non-IFRS operating margin* in the target range of 3.75% to 4.5%, (ii) ATS segment margin in the target range of 5.0% to 6.0%, and CCS segment margin in the target range of 2.0% to 3.0%, and (iii) greater than 50% of total segment income from our ATS segment. Our non-IFRS operating margin* target range reflects anticipated benefits from our CCS Review, completion of our cost efficiency initiative (CEI), and ongoing expansion of our ATS segment revenue portfolio, both organically and through recent strategy-aligned acquisitions. See "Recent Developments" below.

Balanced Approach to Capital Allocation — In terms of capital allocation, we are focused on: (i) returning approximately 50% of non-IFRS free cash flow* to shareholders annually, on average, over the long term, (ii) investing 1.5% to 2.0% of annual revenue in capital expenditures to support our organic growth, and (iii) executing on strategic acquisitions as part of a disciplined capital allocation framework. We are also focused on maintaining a strong balance sheet.

The foregoing priorities and areas of intended focus constitute our objectives and goals, and are not intended to be projections or forecasts of future performance. Our future performance is subject to risks, uncertainties and other factors that could cause actual outcomes and results to differ materially from the goals and priorities described above.

* Operating margin and free cash flow are non-IFRS measures without standardized meanings and may not be comparable to similar measures presented by other companies. See "Non-IFRS measures" below for a discussion of the non-IFRS measures included herein, and a reconciliation of our non-IFRS measures to the most directly comparable IFRS measures. We do not provide reconciliations for forward-looking non-IFRS financial measures, as we are unable to provide a meaningful or accurate calculation or estimation of reconciling items and the information is not available without unreasonable effort. This is due to the inherent difficulty of forecasting the timing or amount of various events that have not yet occurred, are out of our control and/or cannot be reasonably predicted, and that would impact the most directly comparable forward-looking IFRS financial measure. For these same reasons, we are unable to address the probable significance of the unavailable information. Forward-looking non-IFRS financial measures may vary materially from the corresponding IFRS financial measures.

Segment performance is evaluated based on segment revenue, segment income and segment margin (segment income as a percentage of segment revenue), each of which is defined in "Operating Results — Segment income and margin" below.

Overview of business environment:

The EMS industry is highly competitive, with multiple global EMS providers competing for customers and programs. In addition, demand can be volatile from period to period, and aggressive pricing is a common business dynamic, particularly in our CCS segment. As a result, customer and CCS segment revenue and mix, and overall profitability, are difficult to forecast.

Product lifecycles in the markets we serve, production lead times required by our customers, rapid shifts in technology, model obsolescence, commoditization of certain products, the emergence of new business models, shifting patterns of demand, such as the shift from traditional network infrastructures to highly virtualized and cloud-based environments, the prevalence of solid state or flash memory technology as a replacement for hard disk drives, as well as the proliferation of software-defined technologies enabling the disaggregation of software and hardware, increased competition, oversupply of products, pricing pressures, and the volatility of the economy all contribute to the complexity of managing our operations and fluctuations in our financial results. For example, declines in end-market demand for customer-specific proprietary systems in favor of open systems with standardized technologies has adversely impacted some of our CCS segment customers, and consequently, our CCS business. Capacity utilization, customer mix and the types of products and services we provide are important factors affecting our financial performance. The number of sites, the location of qualified personnel, the manufacturing capacity, and the mix of business through that capacity are vital considerations for EMS providers in terms of supporting their customers and generating appropriate returns. Because the EMS industry is working capital intensive, we believe that non-IFRS adjusted ROIC, which is primarily based on non-IFRS operating earnings (each discussed in "Non-IFRS measures" below) and investments in working capital and equipment, is an important metric for measuring an EMS provider's financial performance.

In addition, uncertainty in the global economy and financial markets may impact current and future demand for our customers' products and services, and consequently, our operations. We continue to monitor the dynamics and impacts of the global economic and financial environment and work to manage our priorities, costs and resources to anticipate and prepare for any changes we deem necessary.

External factors that could adversely impact the EMS industry and our business include natural disasters and related disruptions, political instability, terrorism, armed conflict, labor or social unrest, criminal activity, disease or illness that affects local, national or international economies, unusually adverse weather conditions, and other risks present in the jurisdictions in which we, our customers, our suppliers, and/or our logistics partners operate. These types of events could disrupt operations at one or more of our sites or those of our customers, component suppliers and/or our logistics partners. These events could also lead

to higher costs or supply shortages or may disrupt the delivery of components to us, or our ability to provide finished products or services to our customers, any of which could adversely affect our operating results. In addition, uncertainties resulting from Brexit (given the lack of comparable precedent) and/or policies or legislation proposed or instituted by the current administration in the U.S., and/or increased tensions between the U.S. and North Korea, China, Russia and/or other countries, may adversely affect our business, results of operations and financial condition.

The United States, Canada and Mexico have agreed on a revised trade deal (USMCA) to replace the North American Free Trade Agreement. The USMCA was signed on November 30, 2018, but is subject to ratification by the legislatures of all three countries. We cannot currently quantify the impact on our business of the USMCA, if ratified. In addition, the current U.S. administration has increased tariffs on certain items imported into the U.S. from several countries, including China, Canada, Mexico, and the European Union (many of which are not addressed by the USMCA). Each of these countries has imposed retaliatory tariffs on specified items, which have been challenged by the U.S. These actions, or other governmental actions related to tariffs or international trade agreements, could increase the cost to our U.S. customers who use our non-U.S. manufacturing sites and components, and vice versa, which may materially and adversely impact demand for our services, our results of operations or our financial condition. We currently ship a significant portion of our worldwide production to customers in the U.S. from other countries. Increased tariffs, and/or changes to international trade agreements, may cause our U.S. customers to insource programs previously outsourced to us, transfer manufacturing to locations within our global network that are not impacted by such actions (potentially increasing production costs), and/or shift their business to other EMS providers. Additionally, tariffs on imported components for use in our U.S. production could have an adverse impact on demand for such production. Retaliatory tariffs could reduce demand for our U.S.-based production or make such production less profitable. Given the uncertainty regarding the scope and duration of these trade actions by the U.S. and other governments, whether trade tensions will escalate further, and whether our customers will bear the cost of the tariffs, their impact on our operations and results cannot be currently quantified, but may be material. Discussions with impacted customers on our recoverability of tariff costs, and/or the potential of transferring their production from China to other sites within our network, are ongoing.

In general, changes in U.S. social, political, regulatory and economic conditions or in laws and policies governing foreign trade, taxation, manufacturing, clean energy, the healthcare industry, development and investment in the jurisdictions in which we, and/or our customers or suppliers operate, could materially adversely affect our business, results of operations and financial condition.

We have significant suppliers that are important to our sourcing activities. If a key supplier (or any company within such supplier's supply chain) experiences financial or other difficulties, this may affect its ability to supply us with materials, components or services, which could halt or delay the production of a customer's products, and/or have a material adverse impact on our operations, financial results and customer relationships. We continue to experience materials constraints from certain suppliers in both our segments, due in part to industry-wide shortages for certain electronic components. These shortages caused delays in the production of customer products, and required us to carry higher than expected levels of inventory in 2017 and 2018. Although we expect these materials constraints and resulting adverse impacts to continue in the near term, we have begun to see improvements in the availability of certain previously constrained items. Nonetheless, only minor improvements in supplier lead times are currently expected. These supply constraints may result in higher materials costs, adversely impacting our financial results if we are unable to recover such increases from our customers.

Our ability to collect our accounts receivable and achieve future sales depends, in part, on the financial strength of our customers. If any of our customers have insufficient liquidity, we could encounter significant delays or defaults in payments owed to us by such customers, or we may extend our payment terms, which could adversely impact our short-term cash flows, financial condition and/or operating results. From time to time, we have extended the payment terms applicable to certain customers, which has adversely impacted our working capital requirements, and increased our financial exposure and credit risk. In addition, customer financial difficulties or changes in demand for our customers' products may result in order cancellations and higher than expected levels of inventory, which could in turn have a material adverse impact on our operating results and working capital performance. We may not be able to return or re-sell this inventory, or we may be required to hold the inventory for a period of time, any of which may result in our having to record additional reserves for the inventory. We also may be unable to recover all of the amounts owed to us by a customer, including amounts to cover unused inventory or capital investments we incurred to support that customer's business. Furthermore, if a customer bankruptcy occurs, our profitability may be adversely impacted by our failure to collect our accounts receivable in excess of our estimated allowance for uncollectible accounts or amounts insured. Our failure to collect accounts receivable and/or the loss of one or more major customers could have an adverse effect on our operating results, financial position and cash flows.

Our business is dependent on the award of new programs. Customers may shift production between EMS providers for a number of reasons, including changes in demand for their products, pricing concessions, more favorable terms and conditions, execution or quality issues, their preference or need to consolidate their supply chain capacity or change their supply chain partners,

tax benefits, new trade policies or legislation, or consolidation among customers. Customers may also choose to increase the amount of business they outsource, insource previously outsourced business, or change the concentration or location of their EMS suppliers to better manage their supply continuity risk. These customer decisions may impact, among other items, our revenue and margins, the need for future restructuring, the level of capital expenditures and our cash flows.

While the demand environment remains volatile, driven largely by technology shifts and increased competition in our CCS segment, we remain committed to making the investments we believe are required to support our long-term objectives and to create shareholder value. These efforts include a focus on the diversification of our customer mix and product portfolios to address changing needs, including a larger emphasis on after-market services, as well as broadening our ATS segment capabilities, and continuing to expand the breadth of our JDM offerings in the areas of network switching and converged storage and servers. The costs of investments that we deem desirable may be prohibitive, however, and therefore prevent us from achieving these diversification objectives. In addition, the ramping activities associated with investments that we do make may be significant and could negatively impact our margins in the short and medium term. Simultaneously, we intend to continue to manage our costs and resources to maximize our efficiency and productivity.

Recent developments:

Segment Reorganization and Segment Environment:

During the first quarter of 2018, we completed a reorganization of our reporting structure, including our sales, operations and management systems, into two operating and reportable segments: ATS and CCS. Our prior period financial information has been reclassified to reflect the reorganized segment structure and to conform to the current presentation. The changes to our segment structure had no impact on our historical consolidated financial position, results of operations or cash flows as previously reported. See “Overview — Celestica's business” above for a description of the products, services and characteristics of each of our ATS and CCS segments.

The competitive landscape in our CCS segment remains aggressive, as demand growth continues to move from traditional enterprise network infrastructure providers to cloud-based service providers, resulting in aggressive bidding from EMS providers and increased competition from original design manufacturers as they further penetrate these markets. In addition, although we offer a broad range of services to our CCS customers, we have experienced a shift in the mix of our programs, including growth in our lower-margin fulfillment services, particularly in the first half of 2018. This shift in mix, combined with the pricing pressures described above, demand volatility, and investments we have made to grow our higher-value added after-market services, resulted in lower segment income and margins in our CCS segment for 2018 as compared to prior years. See “Operating Results” below. As a result of the high concentration of our business in the CCS marketplace, we expect continued competitive pressures, aggressive pricing and technology-driven demand shifts, as well as certain materials constraints, to continue to negatively impact our CCS businesses and overall profitability in future periods. In addition, cloud-based service providers have increased their use of products in our CCS segment in recent periods. These customers and markets are cyclically different from our traditional OEM customers, creating more volatility and unpredictability in our revenue patterns as we adjust to this shift, and additional challenges with respect to the management of our working capital requirements.

With respect to our ATS segment, see "Overview — *Celestica's business*" above for a discussion of recent adverse trends impacting our semiconductor capital equipment customers and our capital equipment business, including our estimation of a single digit million dollar operating loss in our capital equipment business for the first quarter of 2019.

CCS Revenue Portfolio Review:

See “Overview — *Celestica's business*” above for a discussion of our CCS Review, undertaken to address under-performing programs and to identify opportunities to improve our returns, as well as anticipated impacts of this review on our operations and financial results.

Refinancing:

In June 2018, we entered into an $800 million credit agreement with Bank of America, N.A., as Administrative Agent, and the other lenders party thereto (New Credit Facility), which provides for a $350 million term loan (June Term Loan) that matures in June 2025, and a $450 million revolving credit facility (New Revolver) that matures in June 2023. The net proceeds from the June Term Loan were used primarily to repay all amounts outstanding under our previous credit facility (Prior Facility), which was terminated on such repayment. In November 2018, we utilized the accordion feature under our New Credit Facility to add an incremental term loan of $250 million (November Term Loan), maturing in June 2025. The June Term Loan and the November Term Loan are collectively referred to as the New Term Loans. The Prior Facility consisted of a $250 million term loan

(Prior Term Loan) and a $300 million revolving credit facility (Prior Revolver), each of which was scheduled to mature in May 2020. As of December 31, 2018, an aggregate of $598.3 million was outstanding under the New Term Loans, and other than ordinary course letters of credit (described below), $159.0 million was outstanding under the New Revolver.

Impakt Acquisition:

In November 2018, we completed the acquisition of U.S.-based Impakt, a highly-specialized, vertically integrated company providing manufacturing solutions for leading OEMs in the display (including LCD and Organic Light Emitting Diode (OLED)) and semiconductor industries, as well as other markets requiring complex fabrication services, with operations in California and South Korea. The purchase price was $325.4 million, net of cash acquired, subject to a net working capital adjustment (which has not yet been finalized). The purchase was funded with borrowings under the New Revolver, $245.0 million of which was repaid with proceeds of the November Term Loan. Through this acquisition, we have gained significant new capabilities in large-format, complex, high-mix manufacturing solutions for multiple industries within our ATS segment, and have broadened our precision component manufacturing, full system assembly, integration and machining capabilities. In addition, we expect to benefit from Impakt's full spectrum of specialized vertical services, including its South Korea-based machining and manufacturing expertise. We recorded $111.2 million of goodwill in connection with this acquisition. We expect to finalize our purchase price allocation in the first half of 2019.

Atrenne Acquisition:

On April 4, 2018, we completed the acquisition of U.S.-based Atrenne, a designer and manufacturer of ruggedized electromechanical solutions, primarily for the aerospace and defense market. Atrenne's capabilities include connectors, machining, and the thermal and mechanical design and manufacture of ruggedized chassis and enclosures, primarily for military and commercial aerospace applications. We also believe that Atrenne's capabilities in the design and manufacture of value-added mechanical solutions will expand our service offerings for our industrial customers. The purchase price for Atrenne was $141.7 million, net of cash acquired, including a net working capital adjustment of $3.8 million (which is subject to finalization). The purchase was funded with borrowings under the Prior Revolver. We recorded $64.0 million of goodwill in connection with the acquisition. We expect to finalize our purchase price allocation in the first quarter of 2019, once the net working capital adjustment has been finalized.

Toronto Real Property and Related Transactions Update:

In September 2018, the agreement governing the sale of our Toronto real property (Property Sale Agreement), which includes our corporate headquarters and Toronto manufacturing operations, was assigned to a new purchaser (the Assignee), although the original purchaser was not released from its obligations under the Property Sale Agreement. In connection with such assignment, the Property Sale Agreement was amended to provide for the remaining proceeds of $122 million Canadian dollars (approximately $89 million at year-end exchange rates) to be paid in one lump sum cash payment at closing (previously, we were to receive one-half of the purchase price in the form of a two-year, interest-free, first-ranking mortgage). Other terms of the Property Sale Agreement remained unchanged. On January 21, 2019, the required municipal zoning approval was obtained. On March 7, 2019, we completed the sale of the real property and received total proceeds of approximately $110 million, including a high density bonus and an early vacancy incentive related to the temporary relocation of our corporate headquarters. The gain on sale of this property will be recorded as recoveries through other charges (recoveries) in 2019. No net tax impact is anticipated from this sale, as the gain will be offset by the utilization of currently unrecognized tax losses. See "Liquidity — Toronto Real Property and Related Transactions" and note 8 of the 2018 AFS for a discussion of our Toronto property sale and related transactions, as well as transition and capital costs incurred in connection with related relocations.

Restructuring Update:

We have recorded $45 million in restructuring charges from the commencement of our CEI (described herein) through February 13, 2019. Our restructuring actions under the CEI include, among others, actions identified as part of our CCS Review, as well as actions in response to the demand environment in our capital equipment business. We continue to estimate total restructuring charges for the CEI to be within the previously disclosed range of between $50.0 million and $75.0 million, however we are extending the program by six months and expect the remainder of the charges to be recorded by the end of 2019. See "Operating Results — *Other charges*."

Board Member Addition:

Robert Cascella was appointed to Celestica's Board of Directors effective February 1, 2019. Mr. Cascella is currently an Executive Vice President and Executive Committee member of Royal Philips, a public Dutch multinational healthcare company. He is also the Chief Executive Officer (CEO) of Royal Philips' Diagnosis and Treatment businesses. He was formerly the President and CEO of Hologic, Inc., a public medical device and diagnostics company, from 2003 to 2013. He has also held senior leadership positions at CFG Capital, NeoVision Corporation, and Fischer Imaging Corporation.

Share Repurchases:

Since the commencement in November 2017 of an NCIB (2017 NCIB) through its expiry on November 12, 2018, we paid an aggregate of $95.4 million (including transaction fees) to repurchase and cancel 8.7 million subordinate voting shares. We also purchased 1.1 million subordinate voting shares in the open market during the term of the 2017 NCIB, and 1.3 million shares after its expiration (during 2018), in order to satisfy delivery obligations under our stock-based compensation plans.

In December 2018, the TSX accepted our notice to launch a new NCIB (2018 NCIB), which allows us to repurchase, at our discretion, until the earlier of December 17, 2019 or the completion of the purchases thereunder, up to approximately 9.5 million subordinate voting shares in the open market, or as otherwise permitted. We have not repurchased or canceled any subordinate voting shares under the 2018 NCIB from its commencement through February 13, 2019.

Adoption of IFRS 15:

We adopted IFRS 15, Revenue from Contracts with Customers, effective January 1, 2018. We elected to apply the retrospective approach and as a result, have restated each of the required comparative reporting periods presented herein. A description of the impact of our transition to IFRS 15 is included in note 2 to our 2018 AFS.

Summary of Key Operating Results and Financial Information

Our consolidated financial statements have been prepared in accordance with IFRS as issued by the IASB and accounting policies we adopted in accordance with IFRS. Such consolidated financial statements reflect all adjustments that are, in the opinion of management, necessary to present fairly our financial position as at December 31, 2018 and 2017 and the financial performance, comprehensive income and cash flows for each of the years in the three-year period ended December 31, 2018. See “Critical Accounting Policies and Estimates” below.

The following tables set forth certain key operating results and financial information for the periods indicated (in millions, except per share amounts and percentages). Financial information for 2016 and 2017 has been restated to reflect our January 1, 2018 adoption of IFRS 15.

	Year ended December 31				
	2016	2017	2018	% Change 2017 v. 2016	% Change 2018 v. 2017
	(restated)	(restated)			
Revenue	$ 6,046.6	$ 6,142.7	$ 6,633.2	2 %	8 %
Gross profit	429.6	418.5	430.5	(3)%	3 %
Selling, general and administrative expenses (SG&A)	211.1	203.2	219.0	(4)%	8 %
Other charges	25.5	37.0	61.0	45 %	65 %
Net earnings	138.3	105.5	98.9	(24)%	(6)%
Diluted earnings per share	$ 0.96	$ 0.73	$ 0.70	(24)%	(4)%

Segment revenue* as a percentage of total revenue:

	Year ended December 31		
	2016	2017	2018
ATS revenue (% of total revenue)	32%	32%	33%
CCS revenue (% of total revenue)	68%	68%	67%

Segment income and segment margin*:	Year ended December 31								
	2016			2017			2018		
			Segment Margin			Segment Margin			Segment Margin
ATS segment	$	73.9	3.8%	$	96.8	4.9%	$	102.5	4.6%
CCS segment		149.3	3.6%		120.4	2.9%		111.4	2.5%

* Segment performance is evaluated based on segment revenue, segment income and segment margin (segment income as a percentage of segment revenue), each of which are defined in "Operating Results — Segment income and margin" below.

	December 31 2017	December 31 2018
Cash and cash equivalents	$ 515.2	$ 422.0
Total assets	2,964.2	3,737.7
Borrowings under applicable term loans	187.5	598.3
Borrowings under applicable revolving credit facility	—	159.0

	Year ended December 31		
	2016	2017	2018
Cash provided by operating activities	$ 173.3	$ 127.0	$ 33.1
Shares repurchased for cancellation — aggregate price (including transaction costs)	$ 34.3	$ 19.9	$ 75.5
— # (in millions)	3.2	1.9	6.8
Shares repurchased for delivery under stock-based plans — aggregate price (including transaction costs)	$ 18.2	$ 16.7	$ 22.4
— # (in millions)	1.6	1.4	2.1

A discussion of the foregoing information is set forth under "Operating Results" below.

Other performance indicators:

In addition to the key operating results and financial information described above, management reviews the following measures (which are not measures defined under IFRS)*:

	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash cycle days:	(restated)*	(restated)*	(restated)*	(restated)*				
Days in A/R	61	57	58	58	62	57	60	62
Days in inventory	47	47	50	51	57	56	59	61
Days in A/P	(58)	(56)	(56)	(56)	(62)	(60)	(65)	(65)
Cash cycle days	50	48	52	53	57	53	54	58
Inventory turns	7.8x	7.7x	7.3x	7.2x	6.4x	6.6x	6.2x	6.0x

* 2017 periods have been restated to reflect the adoption of IFRS 15.

	2017				2018			
	March 31	June 30	September 30	December 31	March 31	June 30	September 30	December 31
A/R Sales (in millions)	$ 50.0	$ 50.0	$ 50.0	$ 80.0	$ 113.0	$ 113.0	$ 113.0	$ 130.0
Supplier Financing* (in millions)	44.5	65.4	55.1	52.3	77.8	76.0	81.0	50.0
Total (in millions)	$ 94.5	$ 115.4	$ 105.1	$ 132.3	$ 190.8	$ 189.0	$ 194.0	$ 180.0

* Represents A/R sold to a third party bank in connection with a customer's uncommitted supplier financing program that we joined in the fourth quarter of 2016.

Days in A/R is defined as the average A/R for the quarter divided by the average daily revenue. Days in inventory is defined as the average inventory for the quarter divided by the average daily cost of sales. Days in accounts payable (A/P) is defined as the average A/P for the quarter divided by average daily cost of sales. Cash cycle days is defined as the sum of days in A/R and days in inventory minus the days in A/P. Inventory turns is determined by dividing 365 by the number of days in inventory. A lower number of days in A/R, days in inventory, and cash cycle days, and a higher number of days in A/P and inventory turns generally reflect improved cash management performance.

A/R days increased 4 days from the fourth quarter of 2017 (Q4 2017) to 62 days for the fourth quarter of 2018 (Q4 2018) primarily due to the timing of collections. Inventory days increased 10 days from Q4 2017 to 61 days for Q4 2018 primarily due to the higher inventory levels resulting from acquisitions and a constrained materials environment, as well as requirements to support new programs. A/P days increased 9 days from Q4 2017 to 65 days in Q4 2018 primarily due to higher levels and timing of purchases, as well as the timing of payments. A/R and inventory days each increased 2 days sequentially due to the timing of collections and the impact of the Impakt acquisition, respectively.

We believe that cash cycle days (and the components thereof) and inventory turns are useful measures in providing investors with information regarding our cash management performance and are accepted measures of working capital management efficiency in our industry. These are not measures of performance under IFRS, and may not be defined and calculated in the same manner by other companies. These measures should not be considered in isolation or as an alternative to working capital as an indicator of performance.

Management also reviews other non-IFRS measures including adjusted net earnings, operating margin, adjusted ROIC and free cash flow. See “Non-IFRS measures” below.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities, revenue and expenses, and the related disclosures of contingent assets and liabilities. We base our judgments, estimates and assumptions on current facts, historical experience and various other factors that we believe are reasonable under the circumstances. The economic environment could also impact certain estimates necessary to prepare our consolidated financial statements, including estimates related to the recoverable amounts used in our impairment testing of our non-financial assets (see notes 8 and 9 to our 2018 AFS), and the discount rates applied to our net pension and non-pension post-employment benefit assets or liabilities (see note 19 to our 2018 AFS). Our assessment of these factors forms the basis for our judgments on the carrying values of our assets and liabilities and the accrual of our costs and expenses. Actual results could differ materially from these estimates and assumptions. We review our estimates and underlying assumptions on an ongoing basis and make revisions as determined necessary by management. Revisions are recognized in the period in which the estimates are revised and may impact future periods as well. Significant accounting policies and methods used in the preparation of our consolidated financial statements are described in note 2 to our 2018 AFS. The following is a discussion of those accounting policies which management considers to be “critical,” defined as accounting policies that management believes are both most important to the portrayal of our financial condition and results and require application of management’s most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effects of matters that are inherently uncertain. On January 1, 2018, we adopted IFRS 9 and IFRS 15. See "Recently adopted accounting standards" in note 2 to our 2018 AFS.

Key sources of estimation uncertainty and judgment: We have applied significant estimates, judgment and assumptions in the following areas which we believe could have a significant impact on our reported results and financial position: our determination of the timing of revenue recognition, measures of work in progress and estimates and timing of expected returns, revenues and related costs; valuations of inventory, assets held for sale and income taxes; the amount of our restructuring charges or recoveries; the measurement of the recoverable amounts of our cash generating units (or CGUs, which are the smallest identifiable group of assets that cannot be tested individually and generate cash inflows that are largely independent of those of other assets or groups of assets), which includes estimating future growth, profitability, discount and terminal growth rates, and the fair value of our real property; our valuations of financial assets and liabilities, pension and non-pension post-employment benefit costs; employee stock-based compensation expense, provisions and contingencies; and the allocation of the purchase price and other valuations related to our business acquisitions.

We have also applied significant judgment in the following areas: the determination of our CGUs (which can be comprised of a single site, a group of sites, or a line of business) and whether events or changes in circumstances during the relevant period are indicators that a review for impairment should be conducted, the timing of the recognition of charges or recoveries associated with our restructuring actions, and the decisions and timing of our pension annuity purchases.

Revenue recognition and deferred investment costs:

Under IFRS 15, which we adopted on January 1, 2018, where products are custom-made to meet a customer's specific requirements, and such customer is obligated to compensate us for the work performed to date, we will recognize revenue over time as production progresses to completion, or as services are rendered. We generally estimate revenue for our work in progress based on costs incurred to date plus a reasonable profit margin for eligible products for which we do not have alternative uses. We apply significant estimates, judgment and assumptions in determining the timing of revenue recognition, measuring work in progress, and estimating the amount and timing of expected returns, revenues and related costs. Judgment is also applied in determining the recoverability of deferred investment costs, comprised of contract acquisition or fulfillment costs, and in determining the amortization period for such costs, which is based on the projected period of expected future economic benefits. We review sales and profitability forecasts to determine the likelihood of recovery, as well as applicable contractual recoverability arrangements with customers in the event volumes do not materialize. We monitor these deferred costs for potential impairment on a regular basis. Adverse changes to these assumptions may result in impairment of these costs in future periods.

Inventory valuation:

We procure inventory and manufacture based on specific customer orders and forecasts and value our inventory on a first-in, first-out basis at the lower of cost and net realizable value. The cost of our finished goods and work in progress includes direct materials, labor and overhead. We may require valuation adjustments to these items if actual market conditions or demand for our customers' products or services are less favorable than originally projected. The determination of net realizable value involves significant management judgment. We consider factors such as shrinkage, the aging of the inventory, our estimates of future demand for the inventory, and our contractual arrangements with customers. We attempt to utilize excess inventory in other products we manufacture or return inventory to the relevant suppliers or customers. We use future sales volume forecasts to estimate excess inventory on-hand. A change to these assumptions may impact our inventory valuation and our gross margins. Should our estimates change based on a change in circumstances, we may adjust our previous write-downs in our consolidated statement of operations in the period a change in estimate occurs.

Assets classified as held for sale:

Assets classified as held for sale are measured at the lower of their carrying amount and fair value less costs of disposal, and are no longer depreciated. The determination of fair value less costs of disposal involves judgment by management of the probability and timing of disposition and the expected amount of recoveries and costs. We may engage third parties to assist in the determination of the estimated fair values less costs of disposal for assets classified as held for sale. At the end of each reporting period, we evaluate the appropriateness of our estimates and assumptions. We may require adjustments to reflect actual experience or changes in estimates.

Income taxes:

We record income tax expense or recovery based on taxable income earned or loss incurred in each tax jurisdiction where we operate at the enacted or substantively enacted tax rate applicable to that income or loss. In the ordinary course of business, we engage in many transactions for which the ultimate tax outcome is uncertain and therefore estimates are required for exposures related to potential and actual examinations by taxation authorities. We review these transactions and exposures and record tax liabilities for open years based on our assessment of many factors, including past experience and interpretations of tax law applied to the facts of each matter. Management periodically evaluates the positions taken in our tax returns with respect to situations in which applicable tax rules are subject to interpretation. We establish provisions related to tax uncertainties where appropriate, based on our estimate of the amount that ultimately will be paid to or received from the tax authorities. The various judgments and estimates by management in establishing provisions related to tax uncertainties significantly affect the amounts we recognize in our consolidated financial statements. The determination of tax liabilities is subjective and generally involves a significant amount of judgment. We believe that our income tax liability reflects the probable outcome of our income tax obligations based on known facts and circumstances; however, the final income tax outcome may be different from our estimates. A change to these estimates could impact our income tax provision.

We recognize deferred income tax assets to the extent we believe it is probable, based on management's estimates, that future taxable profit will be available against which the deductible temporary differences as well as unused tax losses and tax credit carryforwards can be utilized. We consider factors such as the reversal of taxable temporary differences, projected future taxable income, the character of the income tax asset, tax planning strategies, changes in tax laws and other factors. A change to these factors could impact the amount of deferred income tax assets we recognize. We review our deferred income tax assets at each reporting date and reduce them to the extent it is no longer probable that we will realize the related tax benefits.

The U.S. Tax Cuts and Jobs Act (U.S. Tax Reform) was enacted on December 22, 2017 and became effective January 1, 2018. We believe all significant one-time impacts resulting from the enactment of the U.S. Tax Reform were recorded in the fourth quarter of 2017, but we will continue to assess additional impacts, if any, as they become known due to changes in our interpretations and assumptions, as well as applicable changes in our business and additional regulatory guidance that may be issued.

Goodwill, intangible assets and property, plant and equipment:

We estimate the useful lives of intangible assets and property, plant and equipment based on the nature of the asset, historical experience, the projected period of expected future economic benefits to be provided by the asset, the terms of any related customer contract, and expected changes in technology. We review the carrying amounts of goodwill, intangible assets and property, plant and equipment for impairment whenever events or changes in circumstances (triggering events) indicate that the carrying amount of such assets (or the related CGU or group of CGUs) may not be recoverable. In addition to an assessment of triggering events during the year, we conduct an annual goodwill impairment assessment of our CGUs with goodwill in the fourth quarter of the year. Judgment is required in the determination of our CGUs and whether a review for impairment should be conducted.

We recognize an impairment loss when the carrying amount of an asset, CGU or group of CGUs exceeds its recoverable amount. The recoverable amount of an asset, CGU or group of CGUs is measured as the greater of its expected value-in-use and its fair value less costs of disposal. The process of determining the recoverable amount is subjective and requires management to exercise significant judgment in estimating future growth, profitability, discount and terminal growth rates, and in projecting future cash flows, among other factors. Our expected value-in-use is determined based on a discounted cash flow analysis. Determining the estimated fair value less costs of disposal requires valuations and use of appraisals. Where applicable, we engage independent brokers to obtain market prices to estimate our real property and other asset values. At each reporting date, we review for indicators that could change the estimates we used to determine the recoverable amount of the relevant assets.

Restructuring charges:

The recognition of restructuring charges (relating to workforce reductions, site consolidations, and costs associated with businesses we are downsizing or exiting) requires management to make certain judgments and estimates regarding the nature, timing and amounts associated with our restructuring actions. Our major assumptions include the timing of employee terminations, the measurement of termination costs, the timing and amount of lease obligations and any anticipated sublease recoveries from exited sites, and the timing of disposition and estimated fair values less costs of disposal for assets we no longer use and which are available for sale. For owned sites and equipment that are no longer in use and are available for sale, we recognize an impairment loss based on their fair value less costs of disposal, with fair value estimated based on market prices for similar assets. We may engage third parties to assist in the determination of the estimated fair values less costs of disposal for these assets. For leased sites that we intend to exit, we discount future contractual lease payments and cancellation fees, if any, less any estimated sublease recoveries, if any. To estimate future sublease recoveries, we engage independent brokers to determine the estimated tenant rents we can expect to realize. At the end of each reporting period, we evaluate the appropriateness of our restructuring charges and balances. Adjustments to the recorded amounts may be required to reflect actual experience or changes in estimates for future periods.

Legal and other contingencies:

We recognize a provision for loss contingencies, including legal claims, based on management's estimate of the probable outcome. Judgment is required when there is a range of possible outcomes. Management considers the degree of probability of the outcome and the ability to make a reasonable estimate of the loss. We may also use third party advisors in making our determination. The ultimate outcome, including the amount and timing of any payments required, may vary significantly from our original estimates. Potential material legal and other material contingent obligations that have not been recognized as provisions, as the outcome is remote or not probable, or the amount cannot be reliably estimated, are disclosed as contingent liabilities.

Warranty:

We offer product and service warranties to our customers. We record a provision for future warranty costs based on management's estimate of probable claims under these warranties. In determining the amount of the provision, we consider several factors including the terms of the warranty (which vary by customer, product or service), the current volume of products sold or services rendered during the warranty period, and historical warranty information. We review and adjust these estimates as necessary to reflect our experience and new information. The amount and aging of our provision will vary depending on various factors including the length of the warranty offered, the remaining life of the warranty and the extent and timing of warranty claims.

Financial assets and financial liabilities:

We review financial assets at each reporting date. Financial assets are deemed to be impaired when objective evidence resulting from one or more events subsequent to the initial recognition of the asset indicates the estimated future cash flows of the asset have decreased. We use a forward-looking expected credit loss (ECL) model in determining our allowance for doubtful accounts as it relates to trade receivables, contract assets (under IFRS 15), and other financial assets. Our allowance is based on historical experience, and includes consideration of the aging of the balances, the customer's creditworthiness, current economic conditions, expectation of bankruptcies, and political and economic volatility in the markets/location of our customers, among other factors. We measure an impairment loss as the excess of the carrying amount over the present value of the estimated future cash flows discounted using the financial asset's original discount rate, and we recognize this loss in our consolidated statement of operations. A financial asset is written off or written down to its net realizable value as soon as it is known to be impaired. We will adjust previous write-downs to reflect changes in estimates or actual experience.

We value our derivative assets and liabilities based on inputs that are either readily available in public markets or derived from information available in public markets. The inputs we use include discount rates, forward exchange rates, interest rate yield curves and volatility, and credit risk adjustments. Changes in these inputs can cause significant volatility in the fair value of our financial instruments in the short-term.

Derivatives and hedge accounting:

We enter into forward exchange contracts and swaps to hedge the cash flow risk associated with firm purchase commitments and forecasted transactions in foreign currencies that are considered highly probable and to hedge foreign-currency denominated balances. We use estimates to forecast future cash flows and the future financial position of net monetary assets or liabilities denominated in foreign currencies. We enter into interest rate swap agreements to mitigate a portion of the interest rate risk on our term loan borrowings. We use judgment in determining the amount and timing of such swap agreements. We apply hedge accounting to those hedge transactions that are considered effective. Management assesses the effectiveness of hedges by comparing actual outcomes against our estimates on a regular basis. Subsequent revisions in estimates of future cash flow forecasts, if significant, may result in the discontinuation of hedge accounting for that hedge.

Pension and non-pension post-employment benefits:

We have pension and non-pension post-employment benefit costs and liabilities that are determined from actuarial valuations. Actuarial valuations require management to make certain judgments and estimates relating to salary escalation, compensation levels at the time of retirement, retirement ages, the discount rate used in measuring the net interest on the net defined benefit asset or liability, and expected healthcare costs (as applicable). These actuarial assumptions could change from period-to-period and actual results could differ materially from the estimates originally made by management. We evaluate our assumptions on a regular basis, taking into consideration current market conditions and historical data. Market driven changes may affect the actual rate of return on plan assets compared to our assumptions, as well as our discount rates and other variables which could cause actual results to differ materially from our estimates. Changes in assumptions could impact our defined benefit pension plan valuations and our future defined benefit pension expense and required funding.

To mitigate the actuarial and investment risks of our defined benefit pension plans, we from time to time purchase annuities (using existing plan assets) from third party insurance companies for certain, or all, plan participants. The purchase of annuities by the pension plan substantially hedges the financial investment risks associated with the pension obligations. See note 19(a) to our 2018 AFS.

Employee stock-based compensation:

IFRS requires grants of share-based compensation to employees to be measured at fair value and expensed in our consolidated statement of operations over the service period (generally the vesting period) of the grant. We measure the fair value of options using the Black-Scholes option pricing model. Measurement inputs include the price of our subordinate voting shares on the grant date, the exercise price of the option, and our estimates of the following: expected price volatility of our subordinate voting shares (based on weighted average historic volatility), weighted average expected life of the option (based on historical experience and general option holder behavior), and the risk-free interest rate. We adjust compensation expense to reflect the estimated number of options that we expect to vest at the end of the vesting period.

The fair value of restricted share units (RSUs) is based on the market value of our subordinate voting shares at the time of grant.

For performance share units (PSUs) that vest based on non-market performance conditions (related to the achievement of pre-determined financial targets over a specified period), the fair value is based on the market value of our subordinate voting shares at the time of grant, and our estimate of the outcome of such performance condition. We adjust the cost of these PSUs as new facts and circumstances arise; the timing of these adjustments is subject to judgment (but is generally in the final year of their three-year term) based on management's estimate of the expected level of achievement of the relevant performance conditions. For PSUs that vest based on our relative total shareholder return (TSR) performance over a three-year period, a market performance condition, the fair value is based on a Monte Carlo simulation model. The number of awards expected to vest is factored into the grant date Monte Carlo valuation. For PSU grants which vest based on a non-market performance measurement in the final year of the three-year performance period, subject to modification by a separate non-market financial target and our relative TSR performance over the three-year vesting period, the fair value of the TSR modifier is based on a Monte Carlo simulation model, and the fair value of the non-TSR-based performance measurement and modifier are based on the market value of our subordinate voting shares at the time of grant and may be adjusted in subsequent periods to reflect a change in the estimated level of achievement related to the applicable non-market performance condition. We do not adjust the grant date fair value based on the eventual number of PSUs that vest based on the level of achievement of the market performance condition. We adjust compensation expense for PSU awards that are not expected to vest because the employment conditions are not expected to be satisfied.

Business combinations:

All identifiable assets and liabilities acquired in business combinations are recorded at fair value as of the acquisition date. Potential obligations for contingent consideration and other contingencies are also recorded at fair value as of the acquisition date. We record subsequent changes in the fair value of such potential obligations from the date of acquisition to the settlement date in our consolidated statement of operations.

We use judgment to determine the estimates used to value identifiable net assets and the fair value of contingent consideration and other contingencies, if applicable, at the acquisition date. We may engage third parties to determine the fair value of certain inventory, property, plant and equipment and intangible assets. We use estimates to determine cash flow projections, including the period of expected future benefit, and future growth and discount rates, among other factors, to value intangible assets and contingent consideration. The fair value of acquired tangible assets are measured by applying market, cost or replacement costs, or the income approach, as applicable, using discounted cash flows and forecasts by management.

Operating Results

Financial information for 2016 and 2017 throughout this "Operating Results" section has been restated to reflect our January 1, 2018 adoption of IFRS 15.

Our annual and quarterly operating results are affected by, among other items: the level and timing of customer orders; our mix of customers and the types of products or services we provide; the rate at which, the costs associated with, and the execution of, new program wins; demand volumes and the seasonality of our business; price competition and other competitive factors; the mix of manufacturing or service value-add; manufacturing efficiency; the degree of automation used in the assembly process; the availability of components or labor; costs and inefficiencies of transferring programs between sites; program completions or losses, or customer disengagements and the timing and the margin of follow-on business or any replacement business; the impact of foreign exchange fluctuations; the performance of third-party providers; our ability to manage inventory, production location and

equipment effectively; our ability to manage changing labor, component, energy and transportation costs effectively; fluctuations in variable compensation costs; the timing of our expenditures in anticipation of forecasted sales levels; and the timing of any acquisitions and related integration costs. Significant period-to-period variations can also result from the timing of new programs reaching full production or programs reaching end-of-life, the timing of follow-on or next generation programs and/or the timing of existing programs being fully or partially transferred internally or to a competitor.

See "Overview — *Overview of business environment* and *Recent developments*" above for a discussion of recent market conditions impacting our business.

Operating results expressed as a percentage of revenue:

	Year ended December 31		
	2016	2017	2018
	(restated)	(restated)	
Revenue	100.0%	100.0%	100.0%
Cost of sales	92.9	93.2	93.5
Gross profit	7.1	6.8	6.5
SG&A	3.5	3.3	3.3
Research and development costs	0.4	0.4	0.5
Amortization of intangible assets	0.1	0.1	0.2
Other charges	0.4	0.6	0.9
Finance costs, net of refund interest income	—	0.2	0.4
Earnings before income tax	2.7	2.2	1.2
Income tax expense (recovery)	0.4	0.5	(0.3)
Net earnings	2.3%	1.7%	1.5%

Revenue:

Revenue of $6.6 billion for 2018 increased 8% compared to 2017. ATS segment revenue increased 13% in 2018 compared to 2017, and CCS segment revenue increased 6% in 2018 compared to 2017.

Revenue of $6.1 billion for 2017 increased 2% compared to 2016. CCS segment revenue increased 2% in 2017 compared to 2016, and ATS segment revenue was relatively flat in 2017 compared to 2016.

The following table sets forth revenue from our reportable segments, as well as segment revenue as a percentage of our total revenue for the periods indicated (in millions, except percentages):

	2016		2017		2018	
		% of total		% of total		% of total
ATS revenue	$ 1,954.2	32%	$ 1,958.6	32%	$ 2,209.7	33%
CCS revenue	$ 4,092.4		$ 4,184.1		$ 4,423.5	
Communications	2,544.9	42%	2,654.6	43%	2,724.2	41%
Enterprise	1,547.5	26%	1,529.5	25%	1,699.3	26%
Revenue	$ 6,046.6	100%	$ 6,142.7	100%	$ 6,633.2	100%

Our product and service volumes, revenue and operating results vary from period-to-period depending on various factors, as discussed above. See “Overview.”

ATS segment revenue represented 33% of total revenue for 2018, compared to 32% for 2017 and 32% for 2016. ATS segment revenue for 2018 increased $251.1 million (13%) compared to 2017, reflecting new aerospace and defense programs, including from our acquisition of Atrenne and our September 2017 "operate-in-place" program (described below), demand strength in our industrial business, higher year-over-year revenue in our capital equipment business, primarily from a strong first half of 2018, and to a lesser extent, revenue from our acquisition of Impakt. Revenue from our semiconductor capital equipment customers however, was weaker than expected for the second half of 2018, adversely impacted by cyclical decreases in demand, which we expect will continue throughout 2019. See "Overview — *Celestica's business*" above for a discussion of recent trends impacting our semiconductor capital equipment customers. ATS segment revenue for 2018 was also adversely impacted by a $24 million decrease, as compared to the prior year, due to our exit from the solar panel manufacturing business (accounting for approximately 1% of our ATS segment revenue in 2017).

ATS segment revenue for 2017 was relatively flat compared to 2016, as growth in our capital equipment business and from new programs was offset by a 7% decrease in revenue due to our exit from the solar panel manufacturing business, and a decrease in revenue due to the completion of programs with one of our then-largest consumer customers during the third quarter of 2016. ATS segment revenue for 2017 benefited from a new "operate-in-place" program outsourced to us from one our aerospace and defense customers in September 2017, as well as our November 2016 Karel acquisition.

CCS segment revenue represented 67% of total revenue for 2018, compared to 68% for 2017 and 68% for 2016. CCS segment revenue for 2018 increased $239.4 million (6%) compared to 2017. Communications end market revenue for 2018 increased 3% compared to 2017, as increased demand and new programs (including JDM programs) were partially offset by decreased demand from certain of our legacy customers. Enterprise end market revenue for 2018 increased 11% compared to 2017, primarily driven by strong demand in our storage business. Notwithstanding the increase in CCS segment revenue in 2018 as compared to 2017, we continued to be impacted by adverse pricing pressures in this segment in 2018, and expect these adverse conditions to continue in future periods. See "Overview — Recent developments — *Segment reorganization and segment environment*" above.

CCS segment revenue for 2017 increased 2% compared to 2016. Communications end market revenue in 2017 increased 4% compared to 2016, primarily due to demand strength in certain existing programs and new program growth (including with respect to our fulfillment services and JDM programs). Although Communications revenue increased compared to 2016, we experienced slower growth rates (particularly in the second half of 2017) compared to the prior year primarily due to programs reaching their full production levels, and increased pricing pressures and late changes in demand from certain customers in 2017. Enterprise end market revenue for 2017 decreased 1% compared to 2016, as growth from new programs primarily in the first half of 2017 was more than offset by softer demand in the second half of 2017.

Although we supply products and services to over 100 customers, we depend upon a small number of customers for a substantial portion of our revenue. In the aggregate, our top 10 customers represented 70% of total revenue for 2018 (2017 — 71%; 2016 — 68%). For 2018, we had two customers that individually represented more than 10% of total revenue (2017 and 2016 — two customers). Cisco Systems and Dell Technologies accounted for 14% and 10%, respectively, of our total revenue for 2018 (2017 — Cisco Systems (18%) and Juniper Networks (13%); 2016 — Cisco Systems (19%) and Juniper Networks (11%)), in each case from our CCS segment.

Whether any of our customers individually account for more than 10% of our total revenue in any period depends on various factors affecting our business with that customer and with other customers, including overall changes in demand for our customers' products, the extent and timing of new program wins, follow-on business, program completions or losses, the phasing in or out of programs, the relative growth rate or decline of our business with our various customers, price competition and changes in our customers' supplier base or supply chain strategies, and the impact of seasonality on our business.

We are dependent to a significant degree upon continued revenue from our largest customers. We generally enter into master supply agreements with our customers that provide the framework for our overall relationship. These agreements typically do not guarantee a particular level of business or fixed pricing. Instead, we bid on a program-by-program basis and typically receive customer purchase orders for specific quantities and timing of products. There can be no assurance that revenue from any of our major customers will continue at historical levels or will not decrease in absolute terms or as a percentage of total revenue. A significant revenue decrease or pricing pressures from these or other customers, or a loss of a major customer or program, could have a material adverse impact on our business, our operating results and our financial position. Changes in the types of product or services we provide to our customers in a particular period may also adversely impact our margins and operating results for such period. For example, providing a relatively higher concentration of fulfillment services (which commenced in 2017 as

compared to prior years) negatively impacts our operating results for our CCS segment, as our fulfillment services generally have significantly lower margins than our traditional value-added services in that segment. Some of our customer agreements require us to provide specific price reductions to our customers over the term of the contracts, which has significantly impacted revenue and margins in our CCS segment. In addition, as longer-term contracts are becoming more prevalent, we anticipate that these adverse effects will increasingly impact our business in future periods.

In the EMS industry, customers may cancel contracts and volume levels can be changed or delayed. Customers may also shift business to a competitor or bring programs in-house to improve their own utilization or to adjust the concentration of their supplier base to manage supply continuity risk, or for other reasons. We cannot assure the replacement of completed, delayed, cancelled or reduced orders with new business. In addition, we cannot assure that any of our current customers will continue to utilize our services. Changes in demand, order cancellations, and changes or delays in production could have a material adverse impact on our results of operations and working capital performance, including requiring us to carry higher than expected levels of inventory. Materials constraints, primarily impacting our CCS segment (which commenced in 2017 and are expected to continue) can also cause delays in production and could have a material adverse impact on our operations and our inventory levels. In addition, in any given quarter, we can experience quality and process variances related to materials, testing or other manufacturing or supply chain activities. Although we were successful in resolving the majority of such issues that arose in 2018, the existence of these variances could have a material adverse impact on the demand for our services in future periods from any affected customers, which could in turn have a material adverse effect on our business and operating results. Order cancellations and delays could also lower our asset utilization, resulting in lower margins. Significant period-to-period changes in margins can also result if new program wins or follow-on business are more competitively priced than past programs. In addition, customers from time to time shift programs to us from other service providers, including some for lower complexity, light touch programs that are aggressively priced, which can adversely impact future operating results.

Gross profit:

The following table shows gross profit and gross margin (gross profit as a percentage of total revenue) for the periods indicated:

	Year ended December 31		
	2016	2017	2018
	(restated)	(restated)	
Gross profit (in millions)	$ 429.6	$ 418.5	$ 430.5
Gross margin	7.1%	6.8%	6.5%

Gross profit for 2018 increased 3%, or $12.0 million, compared to 2017. The increase in gross profit was attributable to higher revenue levels in both our CCS and ATS segments. Despite the increase in revenue for 2018, gross margin decreased from 6.8% in 2017 to 6.5% for 2018. The decrease in gross margin resulted primarily from unfavorable changes in overall program mix (including as a result of demand softness in our capital equipment business), increased pricing pressures primarily in our CCS segment, approximately $10 million in higher provisions we recorded for certain aged inventory during 2018 (Inventory Provisions), and the recognition of a $1.6 million fair value adjustment with respect to the inventory acquired from Atrenne (Atrenne FVA) through cost of sales in the second quarter of 2018. The Inventory Provisions for 2018 of $13.5 million (2017 — $3.3 million) resulted primarily from an increase in our overall aged inventory levels, more than half of which related to customers in our ATS segment. These negative impacts more than offset the increase in gross profit in 2018 as compared to 2017 described above.

Gross profit for 2017 decreased 3% compared to 2016. Gross margin decreased from 7.1% in 2016 to 6.8% in 2017. Gross profit and gross margin for 2017 were negatively impacted by unfavorable changes in program mix, increased pricing pressures and higher ramping costs, offset in part by margin improvements in our ATS segment. During 2017, our CCS segment faced increased pricing pressures, and was also negatively impacted by a higher concentration than in 2016 of new programs, including fulfillment services, that contributed significantly lower gross profit than our historical full-service traditional EMS programs. We also incurred additional ramping costs with respect to new programs, including aerospace and defense programs, as well as programs that required the establishment of infrastructures in multiple jurisdictions. Gross profit and gross margin attributable to our ATS segment businesses in 2017 increased compared to the prior year, as a result of increases in each of our semiconductor and former solar businesses (the latter as a result of lower provisions recorded in 2017), offset in part by the completion of consumer programs which benefited gross margin in 2016. The gross margin for our former solar business was

negatively impacted in 2016 by higher provisions (accounting for 15 basis points in 2016), primarily to write-down the carrying value of our solar panel inventory to then-recoverable amounts).

In general, multiple factors cause gross margin to fluctuate including, among others: volume and mix of products or services; higher/lower revenue concentration in lower gross margin products and businesses; pricing pressures; contract terms and conditions; production management; utilization of manufacturing capacity; changing material and labor costs, including variable labor costs associated with direct manufacturing employees; manufacturing and transportation costs; start-up and ramp-up activities; new product introductions; disruption in production at individual sites, including as a result of program transfers; cost structures at individual sites; foreign exchange volatility; and the availability of components and materials. Our gross profit and SG&A (discussed below) are also impacted by the level of variable compensation expense (including awards under our incentive and stock-based compensation plans) we record in each period.

Selling, general and administrative expenses:

SG&A for 2018 of $219.0 million (3.3% of total revenue) increased $15.8 million compared to $203.2 million (3.3% of total revenue) for 2017, primarily due to higher variable expenses, including $3.2 million in higher employee stock-based compensation expense (described below) in 2018, and $10.5 million in SG&A attributable to acquisitions completed in 2018.

SG&A for 2017 of 203.2 million (3.3% of total revenue) decreased $7.9 million compared to $211.1 million (3.5% of total revenue) for 2016, primarily due to $2.5 million of lower foreign exchange losses, $2.5 million of lower stock-based compensation expense in 2017 (discussed below), and lower variable expenses, including costs associated with our Organizational Design (OD) initiative incurred in 2017 compared to 2016. As part of the wind down of our solar panel business, we recorded a provision of $0.5 million in SG&A expenses during the second quarter of 2017 to write down our solar accounts receivable, primarily as a result of a solar customer's bankruptcy.

Segment income and margin:

Segment performance is evaluated based on segment revenue (set forth above), segment income and segment margin (segment income as a percentage of segment revenue). Revenue is attributed to the segment in which the product is manufactured or the service is performed. Segment income is defined as a segment's net revenue less its cost of sales and its allocable portion of selling, general and administrative expenses and research and development expenses (collectively, Segment Costs). Identifiable Segment Costs are allocated directly to the applicable segment while other Segment Costs, including indirect costs and certain corporate charges, are allocated to our segments based on an analysis of the relative usage or benefit derived by each segment from such costs. Segment income excludes finance costs (net of refund interest, when applicable), amortization of intangible assets (excluding computer software), employee stock-based compensation expense, other solar charges, the Atrenne FVA (recognized in the second quarter of 2018), and net restructuring, impairment and other charges (recoveries) (each of which exclusions is quantified herein) as these costs and charges are managed and reviewed by our CEO at the company level. Net restructuring, impairment and other charges (recoveries) include, in applicable periods, restructuring charges (recoveries), impairment charges (recoveries), acquisition-related consulting, transaction and integration costs (Acquisition Costs), legal settlements (recoveries), Toronto transition costs (recoveries), and the accelerated amortization of unamortized deferred financing costs (as described under "Non-IFRS measures" below). See the reconciliation of segment income to our earnings before income taxes in note 25 to the 2018 AFS. Our segments do not record inter-segment revenue. Although segment income and segment margin are used to evaluate the performance of our segments, we may incur operating costs in one segment that may also benefit the other segment. Our accounting policies for segment reporting are the same as those applied to the company as a whole.

The following table shows segment income (in millions) and segment margin for the periods indicated:

Segment income and segment margin:	Year ended December 31					
	2016		2017		2018	
		Segment Margin		Segment Margin		Segment Margin
ATS segment	$ 73.9	3.8%	$ 96.8	4.9%	$ 102.5	4.6%
CCS segment	149.3	3.6%	120.4	2.9%	111.4	2.5%

ATS segment income for 2018 increased $5.7 million (6%) compared to 2017. ATS segment margin decreased from 4.9% in 2017 to 4.6% in 2018. The increase in ATS segment income for 2018 was primarily due to higher ATS segment revenue in 2018,

as described above, including higher year-over-year revenue in our capital equipment business, primarily during the first half of 2018. The decrease in ATS segment margin was attributable primarily to the weaker than expected demand from our capital equipment business (primarily with respect to our semiconductor customers) in the second half of 2018, resulting in operating losses in this business in Q4 2018 in the mid-single digit million dollar range, due to the high level of associated fixed costs, which more than offset segment margin improvement from acquisitions and new ATS programs in other businesses. We expect the demand softness in our capital equipment business to continue into 2019, and have estimated a single digit million dollar operating loss in this business for the first quarter of 2019.

ATS segment income for 2017 increased $22.9 million (31%) compared to 2016. ATS segment margin increased from 3.8% in 2016 to 4.9% in 2017. Despite ATS revenue for 2017 being relatively flat compared to 2016, ATS segment income and margin for 2017 increased primarily due to increases in each of our capital equipment and former solar businesses (the latter as a result of approximately $10 million in lower inventory provisions recorded in 2017 compared to 2016), offset in part by the completion of consumer programs which benefited segment margin in 2016.

CCS segment income for 2018 decreased $9.0 million (7%) compared to 2017. CCS segment margin decreased from 2.9% in 2017 to 2.5% in 2018. Despite the increase in our overall CCS segment revenue for 2018 as compared to 2017, CCS segment income and margin for 2018, as compared to 2017, were negatively impacted by increased pricing pressures from some of our significant customers, unfavorable changes in program mix, including a higher concentration of lower margin business compared to the prior year (particularly in the first quarter of 2018), and the Inventory Provisions recorded in 2018 (discussed above). These decreases were partially offset by CCS segment income contributions from our JDM business in 2018 as compared to the prior year. The performance of our CCS segment in recent periods resulted in the implementation of our CEI in October 2017 (and related restructuring actions) in order to reduce our cost structure (see "Other charges" below). In addition, as part of our strategy to diversify our business and improve shareholder returns, we commenced the CCS Review in the second half of 2018, with the intention of addressing under-performing programs. See *"Overview — Celestica's business"* above for a discussion of our CCS Review, as well as anticipated impacts of this review on our operations and financial results.

CCS segment income for 2017 decreased $28.9 million (19%) compared to 2016. CCS segment margin decreased from 3.6% in 2016 to 2.9% in 2017. Despite the increase in our CCS segment revenue for 2017 compared to 2016, CCS segment income and margin for 2017, as compared to 2016, were negatively impacted by unfavorable changes in program mix, increased pricing pressures and higher ramping costs. During 2017, our CCS segment faced increased pricing pressures, and was also negatively impacted by a higher concentration than in 2016 of new programs, including fulfillment services, that contributed significantly lower gross profit than our historical full-service traditional EMS programs.

Stock-based compensation:

Our employee stock-based compensation expense, which excludes deferred share unit (DSU) expense, varies each period. The portion of our expense that relates to performance-based compensation generally varies depending on our level of achievement of pre-determined performance goals and financial targets. In 2018, we recorded employee stock-based compensation expense of $14.7 million (2017 — $14.6 million; 2016 —$15.0 million) in cost of sales and $18.7 million (2017 — $15.5 million; 2016 — $18.0 million) in SG&A.

The following table shows employee stock-based compensation for the periods indicated:

	Year ended December 31		
	2016	2017	2018
Employee stock-based compensation (in millions)	$ 33.0	$ 30.1	$ 33.4

Compared to 2017, our employee stock-based compensation expense for 2018 increased by $3.3 million, reflecting $2.4 million in higher reversals we recorded during 2017 in connection with forfeited awards, and additional expenses related to new grants made during 2018 as compared to 2017.

Compared to 2016, our employee stock-based compensation expense for 2017 decreased by $2.9 million, (predominately through SG&A), primarily due to lower adjustments recorded in 2017 to reflect the reduced level of achievement related to our performance based compensation. In addition, the increase in forfeited awards during 2017 decreased our stock-based compensation by a further $2.4 million in 2017, which offset a $2.0 million increase in the accelerated recognition of stock-based compensation expense for employees eligible for retirement in 2017.

Management currently intends to settle all outstanding RSUs and PSUs with subordinate voting shares purchased in the open market by a broker or by issuing subordinate voting shares from treasury. Accordingly, we have accounted for these share unit awards as equity-settled awards. See “Cash requirements” below.

In 2018, we recorded DSU expense of $2.0 million (2017 — $2.2 million; 2016 — $2.1 million) through SG&A. During 2017, we paid $1.7 million in cash to a director that resigned in July 2017 to settle his outstanding DSUs, and we settled the outstanding DSUs of a director that resigned in November 2017 with 14,098 subordinate voting shares that we purchased in the open market, in each case in accordance with the provisions of the Directors' Share Compensation Plan.

Other charges:

(i) Restructuring charges:

We have recorded the following restructuring charges for the periods indicated (in millions):

	Year ended December 31		
	2016	2017	2018
Restructuring charges	$ 31.9	$ 28.9	$ 35.4

We perform ongoing evaluations of our business, operational efficiency and cost structure, and implement restructuring actions as we deem necessary. In connection therewith, we are currently implementing restructuring actions under the CEI, including actions related to our CCS Review and anticipated continued demand softness in our capital equipment business. This initiative includes reductions to our workforce, as well as the potential consolidation of certain sites to better align capacity and infrastructure with current and anticipated customer demand, related transfers of customer programs and production, re-alignment of business processes, management reorganizations, and other associated activities. We continue to estimate total restructuring charges for the CEI to be within the previously disclosed range of between $50.0 million and $75.0 million, however we are extending the program by six months and expect the remainder of the charges to be recorded by the end of 2019. We have recorded $43.4 million in restructuring charges from the commencement of our CEI through the end of 2018, including the $35.4 million of restructuring charges recorded in 2018. The majority of the charges through December 31, 2018 pertained to workforce reductions at sites associated primarily with our CCS segment.

We recorded restructuring charges of $35.4 million in 2018, consisting of cash charges of $35.2 million, primarily for consultant costs, employee and lease termination costs, and non-cash charges of $0.2 million, representing losses on the sale of surplus equipment. Our restructuring provision at December 31, 2018 was $10.3 million, the majority of which we currently expect to pay in 2019. All cash outlays have been, and the balance is expected to be, funded with cash on hand.

We recorded restructuring charges of $28.9 million in 2017, consisting of cash charges of $25.1 million, comprised of employee termination costs resulting from the implementation of our previous OD and Global Business Services (GBS) initiatives (each of which were completed in 2017, and pertained to both of our segments), as well as from the rationalization of our operations in the third quarter of 2017, and $8.0 million of charges in connection with our CEI (described above) in the fourth quarter of 2017, as well as net non-cash impairment charges of $3.8 million to write down the carrying value of our solar panel manufacturing equipment (in our ATS segment) to its fair value less costs of disposal, based on executed sales agreements (2017 Solar Write-down). Our restructuring provision at December 31, 2017 was $12.7 million, comprised primarily of employee termination costs, which were paid with cash on hand.

Our aggregate restructuring charges of $31.9 million for 2016 consisted of cash charges of $10.7 million, primarily for employee termination costs relating to our GBS and OD initiatives, as well as our solar panel manufacturing and other exited operations, and non-cash charges of $21.2 million, to write down certain plant assets and equipment to recoverable amounts,

including $19.0 million related to our solar panel manufacturing equipment at our two locations (2016 Solar Write-down). The majority of these charges were associated with our ATS segment. See note 4 of our 2018 AFS for a description of our decision in the fourth quarter of 2016 to exit the solar panel manufacturing business, and associated write-downs of assets. Our restructuring provision at December 31, 2016 was $6.6 million, comprised primarily of employee termination costs, which were all paid with cash on hand.

We may also propose additional future restructuring actions or divestitures as a result of changes in our business, the marketplace and/or our exit from less profitable, under-performing, non-core or non-strategic operations. In addition, an increase in the frequency of customers transferring business to our EMS competitors, changes in the volumes they outsource, pricing pressures, or requests to transfer their programs among our sites or to lower-cost locations, may also result in our taking future restructuring actions. We may incur higher operating expenses during periods of transitioning programs within our network or to our competitors. Any such restructuring activities, if undertaken at all, could adversely impact our operating and financial results, and may require us to further adjust our operations.

The recognition of restructuring charges requires us to make certain judgments and estimates regarding the nature, timing and amounts associated with our restructuring actions. See note 2(m) to our 2018 AFS.

(ii) Asset impairment:

We review the carrying amounts of goodwill, intangible assets and property, plant and equipment whenever events or changes in circumstances (triggering events) indicate that the carrying amount of such assets (or the related CGU or group of CGUs) may exceed their recoverable amount. If any such indication exists, we test the carrying amount of such assets or CGUs for impairment. In addition to an assessment of triggering events during the year, we conduct an annual goodwill impairment assessment (Annual Impairment Assessment) of our CGUs with goodwill in the fourth quarter of the year to correspond with our annual planning cycle. Judgment is required in the determination of our CGUs and whether events or changes in circumstances during the year are indicators that a review for impairment should be conducted. We recognize an impairment loss when the carrying amount of an asset, CGU or a group of CGUs exceeds its recoverable amount, which is measured as the greater of its expected value-in-use and its fair value less costs of disposal. We did not identify any triggering event during the course of 2018 indicating that the carrying amount of our assets or CGUs may not be recoverable. In the fourth quarter of 2018, we performed our Annual Impairment Assessment of our CGUs with goodwill and determined that there was no goodwill impairment as the recoverable amount of such CGUs exceeded their respective carrying values as of December 31, 2018.

We did not identify any triggering event during the course of 2017 indicating that the carrying amount of our assets or CGUs may not be recoverable, other than with respect to our exit from the solar panel manufacturing business. In connection therewith, we recorded the 2017 Solar Write-down (through restructuring charges). In the fourth quarter of 2017, we performed our Annual Impairment Assessment of our CGUs with goodwill and determined that there was no impairment as the recoverable amount of such CGUs exceeded their respective carrying values as of December 31, 2017.

We did not identify any triggering event during the course of 2016 indicating that the carrying amount of our assets or CGUs may not be recoverable, other than the 2016 Solar Write-down (recorded through restructuring charges). In the fourth quarter of 2016, we performed our Annual Impairment Assessment of our CGUs with goodwill and determined that there was no impairment as the recoverable amount of such CGUs exceeded their respective carrying values as of December 31, 2016.

The process of determining the recoverable amount of an asset, CGU or group of CGUs is subjective and requires management to exercise significant judgment in estimating future growth, profitability, and discount and terminal growth rates, among other factors. Where applicable, including with respect to the 2017 Solar Write-down and the 2016 Solar Write-down, we engage independent brokers to obtain market prices to estimate our real property and other asset values. The assumptions used in each of our 2017 and 2016 interim impairment assessments were determined based on past experiences adjusted for expected changes in future conditions. See note 9 of our 2018 AFS for a discussion of how we determine our cash flow projections for our impairment assessments, as well as the cash flow projection periods, growth rates, and discount rates used in our Annual Impairment Assessments for each of 2018, 2017 and 2016.

Our goodwill balance is allocated to the following CGUs (in millions):

	December 31		
	2016	2017	2018
Capital equipment [1]	$ 19.5	$ 19.5	$ 130.7
A&D [2]	3.7	3.7	3.7
Atrenne [3]	—	—	64.0
	$ 23.2	$ 23.2	$ 198.4

(1) Consists of: (i) in 2018, $111.2 million of goodwill attributable to our acquisition of Impakt, and $19.5 million attributable to a prior acquisition (Prior Goodwill); and (ii) in 2017 and 2016, the Prior Goodwill.
(2) Consists of $3.7 million of goodwill attributable to our acquisition of Karel completed in 2016.
(3) Consists of $64.0 million of goodwill attributable to our acquisition of Atrenne completed in 2018.

As part of our goodwill assessment, we also perform sensitivity analyses for the relevant CGUs in order to identify the impact of changes in key assumptions, including projected growth rates, profitability, and discount and terminal growth rates. We did not identify any key assumptions where a reasonable possible change would result in material impairments to the above goodwill balances in any of 2016, 2017 or 2018. Impairment assessments inherently involve judgment as to assumptions about expected future cash flows and the impact of market conditions on those assumptions. Future events and changing market conditions may impact our assumptions as to prices, costs or other factors that may result in changes in our estimates of future cash flows. Failure to realize the assumed revenues at an appropriate profit margin of a CGU could result in impairment losses in such CGU in future periods.

(iii) Pension annuity purchases:

In March 2017, the Trustees of our U.K. Main pension plan entered into an agreement with a third party insurance company to purchase an annuity for participants in such plan who have retired. The purchase of this annuity resulted in a non-cash loss of $17.0 million which we recorded in other comprehensive income (OCI) and simultaneously re-classified to deficit during the first quarter of 2017. In April 2017, the Trustees of our U.K. Supplementary pension plan entered into an agreement with a third party insurance company to purchase an annuity for all participants of this plan, all of whom are retired. The purchase of this annuity resulted in a non-cash loss of $1.9 million, which we recorded during the second quarter of 2017 in other charges in our consolidated statement of operations, as we anticipate winding up this plan during the first half of 2019 (see note 16 of our 2018 AFS). In June 2018, the Trustees of the U.K. Main pension plan entered into an agreement with a third party insurance company to purchase an annuity for participants in such plan who have not yet retired. The purchase of this annuity resulted in a non-cash loss of $63.3 million during the second quarter of 2018 which we recorded in OCI and simultaneously re-classified to deficit. The cost of the annuities are generally subject to true-up adjustments, and we may be required to pay additional premium amounts to the insurance company after completion of data verification of the participants.

(iv) Toronto transition costs:

In 2018, we recorded $13.2 million of such transition costs (2017 — $1.6 million), consisting primarily of utility costs related to idle premises, depreciation charges and personnel costs incurred in the operation of duplicate production lines in advance of the transition, duplicate rent expenses, and relocation costs. See "Liquidity — Toronto Real Property and Related Transactions" below for a discussion of the sale of our Toronto real property and related relocations, including transition and capital costs incurred through December 31, 2018 and expected in connection therewith. See "Recent developments — *Toronto Real Property and Related Transactions Update*" above for a discussion of the consummation of this transaction.

(v) Accelerated amortization of unamortized deferred financing costs:

During the second quarter of 2018, we recorded a $1.2 million charge to accelerate the amortization of unamortized deferred financing costs related to the extinguishment of the Prior Facility in June 2018.

(vi) Other:

During 2018, we recorded $11.0 million (2017 — $4.5 million; 2016 — $1.4 million) in Acquisition Costs. See note 3 of our 2018 AFS. Additionally, during 2017 and 2016, we received recoveries of damages of $1.1 million and $12.0 million, respectively, in connection with the settlement of class action lawsuits in which we were a plaintiff, related to certain purchases we made in prior periods. These recoveries were partially offset by costs we recorded in each year for unrelated legal matters.

Refund interest income in 2016:

In 2016, we received refund interest income totaling $14.3 million in connection with the resolution of certain previously disputed tax matters. See "Income taxes" below.

Income taxes:

For 2018, we had a net income tax recovery of $17.0 million on earnings before tax of $81.9 million, compared to a net income tax expense of $27.6 million on earnings before tax of $133.1 million for 2017 and a net income tax expense of $24.7 million on earnings before tax of $163.0 million for 2016.

Our net income tax recovery for 2018 of $17.0 million was favorably impacted by the recognition of $3.7 million and $49.6 million of previously unrecognized deferred tax assets in our U.S. group of subsidiaries as a result of our acquisitions of Atrenne and Impakt, respectively (the benefit pertaining to Impakt is referred to as the Impakt Benefit), which partially offset the $56.6 million in net deferred tax liabilities that arose in connection with such acquisitions, as well as the reversal of $6.0 million of previously accrued Mexican taxes (described below). These favorable impacts were offset, in part, by adverse taxable foreign exchange impacts resulting from the weakening of the Malaysian ringgit and Chinese renminbi relative to the U.S. dollar, our functional currency (Currency Impacts). Our functional and reporting currency is the U.S. dollar; however, our income tax expense is based primarily on taxable income determined in the currency of the country of origin. As a result, foreign currency translation differences impact our income tax expense from period to period. During the second quarter of 2018, we received a favorable conclusion to our application for a bi-lateral advance pricing arrangement (BAPA) between the United States and Mexican tax authorities, and reversed $6.0 million of Mexican income taxes previously accrued to reflect the approved BAPA terms.

Our net income tax expense for 2017 of $27.6 million was favorably impacted by the recognition of a $4.3 million deferred income tax benefit (Solar Benefit) related to our solar assets (discussed below), as well as taxable foreign exchange benefits resulting from the strengthening of the Malaysian ringgit and Chinese renminbi relative to the U.S. dollar, which was offset in part by $4.0 million in deferred income tax expense related to taxable temporary differences associated with the then-anticipated repatriation of undistributed earnings from certain of our Chinese subsidiaries, and a $2.0 million deferred income tax expense related to recently enacted U.S. Tax Reform (discussed below). In connection with our exit from the solar panel manufacturing business, we withdrew one of our tax incentives in Thailand (which related solely to such operations) during the second quarter of 2017. The withdrawal of this incentive allowed us to apply tax losses arising from the disposition of our solar assets against other taxable profits in Thailand, resulting in the recognition of the Solar Benefit in 2017 and ultimately realized in 2018.

The U.S. Tax Reform was enacted on December 22, 2017 and became effective January 1, 2018. We believe that we recorded all significant one-time impacts resulting from enactment of the U.S. Tax Reform in the fourth quarter of 2017 (consisting of a non-cash increase to our deferred income tax expense of $2.0 million), but will continue to assess additional impacts, if any, throughout 2019 as they become known due to changes in our interpretations and assumptions, as well as applicable changes in our business and additional regulatory guidance that may be issued. No significant amounts resulting from the U.S. Tax Reform were recorded in 2018. Based on currently available information, we estimate that the U.S. Tax Reform may have an annual adverse impact on our tax expense of approximately $1 million starting in 2019.

Our net income tax expense for 2016 of $24.7 million was favorably impacted by a reversal of provisions previously recorded for tax uncertainties related to the final reassessments and settlement of tax accounts in connection with the resolution of a transfer pricing matter for one of our Canadian subsidiaries. In connection therewith, we recorded aggregate income tax recoveries of $45 million Canadian dollars (approximately $34 million at the exchange rates at the time of recording), as well as aggregate refund interest income of $14.3 million. Our net income tax expense for 2016 was negatively impacted by withholding taxes of $1.5 million pertaining to the repatriation of $50.0 million from a U.S. subsidiary, deferred income tax expense of $8.0 million related to taxable temporary differences associated with the then-anticipated repatriation of undistributed earnings from certain of our Chinese subsidiaries, as well as adverse Currency Impacts of $7.3 million. There was no tax impact recorded in

2016 associated with the $21.2 million in non-cash impairment charges (recorded through restructuring), however, as discussed above, we recorded the Solar Benefit of $4.3 million in 2017, which was ultimately realized in 2018.

We conduct business operations in a number of countries, including countries where tax incentives have been extended to encourage foreign investment or where income tax rates are low. Our effective tax rate can vary significantly from period to period for various reasons, including as a result of the mix and volume of business in various tax jurisdictions, and in jurisdictions with tax holidays and tax incentives that have been negotiated with the respective tax authorities (see discussion below). Our effective tax rate can also vary as a result of restructuring charges, foreign exchange fluctuations, operating losses, cash repatriations, certain tax exposures, the time period in which losses may be used under tax laws and whether management believes it is probable that future taxable profit will be available to allow us to recognize deferred income tax assets.

Certain countries in which we do business grant tax incentives to attract and retain our business. Our tax expense could increase significantly if certain tax incentives from which we benefit are retracted. A retraction could occur if we fail to satisfy the conditions on which these tax incentives are based, or if they are not renewed or replaced upon expiration. Our tax expense could also increase if tax rates applicable to us in such jurisdictions are otherwise increased, or due to changes in legislation or administrative practices. Changes in our outlook in any particular country could impact our ability to meet the required conditions.

We have multiple income tax incentives in Thailand with varying exemption periods. These incentives initially allow for a 100% income tax exemption (including distribution taxes), which after eight years transition to a 50% income tax exemption for the next five years (excluding distribution taxes). Upon full expiry of each of the incentives, taxable profits associated with such expired tax incentives become fully taxable. As a result of our exit from the solar panel manufacturing business, we withdrew our tax incentive related to our solar panel manufacturing operations in Thailand during the second quarter of 2017 (see above). One of our remaining three Thailand tax incentives expires in 2019, another expires in 2020, and the third incentive will transition to the 50% exemption in 2022, and expire in 2027. Upon expiry of the first tax incentive in 2019, we estimate an additional annual tax expense of approximately $1.5 million based on current levels of profit, without accounting for the potential to shift certain Thailand production to incentives that do not expire in 2019.

In certain jurisdictions, primarily in the Americas and Europe, we currently have significant net operating losses and other deductible temporary differences, which we expect will be used to reduce taxable income in these jurisdictions in future periods, although not all are currently recognized as deferred tax assets.

We develop our tax filing positions based upon the anticipated nature and structure of our business and the tax laws, administrative practices and judicial decisions currently in effect in the jurisdictions in which we have assets or conduct business, all of which are subject to change or differing interpretations, possibly with retroactive effect. We are subject to tax audits of historical information by tax authorities in various jurisdictions which could result in additional tax expense in future periods relating to prior results. Reviews by tax authorities generally focus on, but are not limited to, the validity of our inter-company transactions, including financing and transfer pricing policies which generally involve subjective areas of taxation and a significant degree of judgment. Any such increase in our income tax expense and related interest and/or penalties could have a significant adverse impact on our future earnings and future cash flows.

In 2017, the Brazilian Ministry of Science, Technology, Innovation and Communications (MCTIC) issued assessments seeking to disqualify certain amounts of research and development (R&D) expenses for the years 2006 to 2009, which entitled our Brazilian subsidiary (which ceased operations in 2009) to charge reduced sales tax levies to its customers. The assessments against our Brazilian subsidiary (including interest and penalties) total approximately 39 million Brazilian real (approximately $10 million at year-end exchange rates) for such years. Although we cannot predict the outcome of this matter, we believe that our R&D activities for the period are supportable, and it is probable that our position will be sustained upon full examination by the appropriate Brazilian authorities and, if necessary, upon consideration by the Brazilian judicial courts. Our position is supported by our Brazilian legal advisers.

The successful pursuit of assertions made by any taxing authority could result in our owing significant amounts of tax, interest and possibly penalties. We believe we adequately accrue for any probable potential adverse tax ruling. However, there can be no assurance as to the final resolution of any claims and any resulting proceedings. If any claims and any ensuing proceedings are determined adversely to us, the amounts we may be required to pay could be material, and could be in excess of amounts accrued.

Net earnings:

Net earnings for 2018 decreased $6.6 million compared to 2017. The decrease was primarily due to $24.0 million in higher other charges (primarily restructuring charges, Acquisition Costs and Toronto transition costs), $14.3 million in higher finance costs, (see "Liquidity — *Cash provided by (used in) financing activities*" below) and $6.5 million in higher amortization of intangibles in 2018 as compared to the prior year, offset in part by $44.6 million in lower income taxes in 2018 compared to 2017 (primarily due to the $49.6 million Impakt Benefit).

Net earnings for 2017 decreased $32.8 million compared to 2016. The decrease was primarily due to lower gross profit in 2017, as well as the receipt of legal recoveries ($12.0 million) and refund interest income ($14.3 million) that benefited 2016 compared to 2017.

Acquisition Activity and Program Transfer:

In November 2016, we acquired the business assets of Karel. The Karel acquisition supported our strategy to accelerate our growth in the aerospace and defense market through the addition of value-add capabilities and services. In 2018, we completed the acquisitions of Atrenne and Impakt. See “Overview — Recent developments” above. Our acquisitions of Karel, Atrenne and Impakt pertain to our ATS segment.

In September 2017, one of our existing aerospace and defense customers outsourced certain operations to us under a 10-year “operate-in-place” agreement, pursuant to which we provide manufacturing and after-market repair services for electromechanical and electronic assemblies across a wide array of technologies at such customers' site. This agreement further expanded our relationship with this customer, enhanced our ability to provide end-to-end product lifecycle solutions to our customers, and supported our strategy of growing our aerospace and defense business.

We may, at any time, be engaged in ongoing discussions with respect to possible acquisitions or strategic transactions that could expand our revenue base and/or service offerings, increase our penetration in various industries, establish strategic relationships with new or existing customers, enhance our competitiveness, and/or enhance our global supply chain network. There can be no assurance that any of these discussions will result in a definitive purchase agreement and, if they do, what the terms or timing of any such agreement would be. There can also be no assurance that any acquisition or other strategic transactions will be successfully integrated or will generate the returns we expect. We may fund acquisitions from cash on hand, third-party borrowings, the issuance of securities, or a combination thereof.

Liquidity and Capital Resources

Liquidity

The following tables set forth key liquidity metrics for the periods indicated (in millions):

	December 31		
	2016	2017	2018
Cash and cash equivalents	$ 557.2	$ 515.2	$ 422.0
Borrowings under credit facility	227.5	187.5	757.3

	Year-ended December 31		
	2016	2017	2018
	(restated)*	(restated)*	
Cash provided by operating activities	$ 173.3	$ 127.0	$ 33.1
Cash used in investing activities	(64.0)	(89.3)	(545.6)
Cash generated from (used in) financing activities	(97.4)	(79.7)	419.3
Changes in non-cash working capital items (included in operating activities above):			
A/R	$ (134.6)	$ (6.3)	$ (155.4)
Inventories	(61.5)	(139.6)	(224.0)
Other current assets	(5.3)	(2.0)	7.6
A/P, accrued and other current liabilities and provisions	75.4	51.8	227.0
Working capital changes	$ (126.0)	$ (96.1)	$ (144.8)

* Restated to reflect the impact of our adoption of IFRS 15 as of January 1, 2018 on net earnings and changes in non-cash working capital.

Cash provided by operating activities:

In 2018, we generated $33.1 million of cash from operating activities compared to $127.0 million in 2017. The decrease of $93.9 million was primarily due to a $48.7 million increase in working capital requirements and $51.2 million in lower earnings before income taxes in 2018 as compared to 2017. Higher working capital requirements for 2018 as compared to the prior year were driven primarily by increases in accounts receivable ($149.1 million) and inventory ($84.4 million) balances, offset in part by increases in accounts payable balances ($175.2 million). Although part of the $84.4 million in additional inventory in 2018 compared to 2017 was required to support new program ramps, we experienced demand reductions from certain of our customers in each of our segments, as well as materials constraints primarily from CCS segment suppliers during 2018, each of which resulted in us carrying higher than expected levels of inventory at December 31, 2018 compared to 2017. We anticipate that these market conditions will continue to adversely impact us in 2019. The increases in accounts receivable for 2018 as compared to 2017 generally reflect the higher amounts and timing of revenue earned during 2018. The increase in accounts payable reflects increased inventory purchases during 2018.

In 2017, we generated $127.0 million of cash from operating activities compared to $173.3 million in 2016. The decrease was primarily due to the income tax refund of $52 million related to the resolution of certain tax matters we received in the fourth quarter of 2016 (See “Operating results — Income taxes” above), and the decrease in net earnings in 2017 as compared to 2016, offset in part by $29.9 million in lower working capital requirements in 2017 as compared to 2016. Lower working capital requirements in 2017 were primarily due to improvements in A/R from the prior year ($128.3 million), offset in part by higher inventory levels ($78.1 million). Cash generated from accounts receivable improved compared to 2016, primarily due to lower revenue levels in the fourth quarter of 2017 compared to the same period in 2016, as well as $30.0 million of additional accounts receivable sold under our A/R sales program in 2017 compared to 2016, which we used as an alternative to drawing on our Prior Revolver. Our inventory levels increased compared to 2016, in part to support our new program ramps, but also as a result of demand volatility in our CCS segment, including late changes from certain customers, as well as materials constraints throughout 2017, all of which resulted in us carrying higher than expected levels of inventory at December 31, 2017 as compared to 2016.

From time to time, we extend payment terms applicable to certain customers, and/or provide longer payment terms when deemed commercially reasonable. Longer payment terms, which have become more prevalent, could adversely impact our working capital requirements, and increase our financial exposure and credit risk. Commencing in the fourth quarter of 2016, the payment terms of one of our significant customers was extended. In connection therewith, we registered for that customer's supplier financing program (SFP) pursuant to which participating suppliers may sell A/R from such customer to a third-party bank on an uncommitted basis in order to receive earlier payment. During December 31, 2018, we sold $50.0 million of accounts receivable under this program (December 31, 2017 — $52.3 million; December 31, 2016 — $51.4 million). We utilized the SFP to substantially offset the effect of the extended payment terms on our working capital for the period. We pay discount charges with respect to this arrangement, which we record as finance costs in our consolidated statement of operations. Due to our anticipated disengagement from a portion of this customer's programs in early 2019, we expect to sell a lower amount of A/R under the SFP in future periods.

Free cash flow (non-IFRS):

Non-IFRS free cash flow is defined as cash provided by or used in operations after the purchase of property, plant and equipment (net of proceeds from the sale of certain surplus equipment and property), finance lease payments, repayments from a former solar supplier, and finance costs paid. As a measure of liquidity, and consistent with the inclusion of our Toronto relocation capital expenditures and transition costs in non-IFRS free cash flow in the periods incurred, we will include the amounts received from the sale of our Toronto real property, in non-IFRS free cash flow in the period of receipt. Note, however, that non-IFRS free cash flow does not represent residual cash flow available to Celestica for discretionary expenditures. Management uses non-IFRS free cash flow as a measure, in addition to IFRS cash provided by or used in operations, to assess our operational cash flow performance. We believe non-IFRS free cash flow provides another level of transparency to our liquidity. A reconciliation of this measure to cash provided by (used in) operating activities measured under IFRS is set forth below (in millions):

	Year ended December 31		
	2016	2017	2018
IFRS cash provided by operations	$ 173.3	$ 127.0	$ 33.1
Purchase of property, plant and equipment, net of sales proceeds	(63.1)	(101.8)	(78.5)
Finance lease payments	(4.5)	(6.5)	(17.0)
Repayments from former solar supplier	14.0	12.5	—
Finance costs paid	(9.5)	(10.2)	(36.0)
Non-IFRS free cash flow	$ 110.2	$ 21.0	$ (98.4)

Our non-IFRS free cash flow of negative $98.4 million for 2018 decreased $119.4 million compared to 2017, primarily due to lower cash generated from operating activities in 2018 (discussed above) as compared to 2017, as well as the payment of approximately $13 million of debt issuance costs incurred in connection with the arrangement of our New Credit Facility and New Term Loans, higher interest costs incurred on our higher borrowings in 2018, and $11.3 million of finance lease payments (including accrued interest and fees) we made to settle our outstanding solar equipment leases in the first quarter of 2018. These decreases were offset by $20.4 million in lower capital expenditures in 2018 as compared to 2017 (see "Cash used in investing activities" below). In addition, 2017 benefited from the repayment of $12.5 million of advances from a former solar supplier.

Our non-IFRS free cash flow of $21.0 million for 2017 decreased $89.2 million compared to 2016, primarily due to lower cash generated from operating activities in 2017 (discussed above) and $38.5 million of higher capital expenditures in 2017 as compared to 2016.

Cash used in investing activities:

Our capital expenditures for 2018 were $82.2 million (2017 — $102.6 million; 2016 — $64.1 million), primarily to enhance our manufacturing capabilities in various geographies and to support new customer programs (with approximately two-thirds of the equipment additions to support our ATS segment). See footnote (iii) to the "Additional Commitments" table below for further detail. As a result of the demand volatility experienced with certain CCS segment customers during 2018, and the shift in production to our other sites due to the impact of newly-imposed tariffs, certain of our planned CCS segment expenditures have been deferred. Our capital expenditures for 2018 included approximately $15 million in building improvements and new machinery at our new Toronto manufacturing site. The expenditures in 2017 included expanding one of our production sites in Romania to support new ATS customers. We fund our capital expenditures from cash on hand. From time-to-time, we receive cash proceeds from the sale of surplus equipment and property (2018 — $3.7 million; 2017 — $0.8 million; 2016 — $1.0 million).

In 2015, we entered into a supply agreement with a solar supplier (which was terminated in the fourth quarter of 2016) that included a commitment by us to provide cash advances to help secure our solar cell supply. All such cash advances were repaid in full by the second quarter of 2017. We received cash advance repayments of $12.5 million from this solar supplier in the first half of 2017 ($14.0 million in 2016).

In November 2016, we completed the acquisition of Karel. The purchase price of $14.9 million was financed with cash on hand. In April 2018, we completed the acquisition of Atrenne. The purchase price of $141.7 million was funded with borrowings under the Prior Revolver. In November 2018, we completed the acquisition of Impakt. The purchase price of $325.4 million was funded with available borrowings under our New Revolver, $245.0 million of which was repaid with the proceeds of the November Term Loan. See "Overview — Recent developments."

Cash provided by (used in) financing activities:

Share repurchases:

During 2018, we paid $75.5 million (including transaction fees) (2017 — $19.9 million; 2016 — $34.3 million) to repurchase and cancel 6.8 million subordinate voting shares (2017 —1.9 million; 2016 — 3.2 million) under our 2017 NCIB at a weighted average price of $11.10 per share (2017 — $10.58; 2016 — $10.69).

During 2018, we paid $22.4 million (including transaction fees) (2017 — $16.7 million; 2016 — $18.2 million) for a broker's purchase of 2.1 million subordinate voting shares (2017 — 1.4 million; 2016 — 1.6 million) in the open market to satisfy obligations under our stock-based compensation plans.

Financing:

In June 2018, we entered into the $800.0 million New Credit Facility, which provides for the $350.0 million June Term Loan that matures in June 2025, and the $450.0 million New Revolver that matures in June 2023. The net proceeds from the June Term Loan were used to repay all amounts outstanding under our Prior Facility ($175.0 million under the Prior Term Loan and $163.0 million under the Prior Revolver), which was terminated on such repayment, as well as costs related to the arrangement of the New Credit Facility. In November 2018, we utilized the accordion feature under our New Credit Facility to add the incremental $250.0 million November Term Loan, maturing in June 2025.

During the second half of 2018, we made two scheduled quarterly principal repayments of $0.875 million under the June Term Loan. In each quarter of 2016 and 2017, and the first two quarters of 2018, we made scheduled principal repayments of $6.25 million under the Prior Term Loan. We also made a $15.0 million repayment under the Prior Revolver during the first quarter of 2017.

During the fourth quarter of 2018, we borrowed $339.5 million under the New Revolver to fund the Impakt acquisition in November 2018 ($245.0 million of which was repaid with the proceeds from the November Term Loan). During the third quarter of 2018, we borrowed $55.0 million under the New Revolver for working capital purposes. During the second quarter of 2018, we borrowed $163.0 million under the Prior Revolver, primarily to fund the Atrenne acquisition in April 2018, as well as for working capital requirements.

During 2017, no amounts were borrowed under the Prior Revolver. As at December 31, 2016, the Prior Revolver had a balance of $15.0 million, which was repaid during the first quarter of 2017.

During 2018, we paid finance costs of $36.0 million (2017 — $10.2 million; 2016 — $9.5 million). During 2018, these payments included higher interest expense as compared to 2017 due to an increase in borrowings to fund our acquisitions in 2018, higher fees associated with the increased sale of A/R in 2018 as compared to 2017, and higher interest costs in 2018 as compared to 2017 due to rising interest rates (as a result of increases in LIBOR). During 2018, finance costs also included approximately $13 million (2017 — nil; 2016 — nil) of debt issuance costs related to the arrangement of the New Credit Facility and our New Term Loans.

Finance lease payments:

During 2018, we paid $17.0 million (2017 — $6.5 million; 2016 — $4.5 million) under our finance lease agreements (see “Cash Requirements” below). Finance lease payments during 2018 included $11.3 million (including fees and accrued interest) we paid in January 2018 to settle and terminate our solar panel equipment leases in anticipation of the sale of such equipment. At December 31, 2018, we had a total of $10.4 million finance lease obligations outstanding (December 31, 2017 — $17.7 million; December 31, 2016 — $18.4 million).

Cash requirements:

We maintain the New Revolver, uncommitted bank overdraft facilities, and an A/R sales program, and we participate in the SFP, to provide short-term liquidity and to have funds available for working capital and other investments to support our strategic priorities. See "Capital Resources" below for a discussion of swing line and letter of credit sub-limits under the New Revolver, as well as the accordion feature of the New Credit Facility. Our working capital requirements can vary significantly from month-to-month due to a range of business factors, including the ramping of new programs, expansion of our services and business operations, timing of purchases, higher levels of inventory for new programs and anticipated customer demand, timing of payments and A/R collections, and customer forecasting variations. The international scope of our operations may also create working capital requirements in certain countries while other countries generate cash in excess of working capital needs. Moving cash between countries on a short-term basis to fund working capital is not always expedient due to local currency regulations, tax considerations, and other factors. To meet our working capital requirements and to provide short-term liquidity, we may draw on the New Revolver, sell A/R through our A/R sales program or participate in the SFP, while available. The timing and the amounts we borrow or repay under these facilities can vary significantly from month-to-month depending upon our cash requirements. As at December 31, 2018, other than ordinary course letters of credit, $159.0 million was outstanding under the New Revolver for working capital purposes and to partially fund our acquisition of Impakt (December 31, 2017 — nil; December 31, 2016 — other than ordinary course letters of credit, $15.0 million outstanding under the Prior Revolver). We have also increased the amounts sold under our A/R sales program in recent years (2018 — $130.0 million; 2017 — $80.0 million; 2016 — $50.0 million), as a cost-effective alternative to drawing additional amounts on our revolving facility to meet our ordinary course cash requirements. However, since our A/R sales program and the SFP are both on an uncommitted basis, there can be no assurance that any participant bank will purchase the accounts receivable we wish to sell to them under these programs. In addition, due to our anticipated disengagement from a portion of this customer's programs in early 2019, we expect to sell a lower amount of A/R under the SFP in future periods. See “Capital Resources” below.

We do not believe that the aggregate amounts outstanding under our New Credit Facility as at December 31, 2018 (described under "Capital Resources" below) have had (or will have) a significant adverse impact on our liquidity, our results of operations or financial condition. Our quarterly principal repayment requirements under the New Credit Facility are $1.5 million (or $6 million annually) compared to quarterly principal repayments of $6.25 million (or $25 million annually) under our Prior Facility (see below for a description of required prepayments under the New Credit Facility). We estimate our aggregate interest expense, based on interest rates and amounts outstanding as of December 31, 2018, and including the impact of our interest rate swap agreements, to be approximately $10 million per quarter, as compared to approximately $2 million per quarter for 2016 and 2017, based on interest rates and amounts outstanding under the Prior Facility at the applicable year-end. At December 31, 2018, we had $269.7 million available under our revolving facility for future borrowings, reflecting outstanding borrowings and letters of credit (December 31, 2017 — $276.8 million available; December 31, 2016 — $259.2 million available). We believe that our current level of leverage is acceptable for a company of our size and that we will remain in compliance with the financial covenants under the New Credit Facility. In addition, we believe that cash flow from operating activities, together with cash on hand, remaining availability under the New Revolver, intra-day and overnight bank overdraft facilities, and cash from the sale of A/R, will continue to be sufficient to fund our currently anticipated working capital needs and planned capital spending (including the commitments described elsewhere herein).

Notwithstanding the foregoing, however, our increased indebtedness, together with the mandatory prepayment provisions of the New Credit Agreement (described below), has reduced our ability to fund future acquisitions and/or to respond to unexpected capital requirements, and will require us to use an increased amount of our cash flow to service such debt, and may also: require us to pursue additional term loan financing for potential investments, which may not be available on acceptable terms, or at all; limit our ability to obtain additional financing for working capital, business activities, and other general corporate requirements; limit our ability to refinance our indebtedness on terms acceptable to us or at all; limit our flexibility to plan for and adjust to changing business and market conditions, and increase our vulnerability to general adverse economic and industry conditions. In addition, the New Credit Facility contains restrictive covenants that limit our ability to engage in specified types of transactions and require us to maintain specified financial ratios (described in "Capital Resources" below). Our ability to meet those financial ratios will depend on our ongoing financial and operating performance, which, in turn, will be subject to economic conditions and to financial, market, and competitive factors, many of which are beyond our control. A breach of any of such covenants could result in a default under the instruments governing such indebtedness.

In addition to required aggregate quarterly principal repayments on the New Term Loans of $1.5 million, commencing in 2020, we will be required to make an annual prepayment of outstanding obligations under the New Credit Facility (applied first to the New Term Loans, then to the New Revolver, in the manner set forth in the New Credit Facility) ranging from 0% — 50% (based on a defined leverage ratio) of specified excess cash flow (as defined in the New Credit Facility) for the prior fiscal year. Proceeds from the sale of our Toronto real property will be taken into account in the determination of excess cash flow. In addition, prepayments of outstanding obligations under the New Credit Facility (applied as described above) may also be required in the

amount of specified net cash proceeds received above a specified annual threshold (including proceeds from the disposal of certain assets, but excluding the net proceeds from the sale of our Toronto real property). Repaid amounts on the New Term Loans may not be re-borrowed. Repaid amounts on the New Revolver may be re-borrowed.

Interest expense under the New Credit Facility, based on interest rates and amounts outstanding as at December 31, 2018, and including the impact of our interest rate swap agreements, is approximately $10 million per quarter. Any increase in prevailing interest rates, margins, or amounts outstanding, would cause this amount to increase (see discussion below).We also recorded $0.5 million of quarterly non-cash charges in Q4 2018 to amortize the $13.4 million in deferred financing costs incurred in connection with the arrangement of the New Credit Facility and New Term Loans. Commitment fees paid during 2018 were $1.3 million (2017 — $1.3 million; 2016 — $1.4 million).

We may use cash on hand, issue debt (including convertible debt) or equity securities, or further increase our levels of third-party indebtedness to fund operations and/or make additional acquisitions (or any combination of the foregoing). Any significant use of cash would adversely impact our cash position and liquidity. Any issuance or incurrence of additional debt would increase our debt leverage, increase our interest expense, and may reduce our debt agency ratings. In addition, any issuance of equity or convertible debt securities (the pricing of which would be subject to market conditions at the time of issuance) could dilute current shareholders' positions; debt or convertible debt securities could have rights and privileges senior to those of equity holders; and the terms of debt securities could impose restrictions on our operations. Sales of our equity securities or convertible debt, or the perception that these sales could occur, could also cause the market price of our subordinate voting shares to decline. Any further increase in our overall debt levels would further adversely impact our ability to fund future acquisitions and/or respond to unexpected capital requirements, and may: limit our ability to obtain additional financing for working capital, business activities, and other general corporate requirements; limit our ability to refinance our indebtedness on terms acceptable to us or at all; limit our flexibility to plan for and adjust to changing business and market conditions, and increase our vulnerability to general adverse economic and industry conditions; and require us to dedicate an additional portion of our cash flow to make interest payments, principal repayments and potential principal prepayments on such indebtedness, thereby limiting the availability of our cash flow for other purposes.

As at December 31, 2018, a significant portion of our cash and cash equivalents was held by foreign subsidiaries outside of Canada, a large part of which may be subject to withholding taxes upon repatriation under current tax laws. Cash and cash equivalents held by subsidiaries related to undistributed earnings that are considered indefinitely reinvested outside of Canada (which we do not intend to repatriate in the foreseeable future) are not subject to these withholding taxes. We currently expect to repatriate approximately $30 million from various foreign subsidiaries in the near term, and have recorded the anticipated future withholding taxes as deferred income tax liabilities, if applicable. While some of our subsidiaries are subject to local governmental restrictions on the flow of capital into and out of their jurisdictions (including in the form of cash dividends, loans or advances to us), which is required or desirable from time to time to meet our international working capital needs and other business objectives (as described above), these restrictions have not had a material impact on our ability to meet our cash obligations. At December 31, 2018, we had approximately $355 million (December 31, 2017 — $351 million) of cash and cash equivalents held by foreign subsidiaries outside of Canada that we do not intend to repatriate in the foreseeable future.

As at December 31, 2018, we had known contractual obligations that require future payments as follows (in millions):

	Total	2019	2020	2021	2022	2023	Thereafter
Borrowings under New Credit Facility[(i)]	$ 757.3	$ 6.0	$ 6.0	$ 6.0	$ 6.0	$ 165.0	$ 568.3
Operating leases	107.4	31.5	23.7	14.5	9.5	6.6	21.6
Finance leases	11.7	3.8	3.3	2.8	1.4	0.4	—
Pension plan contributions[(ii)]	12.0	12.0	—	—	—	—	—
Non-pension post-employment plan payments	35.8	3.6	2.4	2.6	2.8	3.4	21.0
Binding purchase order obligations [(iii)]	1,075.1	1,075.1	—	—	—	—	—
Purchase obligations under IT support agreements[(iv)]	120.8	19.7	19.7	16.5	13.7	13.5	37.7
Total[(v)]	$2,120.1	$1,151.7	$ 55.1	$ 42.4	$ 33.4	$ 188.9	$ 648.6

(i) Represents mandatory principal repayment obligations for our borrowings under the New Revolver and New Term Loans (based on amounts outstanding as of December 31, 2018), which mature in June 2023 and June 2025, respectively, and excludes related interest and fees. The Term Loans require mandatory aggregate quarterly principal repayments of $1.5 million until their maturity (when remaining amounts outstanding are due), and borrowings under the New Revolver are due upon maturity. Borrowings under the New Revolver bear interest for the period of the draw at LIBOR, Canadian Prime, or Base Rate (each as defined in the New Credit Facility) plus a specified margin, or in the case of any bankers' acceptance, at the B/A Discount Rate (as defined in the New Credit Facility). The margin for borrowings under the New Revolver ranges from 0.75% to 2.5%, depending on the rate we select and our consolidated leverage ratio. As a result of our use of the accordion feature of the New Credit Facility in November 2018, interest on the June Term Loan increased from LIBOR plus 2.0% to LIBOR plus 2.125%. The November Term Loan currently bears interest at LIBOR plus 2.5%. Based on the rates and the principal amount outstanding under the New Term Loans ($598.3 million) and the New Revolver (other than $21.3 million in letters of credit, $159.0 million) as of December 31, 2018, and including the impact of our interest rate swap agreements, interest and fees are estimated to be approximately $10 million per quarter. Actual amounts could differ materially from these estimates. Payment defaults under the credit facility will incur interest on unpaid amounts at an annual rate equal to the sum of (i) 2%, plus (ii) the rate per annum otherwise applicable to such unpaid amounts, or if no rate is specified or available, the rate per annum applicable to Base Rate revolving loans. If an event of default occurs and is continuing, the administrative agent may declare all advances on the facility to be immediately due and payable, and may cancel the lenders' commitments to make further advances thereunder. See “Capital Resources” below and note 12 to our 2018 AFS for a description of our credit facility, including amounts outstanding thereunder, repayment dates and interest obligations.

(ii) Based on our latest actuarial valuations, we estimate our funding requirement for 2019 to be $12.0 million (2018 — $13.3 million; 2017 — $11.9 million). See note 19 to our 2018 AFS. A significant deterioration in the asset values or asset returns could lead to higher than expected future contributions. Risks and uncertainties associated with actuarial valuation measurements may also result in higher future cash contributions. We fund our pension contributions from cash on hand. Although we have defined benefit plans that are currently in a net unfunded position, we do not expect our pension obligations will have a material adverse impact on our future results of operations, cash flows or liquidity.

(iii) Represents outstanding purchase orders with suppliers to acquire inventory. These purchase orders are generally short-term in nature and legally binding. However, a substantial portion of these purchase orders are for standard inventory items which we have procured for specific customers based on their purchase orders or forecasts, under which such customers have contractually assumed liability for such material, if not consumed.

(iv) Represents obligations under IT support agreements.

(v) This table excludes $25.5 million of long-term deferred income tax liabilities and $20.6 million of provisions and other non-current liabilities primarily pertaining to warranties and asset retirement obligations, as we are unable to reliably estimate the timing of any future payments related thereto. However, long-term liabilities included in our consolidated balance sheet include these items. In addition, our interest rate swap agreements require us to pay a fixed rate of interest with respect to an aggregate of $350.0 million outstanding under the New Term Loans. These payments, however, are partially offset by related interest we receive, based on the variable interest rates swapped. As the offsets are not determinable and vary from quarter to quarter, this table also excludes the interest payments on our interest rate swap agreements.

Additional Commitments:

As at December 31, 2018, we had additional commitments that expire as follows (in millions):

	Total	2019	2020	2021	2022	2023	Thereafter
Foreign currency contracts[(i)]	$ 544.2	$ 544.2	$ —	$ —	$ —	$ —	$ —
Letters of credit, letters of guarantee and surety bonds[(ii)]	35.7	29.1	1.6	0.3	—	—	4.7
Capital expenditures[(iii)]	33.6	33.6	—	—	—	—	—
Total	$ 613.5	$ 606.9	$ 1.6	$ 0.3	$ —	$ —	$ 4.7

(i) Represents the aggregate notional amounts of our forward currency contracts and swaps.

(ii) Includes $21.3 million in letters of credit issued under our Revolving Facility.

(iii) Our capital spending varies each period based on the timing of new business wins and forecasted sales levels. Based on our current operating plans, we anticipate capital spending for 2019 to be approximately 1.5% to 2.0% of revenue, and expect to fund these expenditures from cash on hand and through the financing agreements described below under “Capital Resources.” As at December 31, 2018, we had committed $33.6 million for capital expenditures, principally for machinery and equipment to support new customer programs. Of such amount, approximately 25% is committed for Asia, approximately 25% is committed for North America (excluding Canada), approximately 30% is committed for Europe, and approximately 20% is committed for Canada (primarily for building improvements related to our temporary corporate headquarters).

Customer or program transfers between EMS providers are part of the competitive nature of our industry. From time-to-time, we make commitments to purchase assets, primarily inventory, or fund certain costs, as part of transitioning programs from a customer or a competitor. In September 2017, we purchased $5 million of inventory and assumed the relevant workforce in connection with a program transferred to us under an "operate-in-place" arrangement.

We have entered into financing agreements for the lease of machinery and equipment. For leases where the risks and rewards of ownership have substantially transferred to us, we capitalize the leased asset and record a corresponding liability on our consolidated balance sheet. See “Finance leases” in the contractual obligations table above. See note 2(x) of our 2018 AFS for a discussion of a new IFRS standard pertaining to leases which we adopted January 1, 2019, eliminating the distinction between operating and finance leases.

Toronto Real Property and Related Transactions:

On July 23, 2015, we entered into the Property Sale Agreement with a special purpose entity (Property Purchaser) for a purchase price of approximately $137 million Canadian dollars (approximately $100 million at year-end exchange rates), exclusive of applicable taxes and subject to specified adjustments, including for certain density bonuses and other items in accordance with usual commercial practice. Upon execution of the Property Sale Agreement, we were paid a cash deposit of $15 million Canadian dollars ($11.2 million at the then-prevailing exchange rate).

In September 2018, the Property Sale Agreement was assigned to the Assignee, although the Property Purchaser was not released from its obligations under the Property Sale Agreement. In connection with the assignment, the Property Sale Agreement was amended to provide for the remaining proceeds of $122 million Canadian dollars (approximately $89 million at year-end exchange rates) to be paid in one lump sum cash payment at the closing of the transaction (previously we were to receive one-half of the purchase price in the form of a two-year, interest-free, first-ranking mortgage). Other terms of the agreement remained unchanged. On January 21, 2019, the required municipal zoning approval was obtained. On March 7, 2019, we completed the sale of the real property and received total proceeds of approximately $110 million, including a high density bonus and an early vacancy incentive related to the temporary relocation of our corporate headquarters. The gain on the sale of this property will be recorded as recoveries through other charges (recoveries). See "Related Party Transactions" below for a description of the ownership of the Property Purchaser and its option to obtain an interest in the Assignee.

In connection with the anticipated sale, we have moved our Toronto manufacturing operations to another location in the Greater Toronto area and in connection therewith, entered into a long-term lease in November 2017, with occupancy commenced in March 2018. We completed the transition to this new manufacturing location in February 2019. In addition, we will enter into a long-term lease with the Assignee for our new corporate headquarters. In connection therewith, we are relocating our corporate headquarters to a temporary location while space in a new office building (to be built by the Assignee on the site of our former location) is under construction. In connection therewith, in September 2018, we entered into a 3-year lease for such temporary offices, and such relocation is currently expected to be completed by the end of the first half of 2019. We have incurred (and will continue to incur) significant costs throughout the transition period (which commenced in the fourth quarter of 2017) to relocate our corporate headquarters and to transfer our Toronto manufacturing operations to its new location, and as we prepare and customize the new site to meet our manufacturing needs. These costs consist of building improvements and new equipment which we will capitalize, as well as transition-related costs which we record in other charges. Transition costs are comprised of direct relocation costs, duplicate costs (such as rent expense, utility costs, depreciation charges, and personnel costs) incurred during the transition period, as well as cease-use costs incurred in connection with idle or vacated portions of the relevant premises that we would not have incurred but for these relocations. We incurred approximately $17 million in capitalized costs through February 13, 2019 (2018 — $15 million) for the new manufacturing location, funded from cash on hand. We also expect to incur approximately $6 million ($1 million of which has been incurred through February 13, 2019; 2018 — nil) of capitalized building improvements in connection with our temporary corporate headquarters. We expect to incur total transition costs (including in connection with the relocation of our corporate headquarters) of up to $20 million through the end of the second quarter of 2019. We incurred approximately $16 million of such costs through February 13, 2019, consisting primarily of utility costs related to idle premises, depreciation charges and personnel costs incurred in the operation of duplicate production lines in advance of the transition, duplicate rent expenses, and relocation costs.

Share Repurchases:

We have funded and intend to continue to fund our share repurchases from cash on hand, borrowings under our New Revolver, or a combination thereof. See "Cash provided by (used in) financing activities" above.

Indemnities:

We provide routine indemnifications, the terms of which range in duration and often are not explicitly defined. These may include indemnifications against third-party intellectual property infringement claims and certain third-party negligence claims for property damage. We have also provided indemnifications in connection with the sale of certain businesses and real property. The maximum potential liability from these indemnifications cannot be reasonably estimated. In some cases, we have recourse

against other parties to mitigate our risk of loss from these indemnifications. Historically, we have not made significant payments relating to these types of indemnifications.

Litigation and contingencies:

In the normal course of our operations, we may be subject to lawsuits, investigations and other claims, including environmental, labor, product, customer disputes and other matters. Management believes that adequate provisions have been recorded where required. Although it is not always possible to estimate the extent of potential costs, if any, management believes that the ultimate resolution of all such pending matters will not have a material adverse impact on our financial performance, financial position or liquidity. See "Operating Results — Income Taxes" above for a description of certain tax matters.

Capital Resources

Our capital resources consist of cash provided by operating activities, access to a revolving facility, intraday and overnight bank overdraft facilities, an A/R sales program, the SFP, and our ability to issue debt or equity securities. We regularly review our borrowing capacity and make adjustments, as permitted, for changes in economic conditions and changes in our requirements. As part of our strategic initiatives to scale and diversify our ATS revenue base and expand our capabilities in our ATS segment, we have increased our levels of third-party indebtedness and A/R sales in order to fund acquisitions and working capital needs. In addition, we may use cash on hand, issue equity or debt, or further increase our levels of third-party indebtedness in order to fund operations or additional acquisitions (or any combination of the foregoing). See "Liquidity — *Cash requirements*" above for a discussion of expected and potential adverse impacts from such actions. We centrally manage our funding and treasury activities in accordance with corporate policies, the main objectives of which are to ensure appropriate levels of liquidity, to have funds available for working capital or other investments we determine are required to grow our business, to comply with debt covenants, to maintain adequate levels of insurance, and to balance our exposures to market risks.

At December 31, 2018, we had cash and cash equivalents of $422.0 million (December 31, 2017 — $515.2 million), of which approximately 97% was cash and 3% was cash equivalents, consisting of bank deposits. The majority of our cash and cash equivalents was denominated in U.S. dollars, and the remainder was held primarily in Chinese renminbi and the Euro. We also held cash and cash equivalents in the following currencies: British pound sterling, Brazilian real, Canadian dollar, Czech koruna, Hong Kong dollar, Indian rupee, Japanese yen, Korean won, Lao kip, Malaysian ringgit, Mexican peso, Philippines peso, Romanian leu, Singapore dollar, Taiwan dollar and Thai baht. Our cash and cash equivalents are subject to intra-quarter swings, generally related to the timing of A/R collections, inventory purchases and payments, and other capital uses.

Until June 27, 2018, we were party to the Prior Facility, that consisted of the $300.0 million Prior Revolver and the fully drawn $250.0 million Prior Term Loan, each of which was scheduled to mature in May 2020. The Prior Revolver had an accordion feature that allowed us to increase the $300.0 million limit by an additional $150.0 million on an uncommitted basis upon satisfaction of certain terms and conditions. The Prior Revolver also included a $25.0 million swing line, subject to the overall revolving credit limit, that provided for short-term borrowings up to a maximum of seven days. Borrowings under the Prior Revolver bore interest at various base rates selected by us consisting of LIBOR, Prime, Base Rate Canada, and Base Rate (each as defined in the Prior Facility), plus a specified margin. The margin for borrowings under the Prior Revolver ranged from 0.6% to 1.4% (except in the case of the LIBOR loans, in which case, the margin ranged from 1.6% to 2.4%), based on a specified financial ratio based on indebtedness. Outstanding amounts under the Prior Revolver were due at maturity (but were required to be repaid prior thereto under specified circumstances). The Prior Term Loan bore interest at LIBOR plus a margin ranging from 2.0% to 3.0% based on the same financial ratio. The Prior Term Loan required quarterly principal repayments of $6.25 million, with the remainder due at maturity. Prepayments on the Prior Term Loan were required under certain circumstances. We were required to comply with certain restrictive covenants under the Prior Facility, including those relating to the incurrence of senior ranking indebtedness, the sale of assets, a change of control, and certain financial covenants related to indebtedness and interest coverage. Certain of our assets were pledged as security for borrowings under the Prior Facility.

In June 2018, we entered into the $800.0 million New Credit Facility, providing for the $350.0 million June Term Loan and the $450 million New Revolver. In November 2018, we added the $250.0 million November Term Loan. As of December 31, 2018, an aggregate of $598.3 million was outstanding under the New Term Loans, and other than ordinary course letters of credit, $159.0 million was outstanding under the New Revolver (December 31, 2017 — $187.5 million outstanding under the Prior Term Loan and other than ordinary course letters of credits, no amounts outstanding under the Prior Revolver). See "Liquidity — *Cash provided by (used in) financing activities — Financing*" above for a discussion of amounts borrowed and repaid under our credit facilities during 2016 to 2018.

The June Term Loan requires quarterly principal repayments of $0.875 million commencing September 30, 2018 and the November Term Loan requires quarterly principal repayments of $0.625 million, commencing March 31, 2019, and in each case

a lump sum repayment of the remainder outstanding at maturity. See "Liquidity — *Cash requirements*" above for a description of mandatory prepayments required under the New Credit Facility. Except under specified circumstances, and subject to the payment of breakage costs (if any), we are generally permitted to make voluntary prepayments of outstanding amounts under the New Revolver and the New Term Loans without any other premium or penalty. Repaid amounts on the New Term Loans may not be re-borrowed. Repaid amounts on the New Revolver may be re-borrowed.

The New Credit Facility has an accordion feature that allows us to increase the term loans and/or revolving loan commitments by approximately $110 million, plus an unlimited amount to the extent that a specified leverage ratio on a pro forma basis does not exceed specified limits, in each case on an uncommitted basis and subject to the satisfaction of certain terms and conditions. The New Revolver also includes a $50.0 million sub-limit for swing line loans, providing for short-term borrowings up to a maximum of ten business days, as well as a $150.0 million sub-limit for letters of credit, in each case subject to the overall New Revolver credit limit. The New Revolver permits us and certain designated subsidiaries to borrow funds (subject to specified conditions) for general corporate purposes, including for capital expenditures, certain acquisitions, and working capital needs. Borrowings under the New Revolver bear interest at LIBOR, Canadian Prime, or Base Rate (each as defined in the New Credit Facility) plus a specified margin, or in the case of any bankers' acceptance, at the B/A Discount Rate (as defined in the New Credit Facility). The margin for borrowings under the New Revolver ranges from 0.75% to 2.5%, depending on the rate we select and our consolidated leverage ratio. As a result of our use of the accordion feature of the New Credit Facility in November 2018, interest on the June Term Loan increased from LIBOR plus 2.0% to LIBOR plus 2.125%. The November Term Loan currently bears interest at LIBOR plus 2.5%.

As part of our risk management program, we attempt to mitigate interest rate risk through interest rate swaps. In order to partially hedge against our exposure to interest rate variability on the New Term Loans, we entered into 5-year agreements with a syndicate of third-party banks in August and December 2018 to swap the variable interest rate with a fixed rate of interest on $175.0 million of the total borrowings outstanding under each of the June Term Loan and the November Term Loan (for an aggregate of $350.0 million). The swap agreements include an option that allows us to cancel up to $75.0 million of the notional amount of each of the original swap agreements starting in August 2021 for the June Term Loan and December 2020 for the November Term Loan. The cancellable option in the swap agreements is aligned with our risk management strategy for our New Term Loans as it allows us to make voluntary prepayments of outstanding amounts without premium or penalty, subject to certain conditions. Our unhedged borrowings under the New Credit Facility at December 31, 2018 are $407.3 million (comprised of $248.3 million under the New Term Loans and $159 million under the New Revolver). A one-percentage point increase in relevant interest rates would increase interest expense, based on the outstanding unhedged borrowings at December 31, 2018, by $4.1 million annually. See note 21(b) of our 2018 AFS for further information regarding our interest rate swaps.

We are required to comply with certain restrictive covenants under the New Credit Facility, including those relating to the incurrence of certain indebtedness, the existence of certain liens, the sale of certain assets (excluding real property then held for sale), specified investments and payments, sale and leaseback transactions, and certain financial covenants relating to a defined interest coverage ratio and leverage ratio that are tested on a quarterly basis. At December 31, 2018, we were in compliance with all restrictive and financial covenants under the New Credit Facility. The obligations under the New Credit Facility are guaranteed by us and certain specified subsidiaries. Subject to specified exemptions and limitations, all assets of the guarantors are pledged as security for the obligations under the New Credit Facility. The New Credit Facility contains customary events of default. If an event of default occurs and is continuing, the administrative agent may declare all amounts outstanding under the New Credit Facility to be immediately due and payable and may cancel the lenders' commitments to make further advances thereunder. In the event of a payment or other specified defaults, outstanding obligations accrue interest at a specified default rate.

We incurred debt issuance costs of $4.9 million in connection with the June Term Loan, and $5.4 million in connection with the November Term Loan, which we recorded as an offset against the proceeds therefrom. Such costs have been deferred (as long-term debt on our consolidated balance sheet) and will be amortized over the term of the term loans using the effective interest rate method. We incurred debt issuance costs of $3.1 million in connection with the New Revolver, which have been deferred (as other assets on our consolidated balance sheet) and will be amortized over the term of the New Revolver. We accelerated the amortization of the remaining $1.2 million of unamortized deferred financing costs related to the Prior Facility upon its termination ($0.6 million related to our Prior Revolver recorded in other assets and $0.6 million related to our Prior Term Loan recorded in long-term debt), and recorded it to other charges in our consolidated financial statements in June 2018.

Commitment fees paid during 2018 were $1.3 million (2017 — $1.3 million; 2016 — $1.4 million). At December 31, 2018, we had $21.3 million outstanding in letters of credit under the New Revolver (December 31, 2017 — $23.2 million). We

also arrange letters of credit and surety bonds outside our revolving facility. At December 31, 2018, we had $14.4 million of such letters of credit and surety bonds outstanding (December 31, 2017 — $13.6 million).

At December 31, 2018, we also had a total of $132.8 million of uncommitted bank overdraft facilities available for intraday and overnight operating requirements (December 31, 2017 — $73.5 million). There were no amounts outstanding under these overdraft facilities at December 31, 2018 or December 31, 2017.

At December 31, 2018, we had $269.7 million available under the New Revolver for future borrowings, reflecting outstanding borrowings and letters of credit (December 31, 2017 — $276.8 million available under the Prior Revolver).

We have an agreement to sell up to $250.0 million (increased from $200 million in November 2018 based on a review of our requirements) in accounts receivable on an uncommitted basis (subject to pre-determined limits by customer) to two third-party banks. The term of this agreement has been annually extended in recent years (including in November 2018) for additional one-year periods (and is currently extendable to November 2020 under specified circumstances), but may be terminated earlier as provided in the agreement. At December 31, 2018, $130.0 million (December 31, 2017 — $80.0 million) of A/R were sold under this program, and de-recognized from our accounts receivable balance. As our A/R sales program is on an uncommitted basis, there can be no assurance that any of the banks will purchase the A/R we intend to sell to them under this program.

We have entered into the SFP, pursuant to which participating suppliers may sell accounts receivable from such customer to a third-party bank on an uncommitted basis in order to receive earlier payment. The third-party bank collects the relevant receivables directly from the customer. At December 31, 2018, we sold $50.0 million of accounts receivable under the SFP (December 31, 2017 — $52.3 million). We utilized the SFP to substantially offset the effect of extended payment terms required by such customer on our working capital for the period. As the SFP is on an uncommitted basis, there can be no assurance that the bank will purchase the A/R we intend to sell to them thereunder. Due to our anticipated disengagement from a portion of this customer's programs in early 2019, we expect to sell a lower amount of A/R under the SFP in future periods.

The timing and the amounts we borrow and repay under our revolving credit and overdraft facilities, or sell under the SFP or our A/R sales program, can vary significantly from month-to-month depending upon our working capital and other cash requirements.

Our strategy on capital risk management has not changed significantly since the end of 2017. Other than the restrictive and financial covenants associated with our New Credit Facility noted above, we are not subject to any contractual or regulatory capital requirements. While some of our international operations are subject to government restrictions on the flow of capital into and out of their jurisdictions, these restrictions have not had a material impact on our operations or cash flows.

Financial instruments:

Our short-term investment objectives are to preserve principal and to maximize yields without significantly increasing risk, while at the same time not materially restricting our short-term access to cash.

The majority of our cash balances are held in U.S. dollars. We price the majority of our products in U.S. dollars and the majority of our materials costs are also denominated in U.S. dollars. However, a significant portion of our non-materials costs (including payroll, pensions, site costs and costs of locally sourced supplies and inventory) are denominated in various other currencies. As a result, we may experience foreign exchange gains or losses on translation or transactions due to currency fluctuations.

We have a foreign exchange risk management policy in place to govern our hedging activities. We do not enter into speculative trades. Our current hedging activity is designed to reduce the variability of our foreign currency costs where we have local manufacturing operations. We enter into foreign exchange forward contracts to hedge our cash flow exposures and foreign currency swaps to hedge our balance sheet exposures. Balance sheet hedges are based on our forecasts of the future position of net monetary assets or liabilities denominated in foreign currencies and, therefore, may not mitigate the full impact of any translation impacts in the future. There can be no assurance that our hedging transactions will be successful in mitigating our foreign exchange risk.

At December 31, 2018, we had foreign exchange forwards and swaps to trade U.S. dollars in exchange for the following currencies:

Currency	Contract amount in U.S. dollars (in millions)	Weighted average exchange rate in U.S. dollars	Maximum period in months	Fair value gain (loss) (in millions)
Canadian dollar	$ 210.2	$ 0.76	12	$ (10.3)
Thai baht	81.1	0.03	12	(0.7)
Malaysian ringgit	53.4	0.24	12	(0.8)
Mexican peso	25.6	0.05	12	0.2
British pound	5.3	1.27	4	—
Chinese renminbi	66.8	0.15	12	(1.6)
Euro	35.8	1.17	12	0.3
Romanian leu	40.4	0.25	12	(0.9)
Singapore dollar	22.1	0.74	12	(0.3)
Other	3.5	0.01	1	(0.1)
Total	$ 544.2			$ (14.2)

These contracts, which generally extend for periods of up to 12 months, will expire by the end of the fourth quarter of 2019. The fair value of the outstanding contracts at December 31, 2018 was a net unrealized loss of $14.2 million (December 31, 2017 — net unrealized gain of $10.3 million). The unrealized gains or losses are a result of fluctuations in foreign exchange rates between the date the currency forward or swap contracts were entered into and the valuation date at period end.

Financial risks:

We are exposed to a variety of risks associated with financial instruments and otherwise.

Currency risk: Due to the global nature of our operations, we are exposed to exchange rate fluctuations on our financial instruments denominated in various currencies. The majority of our currency risk is driven by operational costs, including income tax expense, incurred in local currencies by our subsidiaries. As part of our risk management program, we attempt to mitigate currency risk through a hedging program using forecasts of our anticipated future cash flows and balance sheet exposures denominated in foreign currencies. We enter into foreign exchange forward contracts and swaps, generally for periods up to 12 months, to lock in the exchange rates for future foreign currency transactions, which is intended to reduce the variability of our operating costs and future cash flows denominated in local currencies. While these contracts are intended to reduce the effects of fluctuations in foreign currency exchange rates, our hedging strategy does not mitigate the longer-term impacts of changes to foreign exchange rates. Although our functional currency is the U.S. dollar, currency risk on our income tax expense arises as we are generally required to file our tax returns in the local currency for each particular country in which we have operations. While our hedging program is designed to mitigate currency risk vis-à-vis the U.S. dollar, we remain subject to taxable foreign exchange impacts in our translated local currency financial results relevant for tax reporting purposes. We do not use derivative financial instruments for speculative purposes.

We cannot predict changes in currency exchange rates, the impact of exchange rate changes on our operating results, nor the degree to which we will be able to manage the impact of currency exchange rate changes. Such changes, including as a result of Brexit or other global events impacting currency exchange rates could materially adversely affect our business, results of operations and financial condition.

Interest rate risk: Borrowings under the New Credit Facility bear interest at specified rates, plus specified margins (as described above). We have entered into 5-year interest rate swap agreements with a syndicate of third-party banks in each of August and December 2018 to partially hedge against our exposures to interest rate variability on our New Term Loans. The derivative instruments swap the variable rate of interest for a fixed rate of interest on an aggregate of $350.0 million of the outstanding borrowings under the New Term Loans. The swap agreements include an option that allows us to cancel up to $75.0 million of the notional amount of each swap agreement, starting in August 2021 with respect to the June Term Loan and December 2020 with respect to the November Term Loan.

Our unhedged borrowings under the New Credit Facility at December 31, 2018 were $407.3 million (December 31, 2017 — $187.5 million under the Prior Credit Facility). Unhedged borrowings expose us to interest rate risk due to the potential variability in market interest rates. A one-percentage point increase in applicable rates would increase interest expense, based on the outstanding unhedged borrowings at December 31, 2018, by $4.1 million annually. Without accounting for the interest rate swap agreements described above, a one-percentage point increase in applicable rates would increase interest expense, based on our outstanding borrowings of $757.3 million under the New Credit Facility as at December 31, 2018, by $7.6 million annually.

Credit risk: Credit risk refers to the risk that a counterparty may default on its contractual obligations resulting in a financial loss to us. We believe our credit risk of counterparty non-performance is relatively low, however, if a key supplier (or any company within such supplier's supply chain) or customer experiences financial difficulties or fails to comply with their contractual obligations, this could result in a financial loss to us. If an institution from which we purchased annuities for our pension plans defaults on their contractual obligations, this would result in a financial loss to us, as we retain ultimate responsibility for the payment of benefits to plan participants unless and until such pension plans are wound-up. With respect to our financial market activities, we have adopted a policy of dealing only with credit-worthy counterparties to help mitigate the risk of financial loss from defaults. We monitor the credit risk of the counterparties with whom we conduct business, through a combined process of credit rating reviews and portfolio reviews.

We also provide unsecured credit to our customers in the normal course of business. Customer exposures that potentially subject us to credit risk include our accounts receivable, inventory on hand, and non-cancellable purchase orders in support of customer demand. From time to time, we extend the payment terms applicable to certain customers, and/or provide longer payment terms when deemed commercially reasonable. Longer payment terms, which have become more prevalent, could adversely impact our working capital requirements, and increase our financial exposure and credit risk. We attempt to mitigate customer credit risk by monitoring our customers' financial condition and performing ongoing credit evaluations as appropriate. In certain instances, we may obtain letters of credit or other forms of security from our customers. We may also purchase credit insurance from a financial institution to reduce our credit exposure to certain customers. We consider credit risk in determining our allowance for doubtful accounts and we believe our allowances, as adjusted from time to time, are adequate. The carrying amount of financial assets recorded in our consolidated financial statements, net of our allowance for doubtful accounts, represents our estimate of maximum exposure to credit risk. At December 31, 2018, approximately 1% of our gross accounts receivable are over 90 days past due. Accounts receivable are net of an allowance for doubtful accounts of $5.3 million at December 31, 2018 (December 31, 2017 — $4.3 million).

Liquidity risk: Liquidity risk is the risk that we may not have cash available to satisfy our financial obligations as they come due. The majority of our financial liabilities recorded in accounts payable, accrued and other current liabilities and provisions are due within 90 days. We manage liquidity risk by maintaining a portfolio of liquid funds and investments and having access to a revolving credit facility, intraday and overnight bank overdraft facilities, an accounts receivable sales program and the SFP. Since our accounts receivable sales program and the SFP are each on an uncommitted basis, there can be no assurance that any participant bank will purchase all the accounts receivable that we wish to sell thereunder. However, we believe that cash flow from operating activities, together with cash on hand, cash from the sale of accounts receivable, and borrowings available under the New Revolver and intraday and overnight bank overdraft facilities are sufficient to fund our currently anticipated financial obligations.

See note 21 to our 2018 AFS for further details.

Related Party Transactions

Onex Corporation (Onex) beneficially owns or controls, directly or indirectly, all of our outstanding multiple voting shares. Accordingly, Onex has the ability to exercise significant influence over our business and affairs and generally has the power to determine all matters submitted to a vote of our shareholders where the subordinate voting shares and multiple voting shares vote together as a single class. Mr. Gerald Schwartz, the Chairman of the Board, President and Chief Executive Officer of Onex, indirectly owns shares representing the majority of the voting rights of Onex.

Onex has entered into an agreement with Celestica and with Computershare Trust Company of Canada (as successor to the Montreal Trust Company of Canada), as trustee for the benefit of the holders of the subordinate voting shares, for the purpose of ensuring that the holders of subordinate voting shares will not be deprived of any rights under applicable take-over bid legislation to which they would be otherwise entitled in the event of a take-over bid (as that term is defined in applicable securities legislation) if multiple voting shares and subordinate voting shares were of a single class of shares. Subject to certain permitted forms of sale, such as identical or better offers to all holders of subordinate voting shares, Onex has agreed that it, and any of its affiliates that may hold multiple voting shares from time to time, will not sell any multiple voting shares, directly or indirectly, pursuant to a take-over bid (as that term is defined under applicable securities legislation) under circumstances in which any applicable securities legislation would have required the same offer or a follow-up offer to be made to holders of subordinate voting shares if the sale had been a sale of subordinate voting shares rather than multiple voting shares, but otherwise on the same terms.

In January 2009, we entered into a Services Agreement with Onex for the services of Mr. Schwartz (amended in 2017 to replace references to Mr. Schwartz with references to Mr. Tawfiq Popatia, also an officer of Onex) as a director of Celestica, pursuant to which Onex receives compensation for such services. This agreement automatically renews for successive one-year terms unless either party provides a notice of intent not to renew. Under such agreement, as amended, the annual fee payable to Onex is $235,000 payable in DSUs in equal quarterly installments in arrears. The Services Agreement terminates automatically and the rights of Onex to receive compensation (other than accrued and unpaid compensation) will terminate (a) 30 days after the first day on which Onex ceases to hold at least one multiple voting share of Celestica or any successor company or (b) the date Mr. Popatia ceases to be a director of Celestica for any reason.

The original parties to the Property Sale Agreement were the Company and the Property Purchaser, a consortium of four real estate partnerships. Approximately 27% of the interests in the Property Purchaser were at the time of execution of the Property Sale Agreement, and are, held by a privately-held partnership in which Mr. Schwartz has a material interest; and approximately 25% of the interests in the Property Purchaser were at the time of execution of the Property Sale Agreement, and are, held by a partnership in which Mr. Schwartz has a non-voting interest. In September 2018, the Property Sale Agreement was assigned to the Assignee, although the Property Purchaser was not released from its obligations under the Property Sale Agreement. At the time of execution of such assignment, the Assignee was unrelated to us or the Property Purchaser. Subsequent to the execution of such assignment, the Assignee granted the Property Purchaser an option to obtain a 5% non-voting interest in the Assignee. See "Overview — *Recent developments* and Liquidity — *Toronto Real Property and Related Transactions*" above.

Outstanding Share Data

As of February 13, 2019, we had 118,079,397 outstanding subordinate voting shares and 18,600,193 outstanding multiple voting shares. As of such date, we also had 345,577 outstanding stock options, 5,085,274 outstanding RSUs, 4,223,278 outstanding PSUs (assuming vesting of 100% of the target amount granted (amounts that will vest range from 0% to 200% of the target amount granted)), and 1,627,598 outstanding DSUs; each vested option or unit entitling the holder thereof to receive one subordinate voting share (or in certain cases, cash) pursuant to the terms thereof, subject to certain time or performance-based vesting conditions.

Controls and Procedures

Evaluation of disclosure controls and procedures:

Our management is responsible for establishing and maintaining a system of disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the U.S. Exchange Act) designed to ensure that information we are required to disclose in the reports that we file or submit under the U.S. Exchange Act is recorded, processed, summarized and reported within the time periods specified in the U.S. Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the U.S. Exchange Act is accumulated and communicated to the issuer's management, including its principal executive officer or officers and principal financial officer or officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure.

Under the supervision of and with the participation of management, including our principal executive officer and principal financial officer, we have evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2018. Based on that evaluation, our principal executive officer and principal financial officer have concluded that, as of December 31, 2018, our disclosure controls and procedures are effective to meet the requirements of Rules 13a-15(e) and 15d-15(e) under the U.S. Exchange Act.

A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that its objectives are met. Due to inherent limitations in all such systems, no evaluation of controls can provide absolute assurance that all control issues within a company have been detected. Accordingly, our disclosure controls and procedures are designed to provide reasonable, not absolute, assurance that the objectives of our disclosure control system are met.

Changes in internal control over financial reporting:

We did not identify any change in our internal control over financial reporting in connection with our evaluation thereof that occurred during the year ended December 31, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

On April 4, 2018, we completed the acquisition of Atrenne, and, as a result, have integrated the processes and controls relating to Atrenne into our existing system of internal control over financial reporting. The integration of Atrenne did not result in changes that would materially affect, or would be reasonably likely to materially affect, our internal control over financial reporting. On November 9, 2018, we completed the acquisition of Impakt, and are in the process of assessing its processes and internal controls. Although this assessment may result in changes to our internal control over financial reporting, we do not currently anticipate that the integration of Impakt will result in changes that would materially affect, or would be reasonably likely to materially affect, our internal control over financial reporting. In addition, there were no significant changes to our internal control over financial reporting as a result of our preparation for the adoption of IFRS 16 (Leases) effective January 1, 2019.

Management's report on internal control over financial reporting:

Reference is made to our Management's Report on Internal Control over Financial Reporting on page F-1 of our Annual Report on Form 20-F for the year ended December 31, 2018. Our auditors, KPMG LLP, an independent registered public accounting firm, have issued an audit report on our internal control over financial reporting as of December 31, 2018, which appears on page F-2 of such Annual Report.

Unaudited Quarterly Financial Highlights (in millions, except percentages and per share amounts):

	2017*				2018			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenue	$1,482.1	$1,557.6	$1,532.8	$1,570.2	$1,499.7	$1,695.2	$1,711.3	$1,727.0
Gross margin	6.9%	7.0%	6.9%	6.5%	6.2%	6.2%	6.6%	6.9%
Net earnings	$ 22.5	$ 34.6	$ 34.8	$ 13.6	$ 14.1	$ 16.1	$ 8.6	$ 60.1
Weighted average # of basic shares	142.1	143.4	143.7	143.3	142.2	139.6	139.0	136.8
Weighted average # of diluted shares	144.0	145.5	145.7	145.5	143.5	140.7	140.3	138.0
# of shares outstanding	143.2	143.6	143.7	141.8	139.6	139.3	137.4	136.3
IFRS EPS:								
basic	$ 0.16	$ 0.24	$ 0.24	$ 0.09	$ 0.10	$ 0.12	$ 0.06	$ 0.44
diluted	$ 0.16	$ 0.24	$ 0.24	$ 0.09	$ 0.10	$ 0.11	$ 0.06	$ 0.44

* 2017 quarterly results have been restated to reflect the adoption of IFRS15.

All quarters in the table above have been impacted by our restructuring charges, the amounts of which vary from quarter to quarter.

Q4 2018 compared to Q4 2017:

Revenue of $1.7 billion for the Q4 2018 increased 10% compared to Q4 2017. Compared to Q4 2017, revenue dollars in Q4 2018 from our CCS segment increased 10%. Communications end market revenue increased 7% in Q4 2018 as compared to the prior year period, as increased demand and new programs (including JDM programs) were partially offset by demand softness from certain of our legacy customers. Enterprise end market revenue increased 14% in Q4 2018 compared to the prior year period, primarily driven by strong demand in our storage business. ATS segment revenue increased 11% in Q4 2018 compared to Q4 2017, driven by demand strength and new programs in our industrial business and revenue from our Atrenne acquisition, offset in part by weaker than expected demand in our capital equipment business. Gross profit increased $18.4 million in Q4 2018 as compared to Q4 2017, and gross margin for Q4 2018 increased to 6.9% of total revenue compared to 6.5% of total revenue for Q4 2017. The increases in gross profit and gross margin were primarily due to higher revenue (primarily in our Enterprise end market and our ATS segment businesses other than capital equipment), changes in CCS program mix, including higher JDM revenues, offset in part by lower utilization and operating losses in our capital equipment business, particularly in our semiconductor business. CCS segment margin for Q4 2018 increased to 3.3% of segment revenue, compared to 2.2% for Q4 2017. ATS segment margin decreased from 5.2% for Q4 2017 to 3.7% for Q4 2018, attributable primarily to the weaker than expected demand from our capital equipment business, resulting in operating losses in this business in Q4 2018 in the mid single-digit million dollar range. Net earnings for Q4 2018 of $60.1 million were $46.5 million higher compared to Q4 2017, primarily due to the Impakt Benefit in the fourth quarter of 2018. In addition, the improvement in gross profit was offset in part by $8.5 million in higher SG&A, $3.9 million in higher amortization of intangible asset charges (primarily due to our recent acquisitions), and $6.6 million in higher finance costs in Q4 2018 as compared to Q4 2017.

Q4 2018 compared to the third quarter 2018 (Q3 2018):

Revenue for Q4 2018 increased 1% compared to Q3 2018. Compared to the previous quarter, CCS segment revenues were relatively flat, as demand strength from our Enterprise end market (including from JDM), was offset by revenue declines primarily from legacy customers in our Communications end market. ATS segment revenue increased 2% sequentially, as revenue from our recent acquisitions were offset, in part, by a sequential revenue decline in our capital equipment business, as weaker than expected demand resulted in lower utilization and losses for the quarter in this business (discussed above), due to its high fixed cost infrastructure. Gross margin for Q4 2018 increased to 6.9% of total revenue compared to 6.6% of total revenue for Q3 2018. The increase in gross margin was due primarily to improvements in our CCS segment, reflecting favorable changes in customer and program mix, including higher levels of JDM business. CCS segment margin for Q4 2018 increased to 3.3% of segment revenue compared to 2.7% for Q3 2018, while ATS segment margin decreased from 4.6% in Q3 2018 to 3.7% for Q4 2018 (for the reasons discussed above). Net earnings for Q4 2018 of $60.1 million were $51.5 million higher compared to Q3 2018, primarily due to the Impakt Benefit.

Selected fourth quarter 2018 IFRS results:

	Actual
IFRS revenue (in billions)	$1.7
IFRS EPS (diluted)*	$0.44
IFRS earnings before income taxes as a % of revenue	1.2%
IFRS SG&A (in millions)	$59.6

* IFRS EPS for the fourth quarter of 2018 of $0.44 on a diluted basis included an aggregate charge of $0.18 (pre-tax) per share for employee stock-based compensation expense, amortization of intangible assets (excluding computer software), Toronto transition costs (described below) and restructuring charges. This aggregate charge is within the range we provided on October 24, 2018 of an aggregate charge of between $0.14 to $0.20 per share for these items.

Fourth quarter 2018 actual compared to guidance

	Q4 2018	
	Guidance	Actual
IFRS revenue (in billions)	$1.70 to $1.80	$1.7
Non-IFRS operating margin	3.5% at the mid-point of our revenue and non-IFRS adjusted EPS guidance ranges	3.5%
Non-IFRS adjusted SG&A (in millions)	$49.0 to $51.0	$55.0
Non-IFRS adjusted EPS (diluted)	$0.27 to $0.33	$0.29

For Q4 2018, our revenue was within our guidance range, but slightly below our guidance mid-point as lower than expected demand in our Communications end market and demand softness from our capital equipment business were partially offset by stronger than expected demand in our Enterprise end market. Non-IFRS operating margin for Q4 2018 met our guidance. Non-IFRS adjusted SG&A for Q4 2018 was higher than our guidance range primarily due to higher than expected variable expenses and SG&A costs incurred in connection with our Impakt acquisition. Our non-IFRS adjusted EPS results for Q4 2018 were within our guidance range.

Our guidance includes a range for adjusted EPS (which is a non-IFRS measure and is defined below). Management considers non-IFRS adjusted EPS to be an important measure for investors to understand our core operating performance. A reconciliation of non-IFRS adjusted net earnings to IFRS net earnings is set forth below.

Non-IFRS measures:

Management uses adjusted net earnings and the other non-IFRS measures described herein (i) to assess operating performance and the effective use and allocation of resources, (ii) to provide more meaningful period-to-period comparisons of operating results, (iii) to enhance investors' understanding of the core operating results of our business, and (iv) to set management incentive targets. We believe the non-IFRS measures we present herein are useful to investors, as they enable investors to evaluate and compare our results from operations in a more consistent manner (by excluding specific items that we do not consider to be reflective of our ongoing operating results), to evaluate cash resources that we generate each period, and to provide an analysis of operating results using the same measures our chief operating decision makers use to measure performance. In addition, management believes that the use of a non-IFRS adjusted tax expense and a non-IFRS adjusted effective tax rate provides improved insight into the tax effects of our ongoing business operations, and is useful to management and investors for historical comparisons and forecasting. These non-IFRS financial measures result largely from management's determination that the facts and circumstances surrounding the excluded charges or recoveries are not indicative of the ordinary course of the ongoing operation of our business.

We believe investors use both IFRS and non-IFRS measures to assess management's past, current and future decisions associated with our priorities and our allocation of capital, as well as to analyze how our business operates in, or responds to, swings in economic cycles or to other events that impact our core operations.

Non-IFRS measures do not have any standardized meaning prescribed by IFRS and therefore may not be comparable to similar measures presented by other companies. Non-IFRS measures are not measures of performance under IFRS and should not be considered in isolation or as a substitute for any standardized measure under IFRS. The most significant limitation to

management's use of non-IFRS financial measures is that the charges or credits excluded from the non-IFRS measures are nonetheless charges or credits that are recognized under IFRS and that have an economic impact on us. Management compensates for these limitations primarily by issuing IFRS results to show a complete picture of our performance, and reconciling non-IFRS results back to the most directly comparable IFRS results.

In addition to cash cycle days (including the components thereof) and inventory turns (each described under the caption "Other Performance Indicators" above), which have no defined meanings under IFRS, we use the following non-IFRS measures: adjusted gross profit, adjusted gross margin (adjusted gross profit as a percentage of revenue), adjusted SG&A, adjusted SG&A as a percentage of revenue, operating earnings (adjusted EBIAT), operating margin (operating earnings or adjusted EBIAT as a percentage of revenue), adjusted net earnings, adjusted EPS, adjusted ROIC, free cash flow, adjusted tax expense and adjusted effective tax rate. Adjusted EBIAT, adjusted ROIC, free cash flow, adjusted tax expense and adjusted effective tax rate are further described in the tables below. In calculating these non-IFRS financial measures, management excludes the following items, where applicable: employee stock-based compensation expense, amortization of intangible assets (excluding computer software), restructuring and other charges, net of recoveries (as defined below), impairment charges, other solar charges (as defined below), and acquisition inventory fair value adjustments, all net of the associated tax adjustments (which are set forth in the table below), and non-core tax impacts (tax adjustments related to acquisitions, and certain other tax costs or recoveries related to restructuring actions or restructured sites).

The economic substance of these exclusions and management's rationale for excluding them from non-IFRS financial measures is provided below:

Employee stock-based compensation expense, which represents the estimated fair value of stock options, RSUs and PSUs granted to employees, is excluded because grant activities vary significantly from quarter-to-quarter in both quantity and fair value. In addition, excluding this expense allows us to better compare core operating results with those of our competitors who also generally exclude employee stock-based compensation expense in assessing their operating performance, who may have different granting patterns and types of equity awards, and who may use different valuation assumptions than we do.

Amortization charges (excluding computer software) consist of non-cash charges against intangible assets that are impacted by the timing and magnitude of acquired businesses. Amortization of intangible assets varies among our competitors, and we believe that excluding these charges permits a better comparison of core operating results with those of our competitors who also generally exclude amortization charges in assessing operating performance.

Restructuring and other charges, net of recoveries, consist of costs relating to employee severance, lease terminations, site closings and consolidations, write-downs of owned property and equipment which are no longer used and are available for sale, reductions in infrastructure, Toronto transition costs (recoveries) (defined below), acquisition-related consulting, transaction and integration costs (Acquisition Costs), legal settlements (recoveries), and the accelerated amortization of $1.2 million in unamortized deferred financing costs recorded on the extinguishment of our Prior Facility during the second quarter of 2018. We exclude these restructuring and other charges, net of recoveries, because we believe that they are not directly related to ongoing operating results and do not reflect expected future operating expenses after completion of these activities. We believe these exclusions permit a better comparison of our core operating results with those of our competitors who also generally exclude these charges, net of recoveries, in assessing operating performance.

Toronto transition costs (recoveries) are costs (recoveries) recorded in connection with the sale of our Toronto real property, the relocation of our Toronto manufacturing operations, the move of our corporate headquarters to a temporary location while space in a new office building for such headquarters at our current location is under construction, as well as the move to such new office space upon its completion. Toronto transition costs consist of direct relocation costs, duplicate costs (such as rent expense, utility costs, depreciation charges, and personnel costs) incurred during the transition period, as well as cease-use costs incurred in connection with idle or vacated portions of the relevant premises that we would not have incurred but for these relocations. Toronto transition recoveries will consist of amounts received from the purchaser of the Toronto real property or gains we record in connection with its sale. We believe that excluding these costs and recoveries permits a better comparison of our core operating results from period-to-period, as these costs will not reflect our ongoing operations once these relocations are complete.

Impairment charges, which consist of non-cash charges against goodwill, intangible assets and property, plant and equipment, result primarily when the carrying value of these assets exceeds their recoverable amount. Our competitors may record impairment charges at different times, and we believe that excluding these charges permits a better comparison of our core operating results with those of our competitors who also generally exclude these charges in assessing operating performance.

Other solar charges, consisting of non-cash charges to further write-down the carrying value of our then-remaining solar panel inventory and the write-down of solar accounts receivable (A/R) (primarily as a result of a solar customer's bankruptcy) to

estimated recoverable amounts, were recorded in the second quarter of 2017 through cost of sales and SG&A expenses, respectively. These impairment charges, which were identified during the wind-down of our solar operations, were excluded as they pertained to a business we had exited, and therefore were no longer directly related to our ongoing core operating results. Although we recorded significant impairment charges to write down our solar panel inventory in the third quarter of 2016, those charges were not excluded in the determination of our non-IFRS financial measures for such period, as we were then still engaged in the solar panel manufacturing business. In connection with this wind-down, we also recorded net non-cash impairment charges to write down the carrying value of our solar panel manufacturing equipment held for sale to its estimated sales value less costs of disposal, which we recorded through other charges during 2017.

Acquisition inventory fair value adjustments relate to the write-up of the inventory acquired in connection with our acquisitions, representing the difference between the cost and fair value of such inventory. Acquired assets and liabilities are recorded on our balance sheet at their fair values as of the date of acquisition. Fair value adjustments are recognized through cost of sales in the period during which the acquired inventory is sold. We recognized the full $1.6 million adjustment related to inventory acquired from Atrenne during the second quarter of 2018 (as all of the inventory was sold during that quarter), which negatively impacted our gross profit and net earnings for such period. No such adjustment was recorded with respect to inventory acquired from Impakt. We exclude the impact of the recognition of these adjustments, when incurred, because we believe such exclusion permits a better comparison of our core operating results from period-to-period, as their impact is not indicative of our ongoing operating performance.

Non-core tax impacts are excluded, as we believe that these costs or recoveries do not reflect core operating performance and vary significantly among those of our competitors who also generally exclude these charges or recoveries in assessing operating performance.

The following table sets forth, for the periods indicated, the various non-IFRS measures discussed above, and a reconciliation of non-IFRS measures to the most directly comparable IFRS measures, (in millions, except percentages and per share amounts). 2017 financial information has been restated to reflect our adoption, effective January 1, 2018, of IFRS 15.

	Three months ended December 31				Year ended December 31			
	2017		2018		2017		2018	
	(restated)				(restated)			
		% of revenue		% of revenue		% of revenue		% of revenue
IFRS revenue	$ 1,570.2		$ 1,727.0		$ 6,142.7		$ 6,633.2	
IFRS gross profit	$ 101.6	6.5%	$ 120.0	6.9%	$ 418.5	6.8%	$ 430.5	6.5%
Employee stock-based compensation expense	3.2		3.8		14.6		14.7	
Other solar charges (inventory write-down)	—		—		0.9		—	
Acquisition inventory fair value adjustment	—		—		—		1.6	
Non-IFRS adjusted gross profit	$ 104.8	6.7%	$ 123.8	7.2%	$ 434.0	7.1%	$ 446.8	6.7%
IFRS SG&A	$ 51.1	3.3%	$ 59.6	3.5%	$ 203.2	3.3%	$ 219.0	3.3%
Employee stock-based compensation expense	(4.2)		(4.6)		(15.5)		(18.7)	
Other solar charges (A/R write-down)	—		—		(0.5)		—	
Non-IFRS adjusted SG&A	$ 46.9	3.0%	$ 55.0	3.2%	$ 187.2	3.0%	$ 200.3	3.0%
IFRS earnings before income taxes	$ 21.3	1.4%	$ 20.1	1.2%	$ 133.1	2.2%	$ 81.9	1.2%
Finance costs	2.6		9.2		10.1		24.4	
Employee stock-based compensation expense	7.4		8.4		30.1		33.4	
Amortization of intangible assets (excluding computer software)	1.1		5.1		5.5		11.6	
Net restructuring, impairment and other charges (recoveries) [1]	17.5		16.9		37.0		61.0	
Other solar charges (inventory and A/R write-down)	—		—		1.4		—	
Acquisition inventory fair value adjustment	—		—		—		1.6	
Non-IFRS operating earnings (adjusted EBIAT) [1]	$ 49.9	3.2%	$ 59.7	3.5%	$ 217.2	3.5%	$ 213.9	3.2%
IFRS net earnings	$ 13.6	0.9%	$ 60.1	3.5%	$ 105.5	1.7%	$ 98.9	1.5%
Employee stock-based compensation expense	7.4		8.4		30.1		33.4	
Amortization of intangible assets (excluding computer software)	1.1		5.1		5.5		11.6	
Net restructuring, impairment and other charges (recoveries) [1]	17.5		16.9		37.0		61.0	
Other solar charges (inventory and A/R write-down)	—		—		1.4		—	
Acquisition inventory fair value adjustment	—		—		—		1.6	
Adjustments for taxes [2]	(0.5)		(50.8)		(6.5)		(56.7)	
Non-IFRS adjusted net earnings	$ 39.1		$ 39.7		$ 173.0		$ 149.8	
Diluted EPS								
Weighted average # of shares (in millions)	145.5		138.0		145.2		140.6	
IFRS earnings per share	$ 0.09		$ 0.44		$ 0.73		$ 0.70	
Non-IFRS adjusted earnings per share	$ 0.27		$ 0.29		$ 1.19		$ 1.07	
# of shares outstanding at period end (in millions)	141.8		136.3		141.8		136.3	
IFRS cash provided by (used in) operations	$ 43.7		$ (1.9)		$ 127.0		$ 33.1	
Purchase of property, plant and equipment, net of sales proceeds	(20.6)		(18.8)		(101.8)		(78.5)	
Finance lease payments	(1.7)		(0.9)		(6.5)		(17.0)	
Repayments from former solar supplier	—		—		12.5		—	
Finance costs paid	(2.6)		(14.3)		(10.2)		(36.0)	
Non-IFRS free cash flow [3]	$ 18.8		$ (35.9)		$ 21.0		$ (98.4)	
IFRS ROIC % [4]	7.0%		5.0%		11.5%		5.8%	
Non-IFRS Adjusted ROIC % [4]	16.4%		15.0%		18.8%		15.1%	

(1) Management uses non-IFRS operating earnings (adjusted EBIAT) as a measure to assess performance related to our core operations. Non-IFRS adjusted EBIAT is defined as earnings before income taxes, finance costs (consisting of interest and fees related to our credit facility, our accounts receivable sales program, and the SFP), amortization of intangible assets (excluding computer software), and in applicable periods, employee stock-based compensation expense, net restructuring and other charges (recoveries) (consisting of restructuring charges (recoveries), Acquisition Costs, legal settlements (recoveries), Toronto transition costs (recoveries), and the accelerated amortization of unamortized deferred financing costs), impairment charges (recoveries), other solar charges, and acquisition inventory fair value adjustments. See "Operating Results -- Other charges" for separate quantification and discussion of impairment charges, and the components of net restructuring and other charges (recoveries).

(2) The adjustments for taxes, as applicable, represent the tax effects of our non-IFRS adjustments and non-core tax impacts (described below).

The following table sets forth a reconciliation of our IFRS tax expense and IFRS effective tax rate to our non-IFRS adjusted tax expense and our non-IFRS adjusted effective tax rate for the periods indicated, in each case determined by excluding the tax benefits or costs associated with the listed items (in millions, except percentages) from our IFRS tax expense for such periods:

	Three months ended December 31				Year ended December 31			
	2017	Effective tax rate	2018	Effective tax rate	2017	Effective tax rate	2018	Effective tax rate
	(restated)				(restated)			
IFRS tax expense and IFRS effective tax rate	$ 7.7	36%	$ (40.0)	(199)%	$ 27.6	21%	$ (17.0)	(21)%
Tax costs (benefits) of the following items excluded from IFRS tax expense:								
Employee stock-based compensation expense	0.9		1.1		1.7		2.3	
Amortization of intangible assets (excluding computer software)	—		—		—		—	
Net restructuring, impairment and other charges	(0.4)		0.7		1.0		1.4	
Other solar charges (inventory and A/R write-down)	—		—		0.4		—	
Non-core tax impact related to fair value adjustment on acquisitions*	—		49.6		—		53.3	
Non-core tax impacts related to restructured sites**	—		(0.6)		3.4		(0.3)	
Non-IFRS adjusted tax expense/Non-IFRS adjusted effective tax rate	$ 8.2	17%	$ 10.8	21 %	$ 34.1	16%	$ 39.7	21 %

* Consists of deferred tax assets attributable to our acquisitions of Atrenne (recorded in the second quarter of 2018) and Impakt (recorded in the fourth quarter of 2018)

** Includes the Solar Benefit recorded in the second quarter of 2017.

(3) Management uses non-IFRS free cash flow as a measure, in addition to IFRS cash provided by (used in) operations, to assess our operational cash flow performance. We believe non-IFRS free cash flow provides another level of transparency to our liquidity. Non-IFRS free cash flow is defined as cash provided by (used in) operations after the purchase of property, plant and equipment (net of proceeds from the sale of certain surplus equipment and property), finance lease payments, repayments from a former solar supplier, and finance costs paid. As a measure of liquidity, and consistent with the inclusion of our Toronto relocation capital expenditures and transition costs in non-IFRS free cash flow in the periods incurred, we will include amounts we receive from the sale of our Toronto real property in non-IFRS free cash flow in the period of receipt. Note that non-IFRS free cash flow, however, does not represent residual cash flow available to Celestica for discretionary expenditures.

(4) Management uses non-IFRS adjusted ROIC as a measure to assess the effectiveness of the invested capital we use to build products or provide services to our customers, by quantifying how well we generate earnings relative to the capital we have invested in our business. Our non-IFRS adjusted ROIC measure reflects non-IFRS operating earnings, working capital management and asset utilization. Non-IFRS adjusted ROIC is calculated by dividing non-IFRS adjusted EBIAT by average net invested capital. Net invested capital (calculated in the table below) consists of the following IFRS measures: total assets less cash, accounts payable, accrued and other current liabilities and provisions, and income taxes payable. We use a two-point average to calculate average net invested capital for the quarter and a five-point average to calculate average net invested capital for the year. A comparable measure under IFRS would be determined by dividing IFRS earnings before income taxes by net invested capital (which we have set forth in the charts above and below), however, this measure (which we have called IFRS ROIC), is not a measure defined under IFRS.

The following table sets forth, for the periods indicated, our calculation of IFRS ROIC % and non-IFRS adjusted ROIC % (in millions, except IFRS ROIC % and non-IFRS adjusted ROIC %). 2017 financial information has been restated to reflect our adoption, effective January 1, 2018, of IFRS 15.

	Three months ended December 31		Year ended December 31	
	2017	2018	2017	2018
	(restated)		(restated)	
IFRS earnings before income taxes	$ 21.3	$ 20.1	$ 133.1	$ 81.9
Multiplier to annualize earnings	4	4	1	1
Annualized IFRS earnings before income taxes	$ 85.2	$ 80.4	$ 133.1	$ 81.9
Average net invested capital for the period	$ 1,216.5	$ 1,594.1	$ 1,152.9	$ 1,413.6
IFRS ROIC % [1]	7.0%	5.0%	11.5%	5.8%

	Three months ended December 31		Year ended December 31	
	2017	2018	2017	2018
	(restated)		(restated)	
Non-IFRS operating earnings (adjusted EBIAT)	$ 49.9	$ 59.7	$ 217.2	$ 213.9
Multiplier to annualize earnings	4	4	1	1
Annualized non-IFRS adjusted EBIAT	$ 199.6	$ 238.8	$ 217.2	$ 213.9
Average net invested capital for the period	$ 1,216.5	$ 1,594.1	$ 1,152.9	$ 1,413.6
Non-IFRS adjusted ROIC % [1]	16.4%	15.0%	18.8%	15.1%

	December 31, 2017	March 31, 2018	June 30, 2018	September 30, 2018	December 31, 2018
	(restated)				
Net invested capital consists of:					
Total assets	$ 2,964.2	$ 2,976.0	$ 3,212.2	$ 3,316.1	$ 3,737.7
Less: cash	515.2	435.7	401.4	457.7	422.0
Less: accounts payable, accrued and other current liabilities, provisions and income taxes payable	1,228.6	1,278.1	1,413.8	1,473.3	1,512.6
Net invested capital at period end [1]	$ 1,220.4	$ 1,262.2	$ 1,397.0	$ 1,385.1	$ 1,803.1

	December 31, 2016	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017
	(restated)	(restated)	(restated)	(restated)	(restated)
Net invested capital consists of:					
Total assets	$ 2,841.9	$ 2,833.5	$ 2,876.7	$ 2,892.0	$ 2,964.2
Less: cash	557.2	558.0	582.7	527.0	515.2
Less: accounts payable, accrued and other current liabilities, provisions and income taxes payable	1,189.7	1,165.2	1,167.9	1,152.4	1,228.6
Net invested capital at period end [1]	$ 1,095.0	$ 1,110.3	$ 1,126.1	$ 1,212.6	$ 1,220.4

(1) See footnote 4 of the previous table.

Recently issued accounting pronouncements:

IFRS 16, Leases:

In January 2016, the IASB issued this standard, which brings most leases on-balance sheet for lessees under a single model, eliminating the distinction between operating and finance leases. IFRS 16 supersedes IAS 17, *Leases*, and related interpretations, and is effective for periods beginning on or after January 1, 2019. We adopted this standard effective January 1, 2019 applying the modified retrospective approach, whereby the cumulative effect of adopting IFRS 16 will be recognized as an adjustment to the opening retained deficit balance as of January 1, 2019, without restatement of prior period comparative information. We have implemented changes to our business processes, systems and controls to enable the preparation of our consolidated financial statements in accordance with IFRS 16. We will recognize new right-of-use assets and lease liabilities related to the majority of our operating leases on our consolidated balance sheet as of January 1, 2019 upon initial application of IFRS 16. The amortization of these assets will be recognized as a depreciation charge, and the interest expense on the lease liabilities will be recognized as finance costs in our consolidated statement of operations. Previously, we recognized operating lease expenses on a straight-line basis over the lease term generally in cost of sales or SG&A in our consolidated statement of operations. No significant changes are expected for our existing finance leases nor for any leases in which we are a lessor. Although we are completing our analysis of the impact of adopting IFRS 16, we anticipate that the initial application of the new standard will have a material impact on our consolidated financial statements, and we currently estimate that we will recognize right-of-use assets and lease liabilities on our consolidated financial statements of approximately $113 million as of January 1, 2019. The opening retained deficit adjustment is not expected to be material.

Research and development, patents and licenses, etc.

The information required by this item is set forth above in Item 4(B) "Information on the Company — Business Overview — Research and Technology Development."

Trend Information

The information required by this item is set forth above in "Overview," "Operating Results," and "Liquidity and Capital Resources," in Item 3(D) "Key Information — Risk Factors," and in Item 4(B) "Information on the Company — Business Overview."

Off-Balance Sheet Arrangements

Not applicable.

Item 6. Directors, Senior Management and Employees

A. Directors and Senior Management

Each director of Celestica is elected by the shareholders to serve until the close of the next annual meeting of shareholders or until a successor is elected or appointed, unless such office is earlier vacated in accordance with the Corporation's by-laws. The following table sets forth certain information regarding the current directors and executive officers of Celestica as of February 13, 2019.

Name	Age	Director Since	Position with Celestica	Residence
William A. Etherington[1]	77	2001	Chair of the Board	Ontario, Canada
Robert A. Cascella[2]	64	2019	Director	Florida, U.S.
Deepak Chopra[3]	55	2018	Director	Ontario, Canada
Daniel P. DiMaggio	68	2010	Director	Georgia, U.S.
Laurette T. Koellner	64	2009	Director	Florida, U.S.
Carol S. Perry	68	2013	Director	Ontario, Canada
Tawfiq Popatia	44	2017	Director	Ontario, Canada
Eamon J. Ryan	73	2008	Director	Ontario, Canada
Michael M. Wilson	67	2011	Director	Alberta, Canada
Robert A. Mionis	55	2015	Director, President and Chief Executive Officer	New Hampshire, U.S.

Name	Age	Executive Officer Since	Position with Celestica	Residence
Mandeep Chawla	42	2017	Chief Financial Officer	Ontario, Canada
Todd C. Cooper[4]	49	2018	Chief Operations Officer	Connecticut, U.S.
Elizabeth L. DelBianco	59	1998	Chief Legal and Administrative Officer and Corporate Secretary	Ontario, Canada
John ("Jack") J. Lawless	58	2015	President, ATS	Georgia, U.S.
Jason Phillips[5]	44	2019	President, CCS	North Carolina, U.S.
Michael P. McCaughey	56	2007	Advisor	Québec, Canada
Nicolas Pujet	46	2016	Chief Strategy Officer	Colorado, U.S.

(1) Chair of the Board since April 2012.

(2) Director since February 1, 2019.

(3) Director since April 27, 2018.

(4) Executive Officer since January 4, 2018.

(5) Executive Officer since January 1, 2019.

The following is a brief biography of each of Celestica's directors, director nominees and executive officers:

William A. Etherington. Mr. Etherington is a corporate director. In addition to being the Chair of the Board of Celestica, he is also a director of Onex* (a public company). He is a former director and non-executive Chairman of the board of directors of the Canadian Imperial Bank of Commerce (a public company), and a former director of St. Michael's Hospital. In 2001, Mr. Etherington retired as Senior Vice President and Group Executive, Sales and Distribution, IBM Corporation (a public company), and as Chairman, President and Chief Executive Officer of IBM World Trade Corporation. He holds a Bachelor of Science degree in Electrical Engineering and a Doctor of Laws (Hon.) from Western University.

* Onex holds an approximate 80% voting interest in Celestica. See "Controlling Shareholder Interest" under Item 4(B) above.

Robert A. Cascella. Mr. Cascella is currently an Executive Vice President and Executive Committee member of Royal Philips, a public Dutch multinational healthcare company. He is also the Chief Executive Officer (CEO) of their Diagnosis and Treatment businesses. He served as the President and CEO of Hologic, Inc., a public medical device and diagnostics company, from 2003 to 2013. He has also held senior leadership positions at CFG Capital, NeoVision Corporation and Fischer Imaging Corporation. Mr. Cascella served on Hologic, Inc.'s board of directors from 2008 to 2013. He also previously served on the board of Tegra Medical and acted as chair of the boards of Dysis Medical and Miranda Medical. He holds a Bachelor's degree in Accounting from Fairfield University.

Deepak Chopra. Mr. Chopra most recently served as President and Chief Executive Officer of Canada Post Corporation from February 2011 to March 2018. He has more than 30 years of global experience in the financial services, technology, logistics and supply-chain industries. Mr. Chopra worked for Pitney Bowes Inc., a NYSE-traded technology company known for postage meters, mail automation and location intelligence services, for more than 20 years. He served as President of Pitney Bowes Canada and Latin America from 2006 to 2010. He held a number of increasingly senior executive roles internationally, including President of its new Asia Pacific and Middle East region from 2001 to 2006 and Chief Financial Officer for the Europe, Africa and Middle East (EAME) region from 1998 to 2001. He has previously served on the boards of Canada Post Corporation, Purolator Inc., SCI Group, the Canada Post Community Foundation, the Toronto Region Board of Trade and the Conference Board of Canada. He currently sits on the board of The North West Company Inc., a TSX-traded retailer. Mr. Chopra is a Fellow of the Institute of Chartered Professional Accountants of Canada and has a Bachelor's degree in Commerce (Honours) and a Master's Degree in Business Management (PGDBM).

Daniel P. DiMaggio. Mr. DiMaggio is a corporate director. Prior to retiring in 2006, he spent 35 years with United Parcel Services (UPS) (a public company), most recently as Chief Executive Officer of the UPS Worldwide Logistics Group. Prior to leading UPS' Worldwide Logistics Group, Mr. DiMaggio held a number of positions at UPS with increasing responsibility, including leadership roles for the UPS International Marketing Group, as well as the Industrial Engineering function. In addition to his senior leadership roles at UPS, Mr. DiMaggio was a member of the board of directors of Greatwide Logistics Services, Inc.* and CEVA Logistics (a public company). He holds a Bachelor of Science degree from the Lowell Technological Institute (now the University of Massachusetts Lowell).

* Mr. DiMaggio was serving as a director of Greatwide Logistics Services, Inc., a privately held company, when that entity filed for bankruptcy in 2008.

Laurette T. Koellner. Ms. Koellner is a corporate director. She most recently served as Executive Chairman of International Lease Finance Corporation, an aircraft leasing subsidiary of American International Group, Inc. (AIG) from 2012 until its sale in 2014. Ms. Koellner retired as President of Boeing International, a division of The Boeing Company, in 2008. While at Boeing, she was a member of the Office of the Chairman and served as the Executive Vice President, Internal Services, Chief Human Resources and Administrative Officer, President of Shared Services, and Corporate Controller. Ms. Koellner currently serves on the board of directors of Papa John's International, Inc., The Goodyear Tire & Rubber Company, and Nucor Corporation, all public companies. Ms. Koellner previously served on the board of directors and was the Chair of the Audit Committee of Hillshire Brands Company (a public company, formerly Sara Lee Corporation and now merged with Tyson Foods, Inc.), and on the board of directors of AIG (a public company). She holds a Bachelor of Science degree in Business Management from the University of Central Florida and a Master of Business Administration from Stetson University, as well as a Certified Professional Contracts Manager designation from the National Contracts Management Association.

Carol S. Perry. Ms. Perry is a corporate director. She is Chair of the Independent Review Committee of the mutual funds managed by 1832 Asset Management L.P., a mutual fund manager and wholly-owned affiliate of The Bank of Nova Scotia. She also serves as Chair of the Independent Review Committees of investment funds managed by Jarislowsky Fraser Limited and MD Financial Management Inc., which are subsidiaries of The Bank of Nova Scotia. Previously, she was a Commissioner of the Ontario Securities Commission, and has served on adjudicative panels and acted as a director and Chair of its Governance and Nominating Committee. With over 20 years of experience in the investment industry as an investment banker, Ms. Perry held senior positions with leading financial services companies including RBC Capital Markets, Richardson Greenshields of Canada Limited and CIBC World Markets and later founded MaxxCap Corporate Finance Inc., a financial advisory firm. She is a former director of Softchoice Corporation, Atomic Energy of Canada Limited and DALSA Corporation. Ms. Perry has a Bachelor of Engineering Science (Electrical) degree from the University of Western Ontario and a Master of Business Administration degree from the University of Toronto. She also holds the professional designation ICD.D from the Institute of Corporate Directors.

Tawfiq Popatia. Mr. Popatia has been a Managing Director of Onex* since 2014 and leads its efforts in automation, aerospace and other transportation-focused industries, having joined the firm in 2007. Prior to joining Onex, Mr. Popatia worked at the private equity firm of Hellman & Friedman LLC and in the Investment Banking Division of Morgan Stanley & Co. Mr. Popatia currently serves on the boards of Advanced Integration Technology, an aerospace automation company, and BBAM, a provider of commercial jet aircraft leasing, financing and management. He previously served on the board of Spirit Aerosystems (a public company), and is a former Employer Trustee of the International Association of Machinists National Pension Fund. Mr. Popatia holds a Bachelor of Science degree in Microbiology and a Bachelor of Commerce degree in Finance from the University of British Columbia.

* Onex holds an approximate 80% voting interest in Celestica. See "Controlling Shareholder Interest" under Item 4(B) above.

Eamon J. Ryan. Mr. Ryan is a corporate director. He is the former Vice President and General Manager, Europe, Middle East and Africa for Lexmark International Inc. (a public company). Prior to that, he was the Vice President and General Manager, Printing Services and Solutions Manager, Europe, Middle East and Africa. Mr. Ryan joined Lexmark International Inc. in 1991 as the President of Lexmark Canada. Prior to that, he spent 22 years at IBM Canada, where he held a number of sales and marketing roles in its Office Products and Large Systems divisions. Mr. Ryan's last role at IBM Canada was Director of Operations for its Public Sector, a role he held from 1986 to 1990. He holds a Bachelor of Arts degree from the University of Western Ontario.

Michael M. Wilson. Mr. Wilson is a corporate director. Until his retirement in December 2013, he was the President and Chief Executive Officer, and a director, of Agrium Inc. (a public agricultural crop inputs company that has subsequently merged with Potash Corporation of Saskatchewan Inc. to form Nutrien Ltd.), and has over 30 years of international and executive management experience. Prior to joining Agrium Inc., Mr. Wilson served as President of Methanex Corporation (a public company), and held various senior positions in North America and Asia during his 18 years with The Dow Chemical Company (a public company). Mr. Wilson also currently serves on the board of directors of Air Canada and Suncor Energy Inc., and previously served on the board of directors of Finning International Inc. (each a public company), and was also the past Chair of the Calgary Prostate Cancer Centre. He holds a degree in Chemical Engineering from the University of Waterloo.

Robert A. Mionis. Mr. Mionis has been President and Chief Executive Officer of the Corporation since August 1, 2015. From July 2013 until August 2015, he was an Operating Partner at Pamplona Capital Management (Pamplona), a global private equity firm focused on companies in the industrial, aerospace, healthcare and automotive segments. Before joining Pamplona, Mr. Mionis spent over six years as the President and CEO of StandardAero, a global aerospace maintenance, repair and overhaul company. Before StandardAero, Mr. Mionis held senior leadership roles at Honeywell, most recently as the head of the Integrated Supply Chain Organization for Honeywell Aerospace. Prior to Honeywell, Mr. Mionis held a variety of progressively senior leadership roles with General Electric (GE) and Axcelis Technologies (each a public company) and AlliedSignal. Mr. Mionis has been serving on the board of directors of Shawcor Ltd., a TSX-listed energy company, since 2018. He holds a Bachelor of Science in Electrical Engineering from the University of Massachusetts.

Mandeep Chawla. Mr. Chawla has been Chief Financial Officer of the Corporation since October 2017. As Chief Financial Officer, Mr. Chawla is responsible for overseeing Celestica's financial strategy, as well as its accounting, financial and investor relations functions. Mr. Chawla joined Celestica in 2010 and has held a variety of roles, including most recently Senior Vice President, Finance and Interim Chief Financial Officer. Prior to joining Celestica, he held financial management roles with MDS Inc., Tyco International, and General Electric. Mr. Chawla holds a Master of Finance degree from Queen's University and a Bachelor of Commerce degree from McMaster University. He holds a CPA, CMA of Ontario, Canada designation.

Todd C. Cooper. Mr. Cooper joined Celestica as Chief Operations Officer in 2018 with over 25 years of experience in operations leadership and advisory roles. Prior to joining Celestica, Mr. Cooper led Supply Chain, Procurement, Logistics, and Sustainability value creation efforts across the portfolio companies of KKR, a leading global investment firm, from 2008 to 2018. Prior to that, he was the Vice President of Global Sourcing in Honeywell's Aerospace Division from 2005 to 2008. Before Honeywell, Mr. Cooper held various management roles at Storage Technology Corporation, McKinsey & Company, and served as a Captain in the U.S. Army.

Elizabeth L. DelBianco. Ms. DelBianco is Chief Legal and Administrative Officer and Corporate Secretary. In this role, she oversees legal, contracts, brand and communications, human resources and sustainability. Ms. DelBianco joined Celestica in 1998 and since that time has been responsible for managing legal, governance, and compliance matters for Celestica on a global basis. Prior to joining Celestica, Ms. DelBianco was a senior corporate legal advisor in the telecommunications industry. She holds a Bachelor of Arts degree from the University of Toronto, a Bachelor of Laws degree from Queen's University, and a Master of Business Administration degree from Western University. She is admitted to practice in Ontario and New York.

John ("Jack") J. Lawless. Mr. Lawless is President, ATS. In this role, he is responsible for the strategy and execution of Celestica's aerospace and defense, industrial, healthtech, smart energy, and capital equipment businesses. He has served in this role since joining Celestica in October 2015; however, his title changed in October 2016 from Executive Vice President, Diversified Markets in order to reflect organizational developments made to better align with the Corporation's business strategy and operational model. From 2009 to 2014, Mr. Lawless was the CEO of Associated Air Center, a subsidiary of StandardAero, one of the world's largest independent global aerospace maintenance, repair and overhaul companies. He also held the role of Chief Operating Officer of StandardAero, where he was responsible for operations, supply chain, quality, IT, and engineering. Prior to StandardAero, Mr. Lawless held a number of Vice President-level roles with Honeywell. Before joining Honeywell, he held progressively senior positions with Axcelis Technologies, General Cable and AlliedSignal.

Jason Phillips. Mr. Phillips was appointed President, CCS, effective January 1, 2019. In this role, he is responsible for the Corporation's enterprise and communications businesses and customers. From 2014 to 2018, he served as Senior Vice President for the Corporation’s enterprise and cloud solutions businesses, where he was central to building the Corporation's JDM business. From 2008 to 2014, he held various positions within the Corporation’s enterprise and communications business. Prior to joining Celestica, Mr. Phillips held various leadership roles with global EMS companies. He holds a BSBA from the University of North Carolina at Chapel Hill - Kenan-Flagler Business School.

Michael P. McCaughey. Mr. McCaughey became an Advisor to the Corporation, effective January 1, 2019. In this role, he provides strategic advice to the Corporation and transitional support. From 2012 through 2018, he served as President, CCS and was responsible for strategic direction of the Corporation's enterprise and communications businesses, including its managed services businesses. From 2005 to 2012, he held senior positions within the Corporation's enterprise and communications businesses. Prior to joining Celestica in 2005, Mr. McCaughey held the role of Senior Vice President, Wireline Network Systems, at Sanmina-SCI. Before joining Sanmina-SCI, Mr. McCaughey held senior roles at Hyperchip Inc. and SCI Systems (prior to that company's merger with Sanmina). He holds a DEC in Electrotechnology from Vanier College and studied Electrical Engineering at McGill University.

Nicolas Pujet. Mr. Pujet has been Chief Strategy Officer since July 2016. In this role, he leads Celestica's strategy and corporate development including the design and development of the Company's vision, strategic framework and planning activities in support of the Company's business objectives, as well as mergers and acquisitions. Prior to joining Celestica, Mr. Pujet spent more than 16 years in various strategic and leadership roles. From 2003 to 2016, he served in various strategy positions at Level 3 Communications. Most recently, he was the Senior Vice President, Corporate Strategy and was responsible for that company's strategic outlook and strategic planning and analyses worldwide. From 1999 to 2003, Mr. Pujet served as a management consultant with McKinsey & Company, a global management consulting firm. He holds a Ph.D. in Aeronautics and Astronautics from MIT.

There are no family relationships among any of the foregoing persons, and there are no arrangements or understandings with any person pursuant to which any of our directors or executive officers were selected.

None of the directors of the Corporation during 2018, or current directors or nominees serve together as directors of other corporations.

The following table identifies the functional competencies, expertise and qualifications of the Corporation's current directors and nominees pursuant to a skills matrix developed by the Nominating and Governance Committee to identify functional competencies, expertise and qualifications that our Board would ideally possess:

	Robert A. Cascella	Deepak Chopra	Daniel P. DiMaggio	William A. Etherington	Laurette T. Koellner	Robert A. Mionis	Carol S. Perry	Tawfiq Popatia	Eamon J. Ryan	Michael M. Wilson	TOTAL
Skills											
Service on Other Public (For-Profit) Company Boards	✓	✓		✓	✓	✓	✓	✓		✓	8
Senior Officer or CEO Experience	✓	✓	✓	✓	✓	✓		✓	✓	✓	9
Financial Literacy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Communications and/or Enterprise Computing		✓		✓							2
A&D, Healthcare, Semiconductor, Solar, Industrial	✓				✓	✓		✓			4
Services (design, after-market)	✓		✓	✓		✓					4
Europe and/or Asia Business Development	✓	✓	✓		✓	✓		✓	✓	✓	8
Operations (supply chain management and manufacturing)	✓	✓	✓			✓				✓	5
Marketing and Sales	✓	✓	✓	✓		✓		✓	✓	✓	8
Strategy Deployment / M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10
Talent Development and Succession Planning	✓	✓	✓	✓	✓	✓			✓	✓	8
IT and Business Transformation		✓		✓	✓	✓			✓		5
Finance and Treasury	✓	✓		✓	✓		✓	✓			6
Other Characteristics											
Gender	M	M	M	M	F	M	F	M	M	M	8M / 2F

B. Compensation

Director Compensation

Director compensation is set by the Board on the recommendation of the Compensation Committee and in accordance with director compensation guidelines and principles established by the Nominating and Corporate Governance Committee. Under these guidelines and principles, the Board seeks to maintain director compensation at a level that is competitive with director compensation at comparable companies, and requires a substantial portion of such compensation to be taken in the form of DSUs. The director fee structure for 2018 is set forth in Table 1 below.

Table 1: Directors' Fees[1]

Element	Director Fee Structure for 2018[2]
Annual Board Retainer[3]	$360,000 – Board Chair $235,000 – Directors
Travel Fees[4]	$2,500
Annual Retainer for the Audit Committee Chair	$20,000
Annual Retainer for the Compensation Committee Chair	$15,000
Annual Retainer for the Nominating and Corporate Governance Committee Chair[5]	–
DSU Election[6]	Directors must elect to be paid either 100% or 75% of their aggregate annual retainers (including committee Chair retainers) and travel fees in the form of DSUs

(1) Does not include Mr. Mionis, President and Chief Executive Officer ("CEO") of the Corporation, whose compensation is set out in Table 15. Does not include fees payable to Onex for the service of Mr. Popatia as a director, which is described in footnote 7 to Table 2.

(2) Directors may also receive further retainers and meeting fees for participation on *ad hoc* committees. No fees were paid for participation on the Director Search Committee (an *ad hoc* committee formed to identify potential new directors) during 2018. The Board has the discretion to grant supplemental equity awards to individual directors as deemed appropriate (no such discretion was exercised in 2018).

(3) Paid on a quarterly basis.

(4) The travel fee is available only to directors who travel outside of their home state or province to attend a Board or Committee meeting.

(5) The Chair of the Board also served as the Chair of the Nominating and Corporate Governance Committee in 2018, for which no additional fee was paid.

(6) Credited on a quarterly basis. The number of DSUs granted are calculated by dividing the notional cash amount for the quarter by the closing price of SVS on the NYSE on the last business day of such quarter. If no election is made, 100% of a director's aggregate annual retainer and travel fees will be paid in DSUs.

Subject to the terms of the Directors' Share Compensation Plan, each DSU represents the right to receive one SVS or an equivalent value in cash (at the Corporation's discretion) when the director (a) ceases to be a director of the Corporation and (b) is not an employee of the Corporation or a director or employee of any corporation that does not deal at arm's-length with the Corporation (collectively, "Retires"). The date used in valuing the DSUs for settlement is the date that is 45 days following the date on which the director Retires, or as soon as practicable thereafter. DSUs are redeemed and payable on or prior to the 90th day following the date on which the director Retires. The number of DSUs granted is calculated by dividing the fee that would otherwise be payable by the closing price of SVS on the NYSE on the last business day of the quarter.

As part of the Compensation Committee's 2018 competitive review of director compensation (the "2018 Review"), the Compensation Committee engaged Willis Towers Watson (the "Compensation Consultant") to provide market information on director compensation policies and practices. The 2018 Review included a review of the mix of the elements of director compensation. As a result of the 2018 Review, amendments to director compensation and related changes to the Directors' Share Compensation Plan were approved effective January 1, 2019 by the Compensation Committee and the Board. Specifically, directors who are paid for their service on the Board were previously required to elect to receive either 75% or 100% of their annual board fees, committee chair retainer fees and travel fees (collectively, "Annual Fees") in DSUs. Effective January 1, 2019, each such director may elect to receive 0%, 25% or 50% of their Annual Fees in cash, with the balance in DSUs, until such director has

satisfied the requirements of the Director Share Ownership Guidelines described (and defined) under *Director Share Ownership Guidelines* below. Once a director has satisfied the requirements of the Director Share Ownership Guidelines, the director may then elect to receive 0%, 25% or 50% of their Annual Fees in cash, with the balance in either DSUs or RSUs. If a director does not make an election**,** 100% of such director's Annual Fees will be paid in DSUs.

2019 Director Elections				
Prior to Satisfaction of Director Share Ownership Guidelines		**After Satisfaction of Director Share Ownership Guidelines**		
Option 1	**Option 2**	**Option 1**	**Option 2**	**Option 3**
100% DSUs	(i) 25% Cash + 75% DSUs or (ii) 50% Cash + 50% DSUs	(i) 100% DSUs or (ii) 100% RSUs	(i) 25% Cash + 75% DSUs or (ii) 50% Cash + 50% DSUs	(i) 25% Cash + 75% RSUs or (ii) 50% Cash + 50% RSUs

RSUs granted to directors will be governed by the terms of the Corporation's Long-Term Incentive Plan ("LTIP"). Grants of RSUs will be credited quarterly in arrears. The number of RSUs to be granted to a director will be determined by multiplying the amount of such director's Annual Fees for the quarter by the percentage of the Annual Fees that the director elected to receive in the form of RSUs and dividing the product by the closing price of the SVS on the NYSE on the last business day of the quarter. Each quarterly grant of RSUs will vest in installments of one-third per year on the first, second and third anniversary dates of the grant. Each vested RSU will entitle the holder thereof to one SVS. Unvested RSUs will vest immediately on the date that the director Retires. These changes were made in order to provide additional payment options for directors who have already met or exceeded the requirements of the Director Share Ownership Guidelines and to provide an option for greater liquidity to our long-serving Board members. See *Directors' Ownership of Securities – Director Share Ownership Guidelines*.

Directors' Fees Earned in 2018

All compensation paid in 2018 by the Corporation to its directors is set out in Table 2, except for the compensation of Mr. Mionis, President and CEO of the Corporation, which is set out in Table 15, and Mr. Cascella, who was appointed to the Board effective February 1, 2019. In 2018, the Board (excluding Mr. Popatia – see footnote 7 to Table 2) earned total Annual Fees in the amount of $1,776,250, including total grants of DSUs in the amount of $1,542,187.

Table 2: Director Fees Earned in Respect of 2018

	Annual Fees Earned				**Allocation of Annual Fees(1)**	
Name	**Annual Board Retainer**	**Annual Committee Chair Retainer**	**Travel Fees**	**Total Fees**	**DSUs(2)**	**Cash(3)**
Deepak Chopra(4)	$176,250	–	–	$176,250	$132,187	$44,063
Daniel P. DiMaggio	$235,000	–	$10,000	$245,000	$183,750	$61,250
William A. Etherington(5)	$360,000	–	–	$360,000	$360,000	–
Laurette T. Koellner	$235,000	$20,000(6)	$10,000	$265,000	$198,750	$66,250
Carol S. Perry	$235,000	–	–	$235,000	$235,000	–
Tawfiq Popatia(7)	–	–	–	–	–	–
Eamon J. Ryan	$235,000	$15,000(8)	–	$250,000	$187,500	$62,500
Michael M. Wilson	$235,000	–	$10,000	$245,000	$245,000	–

(1) Directors were required to elect to receive either 75% or 100% of their 2018 Annual Fees (set forth in the "Total Fees" column above) in DSUs (i.e., at least 75% of such fees were payable in DSUs in 2018). The Annual Fees received by directors in DSUs for 2018 were credited quarterly, and the number of DSUs granted in respect of the amounts credited quarterly was determined using the closing price of the SVS on the NYSE on the last business day of each quarter, which was $10.35 on March 29, 2018, $11.87 on June 29, 2018, $10.83 on September 28, 2018 and $8.77 on December 31, 2018.

(2) Amounts in this column for each of Messrs. Chopra, DiMaggio and Ryan and Ms. Koellner (who elected to receive 75% of their 2018 Annual Fees in DSUs), represent the grant date fair value of DSUs issued in respect of 75% of their 2018 Annual Fees. Amounts in this column for each of Messrs. Etherington and Wilson and Ms. Perry (who elected to receive 100% of their Annual Fees paid in DSUs), represent the grant date fair value of DSUs issued in respect of 100% of their 2018 Annual Fees. The grant date fair value of the grants is the same as their accounting value.

(3) Amounts in this column for Messrs. Chopra, DiMaggio and Ryan and Ms. Koellner represent the portion of their 2018 Annual Fees (25%), which they elected to have paid in cash.

(4) Mr. Chopra was elected to the Board of Directors effective April 27, 2018.

(5) During 2018, Mr. Etherington was the Chair of the Board and the Chair of the Nominating and Corporate Governance Committee. Mr. Etherington received an annual Board Chair retainer fee in the amount of $360,000. He did not receive a committee chair annual retainer in his capacity as Chair of the Nominating and Corporate Governance Committee.

(6) Represents the annual retainer for the Chair of the Audit Committee.

(7) Mr. Popatia is an officer of Onex and did not receive any compensation in his capacity as a director of the Corporation in 2018; however, Onex received compensation for providing the services of Mr. Popatia as a director in 2018 pursuant to a Services Agreement between the Corporation and Onex, entered into on January 1, 2009 (as amended January 1, 2017, the "Services Agreement"). The Services Agreement automatically renews for successive one year terms unless the Corporation or Onex provide notice of intent not to renew. The Services Agreement terminates automatically and the rights of Onex to receive compensation (other than accrued and unpaid compensation) will terminate (a) 30 days after the first day on which Onex ceases to hold at least one MVS of Celestica or any successor company or (b) the date Mr. Popatia ceases to be a director of Celestica, for any reason. Onex receives compensation under the Services Agreement in an amount equal to $235,000 per year (consistent with current annual Board retainer fees), payable in DSUs in equal quarterly installments in arrears. The number of DSUs is determined using the closing price of the SVS on the NYSE on the last day of the fiscal quarter in respect of which the instalment is to be credited.

(8) Represents the annual retainer for the Chair of the Compensation Committee.

Directors' Ownership of Securities

Outstanding Share-Based Awards

Information concerning all outstanding share-based awards as of December 31, 2018 made by the Corporation to each director proposed for election at the Meeting (other than Mr. Mionis, whose information is set out in Table 16, and Mr. Cascella, who was appointed to the Board effective February 1, 2019), including awards granted prior to 2018, is set out in Table 3. Such awards consist solely of DSUs. DSUs that were granted prior to January 1, 2007 may be settled in the form of SVS issued from treasury, SVS purchased in the open market, or an equivalent value in cash (at the discretion of the Corporation). DSUs granted after January 1, 2007 may only be settled in SVS purchased in the open market or an equivalent value in cash (at the discretion of the Corporation). In 2005, the Corporation amended the LTIP to prohibit grants to directors of options to acquire SVS. There are no options granted to directors (or former directors) prior to the foregoing amendment that remain outstanding.

Table 3: Outstanding Share-Based Awards

Name	Number of Outstanding DSUs[1] (#)	Market Value of Outstanding DSUs[2] ($)
Deepak Chopra[3]	12,804	$112,291
Daniel P. DiMaggio	186,932	$1,639,394
William A. Etherington	419,552	$3,679,471
Laurette T. Koellner	212,688	$1,865,274
Carol S. Perry	123,702	$1,084,867
Tawfiq Popatia[4]	–	–
Eamon J. Ryan	262,768	$2,304,475
Michael M. Wilson	190,013	$1,666,414

(1) Represents all outstanding DSUs, including the regular quarterly grant of DSUs issued on January 1, 2019 in respect of the fourth quarter of 2018.

(2) The market value of DSUs was determined using a share price of $8.77, which was the closing price of the SVS on the NYSE on December 31, 2018.

(3) Mr. Chopra was elected to the Board of Directors effective April 27, 2018.

(4) Mr. Popatia had no share-based awards from the Corporation outstanding as of December 31, 2018; however 219,139 DSUs have been issued to Onex (and are outstanding) pursuant to the Services Agreement since its inception, including 22,749 DSUs issued to Onex for the services of Mr. Popatia as a director of the Corporation in 2018. For further information see footnote 7 to Table 2.

Changes in Directors' Equity Interest

The following table sets out, for each director proposed for election at the Meeting (other than Mr. Mionis, whose information is set out in Table 16), such director's direct or indirect beneficial ownership of, or control or direction over, shares and share-based awards in the Corporation as of February 13, 2019, and any changes therein since February 14, 2018, the date of disclosure in the Corporation's 2017 Annual Report on Form 20-F (the "2017 Annual Report").

Table 4: Changes in Directors' Equity Interest[1]

Name	Date	SVS (#)	Share-Based Awards (DSUs) (#)	Total (#)
Robert A. Cascella[2]	Feb. 14, 2018	–	N/A	–
	Feb. 13, 2019	–	N/A	–
	Change	–	N/A	–
Deepak Chopra[2]	Feb. 14, 2018	–	–	–
	Feb. 13, 2019	–	12,804	12,804
	Change	–	12,804	12,804
Daniel P. DiMaggio	Feb. 14, 2018	–	169,144	169,144
	Feb. 13, 2019	–	186,932	186,932
	Change	–	17,788	17,788
William A. Etherington[3]	Feb. 14, 2018	10,000	384,702	394,702
	Feb. 13, 2019	10,000	419,552	429,552
	Change	–	34,850	34,850
Laurette T. Koellner	Feb. 14, 2018	–	193,448	193,448
	Feb. 13, 2019	–	212,688	212,688
	Change	–	19,240	19,240
Carol S. Perry	Feb. 14, 2018	–	100,953	100,953
	Feb. 13, 2019	–	123,702	123,702
	Change	–	22,749	22,749
Tawfiq Popatia[3][4]	Feb. 14, 2018	–	–	–
	Feb. 13, 2019	–	–	–
	Change	–	–	–
Eamon J. Ryan	Feb. 14, 2018	–	244,617	244,617
	Feb. 13, 2019	–	262,768	262,768
	Change	–	18,151	18,151
Michael M. Wilson	Feb. 14, 2018	–	166,296	166,296
	Feb. 13, 2019	–	190,013	190,013
	Change	–	23,717	23,717

(1) Information as to SVS beneficially owned, or controlled or directed, directly or indirectly, is not within the Corporation's knowledge and therefore has been provided by each individual set forth in the table.

(2) Mr. Cascella was appointed to the Board of Directors effective February 1, 2019. Mr. Chopra was elected to the Board of Directors effective April 27, 2018.

(3) As of February 13, 2019, Mr. Etherington also owned 10,000 subordinate voting shares of Onex and Mr. Popatia owned 8,894 subordinate voting shares of Onex. Other than Messrs. Etherington and Popatia, no director of the Corporation during 2018 owned, and no current director nominee owns, shares of Onex.

(4) 22,749 DSUs were issued to Onex for the services of Mr. Popatia as a director of the Corporation in 2018. 219,139 DSUs have been issued to Onex (and are outstanding) pursuant to the Services Agreement since its inception. Onex's beneficial ownership of securities of the Corporation (which does not include DSUs) is set forth in footnote 2 to the Major Shareholder's Table in Item 7(A).

Director Share Ownership Guidelines

The Corporation has minimum shareholding requirements (the "Director Share Ownership Guidelines") for directors who are not employees or officers of the Corporation or Onex (see *Executive Share Ownership* for share ownership guidelines applicable to Mr. Mionis in his role as President and CEO of the Corporation). Subject to the amendment described below, the Director Share Ownership Guidelines require that a director hold SVS and/or DSUs with an aggregate value equal to 150% of the annual retainer and that the Chair of the Board hold SVS and/or DSUs with an aggregate value equal to 187.5% of the annual retainer. Directors have five years from January 1, 2016 or from the time of their appointment to the Board, as applicable, to comply with the Director Share Ownership Guidelines. Effective January 1, 2019, directors may elect to receive 0%, 25% or 50% of their Annual Fees in

cash, with the balance in DSUs, until the director has satisfied the requirements of the Director Share Ownership Guidelines. Once a director has satisfied the requirements of the Director Share Ownership Guidelines, the director may then elect to receive the non-cash portion of their Annual Fees in either DSUs or RSUs. See *Director Compensation* above. As a result, the Director Share Ownership Guidelines were amended effective January 1, 2019 to include the value of any unvested RSUs held by a director in determining whether such director has maintained compliance with such guidelines after initial satisfaction. Although directors subject to the Director Share Ownership Guidelines will not be deemed to have breached such Guidelines by reason of a decrease in the market value of the Corporation's securities, such directors are required to purchase further securities within a reasonable period of time after such occurrence to comply with the Director Share Ownership Guidelines. Each director's holdings of securities are reviewed annually as of December 31. The following table sets out, for each applicable director proposed for election at the Meeting, whether such director was in compliance with the Director Share Ownership Guidelines as of December 31, 2018.

Table 5: Shareholding Requirements

Director[1]	Shareholding Requirements		
	Target Value as of December 31, 2018	Value as of December 31, 2018 [2]	Met Target as of December 31, 2018
Deepak Chopra[3]	$352,500	$112,291	Not yet applicable
Daniel P. DiMaggio	$352,500	$1,639,394	Yes
William A. Etherington	$675,000	$3,679,471	Yes
Laurette T. Koellner	$352,500	$1,865,274	Yes
Carol S. Perry	$352,500	$1,084,867	Yes
Eamon J. Ryan	$352,500	$2,304,475	Yes
Michael M. Wilson	$352,500	$1,666,414	Yes

(1) As President and CEO of the Corporation, Mr. Mionis is subject to the Executive Share Ownership Guidelines. As an officer of Onex, Mr. Popatia is not subject to the Director Share Ownership Guidelines. Mr. Cascella will be required to comply with the Director Share Ownership Guidelines within five years of his appointment to the Board.

(2) The value of the aggregate number of SVS and DSUs held by each director is determined using a share price of $8.77, which was the closing price of the SVS on the NYSE on December 31, 2018.

(3) Mr. Chopra was elected to the Board of Directors effective April 27, 2018 and he is required to comply with the Director Share Ownership Guidelines within five years of his election.

Attendance of Directors at Board and Committee Meetings

The following table sets forth the attendance of directors at Board meetings and at meetings of those standing committees of which they are members, from January 1, 2018 to February 13, 2019. All then-members of the Board attended the Corporation's last annual meeting of shareholders.

Table 6: Directors' Attendance at Board and Committee Meetings

Director	Board	Audit	Compensation	Nominating and Corporate Governance	Meetings Attended %	
					Board	Committee
Robert A. Cascella[1]	–	1 of 1	–	–	–	100%
Deepak Chopra[1]	5 of 5	4 of 4	4 of 4	2 of 2	100%	100%
Daniel P. DiMaggio	10 of 10	6 of 7	6 of 6	4 of 4	100%	94%
William A. Etherington	10 of 10	7 of 7	6 of 6	4 of 4	100%	100%
Laurette T. Koellner	10 of 10	7 of 7	6 of 6	4 of 4	100%	100%
Robert A. Mionis	10 of 10	–	–	–	100%	–
Carol S. Perry	10 of 10	7 of 7	6 of 6	4 of 4	100%	100%
Tawfiq Popatia	10 of 10	–	–	–	100%	–
Eamon J. Ryan	10 of 10	7 of 7	6 of 6	4 of 4	100%	100%
Michael M. Wilson	10 of 10	6 of 7	6 of 6	4 of 4	100%	94%

(1) Mr. Cascella was appointed to the Board of Directors effective February 1, 2019. Mr. Chopra was elected to the Board of Directors effective April 27, 2018.

COMPENSATION DISCUSSION AND ANALYSIS

This Compensation Discussion and Analysis sets out the policies of the Corporation for determining compensation paid to the Corporation's CEO, its Chief Financial Officer ("CFO"), and the three other most highly compensated executive officers (collectively, the "Named Executive Officers" or "NEOs"). The NEOs who are the subject of this Compensation Discussion and Analysis are:

- Robert A. Mionis – President and CEO;
- Mandeep Chawla – CFO;
- Michael P. McCaughey – President, CCS (effective January 1, 2019, Mr. McCaughey's title was changed to Advisor);
- John "Jack" J. Lawless – President, ATS; and
- Todd C. Cooper – Chief Operations Officer.

A description and explanation of the significant elements of compensation awarded to the foregoing NEOs during 2018 is set out in the section *Compensation Discussion and Analysis – 2018 Compensation Decisions*.

Note Regarding Non-IFRS Measures

This Compensation Discussion and Analysis contains references to operating margin, adjusted return on invested capital ("adjusted ROIC"), and adjusted earnings per share ("EPS"), each of which are non-International Financial Reporting Standards ("IFRS") measures. With respect to all references to these measures, please note the following:

- Non-IFRS operating margin is defined as non-IFRS operating earnings divided by revenue. Non-IFRS operating earnings is defined as earnings before income taxes, finance costs (consisting of interest and fees relating to the Corporation's credit facility, accounts receivable sales program and a customer's supplier financing program), amortization of intangible assets (excluding computer software), and in applicable periods, employee stock based compensation expense, net restructuring and other charges (recoveries) (consisting of restructuring charges (recoveries), acquisition-related consulting, transaction, and integration costs, legal settlements (recoveries), Toronto transition costs (recoveries), and the accelerated amortization of unamortized deferred financing costs), impairment charges (recoveries), charges relating to the Corporation's solar panel manufacturing business ("Solar Charges") and acquisition inventory fair value adjustments ("FVAs").

- Adjusted ROIC is determined by dividing non-IFRS operating earnings by average net invested capital, where net invested capital consists of the following IFRS measures: total assets less cash, accounts payable, accrued and other current liabilities and provisions, and income taxes payable, using a five-point average to calculate average net invested capital for the year.

- Adjusted EPS is determined by dividing non-IFRS adjusted net earnings by the weighted average number of diluted shares for the applicable period. Non-IFRS adjusted net earnings is defined as net earnings before amortization of intangible assets (excluding computer software), and in applicable periods, employee stock based compensation expense, net restructuring and other charges (recoveries) (as defined above), impairment charges (recoveries), Solar Charges, FVAs, the tax impact of the foregoing items, and non-core tax impacts (tax adjustments related to acquisitions, and certain other tax costs or recoveries related to restructuring actions or restructured sites).

See "Non-IFRS measures" in the Corporation's Management's Discussion and Analysis for the first three quarters of 2018 (available at www.sec.gov) and in Item 5 of this Annual Report for, among other things, a discussion of the exclusions used to determine these non-IFRS measures, how these non-IFRS measures are used, as well as a reconciliation of historical non-IFRS operating margin, non-IFRS adjusted ROIC, and non-IFRS adjusted EPS to the most directly comparable IFRS measures. These non-IFRS measures do not have any standardized meanings prescribed by IFRS and therefore may not be comparable to similar measures presented by other companies.

Compensation Objectives

The Corporation's executive compensation philosophies and practices are designed to attract, motivate and retain the leaders who drive the success of the Corporation. The Compensation Committee reviews compensation policies and practices regularly, considers related risks, and makes any adjustments it deems necessary to ensure the compensation policies are not reasonably likely to have a material adverse effect on the Corporation.

A substantial portion of the compensation of our executives is linked to the Corporation's performance. The Compensation Committee establishes target compensation with reference to the median compensation of a comparator group of Celestica's competitors, major suppliers, customers, and other major international technology companies that generally fall in the range of 50% to 200% of Celestica's revenue (such group, the "Comparator Group"). However, neither each element of compensation nor total compensation is expected to match the median of such Comparator Group exactly. NEOs have the opportunity for higher compensation for performance that exceeds target performance goals, and will receive lower compensation for performance that is below target performance goals.

The 2018 compensation package was designed to:

- ensure executives are compensated fairly and in a way that does not result in the Corporation incurring undue risk or encouraging executives to take inappropriate risks;
- provide competitive fixed compensation (*i.e.*, base salary and benefits), as well as a substantial amount of at-risk pay through our annual and equity-based incentive plans;
- reward executives, through both annual cash incentives and long-term equity-based incentives, for achieving operational and financial results that meet or exceed the Corporation's business plan and that are superior to those of direct competitors in the electronics manufacturing services ("EMS") industry;
- align the interests of executives and shareholders through long-term equity-based compensation;
- recognize tenure and utilize a multi-year approach for setting and transitioning target compensation for executives who are new in their role;
- reflect internal equity, recognize fair and appropriate compensation levels relative to differing roles and responsibilities, and encourage executives to work as a team to achieve corporate results; and
- ensure direct accountability for the annual operating results and the long-term financial performance of the Corporation.

Independent Advice

The Compensation Committee, which has the sole authority to retain and terminate an executive compensation consultant, has engaged the Compensation Consultant since October 2006 as its independent compensation consultant to assist in identifying appropriate comparator companies against which to evaluate the Corporation's compensation levels, to provide data about those companies, and to provide observations and advice with respect to the Corporation's compensation practices versus those of the Comparator Group and the market in general.

The Compensation Consultant also provides advice (upon request) to the Compensation Committee on the policy recommendations prepared by management and keeps the Compensation Committee apprised of market trends in executive compensation. The Compensation Consultant attended portions of all Compensation Committee meetings held in 2018, in person or by telephone, as requested by the Chair of the Compensation Committee. At each of its meetings, the Compensation Committee held an *in camera* session with the Compensation Consultant without any member of management being present. Decisions made by the Compensation Committee, however, are the responsibility of the Compensation Committee and may reflect factors and considerations supplementary to the information and advice provided by the Compensation Consultant.

Each year, the Compensation Committee reviews the scope of activities of the Compensation Consultant and, if it deems appropriate, approves the corresponding budget. During such review, the Compensation Committee also considers the independence

factors required to be considered by the NYSE prior to the selection or receipt of advice from a compensation consultant. After consideration of such independence factors and prior to engaging the Compensation Consultant in 2018, the Compensation Committee determined that the Compensation Consultant was independent. The Compensation Consultant meets with the Chair of the Compensation Committee and management at least annually to identify any initiatives requiring external support and agenda items for each Compensation Committee meeting throughout the year. The Compensation Consultant reports directly to the Chair of the Compensation Committee and is not engaged by management. The Compensation Consultant may, with the approval of the Compensation Committee, assist management in reviewing and, where appropriate, developing and recommending compensation programs to align the Corporation's practices with competitive practices. Any such service in excess of $25,000 provided by the Compensation Consultant relating to executive compensation must be pre-approved by the Chair of the Compensation Committee. In addition, any non-executive compensation consulting service in excess of $25,000 must be submitted by management to the Compensation Committee for pre-approval, and any services that will cause total non-executive compensation consulting fees to exceed $25,000 in aggregate in a calendar year must also be pre-approved by the Compensation Committee.

The following table sets out the fees paid by the Corporation to the Compensation Consultant in each of the past two years:

Table 7: Fees of the Compensation Consultant

	Year Ended December 31	
	2018	**2017**
Executive Compensation-Related Fees[(1)]	C$328,828	C$246,859
All Other Fees	C$–	C$–

(1) Services for 2018 and 2017 included support on executive compensation matters that are part of its annual agenda (*e.g.*, executive compensation competitive market analysis, review of trends in executive compensation, peer group review, pay-for-performance analysis and assistance with executive compensation-related disclosure), annual valuation of PSUs for accounting purposes, TSR peer group analysis, attendance at all Compensation Committee meetings, and support with ad-hoc executive compensation issues that arose throughout the year. Services for 2018 also included a compensation risk assessment and the 2018 Review of director compensation. Services for 2017 also included advice on incentive plan design changes and research and commentary on strategic incentive awards.

Compensation Process

Executive compensation is determined as part of an annual process followed by the Compensation Committee, as supported by the Compensation Consultant, as follows:

Before/At Commencement of the Performance Period	During the Performance Period	After the Performance Period
• Review and approve Comparator Group • Review of Comparator Group compensation and pay positioning • Establish target compensation levels • Review trends in executive compensation • Establish performance objectives • Conduct risk assessment of compensation programs	• Review of pay-for-performance alignment relative to Comparator Group • Evaluate interim performance relative to objectives • Approve appointments to designated positions and any related compensation changes • Reevaluate Comparator Group and update for the next performance period • Review management succession plans, including retention value of unvested equity awards	• Evaluate individual performance relative to objectives • Determine achievement of performance criteria for annual and long term incentives

The Compensation Committee reviews and approves compensation for the CEO and the other NEOs, including base salaries, target annual incentive awards under the CTI and equity-based incentive grants. The Compensation Committee evaluates the performance of the CEO relative to financial and business goals and objectives approved by the Board from time to time for such purpose. The Compensation Committee reviews data for the Comparator Group and other competitive market data, and consults

with the Compensation Consultant before exercising its independent judgment to determine appropriate compensation levels. The CEO reviews the performance evaluations of the other NEOs with the Compensation Committee and provides compensation recommendations. The Compensation Committee considers these recommendations, reviews market compensation information, consults with the Compensation Consultant, and then exercises its independent judgment to determine if any adjustments are required prior to approval of the compensation of such other NEOs.

The Compensation Committee generally meets five times a year, in January, April, July, October and December. At the July meeting, the Compensation Committee, based on recommendations from the Compensation Consultant, approves the Comparator Group that will be used for the compensation review for the following year. At the October meeting, the Compensation Consultant presents a competitive analysis of the total compensation for each of the NEOs, including the CEO, with reference to the established Comparator Group as well as other competitive market data. Using this analysis, the CEO develops base salary and equity-based incentive recommendations for the NEOs which are then reviewed with the Compensation Consultant. The CEO's compensation is determined by the Compensation Committee in consultation with the Compensation Consultant with input from the Corporation's chief human resources executive. At the December meeting, preliminary compensation proposals for the CEO and the NEOs for the following year are reviewed, including base salary recommendations and the value and mix of their equity-based incentives. By reviewing the compensation proposals in advance, the Compensation Committee is afforded sufficient time to discuss and provide input regarding proposed compensation changes prior to the January meeting at which time the Compensation Committee approves the compensation proposals, revised as necessary or appropriate, based on input provided at the December meeting. Previous grants of equity-based awards and their current retention value are reviewed and may be taken into consideration when making decisions related to equity-based compensation. The Compensation Committee also considers the potential value of the total compensation package for the CEO, which is stress-tested at different levels of performance and different stock prices to ensure that there is an appropriate link between pay and performance, taking into consideration the range of potential total compensation. The CEO and the NEOs are not present at the Compensation Committee meetings when their respective compensation is discussed.

Based on a management plan approved by the Board, CTI targets for the relevant year are approved by the Compensation Committee at the beginning of the year. The Compensation Committee reviews the Corporation's performance relative to these targets and the projected payment at the October and December meetings. At the January meeting of the following year, final payments under the CTI, as well as the vesting percentages for any previously granted equity-based incentives that have performance vesting criteria, are calculated and approved by the Compensation Committee based on the Corporation's year-end results as approved by the Audit Committee. The amounts related to the CTI are then paid in February.

The Compensation Committee may exercise its discretion to either award compensation absent attainment of a relevant performance goal or similar condition, or to reduce or increase the size of any award or payout to any NEO. The Compensation Committee did not exercise such discretion for 2018 compensation with respect to any NEO.

Compensation Risk Assessment and Governance Analysis

The Compensation Committee, in performing its duties and exercising its powers under its mandate, considers the implications of the risks associated with the Corporation's compensation policies and practices. This includes: identifying any such policies or practices that encourage executive officers to take inappropriate or excessive risks, identifying risks arising from such policies and practices that are reasonably likely to have a material adverse effect on the Corporation, and considering the risk implications of the Corporation's compensation policies and practices and any proposed changes to them.

The Corporation's compensation programs are designed with a balanced approach aligned with its business strategy and risk profile. A number of compensation practices have been implemented to mitigate potential compensation policy risk. The Compensation Consultant completed a risk assessment in 2018. It is the Compensation Committee's view that the Corporation's 2018 compensation policies and practices did not promote excessive risk-taking that would be reasonably likely to have a material adverse effect on the Corporation, and that appropriate risk mitigation features are in place within the Corporation's compensation program. In reaching its opinion, the Compensation Committee reviewed key risk-mitigating features in the Corporation's compensation governance processes and compensation structure including the following:

Governance	
Compensation Decision-Making Process	• The Corporation has formalized compensation objectives to help guide compensation decisions and incentive design and to effectively support its pay-for-performance policy (see Compensation Discussion and Analysis – Compensation Objectives).
Non-binding Shareholder Advisory Vote on Executive Compensation	• The Corporation annually holds an advisory vote on executive compensation, allowing shareholders to express approval or disapproval of its approach to executive compensation.
Annual Review of Incentive Programs	• Each year, the Corporation reviews and sets performance measures and targets for the CTI and for PSU grants under the Celestica Share Unit Plan ("CSUP") and the LTIP that are aligned with the business plan and the Corporation's risk profile to ensure continued relevance and applicability. • When new compensation programs are considered, they are stress-tested to ensure potential payouts would be reasonable within the context of the full range of performance outcomes. CEO compensation is stress-tested annually.
External Independent Compensation Advisor	• On an ongoing basis, the Compensation Committee retains the services of an independent compensation advisor, to provide an external perspective as to marketplace changes and best practices related to compensation design, governance and compensation risk management.
Overlapping Committee Membership	• All of the Corporation's independent directors sit on the Compensation Committee to provide continuity and to facilitate coordination between the Committee's and the Board's respective oversight responsibilities.
Compensation Program Design	
Review of Incentive Programs	• At appropriate intervals, Celestica conducts a review of its compensation strategy, including pay philosophy and program design, in light of business requirements, market practice and governance considerations.
Fixed versus Variable Compensation	• For the NEOs, a significant portion of target total direct compensation is delivered through variable compensation (CTI and long-term, equity-based incentive plans). • The majority of the value of target variable compensation is delivered through grants under long-term, equity-based incentive plans which are subject to time and/or performance vesting requirements. • The mix of variable compensation provides a strong pay-for-performance relationship. • The NEO compensation package provides a competitive base level of compensation through salary, and mitigates the risk of encouraging the achievement of short-term goals at the expense of creating and sustaining long-term shareholder value, as NEOs benefit if shareholder value increases over the long-term.
"One-company" Annual Incentive Plan	• Celestica's "one-company" annual incentive plan (the CTI) helps to mitigate risk-taking by tempering the results of any one business unit on Celestica's overall corporate performance, and aligning executives and employees in the various business units and regions with corporate goals.
Balance of Financial Performance Metrics as well as Absolute and Relative Performance Metrics	• The CTI ensures a holistic assessment of performance with ultimate payout tied to measurable corporate financial metrics. • Individual performance is assessed based on business results, teamwork and key accomplishments, and market performance is captured through RSUs as well as PSUs (which vest based on performance relative to both absolute and relative financial targets).
Minimum Performance Requirements and Maximum Payout Caps	• For 2018, a specified corporate profitability requirement was established for any payout to occur under the CTI. • Additionally, a second performance measure must be achieved for payment above target. • Each of the CTI and PSU payouts have a maximum payout of two times target.
Share Ownership Requirement	• The Corporation's share ownership guidelines require executives to hold a significant minimum amount of the Corporation's securities to help align their interests with those of shareholders' and the long-term performance of the Corporation. • This practice also mitigates against executives taking inappropriate or excessive risks to improve short-term performance at the expense of longer-term objectives. • In the event of the cessation of Mr. Mionis' employment with the Corporation for any reason, he will be required to retain the share ownership level set out in the Executive Share Ownership Guidelines on his termination date for the 12 month period immediately following his termination date as set out in Mr. Mionis' amended CEO employment agreement effective August 1, 2016 (the "CEO Employment Agreement").

Anti-hedging and Anti-pledging Policy	• Executives and directors are prohibited from entering into speculative transactions and transactions designed to hedge or offset a decrease in market value of equity securities of the Corporation granted as compensation or purchasing securities of the Corporation on margin, borrowing against securities of the Corporation held in a margin account, or pledging Celestica securities as collateral for a loan.
"Clawback" Policy	• A "clawback" policy provides for recoupment of incentive-based compensation from the CEO and CFO that was received during a specified period in the event of an accounting restatement due to material non-compliance with financial reporting requirements as a result of misconduct, as well as any profits realized from the sale of securities during such period (see – "*Clawback" Provisions*). • In addition, all longer-term incentive awards made to NEOs may be subject to recoupment if certain employment conditions are breached.
"Double Trigger"	• The LTIP and CSUP currently provide for change of control treatment for outstanding equity based on a "double trigger" requirement.
Severance Protection	• NEOs' entitlements on termination without cause are in part contingent on complying with confidentiality, non-solicitation and non-competition obligations (two years).
Pay-For-Performance Analysis	• Periodic scenario testing of the executive compensation programs is conducted, including a pay-for-performance analysis.

Comparator Group

The Compensation Committee establishes salary, annual incentive and equity-based incentive awards with reference to the median of such elements for the Comparator Group, but is not bound to any target percentile for any element of compensation of the Comparator Group. The Comparator Group is comprised of a selection of the Corporation's competitors, major suppliers, customers, and other international technology companies that generally fall in the range of 50% to 200% of the Corporation's revenues and is approved annually by the Compensation Committee. The Compensation Committee also considers the Corporation's business objectives and its participation in global markets when approving the Comparator Group. While the Corporation is incorporated and headquartered in Canada, our business is global and we compete for executive talent worldwide with companies in the technology industry. Our global recruiting strategy has been evidenced by the fact that several of our executive officers were not recruited from Canada; and in fact, the Corporation's three most recent CEOs have come from the United States. There are no EMS competitor companies in the Comparator Group that are headquartered in Canada. For non-EMS companies, competitors of similar size and scope within Canada would not provide the desired global perspective. As a result, the determination of the Comparator Group is not bound by geographic limitations and instead includes a representation from a broad group of relevant companies which are publicly traded and against which the Corporation competes for executive leaders. Most of the companies in the current Comparator Group are based in the United States. The Comparator Group chosen in 2017 was used to establish 2018 executive compensation. In 2018, Level 3 Communications was acquired by another company and was subsequently removed from the Comparator Group. Applied Materials Inc. was also removed from the Comparator Group since its revenue was outside of an acceptable range for comparison. The Comparator Group chosen in 2018 to establish 2019 executive compensation was reviewed and approved by the Compensation Committee, and is set out in Table 8 below.

Table 8: Comparator Group[1]

Industry Company Name	2017 Annual Revenue (billions)	Industry Company Name	2017 Annual Revenue (billions)	Industry Company Name	2017 Annual Revenue (billions)
Electronic Manufacturing Services		**Communications**		**Technology Hardware, Storage, Peripherals**	
Flex Ltd.	$23.9	Harris Corp.	$5.9	NCR Corp.	$6.5
Jabil Circuit, Inc.	$19.1	Juniper Networks, Inc.	$5.0	NetApp, Inc.	$5.5
Sanmina Corporation	$6.9	Motorola Solutions	$6.4		
Benchmark	$2.5	ARRIS International	$6.6		
Plexus Corp.	$2.5				
Electronic Components		**Diversified Markets**		**Semiconductor**	
Corning Inc.	$10.1	Agilent Technologies Inc.	$4.5	Advanced Micro Devices Inc.	$5.3
Amphenol Corporation	$7.0			Lam Research	$8.0
				NVIDIA Corp.	$6.9
				Overall	
				25th Percentile	$5.3
				50th Percentile	$6.5
				75th Percentile	$7.0
				Celestica Inc.	$6.1
				Percentile	40th *percentile*

(1) All data was provided by the Compensation Consultant (sourced by it from Standard & Poor's Capital IQ), reflecting fiscal year 2017 revenue for each company, and is presented in U.S. dollars.

Additionally, broader market compensation survey data for other similarly-sized organizations as well as Canadian market data provided by the Compensation Consultant is analyzed in accordance with a process approved by the Compensation Committee. The Compensation Committee considered such survey data, among other matters, in making compensation decisions. In addition to the survey data, proxy disclosure of the Comparator Group companies for the most recently completed fiscal year was considered when determining the compensation of the CEO and the other NEOs.

Anti-Hedging and Anti-Pledging Policy

The Insider Trading Policy prohibits executives from, among other things, entering into speculative transactions and transactions designed to hedge or offset a decrease in market value of equity securities of the Corporation granted as compensation. Accordingly, executive officers may not sell short the Corporation's securities, buy or sell put or call options on the Corporation's securities, or purchase financial instruments (including prepaid variable contracts, equity swaps, collars or units of exchange funds) which are designed to hedge or offset a decrease in market value of the Corporation's securities. Executive officers are also prohibited from purchasing the Corporation's securities on margin, borrowing against the Corporation's securities held in a margin account, or pledging the Corporation's securities as collateral for a loan. The directors of the Corporation also must comply with the provisions of the Insider Trading policy which prohibit hedging and/or pledging of the Corporation's securities**.**

"Clawback" Provisions

The Corporation is subject to the "clawback" provisions of the Sarbanes-Oxley Act of 2002. Accordingly, if the Corporation is required to restate financial results due to material non-compliance with financial reporting requirements as a result of misconduct, the CEO and CFO would be required to reimburse the Corporation for any bonuses or incentive-based compensation they had received during the 12-month period following the first public issuance or filing with the SEC (whichever is earlier) of a financial document embodying such financial reporting requirement, as well as any profits they had realized from the sale of securities of the Corporation during that 12-month period.

In addition, under the terms of the stock option grants and the PSU and RSU grants made under the LTIP and the CSUP, a NEO may be required by the Corporation to repay an amount equal to the market value of the shares (or in the case of options, the intrinsic value realized by the executive) at the time of release, net of taxes, if, within 12 months of the release date, the executive:

- accepts employment with, or accepts an engagement to supply services, directly or indirectly to, a third party that is in competition with the Corporation or any of its subsidiaries; or

- fails to comply with, or otherwise breaches, the terms and conditions of a confidentiality agreement or non-disclosure agreement with, or confidentiality obligations to, the Corporation or any of its subsidiaries; or

- on his or her behalf or on another's behalf, directly or indirectly recruits, induces or solicits, or attempts to recruit, induce or solicit any current employee or other individual who is/was supplying services to the Corporation or any of its subsidiaries.

Executives who are terminated for cause also forfeit all unvested RSUs, PSUs and stock options as well as all vested and unexercised stock options.

Compensation Elements for the Named Executive Officers

The compensation of the NEOs in 2018 was comprised of the following elements:

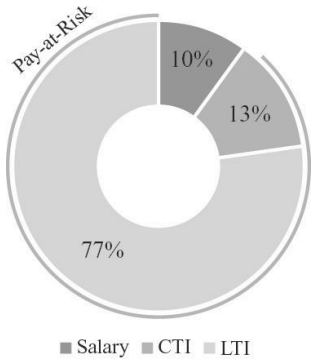
Elements	Rationale
Base Salary	Provides a fixed level of compensation intended to reflect the scope of an executive's responsibilities and level of experience and to reward sustained performance over time, as well as to approximate competitive base salary levels
Annual Cash Incentives	Aligns executive performance with the Corporation's annual goals and objectives
Equity-Based Incentives	
• RSUs	Provides a strong incentive for long-term executive retention
• PSUs	Aligns executives' interests with shareholder interests and provides incentives for long-term performance
Benefits	Designed to help ensure the health and wellness of executives
Pension	Designed to assist executives in saving for their retirement
Perquisites	Perquisites are provided to executives on a case-by-case basis as considered appropriate and in the interests of the Corporation

Compensation Element Mix

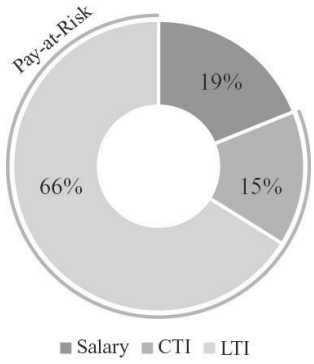
In order to ensure that our executive compensation program is market competitive, we annually review the program design and pay levels of companies in the Comparator Group and other competitive market data. We assess total target direct compensation (base salary, annual cash incentive and equity grants) as well as specific elements of compensation when reviewing market information relative to our executive compensation program. The Compensation Committee uses the median of the Comparator Group as a guideline when determining total target direct compensation but is not bound to any target percentile for any specific element of compensation. In addition to the Comparator Group, we also consider executive compensation relative to internal peers where responsibilities and experience vary. In determining appropriate positioning relative to the Comparator Group and internal peers, we utilize a multi-year approach for setting and transitioning target compensation for executives who are new in their role.

The at-risk portion of total compensation varies by role and executive level, but has the highest weighting at the most senior levels of management. CTI awards and certain equity-based incentive plan awards are contingent upon the Corporation's financial and operational performance and are therefore at-risk. With a significant portion of total target direct compensation delivered through variable compensation, the Corporation intends to continue to align NEO compensation with shareholder interests. The relative weighting of the compensation elements for the CEO and the other NEOs (average) for 2018 is set forth below.

Compensation Element Mix for CEO



Compensation Element Mix for NEOs (Average)

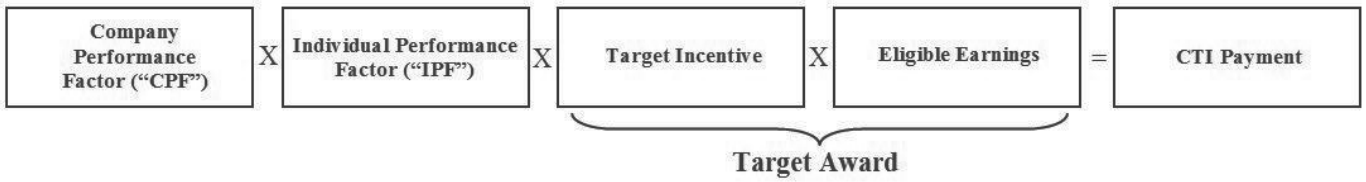


Base Salary

The objective of base salary is to attract, reward and retain top talent. Base salaries for executive positions are determined with consideration given to the market median of the Comparator Group. Base salaries are reviewed annually and adjusted if appropriate, to reflect individual performance, relevant knowledge, experience and the executive's level of responsibility within the Corporation.

Celestica Team Incentive Plan

The objective of the CTI is to reward all eligible employees, including the NEOs, for the achievement of annual objectives. CTI awards for the NEOs are based on the achievement of pre-determined corporate and individual goals, and are paid in cash. Payouts can vary from 0% for performance below a threshold up to a maximum capped at 200% of the Target Award (defined below). Awards are determined in accordance with the following formula:



Target Award	The target award is calculated as each NEO's Eligible Earnings (*i.e.*, base salary) multiplied by the Target Incentive (expressed as a percentage of base salary in the applicable plan year) (the "Target Award"). The maximum CTI payment is two times the Target Award.
CPF	The CPF is based on certain corporate financial targets (described for 2018 in more detail in Table 10 below) established at the beginning of the performance period and approved by the Compensation Committee and can vary from 0% to 200% of target. Actual results relative to the targets, as described above, determine the amount of the annual incentive and for 2018, were subject to the following two parameters (the "CTI Parameters"): (1) a minimum corporate profitability requirement must be achieved for the CPF to exceed zero; and (2) target non-IFRS operating margin must be achieved for other measures under the CPF to pay above target. The CTI Parameters were set in addition to the CPF thresholds in order to ensure challenging limits reflective of our current business environment. The CPF must be greater than zero for an executive to be entitled to any CTI payment.
IPF	Individual contribution is recognized through the IPF component of the CTI. The IPF is determined through the annual performance review process and is based on an evaluation of the NEO's performance measured against specific criteria established at the beginning of each year. The criteria may include factors such as the NEO's individual performance relative to business results, teamwork and the executive's key accomplishments. The IPF can increase an NEO's CTI award by a factor of up to 1.5x or reduce an NEO's CTI award to zero depending on individual performance. An IPF of less than 1.0 will result in a reduction of the CTI award otherwise payable. The CTI payment is subject to an overall maximum cap of 200% of the Target Award.

Equity-Based Incentives

The Corporation's equity-based incentives for the NEOs consist of RSUs, PSUs and/or stock options. The objectives of equity-based compensation are to:

- align the NEOs' interests with those of shareholders and incent appropriate behaviour for long-term performance;
- reward the NEOs' contributions to the Corporation's long-term success; and
- enable the Corporation to attract, motivate and retain qualified and experienced employees.

At the January meeting, the Compensation Committee determines the dollar value and mix of the equity-based grants to be awarded to the NEOs, if any. On the grant date, the dollar value is converted into the number of units that will be granted using the closing price of the SVS on the day prior to the grant date. The annual grants are made following the blackout period that ends not less than 48 hours after the Corporation's year-end results have been released. The mix of equity-based incentives is reviewed and approved by the Compensation Committee each year, and is based on factors including competitive grant practices, balance between performance incentive and retention value, and the effectiveness of each equity vehicle for motivating and retaining critical leaders.

Target equity-based incentives are determined using the median awards of the Comparator Group as a guideline; however, consideration is also given to individual performance and contribution when determining actual awards. In establishing the grant value of the annual equity awards for each of the NEOs, we start by assessing the median total target direct compensation of the equivalent position at companies in the Comparator Group. This data is then compared over a number of years for additional context and market trends. The Compensation Committee also considers individual performance, the need to retain experienced and talented leaders to execute the Corporation's business strategies and the executive's potential to contribute to long-term shareholder value. Also considered are the executive's role and responsibilities, internal equity and the level of previous long-term incentive awards. Once all of these factors are taken into consideration, the grant value of the annual equity-based awards for the NEOs is set.

The CEO has the discretion to issue equity-based awards throughout the year to attract new hires and to retain current employees (excluding executive officers) within limits set by the Compensation Committee. The number of units available throughout the year for these grants is pre-approved by the Compensation Committee at the January meeting. Subject to the Corporation's blackout periods, these grants typically take place at the beginning of a month. Any such grants to NEOs must be reviewed with the Compensation Committee at the next meeting following such grant and typically are reviewed in advance with the Chair of the Compensation Committee. No such grants were made to NEOs in 2018.

RSUs

NEOs may be granted RSUs under either the LTIP or the CSUP as part of the Corporation's annual equity grant. Such awards may be subject to vesting requirements, including time-based or other conditions as may be determined by the Compensation Committee in its discretion. RSUs granted by the Corporation generally vest in instalments of one-third per year, over three years, based on continued employment with the Corporation. Each vested RSU entitles the holder to one SVS on the release date. The payout value of the award is based on the number of RSUs being released and the market price of the SVS at the time of release. The Corporation has the right under the CSUP to settle RSUs in either cash or SVS. Under the LTIP, the Corporation may, at the time of grant, authorize grantees to settle RSUs either in cash or in SVS. Absent such permitted election, grants under the LTIP will be settled in SVS. If the Corporation has authorized a settlement in SVS or cash, the holder can choose which of these the holder receives. See *Compensation of Named Executive Officers – Equity Compensation Plans*.

PSUs

NEOs may be granted PSUs under the LTIP or the CSUP as part of the Corporation's annual equity grant. The vesting of such awards requires the achievement of specified performance-based conditions over a specified time period, as determined by the Compensation Committee in its discretion. PSUs granted by the Corporation generally vest at the end of a three-year performance period subject to pre-determined performance criteria. Each vested PSU entitles the holder to receive one SVS on the applicable release date. The payout value of the award is based on the number of PSUs that vest (which ranges from 0% to 200% of the target amount granted) and the market price of the SVS at the time of release. The Corporation has the right under the CSUP to settle

the PSUs in either cash or SVS. Under the LTIP, the Corporation may, at the time of grant, authorize grantees to settle PSUs either in cash or in SVS. Absent such permitted election, grants under the LTIP will be settled in SVS. If the Corporation has authorized a settlement in SVS or cash, the holder can choose which of these the holder receives. See *Compensation of Named Executive Officers – Equity Compensation Plans*.

Stock Options

NEOs may be granted stock options under the LTIP. The exercise price of a stock option is the closing market price on the business day prior to the date of the grant. Stock options granted by the Corporation generally vest at a rate of 25% annually on each of the first four anniversaries of the date of grant and expire after a ten-year term. The LTIP is not an evergreen plan and no stock options have been re-priced.

Other Compensation

Benefits

NEOs participate in the Corporation's health, dental, pension, life insurance and long-term disability programs. Benefit programs are determined with consideration given to market median levels in the local geographic region.

Perquisites

Perquisites are provided to executives on a case-by-case basis as considered appropriate in the interests of the Corporation. NEOs are entitled to an annual comprehensive medical examination at a private health clinic. Where applicable, tax equalization is provided to NEOs as an integral part of the Corporation's Short Term Business Travel Program and is designed to maintain an individual's tax burden at approximately the same level it would have otherwise been had they remained in their home country. Due largely to variables such as timing and tax rate differences between Canada and the U.S., tax equalization amounts may vary from year to year. While the Corporation is incorporated and headquartered in Canada, our business is global, we compete for executive talent worldwide and our executives are often required to travel extensively. As a result, we believe it is appropriate to make tax equalization payments in order to attract and retain non-Canadian executive officers with specific capabilities as well as to ensure that our executives do not incur any additional tax burden as a result of the business travel necessitated by the global nature of our business.

Tax Deductibility of Executive Compensation for U.S. Tax Purposes

Prior to December 22, 2017, when the U.S. Tax Cuts and Jobs Act of 2017 (the "U.S. Tax Reform") became law, Section 162 (m) of the U.S. Internal Revenue Code, which did not apply to foreign private issuers, generally disallowed a tax deduction to public companies for compensation paid to specified executive officers in excess of $1 million per officer in any year that did not qualify as performance-based compensation. Pursuant to the U.S. Tax Reform, however, foreign private issuers who, like the Corporation, have securities registered under Section 12 of the *United States Securities Exchange Act of 1934*, as amended, have become subject to Section 162(m), to the extent they have U.S-based executive officers for whose compensation they take a deduction for U.S. tax purposes. Under the revisions to Section 162(m) implemented by the U.S. Tax Reform, the performance-based exception has been repealed and the $1 million deduction limit now applies to anyone serving as the chief executive officer or the chief financial officer at any time during the taxable year and the top three other highest compensated executive officers serving at fiscal year-end (if relevant deductions for such executives are taken for U.S. tax purposes). The new rules generally apply to taxable years beginning after December 31, 2017, but do not apply to remuneration provided pursuant to a written binding contract in effect on November 2, 2017 that has not been modified in any material respect after that date. Because of ambiguities and uncertainties as to the scope of the foregoing exception, no assurance can be given that the compensation of our CEO and Mr. Lawless will be so exempted**.** In addition, although the Compensation Committee intends to consider the potential tax deductibility of executive compensation under Section 162(m) for applicable executive officers, the primary goal of our compensation programs is to meet the objectives set forth in this Compensation Discussion and Analysis. Accordingly, the Compensation Committee reserves the right to use its business judgment to authorize compensation payments that may be subject to the Section 162(m) deduction limit if it believes such payments are appropriate and in the best interests of the Corporation and its shareholders.

2018 Compensation Decisions

Each element of compensation is considered independently of the other elements. However, the total package is reviewed to ensure that the achievement of target levels of corporate and individual performance will result in total compensation that is generally comparable to the median total compensation of the Comparator Group.

Key 2018 Executive Compensation Program Design Changes

During 2017, a comprehensive review of our incentive plans was undertaken in light of the Corporation's long-term strategic plan and then-recent organizational design changes. Following this review, the Compensation Committee approved the following design changes to the Corporation's incentive plans which were implemented for 2018 executive compensation (collectively, the "2018 Incentive Plan Design Changes"):

- non-IFRS adjusted ROIC was eliminated as a performance measure for the CPF portion of the CTI. Instead, 50% of the CPF was based on the achievement of specified revenue goals and 50% of the CPF was based on the achievement of specified non-IFRS operating margin goals;

- the equity mix changed to 40% RSUs and 60% PSUs (the previous mix was 50% RSUs and 50% PSUs); and

- the number of PSUs that will actually vest continues to range from 0% to 200% of the target number granted. The vesting level will be primarily based on the Corporation's non-IFRS operating margin (in the final year of the three-year performance period ("EBIAT Result"), and subject to modification by the Corporation's average annual non-IFRS adjusted ROIC achievement over the performance period ("ROIC Factor") and relative TSR achievement ("TSR Factor") over the performance period. See *NEO Equity Awards and Mix* below.

The 2018 Incentive Plan Design Changes were implemented to further improve the alignment of the incentive-based compensation of our executives with the Corporation's strategic goals and pay-for-performance objectives, and also to promote long-term shareholder value. In particular, we believe that the greater emphasis on non-IFRS operating margin as a performance measure for payouts under the CPF of the CTI, and introduction of this measure as the primary vesting criterion for our PSUs, strongly correlates with our current focus on margin improvement across all of our businesses. We believe that maintaining close alignment between our strategic objectives and our executive incentive compensation programs demonstrates our commitment to a pay-for-performance philosophy, which commitment requires adjustment to our performance criteria from time to time as our business goals and objectives evolve. Similarly, our decision to shift our equity grants to include a larger percentage of PSUs also demonstrates this commitment, as PSUs vest based on the level of achievement relative to business performance objectives. We eliminated the comparative nature of non-IFRS adjusted ROIC performance from our PSU vesting calculation as we believe our own results over the relevant period will represent a more meaningful measure of our financial performance. The decision to approve the 2018 Incentive Plan Design Changes was made upon the recommendation of management and after consultation with the Compensation Consultant. In reaching this decision, the Compensation Committee took into account competitive trends and practices as well as the Corporation's focus on retaining key leaders to effectively execute our strategic business goals.

Base Salary

The base salaries for the NEOs were reviewed during 2018, taking into account individual performance and experience, level of responsibility and median competitive data. No NEO base salaries were increased in 2018.

The following table sets forth the annual base salary for the NEOs for the years ended December 31, 2016 through December 31, 2018:

Table 9: NEO Base Salary Changes

NEO	Year	Salary ($)
Robert A. Mionis	2018	$950,000
	2017	$950,000
	2016	$850,000
Mandeep Chawla	2018	$450,000
	2017	$450,000
	2016	$246,000
Michael P. McCaughey	2018	$475,000
	2017	$475,000
	2016	$475,000
Jack J. Lawless	2018	$460,000
	2017	$460,000
	2016	$410,000
Todd C. Cooper	2018	$460,000
	2017	-
	2016	-

Prior to his appointment as CFO on October 19, 2017, Mr. Chawla served as interim CFO of the Corporation at which time his annual base salary did not change from his prior role; however, in recognition of his significantly expanded responsibilities, he received a one-time cash award of C$260,000 paid in two equal instalments during 2017. Upon his appointment as CFO, the Compensation Committee approved an annual base salary of $450,000 for Mr. Chawla. When setting the base salary for Mr. Chawla, the Compensation Committee considered his experience and the responsibilities and duties connected with the CFO position, as well as variable incentive compensation and median aggregate compensation. The Compensation Committee also reviewed salaries for CFOs within the Comparator Group, median competitive data and historical data concerning CFO base salaries at the Corporation.

Mr. Cooper's base salary was determined upon his appointment as Chief Operations Officer of the Corporation effective January 4, 2018 and reflects the scope of his responsibilities, his level of experience and competitive base salary levels. In connection with his appointment as Chief Operations Officer, Mr. Cooper was granted a one-time cash award of $200,000 during 2018. This one-time cash award was made in order to incentivize Mr. Cooper to join the Corporation when we deemed expedient for him to transition seamlessly into a key leadership position and in recognition of the related forfeiture of his eligibility to receive a short-term incentive award from his previous employer.

Annual Incentive Award (CTI)

2018 Company Performance Factor

The CPF component of the CTI calculation for 2018 was based on the achievement by the Corporation relative to specified financial targets as set forth in Table 10 below. These measures were approved by the Compensation Committee as they were determined to be aligned with the Corporation's key objectives of driving profitable growth, on both a "top line" and "bottom line" basis. The 2018 financial targets were established at levels consistent with the Corporation's Annual Operating Plan for 2018, which was approved by the Board. The financial targets for non-IFRS operating margin and revenue for 2018 were unchanged from 2017 and were not set lower than the actual results achieved in 2017. As described above, no minimum CTI payments are guaranteed. See *Key 2018 Executive Compensation Program Design Changes* for a discussion of the changes to the performance measures for the CTI that were implemented in 2018.

Before the CPF for 2018 was calculated, the Compensation Committee reviewed the CTI Parameters and determined that: (1) the minimum corporate profitability requirement was met and, therefore, a CTI payment for 2018 would be made; and (2) as non-IFRS operating margin did not meet target, in accordance with the provisions of the CTI, the revenue metric would be capped at target performance (notwithstanding that the actual performance of the revenue metric was in excess of target). The percentage achievement for each measure was then determined by interpolating between the factor that corresponds to threshold, target and maximum, as applicable. Each achievement factor was then multiplied by its weight (50%) in order to determine the weighted achievement.

The CPF for 2018 was 80% based on the results in the following table:

Table 10: Company Performance Factor

Measure	Weight	Threshold	Target	Maximum	Achieved Results	Weighted Achievement
Non-IFRS operating margin	50%	2.8%	3.7%	4.6%	3.2%	30%
Revenue[1]	50%	$5,700M	$6,200M	$6,700M	$6,633M[2]	50%
CPF						**80%**

(1) Revenue means the Corporation's annual revenue.

(2) Notwithstanding that the performance of the revenue measure was in excess of target, that metric was capped at target performance based on the design of the CTI plan, which limits payment on the revenue measure if non-IFRS operating margin is below target performance.

2018 Individual Performance Factor

The IPF can increase an executive's CTI award by a factor of up to 1.5x or reduce the CTI award to zero depending on individual performance (an IPF of less than 1.0 will result in a reduction of the CTI award otherwise payable). Notwithstanding the foregoing, CTI payments are subject to an overall maximum cap of 200% of the Target Award. The IPF is determined through the annual performance review process.

At the beginning of each year, the Compensation Committee and the CEO agree on performance goals for the CEO that are then approved by the Board. Goals for the other NEOs that align with the CEO's goals are then established and agreed to between the CEO and the respective NEOs. The performance of the CEO and the NEOs is measured against the established goals, but also contains subjective elements, such that criteria for, and the amount of, the IPF remains at the discretion of the Compensation Committee. However, the CPF must be greater than zero for an executive to be entitled to any CTI payment.

CEO

In assessing Mr. Mionis' individual performance, the Compensation Committee considers the Corporation's objectives and results achieved, personal performance objectives as determined annually, as well as other factors the Committee considers relevant to the role of CEO. Key results that were considered in determining Mr. Mionis' IPF for 2018 are included below:

Objective	Metric	Result
Profitable Growth	Revenue	$6.6 billion in revenue for 2018, including revenue of $2.2 billion from our ATS segment (13% growth year-over-year) and revenue of $4.4 billion from our CCS segment (6% growth year over year).
	Customer Satisfaction	Customer satisfaction was strong overall. Celestica was named as "supplier of the year" by a key customer for execution excellence and recognized for superior performance by several other important customers.
Expand Capabilities	Expand Market Offerings	Expanded our aerospace and defense and healthtech lifecycle capabilities.
	Enhance Internal Capabilities	Continued progress in developing Celestica's commercial excellence program.
	Pursue Strategic M&A	Through the acquisitions of Atrenne and Impakt, Celestica grew its aerospace and defense and capital equipment businesses. These acquisitions bolstered capabilities and reach by improving design competency, expanding our ability to serve important customers, and establishing the Corporation in new markets (Organic Light Emitting Diode (OLED)) and geographies (South Korea).
Financial Strength	Deliver Financial Results	Delivered continued sequential non-IFRS operating margin improvements each quarter of 2018; however, full-year non-IFRS operating margin of 3.2% and non-IFRS adjusted EPS of $1.07 were down year-over-year, due in part to the adverse impact of cyclical decreased demand in our capital equipment business.
	Transform Enterprise Productivity	Execution of cost efficiency initiatives helping to achieve sequential non-IFRS operating margin expansion throughout 2018.
People Driven	Mobilize Talent	Developed our "Grow Together" talent strategy with the objective of attracting, engaging and developing our talent. Talent and succession plans for all organizations were completed in 2018. Global employee engagement survey was launched in 2018 with a strong participation rate of 86%.

The Compensation Committee determined that, in 2018, Mr. Mionis made meaningful progress in advancing Celestica's strategic goals and driving future margin expansion by completing two strategic acquisitions, launching our cost efficiency initiatives, expanding our capabilities and implementing various people initiatives. Overall financial results for 2018 were below expectations partly as a result of demand softness from our capital equipment business; however, the Celestica team, under Mr. Mionis' leadership, has remained consistent in executing a strategy focused on growing our ATS segment while maintaining our strong and differentiated CCS segment. As a result, the Compensation Committee and the Board believe that an IPF of 0.95 for 2018 for Mr. Mionis appropriately reflects Celestica's overall performance in 2018, as well as Mr. Mionis' leadership in executing the Corporation's key strategic initiatives. As a result of his 2018 IPF and the CPF for 2018, Mr. Mionis received less than his Target Award, which reduced his realized compensation for 2018.

Other NEOs

The performance of the NEOs (other than the CEO) are assessed at year-end relative to objective measures that align with the targets for the CEO. The CEO assesses each NEO's contributions to the Corporation's results, including such NEO's contributions as a part of the senior leadership team. Based on the CEO's assessment, the Compensation Committee considered each NEO to have either substantially met expectations or exceeded expectations for 2018 based on his individual performance and contribution to corporate goals and objectives.

Factors considered in the evaluation of each NEO's IPF included the following:

Mr. Chawla	• Provided strong support for the acquisitions of Atrenne and Impakt • Drove capital allocation priorities, including negotiating new term loans, introducing interest rate swaps and executing the Corporation's normal course issuer bid • Strengthened relationships with both the investment and financial community
Mr. McCaughey	• Strong leadership of our CCS segment during a transformational period • CCS segment revenue increased 6% year-over-year, led by increased demand and new programs, including JDM programs, in our Communications end market, as well as strong demand in our storage business
Mr. Lawless	• Led the expansion of our ATS segment, both organically, and through the Atrenne and Impakt acquisitions • ATS segment revenue increased 13% year-over-year, driven primarily by solid performance in our aerospace and defense and industrial markets, partially offset by cyclical decreased demand in our capital equipment business
Mr. Cooper	• Developed a comprehensive global operations strategy with a focus on people, quality, shop floor operations and supply chain as well as related key performance indicators • Deployed Celestica's new global operating system, which improved operational performance by driving quality, delivery and cost productivity throughout our operations and supply chain

Target Award

The following table sets forth information with respect to the potential and actual awards under the CTI for participating NEOs during 2018:

Table 11: 2018 CTI Awards

Name	Target Incentive %[1]	Potential Award for Below Threshold Performance	Potential Award for Threshold Performance[2]	Potential Award for Target Performance[2]	Potential Maximum Award[2]	Amount Awarded	Amount Awarded as a % of Base Salary
Robert A. Mionis	125%	$0	$296,875	$1,187,500	$2,375,000	$902,500	95%
Mandeep Chawla	80%	$0	$90,000	$360,000	$720,000	$316,800	70%
Michael P. McCaughey	80%	$0	$95,000	$380,000	$760,000	$304,000	64%
Jack J. Lawless	80%	$0	$92,000	$368,000	$736,000	$323,840	70%
Todd C. Cooper[3]	80%	$0	$90,992	$363,967	$727,934	$291,980	64%

(1) The Target Incentive for each of Messrs. Mionis, Chawla, McCaughey and Lawless was not changed from 2017. Mr. Cooper's Target Incentive was determined upon his appointment as Chief Operations Officer effective January 4, 2018 based on the scope of his responsibilities.

(2) Award amounts in these columns are calculated based on an IPF of 1.0.

(3) As Mr. Cooper was appointed on January 4, 2018, his Target Award is equal to his Target Incentive multiplied by the prorated amount of his annualized salary for 2018.

NEO Equity Awards and Mix

Target equity-based incentives were determined for the NEOs with reference to the median awards of the Comparator Group and, for 2018, were set lower than such median awards. Consideration was also given to individual performance, the roles and responsibilities of the NEOs, retention value and market trends. Under the 2018 Incentive Plan Design Changes, the equity mix for 2018 was changed to 40% RSUs and 60% PSUs (the previous mix was 50% RSUs and 50% PSUs). See *Compensation Elements for the Named Executive Officers – Equity Based Incentives* for a general description of the process for determining the amounts of these awards and *Key 2018 Executive Compensation Program Design Changes* for a discussion of the changes to the equity mix that were implemented pursuant to the 2018 Incentive Plan Design Changes.

The following table sets forth equity awards granted to the NEOs on January 30, 2018 as part of their 2018 compensation:

Table 12: NEO Equity Awards

Name	RSUs (#)[1]	PSUs (#)[2]	Stock Options (#)	Value of Equity Award[3]
Robert A. Mionis	274,024	411,037	-	$7,200,000
Mandeep Chawla	55,185	82,778	-	$1,450,000
Michael P. McCaughey	64,700	97,050	-	$1,700,000
Jack J. Lawless	62,797	94,196	-	$1,650,000
Todd C. Cooper	60,894	91,341	-	$1,600,000

(1) Grants were based on a share price of $10.51, which was the closing price of the SVS on the NYSE on January 29, 2018 (the last business day before the date of grant).

(2) Assumes achievement of 100% of target level performance.

(3) Represents the aggregate grant date fair value of the RSUs and PSUs.

The RSUs vest ratably over a three-year period, commencing on the first anniversary of the date of grant. The value of the RSUs granted on January 30, 2018 was determined at the January 2018 meeting of the Compensation Committee. The number of RSUs granted was determined using the closing price of the SVS on January 29, 2018 (the day prior to the date of grant) on the NYSE of $10.51.

PSUs granted as set forth in the table above vest at the end of a three-year performance period subject to pre-determined performance criteria. For such awards, each NEO was granted a target number of PSUs (“Target Grant”). The number of PSUs that will actually vest ranges from 0% to 200% of the Target Grant and will be primarily based on the EBIAT Result for the final year of the three-year performance period, subject to modification by the ROIC Factor and the TSR Factor over the performance period in accordance with the following:

<table>
<tr><th>Formula</th><th>Description</th></tr>
<tr><td>Preliminary Vesting % based on EBIAT Result</td><td>The percentage of PSUs that will vest based on the EBIAT Result (the “Preliminary Vesting %”) can range between 0% and 200% of the Target Grant. The Preliminary Vesting % will be subject to initial adjustment based on the ROIC Factor and further adjustment based on the TSR Factor, as described below, provided that the maximum number of PSUs that may vest will not exceed 200% of the Target Grant.</td></tr>
<tr><td>Preliminary Vesting % subject to modification by a factor of either -25%, 0% or +25% based on ROIC Factor</td><td>The Corporation’s ROIC Factor will be measured relative to a pre-determined non-IFRS adjusted ROIC range approved by the Board. The Preliminary Vesting % will not be modified if the ROIC Factor is within that pre-determined range. The Preliminary Vesting % will be increased or decreased by 25 percentage points if the ROIC Factor is above or below that predetermined range, respectively (as so adjusted, the “Secondary Vesting %”). The ROIC Factor cannot increase the actual number of PSUs that vest to more than 200% of the Target Grant.</td></tr>
<tr><td>Secondary Vesting % subject to modification by a factor ranging from -25% to +25% based on TSR Factor</td><td>TSR measures the performance of a company’s shares over time. It combines share price appreciation and dividends, if any, paid over the period to determine the total return to the shareholder expressed as a percentage of the share price at the beginning of the performance period. With respect to each TSR Comparator (as defined below), TSR is calculated as the change in share price over the three year performance period (plus any dividends) divided by the share price at the beginning of the period, where the average of the daily closing share price for the month of December 2017 is the beginning share price and the average of the daily closing price for the month of December 2020 will be the ending share price. The TSR of the Corporation is calculated in the same manner in respect of the SVS (the Corporation does not currently pay dividends).

For purposes of determining modifications to the Secondary Vesting % based on the TSR Factor, the Corporation’s TSR will be measured relative to the information technology companies within the S&P 1500 Index as at January 1, 2018, with the addition of Flex Ltd. (the only EMS-peer company not already included in the S&P 1500 Index), that remain publicly traded on an established U.S. stock exchange for the entire performance period (the “TSR Comparators”). The Corporation’s market capitalization is positioned around the median of the TSR Comparators.

After calculating the percentile rank for each TSR Comparator (by arranging the TSR results from highest to lowest), the Corporation’s TSR will be ranked against that of each of the TSR Comparators. The Secondary Vesting % will then be subject to modification (ranging from a decrease of 25 percentage points to an increase of 25 percentage points) by interpolating between the corresponding percentages immediately above and immediately below Celestica’s percentile position as set out in the table below, provided that the Corporation’s TSR performance cannot increase the actual number of PSUs that will vest to more than 200% of the Target Grant.

<table>
<tr><th>Celestica’s TSR Positioning</th><th>TSR Modification Factor</th></tr>
<tr><td>90th Percentile</td><td>25%</td></tr>
<tr><td>75th Percentile</td><td>15%</td></tr>
<tr><td>50th Percentile</td><td>0%</td></tr>
<tr><td>25th Percentile</td><td>-15%</td></tr>
<tr><td><25th Percentile</td><td>-25%</td></tr>
</table>
</td></tr>
<tr><td>Summary</td><td>Total PSU Vesting Percentage =

(1) Preliminary Vesting % based on EBIAT Result;

(2) Preliminary Vesting % is subject to modification by a factor of either -25%, 0% or +25% based on ROIC Factor and results in the Secondary Vesting %; and

(3) Secondary Vesting % is subject to modification by a factor ranging from -25% to +25% based on TSR Factor.</td></tr>
</table>

Realized and Realizable Compensation

CEO Realized and Realizable Compensation

The following table is a look back at CEO compensation that compares the total target direct compensation awarded to Mr. Mionis for the financial years ended December 31, 2016 through December 31, 2018 to his realized and realizable compensation for each such year. The total target direct compensation value represents Mr. Mionis’ salary, target CTI award and the target value

of share-based awards. The realized and realizable value represents actual salary paid, actual CTI award paid and share-based awards at vest date value or, if the vest date is after December 31, 2018, at $8.77 per share, the closing price of the SVS on the NYSE on December 31, 2018.

Table 13: CEO Realized and Realizable Compensation

	2016	2017	2018
Total Target Direct Compensation	$6,912,500	$7,582,021	$9,337,500
Realized and Realizable Compensation	$7,629,976	$5,457,729	$7,860,485

NEO Realized and Realizable Compensation and Total Shareholder Return

The following graph compares the five-year trend in the Corporation's TSR versus compensation for the NEOs as reported in each year's Annual Report on Form 20-F. The comparison also demonstrates the difference between total target direct compensation and the realized and realizable compensation for the NEOs related to each year. The total target direct compensation value represents salary, target CTI award and the target value of share-based awards and option awards (if applicable) for all NEOs reported in the Corporation's Annual Report on Form 20-F each year. The realized and realizable value represents: actual salary paid; actual CTI award paid; share-based awards at vest date value or if the vest date is after December 31, 2018, at $8.77 per share, the closing price of the SVS on the NYSE on December 31, 2018; and option awards (if applicable) at their intrinsic value. This look back at compensation demonstrates the comparison between actual pay and total target compensation intended at the time of grant. The difference between total target direct compensation and realized and realizable compensation was driven by the performance of the SVS and achievement relative to CTI and PSU performance measures, as well as changes in the reported NEOs in applicable years.

We believe that our TSR for 2018 was negatively impacted as a result of a highly competitive and volatile market environment and was further negatively impacted by volatility in North American equity markets in the fourth quarter of 2018. Although we compete in a turbulent competitive environment, we continue to include TSR as an element for measuring the Corporation's performance; however, we also assess our performance based on various other measures, including revenue and non-IFRS operating margin, and utilize such other measures in aligning our pay for performance. We also measure our performance against how well we have achieved our objectives through a complex and necessary business transformation strategy designed to diversify the Corporation's business and drive more sustainable, long-term revenue and profitable growth. We believe that progress towards our business transformation will have a positive impact on our TSR.

A significant portion of NEO compensation is provided in the form of long-term incentives and for 2018, we increased the proportion of PSUs to 60% (from 50% in 2017) and the value of such PSUs will not be realizable by the NEOs until the end of the performance period in 2021. We believe the realized value of the long-term incentives granted to NEOS, and the performance of the PSUs in particular, will more closely mirror the trend in share price movement and serve to align the interests of management with those of our shareholders. PSU payouts made in January 2018 (with respect to PSUs issued in 2015) reflect that the Corporation's relative non-IFRS adjusted ROIC performance (40% weight) resulted in 140% achievement and the Corporation's relative TSR ranking (60% weight) resulted in zero achievement for an overall vesting level of 56%.

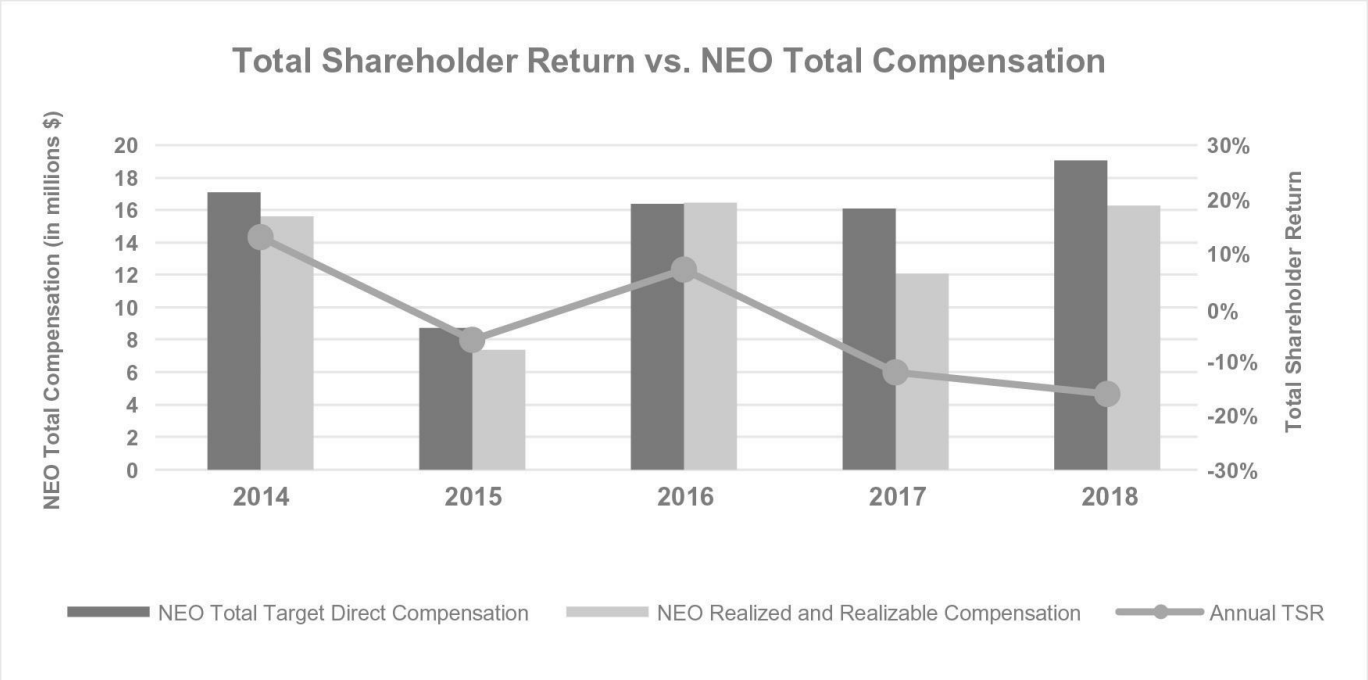


Table 14: NEOs Realized and Realizable Compensation

	2014	2015	2016	2017	2018
Celestica Total Shareholder Return (1 year)	13%	-6%	7%	-12%	-16%
Total Target Direct Compensation	$17,095,810	$8,727,784	$16,375,500	$16,088,075	$19,049,426
Realized and Realizable Compensation	$15,606,638	$7,376,294	$16,453,863	$12,075,011	$16,277,477

EXECUTIVE COMPENSATION

This section contains references to operating margin and adjusted ROIC, each of which are non-IFRS measures. See *Compensation Discussion and Analysis – Note Regarding Non-IFRS Measures* for definitions of such non-IFRS measures, and where to find a discussion of the exclusions used to determine such measures, how they are used, as well as a reconciliation of historical non-IFRS operating margin and non-IFRS adjusted ROIC to the most directly comparable IFRS measures. These non-IFRS measures do not have any standardized meaning prescribed by IFRS and therefore may not be comparable to similar measures presented by other companies.

Summary Compensation Table

The following table sets forth the compensation of the NEOs for the financial years ended December 31, 2016 through December 31, 2018.

Table 15: Summary Compensation Table

Name & Principal Position	Year	Salary ($)	Share-based Awards ($)[1][2]	Option-based Awards ($)[3]	Non-equity Incentive Plan Compensation: Annual Incentive Plans ($)[4]	Pension Value ($)[5]	All Other Compensation ($)[6]	Total Compensation ($)
Robert A. Mionis[7]	2018	$950,000	$7,200,000	–	$902,500	$132,613	$1,051,189	$10,236,302
President and Chief Executive	2017	$925,342	$5,500,000	–	$912,041	$155,821	$721,898	$8,215,102
Officer	2016	$850,000	$5,000,000	–	$1,227,188	$141,262	$265,623	$7,484,073
Mandeep Chawla[8]	2018	$450,000	$1,450,000	–	$316,800	$48,692	$479	$2,265,971
Chief Financial Officer	2017	$287,359	$1,025,000	–	$359,161	$47,234	$493	$1,719,247
	2016	$210,196	$285,000	–	$103,966	$21,008	$48	$620,218
Michael P. McCaughey[9]	2018	$475,000	$1,700,000	–	$304,000	$61,992	$3,254	$2,544,246
President, CCS	2017	$475,000	$1,550,000	–	$299,630	$78,586	$6,201	$2,409,417
	2016	$475,000	$1,550,000	–	$498,750	$62,510	$1,018	$2,587,278
Jack J. Lawless[10]	2018	$460,000	$1,650,000	–	$323,840	$44,230	$41,194	$2,519,264
President, ATS	2017	$447,671	$1,500,000	–	$297,254	$52,975	$34,522	$2,332,422
	2016	$410,000	$1,350,000	–	$447,720	$31,914	$2,738	$2,242,372
Todd C. Cooper[11]	2018	$454,959	$1,600,000	–	$491,980	$27,568	$10,477	$2,584,984
Chief Operations Officer	2017	–	$2,750,000	–	–	–	–	$2,750,000
	2016	–	–	–	–	–	–	–

(1) All amounts in this column represent the grant date fair value of share-based awards. Amounts in this column for 2018 represent RSU and PSU grants made on January 30, 2018 to all NEOs. Grants were based on a share price of $10.51, which was the closing price of the SVS on the NYSE on January 29, 2018 (the day prior to the date of the grant). Amounts in this column for 2017 represent: (i) RSU and PSU grants made on January 31, 2017 to all NEOs; (ii) for Mr. Chawla, includes the additional one-time RSU grant made on June 5, 2017; and (iii) for Mr. Cooper, includes a one-time RSU grant made on December 15, 2017. The one-time RSU grant to Mr. Cooper was made following the acceptance of his employment terms with Celestica in recognition of the forfeiture of his unvested equity with his previous employer and to incentivize Mr. Cooper to join Celestica in a timely fashion. Grants for 2017 were based on a share price of $13.66, which was the closing price of the SVS on the NYSE on January 30, 2017 (the day prior to the date of the grant), except for (i) the one-time additional grant made to Mr. Chawla, which was based on a share price of $14.01, which was the closing price of the SVS on the NYSE on June 2, 2017 (the last business day prior to the date of the grant); and (ii) the one-time grant made to Mr. Cooper, which was based on a share price of $10.32, which was the closing price of the SVS on the NYSE on December 14, 2017 (the last business day prior to the date of the grant). Amounts in this column for 2016 represent RSU and PSU grants made on February 1, 2016 under the CSUP. Grants were based on a share price of $9.06, which was the closing price of the SVS on the NYSE on January 29, 2016 (the day prior to the date of grant). See *Compensation Discussion and Analysis – Compensation Elements for the Named Executive Officers – Equity-Based Incentives* for a description of the process followed in determining the grants for 2018, and see *Compensation Discussion and Analysis – 2018 Compensation Decisions – Equity-Based Incentives* for a description of the vesting terms of the RSU and PSU awards. Commencing with the annual equity grants made in 2016, grants made in-year are reported for such year rather than the most recently completed year.

(2) The estimated accounting fair value of the share-based awards is calculated using the market price of SVS as defined under each of the plans and various fair value pricing models. The grant date fair value of the RSU portion of the share-based awards in Table 15 is the same as the accounting fair value of such awards. The accounting fair values for the PSU portion of the 2016, 2017 and 2018 share-based awards reflects various assumptions as to estimated vesting for such awards in accordance with applicable accounting standards. The grant date fair value for the PSU portion of the share-based awards reflects the dollar amount of the award intended for compensation purposes, based on the market value of the underlying shares on the grant dates based on an assumption of the vesting of 100% of the target number of PSUs granted. The accounting fair value for all share-based awards in the table assumed a zero forfeiture rate.

The number of PSUs granted in 2018 that will actually vest will range from 0% to 200% of the target number granted and will be primarily based on the Corporation's EBIAT Result in the final year of the three-year performance period, and then potentially modified by the Corporation's ROIC Factor and TSR Factor over the performance period, as described in detail under *NEO Equity Awards and Mix* above. The Corporation estimated the grant date fair value of the TSR Factor using a Monte Carlo simulation model. The accounting grant date fair value is not subsequently adjusted regardless of the eventual number of awards that are earned based on TSR. The grant date fair value for the non-TSR-based performance measurement and modifier was based on the market value of our subordinate voting shares at the time of grant and may be adjusted in subsequent periods to reflect a change in the estimated level of achievement related to the applicable performance condition. 60% of the PSUs granted with respect to 2016 and 2017 performance vest depending on the level of TSR achievement over a three-year period relative to the TSR of a pre-defined comparator group. The comparator group was based on the S&P 1500 Technology Index for each of 2016 and 2017 with the addition of Flex Ltd., and which remain publicly traded on an established U.S. stock exchange for the entire performance period. The cost the Corporation recorded for these PSUs was determined using a Monte Carlo simulation model. The number of awards expected to be earned is factored into the grant date Monte Carlo valuation for the award. The accounting grant date fair value is not subsequently adjusted regardless of the eventual number of awards that are earned based on the market performance condition. 40% of the PSUs granted with respect to 2016 and 2017 vest depending on the Corporation's non-IFRS adjusted ROIC performance (a non-market performance condition), in the final year of a three-year vesting period, relative to the non-IFRS adjusted ROIC of a pre-determined EMS competitor group. The cost the Corporation recorded for these PSUs was determined based on the market value of SVS at the time of grant, and such cost may be adjusted (usually during the last year of the three-year performance period) based on management's estimate of the relative level of achievement of non-IFRS adjusted ROIC, as outlined above.

(3) There were no stock options granted to the NEOs in 2016, 2017 or 2018.

(4) Amounts in this column represent CTI incentive payments made to NEOs. See *Compensation Discussion and Analysis – Compensation Elements for the Named Executive Officers – Celestica Team Incentive Plan* for a description of the CTI. Amounts in this column for Mr. Cooper for 2018 also include the one-time cash award of $200,000 paid to him in connection with his appointment as Chief Operations Officer. Amounts in this column for Mr. Chawla for 2017 also include the one-time cash award of C$260,000 paid to him (in two equal instalments) in connection with his appointment as interim CFO.

(5) Amounts in this column represent Celestica's contributions to defined contribution pension plans on behalf of the NEOs. Pension values for Messrs. Mionis, Lawless and Cooper are reported in U.S. dollars. For 2018 and 2017, Mr. Mionis' pension values include $132,613 and $155,821, respectively, in U.S. dollars representing the pension value from the U.S. pension plans. For 2016, his pension values include $8,088 in U.S. dollars representing the pension value from the U.S. pension plans and $133,174 having been converted from Canadian dollars representing the pension value from the Canadian Pension Plans (as defined below). See *Pension Plans* for a full description of the plans Mr. Mionis participated in during 2018. Pension values for Messrs. Chawla and McCaughey are reported in U.S. dollars, having been converted from Canadian dollars. Amounts were converted to U.S. dollars at the average exchange rate for 2018 of $1.00 equals C$1.2957.

(6) Amounts in this column for Mr. Mionis represent amounts for items provided for under the CEO Employment Agreement, which for 2018 consisted of tax equalization payments of $948,353, housing expenses of $76,261 while in Canada, group life insurance premiums of $7,482, a 401(k) contribution of $16,500, a tax preparation fee of $500 and a comprehensive medical exam at a private clinic of $2,093. For 2017, the amount in this column for Mr. Mionis consisted of tax equalization payments of $624,011, housing expenses of $73,669 while in Canada, group life insurance premiums of $1,177, a 401(k) contribution of $16,200, travel expenses between Toronto and Arizona of $4,346, a tax preparation fee of $500 and the cost of a comprehensive medical exam at a private health clinic of $1,995. For 2016, the amount in this column for Mr. Mionis consisted of tax equalization payments of $124,548, housing expenses of $75,916 while in Canada, group life insurance premiums of $1,089, a 401(k) contribution of $10,298, travel expenses between Toronto and Arizona of $28,795, tax preparation fees of $23,168 and the cost of a comprehensive medical exam at a private health clinic of $1,809. Amounts in this column for Mr. Lawless for 2018 consisted of tax equalization payments of $25,013, a 401(k) contribution of $15,681 and a tax preparation fee of $500. Amounts in this column for Mr. Lawless for 2017 consisted of tax equalization payments of $17,610 and a 401(k) contribution of $16,200. Amounts in this column for Mr. Cooper for 2018 consisted of a 401(k) contribution of $8,250 and a comprehensive medical exam at a private clinic of $2,227. In accordance with the Corporation's Short Term Business Travel Program, the Compensation Committee approved tax equalization payments for Messrs. Mionis and Lawless in order to cover taxes on their compensation in excess of the taxes they would have incurred in the United States. Due largely to variables such as timing and tax rate differences between Canada and the U.S., tax equalization amounts may vary from one year to the next and the net benefit may be positive or negative in the year. While the Corporation is incorporated and headquartered in Canada, our business is global and we compete for executive talent worldwide. As a result, we believe it is appropriate to make tax equalization payments in order to attract and retain non-Canadian executive officers with specific capabilities.

(7) In January 2017, the Compensation Committee approved an increase in Mr. Mionis' annual base salary from $850,000 to $950,000 effective April 1, 2017 in order to align his salary to the median of the Corporation's competitive benchmark. As such, annualized amounts for 2017 were pro-rated to reflect actual compensation paid, awarded or earned.

(8) Mr. Chawla was appointed as interim CFO of the Corporation effective May 23, 2017 and CFO of the Corporation effective October 19, 2017 and, accordingly, annualized amounts for 2017 have been pro-rated to reflect actual compensation paid, awarded or earned.

(9) Effective January 1, 2019, Mr. McCaughey's title was changed to Advisor.

(10) In January 2017, the Compensation Committee approved an increase in Mr. Lawless' annual base salary from $410,000 to $460,000 effective April 1, 2017 in order to align his salary to the median of the Corporation's competitive benchmark. As such, annualized amounts for 2017 were pro-rated to reflect actual compensation paid, awarded or earned.

(11) Mr. Cooper was appointed as Chief Operations Officer of the Corporation effective January 4, 2018.

Option-Based and Share-Based Awards

The following table provides details of each stock option grant outstanding (vested and unvested) and the aggregate number of unvested share-based awards for each of the NEOs as of December 31, 2018.

Table 16: Outstanding Option-Based and Share-Based Awards[1]

	Option-Based Awards				Share-Based Awards				
Name	Number of Securities Underlying Unexercised Options (#)	Option Exercise Price ($)	Option Expiration Date	Value of Unexercised In-the-Money Options ($)[2]	Number of Shares or Units that have not Vested (#)[3]	Payout Value of Share-Based Awards that have not Vested at Minimum ($)[4]	Payout Value of Share-Based Awards that have not Vested at Target ($)[4]	Payout Value of Share-Based Awards that have not Vested at Maximum ($)[4]	Payout Value of Vested Share-Based Awards Not Paid Out or Distributed ($)
Robert A. Mionis									
Aug. 1, 2015	298,954	C$17.52	Aug. 1, 2025	–	–	–	–	–	–
Feb. 1, 2016	–	–	–	–	275,938	–	$2,547,054	$5,094,109	–
Jan. 31, 2017	–	–	–	–	335,528	$1,177,030	$2,942,581	$4,708,131	–
Jan. 30, 2018	–	–	–	–	685,061	$2,403,190	$6,007,985	$9,612,779	–
Total	**298,954**	–	–	–	**1,296,527**	**$3,580,221**	**$11,497,620**	**$19,415,019**	–
Mandeep Chawla									
Feb. 1, 2016	–	–	–	–	10,209	–	$94,234	$188,469	–
Aug. 1, 2016	–	–	–	–	6,017	$55,540	$55,540	$55,540	–
Jan. 31, 2017	–	–	–	–	21,352	$78,838	$197,090	$315,343	–
Jun. 5, 2017	–	–	–	–	32,120	$296,485	$296,485	$296,485	–
Jan. 30, 2018	–	–	–	–	137,963	$509,387	$1,273,472	$2,037,557	–
Total	–	–	–	–	**207,661**	**$940,250**	**$1,916,821**	**$2,893,393**	–
Michael P. McCaughey									
Feb. 1, 2016	–	–	–	–	85,540	–	$789,580	$1,579,159	–
Jan. 31, 2017	–	–	–	–	94,557	$349,126	$872,811	$1,396,496	–
Jan. 30, 2018	–	–	–	–	161,750	$597,215	$1,493,039	$2,388,862	–
Total	–	–	–	–	**341,847**	**$946,342**	**$3,155,430**	**$5,364,517**	–
Jack J. Lawless									
Feb. 1, 2016	–	–	–	–	74,503	–	$653,391	$1,306,783	–
Jan. 31, 2017	–	–	–	–	91,507	$321,008	$802,516	$1,284,024	–
Jan. 30, 2018	–	–	–	–	156,993	$550,730	$1,376,829	$2,202,928	–
Total	–	–	–	–	**323,003**	**$871,738**	**$2,832,736**	**$4,793,735**	–
Todd C. Cooper									
Dec. 15, 2017	–	–	–	–	266,473	$2,336,968	$2,336,968	$2,336,968	–
Jan. 30, 2018	–	–	–	–	152,235	$534,040	$1,335,101	$2,136,162	–
Total	–	–	–	–	**418,708**	**$2,871,009**	**$3,672,069**	**$4,473,130**	–

(1) See *Compensation Discussion and Analysis – 2018 Compensation Decisions – Equity-Based Incentives* for a discussion of the equity grants.

(2) The value of unexercised in-the-money stock options was determined using a share price of C$11.96, which was the closing price of the SVS on the TSX on December 31, 2018, converted to U.S. dollars at the average exchange rate for 2018 of $1.00 equals C$1.2957.

(3) Includes unvested RSUs, as well as PSUs assuming achievement of 100% of target level performance.

(4) Payout values at minimum vesting include the value of RSUs only, as the minimum value of PSUs would be $0.00 if the minimum performance condition is not met. Payout value at target vesting is determined assuming vesting of 100% of the target number of PSUs granted and payout values at maximum vesting is determined assuming vesting of 200% of the target number of PSUs granted. Payout values for Messrs. Chawla and McCaughey and the February 1, 2016 grants for Mr. Mionis were determined using a share price of C$11.96, which was the closing price of the SVS on the TSX on December 31, 2018, converted to U.S. dollars at the average exchange rate for 2018 of $1.00 equals C$1.2957. Payout values for Mr. Lawless and the payout value for Mr. Mionis' January 31, 2017 grant were determined using a share price of $8.77, which was the closing price of the SVS on the NYSE on December 31, 2018.

The following table provides details for each NEO of the value of option-based and share-based awards that vested during 2018 and the value of annual incentive awards earned in respect of 2018 performance.

Table 17: Incentive Plan Awards – Value Vested or Earned in 2018

Name	Option-based Awards – Value Vested During the Year ($)	Share-based Awards – Value Vested During the Year ($)[1]	Non-equity Incentive Plan Compensation – Value Earned During the Year ($)[2]
Robert A. Mionis	–	$3,734,824	$902,500
Mandeep Chawla	–	$576,767	$316,800
Michael P. McCaughey	–	$1,915,465	$304,000
Jack J. Lawless	–	$683,482	$323,840
Todd C. Cooper	–	–	$291,980

(1) Amounts in this column reflect: (i) share-based awards released in 2018 for Messrs. Mionis and Lawless based on the price of the SVS on the NYSE as follows:

Type of Award	Vesting Date	Price
RSU	January 31, 2018	$10.17
RSU	February 1, 2018	$10.11
RSU	December 3, 2018	$9.92

and (ii) share-based awards released in 2018 for Messrs. Mionis, Chawla, and McCaughey based on the price of the SVS on the TSX as follows:

Type of Award	Vesting Date	Price
PSU	January 23, 2018	$13.75
RSU	January 31, 2018	$12.50
RSU	February 1, 2018	$12.42
RSU	February 5, 2018	$12.84
RSU	December 3, 2018	$13.19

Certain values in this column were converted to U.S. dollars from Canadian dollars at the average exchange rate for 2018 of $1.00 equals C$1.2957. With respect to previously-issued PSUs subject to vesting in 2018, the Corporation's relative TSR (determinative for 60% of such PSUs) ranked 6th among the TSR Comparators, resulting in zero achievement for such PSUs and the Corporation's relative non-IFRS adjusted ROIC (determinative for 40% of such PSUs) ranked 2nd among the ROIC Competitors resulting in 140% achievement for an overall vesting level of 56%, i.e. ((60% * 0%) + (40% * 140%)).

(2) Consists of payments under the CTI made on February 22, 2019 in respect of 2018 performance. See *Compensation Discussion and Analysis – 2018 Compensation Decisions – Annual Incentive Award – Target Award*. These are the same amounts as disclosed in Table 15 under the column "Non-equity Incentive Plan Compensation – Annual Incentive Plans".

No gains were realized by NEOs from exercising stock options in 2018.

Securities Authorized for Issuance Under Equity Compensation Plans

Table 18: Equity Compensation Plans as at December 31, 2018[1]

Plan Category		Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (#)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights ($)	Securities Remaining Available for Future Issuance Under Equity Compensation Plans[2] (#)
Equity Compensation Plans Approved by Securityholders	LTIP (Options)	345,577	C$16.27	N/A[2]
	LTIP (RSUs)	772,719	N/A	N/A[3]
	LTIP (PSUs)[4]	1,380,858	N/A	N/A[3]
	Total[5]	2,499,154	C$16.27	8,572,065

(1) This table sets forth information, as of December 31, 2018, with respect to subordinate voting shares of the Corporation authorized for issuance under the LTIP, and does not include subordinate voting shares of the Corporation purchased (or to be purchased) in the open market to settle equity awards under the LTIP or the Corporation's other equity compensation plans. The LTIP, which was approved by the Corporation's shareholders, is the only equity compensation plan pursuant to which the Corporation may issue new subordinate voting shares to settle equity awards.

(2) Excluding securities that may be issued upon exercise of outstanding stock options, warrants and rights.

(3) The LTIP provides for a maximum number of securities that may be issued from treasury, but does not provide separate maximums for each type of award thereunder.

(4) Assumes the maximum payout for all outstanding PSUs (200% of target).

(5) The total number of securities issuable upon the exercise/settlement of outstanding grants under all equity compensation plans approved by shareholders represents 1.834% of the total number of outstanding shares at December 31, 2018 (LTIP (Options) – 0.254%; LTIP (RSUs) – 0.567%; and LTIP (PSUs) – 1.013%).

Equity Compensation Plans

Long-Term Incentive Plan

The LTIP (which was approved by the Corporation's shareholders) is the only securities-based compensation plan providing for the issuance of securities from treasury under which grants have been made and continue to be made by the Corporation since the company was listed on the TSX and the NYSE. Under the LTIP, the Board of Directors may in its discretion from time to time grant stock options, share units (in the form of RSUs and PSUs) and stock appreciation rights ("SARs") to employees and consultants of the Corporation and affiliated entities.

Up to 29,000,000 SVS may be issued from treasury pursuant to the LTIP. The number of SVS that may be issued from treasury under the LTIP to directors is limited to 2,000,000; however, the Corporation decided in 2004 that stock option grants under the LTIP would no longer be made to directors. Under the LTIP, as of February 13, 2019, 18,544,730 SVS have been issued from treasury, 345,577 SVS are issuable under outstanding stock options, 385,491 SVS are issuable under outstanding RSUs, and 690,429 SVS are issuable under outstanding PSUs assuming vesting at 100% of target (1,380,858 SVS are issuable under outstanding PSUs assuming vesting at 200% of target). Accordingly, as of February 13, 2019, 10,455,270 SVS are reserved for issuance from treasury pursuant to current and potential future grants of securities-based compensation under the LTIP (including PSUs assuming vesting at 100% of target). In addition, the Corporation may satisfy obligations under the LTIP by acquiring SVS in the open market.

As of February 13, 2019, the Corporation had a "gross overhang" of 7.1% under the LTIP. "Gross overhang" refers to the total number of shares reserved for issuance from treasury under equity plans at any given time relative to the total number of shares outstanding, including shares reserved for outstanding stock options, RSUs and PSUs (assuming vesting at 100% of target). The Corporation's "net overhang" (*i.e.* the total number of shares that have been reserved for issuance from treasury to satisfy outstanding equity grants to employees relative to the total number of shares outstanding) was 1.0% (including PSUs assuming vesting at 100% of target) .

As of December 31, 2018, the Corporation had an "overhang" for stock options of 6.54%, representing the number of shares reserved for outstanding stock options as at such date, together with shares reserved for potential future grants of stock options, relative to the total number of shares outstanding as at such date.

The Corporation had a "burn rate" for the LTIP for each of the years 2018, 2017, and 2016 of 0.0%, 1.6%, and 0.5%, respectively. "Burn rate" is calculated by dividing the number of awards granted during the applicable year (including the target amount of PSUs granted), by the weighted average number of securities outstanding for the applicable year.

The LTIP limits the number of SVS that may be (a) reserved for issuance to insiders (as defined under TSX rules for this purpose), and (b) issued within a one-year period to insiders pursuant to stock options, rights or share units granted pursuant to the LTIP, together with SVS reserved for issuance under any other employee-related plan of the Corporation or stock options for services granted by the Corporation, in each case to 10% of the aggregate issued and outstanding SVS and MVS of the Corporation. The LTIP also limits the number of SVS that may be reserved for issuance to any one participant pursuant to stock options, SARs or share units granted pursuant to the LTIP, together with SVS reserved for issuance under any other employee-related equity plan of the Corporation or stock options for services granted by the Corporation, to 5% of the aggregate issued and outstanding SVS and MVS.

Vested stock options issued under the LTIP may be exercised during a period determined as provided in the LTIP, which may not exceed ten years. The LTIP also provides that, unless otherwise determined by the Board of Directors, stock options will terminate within specified time periods following the termination of employment of an eligible participant with the Corporation or affiliated entities, including in connection with a change of control. The exercise price for stock options issued under the LTIP is the closing price for SVS on the last business day prior to the grant. The TSX closing price is used for Canadian employees and the NYSE closing price is used for all other employees. The exercise of stock options may be subject to vesting conditions, including specific time schedules for vesting and performance-based conditions such as share price and financial results. The grant of stock options to, or exercise of stock options by, an eligible participant may also be subject to certain share ownership requirements.

The interest of any participant under the LTIP is generally not transferable or assignable. However, the LTIP does provide that a participant may assign his or her rights to a spouse, or a personal holding company or family trust controlled by the participant, of which any combination of the participant, the participant's spouse, minor children or grandchildren are shareholders or beneficiaries, as applicable.

Under the LTIP, eligible participants may be granted SARs, a right to receive a cash amount equal to the amount, if any, by which the market price of the SVS at the time of exercise of the SAR exceeds the market price of the SVS at the time of the grant. The market price used for this purpose is the weighted average price for SVS during the five trading days preceding the date of determination. The TSX market price is used for Canadian employees and the NYSE market price is used for all other employees. Such amounts may also be payable by the issuance of SVS (at the discretion of the Corporation). The exercise of SARs may also be subject to conditions similar to those which may be imposed on the exercise of stock options. To date, the Corporation has not granted any SARs under the LTIP.

Under the LTIP, eligible participants may be allocated share units in the form of PSUs or RSUs. Each vested RSU and PSU entitles the holder to receive one SVS on the applicable release date (however, the number of PSUs that may vest range from 0% to 200% of a target amount). The issuance of such shares may be subject to vesting requirements similar to those described above with respect to the exercisability of stock options and SARs, including such time or performance-based conditions as may be determined by the Board of Directors in its discretion. The number of SVS that may be issued to any one person pursuant to the share unit program shall not exceed 1% of the aggregate issued and outstanding SVS and MVS. The number of SVS that may be issued under share units in the event of termination of employment without cause, death or long term disability is subject to pro-ration, unless otherwise determined by the Corporation. The LTIP provides for the express designation of share units as either RSUs (restricted share units), which have time-based vesting conditions or PSUs (performance share units), which have performance-based vesting conditions over a specified period. In the event a holder of PSUs retires, unless otherwise determined by the Corporation, the pro-rated vesting of such PSUs shall be determined based on the actual performance achieved during the period specified for the grant by the Corporation.

The following types of amendments to the LTIP or the entitlements granted under it require the approval of the holders of the voting securities by a majority of votes cast by shareholders present or represented by proxy at a meeting:

(a) increasing the maximum number of SVS that may be issued under the LTIP;

(b) reducing the exercise price of an outstanding stock option (including cancelling and, in conjunction therewith, regranting a stock option at a reduced exercise price);

(c) extending the term of any outstanding stock option or SAR;

(d) expanding the rights of participants to assign or transfer a stock option, SAR or share unit beyond that currently contemplated by the LTIP;

(e) amending the LTIP to provide for other types of security-based compensation through equity issuance;

(f) permitting a stock option to have a term of more than ten years from the grant date;

(g) increasing or deleting the percentage limit on SVS issuable or issued to insiders under the LTIP;

(h) increasing or deleting the percentage limit on SVS reserved for issuance to any one person under the LTIP (being 5% of the Corporation's total issued and outstanding SVS and MVS);

(i) adding to the categories of participants who may be eligible to participate in the LTIP; and

(j) amending the amendment provision,

subject to the application of the anti-dilution or re-organization provisions of the LTIP.

The Board may approve amendments to the LTIP or the entitlements granted under it without shareholder approval, other than those specified above as requiring approval of the shareholders, including, without limitation:

(a) clerical changes (such as a change to correct an inconsistency or omission or a change to update an administrative provision);

(b) a change to the termination provisions for the LTIP or for a stock option as long as the change does not permit the Corporation to grant a stock option with a termination date of more than ten years from the date of grant or extend an outstanding stock option's termination date beyond such date; and

(c) a change deemed necessary or desirable to comply with applicable law or regulatory requirements.

Celestica Share Unit Plan

The CSUP provides for the issuance of RSUs and PSUs in the same manner as provided in the LTIP, except that the Corporation may not issue shares from treasury to satisfy its obligations under the CSUP and there is no limit on the number of share units that may be issued as RSUs and PSUs under the terms of the CSUP. The share units may be subject to vesting requirements, including any time-based conditions established by the Board of Directors at its discretion. The vesting of PSUs also requires the achievement of specified performance-based conditions as determined by the Compensation Committee. There is no "burn rate" for the CSUP because issuances under the CSUP are not from treasury and are therefore non-dilutive.

Pension Plans

The following table provides details of the amount of Celestica's contributions to its defined contribution pension plans on behalf of the NEOs, and the accumulated value thereunder as of December 31, 2018 for each NEO.

Table 19: Defined Contribution Pension Plan

Name	Accumulated Value at Start of Year ($)	Compensatory ($)	Accumulated Value at End of Year[1] ($)
Robert A. Mionis	$391,354	$132,613	$507,632
Mandeep Chawla	$167,375	$48,692	$215,918
Michael P. McCaughey[2]	$515,797	$61,992	$585,857
Jack J. Lawless[2]	$110,220	$44,230	$143,159
Todd C. Cooper	$ -	$27,568	$26,141

(1) The difference between (i) the sum of the Accumulated Value at Start of Year column plus the Compensatory column and (ii) the Accumulated Value at End of Year column is attributable to non-compensatory changes in the Corporation's accrued obligations during the year ended December 31, 2018.

(2) The difference between the Accumulated Value at Start of Year reported here and the Accumulated Value at End of Year reported in the 2017 Annual Report for Messrs. Mionis, Chawla and McCaughey is attributable to different exchange rates used in the 2017 Annual Report and in this Annual Report. The exchange rate used in the 2017 Annual Report was $1.00 = C$1.2984.

Canadian Pension Plans

Messrs. Chawla and McCaughey participate in the Corporation's registered pension plan for Canadian employees (the "Canadian Pension Plan") which is a defined contribution plan. The Canadian Pension Plan allows employees to choose how the Corporation's contributions are invested on their behalf within a range of investment options provided by third-party fund managers. Retirement benefits depend upon the performance of the investment options chosen. Messrs. Chawla and McCaughey also participate in an unregistered supplementary pension plan (the "Canadian Supplementary Plan"). This is also a defined contribution plan through which the Corporation provides an annual contribution of an amount equal to the difference between (i) the maximum annual contribution limit as determined in accordance with the formula set out in the Canadian Pension Plan and with Canada Revenue Agency rules and (ii) 8% of the total base salary and paid annual incentives. Notional accounts are maintained for each participant in the Canadian Supplementary Plan. Participants are entitled to select from among the investment options available in the Canadian Pension Plan for the purpose of determining the return on their Canadian Supplementary Plan notional accounts.

U.S. Pension Plans

Messrs. Mionis, Lawless and Cooper participate in the Corporation's U.S. pension plans comprised of two defined contribution retirement programs, one of which qualifies as a deferred salary arrangement under section 401(k) of the Internal Revenue Code (United States) (the "401(k) Plan"). Under the 401(k) Plan, participating employees may defer 100% of their pre-tax earnings subject to any statutory limitations. The Corporation may make contributions for the benefit of eligible employees. The 401(k) Plan allows employees to choose how their account balances are invested on their behalf within a range of investment options provided by third-party fund managers. The Corporation contributes: (i) 3% of eligible compensation for the participant, and (ii) up to an additional 3% of eligible compensation by matching 50% of the first 6% contributed by the participant. The maximum contribution of the Corporation to the 401(k) Plan, based on the Internal Revenue Code rules and the 401(k) Plan formula for 2018 was $18,500 (plus an additional $6,000 for an individual over the age of 50). Messrs. Mionis, Lawless and Cooper also participate in a supplementary retirement plan that is also a defined contribution plan (the "U.S. Supplementary Plan"). Under the U.S. Supplementary Plan, the Corporation contributes to the participant an annual amount equal to the difference between 8% of the participant's salary and paid incentive and the amount that Celestica would contribute to the 401(k) Plan assuming the participant contributes the amount required to receive the matching 50% contribution by Celestica. A notional account is maintained for Messrs. Mionis, Lawless and Cooper, and they are entitled to select from among the investment options available in the 401(k) Plan for the purpose of determining the return on their notional accounts.

Termination of Employment and Change in Control Arrangements with Named Executive Officers

The Corporation has entered into employment agreements with certain of its NEOs in order to provide certainty to the Corporation and such NEOs with respect to issues such as obligations of confidentiality, non-solicitation and non-competition after termination of employment, the amount of severance to be paid in the event of termination of the NEO's employment, and to provide a retention incentive in the event of a change in control scenario.

Mr. Mionis

The CEO Employment Agreement provides that Mr. Mionis is entitled to certain severance benefits if, during a change of control period or a potential change of control period at the Corporation, he is terminated without cause or resigns for good reason as defined in his agreement (a "double trigger" provision) where good reason includes, without limitation, a material adverse change in position or duties or a specified reduction(s) in total compensation (including base salary, equity and CTI award). A change of control period is defined in his agreement as the 12-month period following a change of control. A potential change of control period is defined in his agreement as the period beginning upon the occurrence of a potential change of control and ending on the earlier of: (i) the end of the 6-month period following a potential change of control; and (ii) a change of control.

The amount of the severance payment for Mr. Mionis is equal to: (i) base salary up to and including the termination date; (ii) a lump sum amount equal to his target payment under the CTI prorated to the date of termination; (iii) a lump sum amount equal to any payments accrued under the CTI in respect of the fiscal year preceding the fiscal year during which his termination occurs, if any; (iv) a lump sum amount equal to two times his eligible earnings (such eligible earnings calculated as his annual base salary plus the lesser of (a) his target payment under the CTI for the fiscal year during which his termination occurs based on target achievement of the CPF of 1.0 and an IPF of 1.0, and (b) payment received under the CTI for the fiscal year preceding the fiscal year during which termination occurs); (v) vacation pay earned but unpaid up to and including the date of termination; (vi) a lump sum cash settlement of contributions to, or continuation of his pension and retirement plans for a two-year period; and (vii) a one-time lump sum payment of $100,000 in lieu of all future benefits and perquisites. In addition, upon a change of control and termination without cause or for good reason (a) the stock options granted to him vest immediately, (b) the unvested PSUs granted to him vest immediately at the target level of performance specified in the terms of the PSU grant, and (c) the RSUs granted to him shall vest immediately.

Outside a change in control period, upon termination without cause or resignation for good reason as defined in his agreement, the amount of the severance payment for Mr. Mionis is equal to: (a) base salary up to and including the termination date; (ii) a lump sum amount equal to any payments accrued under the CTI in respect of the fiscal year preceding the fiscal year during which his termination occurs; (iii) a lump sum amount equal to two times his eligible earnings (as calculated in the paragraph above); (iv) vacation pay earned but unpaid up to and including the date of termination; (v) a one-time lump sum payment of $100,000 in lieu of all future benefits and perquisites; and (vi) a lump sum cash settlement of contributions to, or continuation of his pension and retirement plans for a two-year period. In addition, (a) vested stock options may be exercised for a period of 30 days and unvested stock options are forfeited on the termination date, (b) RSUs shall vest immediately on a *pro rata* basis based on the ratio of (i) the number of full years of employment completed between the date of grant and termination of employment, to (ii) the number of years between the date of grant and the vesting date, and (c) PSUs vest based on actual performance on a *pro rata* basis based on the ratio of (i) the number of full years of employment completed between the date of grant and the termination of employment, to (ii) the number of years between the date of grant and the vesting date.

The foregoing entitlements are conferred on Mr. Mionis in part upon his fulfillment of certain confidentiality, non-solicitation and non-competition obligations for a period of two years following termination of employment. In the event of a breach of such obligations, the Corporation is entitled to seek appropriate legal, equitable and other remedies, including injunctive relief.

The following table summarizes the incremental payments and benefits to which Mr. Mionis would have been entitled upon a change in control occurring on December 31, 2018, or if his employment had been terminated on December 31, 2018 as a result of a change in control, retirement or termination without cause (or with good reason).

Table 20: Mr. Mionis' Benefits

	Cash Portion	Value of Option-Based and Share-Based Awards[1]	Other Benefits[2]	Total
Termination without Cause/with Good Reason or Change in Control with Termination	$3,724,082	—	$398,227	$4,122,309
Change in Control with no Termination or Retirement	—	—	—	—

(1) No incremental amount would be received in respect of accelerated vesting of options, RSUs and PSUs, if any, on the assumption that the discount rate applied to calculate the net present value of the accelerated entitlements is not greater than the rate at which the SVS would otherwise be expected to appreciate over the period of acceleration.

(2) Other benefits consist of group health benefits and pension plan contribution.

Messrs. Chawla, McCaughey, Lawless and Cooper

Messrs. Chawla, McCaughey, Lawless and Cooper are subject to the Executive Policy Guidelines which provide the following:

Termination without cause	• eligible to receive a severance payment up to two times annual base salary and the lower of target or actual annual incentive for the previous year ("Eligible Earnings"), subject to adjustment for factors including length of service, together with a portion of their annual incentive for the year, prorated to the date of termination • (a) vested stock options may be exercised for a period of 30 days and unvested stock options are forfeited on the termination date, (b) RSUs shall vest immediately on a *pro rata* basis based on the ratio of (i) the number of full years of employment completed between the date of grant and termination of employment, to (ii) the number of years between the date of grant and the vesting date, and (c) PSUs vest based on actual performance on a *pro rata* basis based on the ratio of (i) the number of full years of employment completed between the date of grant and the termination of employment, to (ii) the number of years between the date of grant and the vesting date
Termination without cause within two years following a change in control of the Corporation ("double trigger" provision)	• eligible to receive a severance payment up to two times Eligible Earnings, subject to adjustment for factors including length of service, together with a portion of their annual incentive for the year, prorated to the date of termination • (a) all unvested stock options vest on the date of change in control, (b) all unvested RSUs vest on the date of change in control, and (c) all unvested PSUs vest on the date of change in control at target level of performance unless the terms of a PSU grant provide otherwise, or on such other more favourable terms as the Board may in its discretion provide
Termination with cause	• no severance benefit is payable • all unvested equity is forfeited on the termination date
Retirement	• (a) stock options continue to vest and are exercisable until the earlier of three years following retirement and the original expiry date, (b) RSUs will continue to vest on their vesting dates, and (c) PSUs vest based on actual performance on a *pro rata* basis based on the percentage represented by the number of days between the date of grant and the date of retirement as compared to the total number of days from the date of grant to the scheduled release date for the issuance of shares in respect of vested PSUs
Resignation	• no severance benefit is payable • (a) vested stock options may be exercised for a period of 30 days and unvested stock options are forfeited on the resignation date and (b) all unvested RSUs and PSUs are forfeited on the resignation date

Additionally, the Executive Policy Guidelines provide that executives whose employment has been terminated will have their pension and benefits coverage treated according to the terms of the plans in which they participate.

The entitlements described in the above table are only conferred on eligible executives who fulfill certain confidentiality, non-solicitation and non-competition obligations for a period of two years following termination of their employment.

The following tables summarize the incremental payments to which Messrs. Chawla, McCaughey, Lawless and Cooper would have been entitled upon a change in control occurring on December 31, 2018, or if their employment had been terminated on December 31, 2018 as a result of a change in control, retirement or termination without cause.

Table 21: Mr. Chawla's Benefits

	Cash Portion[1]	Value of Option-Based and Share-Based Awards[2]	Other Benefits	Total
Termination without Cause or Change in Control with Termination	$1,205,522	—	—	$1,205,522
Change in Control with no Termination or Retirement	—	—	—	—

(1) Amounts in this column assume a maximum severance payment of two times Eligible Earnings but the actual amounts payable could be less.

(2) No incremental amount would be received in respect of accelerated vesting of options, RSUs and PSUs, if any, on the assumption that the discount rate applied to calculate the net present value of the accelerated entitlements is not greater than the rate at which the SVS would otherwise be expected to appreciate over the period of acceleration.

Table 22: Mr. McCaughey's Benefits

	Cash Portion[1]	Value of Option-Based and Share-Based Awards[2]	Other Benefits	Total
Termination without Cause or Change in Control with Termination	$1,549,260	—	—	$1,549,260
Change in Control with no Termination or Retirement	—	—	—	—

(1) Amounts in this column assume a maximum severance payment of two times Eligible Earnings but the actual amounts payable could be less.

(2) No incremental amount would be received in respect of accelerated vesting of options, RSUs and PSUs, if any, on the assumption that the discount rate applied to calculate the net present value of the accelerated entitlements is not greater than the rate at which the SVS would otherwise be expected to appreciate over the period of acceleration.

Table 23: Mr. Lawless' Benefits

	Cash Portion[1]	Value of Option-Based and Share-Based Awards[2]	Other Benefits	Total
Termination without Cause or Change in Control with Termination	$1,514,508	—	—	$1,514,508
Change in Control with no Termination or Retirement	—	—	—	—

(1) Amounts in this column assume a maximum severance payment of two times Eligible Earnings but the actual amounts payable could be less.

(2) No incremental amount would be received in respect of accelerated vesting of options, RSUs and PSUs, if any, on the assumption that the discount rate applied to calculate the net present value of the accelerated entitlements is not greater than the rate at which the SVS would otherwise be expected to appreciate over the period of acceleration.

Table 24: Mr. Cooper's Benefits

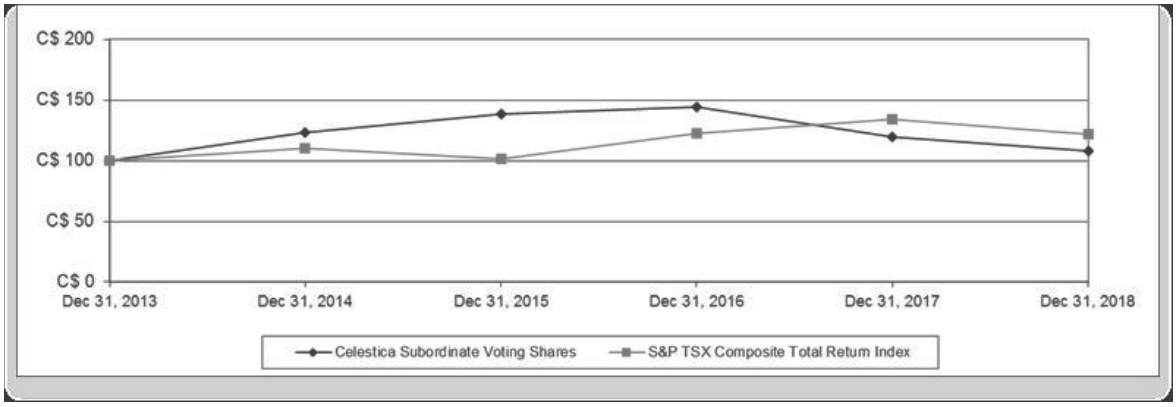
	Cash Portion[1]	Value of Option-Based and Share-Based Awards[2]	Other Benefits	Total
Termination without Cause or Change in Control with Termination	$920,000	—	—	$920,000
Change in Control with no Termination or Retirement	—	—	—	—

(1) Amounts in this column assume a maximum severance payment of two times Eligible Earnings but the actual amounts payable could be less.

(2) No incremental amount would be received in respect of accelerated vesting of options, RSUs and PSUs, if any, on the assumption that the discount rate applied to calculate the net present value of the accelerated entitlements is not greater than the rate at which the SVS would otherwise be expected to appreciate over the period of acceleration.

Performance Graph

The SVS have been listed and posted for trading under the symbol "CLS" on the NYSE and the TSX since June 30, 1998 (except for the period commencing on November 8, 2004 and ending on May 15, 2006 during which the symbol on the TSX was CLS.SV). The following chart compares the cumulative TSR of C$100 invested in SVS with the cumulative TSR of the S&P/TSX Composite Total Return Index for the period from December 31, 2013 to December 31, 2018.



An investment in the Corporation on December 31, 2013 would have resulted in an 8.3% increase in value over the five-year period ended December 31, 2018 compared with a 22% increase that would have resulted from an investment in the S&P/TSX Composite Total Return Index over the same period.

Over the same period, total NEO Compensation (as defined below) increased by 5.4%. In the medium to long term, compensation of the Corporation's NEOs is directly impacted by the market value of the SVS, as a significant portion of NEO Compensation is awarded in the form of equity based incentives with payout tied to the market value of the SVS.

For the purpose of the above discussion, "NEO Compensation" is defined as aggregate annual compensation (*i.e.* the sum of actual salary paid, actual CTI awards paid and the grant date fair value of share-based awards and option-based awards (if any) but excluding all other compensation). The executive compensation values have been calculated for the NEOs based on the same methodology set out in Table 15. This is a methodology adopted by Celestica solely for the purposes of this comparison. It is not a recognized or prescribed methodology for this purpose, and may not be comparable to methodologies used by other issuers for this purpose.

EXECUTIVE SHARE OWNERSHIP

The Corporation has executive share ownership guidelines (the "Executive Share Ownership Guidelines") which require specified executives to hold a multiple of their base salary in securities of the Corporation as shown in Table 25**.** Executives subject to the Executive Share Ownership Guidelines are expected to achieve the specified ownership within a period of five years following the later of: (i) the date of hire, or (ii) the date of promotion to a level subject to ownership guidelines. Compliance is reviewed annually as of December 31 of each year. The Compensation Committee reviewed the Executive Share Ownership Guidelines in April 2018 and determined no policy changes were required. The table below sets forth the compliance status of the applicable NEOs with the Executive Share Ownership Guidelines as of December 31, 2018:

Table 25: Share Ownership Guidelines

Name	Ownership Guidelines	Share and Share Unit Ownership (Value)[1]	Share and Share Unit Ownership (Multiple of Salary)
Robert A. Mionis[2]	$4,750,000 (5 × salary)	$6,455,764	6.8x
Mandeep Chawla[3]	$1,350,000 (3 × salary)	$1,089,142	2.4x
Michael P. McCaughey	$1,425,000 (3 × salary)	$2,330,663	4.9x
Jack J. Lawless	$1,380,000 (3 × salary)	$1,653,228	3.6x
Todd C. Cooper	$1,380,000 (3 × salary)	$2,871,009	6.2x

(1) Includes the following, as of December 31, 2018: (i) SVS beneficially owned, (ii) all unvested RSUs, and (iii) PSUs that vested on February 1, 2019 at 50% of target, which, on December 31, 2018, was the Corporation's anticipated payout and was in fact the resulting payout; the value of which was determined using a share price of $8.77, the closing price of SVS on the NYSE on December 31, 2018.

(2) Mr. Mionis' Share and Share Unit Ownership (Value) of $6,455,764 consists of the following holdings: (i) $1,665,555 of SVS, (ii) $3,580,221 of unvested RSUs and (iii) $1,209,988 of PSUs that vested on February 1, 2019; the value of which was determined using a share price of $8.77, being the closing price of SVS on the NYSE on December 31, 2018.

(3) Mr. Chawla was appointed as CFO of the Corporation effective October 19, 2017 and has five years from that date to achieve the required share ownership.

The CEO Employment Agreement provides that, in the event of the cessation of Mr. Mionis' employment with the Corporation for any reason, he will be required to retain the share ownership level set out in the Executive Share Ownership Guidelines on his termination date for the 12 month period immediately following his termination date.

C. Board Practices

Members of the Board are elected until the close of the next annual meeting of shareholders or until their successors are elected or appointed (unless such position is earlier vacated in accordance with the Corporation's by-laws). Each member of our senior management is appointed to serve at the discretion of our Board (subject to the terms and conditions of their respective employment agreements, if any). See Item 6(A), "Directors and Senior Management" for details for the period during which each director has served in his/her office. Our non-management directors meet *in camera* (*i.e.*, without our chief executive officer, chief financial officer or other members of management present) from time to time to consider such matters as they deem appropriate. In accordance with NYSE listing standards, "non-management" directors are all those who are not executive officers of the Corporation. We have designated the Chair of the Board as the presiding non-management director at all *in camera* sessions. The non-management directors can set their own agenda, maintain minutes and report back to the Board as a whole. Among the items that the non-management directors meet privately *in camera* to review is the performance of the Corporation's executive officers. Our Audit Committee, which consists solely of independent, non-management directors, met *in camera* immediately following each Audit Committee meeting in 2018.

The Board has determined that Mr. Cascella, Mr. Chopra, Mr. DiMaggio, Mr. Etherington, Ms. Koellner, Ms. Perry, Mr. Ryan and Mr. Wilson (constituting a majority of the Board) are independent directors under applicable independence standards in Canada and under NYSE listing standards. Our independent directors hold an executive session at least once annually.

Except for the right to receive deferred compensation, no director is entitled to benefits from Celestica under any service contracts when they cease to serve as a director. See Item 6(B), "Compensation."

Communications with the Board

Shareholders and other interested parties may communicate with the Board, the Audit Committee, the Compensation Committee, any individual director, or all non-management or independent directors as a group, by writing to:

until April 1, 2019:

Celestica Inc.
844 Don Mills Road
Toronto, Ontario, Canada M3C 1V7
Attention: Board of Directors

after April 1, 2019:

Celestica Inc.
5140 Yonge Street, Suite 1900
Toronto, Ontario, Canada M2N 6L7
Attention: Board of Directors

If the letter is from a shareholder, the letter should state that the sender is a shareholder. Under a process approved by the Board, depending on the subject matter, management will:

- forward the letter to the director or directors to whom it is addressed; or
- attempt to handle the matter directly (where information about the Corporation or its stock is requested); or
- not forward the letter if it is primarily commercial in nature or relates to an improper or irrelevant topic.

A summary of all relevant communications that are received after the last meeting of the full Board and which are not forwarded will be presented at each meeting of the Board, together with any specific communication requested by a director to be presented to the Board.

Shareholders and other interested parties who have concerns or complaints relating to accounting, internal accounting controls or other matters may also contact the Audit Committee by writing to the address set out above or by reporting the matter through our Ethics Hotline toll free at 1-888-312-2689. Callers outside the United States or Canada can place a collect call to 1-503-726-2457. Alternatively, concerns or complaints can be reported using a secure on-line web-based tool at www.ethics.celestica.com.

All communications will be handled in a confidential manner, to the degree that Canadian and U.S. laws allow. Communications may be made on an anonymous basis; however, in these cases the reporting individual must provide sufficient details for the matter to be reviewed and resolved. The Corporation will not tolerate any retaliation against an employee who makes a good faith report.

Board Committees

The Board has three standing committees, each with a specific mandate (charter): the Audit Committee, the Compensation Committee, and the Nominating and Corporate Governance Committee. All of these committees are composed solely of independent directors (as that term is defined by applicable Canadian and SEC rules and in the NYSE listing standards, as applicable).

Audit Committee

The Audit Committee in 2018 consisted of Ms. Koellner (Chair), Mr. Chopra (commencing upon his election to the Board in April 2018), Mr. DiMaggio, Mr. Etherington, Ms. Perry, Mr. Ryan and Mr. Wilson, all of whom the Board determined to be independent directors for audit committee purposes (as that term is defined by applicable Canadian and SEC rules and in the NYSE listing standards) and financially literate. Mr. Cascella, who was appointed to the committee effective February 1, 2019, meets such independence definitions and is financially literate. All of the audit committee members have held executive positions with large corporations or financial services companies. The Audit Committee has a well-defined mandate which, among other things, sets out its relationship with, and expectations of, the external auditors, including the determination of the independence of the external auditors and approval of any non-audit services of the external auditor; the engagement, evaluation, remuneration and termination of the external auditor; its relationship with, and expectations of, the internal auditor function and its oversight of internal control; and the disclosure of financial and related information. In addition to fulfilling the responsibilities as set forth in its mandate, the Audit Committee has established procedures for a formal annual review of the qualifications, expertise, resources and the overall performance of the Corporation's external auditor, including conducting a survey of each member of the Audit Committee and of certain key management personnel. The Audit Committee has direct communication channels with the internal and external auditors to discuss and review specific issues and has the authority to retain and fund such independent legal, accounting,

or other advisors as it may consider appropriate. The Audit Committee reviews and approves the mandate and plan of the internal audit department on an annual basis. The Audit Committee's duties include responsibility for reviewing financial statements with management and the auditors, monitoring the adequacy of Celestica's internal control procedures, and reviewing the adequacy of Celestica's processes for identifying and managing risk.

The Audit Committee has established procedures for: (i) receipt, retention, and treatment of complaints regarding accounting, internal accounting controls, or auditing matters and (ii) confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters. A copy of the Audit Committee Mandate is available on our website at www.celestica.com.

Members of the Audit Committee do not serve on more than three audit committees of public companies, including that of Celestica.

See Item 16A "Audit Committee Financial Expert" for a discussion of the Corporation's Audit Committee Financial Experts.

Audit Committee Report:

The Audit Committee has reviewed and discussed the audited financial statements with management;

The Audit Committee has discussed with the independent auditors the matters required to be discussed by applicable Public Company Accounting Oversight Board Auditing Standards;

The Audit Committee has received the written disclosures and the letter from the independent auditor as required by the Public Company Accounting Oversight Board regarding the independent auditor's communications with the Audit Committee concerning independence, and has discussed with the independent auditor the independent auditor's independence; and

Based on such review and discussions, the Audit Committee recommended to the Board that the audited financial statements be included in this Annual Report for the year ended December 31, 2018 for filing with the SEC.

The Audit Committee:

Mr. Cascella
Mr. Chopra
Mr. DiMaggio
Mr. Etherington
Ms. Koellner
Ms. Perry
Mr. Ryan
Mr. Wilson

Compensation Committee

The Compensation Committee in 2018 consisted of Mr. Ryan (Chair), Mr. Chopra (commencing upon his election to the Board in April 2018), Mr. DiMaggio, Mr. Etherington, Ms. Koellner, Ms. Perry and Mr. Wilson, all of whom the Board determined to be independent directors for compensation committee purposes pursuant to the applicable Canadian and SEC rules and the NYSE listing standards. Mr. Cascella, who was appointed to the committee effective February 1, 2019, meets such independence definitions. It is the responsibility of the Compensation Committee to define and communicate compensation policies and principles that reflect and support our strategic direction, business goals and desired culture. Pursuant to its mandate, the Compensation Committee: reviews and approves Celestica's overall reward/compensation policy, including an executive compensation policy that is consistent with competitive practice and supports organizational objectives and shareholder interests; reviews, modifies, as appropriate, and approves the elements of our incentive compensation plans and equity-based plans, including plan design, performance targets, administration and total funds/shares reserved for payment; reviews the corporate goals and objectives relevant to the compensation of the CEO, as approved by the Board, evaluates the CEO's performance in light of these goals and objectives, and sets the compensation of the CEO based on this evaluation; approves the compensation of our most senior executives; maintains and reviews our succession plans for key executive positions; reviews material changes to our organizational structure and human resource policies; and regularly reviews the risks associated with our executive compensation policies and practices. See Item 6 (B), "Compensation" for details regarding our processes and procedures for the consideration and determination of executive and director compensation and the role of our compensation consultant in making recommendations to the Compensation Committee regarding executive officer and director compensation.

A copy of the Compensation Committee Mandate is available on our website at www.celestica.com.

Compensation Committee Report:

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis with management and based on such review and discussions, the Compensation Committee recommended to the Board that the Compensation Discussion and Analysis be included in this Annual Report for the year ended December 31, 2018.

The Compensation Committee:

Mr. Cascella
Mr. Chopra
Mr. DiMaggio
Mr. Etherington
Ms. Koellner
Ms. Perry
Mr. Ryan
Mr. Wilson

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee in 2018 consisted of Mr. Etherington (Chair), Mr. Chopra (commencing upon his election to the Board in April 2018), Mr. DiMaggio, Ms. Koellner, Ms. Perry, Mr. Ryan and Mr. Wilson, all of whom were determined by the Board to be independent directors pursuant to applicable Canadian rules and NYSE listing standards. Mr. Cascella, who was appointed to the committee effective February 1, 2019, meets such independence definitions. The Nominating and Corporate Governance Committee recommends to the Board the criteria for selecting candidates for nomination to the Board and the individuals to be nominated for election by our shareholders. The committee's mandate includes making recommendations to the Board relating to the Corporation's approach to corporate governance; reviewing the Corporation's corporate governance guidelines and recommending appropriate changes to the Board; and assessing the effectiveness of the Board and its committees.

A copy of the Nominating and Corporate Governance Committee Mandate is available on our website at www.celestica.com.

D. Employees

As of December 31, 2018, we employed approximately 28,700 permanent and temporary (contract) employees worldwide (December 31, 2017 — 27,500; December 31, 2016 — 26,400). Some of our employees in China, Japan, Mexico, Romania, Singapore and Spain are represented by unions or are covered by collective bargaining agreements. We believe we have a productive and collaborative working relationship between management and the relevant unions. We believe that our employee relationships are generally positive and stable.

The following table sets forth information concerning our employees (permanent and temporary) by geographic location for the past three fiscal years:

	Number of Employees			
Date	Americas	Europe	Asia	Total
December 31, 2016	4,600	2,400	19,400	26,400
December 31, 2017	5,900	2,800	18,800	27,500
December 31, 2018	6,900	3,900	17,900	28,700

Given the variable nature of our project flow and the quick response time required by our customers, it is critical that we be able to quickly adjust our production up or down to maximize efficiency. To achieve this, our approach has been to employ a skilled temporary labor force, as required. As at December 31, 2018, approximately 5,100 temporary (contract) employees (December 31, 2017 — 4,100; December 31, 2016 — 3,400) were engaged by us worldwide. We used, on average for the year, approximately 4,700 temporary (contract) employees in 2018.

E. Share Ownership

The following table sets forth certain information concerning the direct and beneficial ownership of shares of Celestica at February 13, 2019 by each director, each NEO, each non-NEO executive officer, and all directors and executive officers of Celestica as a group as of such date. The address of each shareholder named below is Celestica's principal executive office.

Name of Beneficial Owner[1][2]	Number of Shares[3][4]	Percentage of Class	Percentage of all Equity Shares[5]	Percentage of Voting Power
William A. Etherington	10,000 SVS	*	*	*
Robert A. Cascella	0 SVS	—	—	—
Deepak Chopra	0 SVS	—	—	—
Daniel P. DiMaggio	0 SVS	—	—	—
Laurette T. Koellner	0 SVS	—	—	—
Carol S. Perry	0 SVS	—	—	—
Tawfiq Popatia	0 SVS	—	—	—
Eamon J. Ryan	0 SVS	—	—	—
Michael M. Wilson	0 SVS	—	—	—
Robert A. Mionis	593,906 SVS	*	*	*
Mandeep Chawla	38,986 SVS	*	*	*
Elizabeth L. DelBianco	161,687 SVS	*	*	*
Todd C. Cooper	58,553 SVS	*	*	*
John ("Jack") J. Lawless	92,105 SVS	*	*	*
Jason Phillips	48,990 SVS	*	*	*
Michael P. McCaughey	120,461 SVS	*	*	*
Nicolas Pujet	9,256 SVS	*	*	*
All directors and executive officers as a group (17 persons)	1,133,944 SVS	*	*	*

* Less than 1%.

(1) As used in this table, beneficial ownership means sole or shared power to vote or direct the voting of the security, or the sole or shared investment power with respect to a security (*i.e.*, the power to dispose, or direct a disposition, of a security). A person is deemed at any date to have beneficial ownership of any security that such person has a right to acquire within 60 days of such date. More than one person may be deemed to have beneficial ownership of the same securities. Information with respect to stock options held by each NEO, including exercise price and expiration date, is included in Table 16.

(2) Information as to shares beneficially owned or shares over which control or direction is exercised is not within Celestica's knowledge. Except as otherwise disclosed, such information has been provided by each individual.

(3) Includes SVS subject to a total of 270,839 stock options that are currently exercisable, or will be exercisable within 60 days of February 13, 2019, as follows: Mr. Mionis — 224,216 stock options; Ms. DelBianco — 46,623 stock options. With respect to Mr. Mionis: all of his options have an exercise price of C$17.52 and an expiration date of August 1, 2025. With respect to Ms. DelBianco: 22,742 of her options have an exercise price of C$8.26 and an expiration date of January 31, 2022, and 23,881 of her options have an exercise price of C$8.29 and an expiration date of January 28, 2023.

(4) SVS refers to subordinate voting shares.

(5) Represents the percentage beneficial ownership of the Company's subordinate voting shares and multiple voting shares in the aggregate.

Multiple voting shares and subordinate voting shares have different voting rights. Multiple voting shares entitle the holder to 25 votes per share and subordinate voting shares entitle the holder to one vote per share. Subordinate voting shares represent approximately 20% of the aggregate voting rights attached to Celestica's shares. Multiple voting shares represent approximately 80% of the voting rights attached to Celestica's shares. See Item 10(B), "Additional Information — Memorandum and Articles of Incorporation."

At February 13, 2019, 2 persons (each an executive officer) held stock options to acquire an aggregate of 0.27 million subordinate voting shares (see footnote (3) in the table above). These stock options were issued pursuant to our Long-Term Incentive

Plan. See Item 6(B), "Compensation" and note 13(b) to the Consolidated Financial Statements in Item 18 for a discussion of the different types of equity awards, including stock options, RSUs and PSUs, issuable to our employees. The following table sets forth information with respect to stock options outstanding as at February 13, 2019. No other Celestica employees hold outstanding stock options.

Outstanding Options

Beneficial Holders	Number of Subordinate Voting Shares Under Option	Exercise Price	Date of Issuance	Date of Expiry
Executive Officers	22,742	C$8.26	January 31, 2012	January 31, 2022
	23,881	C$8.29	January 28, 2013	January 28, 2023
	298,954	C$17.52	August 1, 2015	August 1, 2025

Item 7. Major Shareholders and Related Party Transactions

A. Major Shareholders

The following table sets forth certain information concerning the direct and beneficial ownership of the shares of Celestica as of February 13, 2019 by each person known to Celestica to own beneficially, directly or indirectly, 5% or more of the subordinate voting shares or multiple voting shares. Multiple voting shares (MVS in the table below) and subordinate voting shares (SVS in the table below) have different voting rights (see Item 6(E) above). Subordinate voting shares represent approximately 20% of the aggregate voting rights attached to Celestica's shares, and multiple voting shares represent approximately 80% of the aggregate voting rights attached to Celestica's shares. See Item 4(B) "Information on the Company — Business Overview — Controlling Shareholder Interest" above for additional information regarding our controlling shareholder, and Item 10(B), "Additional Information — Memorandum and Articles of Incorporation" for additional information regarding our share capital.

Name of Beneficial Owner[1]	Number of Shares	Percentage of Class	Percentage of All Equity Shares	Percentage of Voting Power
Onex Corporation[2]	18,600,193 MVS	100%	13.6%	79.7%
	397,045 SVS	*	*	*
Gerald W. Schwartz[3]	18,600,193 MVS	100%	13.6%	79.7%
	517,702 SVS	*	*	*
Letko, Brosseau & Associates Inc.[4]	22,173,121 SVS	18.8%	16.2%	3.8%
Total percentage of all equity shares and total percentage of voting power			30.2%	83.6%

* Less than 1%.

(1) As used in this table, beneficial ownership means sole or shared power to vote or direct the voting of the security, or the sole or shared investment power with respect to a security (*i.e.*, the power to dispose, or direct a disposition, of a security). A person is deemed at any date to have beneficial ownership of any security that such person has a right to acquire within 60 days of such date. More than one person may be deemed to have beneficial ownership of the same securities.

(2) Includes 945,010 MVS held by a wholly-owned subsidiary of Onex. 814,546 of such MVS are subject to options granted to certain officers of Onex pursuant to certain Onex management investment plans, which options may be exercised upon specified dispositions by Onex (directly or indirectly) of Celestica's securities, with respect to which Onex has the right to vote or direct the vote ("MIP Options"), including 688,807 MIP Options granted to Mr. Schwartz (each of which MVS will, upon exercise of such options, be automatically converted into an SVS). The percentage ownership of SVS beneficially owned by Onex (assuming conversion of all MVS) was 13.5% as of February 15, 2017, 13.3% as of February 14, 2018, and 13.9% as of February 13, 2019.

The Corporation's Restated Articles of Incorporation (Articles) provide "coat-tail" protection to the holders of the subordinate voting shares by providing that the multiple voting shares will be converted automatically into subordinate voting shares upon any transfer thereof, except (i) a transfer to Onex or any affiliate of Onex or (ii) a transfer of 100% of the outstanding multiple voting shares to a purchaser who also has offered to purchase all of the outstanding subordinate voting shares for a per share consideration identical to, and otherwise on the same terms as, that offered for the multiple voting shares, and the multiple voting shares held by such purchaser thereafter shall be subject to the share provisions relating to conversion (including with respect to the provisions described herein) as if all references to Onex were references to such purchaser. In addition, if (i) any holder of any multiple voting shares ceases to be an affiliate of Onex, (ii) Onex and its affiliates, collectively, cease to have the right, in all cases, to exercise the votes attached

to, or to direct the voting of, any of the multiple voting shares held by Onex and its affiliates, such multiple voting shares shall convert automatically into subordinate voting shares on a one-for-one basis. For these purposes, (i) Onex includes any successor corporation resulting from an amalgamation, merger, arrangement, sale of all or substantially all of its assets, or other business combination or reorganization involving Onex, provided that such successor corporation beneficially owns directly or indirectly all multiple voting shares beneficially owned directly or indirectly by Onex immediately prior to such transaction and is controlled by the same person or persons as controlled Onex immediately prior to the consummation of such transaction; (ii) a corporation shall be deemed to be a subsidiary of another corporation if, but only if, (a) it is controlled by that other, or that other and one or more corporations each of which is controlled by that other, or two or more corporations each of which is controlled by that other, or (b) it is a subsidiary of a corporation that is that other's subsidiary; (iii) "affiliate" means a subsidiary of Onex or a corporation controlled by the same person or company that controls Onex; and (iv) "control" means beneficial ownership of, or control or direction over, securities carrying more than 50% of the votes that may be cast to elect directors if those votes, if cast, could elect more than 50% of the directors. For these purposes, a person is deemed to beneficially own any security which is beneficially owned by a corporation controlled by such person. In addition, if at any time the number of outstanding multiple voting shares shall represent less than 5% of the aggregate number of the outstanding multiple voting shares and subordinate voting shares, all of the outstanding multiple voting shares shall be automatically converted at such time into subordinate voting shares on a one-for-one basis. Onex, which beneficially owns, controls or directs, directly or indirectly all of the outstanding multiple voting shares, has entered into an agreement with Computershare Trust Company of Canada (as successor to the Montreal Trust Company of Canada), as trustee for the benefit of the holders of the subordinate voting shares, for the purpose of ensuring that the holders of subordinate voting shares will not be deprived of any rights under applicable take-over bid legislation to which they would be otherwise entitled in the event of a take-over bid (as that term is defined in applicable securities legislation) if multiple voting shares and subordinate voting shares were of a single class of shares. Subject to certain permitted forms of sale, such as identical or better offers to all holders of subordinate voting shares, Onex has agreed that it, and any of its affiliates that may hold multiple voting shares from time to time, will not sell any multiple voting shares, directly or indirectly, pursuant to a take-over bid (as that term is defined under applicable securities legislation) under circumstances in which any applicable securities legislation would have required the same offer or a follow-up offer to be made to holders of subordinate voting shares if the sale had been a sale of subordinate voting shares rather than multiple voting shares, but otherwise on the same terms.

The address of Onex is: c/o Onex Corporation, 161 Bay Street, P.O. Box 700, Toronto, Ontario, Canada M5J 2S1.

(3) The number of shares beneficially owned, or controlled or directed, directly or indirectly, by Mr. Schwartz consists of 120,657 SVS owned by a company controlled by Mr. Schwartz, and all of the 18,600,193 MVS and 397,045 SVS beneficially owned, or controlled or directed, directly or indirectly, by Onex. Of Celestica's MVS beneficially owned by Onex, 814,546 MVS are subject to MIP Options, including the 688,807 MIP Options granted to Mr. Schwartz (each of which MVS will, upon exercise of such options, be automatically converted into an SVS), and 945,010 MVS are held by a wholly-owned subsidiary of Onex. Mr. Schwartz is the Chairman of the Board, President and Chief Executive Officer of Onex. In addition, he indirectly owns multiple voting shares of Onex carrying the right to elect a majority of the Onex board of directors. Accordingly, under applicable securities laws, Mr. Schwartz is deemed to be the beneficial owner of the Celestica shares owned by Onex; Mr. Schwartz has advised Celestica, however, that he disclaims beneficial ownership of the shares held by Onex. The percentage ownership of SVS beneficially owned by Mr. Schwartz (assuming conversion of all MVS) was 13.6% as of February 15, 2017, 13.4% as of February 14, 2018, and 14.0% as of February 13, 2019.

The address of Mr. Schwartz is: 161 Bay Street, P.O. Box 700, Toronto, Ontario, Canada M5J 2S1.

(4) Letko, Brosseau & Associates Inc. ("Letko") is the beneficial owner of 22,173,121 SVS and has sole voting power and sole dispositive power over these shares. Clients of Letko have the right to receive or the power to direct the receipt of dividends from, or the proceeds from sale of, the SVS reported as beneficially owned by Letko. No clients of Letko beneficially own more than five percent of the SVS. The address of Letko is: 1800 McGill College Av., Suite 2510, Montréal, Québec, Canada H3A 3J6. The number of shares reported as owned by Letko in this Major Shareholders Table and the information in this footnote is based on the Schedule 13G/A filed by Letko with the SEC on February 4, 2019, reporting beneficial ownership as of December 31, 2018. The percentage ownership of SVS beneficially owned by Letko was 16.8% as of February 15, 2017, 16.4% as of February 14, 2018, and 18.8% as of February 13, 2019.

There are no arrangements known to the Corporation, the operation of which may at a subsequent date result in a change of control of the Corporation.

Holders

As of February 13, 2019, based on information provided to us by our transfer agent, there were 1,630 holders of record of subordinate voting shares, of which 383 holders, holding approximately 78.5% of the outstanding subordinate voting shares, were resident in the United States and 353 holders, holding approximately 21.3% of the outstanding subordinate voting shares, were resident in Canada. These numbers are not representative of the number of beneficial holders of our subordinate voting shares nor are they representative of where such beneficial holders reside, since many of such shares are held of record by brokers or other nominees. The Corporation does not have knowledge of the identities of the beneficial owners of subordinate voting shares registered through intermediaries. No multiple voting shares are held in the United States.

B. Related Party Transactions

Onex, which beneficially owns or controls, directly or indirectly, all of our outstanding multiple voting shares, has entered into an agreement with Celestica and with Computershare Trust Company of Canada (as successor to the Montreal Trust Company of Canada), as trustee for the benefit of the holders of the subordinate voting shares, for the purpose of ensuring that the holders of subordinate voting shares will not be deprived of any rights under applicable take-over bid legislation to which they would be otherwise entitled in the event of a take-over bid (as that term is defined in applicable securities legislation) if multiple voting

shares and subordinate voting shares were of a single class of shares. Subject to certain permitted forms of sale, such as identical or better offers to all holders of subordinate voting shares, Onex has agreed that it, and any of its affiliates that may hold multiple voting shares from time to time, will not sell any multiple voting shares, directly or indirectly, pursuant to a take-over bid (as that term is defined under applicable securities legislation) under circumstances in which any applicable securities legislation would have required the same offer or a follow-up offer to be made to holders of subordinate voting shares if the sale had been a sale of subordinate voting shares rather than multiple voting shares, but otherwise on the same terms.

On January 1, 2009, Celestica and Onex entered into a Services Agreement for the services of Mr. Schwartz as a director of the Corporation. The initial term of the Services Agreement was for one year and it automatically renews for successive one-year terms unless either party provides a notice of intent not to renew. In connection with the retirement of Mr. Schwartz from our Board as of December 31, 2016, and the appointment of Mr. Tawfiq Popatia (also an officer of Onex) as his replacement effective January 1, 2017, the Services Agreement was amended as of such date to replace all references to Mr. Schwartz therein with references to Mr. Popatia, and to increase the annual fee payable to Onex thereunder from $200,000 per year to $235,000 per year (to be consistent with current annual Board retainer fees), payable in DSUs in equal quarterly installments in arrears. The number of DSUs is determined using the closing price of the subordinate voting shares on the NYSE on the last day of the fiscal quarter in respect of which the installment is to be credited. The Services Agreement terminates automatically and the rights of Onex to receive compensation (other than accrued and unpaid compensation) will terminate (a) 30 days after the first day on which Onex ceases to hold at least one MVS of Celestica or any successor company or (b) the date Mr. Popatia ceases to be a director of Celestica, for any reason.

See Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — *Toronto Real Property and Related Transactions*" above for a description of the Property Sale Agreement (and related lease arrangements) with respect to the sale of our real property in Toronto, Ontario (which includes our corporate headquarters and our Toronto manufacturing operations) to the Property Purchaser, the terms of the September 2018 assignment of such agreement to the Assignee, and the consummation of such sale on March 7, 2019.

Given the interest in the transaction at the time of execution of the Property Sale Agreement of the Property Purchaser (a related party, as described below), our Board formed a special committee (Special Committee), consisting solely of independent directors, which retained its own independent legal counsel, to review and supervise a competitive bidding process. The Special Committee, after considering, among other factors, that the purchase price for the property exceeded the valuation provided by an independent appraiser, determined that the Property Purchaser's transaction terms were in the best interests of Celestica. Our Board, at a meeting where Mr. Schwartz was not present, approved the transaction based on the unanimous recommendation of the Special Committee.

The original parties to the Property Sale Agreement were the Company and the Property Purchaser, a consortium of four real estate partnerships. Approximately 27% of the interests in the Property Purchaser were at the time of execution of the Property Sale Agreement, and are, held by a privately-held partnership in which Mr. Schwartz has a material interest; and approximately 25% of the interests in the Property Purchaser were at the time of execution of the Property Sale Agreement, and are, held by a partnership in which Mr. Schwartz has a non-voting interest. In September 2018, the Property Sale Agreement was assigned to the Assignee, although the Property Purchaser was not released from its obligations under the Property Sale Agreement. At the time of execution of the assignment, the Assignee was unrelated to us or the Property Purchaser. Subsequent to the execution of such assignment, the Assignee granted the Property Purchaser an option to obtain a 5% non-voting interest in the Assignee.

Our related party transactions are also disclosed in Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Related Party Transactions."

Indebtedness of Related Parties

As at February 13, 2019, other than inter-company loans among Celestica and its wholly-owned subsidiaries, no related parties (as defined in Form 20-F), were indebted to Onex, Celestica or its subsidiaries.

C. Interests of Experts and Counsel

Not applicable.

Item 8. Financial Information

A. Consolidated Statements and Other Financial Information

See Item 18, "Financial Statements."

Export Sales

For the year ended December 31, 2018, we had approximately $6.3 billion of export sales (*i.e.*, sales to customers located outside of Canada), constituting approximately 95% of our $6.6 billion in total sales for the year. For further information regarding the allocation of our revenues by geographic region over the last three years, see Item 4, "Information on the Company — Business Overview — Geographies."

Litigation

We are party to litigation from time-to-time. We are not currently (nor in the recent past have been) party to any legal or arbitration proceedings which management expects may have significant effects on the results of operations, business, or financial condition of Celestica.There are no material proceedings in which any of our affiliates, directors, or members of senior management is either a party adverse to us or our subsidiaries or has a material interest adverse to us or our subsidiaries.

Information concerning the status of certain tax matters is disclosed in Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Litigation and contingencies" and note 24 to the Consolidated Financial Statements in Item 18.

Dividend Policy

We have not declared or paid any dividends to our shareholders. We intend to retain earnings for general corporate purposes to promote future growth; as such, our Board does not anticipate paying any dividends at this time. Our Board will review this policy from time-to-time, having regard to our financial condition, financing requirements and other relevant factors.

B. Significant Changes

Except as otherwise disclosed in this Annual Report, no significant change has occurred since December 31, 2018.

Item 9. The Offer and Listing

A. Offer and Listing Details

Market Information

The subordinate voting shares are listed on the NYSE and the TSX (in each case under the symbol "CLS").

B. Plan of Distribution

Not applicable.

C. Markets

See Item 9A. — "Offer and Listing Details" above. The subordinate voting shares are listed on the NYSE and the TSX.

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.

F. Expenses of the Issue

Not applicable.

Item 10. Additional Information

A. Share Capital

Not applicable.

B. Memorandum and Articles of Incorporation

Objects and Purposes

Celestica (Ontario Corporation No. 1201522) can engage in any legal activity permitted under the OBCA. As set forth in Item 6 of our Restated Articles of Incorporation (Articles), there are no restrictions on the business we may carry on or on the powers we may exercise.

Certain Powers of Directors

Celestica's by-laws provide that the directors shall from time to time determine by resolution the remuneration to be paid to the directors, which shall be in addition to the salary paid to any officer or employee of Celestica who is also a director. The directors may also, by resolution, award special remuneration to any director in undertaking any special services on Celestica's behalf other than the normal work ordinarily required of a director of Celestica. The by-laws provide that confirmation of any such resolution by Celestica's shareholders is not required.

The Articles provide that the Board may, without shareholder authorization, from time to time in such amounts and on such terms as it deems expedient: (i) borrow money upon the credit of Celestica; (ii) issue, reissue, sell or pledge debt obligations of Celestica; (iii) give a guarantee on behalf of Celestica to secure performance of an obligation of any person; and (iv) mortgage, hypothecate, charge, pledge or otherwise create a security interest in all or any currently owned or subsequently acquired real and personal, movable and immovable, property of Celestica, including book debts, rights, powers, franchises and undertakings, to secure Celestica's obligations.

Directors do not stand for re-election at staggered intervals, and there is no provision in our Articles or by-laws imposing a requirement for retirement or non-retirement of directors under an age limit requirement. However, the Board has a retirement policy which provides that, unless the Board authorizes an exception, a director shall not stand for re-election after his or her 75th birthday.

Share Ownership Requirements

The OBCA provides that unless the articles of a corporation otherwise provide, a director of a corporation is not required to hold shares issued by the corporation. There is no provision in the Articles imposing a requirement that a director hold any shares issued by Celestica. Our Board, however, has established guidelines setting out minimum shareholding requirements for directors who are not employees or officers of Celestica or Onex. See the section entitled "Director Share Ownership Guidelines" under Item 6, "Directors, Senior Management and Employees — Compensation" for a summary of these minimum shareholding requirements.

No Limitation on Foreign Ownership

There are no limitations under our Articles or in the OBCA on persons who are not citizens of Canada with respect to holding or exercising their voting rights as holders of our securities.

Other Provisions of Articles and By-laws

Other than the "coat-tail provisions" described in detail in footnote (2) to the table set forth in Item 7(A), "Major Shareholders" above, there are no provisions in the Articles or By-laws: (i) delaying, deferring or preventing a change in control of our company that operate only with respect to a merger, acquisition or corporate restructuring; (ii) discriminating against any existing or prospective holder of our securities as a result of such shareholder owning a substantial number of our securities; (iii) requiring disclosure of share ownership; or (iv) governing changes in the rights of holders of our securities or our capital, where such provisions are more stringent than those required by law.

Shareholder Rights and Limitations

The rights and preferences attached to our subordinate voting shares and multiple voting shares are described in the section entitled "Description of Capital Stock" of our registration statement on Form F-3ASR (Reg. No. 333-221144), filed with the SEC on October 26, 2017, which section is incorporated herein by reference thereto.

Additional information concerning the rights and limitations of Celestica's shareholders is described in the section entitled "Comparison of Celestica and MSL Stockholder's Rights" of our registration statement on Form F-4/A (Reg. No. 333-110362), filed with the SEC on February 9, 2004, which information (pertaining to Celestica) is incorporated herein by reference thereto.

C. Material Contracts

Information with respect to material contracts, other than contracts entered into in the ordinary course of business, to which Celestica or its subsidiaries is a party, entered into during the two years immediately preceding the publication of this Annual Report, is included in Item 5, "Operating and Financial Review and Prospects — Liquidity and Capital Resources" and Item 6(B), "Compensation." These contracts include equity compensation plans and agreements related to our credit facility and our $250.0 million accounts receivable sales program, as well as our acquisition of Impakt, each of which is included as an exhibit to this Annual Report. See Item 19, "Exhibits."

D. Exchange Controls

Canada has no system of exchange controls. There are no Canadian restrictions on the repatriation of capital or earnings of a Canadian public company to non-resident investors. There are no laws of Canada or exchange restrictions affecting the remittance of dividends, interest, royalties or similar payments to non-resident holders of Celestica's securities, although there may be Canadian and other foreign tax considerations. See Item 10E.— "Taxation."

E. Taxation

Material Canadian Federal Income Tax Considerations

The following is a summary of the material Canadian federal income tax considerations generally applicable to a person (a "U.S. Holder"), who acquires subordinate voting shares and who, for purposes of the Income Tax Act (Canada) (the "Canadian Tax Act") and the Canada-United States Income Tax Convention (1980) (as amended, the "Tax Treaty") at all relevant times is resident in the United States and is neither resident nor deemed to be resident in Canada, is eligible for benefits under the Tax Treaty, deals at arm's length and is not affiliated with Celestica, holds such subordinate voting shares as capital property, and does not use or hold, and is not deemed to use or hold, the subordinate voting shares in carrying on business in Canada. Special rules, which are not discussed in this summary, may apply to a U.S. Holder that is a financial institution (as defined in the Canadian Tax Act), or is an insurer to whom the subordinate voting shares are designated insurance property (as defined in the Canadian Tax Act).

This summary is based on Celestica's understanding of the current provisions of the Tax Treaty, the Canadian Tax Act and the regulations thereunder, all specific proposals to amend the Canadian Tax Act or the regulations publicly announced by the Minister of Finance (Canada) prior to February 13, 2019, and the current published administrative policies and assessing practices of the Canada Revenue Agency.

This summary does not express an exhaustive discussion of all possible Canadian federal income tax considerations and, except as mentioned above, does not take into account or anticipate any changes in law, whether by legislative, administrative or judicial decision or action, nor does it take into account the tax legislation or considerations of any province or territory of Canada or any jurisdiction other than Canada, which may differ significantly from the considerations described in this summary.

This summary is of a general nature only and is not intended to be, nor should it be construed to be, legal or tax advice to any particular holder, and no representation with respect to the Canadian federal income tax consequences to any particular holder is made. Consequently, U.S. Holders of subordinate voting shares should consult their own tax advisors with respect to the income tax consequences to them having regard to their particular circumstances.

All amounts relevant in computing a U.S. Holder's liability under the Canadian Tax Act are to be computed in Canadian dollars.

Taxation of Dividends

By virtue of the Canadian Tax Act and the Tax Treaty, dividends (including stock dividends) on subordinate voting shares paid or credited or deemed to be paid or credited to a U.S. Holder who is the beneficial owner of such dividends will generally be subject to Canadian non-resident withholding tax at the rate of 15% of the gross amount of such dividends. Under the Tax Treaty, the rate of withholding tax on dividends is reduced to 5% if that U.S. Holder is a company that beneficially owns (or is deemed to beneficially own) at least 10% of the voting stock of Celestica. Moreover, under the Tax Treaty, dividends paid to certain religious, scientific, literary, educational or charitable organizations and certain pension organizations that are resident in, and generally exempt from tax in, the U.S., generally are exempt from Canadian non-resident withholding tax. Provided that certain administrative procedures are observed by such an organization, Celestica would not be required to withhold such tax from dividends paid or credited to such organization. Any such organization that has suffered withholding tax should consult its own advisors about the possibility of seeking a refund.

Disposition of Subordinate Voting Shares

A U.S. Holder will not be subject to tax under the Canadian Tax Act in respect of any capital gain realized on the disposition or deemed disposition of subordinate voting shares unless the subordinate voting shares constitute or are deemed to constitute "taxable Canadian property" other than "treaty-protected property," as defined in the Canadian Tax Act, at the time of such disposition. Generally, subordinate voting shares will not be "taxable Canadian property" to a U.S. Holder at a particular time, where the subordinate voting shares are listed on a designated stock exchange (which currently includes the TSX and NYSE) at that time, unless at any time during the 60-month period immediately preceding that time: (A) the U.S. Holder, persons with whom the U.S. Holder did not deal at arm's length, partnerships of which the U.S. Holder or persons not dealing at arm's length with the U.S. Holder holds a membership interest (directly or indirectly through another partnership) or the U.S. Holder together with all such persons or partnerships, owned 25% or more of the issued shares of any class or series of shares of the capital stock of Celestica; and (B) more than 50% of the fair market value of the subordinate voting shares was derived directly or indirectly from one or any combination of (i) real or immoveable properties situated in Canada, (ii) "Canadian resource properties", (iii) "timber resource properties" and (iv) options in respect of, or interests in, property described in (i) to (iii), in each case as defined in the Canadian Tax Act. In certain circumstances set out in the Canadian Tax Act, the subordinate voting shares of a particular U.S. Holder could be deemed to be "taxable Canadian property" to that holder. Even if the subordinate voting shares are "taxable Canadian property" to a U.S. Holder, they generally will be "treaty-protected property" to such holder by virtue of the Tax Treaty if the value of such shares at the time of disposition is not derived principally from "real property situated in Canada" as defined for these purposes under the Tax Treaty and the Canadian Tax Act. Consequently, on the basis that the value of the subordinate voting shares should not be considered derived principally from such "real property situated in Canada" at any relevant time, any gain realized by the U.S. Holder upon the disposition of the subordinate voting shares generally will be exempt from tax under the Canadian Tax Act.

Material U.S. Federal Income Tax Considerations

The following discussion describes the material U.S. federal income tax consequences to United States Holders (as defined below) of subordinate voting shares. For purposes of this discussion, a United States Holder is a citizen or resident of the United States, a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) that is created or organized in or under the laws of the United States or of any state thereof, an estate, the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source, or a trust, if either (i) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more "United States persons" (within the meaning of Section 7701(a)(30) of the U.S. Internal Revenue Code of 1986, as amended (Internal Revenue Code)) have the authority to control all substantial decisions of the trust, or (ii) the trust has made an election under applicable U.S. Department of the Treasury regulations (Treasury Regulations) to be treated as a domestic trust for U.S. federal income tax purposes. If a partnership (or any other entity that is treated as a partnership for U.S. federal income tax purposes) holds subordinate voting shares, the tax treatment of an equity owner of the partnership (or other entity that is treated as a partnership for U.S. federal income tax purposes) generally will depend upon the status of the equity owner and upon the activities of the partnership (or other entity that is treated as a partnership for U.S. federal income tax purposes). If you are an equity owner of a partnership (or other entity that is treated as a partnership for U.S. federal income tax purposes) holding subordinate voting shares, we suggest that you consult with your tax advisor. This summary is for general information purposes only. It does not purport to be a comprehensive description of all of the tax considerations that may be relevant to your decision to purchase, hold or dispose of subordinate voting shares. This summary considers only United States Holders who will own subordinate voting shares as capital assets within the meaning of Section 1221 of the Internal Revenue Code. In this context, the term "capital assets" means, in general, assets held for investment by a taxpayer. Certain material aspects of U.S. federal income tax relevant to non-United States Holders are also discussed below.

This discussion is based on current provisions of the Internal Revenue Code, current and proposed Treasury Regulations promulgated thereunder, administrative rulings and pronouncements of the U.S. Internal Revenue Service (the "IRS"), and judicial decisions, all as of February 13, 2019, and all of which are subject to change, possibly on a retroactive basis. This discussion does not address all aspects of U.S. federal income taxation that may be relevant to any particular United States Holder based on the United States Holder's individual circumstances. In particular, this discussion does not address the potential application of the alternative minimum tax or U.S. federal income tax consequences to United States Holders who are subject to special treatment, including, without limitation, taxpayers who are broker dealers or insurance companies, taxpayers who have elected mark-to-market accounting, individual retirement and other tax-deferred accounts, tax-exempt organizations, financial institutions or "financial services entities," real estate investment trusts, regulated investment companies, taxpayers subject to special accounting rules under Section 451(b) of the Internal Revenue Code, taxpayers who hold subordinate voting shares as part of a "straddle," "hedge" or "conversion transaction" with other investments, taxpayers owning directly, indirectly or by attribution at least 10% of the voting power or value of our share capital, and taxpayers whose functional currency (as defined in Section 985 of the Internal Revenue Code) is not the U.S. dollar.

This discussion does not address any aspect of U.S. federal gift or estate tax or state, local or non-U.S. tax laws. Additionally, the discussion does not consider the tax treatment of persons who hold subordinate voting shares through a partnership or other pass-through entity (such as an S corporation). For U.S. federal income tax purposes, income earned through a non-U.S. or domestic partnership or similar entity generally is attributed to its owners. You are advised to consult your own tax advisor with respect to the specific tax consequences to you of purchasing, holding or disposing of the subordinate voting shares.

In December 2017, the United States enacted U.S. federal income tax reform, which significantly changed the U.S. federal income tax system. Although this summary takes into account this new U.S. federal income tax law, its provisions are complex and there is limited administrative guidance about its application. United States Holders should consult their own tax advisers regarding the potential impact of this new U.S. federal income tax law on the U.S. federal income tax consequences to them in light of their particular circumstances.

Taxation of Dividends Paid on Subordinate Voting Shares

Subject to the discussion of the passive foreign investment company (PFIC) rules below, in the event that we pay a dividend, a United States Holder will be required to include in gross income as ordinary income the amount of any distribution paid on subordinate voting shares, including any Canadian taxes withheld from the amount paid, on the date the distribution is received, to the extent that the distribution is paid out of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes. In addition, distributions of the Corporation's current or accumulated earnings and profits will be foreign source "passive category income" for U.S. foreign tax credit purposes and will not qualify for the dividends received deduction available to corporations. Distributions in excess of such earnings and profits will be applied against and will reduce the United States Holder's tax basis in the subordinate voting shares and, to the extent in excess of such basis, will be treated as capital gain.

Distributions of current or accumulated earnings and profits paid in Canadian dollars to a United States Holder will be includible in the income of the United States Holder in a dollar amount calculated by reference to the exchange rate on the date the distribution is received. A United States Holder who receives a distribution of Canadian dollars and converts the Canadian dollars into U.S. dollars subsequent to receipt will have foreign exchange gain or loss based on any appreciation or depreciation in the value of the Canadian dollar against the U.S. dollar. Such gain or loss will generally be ordinary income and loss and will generally be U.S. source gain or loss for U.S. foreign tax credit purposes. United States Holders should consult their own tax advisors regarding the treatment of a foreign currency gain or loss.

United States Holders will generally have the option of claiming the amount of any Canadian income taxes withheld either as a deduction from gross income or as a dollar-for-dollar credit against their U.S. federal income tax liability, subject to specified conditions and limitations. Individuals who do not claim itemized deductions, but instead utilize the standard deduction, may not claim a deduction for the amount of the Canadian income taxes withheld, but these individuals generally may still claim a credit against their U.S. federal income tax liability. The amount of foreign income taxes that may be claimed as a credit in any year is subject to complex limitations and restrictions, which must be determined on an individual basis by each shareholder. The total amount of allowable foreign tax credits in any year cannot exceed the pre-credit U.S. tax liability for the year attributable to foreign source taxable income and further limitations may apply to individuals under the alternative minimum tax. A United States Holder will be denied a foreign tax credit with respect to Canadian income tax withheld from dividends received on subordinate voting shares to the extent that he or she has not held the subordinate voting shares for at least 16 days of the 31-day period beginning on the date which is 15 days before the ex-dividend date or to the extent that he or she is under an obligation to make related payments with respect to substantially similar or related property. Instead, a deduction may be allowed. Any days during which a

United States Holder has substantially diminished his or her risk of loss on his or her subordinate voting shares are not counted toward meeting the 16-day holding period.

Individuals, estates or trusts who receive "qualified dividend income" (excluding dividends from a PFIC) generally will be taxed at a current maximum U.S. federal rate of 20% (rather than the higher tax rates generally applicable to items of ordinary income) provided certain holding period requirements are met. Subject to the discussion of the PFIC rules below, Celestica believes that dividends paid by it with respect to its subordinate voting shares should constitute "qualified dividend income" for United States federal income tax purposes and that holders who are individuals (as well as certain trusts and estates) should be entitled to the reduced rate of tax, as applicable. Holders are urged to consult their own tax advisors regarding the impact of the "qualified dividend income" provisions of the Internal Revenue Code on their particular situations, including related restrictions and special rules.

Dividends received by certain high-income individuals, trusts and estates will also be subject to a 3.8% unearned Medicare contribution tax on passive income.

Taxation of Disposition of Subordinate Voting Shares

Subject to the discussion of the PFIC rules below, upon the sale, exchange or other disposition of subordinate voting shares, a United States Holder will recognize capital gain or loss in an amount equal to the difference between his or her adjusted tax basis in his or her shares and the amount realized on the disposition.

A United States Holder's adjusted tax basis in the subordinate voting shares will generally be the initial cost, but may be adjusted for various reasons including the receipt by such United States Holder of a distribution that was not made up wholly of earning and profits as described above under the heading "Taxation of Dividends Paid on Subordinate Voting Shares." A United States Holder is required to calculate the dollar value of the proceeds received on the sale date as of the "trade date," rather than the date the sale settles, regardless of whether such United States Holder uses the cash method or accrual method of accounting. Capital gain from the sale, exchange or other disposition of shares held more than one year is long-term capital gain. Long-term capital gain that is recognized by non-corporate taxpayers is eligible for a current maximum 20% rate of taxation plus a 3.8% tax on passive income derived by certain high-income individuals, trusts and estates. A reduced rate does not apply to capital gains realized by a United States Holder that is a corporation. Capital losses are generally deductible only against capital gains and not against ordinary income. In the case of an individual, however, unused capital losses in excess of capital gains may offset up to $3,000 annually of ordinary income. Gain or loss recognized by a United States Holder on a sale, exchange or other disposition of subordinate voting shares generally will be treated as U.S. source income or loss for U.S. foreign tax credit purposes. A United States Holder who receives foreign currency upon disposition of subordinate voting shares and converts the foreign currency into U.S. dollars subsequent to receipt will have foreign exchange gain or loss based on any appreciation or depreciation in the value of the foreign currency against the U.S. dollar. United States Holders should consult their own tax advisors regarding the treatment of a foreign currency gain or loss.

Tax Consequences if We Are a Passive Foreign Investment Company

A non-U.S. corporation will be a passive foreign investment company, or PFIC, if, in general, either (i) 75% or more of its gross income in a taxable year, including the pro rata share of the gross income of any U.S. or foreign company in which it is considered to own 25% or more of the shares by value, is passive income or (ii) 50% or more of its assets in a taxable year, averaged over the year and ordinarily determined based on fair market value and including the pro rata share of the assets of any company in which it is considered to own 25% or more of the shares by value, are held for the production of, or produce, passive income. If Celestica were a PFIC and a United States Holder did not make an election to treat the Corporation as a "qualified electing fund" and did not make a mark-to-market election, each as described below, then:

- "Excess distributions" by Celestica to a United States Holder would be taxed in a special way. "Excess distributions" are amounts received by a United States Holder with respect to subordinate voting shares in any taxable year that exceed 125% of the average distributions received by the United States Holder from the Corporation in the shorter of either the three previous years or his or her holding period for his or her shares before the present taxable year. Excess distributions must be allocated ratably to each day that a United States Holder has held subordinate voting shares. A United States Holder must include amounts allocated to the current taxable year and to any non-PFIC years in his or her gross income as ordinary income for that year. A United States Holder must pay tax on amounts allocated to each prior taxable PFIC year at the highest marginal tax rate in effect for that year on ordinary income and the tax is subject to an interest charge at the rate applicable to deficiencies for income tax.

- The entire amount of gain that is realized by a United States Holder upon the sale or other disposition of shares would also be considered an excess distribution and would be subject to tax as described above.

- A United States Holder's tax basis in shares that were acquired from a decedent generally would not receive a step-up to fair market value as of the date of the decedent's death but instead would be equal to the decedent's tax basis, if lower than such value.

The special PFIC rules do not apply to a United States Holder if the United States Holder makes an election to treat the Corporation as a "qualified electing fund" in the first taxable year in which he or she owns subordinate voting shares and if we comply with reporting requirements as described below. Instead, a shareholder of a qualified electing fund is required for each taxable year to include in income a pro rata share of the ordinary earnings of the qualified electing fund as ordinary income and a pro rata share of the net capital gain of the qualified electing fund as long-term capital gain, subject to a separate election to defer payment of taxes, which deferral is subject to an interest charge. We have agreed to supply United States Holders with the information needed to report income and gain pursuant to this election in the event that we are classified as a PFIC. The election is made on a shareholder-by-shareholder basis and may be revoked only with the consent of the IRS. A shareholder makes the election by attaching a completed IRS Form 8621, reflecting the information contained in the PFIC annual information statement, to a timely filed U.S. federal income tax return. Even if an election is not made, a shareholder in a PFIC who is a United States Holder generally must file a completed IRS Form 8621 every year.

A United States Holder who owns PFIC shares that are publicly traded could elect to mark the shares to market annually, recognizing as ordinary income or loss each year an amount equal to the difference as of the close of the taxable year between the fair market value of the PFIC shares and the United States Holder's adjusted tax basis in the PFIC shares, provided, that, in the case of any loss, it can be recognized only to the extent of any net mark-to-market income recognized in prior years. If the mark-to-market election were made, then the rules set forth above would not apply for periods covered by the election. The subordinate voting shares would be treated as publicly traded for purposes of the mark-to-market election and, therefore, such election could be made if Celestica were classified as a PFIC. A mark-to-market election is, however, subject to complex and specific rules and requirements, and United States Holders are strongly urged to consult their tax advisors concerning this election if Celestica is classified as a PFIC.

Despite the fact that we are engaged in an active business, we are unable to conclude that Celestica was not a PFIC in 2018 or in prior years, though we believe, based on our internally performed analysis, that such status is unlikely. The tests for determining PFIC status include the determination of the value of all assets of the Corporation which is highly subjective. Further, the tests for determining PFIC status are applied annually, and it is difficult to make accurate predictions of future income and assets, which are relevant to the determination as to whether we will be a PFIC in the future. Accordingly, it is possible that Celestica could be a PFIC in 2019 or in a future year. A United States Holder who holds subordinate voting shares during a period in which we are a PFIC will be subject to the PFIC rules, even if we cease to be a PFIC, unless he or she has made a qualifying electing fund election. Although we have agreed to supply United States Holders with the information needed to report income and gain pursuant to this election in the event that Celestica is classified as a PFIC, if Celestica was determined to be a PFIC with respect to a year in which we had not thought that it would be so treated, the information needed to enable United States Holders to make a qualifying electing fund election would not have been provided. United States Holders are strongly urged to consult their tax advisors about the PFIC rules, including the consequences to them of making a mark-to-market or qualifying electing fund elections with respect to subordinate voting shares in the event that Celestica is treated as a PFIC.

Tax Consequences for Non-United States Holders of Subordinate Voting Shares

Except as described in "Information Reporting and Backup Withholding" below, a holder of subordinate voting shares that is not a United States Holder ("Non-United States Holder") will not be subject to U.S. federal income or withholding tax on the payment of dividends on, and the proceeds from the disposition of, subordinate voting shares unless:

- the item is effectively connected with the conduct by the Non-United States Holder of a trade or business in the United States and, generally, in the case of a resident of a country that has an income treaty with the United States, such item is attributable to a permanent establishment in the United States;

- the Non-United States Holder is an individual who holds subordinate voting shares as a capital asset, is present in the United States for 183 days or more in the taxable year of the disposition and satisfies certain other requirements; or

- the Non-United States Holder is subject to tax pursuant to the provisions of U.S. tax law applicable to U.S. expatriates who expatriated prior to June 17, 2008.

Information Reporting and Backup Withholding

Payments made within the United States, or by a U.S. payor or U.S. middleman, of dividends and proceeds arising from certain sales or other taxable dispositions of subordinate voting shares will be subject to information reporting. Backup withholding tax, at the then applicable rate, will apply if a United States Holder (a) fails to furnish the United States Holder's correct U.S. taxpayer identification number (generally on an IRS Form W-9), (b) is notified by the IRS that the United States Holder has previously failed to properly report items subject to backup withholding tax, or (c) fails to certify, under penalty of perjury, that the United States Holder has furnished the United States Holder's correct U.S. taxpayer identification number and that the IRS has not notified the United States Holder that the United States Holder is subject to backup withholding tax. However, United States Holders that are corporations generally are excluded from these information reporting and backup withholding tax rules. Any amounts withheld under the U.S. backup withholding tax rules will be allowed as a credit against a United States Holder's U.S. federal income tax liability, if any, or will be refunded, if the United States Holder follows the requisite procedures and timely furnishes the required information to the IRS. United States Holders should consult their own tax advisors regarding the information reporting and backup withholding tax rules.

U.S. individuals and "specified domestic entities" generally are required to report an interest in any "specified foreign financial asset" if the aggregate value of such assets owned by such person exceeds $50,000 on the last day of the taxable year or $75,000 at any time during the taxable year (or such higher threshold as may apply to a particular taxpayer pursuant to the instructions to IRS Form 8938). Stock issued by a non-U.S. corporation is treated as a specified foreign financial asset for this purpose.

Non-United States Holders generally are not subject to information reporting or backup withholding with respect to dividends paid on or upon the disposition of shares, provided, in some instances, that the Non-United States Holder certifies to his foreign status or otherwise establishes an exemption.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

Any statement in this Annual Report about any of our contracts or other documents is not exhaustive. If the contract or document is filed as an exhibit to this Annual Report or is incorporated herein by reference thereto, the contract or document is deemed to modify our description. You must review the exhibits themselves for a complete description of the contract or document.

You may access this Annual Report, including exhibits and schedules, on our website at www.celestica.com or request a copy free of charge through our website. Requests may also be directed: (i) to clsir@celestica.com; (ii) by mail to Celestica Investor Relations, until April 1, 2019, to: 844 Don Mills Road, Toronto, Ontario, Canada M3C 1V7, and after April 1, 2019, to: 5140 Yonge Street, Suite 1900, Toronto, Ontario, Canada M2N 6L7; or (iii) by telephone at 416-448-2211.

The SEC maintains a website (www.sec.gov) that contains reports, proxy and information statements and other information regarding registrants. You may access the documents we file with or furnish to the SEC at that website (for submissions commencing November 2000, the date we began to file electronically with the SEC). Our SEC filings are also available from commercial document retrieval services.

We also file reports, statements and other information with the Canadian Securities Administrators, or the CSA, and these can be accessed electronically at the CSA's System for Electronic Document Analysis and Retrieval website (www.sedar.com).

You may access other information about Celestica on our website at www.celestica.com. Information on our website is not incorporated by reference into this Annual Report.

I. Subsidiary Information

Not applicable.

Item 11. Quantitative and Qualitative Disclosures about Market Risk

Market Risk

Market risk is the potential loss arising from changes in market rates and market prices. Our market risk exposure results primarily from fluctuations in foreign currency exchange rates and interest rates.

We do not hold financial instruments for speculative trading purposes.

Exchange Rate Risk

Conducting business in currencies other than the U.S. dollar subjects us to translation and transaction risks associated with fluctuations in currency exchange rates. Although we conduct the majority of our business in U.S. dollars (our functional currency), our global operations subject us to foreign currency volatility. Our non-U.S. currency exposures include the Canadian dollar, Thai baht, Malaysian ringgit, Mexican peso, British pound sterling, Chinese renminbi, Euro, Romanian leu, Korean won, and Singapore dollar. As part of our risk management program, we enter into foreign exchange forward contracts and swaps, generally for periods up to 12 months, intended to hedge foreign currency transaction risk and local currency denominated balance sheet exposures. These contracts include, to varying degrees, elements of market risk. We enter into these contracts to lock in the exchange rates for future foreign currency transactions and balance sheet balances, which is intended to reduce the variability of our operating costs and future cash flows denominated in local currencies. While these contracts are intended to reduce the effects of fluctuations in foreign currency exchange rates, our hedging strategy does not mitigate the longer-term impacts of changes to foreign exchange rates.

Currency risk on our income tax expense arises because we are generally required to file our tax returns in the local currency for each particular country in which we have operations. Exchange rate volatility between the relevant local currency and the U.S. dollar will affect the recorded amounts of our foreign assets, liabilities, revenues and expenses in local currency for statutory financial statement purposes. In addition, we earn revenues and incur expenses in foreign currencies as part of our global operations. As a result, we are also exposed to foreign currency exchange transaction risk, such that fluctuations in currency exchange rates may significantly impact the amount of translated U.S. dollars required for expenses incurred in other currencies or received from non-U.S. dollar revenues. While our hedging programs are designed to mitigate currency risk vis-à-vis the U.S. dollar, we remain subject to taxable foreign exchange impacts in our translated local currency financial results relevant for tax reporting purposes.

The table below presents the notional amounts (the U.S. dollar equivalent amounts of the foreign currency buy/sell contracts at hedge rates), weighted average exchange rates by expected (contractual) maturity dates, and the fair values of our outstanding foreign exchange forward contracts and swaps at December 31, 2018. These notional amounts are used to calculate the contractual payments to be exchanged under the contracts. At December 31, 2018, we had foreign currency contracts and swaps covering various currencies in an aggregate notional amount of $544.2 million (December 31, 2017 — $576.1 million). These contracts had a fair value net unrealized loss of $14.2 million at December 31, 2018 (December 31, 2017 — $10.3 million net unrealized gain).

At December 31, 2018, we had foreign exchange forward contracts and swaps to trade U.S. dollars in exchange for the following currencies:

	Expected Maturity Date				
	2019	2020	2021 and thereafter	Total	Fair Value Gain (Loss) (in millions)
Forward Exchange Agreements					
(Contract amounts in millions)					
Receive C$/Pay U.S.$					
Contract amount	$ 210.2	$ —	$ —	$ 210.2	$ (10.3)
Average exchange rate	0.76				
Receive Thai Baht/Pay U.S.$					
Contract amount	$ 81.1	—	—	$ 81.1	$ (0.7)
Average exchange rate	0.03				
Receive Malaysian Ringgit/Pay U.S.$					
Contract amount	$ 53.4	—	—	$ 53.4	$ (0.8)
Average exchange rate	0.24				
Receive Mexican Peso/Pay U.S.$					
Contract amount	$ 25.6	—	—	$ 25.6	$ 0.2
Average exchange rate	0.05				
Receive British Pound Sterling/Pay U.S.$					
Contract amount	$ 5.3	—	—	$ 5.3	$ —
Average exchange rate	1.27				
Receive Chinese Renminbi/Pay U.S.$					
Contract amount	$ 66.8	—	—	$ 66.8	$ (1.6)
Average exchange rate	0.15				
Pay Euro/Receive U.S.$					
Contract amount	$ 35.8	—	—	$ 35.8	$ 0.3
Average exchange rate	1.17				
Receive Romanian Leu/Pay U.S.$					
Contract amount	$ 40.4	—	—	$ 40.4	$ (0.9)
Average exchange rate	0.25				
Receive Singapore Dollar/Pay U.S.$					
Contract amount	$ 22.1	—	—	$ 22.1	$ (0.3)
Average exchange rate	0.74				
Pay Other/Receive U.S.$					
Contract amount	$ 3.5	—	—	$ 3.5	$ (0.1)
Average exchange rate	0.01				
Total	$ 544.2	$ —	$ —	$ 544.2	$ (14.2)

Interest Rate Risk

Borrowings under the New Credit Facility bear interest at specified rates, plus specified margins. See note 12 to the Consolidated Financial Statements in Item 18. Our borrowings under this facility at December 31, 2018 totaled $757.3 million, comprised of $348.3 million under the June Term Loan, $250.0 million under the November Term Loan, and other than ordinary course letters of credit, $159.0 million under the New Revolver. These borrowings expose us to interest rate risk due to the potential variability in market interest rates. Assuming our outstanding aggregate borrowings under the New Credit Facility as at

December 31, 2018 as described above (December 31, 2017 — aggregate outstanding borrowings of $187.5 million under our prior credit facility), and without accounting for the interest rate swap agreements described below, a one-percentage point increase in applicable interest rates would increase our interest expense by $7.6 million annually (December 31, 2017 — an increase of $1.9 million annually). Assuming aggregate borrowings of $600.0 million under our term loans and $450.0 million under the New Revolver (the credit limit thereunder without further use of the accordion feature), and without accounting for the interest rate swap agreements described below, a one-percentage point increase in applicable interest rates would increase our interest expense by $10.5 million annually.

As part of our risk management program, we attempt to mitigate interest rate risk through interest rate swaps. In order to partially hedge against our exposure to interest rate variability on our term loans, we entered into 5-year agreements with a syndicate of third-party banks in August and December 2018 to swap the variable interest rate (based on LIBOR plus a margin) with a fixed rate of interest for an aggregate of $350.0 million of the total borrowings under our term loans. The swap agreements include options that allow us to cancel up to $150.0 million of the notional amount of the original swap agreements ($75.0 million under the November Term Loan starting in December 2020, and $75.0 million under the June Term Loan starting in August 2021). The cancellable options in the swap agreements are aligned with our risk management strategy for our term loans as they allow us to make voluntary prepayments of outstanding amounts without premium or penalty, subject to certain conditions. Our unhedged borrowings under the New Credit Facility at December 31, 2018 were $407.3 million (comprised of an aggregate of $173.3 million under the June Term Loan and $75.0 million under the November Term Loan, and other than ordinary course letters of credit, $159.0 million under the New Revolver). A one-percentage point increase in the interest rates applicable to our unhedged borrowings outstanding as at December 31, 2018 would increase our interest expense by $4.1 million annually (such hedge agreements were not in place as of December 31, 2017).

The change in our exposure to interest rate risk as of December 31, 2018 as compared to December 31, 2017 is attributable to the increased amount of borrowings under the New Credit Facility incurred in 2018 primarily to fund acquisitions in 2018 as compared to the prior year.

See note 21 to the Consolidated Financial Statements in Item 18 for further detail.

Credit and Counterparty Risk

Management monitors the institutions that hold our cash and cash equivalents. Management's emphasis is primarily on safety of principal. Management, in its discretion, has diversified our cash and cash equivalents among banking institutions to adjust our exposure to levels they deem acceptable with respect to any one of these entities. To date, we have experienced no loss or lack of access to our invested cash or cash equivalents; however, we can provide no assurances that access to these holdings will not be impacted by adverse conditions in the financial markets, or that third party institutions will retain acceptable credit ratings or investment practices.

Cash balances held at banking institutions in the United States with which we do business may exceed the Federal Deposit Insurance Corporation (FDIC) insurance limits. While management monitors the cash balances in these bank accounts, such cash balances could be impacted if the underlying banks were to become insolvent or could be subject to other adverse conditions in the financial markets.

Credit risk refers to the risk that a counterparty may default on its contractual obligations resulting in a financial loss to us. We believe our risk of counterparty non-performance is relatively low, however, if a key supplier (or any company within such supplier's supply chain) or customer experiences financial difficulties or fails to comply with their contractual obligations, this could result in a financial loss to us (see Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Overview of business environment" for a discussion of write-downs recorded in each of 2017 and 2016 in connection with our exit from the solar panel manufacturing business). If an institution from which we purchased annuities for our pension plans defaults on their contractual obligations, this would result in a financial loss to us, as we retain ultimate responsibility for the payment of benefits to plan participants unless and until such pension plans are wound-up. With respect to our financial market activities, we have adopted a policy of dealing only with credit-worthy counterparties to help mitigate the risk of financial loss from defaults. We monitor the credit risk of the counterparties with whom we conduct business, through a combined process of credit rating reviews and portfolio reviews. To attempt to mitigate the risk of financial loss from defaults under our foreign currency forward contracts and swaps, and our interest rate swaps, our contracts are held by counterparty financial institutions, each of which had a Standard and Poor's rating of A-2 or above at December 31, 2018. In addition, we maintain cash and short-term investments in highly-rated investments or on deposit with major financial institutions. Each financial institution with which we have our A/R sales program and the SFP had a Standard and Poor's short-term rating of

A-2 or above and a long-term rating of BBB+ or above at December 31, 2018. Each financial institution from which annuities have been purchased for the defined benefit component of our Canadian pension plan had an A.M. Best or Standard and Poor's long-term rating of A or above at December 31, 2018. In addition, the financial institutions from which annuities have been purchased for the defined benefit component of our U.K. pension plans are governed by local regulatory bodies.We also provide unsecured credit to our customers in the normal course of business. From time to time, we extend the payment terms applicable to certain customers and/or provide longer payment terms when deemed commercially reasonable. Longer payment terms, which have become more prevalent, could adversely impact our working capital requirements, and increase our financial exposure and credit risk. We attempt to mitigate customer credit risk by monitoring our customers' financial condition and performing ongoing credit evaluations as appropriate. In certain instances, we may obtain letters of credit or other forms of security from our customers. We may also purchase credit insurance from a financial institution to reduce our credit exposure to certain customers. We consider credit risk in determining our allowance for doubtful accounts and we believe our allowances, as adjusted from time to time, are adequate.

Item 12. Description of Securities Other than Equity Securities

A. Debt Securities

Not applicable.

B. Warrants and Rights

Not applicable.

C. Other Securities

Not applicable.

D. American Depositary Shares

None.

Part II.

Item 13. Defaults, Dividend Arrearages and Delinquencies

None.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

None.

Item 15. Controls and Procedures

The information required by this Item concerning our disclosure controls and procedures, and changes in our internal control over financial reporting, is set forth in Item 5, "Operating and Financial Review and Prospects — Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Controls and Procedures."

Management's Report on Internal Control over Financial Reporting is set forth on page F-1 of our Consolidated Financial Statements in Item 18. The Company completed the acquisition of Impakt in November 2018, and as a result, management has excluded Impakt's internal controls from the scope of its assessment, and conclusion on the effectiveness, of the Company's internal control over financial reporting as of December 31, 2018, and from such report. Impakt represented 10% of the Company's consolidated assets, and less than 1% of the Company's consolidated revenue as of, and for the year ended, December 31, 2018, respectively.

The attestation report from our independent auditors, KPMG LLP (KPMG) is set forth on page F-2 of our Consolidated Financial Statements in Item 18.

Item 16. [Reserved]

Item 16A. Audit Committee Financial Expert

The Board has considered the extensive financial experience of Mr. Etherington, Ms. Koellner, and Ms. Perry, and has determined that each of them is an audit committee financial expert within the meaning of Item 16A(b) of Form 20-F, and each are independent directors, as that term is defined by the applicable Canadian and SEC rules and in the NYSE listing standards.

Item 16B. Code of Ethics

The Board has adopted a Finance Code of Professional Conduct for Celestica's Chief Executive Officer, our senior finance officers, and all personnel in its finance organization to deter wrongdoing and promote honest and ethical conduct in the practice of financial management, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships; full, fair, accurate, timely and understandable disclosure; compliance with all applicable laws, rules and regulations; prompt internal reporting of violations of the code and accountability for adherence to the code. These professionals are expected to abide by this code as well as Celestica's Business Conduct Governance policy and all of our other applicable business policies, standards and guidelines.

The Finance Code of Professional Conduct and the Business Conduct Governance policy can be accessed electronically at www.celestica.com. Celestica will provide a copy of such policies free of charge to any person who so requests. Requests should be directed: (i) to clsir@celestica.com; (ii) by mail to Celestica Investor Relations, until April 1, 2019, to: 844 Don Mills Road, Toronto, Ontario, Canada M3C 1V7, and after April 1, 2019, to: 5140 Yonge Street, Suite 1900, Toronto, Ontario, Canada M2N 6L7; or (iii) by telephone at 416-448-2211.

Item 16C. Principal Accountant Fees and Services

The external auditor is engaged to provide services pursuant to pre-approval policies and procedures established by the Audit Committee of the Board. The Audit Committee approves the external auditor's Audit Plan, the scope of the external auditor's quarterly reviews and all related fees. The Audit Committee must approve any non-audit services provided by the auditor and related fees and does so only if it considers that these services are compatible with the external auditor's independence.

Our auditors are KPMG. KPMG did not provide any financial information systems design or implementation services to us during 2017 or 2018. The Audit Committee has determined that the provision of the non-audit services by KPMG described below does not compromise KPMG's independence.

Audit Fees

KPMG billed $2.5 million in 2018 (2017 — $2.3 million) for audit services.

Audit-Related Fees

KPMG billed $0.3 million in 2018 (2017 — $0.1 million) for audit-related services, including pension audits and due diligence for acquisitions.

Tax Fees

KPMG billed $0.1 million in 2018 (2017 — $0.1 million) for tax compliance and tax advisory services.

All Other Fees

KPMG billed $0.1 million in 2018 for a regulatory performance audit related to compliance with government accounting standards (2017 — $0.2 million).

Pre-approval Policies and Procedures — Percentage of Services Approved by Audit Committee

All KPMG services and fees are approved by the Audit Committee as follows. The Audit Committee has established an Audit and Non-Audit Services Pre-Approval Policy to pre-approve all permissible audit and non-audit services provided by our independent auditors. On an annual basis, the Audit Committee reviews and provides pre-approval for certain types of services that may be rendered by the independent auditors and a budget for audit services for the applicable fiscal year. Upon pre-approval of the services on the initial list, management may engage the auditor for specific engagements that are within the definition of the pre-approved services. Any significant service engagements above a certain threshold will require separate pre-approval. The policy contains a provision delegating pre-approval authority to the Chair of the Audit Committee in instances when pre-approval is needed prior to a scheduled Audit Committee meeting. The Chair of the Audit Committee is required to report on such pre-approvals at the next scheduled Audit Committee meeting. A final detailed review of all audit and non-audit services and fees is performed by the Audit Committee prior to the issuance of the audit opinion at year-end.

Percentage of Hours Expended on KPMG's engagement not performed by KPMG's full-time, permanent employees (if greater than 50%):

Not applicable.

Item 16D. Exemptions from the Listing Standards for Audit Committees

None.

Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

ISSUER PURCHASES OF EQUITY SECURITIES

Period	(a) Total number of subordinate voting shares purchased (in millions)	(b) Average price paid per subordinate voting share	(c) Total number of subordinate voting shares purchased as part of publicly announced plans or programs (in millions)	(d) Maximum number of subordinate voting shares that may yet be purchased under the plans or programs (in millions)
January 1 — 31, 2018	—	—	—	8.3
February 1 — 28, 2018[1]	2.9	$10.57	2.9	5.4
March 1 — 31, 2018[1][2]	0.8	$11.12	0.8	4.6
April 1 — 30, 2018	—	—	—	4.6
May 1 — 31, 2018[2]	0.2	$11.99	0.2	4.4
June 1 — 30, 2018[1][2]	0.5	$12.21	0.5	3.9
July 1 — 31, 2018	—	—	—	3.9
August 1 — 31, 2018[1]	0.9	$12.21	0.9	3.0
September 1 — 30, 2018[1]	1.0	$12.13	1.0	2.0
October 1 — 31, 2018[1]	0.4	$10.27	0.4	1.6
November 1 — 30, 2018[1][2]	2.0	$10.31	0.9	—
December 1 — 31, 2018[2][3]	0.2	$10.21	—	9.5
Total	**8.9**	**$11.01**	**7.6**	

(1) On November 8, 2017, the TSX accepted our notice to launch, and we announced, a normal course issuer bid (the 2017 NCIB). The 2017 NCIB allowed us to repurchase, at our discretion, until the earlier of November 12, 2018 or the completion of purchases thereunder, up to approximately 10.5 million subordinate voting shares (representing approximately 7.3% of our total outstanding subordinate voting and multiple voting shares at the time of launch) in the open market or as otherwise permitted, subject to the normal terms and limitations of such bids. During 2017, we repurchased and cancelled a total of 1.9 million subordinate voting shares under the 2017 NCIB at a weighted average price of $10.58 per share. During 2018, we repurchased and cancelled a total of 6.8 million subordinate voting shares under the 2017 NCIB at a weighted average price of $11.10 per share. The maximum number of subordinate voting shares we were permitted to repurchase for cancellation under the 2017 NCIB was reduced by 1.1 million subordinate voting shares purchased in the open market during the term of the 2017 NCIB (0.8 million subordinate voting shares in 2018) to satisfy delivery obligations under our equity-based compensation plans. See footnote (2) below. The 2017 NCIB expired on November 12, 2018.

(2) From time-to-time, a broker has purchased subordinate voting shares in the open market, on our behalf, to settle vested employee awards under our equity-based compensation plans. During 2018, approximately 2.1 million subordinate voting shares were purchased on our behalf by a broker for such purpose (0.8 million of which were purchased during the term of the 2017 NCIB, and 1.3 million of which were purchased after the expiry of the 2017 NCIB and prior to the beginning of the 2018 NCIB (as defined in footnote (3) below)). Shares purchased to settle employee awards were not cancelled.

(3) On December 14, 2018, the TSX accepted our notice to launch, and we announced, a normal course issuer bid (the 2018 NCIB). The 2018 NCIB allows us to repurchase, at our discretion, until the earlier of December 17, 2019 or the completion of purchases thereunder, up to approximately 9.5 million subordinate voting shares (representing approximately 7.0% of our total outstanding subordinate voting and multiple voting shares at the time of launch) in the open market or as otherwise permitted, subject to the normal terms and limitations of such bids. During 2018, we did not repurchase or cancel any subordinate voting shares under the 2018 NCIB . The maximum number of subordinate voting shares we are permitted to repurchase for cancellation under the 2018 NCIB will be reduced by the number of subordinate voting shares purchased in the open market during the term of the 2018 NCIB to satisfy delivery obligations under our equity-based compensation plans. See footnote (2) above.

Item 16F. Change in Registrant's Certifying Accountant

Not applicable.

Item 16G. Corporate Governance

Corporate Governance

We are subject to a variety of corporate governance guidelines and requirements enacted by the TSX, the CSA, the NYSE and the SEC under its rules and those mandated by the United States Sarbanes Oxley Act of 2002 and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. We are listed on the NYSE and, although we are not required to comply with all of the NYSE corporate governance requirements to which we would be subject if we were a U.S. corporation, our governance practices differ significantly in only one respect from those required of U.S. domestic issuers by the NYSE, as described below. Celestica complies with TSX rules, which require shareholder approval of share compensation arrangements involving new issuances of shares, and of certain amendments to such arrangements, but do not require such approval if the compensation arrangements involve only shares purchased by the Corporation in the open market. NYSE rules require shareholder approval of all equity compensation plans (and material revisions thereto) regardless of whether new issuances or treasury shares are used.

Our corporate governance guidelines can be accessed electronically at www.celestica.com.

Item 16H. Mine Safety Disclosure

Not applicable.

Part III.

Item 17. Financial Statements

Not applicable.

Item 18. Financial Statements

The following financial statements have been filed as part of this Annual Report:

Item 19. Exhibits

The following exhibits have been filed as part of this Annual Report:

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exhibit No.	
1.1	Certificate and Restated Articles of Incorporation effective June 25, 2004	20-F	001-14832	March 23, 2010	1.10	
1.2	Bylaw No. 1	20-F	001-14832	March 23, 2010	1.11	
2	Instruments defining rights of holders of equity securities or long-term debt:					
2.1	See Certificate and Restated Articles of Incorporation identified above					
2.2	Form of Subordinate Voting Share Certificate	F-3ASR	333-221144	October 26, 2017	4.1	
4	Certain Contracts:					
4.1	Services Agreement, dated as of January 1, 2009, between Celestica Inc. and Onex Corporation ("Services Agreement")	20-F	001-14832	March 23, 2010	4.1	
4.2	Amending Agreement to Services Agreement made as of January 1, 2017	20-F	001-14832	March 13, 2017	4.2	
4.3	Executive Employment Agreement, dated as of January 1, 2008, between Celestica Inc., Celestica International Inc. and Elizabeth L. DelBianco	20-F	001-14832	March 25, 2008	4.6	
4.4	Amended and Restated Celestica Inc. Long-Term Incentive Plan as of January 29, 2014	6-K	001-14832	July 9, 2014	99.1	
4.5	Amended and Restated Celestica Inc. Long-Term Incentive Plan as of July 22, 2015	6-K	001-14832	July 29, 2015	99.1	
4.6	Amended and Restated Celestica Inc. Long-Term Incentive Plan as of October 19, 2015	20-F	001-14832	March 7, 2016	4.5	
4.7	Amended and Restated Celestica Inc. Long-Term Incentive Plan as of October 19, 2016	20-F	001-14832	March 13, 2017	4.7	
4.8	Amended and Restated Celestica Share Unit Plan as of January 29, 2014	6-K	001-14832	July 9, 2014	99.2	
4.9	Amended and Restated Celestica Share Unit Plan as of July 22, 2015	6-K	001-14832	July 29, 2015	99.2	
4.10	Amended and Restated Celestica Share Unit Plan as of October 19, 2015	20-F	001-14832	March 7, 2016	4.8	
4.11	Coattail Agreement, dated June 29, 1998, between Onex Corporation, Celestica Inc. and Montreal Trust Company of Canada.	SC TO-I	005-55523	October 29, 2012	(d)(1)	
4.12	Directors' Share Compensation Plan (2008)	SC TO-I	005-55523	October 29, 2012	(d)(3)	

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exhibit No.	
4.13	Amended and Restated Revolving Trade Receivables Purchase Agreement, dated as of November 4, 2011, among the Celestica Inc., Celestica LLC, Celestica Czech Republic s.r.o., Celestica Holdings Pte Ltd., Celestica Valencia S.A., Celestica Hong Kong Ltd., Celestica (Romania) s.r.l., Celestica Japan KK, Celestica Oregon LLC, each of the financial institutions named on Schedule I thereto and Deutsche Bank AG New York Branch	20-F	001-14832	March 13, 2015	4.12	
4.14	First Amendment to Amended and Restated Revolving Trade Receivables Purchase Agreement	20-F	001-14832	March 13, 2017	4.18	
4.15	Second Amendment to Amended and Restated Revolving Trade Receivables Purchase Agreement	20-F	001-14832	March 14, 2014	4.14	
4.16	Third Amendment to Amended and Restated Revolving Trade Receivables Purchase Agreement					X
4.17	Fourth Amendment to Amended and Restated Revolving Trade Receivables Purchase Agreement*	20-F	001-14382	March 13, 2015	4.16	
4.18	Fifth Amendment to Amended and Restated Revolving Trade Receivables Purchase Agreement and Accession Agreement*	20-F	001-14382	March 7, 2016	4.20	
4.19	Sixth Amendment to Amended and Restated Revolving Trade Receivables Agreement*	20-F	001-14382	March 13, 2017	4.23	
4.20	Letter Agreement pertaining to Amended and Restated Revolving Trade Receivables Agreement*	20-F	001-14382	March 12, 2018	4.20	
4.21	Seventh Amendment to Amended and Restated Revolving Trade Receivables Agreement*	20-F	001-14382	March 12, 2018	4.21	
4.22	Eighth Amendment to Amended and Restated Revolving Trade Receivables Agreement	20-F	001-14382	March 12, 2018	4.22	
4.23	Ninth Amendment to Amended and Restated Revolving Trade Receivables Purchase Agreement and Accession Agreement					X
4.24	Tenth Amendment to the Amended and Restated Revolving Trade Receivables Purchase Agreement†					X
4.25	Directors' Share Compensation Plan, amended and restated as of July 25, 2013	20-F	001-14382	March 14, 2014	4.16	
4.26	Directors' Share Compensation Plan, amended and restated as of January 1, 2016	20-F	001-14382	March 7, 2016	4.22	
4.27	Directors' Share Compensation Plan, amended and restated as of January 1, 2019					X

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exhibit No.	
4.28	Credit Agreement, dated as of June 27, 2018, among Celestica Inc, and the subsidiaries identified therein as Borrowers, Celestica Inc, and specified subsidiaries identified therein as Guarantors, Bank of America, N.A. as Administrative Agent, Swing Line Lender and an L/C Issuer, and the financial institutions named therein as Lenders					X
4.29	First Incremental Facility Amendment, dated as of November 14, 2018, by and among Celestica Inc., Celestica International LP, Celestica (USA) Inc., the guarantors party thereto, the Incremental Term B-2 Lender (as defined therein), and Bank of America, N.A., as Administrative Agent					X
4.30	Second Amendment to Credit Agreement, dated as of December 21, 2018, by and among Celestica Inc., Celestica International LP, Celestica (USA) Inc., the Guarantors party thereto, and Bank of America, N.A., as Administrative Agent.					X
4.31	Securities Purchase and Merger Agreement, dated as of October 9, 2018, by and among Impakt Holdings, LLC, Graycliff Private Equity Partners III Parallel (A-1 Blocker) LLC, Graycliff Private Equity Partners III Parallel LP, Celestica (USA) Inc., Iron Man Acquisition Inc., Iron Man Merger Sub, LLC, and Fortis Advisors LLC, in its capacity as Holder Representative†					X
4.32	First Amendment to the Securities Purchase and Merger Agreement, dated as of November 9, 2018, by and among Graycliff Private Equity Partners III Parallel LP, Iron Man Acquisition Inc., and Impakt Holdings, LLC†					X
8.1	Subsidiaries of Registrant					X
11.1	Finance Code of Professional Conduct	20-F	001-14382	March 23, 2010	11.1	
11.2	Business Conduct Governance Policy	20-F	001-14382	March 12, 2018	11.2	
12.1	Principal Executive Officer Certification pursuant to Rule 13(a)-14(a)					X
12.2	Principal Financial Officer Certification pursuant to Rule 13(a)-14(a)					X
13.1	Certification required by Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code**					X
15.1	Consent of KPMG LLP, Chartered Professional Accountants					X
101.INS**	XBRL Instance Document					X
101.SCH**	XBRL Taxonomy Extension Schema Document					X

Exhibit Number	Description	Incorporated by Reference				Filed Herewith
		Form	File No.	Filing Date	Exhibit No.	
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB**	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document					X

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* Certain confidential portions of this exhibit were omitted by means of redacting a portion of the text. This exhibit has been filed separately with the Securities and Exchange Commission without redactions. Confidential treatment has been granted pursuant to our Application for an Order Granting Confidential Treatment Pursuant to Rule 24b-2 of the U.S. Exchange Act.

** Will not be deemed "filed" for purposes of Section 18 of the U.S. Exchange Act, or otherwise subject to the liability of Section 18 of the U.S. Exchange Act, and will not be incorporated by reference into any filing under the U.S. Securities Act, or the U.S. Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

† Certain confidential portions of this exhibit were omitted by means of redacting a portion of the text. This exhibit has been filed separately with the Securities and Exchange Commission without redactions pursuant to our Application for an Order Granting Confidential Treatment Pursuant to Rule 24b-2 of the U.S. Exchange Act.

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

CELESTICA INC.

By: /s/ ELIZABETH L. DELBIANCO

Elizabeth L. DelBianco

Chief Legal and Administrative Officer

Date: March 11, 2019

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Celestica Inc. (the Company) is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. The Company's internal control system was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Our internal control over financial reporting includes those policies and procedures that: pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with applicable accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2018 based on the criteria set forth in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has concluded that, as of December 31, 2018, the Company's internal control over financial reporting is effective.

As discussed in note 3 to the Company's 2018 audited consolidated financial statements, the Company completed the acquisition of Impakt Holdings, LLC (Impakt) in November 2018. As a result, management has excluded Impakt's internal controls from the scope of its assessment, and conclusion on the effectiveness, of the Company's internal control over financial reporting as of December 31, 2018, and from this report. Impakt represented 10% of the Company's consolidated assets and less than 1% of the Company's consolidated revenue as of, and for the year ended, December 31, 2018, respectively.

The Company's independent auditors, KPMG LLP, have audited the effectiveness of our internal control over financial reporting as of December 31, 2018, as stated in their report appearing on page F-2.

March 7, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Celestica Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Celestica Inc.'s (the Company) internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, and the related consolidated statements of operations, comprehensive income, changes in equity and cash flows for each of the years in the three-year period ended December 31, 2018, and related notes (collectively, the consolidated financial statements), and our report dated March 7, 2019 expressed an unqualified opinion on those consolidated financial statements.

The Company acquired Impakt Holdings, LLC (Impakt) in November 2018, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2018, Impakt's internal control over financial reporting. Impakt represented 10% of the Company's consolidated assets, and less than 1% of the Company's consolidated revenue as of, and for the year ended, December 31, 2018, respectively. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Impakt.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's Report on Internal Control over Financial Reporting." Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP
Chartered Professional Accountants,
Licensed Public Accountants

Toronto, Canada
March 7, 2019

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Celestica Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Celestica Inc. (the Company) as of December 31, 2018 and 2017, the related consolidated statements of operations, comprehensive income, changes in equity and cash flows for each of the years in the three-year period ended December 31, 2018, and related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the financial performance and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 7, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in note 2(y) to the consolidated financial statements, the Company has changed its method of accounting for revenue recognition in 2018 due to the adoption of IFRS 15, Revenue from Contracts with Customers and included the presentation of the consolidated balance sheet as of January 1, 2017.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP
Chartered Professional Accountants,
Licensed Public Accountants

We have served as the Company's auditor since 1997.

Toronto, Canada
March 7, 2019

CELESTICA INC.
CONSOLIDATED BALANCE SHEETS
(in millions of U.S. dollars)

	January 1 2017	December 31 2017	December 31 2018
Assets	(restated)*	(restated)*	
Current assets:			
Cash and cash equivalents (note 21)	$ 557.2	$ 515.2	$ 422.0
Accounts receivable (note 5)	1,017.4	1,023.7	1,206.6
Inventories (note 6)	684.4	824.0	1,089.9
Income taxes receivable	5.4	1.6	5.0
Assets classified as held for sale (note 7)	28.9	30.1	27.4
Other current assets	73.9	82.0	72.6
Total current assets	2,367.2	2,476.6	2,823.5
Property, plant and equipment (note 8)	302.7	323.9	365.3
Goodwill (note 9)	23.2	23.2	198.4
Intangible assets (note 9)	25.5	21.6	283.6
Deferred income taxes (note 20)	35.3	37.6	36.7
Other non-current assets (note 10)	88.0	81.3	30.2
Total assets	$ 2,841.9	$ 2,964.2	$ 3,737.7
Liabilities and Equity			
Current liabilities:			
Borrowings under credit facility & finance leases (notes 4 & 12)	$ 56.0	$ 37.9	$ 107.7
Accounts payable	876.9	931.1	1,126.7
Accrued and other current liabilities	261.7	233.2	320.4
Income taxes payable (note 20)	32.4	37.7	42.3
Current portion of provisions (note 11)	18.7	26.6	23.2
Total current liabilities	1,245.7	1,266.5	1,620.3
Long-term portion of borrowings under credit facility & finance leases (notes 4 & 12)	188.7	166.5	650.2
Pension and non-pension post-employment benefit obligations (note 19)	86.0	97.8	88.8
Provisions and other non-current liabilities (note 11)	28.3	35.4	20.6
Deferred income taxes (note 20)	35.4	27.8	25.5
Total liabilities	1,584.1	1,594.0	2,405.4
Equity:			
Capital stock (note 13)	2,048.2	2,048.3	1,954.1
Treasury stock (note 13)	(15.3)	(8.7)	(20.2)
Contributed surplus	862.6	863.0	906.6
Deficit	(1,613.0)	(1,525.7)	(1,481.7)
Accumulated other comprehensive loss (note 14)	(24.7)	(6.7)	(26.5)
Total equity	1,257.8	1,370.2	1,332.3
Total liabilities and equity	$ 2,841.9	$ 2,964.2	$ 3,737.7

Commitments, contingencies and guarantees (note 24), Subsequent event (note 8)

Signed on behalf of the Board of Directors

[Signed] William A. Etherington, Director

[Signed] Laurette T. Koellner, Director

** Certain prior period figures have been restated to reflect the adoption of IFRS 15 (see note 2)*

The accompanying notes are an integral part of these consolidated financial statements.

CELESTICA INC.
CONSOLIDATED STATEMENT OF OPERATIONS
(in millions of U.S. dollars, except per share amounts)

	Year ended December 31		
	2016 (restated)*	2017 (restated)*	2018
Revenue	$ 6,046.6	$ 6,142.7	$ 6,633.2
Cost of sales (notes 6 & 15)	5,617.0	5,724.2	6,202.7
Gross profit	429.6	418.5	430.5
Selling, general and administrative expenses (SG&A) (note 15)	211.1	203.2	219.0
Research and development	24.9	26.2	28.8
Amortization of intangible assets (note 9)	9.4	8.9	15.4
Other charges (note 16)	25.5	37.0	61.0
Earnings from operations	158.7	143.2	106.3
Refund interest income (notes 17 & 20)	(14.3)	—	—
Finance costs (note 17)	10.0	10.1	24.4
Earnings before income taxes	163.0	133.1	81.9
Income tax expense (recovery) (note 20)			
Current	14.2	39.1	39.7
Deferred	10.5	(11.5)	(56.7)
	24.7	27.6	(17.0)
Net earnings	$ 138.3	$ 105.5	$ 98.9
Basic earnings per share	$ 0.98	$ 0.74	$ 0.71
Diluted earnings per share	$ 0.96	$ 0.73	$ 0.70
Shares used in computing per share amounts (in millions):			
Basic (note 23)	141.8	143.1	139.4
Diluted (note 23)	143.9	145.2	140.6

** Certain prior period figures have been restated to reflect the adoption of IFRS 15 (see note 2)*

The accompanying notes are an integral part of these consolidated financial statements.

CELESTICA INC.
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
(in millions of U.S. dollars)

	Year ended December 31		
	2016	2017	2018
	(restated)*	(restated)*	
Net earnings	$ 138.3	$ 105.5	$ 98.9
Other comprehensive income (loss), net of tax (note 14)			
Items that will not be reclassified to net earnings:			
Gains (losses) on pension and non-pension post-employment benefit plans (note 19)	17.1	(18.2)	(54.9)
Items that may be reclassified to net earnings:			
Currency translation differences for foreign operations	—	0.7	0.1
Changes from currency forward derivatives designated as hedges	8.1	17.3	(15.5)
Changes from interest rate swap derivatives designated as hedges	—	—	(4.4)
Total comprehensive income	$ 163.5	$ 105.3	$ 24.2

** Certain prior period figures have been restated to reflect the adoption of IFRS 15 (see note 2)*

The accompanying notes are an integral part of these consolidated financial statements.

CELESTICA INC.
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
(in millions of U.S. dollars)

	Capital stock (note 13)	Treasury stock (note 13)	Contributed surplus	Deficit	Accumulated other comprehensive income (loss) [(a)]	Total equity
Balance — December 31, 2015	$ 2,093.9	$ (31.4)	$ 846.7	$ (1,785.4)	$ (32.8)	$ 1,091.0
Impact of change in accounting policies (note 2)	—	—	—	17.0	—	17.0
Restated balance at December 31, 2015	2,093.9	(31.4)	846.7	(1,768.4)	(32.8)	1,108.0
Capital transactions:						
Issuance of capital stock	6.4	—	(2.3)	—	—	4.1
Repurchase of capital stock for cancellation	(52.1)	—	17.8	—	—	(34.3)
Purchase of treasury stock for stock-based plans	—	(18.2)	—	—	—	(18.2)
Stock-based compensation and other	—	34.3	0.4	—	—	34.7
Total comprehensive income:						
Net earnings for 2016	—	—	—	138.3	—	138.3
Gains on pension and non-pension post-employment benefit plans (note 19)	—	—	—	17.1	—	17.1
Changes from currency forward derivatives designated as hedges	—	—	—	—	8.1	8.1
Balance — December 31, 2016	$ 2,048.2	$ (15.3)	$ 862.6	$ (1,613.0)	$ (24.7)	$ 1,257.8
Capital transactions:						
Issuance of capital stock	30.4	—	(16.8)	—	—	13.6
Repurchase of capital stock for cancellation	(30.3)	—	10.4	—	—	(19.9)
Purchase of treasury stock for stock-based plans	—	(16.7)	—	—	—	(16.7)
Stock-based compensation and other	—	23.3	6.8	—	—	30.1
Total comprehensive income:						
Net earnings for 2017	—	—	—	105.5	—	105.5
Losses on pension and non-pension post-employment benefit plans (note 19)	—	—	—	(18.2)	—	(18.2)
Currency translation differences for foreign operations	—	—	—	—	0.7	0.7
Changes from currency forward derivatives designated as hedges	—	—	—	—	17.3	17.3
Balance — December 31, 2017	$ 2,048.3	$ (8.7)	$ 863.0	$ (1,525.7)	$ (6.7)	$ 1,370.2
Capital transactions:						
Issuance of capital stock	14.9	—	(14.5)	—	—	0.4
Repurchase of capital stock for cancellation	(109.1)	—	33.6	—	—	(75.5)
Purchase of treasury stock for stock-based plans	—	(22.4)	—	—	—	(22.4)
Stock-based compensation and other	—	10.9	24.5	—	—	35.4
Total comprehensive income:						
Net earnings for 2018	—	—	—	98.9	—	98.9
Losses on pension and non-pension post-employment benefit plans (note 19)	—	—	—	(54.9)	—	(54.9)
Currency translation differences for foreign operations	—	—	—	—	0.1	0.1
Changes from currency forward derivatives designated as hedges	—	—	—	—	(15.5)	(15.5)
Changes from interest rate swap derivatives designated as hedges	—	—	—	—	(4.4)	(4.4)
Balance — December 31, 2018	$ 1,954.1	$ (20.2)	$ 906.6	$ (1,481.7)	$ (26.5)	$ 1,332.3

(a) Accumulated other comprehensive income (loss) is net of tax. See note 14.

The accompanying notes are an integral part of these consolidated financial statements.

CELESTICA INC.
CONSOLIDATED STATEMENT OF CASH FLOWS
(in millions of U.S. dollars)

	Year ended December 31		
	2016	2017	2018
Cash provided by (used in):	(restated)*	(restated)*	
Operating activities:			
Net earnings	$ 138.3	$ 105.5	$ 98.9
Adjustments to net earnings for items not affecting cash:			
Depreciation and amortization	75.6	76.5	89.1
Equity-settled stock-based compensation (note 13)	33.0	30.1	33.4
Other charges (note 16)	21.2	5.7	1.4
Finance costs, net of refund interest income	(4.3)	10.1	24.4
Income tax expense (recovery)	24.7	27.6	(17.0)
Other	(1.1)	(1.6)	(7.5)
Changes in non-cash working capital items:			
Accounts receivable	(134.6)	(6.3)	(155.4)
Inventories	(61.5)	(139.6)	(224.0)
Other current assets	(5.3)	(2.0)	7.6
Accounts payable, accrued and other current liabilities and provisions	75.4	51.8	227.0
Non-cash working capital changes	(126.0)	(96.1)	(144.8)
Net income tax refund (paid), including related refund interest income	11.9	(30.8)	(44.8)
Net cash provided by operating activities	173.3	127.0	33.1
Investing activities:			
Acquisitions (note 3)	(14.9)	—	(467.1)
Purchase of computer software and property, plant and equipment [(a)]	(64.1)	(102.6)	(82.2)
Proceeds from sale of assets	1.0	0.8	3.7
Repayment of advances from solar supplier (note 4)	14.0	12.5	—
Net cash used in investing activities	(64.0)	(89.3)	(545.6)
Financing activities:			
Borrowing under prior credit facility (note 12)	40.0	—	163.0
Repayments under prior credit facility (note 12)	(75.0)	(40.0)	(350.5)
Borrowing under new credit facility (note 12)	—	—	759.0
Repayments under new credit facility (note 12)	—	—	(1.7)
Finance lease payments (note 12)	(4.5)	(6.5)	(17.0)
Issuance of capital stock (note 13)	4.1	13.6	0.4
Repurchase of capital stock for cancellation (note 13)	(34.3)	(19.9)	(75.5)
Purchase of treasury stock for stock-based plans (note 13)	(18.2)	(16.7)	(22.4)
Finance costs paid	(9.5)	(10.2)	(36.0)
Net cash provided by (used in) financing activities	(97.4)	(79.7)	419.3
Net increase (decrease) in cash and cash equivalents	11.9	(42.0)	(93.2)
Cash and cash equivalents, beginning of year	545.3	557.2	515.2
Cash and cash equivalents, end of year	$ 557.2	$ 515.2	$ 422.0

(a) Additional equipment of $9.3 was acquired through finance leases in 2018 (2017 —$5.0; 2016 — $3.4). See notes 4, 8 and 12. Purchases of property, plant and equipment that were unpaid at December 31, 2018 were $14.4 (December 31, 2017 — $14.0; December 31, 2016 — $22.6).

** Certain prior period figures have been restated to reflect the adoption of IFRS 15 (see note 2)*

The accompanying notes are an integral part of these consolidated financial statements.

1. REPORTING ENTITY:

Celestica Inc. (Celestica) is incorporated in Ontario with its corporate headquarters located in Toronto, Ontario, Canada. Celestica's subordinate voting shares are listed on the Toronto Stock Exchange (TSX) and the New York Stock Exchange (NYSE).

Celestica delivers innovative supply chain solutions globally to customers in two operating and reportable segments: Advanced Technology Solutions (ATS) and Connectivity & Cloud Solutions (CCS). Our ATS segment consists of our ATS end market, and is comprised of our aerospace and defense, industrial, smart energy, healthtech, and capital equipment businesses. Our capital equipment business consists of our semiconductor, display, and power & signal distribution equipment businesses. Our CCS segment consists of our Communications and Enterprise end markets, and is comprised of our enterprise communications, telecommunications, servers and storage businesses. See note 25 for a discussion of the reorganization of our end markets and the division of our business into two operating and reportable segments, commencing in the first quarter of 2018. Our prior period financial information has been reclassified to reflect the reorganized segment structure and to conform to the current presentation.

2. BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES:

Statement of compliance:

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

The consolidated financial statements were authorized for issuance by our Board of Directors on March 7, 2019.

Functional and presentation currency:

The consolidated financial statements are presented in U.S. dollars, which is also our functional currency. Unless otherwise noted, all financial information is presented in millions of U.S. dollars (except percentages and per share amounts).

Use of estimates and judgments:

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities, revenue and expenses, and the related disclosures of contingent assets and liabilities. We base our judgments, estimates and assumptions on current facts, historical experience and various other factors that we believe are reasonable under the circumstances. The economic environment could also impact certain estimates necessary to prepare our consolidated financial statements, including estimates related to the recoverable amounts used in our impairment testing of our non-financial assets, and the discount rates applied to our net pension and non-pension post-employment benefit assets or liabilities. Our assessment of these factors forms the basis for our judgments on the carrying values of our assets and liabilities, and the accrual of our costs and expenses. Actual results could differ materially from our estimates and assumptions. We review our estimates and underlying assumptions on an ongoing basis and make revisions as determined necessary by management. Revisions are recognized in the period in which the estimates are revised and may impact future periods as well.

Key sources of estimation uncertainty and judgment: We have applied significant estimates, judgment and assumptions in the following areas which we believe could have a significant impact on our reported results and financial position: our determination of the timing of revenue recognition, measures of work in progress, and estimates and timing of expected returns, revenues and related costs; valuations of inventory, assets held for sale and income taxes; the amount of our restructuring charges or recoveries; the measurement of the recoverable amounts of our cash generating units (or CGUs, which are the smallest identifiable group of assets that cannot be tested individually and generate cash inflows that are largely independent of those of other assets or groups of assets), which includes estimating future growth, profitability, discount and terminal growth rates, and the fair value of our real property; our valuations of financial assets and liabilities, pension and non-pension post-employment benefit costs, employee stock-based compensation expense, provisions and contingencies; and the allocation of the purchase price and other valuations related to our business acquisitions.

We have also applied significant judgment in the following areas: the determination of our CGUs (which can be comprised of a single site, a group of sites, or a line of business) and whether events or changes in circumstances during the relevant period are indicators that a review for impairment should be conducted, the timing of the recognition of charges or recoveries associated with our restructuring actions, and the decisions and timing of our pension annuity purchases.

We describe our use of judgment and estimation uncertainties in greater detail in the accounting policies described under "Significant Accounting Policies" below.

Recently adopted accounting standards:

IFRS 9, Financial Instruments:

Effective January 1, 2018, we adopted IFRS 9, *Financial Instruments*. This standard introduced a new model for the classification and measurement of financial assets, a single expected credit loss (ECL) model for the measurement of the impairment of financial assets, and a new model for hedge accounting that is aligned with a company's risk management activities. In connection with the adoption of this standard, we also complied with the transitional rules of IAS 1, *Presentation of Financial Statements* and IFRS 7, *Financial Instruments Disclosures*. In accordance with the transitional provisions of the rule, we have applied the changes of IFRS 9 retrospectively, with the exception of the hedge accounting policies, which we have applied prospectively as required. The adoption of this standard did not result in any adjustments to our consolidated financial statements. See notes 2(q) and (r) for further detail.

Under IFRS 9, financial assets are classified as: measured at amortized cost, fair value through other comprehensive income (FVOCI), or fair value through profit or loss (FVTPL). This classification is generally based on the business model in which the financial asset is managed and its contractual cash flow characteristics. IFRS 9 eliminated the held-to-maturity, loans and receivables, and available-for-sale categories previously allowed under IAS 39. Trade and non-customer receivables, that were previously classified as loans and receivables under IAS 39, are measured at amortized cost under IFRS 9. Although the classification of such assets changed, measurement of these assets continues to be at amortized cost, and no changes to their carrying amounts were required upon adopting IFRS 9. For financial liabilities, IFRS 9 largely retains the existing IAS 39 classifications, with the exception of those designated at FVTPL. We do not currently hold any financial liabilities designated as FVTPL, or any financial assets or liabilities designated as FVOCI.

IFRS 15, Revenue from Contracts with Customers:

Effective January 1, 2018, we adopted IFRS 15, *Revenue from Contracts with Customers*. This standard provides a comprehensive five-step revenue recognition model for all contracts with customers, and prescribes when and how much revenue should be recognized. This standard replaced IAS 18, *Revenues*, IAS 11, *Construction Contracts,* and related interpretations. In accordance with the transitional provisions of the rule, we elected to apply IFRS 15 using the retrospective method, and have restated the comparative reporting periods presented herein, and recognized the transitional adjustments through equity at the start of the first comparative reporting period presented herein. The new standard changed the timing of our revenue recognition for a significant portion of our business, resulting in the recognition of revenue for certain customer contracts earlier than under the previous recognition rules (which was generally upon delivery). The new standard had a material impact on our consolidated financial statements, primarily in relation to inventory and accounts receivable balances. See note 2(y) for the transitional impacts of adopting IFRS 15.

SIGNIFICANT ACCOUNTING POLICIES:

The accounting policies below are in compliance with IFRS and have been applied consistently to all periods presented in these consolidated financial statements.

(a) Basis of measurement:

These consolidated financial statements have been prepared primarily on the historical cost basis. Other measurement bases, where used, are described in the applicable notes.

(b) Basis of consolidation:

These consolidated financial statements include our direct and indirect subsidiaries, all of which are wholly-owned. Any subsidiaries that are formed or acquired during the year are consolidated from their respective dates of formation or acquisition. Inter-company transactions and balances are eliminated on consolidation.

(c) Business combinations:

We use the acquisition method to account for any business combinations. All identifiable assets and liabilities are recorded at fair value as of the acquisition date. Any goodwill that arises from business combinations is tested annually for impairment (see note 2(l)). Potential obligations for contingent consideration and other contingencies are also recorded at fair value as of the acquisition date. We record subsequent changes in the fair value of such potential obligations from the date of acquisition to the settlement date in our consolidated statement of operations. We expense integration costs (for the establishment of business processes, infrastructure and information systems for acquired operations) and acquisition-related consulting and transaction costs as incurred in our consolidated statement of operations.

We use judgment to determine the estimates used to value identifiable net assets and the fair value of contingent consideration, if applicable, at the acquisition date. We may engage third parties to assist in determining the fair value of inventory, property, plant and equipment and intangible assets. We use estimates to determine cash flow projections, including the period of expected future benefit, and future growth and discount rates, among other factors.

(d) Foreign currency translation:

The majority of our subsidiaries have a U.S. dollar functional currency, which represents the currency of the primary economic environment in which they operate. For these subsidiaries, we translate monetary assets and liabilities denominated in foreign currencies into U.S. dollars at the period-end exchange rates. We translate non-monetary assets and liabilities denominated in foreign currencies into U.S. dollars at historic rates, and we translate revenue and expenses into U.S. dollars at the average exchange rates prevailing during the month of the transaction. Exchange gains and losses also arise on the settlement of foreign-currency denominated transactions. We recognize foreign currency differences arising on translation in our consolidated statement of operations.

For our subsidiaries with a non-U.S. dollar functional currency, we translate assets and liabilities into U.S. dollars using the period-end exchange rates, and we translate revenue and expenses into U.S. dollars at the average exchange rates prevailing during the month of the transaction. We defer gains and losses arising from the translation of these operations in the foreign currency translation account included in accumulated other comprehensive income (OCI).

(e) Cash and cash equivalents:

Cash and cash equivalents include cash on account and short-term investments with original maturities of three months or less. These instruments are subject to an insignificant risk of change in fair value over their terms and, as a result, we carry cash and cash equivalents at cost.

(f) Accounts receivable:

We initially value our accounts receivable at fair value. We record an allowance for doubtful accounts against accounts receivable that management believes are impaired. We record specific allowances against customer receivables based on a forward-looking ECL model. Our allowance is based on historical experience, and includes consideration of the aging of the balances, the customer's creditworthiness, current economic conditions, expectation of bankruptcies, and political and economic volatility in the markets/location of our customers, among other factors. A default of accounts receivable occurs when customers are unable to pay for the goods or services provided in accordance with the contract terms and conditions. An accounts receivable

balance is written off or written down to its net realizable value as soon as it is known to be in full or partial default. We will adjust previous write-downs to reflect changes in estimates or actual experience.

(g) Inventories:

We procure inventory and manufacture based on specific customer orders and forecasts and value our inventory on a first-in, first-out basis at the lower of cost and net realizable value. The cost of our finished goods and work in progress includes direct materials, labor and overhead. We may require valuation adjustments if actual market conditions or demand for our customers' products or services are less favorable than originally projected. The determination of net realizable value involves significant management judgment. We consider factors such as shrinkage, the aging of and future demand for the inventory, and contractual arrangements with customers. We attempt to utilize excess inventory in other products we manufacture or return inventory to the relevant suppliers or customers. We use future sales volume forecasts to estimate excess inventory on-hand. A change to these assumptions may impact our inventory valuation and our gross margins. Should circumstances change, we may adjust our previous write-downs in our consolidated statement of operations in the period a change in estimate occurs.

(h) Assets classified as held for sale:

We classify assets as held for sale if the carrying amount will be recovered principally through a sale transaction rather than through continued use. Management must be committed to the sale transaction and the asset must be immediately available for sale in its present condition to qualify as an asset held for sale. Assets classified as held for sale are measured at the lower of their carrying amount and fair value less costs of disposal, and are no longer depreciated. The determination of fair value less costs of disposal involves judgment by management of the probability and timing of disposition and the expected amount of recoveries and costs. We may engage third parties to assist in the determination of the estimated fair value less costs of disposal for assets classified as held for sale. At the end of each reporting period, we evaluate the appropriateness of our estimates and assumptions. We may require adjustments to reflect actual experience or changes in estimates.

(i) Property, plant and equipment:

We carry property, plant and equipment at cost less accumulated depreciation and accumulated impairment losses. Cost consists of expenditures directly attributable to the acquisition of the asset, including interest on qualified long-term assets. We capitalize the cost of an asset when the economic benefits associated with that asset are probable and when the cost can be measured reliably. We capitalize the costs of major renovations and we write-off the carrying amount of replaced assets. We expense all other maintenance and repair costs in our consolidated statement of operations as incurred. We do not depreciate land. We recognize depreciation expense on a straight-line basis over the estimated useful life of the asset as follows:

Buildings	Up to 40 years
Building/leasehold improvements	Up to 40 years or term of lease
Machinery and equipment	3 to 15 years

We estimate the useful life of property, plant and equipment based on the nature of the asset, historical experience, expected changes in technology, and the expected duration of related customer programs. When major components of an asset have a significantly different useful life than their primary asset, the components are accounted for and depreciated separately. We review our estimates of residual values, useful lives and the methods of depreciation annually at year end and, if required, adjust for these prospectively. We determine gains and losses on the disposal or retirement of property, plant and equipment by comparing the proceeds from disposal with the carrying amount of the asset and we recognize these gains and losses in our consolidated statement of operations in the period of disposal.

(j) Leases:

We are the lessee of property, plant and equipment, primarily buildings and machinery. We classify leases as operating leases where the risks and rewards of ownership are retained by the lessor. We generally treat payments made under operating leases as rentals and recognize them as expenses on a straight-line basis over the term of the lease in our consolidated statement of operations. For operating leases, we do not record the leased asset or associated obligation on our consolidated balance sheet.

We classify leases as finance leases if the risks and rewards of ownership have substantially transferred to us. We capitalize finance leases at the commencement of the lease at the lower of the fair value of the leased asset and the present value of the minimum lease payments (included in property, plant and equipment on our consolidated balance sheet), and we depreciate finance leases over a period based on the useful life of the asset. We include the corresponding liabilities, net of finance costs, on our consolidated balance sheet (see note 12). We allocate each finance lease payment between the liability and finance costs.

See note 2(x), "Recently issued accounting pronouncements" for a description of a new IFRS standard on leases that we adopted as of January 1, 2019.

(k) Goodwill and intangible assets:

Goodwill:

We initially record goodwill related to acquisitions on our consolidated balance sheet in the amount of the excess of the fair value of the aggregate consideration paid (including the estimated fair value of any contingent consideration) over the fair value of the identifiable net assets acquired. In subsequent reporting periods, we measure goodwill at cost less accumulated impairment losses, if any. We do not amortize goodwill. For purposes of impairment testing, we allocate goodwill to the CGU, or group of CGUs, that we expect will benefit from the related acquisition. See note 2(l), "Impairment of goodwill, intangible assets and property, plant and equipment."

Intangible assets:

We record intangible assets on our consolidated balance sheet at fair value on the date of acquisition. We capitalize intangible assets when the economic benefits associated with the asset are probable and when the cost can be measured reliably. We estimate the useful life of intangible assets based on the nature of the asset, historical experience and the projected period of expected future economic benefits to be provided by the asset. In subsequent reporting periods, we measure intangible assets at cost less accumulated amortization and accumulated impairment losses, if any. We amortize these assets on a straight-line basis over their estimated useful lives as follows:

Intellectual property	3 to 5 years
Other intangible assets	4 to 15 years
Computer software assets	1 to 10 years

Intellectual property assets consist primarily of certain non-patented intellectual property and process technology. Other intangible assets consist primarily of acquired customer relationships and contract intangibles. Computer software assets consist primarily of software licenses. We review our estimates of residual values, useful lives and the methods of amortization annually at year end and, if required, adjust for these prospectively. We reflect changes in useful lives on a prospective basis.

(l) Impairment of goodwill, intangible assets and property, plant and equipment:

We review the carrying amount of goodwill, intangible assets and property, plant and equipment for impairment whenever events or changes in circumstances (triggering events) indicate that the carrying amount of such assets (or the related CGU or CGUs) may not be recoverable. If any such indication exists, we test the carrying amount of such assets or CGUs for impairment. In addition to an assessment of triggering events during the year, we conduct an annual goodwill impairment assessment in the fourth quarter of the year to correspond with our annual planning cycle. Judgment is required in the determination of our CGUs and whether events or changes in circumstances during the year are indicators that a review for impairment should be conducted.

We recognize an impairment loss when the carrying amount of an asset, CGU or group of CGUs exceeds its recoverable amount. The recoverable amount of an asset, CGU or group of CGUs is measured as the greater of its expected value-in-use and its estimated fair value less costs of disposal. The process of determining the recoverable amount is subjective and requires management to exercise significant judgment in estimating future growth, profitability, discount and terminal growth rates, and in projecting future cash flows, among other factors. Determination of our value-in-use is based on a discounted cash flow

analysis of the relevant asset, CGU or group of CGUs. The process of determining the estimated fair value less costs of disposal requires valuations and use of appraisals. Where applicable, we engage independent brokers to obtain market prices to estimate our real property and other asset values. We recognize impairment losses in our consolidated statement of operations. We first allocate impairment losses in respect of a CGU or group of CGUs to reduce the carrying amount of its goodwill, and then to reduce the carrying amount of other assets in such CGU or group of CGUs generally on a pro rata basis. See notes 8, 9 and 16 (a).

We do not reverse impairment losses for goodwill in future periods. We reverse impairment losses for property, plant and equipment and intangible assets if the losses we recognized in prior periods no longer exist or have decreased as a result of changes in circumstances. At each reporting date, we review for indicators that could change the estimates we used to determine the recoverable amount of the relevant assets. The amount of the reversal will be limited to the carrying amount that would have been determined, net of depreciation or amortization, had we recognized no impairment loss in prior periods.

(m) Provisions:

We recognize a provision for legal or constructive obligations arising from past events when the amount can be reliably estimated and it is probable that an outflow of resources will be required to settle an obligation. The nature and type of provisions vary and management judgment is required to determine the extent of an obligation and whether the outflow of resources is probable. At the end of each reporting period, we evaluate the appropriateness of the remaining balances. We may require adjustments to the recorded amounts to reflect actual experience or changes in estimates in future periods.

Restructuring:

We incur restructuring charges relating to workforce reductions, site consolidations, and costs associated with businesses we are downsizing or exiting. Our restructuring charges include employee severance and benefit costs, consultant costs, gains, losses or impairments related to owned sites and equipment we no longer use and which are available for sale, impairment of related intangible assets, and costs related to leased sites and equipment we no longer use.

The recognition of restructuring charges requires management to make certain judgments and estimates regarding the nature, timing and amounts associated with our restructuring actions. Our major assumptions include the timing of employees to be terminated, the measurement of termination costs, the timing and amount of lease obligations and any anticipated sublease recoveries from exited sites, and the timing of disposition and estimated fair values less costs of disposal for assets we no longer use and which are available for sale. We develop detailed plans and record termination costs in the period the employees are informed of their termination. For owned sites and equipment that are no longer in use and are available for sale, we recognize an impairment loss based on their estimated fair value less costs of disposal, with fair value estimated based on market prices for similar assets. We may engage third parties to assist in the determination of the fair values less costs of disposal for these assets. For leased sites that we intend to exit, we discount the lease obligation costs, which represent future contractual lease payments and cancellation fees, if any, less estimated sublease recoveries, if any. We recognize any change in provisions due to the passage of time as finance costs. To estimate future sublease recoveries, we engage independent brokers to determine the estimated tenant rents we can expect to realize. At the end of each reporting period, we evaluate the appropriateness of our restructuring charges and balances. Adjustments to the recorded amounts may be required to reflect actual experience or changes in estimates for future periods. See note 16(a).

Legal and other contingencies:

In the normal course of our operations, we may be subject to lawsuits, investigations and other claims, including environmental, labor, product, customer disputes and other matters. The filing of a suit or formal assertion of a claim does not automatically trigger a requirement to record a provision. We recognize a provision for loss contingencies, including legal claims, based on management's estimate of the probable outcome. Judgment is required when there is a range of possible outcomes. Management considers the degree of probability of the outcome and the ability to make a reasonable estimate of the loss. We may also use third party advisors in making our determination. The ultimate outcome, including the amount and timing of any payments required, may vary significantly from our original estimates. Potential material legal and other material contingent obligations that have not been recognized as provisions, as the outcome is remote or not probable, or the amount cannot be reliably estimated, are disclosed as contingent liabilities. See note 24.

Warranty:

We offer product and service warranties to our customers. We record a provision for future warranty costs based on management's estimate of probable claims under these warranties. In determining the amount of the provision, we consider several factors including the terms of the warranty (which vary by customer, product or service), the current volume of products sold or services rendered during the warranty period, and historical warranty information. We review and adjust these estimates as necessary to reflect our experience and new information. The amount and aging of our provision will vary depending on various factors including the length of the warranty offered, the remaining life of the warranty and the extent and timing of warranty claims. We classify the portion of our warranty provision for which payment is expected in the next 12 months as current, and the remainder as non-current.

(n) Employee benefits:

Pension and non-pension post-employment benefits:

We classify pension and non-pension post-employment benefits as either defined contribution plans or defined benefit plans.

Under defined contribution plans, our obligation is to make a fixed contribution to a separate entity. The related investment risk is borne by the employee. We recognize our obligations to make contributions to defined contribution plans as an employee benefit expense in our consolidated statement of operations in the period the employee services are rendered.

Under defined benefit plans, our obligation is to provide an agreed-upon benefit to specified plan participants. We remain exposed to the actuarial and investment risks with respect to defined benefit plans. Our obligation is actuarially determined using the projected unit credit method, based on service and management's estimates. Actuarial valuations require management to make certain judgments and estimates relating to salary escalation, compensation levels at the time of retirement, retirement ages, the discount rate used in measuring the net interest on the net defined benefit asset or liability, and expected healthcare costs (as applicable). These actuarial assumptions could change from period-to-period and actual results could differ materially from the estimates originally made by management. We evaluate our assumptions on a regular basis, taking into consideration current market conditions and historical data. Market driven changes may affect the actual rate of return on plan assets compared to our assumptions, as well as our discount rates and other variables which could cause actual results to differ materially from our estimates. Changes in assumptions could impact our defined benefit pension plan valuations and our future defined benefit pension expense and required funding.

Our obligation for each defined benefit plan consists of the present value of the defined benefit obligation less the fair value of plan assets, and is presented on a net basis on our consolidated balance sheet. When the actuarial calculation results in a benefit, the asset we recognize is restricted to the present value of economic benefits available in the form of future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, we also consider any minimum funding requirements that apply to the plan. An economic benefit is available if it is realizable during the life of the plan, or on settlement of the plan liabilities.

We recognize past service costs or credits arising from plan amendments, whether vested or unvested, immediately in our consolidated statement of operations. We determine the net interest expense (income) on the net defined benefit liability (asset) for each year by applying the discount rate used to measure the defined benefit obligation at the beginning of the year to the net defined benefit liability (asset) position, taking into account any changes in the net defined benefit liability (asset) during the year as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognized in our consolidated statement of operations. The difference between the interest income on plan assets and the actual net return on plan assets is included in the re-measurement of the net defined benefit liability (asset). We recognize actuarial gains and losses on plan assets or obligations, as well as any year over year change in the impairment of the balance sheet position in OCI and we reclassify the amounts to deficit. Curtailment gains or losses may arise from significant changes to a plan. We record curtailment gains or losses in our consolidated statement of operations when the curtailment occurs.

To mitigate the actuarial and investment risks of our defined benefit pension plans, we from time to time purchase annuities (using existing plan assets) from third party insurance companies for certain, or all, plan participants. The purchase of annuities by the pension plan substantially hedges the financial risks associated with our pension obligations. Where the annuities

are purchased on behalf of, and held by the pension plan, the relevant employer retains the ultimate responsibility for the payment of benefits to plan participants, and we retain the pension assets and liabilities on our consolidated balance sheet. Our annuity purchases have resulted (and future annuity purchases may result) in losses, due to a reduction in the value of the plan assets relative to plan obligations as of the date of the annuity purchase. We record these non-cash losses in OCI on our consolidated balance sheet and simultaneously reclassify such amounts to deficit in the same period. Alternatively, where we purchase annuities from insurance companies on behalf of applicable plan participants with the intention of winding-up the relevant plan in the future (with the expectation of transferring the annuities to the individual plan members), the insurance company assumes responsibility for the payment of benefits to the relevant plan participants once the wind-up is complete. In this case, settlement accounting is applied to the purchase of the annuities and the loss (if any) is recorded in other charges in our consolidated statement of operations. In addition, both the pension assets and liabilities will be removed from our consolidated balance sheet once the wind-up of the plan is complete.

Stock-based compensation:

We generally grant performance share units (PSUs) and restricted share units (RSUs), and from time to time grant stock options, to employees under our stock-based compensation plans. Stock options and RSUs vest in installments over the vesting period. Stock options generally vest 25% per year over a four-year period, and RSUs generally vest one-third per year over a three-year period. We treat each installment under a grant of stock options and RSUs as a separate grant in determining the compensation expense. PSUs vest at the end of their respective terms, generally three years from the grant date, to the extent that specified performance conditions have been met.

Stock options:

Stock options are exercisable for subordinate voting shares. We recognize the grant date fair value of stock options granted to employees as compensation expense in our consolidated statement of operations, with a corresponding charge to contributed surplus on our consolidated balance sheet, over the vesting period. We adjust compensation expense to reflect the estimated number of options we expect to vest at the end of the vesting period. When options are exercised, we credit the proceeds to capital stock on our consolidated balance sheet. We measure the fair value of stock options using the Black-Scholes option pricing model. Measurement inputs include the price of our subordinate voting shares on the grant date, the exercise price of the stock option, and our estimates of the following: expected price volatility of our subordinate voting shares (based on weighted average historic volatility), weighted average expected life of the stock option (based on historical experience and general option holder behavior), and the risk-free interest rate.

RSUs:

The cost we recorded for RSUs was based on the market value of our subordinate voting shares at the time of grant. We amortize the cost of RSUs to compensation expense in our consolidated statement of operations, with a corresponding charge to contributed surplus on our consolidated balance sheet, over the vesting period. We generally settle these awards with subordinate voting shares purchased in the open market by a broker, or by issuing subordinate voting shares from treasury.

PSUs granted in 2016 and 2017:

The cost we recorded for 40% of PSUs granted in each of 2016 and 2017 was based on the market value of our subordinate voting shares at the time of grant. The cost we recorded for these PSUs, which vest based on a non-market performance condition related to the achievement of pre-determined financial targets over a specified period, was based on our estimate of the outcome of such performance condition. We adjust the cost of these PSUs as new facts and circumstances arise; the timing of these adjustments is subject to judgment. We generally record adjustments to the cost of these PSUs in the final year of the three-year term based on management's estimate of the expected level of achievement of such performance condition. We amortize the cost of these PSUs to compensation expense in our consolidated statement of operations, with a corresponding charge to contributed surplus on our consolidated balance sheet, over the vesting period. We generally settle these awards with subordinate voting shares purchased in the open market by a broker, or by issuing subordinate voting shares from treasury.

We determined the cost we recorded for 60% of PSUs granted in each of 2016 and 2017 using a Monte Carlo simulation model. The number of awards expected to vest is factored into the grant date Monte Carlo valuation for the award. The number

of these PSUs that will vest depends on the level of achievement of total shareholder return (TSR), which is a market performance condition, relative to the TSR of a pre-defined group of companies over a three-year period. We do not adjust the grant date fair value regardless of the eventual number of awards that vest based on the level of achievement of the market performance condition. We recognize compensation expense in our consolidated statement of operations on a straight-line basis over the requisite service period and we reduce this expense for the estimated PSU awards that are not expected to vest because the employment conditions are not expected to be satisfied. We generally settle these awards with subordinate voting shares purchased in the open market by a broker, or by issuing subordinate voting shares from treasury.

PSUs granted in 2018:

The cost we recorded for the PSUs granted in 2018 was based on our estimate of the outcome of the performance conditions. The number of PSUs granted in 2018 that will actually vest will vary from 0 to 200% of the target amount granted based on the level of achievement of a pre-determined non-market performance measurement in the final year of the three-year performance period, subject to modification by a separate pre-determined non-market financial target and our relative TSR performance over the 3 -year vesting period. We estimated the grant date fair value of the TSR modifier for these awards using a Monte Carlo simulation model. The grant date fair value for the non-TSR-based performance measurement and modifier was based on the market value of our subordinate voting shares at the time of grant and may be adjusted in subsequent periods to reflect a change in the estimated level of achievement related to the applicable performance condition. We recognize compensation expense in our consolidated statement of operations on a straight-line basis over the requisite service period and we reduce this expense for the estimated PSU awards that are not expected to vest because the employment conditions are not expected to be satisfied. We generally settle these awards with subordinate voting shares purchased in the open market by a broker, or by issuing subordinate voting shares from treasury.

DSUs:

The compensation of our Board of Directors is comprised of annual Board retainer fees, annual Audit and Compensation Committee Chair retainer fees (for the Chairs of those committees) and travel fees (collectively, Annual Fees) payable in quarterly installments in arrears. In 2018, directors were required to elect to have either 75% or 100% of their Annual Fees paid in deferred share units (DSUs). The number of DSUs we grant is determined by dividing the elected percentage of the dollar value of the Annual Fees earned in the quarter by the closing price of our subordinate voting shares on the NYSE on the last business day of such quarter. Each DSU represents the right to receive one subordinate voting share or an equivalent value in cash after the individual ceases to serve as a director. DSUs granted prior to January 1, 2007 may be settled with subordinate voting shares issued from treasury or purchased in the open market, or with cash (at the discretion of the Company). DSUs granted after January 1, 2007 may only be settled with subordinate voting shares purchased in the open market, or with cash (at the discretion of the Company). We expense the cost of DSUs through SG&A in our consolidated statement of operations in the period the services are rendered.

(o) Deferred financing costs:

Deferred financing costs consist of costs relating to the establishment or amendment of our credit facility. We defer financing costs related to our revolving facility as other assets on our consolidated balance sheet which we amortize to our consolidated statement of operations on a straight-line basis over the term of the revolving facility. We record financing costs relating to the issuance of our term loans as a reduction to the cost of the related debt (see note 12) which we amortize to our consolidated statement of operations using the effective interest rate method over the term of the related debt or when the debt is retired, if earlier.

(p) Income taxes:

Our income tax expense for a reporting period is comprised of current and deferred income taxes. Current income taxes and deferred income taxes are recognized in our consolidated statement of operations, except to the extent that they relate to items recognized in OCI or directly in equity, in which case the taxes are also recognized in OCI or directly in equity, respectively.

In the ordinary course of business, there are many transactions for which the ultimate tax outcome is uncertain until we resolve it with the relevant tax authority, which may take many years. The final tax outcome of these matters may be different from the estimates management originally made in determining our tax provision. Management periodically evaluates the

positions taken in our tax returns with respect to situations in which applicable tax rules are subject to interpretation. We establish provisions related to tax uncertainties where appropriate, based on our estimate of the amount that ultimately will be paid to or received from the tax authorities. We recognize accrued interest and penalties relating to tax uncertainties in current income tax expense. The various judgments and estimates by management in establishing provisions related to tax uncertainties significantly affect the amounts we recognize in our consolidated financial statements.

We use the liability method of accounting for deferred income taxes. Under this method, we recognize deferred income tax assets and liabilities for future income tax consequences attributable to temporary differences between the financial statement carrying amounts of assets and liabilities and their respective income tax bases, and on unused tax losses and tax credit carryforwards. We measure deferred income taxes using tax rates and laws that have been enacted or substantively enacted at the reporting date and that we expect will apply when the related deferred income tax asset is realized or the deferred income tax liability is settled. We recognize deferred income tax assets to the extent we believe it is probable, based on management's estimates, that future taxable profit will be available against which the deductible temporary differences as well as unused tax losses and tax credit carryforwards can be utilized. Estimates of future taxable profit in different tax jurisdictions are an area of estimation uncertainty. We review our deferred income tax assets at each reporting date and reduce them to the extent it is no longer probable that we will realize the related tax benefits. We recognize the effect of a change in income tax rates in the period of enactment or substantive enactment.

We do not recognize deferred income taxes if they arise from the initial recognition of goodwill, or for temporary differences arising from the initial recognition of an asset or a liability in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss. We also do not recognize deferred income taxes on temporary differences relating to investments in subsidiaries to the extent we are able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

During each period, we record current income tax expense or recovery based on taxable income earned or loss incurred in each tax jurisdiction where we operate, and for any adjustments to taxes payable in respect of previous years, using tax laws that are enacted or substantively enacted at the balance sheet date.

(q) Financial assets and financial liabilities:

We recognize financial assets and financial liabilities initially at fair value and subsequently measure these at either fair value or amortized cost based on their classification as described below.

See note 2(s), "Impairment of financial assets."

Fair value through profit or loss (FVTPL):

Financial assets and any financial liabilities that we purchase or incur, respectively, with the intention of generating earnings in the near term, and derivatives other than cash flow hedges, are classified as FVTPL. This category includes short-term investments in money market funds (if applicable) that we group with cash equivalents, and derivative assets and derivative liabilities that do not qualify for hedge accounting. For investments that we classify as FVTPL, we initially recognize such financial assets on our consolidated balance sheet at fair value and recognize subsequent changes in our consolidated statement of operations. We expense transaction costs as incurred in our consolidated statement of operations. We do not currently hold any liabilities designated as FVTPL.

Amortized cost:

Financial assets that we hold with the intention of collecting the contractual cash flows (in the form of payment of principal and related interest) are measured at amortized cost, and includes our trade receivables, term deposits and non-customer receivables. We initially recognize the carrying amount of such assets on our consolidated balance sheet at fair value plus directly attributable transaction costs, and subsequently measure these at amortized cost using the effective interest rate method, less any impairment losses.

Other financial liabilities:

This category is for our financial liabilities that are not classified as FVTPL, and includes our accounts payable, the majority of our accrued liabilities and certain other provisions, as well as borrowings under our credit facility, including our term loans. We record these financial liabilities at amortized cost on our consolidated balance sheet.

(r) Derivatives and hedge accounting:

We enter into forward exchange and swap contracts to hedge the cash flow risk associated with firm purchase commitments and forecasted transactions in foreign currencies that are considered highly probable and to hedge foreign-currency denominated balances. We use estimates to forecast future cash flows and the future financial position of net monetary assets or liabilities denominated in foreign currencies. We enter into interest rate swap agreements to mitigate a portion of the interest rate risk on our term loan borrowings. We apply hedge accounting to those hedge transactions that are considered effective. Management assesses the effectiveness of hedges by comparing actual outcomes against our estimates on a regular basis. Subsequent revisions in estimates of future cash flow forecasts, if significant, may result in the discontinuation of hedge accounting for that hedge. We do not enter into derivative contracts for speculative purposes.

At the inception of a hedging relationship, we formally document the relationship between our hedging instrument and the hedged item, as well as our risk management objectives and strategy for undertaking the various hedge transactions. Our process includes linking all derivatives to specific assets and liabilities on our consolidated balance sheet or to specific firm commitments or forecasted transactions. We also formally assess, both at the hedge's inception and at the end of each quarter, whether the derivatives used in hedged transactions are highly effective in offsetting changes in the cash flows of the hedged items. We record the gain or loss from these forward contracts in the same line item where the underlying exposures are recognized in our consolidated statement of operations. For our non-designated hedges against our balance sheet exposures denominated in foreign currencies, we record the gain or loss from these forward contracts in SG&A in our consolidated statement of operations.

Forward contracts that are not designated as hedges are marked to market each period, resulting in a gain or loss in our consolidated statement of operations. We measure all derivative contracts at fair value on our consolidated balance sheet. The majority of our derivative assets and liabilities arise from the foreign currency forward contracts and interest rate swaps that we designate as cash flow hedges. In a cash flow hedge, we defer the changes in the fair value of the hedging derivative, to the extent effective, in OCI until we recognize the asset, liability or forecasted transactions being hedged in our consolidated statement of operations. Any cash flow hedge ineffectiveness is recognized in our consolidated statement of operations immediately. For hedges that we discontinue before the end of the original hedge term, we amortize the unrealized hedge gain or loss in OCI in our consolidated statement of operations over the remaining term of the hedge. If the hedged item ceases to exist before the end of the original hedge term, we recognize the unrealized hedge gain or loss in OCI immediately in our consolidated statement of operations. For our current currency forward and swap cash flow hedges, the majority of the underlying expenses we hedge are included in cost of sales. For our interest rate swaps, the underlying interest expenses that we hedge are included in finance costs in our consolidated statement of operations.

We value our derivative assets and liabilities based on inputs that are either readily available in public markets or derived from information available in public markets. The inputs we use include discount rates, forward exchange rates, interest rate yield curves and volatility, and credit risk adjustments. Changes in these inputs can cause significant volatility in the fair value of our financial instruments in the short-term.

(s) Impairment of financial assets:

We review financial assets at each reporting date. Financial assets are deemed to be impaired when objective evidence resulting from one or more events subsequent to the initial recognition of the asset indicates the estimated future cash flows of the asset have decreased. We use a forward-looking ECL model in determining our allowance for doubtful accounts as it relates to trade receivables, contract assets (under IFRS 15), and other financial assets. Our allowance is based on historical experience, and includes consideration of the aging of the balances, the customer's creditworthiness, current economic conditions, expectation of bankruptcies, and political and economic volatility in the markets/location of our customers, among other factors. We measure an impairment loss as the excess of the carrying amount over the present value of the estimated future cash flows discounted using the financial asset's original discount rate, and we recognize this loss in our consolidated statement of operations. A

financial asset is written off or written down to its net realizable value as soon as it is known to be impaired. We will adjust previous write-downs to reflect changes in estimates or actual experience.

(t) Revenue and deferred investment costs:

We derive the majority of our revenue from the sale of electronic products and services that we manufacture and provide to customer specifications. We recognize revenue from the sale of products and services rendered when our performance obligations have been satisfied or when the associated control over the products has passed to the customer and no material uncertainties remain as to the collection of our receivables. Under IFRS 15, which we adopted on January 1, 2018, where products are custom-made to meet a customer's specific requirements, and such customer is obligated to compensate us for the work performed to date, we will recognize revenue over time as production progresses to completion, or as services are rendered. We generally estimate revenue for our work in progress based on costs incurred to date plus a reasonable profit margin for eligible products for which we do not have alternative uses. For other contracts that do not qualify for revenue recognition over time, we recognize revenue at the point in time where control is passed to the customer, which is generally upon shipment when no further performance obligation remains except for our standard manufacturing or service warranties. We apply significant estimates, judgment and assumptions in determining the timing of revenue recognition, measuring work in progress, and estimating the amount and timing of expected returns, revenues and related costs. As our invoices are typically issued at the time of the delivery of final products to the customers, the earlier recognition of revenue on certain custom-made products has significantly increased the amount of unbilled contract assets included in accounts receivable on our consolidated balance sheet. See "Recently adopted accounting standards" above and note 2(y) below for the impact of adopting IFRS 15 effective January 1, 2018.

We record certain investment costs, comprised of contract acquisition or fulfillment costs, to the extent recoverability of these costs are probable, in other current and non-current assets on our consolidated balance sheet. We subsequently amortize these investment costs over the projected period of expected future economic benefits, or as recoveries are realized, from the new contracts. We monitor these deferred costs for potential impairment on a regular basis.

(u) Government grants:

We receive government grants from time to time related to equipment purchases or other expenditures. We recognize these grants when there is reasonable assurance that we will retain the benefits. If we receive a grant but cannot reasonably assure that we will comply with the conditions of the grant, we will defer the grant and record a liability on our consolidated balance sheet until the conditions are fulfilled. For grants that relate to the purchase of equipment, we reduce the cost of the asset in the period the cost is incurred or when the conditions are fulfilled, and we calculate amortization on the net amount. For grants that relate to operating expenditures, we reduce the expense in the period the cost is incurred or when the conditions are fulfilled.

(v) Research and development:

We incur costs relating to research and development activities. We expense these costs as incurred in our consolidated statement of operations unless development costs meet the required criteria under IFRS for capitalization.

(w) Earnings per share (EPS):

We calculate basic EPS by dividing net earnings by the weighted average number of shares (subordinate and multiple voting shares collectively) outstanding during the period. We calculate diluted EPS using the treasury stock method, which reflects the potential dilution from stock-based awards that are issued from treasury.

(in millions of U.S. dollars, except percentages and per share amounts)

(x) Recently issued accounting pronouncements:

IFRS 16, Leases:

In January 2016, the IASB issued this standard, which brings most leases on-balance sheet for lessees under a single model, eliminating the distinction between operating and finance leases. IFRS 16 supersedes IAS 17, *Leases*, and related interpretations, and is effective for periods beginning on or after January 1, 2019. We adopted this standard effective January 1, 2019 applying the modified retrospective approach, whereby the cumulative effect of adopting IFRS 16 will be recognized as an adjustment to the opening retained deficit balance as of January 1, 2019, without restatement of prior period comparative information. We have implemented changes to our business processes, systems and controls to enable the preparation of our consolidated financial statements in accordance with IFRS 16. We will recognize new right-of-use assets and lease liabilities related to the majority of our operating leases on our consolidated balance sheet as of January 1, 2019 upon initial application of IFRS 16. The amortization of these assets will be recognized as a depreciation charge, and the interest expense on the lease liabilities will be recognized as finance costs in our consolidated statement of operations. Previously, we recognized operating lease expenses on a straight-line basis over the lease term generally in cost of sales or SG&A in our consolidated statement of operations. No significant changes are expected for our existing finance leases nor for any leases in which we are a lessor. Although we are completing our analysis of the impact of adopting IFRS 16, we anticipate that the initial application of the new standard will have a material impact on our consolidated financial statements, and we currently estimate that we will recognize right-of-use assets and lease liabilities on our consolidated financial statements of approximately $113 as of January 1, 2019. The opening retained deficit adjustment is not expected to be material.

(y) Transition to IFRS 15, Revenue from Contracts with Customers:

We adopted the new revenue recognition standard effective January 1, 2018, by applying the retrospective method, and have restated the comparative reporting periods presented herein. In computing the transitional adjustments, we applied the practical expedients in accordance with IFRS 15 to exclude certain contracts that we started and completed in the same annual reporting period, or were completed prior to January 1, 2016, the beginning of the earliest period presented herein. We recognized the transitional adjustments through equity as of January 1, 2016.

Transitional impacts:

For a significant portion of our business, the timing of our revenue recognition has changed under the new standard from a point-in-time to over time, resulting in earlier recognition of revenue than under the previous recognition rules (which was generally upon delivery of final products to our end customer). The most significant financial impacts of adopting IFRS 15 on the comparative periods in our consolidated financial statements are summarized as follows:

		Year ended		Year ended	
	January 1, 2016	December 31, 2016	December 31, 2016	December 31, 2017	December 31, 2017
			Increase (decrease)		
Contract assets (included in accounts receivable)	$ 196.9	—	$ 226.9	—	$ 258.9
Inventories	(178.2)	—	(206.2)	—	(237.8)
Deferred taxes	(1.7)	—	(1.7)	—	(1.9)
Accrued and other current liabilities	—	—	—	—	(0.3)
Deficit	(17.0)	—	(19.0)	—	(19.5)
Revenue	—	$ 30.1	—	$ 32.2	—
Cost of sales	—	28.1	—	31.5	—
Income tax expense	—	—	—	0.2	—
Net earnings	—	2.0	—	0.5	—
Diluted earnings per share	—	$ 0.01	—	$ 0.01	—

(in millions of U.S. dollars, except percentages and per share amounts)

Contract assets and liabilities:

Our contract assets consist of unbilled amounts recognized as revenue under IFRS 15 and deferred investment costs incurred to obtain or fulfill a contract. Contract assets are recorded in accounts receivable on our consolidated balance sheet. Deferred investment costs are recorded in other current and non-current assets on our consolidated balance sheet. Our contract liabilities consist of advance payments from customers and deferred revenue, which are recorded in accrued and other current liabilities on our consolidated balance sheet.

3. ACQUISITIONS:

We may, at any time, be engaged in ongoing discussions with respect to possible acquisitions that could expand our revenue base and/or service offerings, increase our penetration in various industries, establish strategic relationships with new or existing customers, enhance our competitiveness and/or enhance our global supply chain network. We incur consulting, transaction and integration costs (Acquisition Costs) relating to potential and completed acquisitions. During 2018, we recorded Acquisition Costs of $11.0 (2017 — $4.5; 2016 — $1.4) in other charges in our consolidated statement of operations.

In November 2016, we acquired the business assets of Lorenz, Inc. and Suntek Manufacturing Technologies, SA de CV, collectively known as Karel Manufacturing (Karel), for a cash purchase price of $14.9, with operations in Mexico. Karel is a manufacturing services company that specializes in complex wire harness assembly, systems integration, sheet metal fabrication, welding and machining, serving primarily aerospace and defense customers. As part of the acquisition, we acquired $11.5 in assets, primarily for current assets, net of cash acquired, and $3.7 of goodwill, representing the specialized knowledge of the acquired workforce and expected synergies. The goodwill arising from this acquisition is attributable to our ATS segment, and approximately two-thirds of such goodwill was tax deductible.

In April 2018, we completed the acquisition of U.S.-based Atrenne Integrated Solutions, Inc. (Atrenne), a designer and manufacturer of ruggedized electromechanical solutions, primarily for military and commercial aerospace applications, with operations in Minnesota and Massachusetts. The purchase price for Atrenne was $141.7, net of cash acquired, including a net working capital adjustment of $3.8 (which is subject to finalization). The purchase was funded with borrowings under the revolving portion of our then-available credit facility. We recorded $64.0 of goodwill as part of the acquisition, attributable primarily to the specific knowledge and capabilities of the acquired workforce and expected synergies from the combination of our operations.

Details of our preliminary purchase price allocation in the year of acquisition are as follows:

	Atrenne
Current assets, net of $1.1 of cash acquired	$ 31.5
Property, plant and equipment	7.8
Customer intangible assets and computer software assets	51.0
Goodwill	64.0
Current liabilities	(8.5)
Deferred income taxes and other-long-term liabilities	(4.1)
	$ 141.7

Acquired assets and liabilities are recorded on our consolidated balance sheet at their fair values as of the date of acquisition. In connection with our purchase of Atrenne, we recorded a $1.6 fair value adjustment to write up the value of the acquired inventory as of the acquisition date, representing the difference between the inventory's cost and its fair value. During the second quarter of 2018, we recognized the full $1.6 fair value adjustment through cost of sales, as all such acquired inventory was sold during that quarter.

The purchase price for Atrenne includes a customary post-closing net working capital adjustment. We expect to finalize our purchase price allocation by the end of the first quarter of 2019, once such net working capital adjustment has been finalized.

(in millions of U.S. dollars, except percentages and per share amounts)

Annual amortization of intangible assets increased by approximately $6 as a result of the Atrenne acquisition. The goodwill arising from this acquisition is attributable to our ATS segment and is not tax deductible.

In November 2018, we completed the acquisition of U.S.-based Impakt Holdings, LLC (Impakt), a highly-specialized, vertically integrated company providing manufacturing solutions for leading OEMs in the display and semiconductor industries, as well as other markets requiring complex fabrication services, with operations in California and South Korea. The purchase price for Impakt was $325.4, net of cash acquired. The purchase price is subject to a net working capital adjustment, which has not yet been finalized. The purchase was funded with borrowings under our revolving credit facility, $245.0 of which was repaid with proceeds of a new incremental term loan under our credit facility (see note 12). We recorded $111.2 of goodwill as part of the acquisition, attributable primarily to the specific knowledge and capabilities of the acquired workforce and expected synergies from the combination of our operations.

Details of our preliminary purchase price allocation in the year of acquisition are as follows:

	Impakt
Current assets, net of $5.9 of cash acquired	$ 46.7
Property, plant and equipment and other long-term assets	20.9
Customer intangible assets and computer software assets	223.0
Goodwill	111.2
Current liabilities	(23.8)
Deferred income taxes	(52.6)
	$ 325.4

The determination of the fair value of certain assets in the table above, including customer intangible assets and working capital assets, has not been finalized. We expect to complete the valuation of these assets and to finalize the purchase price allocation for Impakt in the first half of 2019.

We expect annual amortization of intangible assets to increase by approximately $15 as a result of the Impakt acquisition. The goodwill arising from this acquisition is attributable to our ATS segment and is not tax deductible.

Pro forma disclosure: Consolidated revenue and net earnings for fiscal year 2018 would not have been materially different had either (or both of) the Atrenne and Impakt acquisitions occurred at the beginning of 2018.

We engaged third-party consultants to provide valuations of certain inventory, property, plant and equipment and intangible assets in connection with our purchases of Atrenne and Impakt. The fair value of the acquired tangible assets was measured based on their value in-use, by applying the market (sales comparison, brokers' quotes), cost or replacement cost, or the income (discounted cash flow) approach, as deemed appropriate. The valuation of the intangible assets by the third-party consultants was primarily based on the income approach using a discounted cash flow model and forecasts based on management's subjective estimates and assumptions. Various Level 2 and 3 data inputs of the fair value measurement hierarchy (see note 21 for definitions) were used in the valuation of the above-mentioned assets.

4. SOLAR PANEL MANUFACTURING BUSINESS:

During the fourth quarter of 2016, due to anticipated prolonged volatility in the solar panel market, we made the decision to exit the solar panel manufacturing business, and terminated (prior to its scheduled expiration) a supply agreement pursuant to which we had made specific cash advances during 2015 to an Asia-based solar cell supplier (Solar Supplier). All such cash advances were repaid in full during 2017 (cash advances outstanding at December 31, 2016 — $12.5). Under this supply agreement, we also manufactured and sold completed solar panels to the Solar Supplier as a customer (discussed below).

In connection with our exit from this business, we wrote down the carrying values of our inventories and our solar panel manufacturing equipment during 2016 to then-recoverable amounts (see notes 6 and 16(a), respectively), and completed production of the final solar panels in the first quarter of 2017. During 2017, we recorded: (i) additional provisions of $0.9 in cost of sales, to further write down the carrying value of our remaining solar panel inventory to reflect lower prices obtained in

(in millions of U.S. dollars, except percentages and per share amounts)

then-current purchase orders, (ii) a provision of $0.5 in SG&A, to write down the carrying value of solar accounts receivable, primarily as a result of a solar customer's bankruptcy, and (iii) net impairment charges of $3.8 in other charges (through restructuring) to further write down the carrying value of our solar panel manufacturing equipment to its estimated fair value less costs of disposal, based on executed sales agreements (see note 16(a)). During the third quarter of 2017, we shipped all of our remaining solar panel inventory to customers, including to the Solar Supplier. As of December 31, 2017, we had $6.7 of outstanding solar accounts receivable, all from the Solar Supplier, which were repaid in full during 2018. During the second quarter of 2018, we completed the sale of our remaining solar equipment. In anticipation of such disposition, we paid $11.3 (including fees and accrued interest) to terminate and settle our outstanding lease obligations for this equipment in January 2018. See notes 8 and 12.

5. ACCOUNTS RECEIVABLE:

Accounts receivable sales and financing programs:

We have an agreement to sell up to $250.0 in accounts receivable on an uncommitted basis (subject to pre-determined limits by customer) to two third-party banks. Based on a review of our requirements, we amended this agreement in November 2018 to increase its overall capacity from $200.0 to $250.0. The term of this agreement has been annually extended in recent years (including in November 2018) for additional one-year periods (and is currently extendable to November 2020 under specified circumstances), but may be terminated earlier as provided in the agreement. At December 31, 2018, $130.0 of accounts receivable were sold under this program (December 31, 2017 — $80.0). We continue to collect cash from our customers and remit the cash to the banks once it is collected.

We also participate in a customer's supplier financing program (SFP), pursuant to which we sell accounts receivable from such customer to a third-party bank on an uncommitted basis. At December 31, 2018, we sold $50.0 of accounts receivable under the SFP (December 31, 2017 — $52.3), in order to receive earlier payment. We utilize the SFP to substantially offset the effect of extended payment terms required by such customer on our working capital for the period. The third-party bank collects the relevant receivables directly from the customer.

The accounts receivable sold under both of these programs are de-recognized from our accounts receivable balance and removed from our consolidated balance sheet, and the proceeds are reflected as cash provided by operating activities in our consolidated statement of cash flows. Upon sale, we assign the rights to the accounts receivable to the banks. We pay discount charges which we record as finance costs in our consolidated statement of operations.

Contract assets:

At December 31, 2018, our accounts receivable balance included $267.8 of contract assets (December 31, 2017 — $258.9) recognized as revenue under IFRS 15. See note 2(y).

6. INVENTORIES:

Inventories are comprised of the following:

	December 31	
	2017	2018
	(restated)	
Raw materials	$ 733.2	$ 948.8
Work in progress	57.6	101.5
Finished goods	33.2	39.6
	$ 824.0	$ 1,089.9

We record our inventory provisions, net of valuation recoveries, in cost of sales. We record inventory provisions to reflect write-downs in the value of our inventory to net realizable value, and valuation recoveries primarily to reflect realized gains on the disposition of inventory previously written-down to net realizable value. During 2018, we recorded net inventory provisions of $13.5 (2017 — $3.3; 2016 — $12.0). We regularly review our estimates and assumptions used to value our inventory

(in millions of U.S. dollars, except percentages and per share amounts)

through analysis of historical performance. The increase in our inventory provisions for 2018 as compared to 2017 was a result of increases in our overall aged inventory levels, more than half of which related to customers in our ATS segment. Our inventory provisions for 2017 included provisions of $0.9 that we recorded in the second quarter of 2017 to further write down the carrying amount of our remaining solar panel inventory (in our ATS segment) to recoverable amounts. Our inventory provisions for 2016 consisted primarily of the write down of our solar panel inventory to then-lower net realizable values. See note 4.

7. ASSETS CLASSIFIED AS HELD FOR SALE:

As a result of previously announced restructuring actions, we have reclassified certain assets as held for sale. These assets were reclassified at the lower of their carrying value and estimated fair value less costs of disposal at the time of such reclassification. At December 31, 2018, we had $27.4 (December 31, 2017 — $30.1) of assets classified as held for sale, which consisted primarily of land and buildings in Europe and North America.

See note 8 for a discussion of the sale of our Toronto real property.

8. PROPERTY, PLANT AND EQUIPMENT:

Property, plant and equipment are comprised of the following:

	2017		
	Cost	Accumulated Depreciation and Impairment	Net Book Value
Land	$ 23.1	$ 12.0	$ 11.1
Buildings including improvements	344.0	202.4	141.6
Machinery and equipment	745.5	574.3	171.2
	$ 1,112.6	$ 788.7	$ 323.9

	2018		
	Cost	Accumulated Depreciation and Impairment	Net Book Value
Land	$ 26.8	$ 12.0	$ 14.8
Buildings including improvements	375.5	218.0	157.5
Machinery and equipment	781.2	588.2	193.0
	$ 1,183.5	$ 818.2	$ 365.3

(in millions of U.S. dollars, except percentages and per share amounts)

The following table details the changes to the net book value of property, plant and equipment for the years indicated:

	Land	Buildings including Improvements	Machinery and Equipment	Total
Balance — January 1, 2017	$ 10.9	$ 140.1	$ 151.7	$ 302.7
Additions	—	22.8	72.1	94.9
Depreciation	—	(21.3)	(46.3)	(67.6)
Write down of assets and other disposals [(i)]	—	(0.2)	(5.3)	(5.5)
Foreign exchange and other	0.2	0.2	(1.0)	(0.6)
Balance — December 31, 2017 [(ii)]	11.1	141.6	171.2	323.9
Additions	—	25.4	62.3	87.7
Acquisitions through business combinations (note 3)	3.6	10.8	13.9	28.3
Depreciation	—	(20.4)	(53.3)	(73.7)
Write down of assets and other disposals	—	—	(0.9)	(0.9)
Foreign exchange and other	0.1	0.1	(0.2)	—
Balance — December 31, 2018 [(ii)]	$ 14.8	$ 157.5	$ 193.0	$ 365.3

(i) Includes $4.8 of solar panel manufacturing equipment that we reclassified as assets held for sale during 2017. In 2017, we recorded net impairment losses of $3.8 primarily to write-down solar panel manufacturing equipment. See note 16(a).

(ii) The net book value of property, plant and equipment at December 31, 2018 included $12.8 (December 31, 2017 — $7.3) of assets under finance leases. See note 24 for the future minimum lease payments under these finance leases.

We review the carrying amount of property, plant and equipment for impairment whenever events or changes in circumstances (triggering events) indicate that the carrying amount of such assets (or the related CGU or CGUs) may not be recoverable. If any such indication exists, we test the carrying amount of such assets or CGUs for impairment.We did not identify any triggering event during the course of 2018 indicating that the carrying amount of such assets or GCUs may not be recoverable. With respect to 2016 and 2017, we determined that, other than the write-down of our solar panel manufacturing equipment (in our ATS segment) in each year, discussed in notes 4 and 16(a) (recorded through restructuring charges), there was no impairment of our property, plant and equipment, as the recoverable amount of such assets and CGUs exceeded their respective carrying values. See footnote (i) to the table above and notes 9 and 16(a).

Toronto Real Property and Related Transactions:

On July 23, 2015, we entered into an agreement of purchase and sale (Property Sale Agreement) to sell our real property located in Toronto, Ontario, which includes the site of our corporate headquarters and our Toronto manufacturing operations, to a special purpose entity (the Property Purchaser) formed by a consortium of four real estate partnerships (see below). If the transaction is completed, the purchase price for the property will be approximately $137 million Canadian dollars (approximately $100 at year-end exchange rates), exclusive of applicable taxes and subject to specified adjustments, including for certain density bonuses and other items in accordance with usual commercial practice.

Upon execution of the Property Sale Agreement, we were paid a cash deposit of $15 million Canadian dollars ($11.2 at the then-prevailing exchange rate). Prior to the assignment of the Property Sale Agreement described below, the Property Purchaser was to pay us an additional $53.5 million Canadian dollars in cash (approximately $39 at year-end exchange rates) at closing, with the balance to be satisfied at closing by an interest-free, first-ranking mortgage in the amount of $68.5 million Canadian dollars (approximately $50 at year-end exchange rates) to be registered on title to the property and having a term of two years from the closing date. As part of the Property Sale Agreement, we agreed, upon closing, to enter into a long-term lease for our new corporate headquarters on commercially reasonable arm's-length terms.

In September 2018, the Property Sale Agreement was assigned from the Property Purchaser to a new purchaser (Assignee), although the Property Purchaser was not released from its obligations under the Property Sale Agreement. In connection with the assignment, the Property Sale Agreement was amended to provide for the remaining proceeds of $122 million Canadian dollars (approximately $89 at year-end exchange rates) to be paid in one lump sum cash payment upon closing

(in millions of U.S. dollars, except percentages and per share amounts)

of the transaction. Other terms of the agreement remained unchanged. On January 21, 2019, the required municipal zoning approval was obtained. On March 7, 2019, we completed the sale of the real property and received total proceeds of approximately $110, including a high density bonus and an early vacancy incentive related to the temporary relocation of our corporate headquarters. The gain on sale of this property will be recorded as recoveries through other charges (recoveries) during 2019. No net tax impact is anticipated from this sale as the gain will be offset by the utilization of currently unrecognized tax losses.

Approximately 27% of the interests in the Property Purchaser were at the time of execution of the Property Sale Agreement, and are, held by a privately-held partnership in which Mr. Gerald Schwartz (a controlling shareholder of Celestica) has a material interest, and approximately 25% of the interests in the Property Purchaser were at the time of execution of the Property Sale Agreement, and are, held by a partnership in which Mr. Schwartz has a non-voting interest. At the time of execution of the assignment, the Assignee was unrelated to us and the Property Purchaser. Subsequent to such execution, the Assignee granted the Property Purchaser an option to obtain a 5% non-voting interest in the Assignee.

In connection with the anticipated sale, we entered into a long-term lease in November 2017 (in the Greater Toronto area) for the relocation of our Toronto manufacturing operations, and commenced occupancy in March 2018. We completed this relocation in February 2019. We are also in the process of relocating our corporate headquarters to a temporary location while space in a new office building (to be built by the Assignee on the site of our former location) is under construction. In connection therewith, in September 2018, we entered into a 3-year lease for such temporary offices, and such relocation is currently expected to be completed by the end of the first half of 2019. We have incurred, and will continue to incur, significant costs throughout the transition period (which commenced in the fourth quarter of 2017) to relocate our corporate headquarters and to transfer our Toronto manufacturing operations to its new location. These costs consist of building improvements and equipment in connection with our new manufacturing site (totaling $17 of which approximately $15 was incurred during 2018), which we have capitalized, as well as transition-related costs which we record in other charges. We also anticipate capitalizing building improvements (2018 — nil) in connection with our temporary corporate headquarters. Transition costs are comprised of direct relocation costs, duplicate costs (such as rent expense, utility costs, depreciation charges, and personnel costs) incurred during the transition period, as well as cease-use costs incurred in connection with idle or vacated portions of the relevant premises that we would not have incurred but for these relocations. During 2018, we recorded $13.2 (2017 — $1.6) of such transition costs, consisting primarily of utility costs related to idle premises, depreciation charges and personnel costs incurred in the operation of duplicate production lines in advance of the transition, duplicate rent expense, and relocation costs. See note 16.

9. GOODWILL AND INTANGIBLE ASSETS:

Goodwill and intangible assets are comprised of the following:

	2017		
	Cost	Accumulated Amortization and Impairment	Net Book Value
Goodwill	$ 78.6	$ 55.4	$ 23.2
Intellectual property	$ 111.3	$ 111.3	$ —
Other intangible assets	237.0	226.6	10.4
Computer software assets	285.3	274.1	11.2
	$ 633.6	$ 612.0	$ 21.6

(in millions of U.S. dollars, except percentages and per share amounts)

	2018		
	Cost	Accumulated Amortization and Impairment	Net Book Value
Goodwill	$ 253.8	$ 55.4	$ 198.4
Intellectual property	$ 111.3	$ 111.3	$ —
Other intangible assets	508.0	238.2	269.8
Computer software assets	290.1	276.3	13.8
	$ 909.4	$ 625.8	$ 283.6

The following table details the changes to the net book value of goodwill and intangible assets for the years indicated:

	Goodwill	Other Intangible Assets	Computer Software Assets	Total
Balance — January 1, 2017	$ 23.2	$ 15.9	$ 9.6	$ 48.7
Additions	—	—	4.9	4.9
Amortization	—	(5.5)	(3.4)	(8.9)
Foreign exchange and other	—	—	0.1	0.1
Balance — December 31, 2017	23.2	10.4	11.2	44.8
Additions	—	—	3.3	3.3
Acquisitions through business combinations (note 3)	175.2	271.0	3.0	449.2
Amortization	—	(11.6)	(3.8)	(15.4)
Foreign exchange and other	—	—	0.1	0.1
Balance — December 31, 2018	$ 198.4	$ 269.8	$ 13.8	$ 482.0

We review the carrying amount of goodwill and intangible assets for impairment whenever events or changes in circumstances (triggering events) indicate that the carrying amount of such assets (or the related CGU or CGUs) may not be recoverable. If any such indication exists, we test the carrying amount of such assets or CGUs for impairment. In addition to an assessment of triggering events during the year, we conduct an annual goodwill impairment assessment (Annual Impairment Assessment) of CGUs with goodwill in the fourth quarter of the year. We recorded no impairment charges against goodwill or intangible assets in 2018, or as a result of our 2018 Annual Impairment Assessment, as the recoverable amount of such assets and CGUs exceeded their respective carrying values as of December 31, 2018. We also recorded no impairment charges against goodwill or intangible assets in 2017 or 2016. See note 8 for a discussion of write-downs of our solar panel manufacturing equipment (in our ATS segment) in each of 2017 and 2016 (recorded through restructuring charges).

For our Annual Impairment Assessments, we used cash flow projections based primarily on our plan for the following year and, to a lesser extent, on our three-year strategic plan and other financial projections. Our plans, which are primarily based on financial projections submitted by our subsidiaries along with input from our customer teams, are reviewed by various levels of management as part of our annual planning cycle. The plan for 2019 (used for our 2018 Annual Impairment Assessment) was approved by management and presented to our Board of Directors in December 2018.

The process of determining the recoverable amount of a CGU is subjective and requires management to exercise significant judgment in estimating future growth, profitability, and discount and terminal growth rates, among other factors. The assumptions used in our 2018 Annual Impairment Assessment were determined based on past experiences adjusted for expected changes in future conditions. Where applicable, we also engaged independent brokers to obtain market prices to estimate our real property and other asset values. For our 2018 Annual Impairment Assessment, we used cash flow projections over periods ranging from 4 to 5 years, and applied a perpetuity growth rate of 2% thereafter (consistent with long-term inflation guidance).

Our goodwill balance at December 31, 2018 was $198.4 (December 31, 2017 — $23.2; December 31, 2016 — $23.2). Our capital equipment CGU consists of $111.2 of goodwill attributable to our acquisition of Impakt in November 2018 and

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$19.5 attributable to prior acquisitions. Our A&D CGU consists of goodwill of $3.7 attributable to our November 2016 Karel acquisition. Our Atrenne CGU consists of goodwill of $64.0 attributable to our April 2018 Atrenne acquisition. See note 3 for further details.

We used the following assumptions for purposes of our Annual Impairment Assessments of goodwill for the periods shown:

Assumption	Capital equipment CGU	A&D CGU	Atrenne CGU
Annual revenue growth rate[1]	2018 — 4% over 5 year period; 2017 — 9% over 6 year period; 2016 — 7% over 7 year period	2018 — modest growth over 5 year period; 2017 — modest growth over 4 year period; 2016 — N/A	2018 — 12% over 4 year period; 2017 and 2016 — N/A
Average annual margins	2018 — above company margins; 2017 and 2016 — slightly above company margins	2018 — slightly above company margins; 2017 — used company margins; 2016 — N/A	2018 — above company margins; 2017 and 2016 — N/A
Discount rate	2018 —13%; 2017 and 2016 —17%	2018 — 11%; 2017 — 9%; 2016 — N/A	2018 — 13%; 2017 and 2016 — N/A

(1) Supported by new business awarded in recent years, and the expectation of future new business awards.

In our 2018 Annual Impairment Assessment, we did not identify any key assumptions where a reasonable possible change would result in material impairments to the goodwill of any of the above mentioned CGUs. Future events and market conditions may impact our assumptions as to prices, costs or other factors that may result in changes to our estimates of future cash flows. Failure to realize the assumed revenues at an appropriate profit margin of a CGU could result in impairment losses in such CGU in future periods.

10. OTHER NON-CURRENT ASSETS:

	December 31	
	2017	2018
Net pension assets (note 19)	$ 62.9	$ 4.5
Land rights	10.5	10.1
Deferred investment costs	3.2	2.9
Deferred financing costs	0.7	2.1
Other	4.0	10.6
	$ 81.3	$ 30.2

(in millions of U.S. dollars, except percentages and per share amounts)

11. PROVISIONS:

Our provisions include restructuring, warranty, legal and other provisions. We have included a description of our restructuring, warranty and legal provisions in note 2(m). We include details of our restructuring provision in note 16(a). The following chart details the changes in our provisions for the year indicated:

	Restructuring	Warranty	Legal [i]	Other[ii]	Total
Balance — December 31, 2017	$ 12.7	$ 21.4	$ 2.5	$ 6.8	$ 43.4
Provisions	35.3	10.8	—	0.7	46.8
Reversal of prior year provisions[iii]	(0.1)	(6.2)	(0.6)	—	(6.9)
Payments/usage	(37.6)	(7.1)	(0.7)	—	(45.4)
Accretion, foreign exchange and other	—	(0.2)	(0.1)	—	(0.3)
Balance — December 31, 2018	$ 10.3	$ 18.7	$ 1.1	$ 7.5	$ 37.6
Current	$ 10.3	$ 11.0	$ 1.1	$ 0.8	$ 23.2
Non-current[iv]	—	7.7	—	6.7	14.4
December 31, 2018	$ 10.3	$ 18.7	$ 1.1	$ 7.5	$ 37.6

(i) Legal represents our aggregate provisions recorded for various legal actions based on our estimates of the likely outcomes.

(ii) Other represents our asset retirement obligations relating to sites that we currently lease.

(iii) During 2018, we reversed prior year warranty provisions as a result of expired warranties and changes in estimated costs based on historical experience.

(iv) Non-current balances are included in provisions and other non-current liabilities on our consolidated balance sheet.

At the end of each reporting period, we evaluate the appropriateness of our provisions, and adjustments may be made to reflect actual experience or changes in our estimates.

12. CREDIT FACILITIES AND LONG-TERM DEBT:

In June 2018, we entered into an $800.0 credit agreement with Bank of America, N.A., as Administrative Agent, and the other lenders party thereto (New Credit Facility), which provides for a $350.0 term loan (June Term Loan) that matures in June 2025, and a $450.0 revolving credit facility (New Revolver) that matures in June 2023. The net proceeds from the June Term Loan were used primarily to repay all amounts outstanding under our previous credit facility (Prior Facility), which was terminated on such repayment. In November 2018, we utilized the accordion feature under our New Credit Facility to add an incremental term loan of $250.0 (November Term Loan), maturing in June 2025. The June Term Loan and the November Term Loan are collectively referred to as the New Term Loans. The Prior Facility consisted of a $250.0 term loan (Prior Term Loan) and a $300.0 revolving credit facility (Prior Revolver), both of which were scheduled to mature in May 2020. The New Credit Facility is described below. The Prior Facility is described in note 12 to our 2017 audited consolidated financial statements.

As of December 31, 2018, an aggregate of $598.3 was outstanding under the New Term Loans, and other than ordinary course letters of credit (described below), $159.0 was outstanding under the New Revolver.

During the second quarter of 2018, we borrowed a total of $163.0 under the Prior Revolver, used primarily to fund the Atrenne acquisition in April 2018 (see note 3). The net proceeds of the June Term Loan were used primarily to repay the outstanding amounts under the Prior Revolver ($163.0) and the Prior Term Loan ($175.0), as well as costs related to the arrangement of the New Credit Facility. During the third quarter of 2018, we borrowed $55.0 under the New Revolver for working capital purposes. During the fourth quarter of 2018, we borrowed $339.5 under the New Revolver to fund the Impakt acquisition in November 2018 (see note 3). The net proceeds of the November Term Loan were used to repay $245.0 of the outstanding amounts under the New Revolver, as well as costs related to the arrangement of the November Term Loan. We made scheduled quarterly principal repayments of $0.875 during the last two quarters of 2018 under the June Term Loan. We made

scheduled quarterly principal repayments of $6.25 during each quarter of 2017 and during the first two quarters of 2018 under the Prior Term Loan.

The June Term Loan requires quarterly principal repayments of $0.875, commencing September 30, 2018, and the November Term Loan requires quarterly principal repayments of $0.625, commencing March 31, 2019, and in each case a lump sum repayment of the remainder outstanding at maturity. Commencing in 2020, we are also required to make an annual prepayment of outstanding obligations under the New Credit Facility (applied first to the New Term Loans, then to the New Revolver, in the manner set forth in the New Credit Facility) ranging from 0% — 50% (based on a defined leverage ratio) of specified excess cash flow (as defined in the New Credit Facility) for the prior fiscal year. Proceeds from the sale of our Toronto real property (note 8) will be taken into account in the determination of excess cash flow. In addition, prepayments of outstanding obligations under the New Credit Facility (applied as described above) may also be required in the amount of specified net cash proceeds received above a specified annual threshold (including proceeds from the disposal of certain assets, but excluding the net proceeds from the sale of our Toronto real estate). Except under specified circumstances, and subject to the payment of breakage costs (if any), we are generally permitted to make voluntary prepayments of outstanding amounts under the New Revolver and the New Term Loans without any other premium or penalty. Repaid amounts on the term loans may not be re-borrowed.

The New Credit Facility has an accordion feature that allows us to increase the term loans and/or revolving loan commitments thereunder by approximately $110, plus an unlimited amount to the extent that a specified leverage ratio on a pro forma basis does not exceed specified limits, in each case on an uncommitted basis and subject to the satisfaction of certain terms and conditions. The New Revolver also includes a $50.0 sub-limit for swing line loans, providing for short-term borrowings up to a maximum of ten business days, as well as a $150.0 sub-limit for letters of credit, in each case subject to the overall New Revolver credit limit. The New Revolver permits us and certain designated subsidiaries to borrow funds (subject to specified conditions) for general corporate purposes, including for capital expenditures, certain acquisitions, and working capital needs. Borrowings under the New Revolver bear interest at LIBOR, Canadian Prime or Base Rate (each as defined in the New Credit Facility) plus a specified margin, or in the case of any bankers' acceptance, at the B/A Discount Rate (as defined in the New Credit Facility). The margin for borrowings under the New Revolver ranges from 0.75% to 2.5%, and commitment fees range between 0.35% and 0.50%, in each case depending on the rate we select and our consolidated leverage ratio. As a result of our use of the accordion feature of the New Credit Facility in November 2018, interest on the June Term Loan increased from LIBOR plus 2.0% to LIBOR plus 2.125%. The November Term Loan currently bears interest at LIBOR plus 2.5%.

We are required to comply with certain restrictive covenants under the New Credit Facility, including those relating to the incurrence of certain indebtedness, the existence of certain liens, the sale of certain assets (excluding real property then held for sale), specified investments and payments, sale and leaseback transactions, and certain financial covenants relating to a defined interest coverage ratio and leverage ratio that are tested on a quarterly basis. At December 31, 2018, we were in compliance with all restrictive and financial covenants under the New Credit Facility. The obligations under the New Credit Facility are guaranteed by us and certain specified subsidiaries. Subject to specified exemptions and limitations, all assets of the guarantors are pledged as security for the obligations under the New Credit Facility. The New Credit Facility contains customary events of default. If an event of default occurs and is continuing, the administrative agent may declare all amounts outstanding under the New Credit Facility to be immediately due and payable and may cancel the lenders' commitments to make further advances thereunder. In the event of a payment or other specified defaults, outstanding obligations accrue interest at a specified default rate.

(in millions of U.S. dollars, except percentages and per share amounts)

The following table sets forth our borrowings under our credit facilities, and our finance lease obligations, as of December 31, 2018 and 2017:

	December 31 2017	December 31 2018
Borrowings under the Prior Revolver/New Revolver [(1)]	$ —	$ 159.0
Borrowings under the Prior Term Loan/New Term Loans	187.5	598.3
Total borrowings under applicable credit facility	187.5	757.3
Less: unamortized debt issuance costs [(2)]	(0.8)	(9.8)
Finance lease obligations (see notes 4 and 24) [(3)]	17.7	10.4
	$ 204.4	$ 757.9
Comprised of:		
Current portion of borrowings under applicable credit facility and finance lease obligations [(3)]	$ 37.9	$ 107.7
Long-term portion of borrowings under applicable credit facility and finance lease obligations	166.5	650.2
	$ 204.4	$ 757.9

(1) Debt issuance costs were incurred in connection with our Prior Revolver in 2014 ($1.7) and the New Revolver in 2018 ($3.1), which we deferred as other assets on our consolidated balance sheets and amortize over the term of the relevant revolver. See note 10 for the long-term portion of the deferred financing costs. We accelerated the amortization of $0.6, representing the remaining portion of the unamortized deferred financing costs related to the Prior Revolver, upon termination of the Prior Facility, and recorded it to other charges in June 2018.

(2) Debt issuance costs were incurred in connection with our Prior Term Loan in 2015 ($2.1), the June Term Loan ($4.9), and the November Term Loan ($5.4), which we deferred as long-term debt on our consolidated balance sheets and amortize over the term of the relevant term loan using the effective interest rate method. We accelerated the amortization of $0.6, representing the remaining portion of the unamortized deferred financing costs related to the Prior Term Loan, upon termination of the Prior Facility, and recorded it to other charges in June 2018.

(3) At December 31, 2017, $11.1 of our finance lease obligations related to our solar panel manufacturing equipment (recorded as current liabilities on our consolidated balance sheet as at December 31, 2017). In connection with the anticipated disposition of such equipment, we terminated and settled these lease obligations in full in January 2018 for $11.3 (including $0.2 of fees and accrued interest). See note 4.

The New Term Loans require aggregate quarterly principal repayments of $1.5, and a lump sum repayment of the remainder outstanding at maturity. At December 31, 2018, the aggregate remaining mandatory principal repayments of the New Term Loans were as follows:

Years ending December 31	Amount
2019	$ 6.0
2020	6.0
2021	6.0
2022	6.0
2023	6.0
2024	6.0
2025 (to maturity in June 2025)	562.3
	$ 598.3

We entered into 5-year interest rate swap agreements with a syndicate of third-party banks in August and December 2018 to partially hedge against our exposures to the interest rate variability on our New Term Loans. The derivative instruments swap the variable rate of interest for a fixed rate of interest on $175.0 of the amounts outstanding under each of our June Term Loan and our November Term Loan, for an aggregate hedged amount of $350.0. See note 21.

Commitment fees paid under our relevant credit facilities in 2018 were $1.3 (2017 — $1.3; 2016 — $1.4). At December 31, 2018, we had $21.3 outstanding in letters of credit under the New Revolver (December 31, 2017 — $23.2 outstanding in letters of credit under the Prior Revolver). We also arrange letters of credit and surety bonds outside of our revolving facility. At December 31, 2018, we had $14.4 (December 31, 2017 — $13.6) of such letters of credit and surety bonds outstanding.

At December 31, 2018, we also had a total of $132.8 (December 31, 2017 — $73.5) in uncommitted bank overdraft facilities available for intraday and overnight operating requirements under our applicable credit facility. There were no amounts outstanding under these overdraft facilities at December 31, 2018 or December 31, 2017.

The amounts we borrow and repay under our facilities can vary significantly from month-to-month depending upon our working capital and other cash requirements.

13. CAPITAL STOCK:

We are authorized to issue an unlimited number of subordinate voting shares, which entitle the holder to one vote per share, and an unlimited number of multiple voting shares, which entitle the holder to 25 votes per share. The subordinate voting shares and multiple voting shares vote together as a single class on all matters submitted to a vote of shareholders, including the election of directors, except as otherwise required by law. The holders of the subordinate voting shares and multiple voting shares are entitled to share ratably, as a single class, in any dividends declared subject to any preferential rights of any outstanding preferred shares in respect of the payment of dividends. Each multiple voting share is convertible at any time at the option of the holder thereof and automatically, under certain circumstances, into one subordinate voting share. We are also authorized to issue an unlimited number of preferred shares, issuable in series. No preferred shares have been issued to date.

(a) Capital transactions:

Number of shares (in millions)	Subordinate Voting Shares	Multiple Voting Shares
Issued and outstanding at December 31, 2015	124.5	18.9
Issued from treasury[(i)]	0.6	—
Cancelled under NCIB[(ii)]	(3.2)	—
Issued and outstanding at December 31, 2016	121.9	18.9
Issued from treasury[(i)]	2.8	—
Cancelled under NCIB[(ii)]	(1.9)	—
Other[(iii)]	0.35	(0.35)
Issued and outstanding at December 31, 2017	123.2	18.6
Issued from treasury[(i)]	1.3	—
Cancelled under NCIB[(ii)]	(6.8)	—
Issued and outstanding at December 31, 2018	117.7	18.6

(i) During 2018, we issued 0.1 million (2017 — 1.7 million; 2016 — 0.6 million) subordinate voting shares from treasury upon the exercise of stock options for aggregate cash proceeds of $0.4 (2017 — $13.6; 2016 — $4.1). We also issued 1.2 million (2017 — 1.1 million; 2016 — nil) subordinate voting shares from treasury with ascribed values of $14.3 (2017 — $9.8; 2016 — nil) upon the vesting of certain RSUs and PSUs. We also settled RSUs and PSUs with subordinate voting shares purchased in the open market. Settlement of these awards is described below.

(ii) NCIB stands for normal course issuer bid.

(iii) During 2017, Onex Corporation converted 346,175 of our multiple voting shares into subordinate voting shares. Onex Corporation did not convert any multiple voting shares in 2016 or 2018.

We have repurchased subordinate voting shares in the open market and otherwise for cancellation in recent years pursuant to normal course issuer bids (NCIBs) and substantial issuer bids (SIBs), which allow us to repurchase a limited number of subordinate voting shares during a specified period. The maximum number of subordinate voting shares we are permitted to

repurchase for cancellation under each NCIB is reduced by the number of subordinate voting shares purchased in the open market during the term of such NCIB to satisfy obligations under our stock-based compensation plans. We enter into program share repurchases (PSRs) from time to time as part of the NCIB process (if permitted by the TSX), pursuant to which we make a prepayment to a broker in consideration for the right to receive a variable number of subordinate voting shares upon such PSR's completion. Under such PSRs, the price and number of subordinate voting shares to be repurchased by us is generally determined based on a discount to the volume weighted-average market price of such shares during the term of the PSR, subject to certain terms and conditions. The subordinate voting shares repurchased under any PSR are cancelled upon such PSR's completion.

In December 2018, the TSX accepted our notice to launch a new NCIB (2018 NCIB), which allows us to repurchase, at our discretion, until the earlier of December 17, 2019 or the completion of the purchases thereunder, up to approximately 9.5 million subordinate voting shares in the open market, or as otherwise permitted. We did not repurchase or cancel any subordinate voting shares under the 2018 NCIB in 2018.

In November 2017, we launched an NCIB (2017 NCIB) which was completed in November 2018. The 2017 NCIB allowed us to repurchase, at our discretion, up to approximately 10.5 million subordinate voting shares in the open market, or as otherwise permitted. During the term of the 2017 NCIB, we paid an aggregate of $19.9 (including transaction fees) in 2017 to repurchase and cancel 1.9 million subordinate voting shares at a weighted average price of $10.58 per share, and $75.5 to cancel 6.8 million subordinate voting shares during 2018 at a weighted average price of $11.10 per share. In addition, prior to its expiry, we repurchased an aggregate of 1.1 million subordinate voting shares under the 2017 NCIB (including 0.3 million subordinate voting shares in 2017) to satisfy delivery obligations under our stock-based compensation plans (see below).

In February 2016, we launched an NCIB (2016 NCIB) which was completed in February 2017. The 2016 NCIB allowed us to repurchase, at our discretion, up to approximately 10.5 million subordinate voting shares in the open market, or as otherwise permitted. During 2016, we paid $34.3 (including transaction fees) to repurchase and cancel 3.2 million subordinate voting shares under the 2016 NCIB at a weighted average price of $10.69 per share, including 2.8 million subordinate voting shares repurchased under a $30.0 PSR we funded in March 2016 (and completed in May 2016) at a weighted average price of $10.69 per share. We did not repurchase any subordinate voting shares under the 2016 NCIB for cancellation during 2017. However, prior to its expiry, we repurchased an aggregate of 1.6 million subordinate voting shares under the 2016 NCIB (2016 — 1.6 million; 2017 — nil), to satisfy delivery obligations under our stock-based compensation plans (see below).

***(b) Employee stock-based compensation*:**

Long-Term Incentive Plan (LTIP):

Under the LTIP, we may grant stock options, stock appreciation rights, RSUs and PSUs to eligible employees, consultants and directors. We may, at the time of grant, authorize the grantees to settle these awards either in cash or in subordinate voting shares. Absent such permitted election, grants under the LTIP will be settled in subordinate voting shares, which we may purchase in the open market, or issue from treasury (up to a maximum aggregate of 29.0 million subordinate voting shares). As of December 31, 2018, 11.1 million subordinate voting shares remain reserved for issuance from treasury, covering potential issuances of subordinate voting shares for outstanding awards and for potential future grants of stock-based compensation under the LTIP.

Celestica Share Unit Plan (CSUP):

Under the CSUP, we may grant RSUs and PSUs to eligible employees. We have the option to settle RSUs and PSUs issued thereunder in subordinate voting shares purchased in the open market, or in cash.

For disclosure regarding DSUs issued to eligible directors under our Directors' Share Compensation Plan (DSC Plan), see paragraph (c) below.

During 2018, we recorded aggregate employee stock-based compensation expense (excluding DSU expense) through cost of sales and SG&A, of $33.4 (2017 — $30.1; 2016 — $33.0). Employee stock-based compensation expense varies from period-to-period. The portion of such expense that relates to a non-market performance condition varies depending on the level of achievement of pre-determined financial targets.

(i) Stock options:

We are permitted to grant stock options under our LTIP, although no stock options have been granted in 2016, 2017 or 2018. When granted, stock options are granted at prices equal to the closing market price on the day prior to the grant date and are exercisable during a period not to exceed 10 years from the grant date.

Stock option transactions were as follows for the years indicated:

	Number of Options	Weighted Average Exercise Price
	(in millions)	
Outstanding at January 1, 2016	2.9	$ 8.03
Exercised	(0.6)	$ 6.46
Forfeited/Expired	(0.2)	$ 9.99
Outstanding at December 31, 2016	2.1	$ 8.46
Exercised	(1.7)	$ 7.87
Outstanding at December 31, 2017	0.4	$ 12.14
Exercised	(0.1)	$ 6.20
Outstanding at December 31, 2018	0.3	$ 11.93

Outstanding stock options were exercised throughout the year. The weighted average closing market price of a subordinate voting share was $10.92 during 2018 (2017 — $12.41; 2016 — $10.66).

The following stock options were outstanding as at December 31, 2018:

Range of Exercise Prices	Outstanding Options	Weighted Average Exercise Price	Weighted Average Remaining Life of Outstanding Options	Exercisable Options	Weighted Average Exercise Price
	(in millions)		(years)	(in millions)	
$6.06 - $12.85	0.3	$11.93	6.2	0.3	$11.68

We amortize the estimated grant date fair value of stock options to expense over the vesting period (generally four years). The grant date fair value of outstanding stock options was determined using the Black-Scholes option pricing model and the following assumptions in the year of the grant: risk-free interest rate (based on U.S. government bond yields), expected volatility of the market price of our shares (based on historical volatility of our share price), and the expected option life (in years) (based on historical option holder behavior).

(ii) RSUs and PSUs:

We grant RSUs and PSUs to our employees pursuant to our LTIP and CSUP. Each vested unit generally entitles the holder to receive one subordinate voting share. Under the CSUP, we have the option to satisfy the delivery of shares upon vesting of the awards by purchasing subordinate voting shares in the open market or by settling such awards in cash. Under the LTIP, we may (at the time of grant) authorize the grantees to settle awards in either cash or subordinate voting shares (absent such permitted election, grants will be settled in subordinate voting shares, which we may purchase in the open market or issue from treasury, subject to certain limits). We have generally settled these awards with subordinate voting shares purchased in the open market by a broker, or by issuing subordinate voting shares from treasury. We amortize the grant date fair value of RSUs and PSUs to expense over the vesting period.

The following table outlines the RSU transactions during the years indicated, under each of the LTIP and CSUP.

Number of awards (in millions)	LTIP	CSUP	Total
Outstanding at January 1, 2016	—	3.5	3.5
Granted	0.8	1.5	2.3
Settled	—	(1.9)	(1.9)
Forfeited/Expired	—	(0.1)	(0.1)
Outstanding at December 31, 2016	0.8	3.0	3.8
Granted	1.4	0.5	1.9
Settled	(0.3)	(2.0)	(2.3)
Forfeited/Expired	(0.2)	—	(0.2)
Outstanding at December 31, 2017	1.7	1.5	3.2
Granted	—	2.6	2.6
Settled	(0.9)	(0.9)	(1.8)
Forfeited/Expired	(0.1)	(0.1)	(0.2)
Outstanding at December 31, 2018	0.7	3.1	3.8

The grant date fair value of RSUs is based on the market value of our subordinate voting shares at the time of grant.

With respect to PSUs, employees are granted a target number of PSUs. The number of PSUs that will actually vest will vary from 0 to 200% of the target amount granted based on the level of achievement of the relevant performance conditions. During 2018, we granted 1.6 million (2017 — 0.9 million; 2016 — 1.25 million) PSUs (representing in each case 100% of target), primarily granted in the first quarter of each such year. The PSUs granted in 2018 vest based on the level of achievement of a pre-determined non-market performance measurement in the final year of the three-year performance period, subject to modification by a separate pre-determined non-market financial target and our relative TSR performance over the 3-year vesting period. See note 2(n) for a description of TSR. We estimated the grant date fair value of the TSR modifier using a Monte Carlo simulation model and a premium of 106%. The grant date fair value of the non TSR-based performance measurement and modifier was based on the market value of our subordinate voting shares at the time of grant and may be adjusted in subsequent years to reflect a change in the estimated level of achievement related to the applicable performance condition. 60% of the PSUs granted in 2017 and 2016 vest based on the achievement of a market performance condition tied to TSR, and the balance vest based on a pre-determined non-market performance measurement in the final year of the three-year performance period. We estimated the grant date fair value of the TSR-based PSUs using a Monte Carlo simulation model (2017 grants — premium of 143%; 2016 grants — premium of 109%). The grant date fair value of the non TSR-based PSUs was based on the market value of our subordinate voting shares at the time of grant and may be adjusted in subsequent years to reflect a change in the estimated level of achievement related to the applicable performance condition. We expect to settle these awards with subordinate voting shares purchased in the open market by a broker or issued from treasury. During 2018, we settled 0.4 million (2017 — 0.8 million; 2016 — 1.1 million) PSUs with subordinate voting shares. At December 31, 2018, 3.2 million (December 31, 2017 — 2.5 million; December 31, 2016 — 3.0 million) PSUs were outstanding (representing 100% of the target amounts granted). Of the total number of outstanding PSUs at December 31, 2018, 0.7 million PSUs were granted pursuant to the LTIP, and 2.5 million PSUs were granted pursuant to the CSUP.

The weighted average grant date fair value of RSUs awarded in 2018 was $10.48 per unit (2017 — $13.05; 2016 — $9.29). The weighted average grant date fair value of PSUs awarded in 2018 was $11.11 per unit (2017 — $17.18; 2016 — $9.61). As of December 31, 2018, none of the outstanding RSUs or PSUs had vested.

From time-to-time, we pay cash for the purchase by a broker of subordinate voting shares in the open market to satisfy the delivery of subordinate voting shares upon vesting of awards under our stock-based compensation plans. For accounting purposes, we classify these shares as treasury stock until they are delivered pursuant to the plans. During 2018, we purchased 2.1 million subordinate voting shares (2017 — 1.4 million; 2016 — 1.6 million) in the open market through a broker for $22.4 (2017 — $16.7; 2016 — $18.2) (including transaction fees) to satisfy delivery requirements under our stock-based compensation plans.

(in millions of U.S. dollars, except percentages and per share amounts)

At December 31, 2018, the broker held 1.9 million (December 31, 2017 — 0.8 million; December 31, 2016 — 1.4 million) subordinate voting shares with a value of $20.2 (December 31, 2017 — $8.7; December 31, 2016 — $15.3).

As management currently intends to settle all outstanding share unit awards with subordinate voting shares purchased in the open market by a broker or subordinate voting shares issued from treasury, we have accounted for these share unit awards as equity-settled awards.

***(c) Deferred share units*:**

We grant DSUs to certain members of our Board of Directors under our DSC Plan. The DSUs may be settled in cash or with subordinate voting shares issued from treasury or purchased in the open market (at the Company's option). See note 2(n) for details. During 2017, two of our directors resigned from the Board and in connection therewith, we settled their outstanding DSUs in 2017 in accordance with the provisions of the DSC Plan. Specifically, we paid $1.7 in cash to Joseph M. Natale to settle his outstanding DSUs, and we settled the outstanding DSUs of Thomas S. Gross with 14,098 subordinate voting shares that we purchased in the open market. As Celestica is permitted to, and currently intends to, settle all other DSUs with shares purchased in the open market, we have accounted for these awards as equity-settled awards. In 2018, we recorded DSU expense of $2.0 (2017 — $2.2; 2016 — $2.1) through SG&A. At December 31, 2018, 1.6 million (December 31, 2017 — 1.5 million; December 31, 2016 — 1.3 million) DSUs were outstanding.

14. ACCUMULATED OTHER COMPREHENSIVE LOSS, NET OF TAX:

	Year ended December 31		
	2016	2017	2018
Opening balance of foreign currency translation account	$ (15.2)	$ (15.2)	$ (14.5)
Foreign currency translation adjustments	—	0.7	0.1
Closing balance	(15.2)	(14.5)	(14.4)
Opening balance of unrealized net gain (loss) on currency forward cash flow hedges	$ (17.6)	$ (9.5)	$ 7.8
Net gain (loss) on currency forward cash flow hedges[(i)]	(2.2)	27.9	(14.7)
Reclassification of net loss (gain) on currency forward cash flow hedges to operations[(ii)]	10.3	(10.6)	(0.8)
Closing balance[(iii)]	(9.5)	7.8	(7.7)
Opening balance of unrealized net gain (loss) on interest rate swap cash flow hedges	$ —	$ —	$ —
Net loss on interest rate swap cash flow hedges	—	—	(4.8)
Reclassification of net loss on interest rate swap cash flow hedges to operations	—	—	0.4
Closing balance[(iv)]	—	—	(4.4)
Actuarial gains (losses) on pension and non-pension post-employment benefit plans (note 19)	$ 17.1	$ (1.2)	$ 8.4
Reclassification of actuarial losses (gains) to deficit	(17.1)	1.2	(8.4)
Loss on purchase of pension annuities (note 19)	—	(17.0)	(63.3)
Reclassification of loss on purchase of pension annuities to deficit (note 19)	—	17.0	63.3
Closing balance	—	—	—
Accumulated other comprehensive loss	$ (24.7)	$ (6.7)	$ (26.5)

(i) Net of income tax benefit of $1.0 for 2018 (2017 — net of $2.8 income tax expense; 2016 — net of $1.2 income tax benefit).

(in millions of U.S. dollars, except percentages and per share amounts)

(ii) Net of release of income tax expense of $0.7 associated with the reclassification of net hedge (gain) loss to operations for 2018 (2017 — net of release of $0.3 income tax expense; 2016 — net of release of $1.1 income tax benefit).

(iii) Net of income tax benefit of $0.5 as of December 31, 2018 (December 31, 2017 — net of $1.2 income tax expense; December 31, 2016 — net of $1.3 income tax benefit).

(iv) No income tax impact as of December 31, 2018.

We expect that the majority of net gains or losses on foreign exchange cash flow hedges reported in the 2018 accumulated other comprehensive loss balance will be reclassified to operations during 2019, primarily in cost of sales, as the underlying expenses that are being hedged are primarily included in cost of sales. The gains or losses on interest rate swap cash flow hedges will be released from OCI to finance costs in each of the respective interest payment periods during the 5-year term of the swap agreements, which mature in 2023 if the cancellable options remain unexercised.

15. EXPENSES BY NATURE:

We have presented our consolidated statement of operations by function. Included in our cost of sales and SG&A for 2018 were employee-related costs of $804.7 (2017 — $726.4; 2016 — $711.3), including employee stock-based compensation expense of $33.4 (2017 — $30.1; 2016 — $33.0), freight and transportation costs of $97.0 (2017 — $79.3; 2016 — $80.9), depreciation expense of $73.7 (2017 — $67.6; 2016 — $66.2) and rental expense of $35.4 (2017 — $28.5; 2016 — $27.1).

16. OTHER CHARGES:

	Year ended December 31		
	2016	2017	2018
Restructuring charges (a)	$ 31.9	$ 28.9	$ 35.4
Loss on pension annuity purchase (note 19)	—	1.9	—
Toronto transition costs (note 8)	—	1.6	13.2
Accelerated amortization of unamortized deferred financing costs (b)	—	—	1.2
Other (c)	(6.4)	4.6	11.2
	$ 25.5	$ 37.0	$ 61.0

(a) Restructuring:

Our restructuring charges were comprised of the following:

	Year ended December 31		
	2016	2017	2018
Cash charges	$ 10.7	$ 25.1	$ 35.2
Non-cash charges	21.2	3.8	0.2
	$ 31.9	$ 28.9	$ 35.4

We perform ongoing evaluations of our business, operational efficiency and cost structure, and implement restructuring actions as we deem necessary. In connection therewith, we are currently implementing restructuring actions under a cost efficiency initiative (CEI), including actions identified as part of our previously-disclosed CCS segment portfolio review and actions in response to the demand environment in our capital equipment business. This initiative includes reductions to our workforce, as well as potential consolidation of certain sites to better align capacity and infrastructure with current and anticipated customer demand, related transfers of customer programs and production, re-alignment of business processes, management reorganizations, and other associated activities.

We recorded restructuring charges of $35.4 in 2018, all in connection with our CEI, consisting of cash charges of $35.2, primarily for consultant costs, and employee and lease termination costs, and non-cash charges of $0.2, representing losses on

the sale of surplus equipment. Our restructuring provision at December 31, 2018 was $10.3 (December 31, 2017 — $12.7), which we recorded in current portion of provisions on our consolidated balance sheet.

We recorded restructuring charges of $28.9 in 2017. Our restructuring charges for 2017 consisted of cash charges of $25.1, comprised of employee termination costs related to our Organizational Design (OD) and Global Business Services (GBS) initiatives (each of which were completed in 2017), costs in connection with the rationalization of certain operations in the third quarter of 2017, and $8.0 of charges in connection with our CEI in the fourth quarter of 2017, and net non-cash charges of $3.8, to write down the carrying value of our solar panel manufacturing equipment based on executed sale agreements. See note 4.

We recorded restructuring charges of $31.9 in 2016, consisting of cash charges of $10.7, primarily for employee termination costs relating to our GBS and OD initiatives, our solar panel manufacturing operations and other exited operations, and non-cash charges of $21.2 to write down certain plant assets and equipment to recoverable amounts, including $19.0 related to our solar panel manufacturing equipment at our two locations. See note 4 for a description of our decision in the fourth quarter of 2016 to exit the solar panel manufacturing business.

See notes 2(m) and 11 for further details regarding our restructuring provisions.

(b) Accelerated amortization of unamortized deferred financing costs:

During the second quarter of 2018, we recorded a $1.2 charge to accelerate the amortization of unamortized deferred financing costs related to the extinguishment of the Prior Facility in June 2018. See note 12.

(c) Other:

During 2018, we recorded $11.0 (2017 — $4.5; 2016 — $1.4) in Acquisition Costs. See note 3. Additionally, during 2017 and 2016, we received recoveries of damages of $1.1 and $12.0, respectively, in connection with the settlement of class action lawsuits in which we were a plaintiff, related to certain purchases we made in prior periods. These recoveries were offset in part by costs we recorded in each year for unrelated legal matters.

17. FINANCE COSTS AND REFUND INTEREST INCOME:

Our finance costs are comprised primarily of interest expenses and fees related to our applicable credit facility, interest rate swap agreements, accounts receivable sales program and the SFP. See notes 5 and 12.

Refund interest income represents the refund of interest on cash previously held on account with tax authorities in connection with the resolution of certain previously-disputed tax matters in 2016. See note 20.

18. RELATED PARTY TRANSACTIONS:

Onex Corporation (Onex) beneficially owns or controls, directly or indirectly, all of our outstanding multiple voting shares. Accordingly, Onex has the ability to exercise significant influence over our business and affairs and generally has the power to determine all matters submitted to a vote of our shareholders where the subordinate voting shares and multiple voting shares vote together as a single class. Mr. Gerald Schwartz, the Chairman of the Board, President and Chief Executive Officer of Onex, indirectly owns shares representing the majority of the voting rights of Onex.

In January 2009, we entered into a Services Agreement with Onex for the services of Mr. Schwartz (amended in 2017 to replace references to Mr. Schwartz with references to Mr. Tawfiq Popatia) as a director of Celestica, pursuant to which Onex receives compensation for such services. This agreement automatically renews for successive one-year terms unless either party provides a notice of intent not to renew. Under such agreement, as amended, the annual fee payable to Onex is $0.235 payable in DSUs in equal quarterly installments, in arrears. The Services Agreement terminates automatically and the rights of Onex to receive compensation (other than accrued and unpaid compensation) will terminate (a) 30 days after the first day on which Onex ceases to hold at least one multiple voting share of Celestica or any successor company or (b) the date Mr. Popatia ceases to be a director of Celestica for any reason.

(in millions of U.S. dollars, except percentages and per share amounts)

See note 8 for details with respect to Mr. Schwartz's interest in the Property Purchaser, and the Property Purchaser's option to obtain a 5% non-voting interest in the Assignee.

Compensation of key management personnel:

Our key management team consists of directors and senior executive officers. The aggregate compensation expenses we recognized under IFRS for our directors and key management team were as follows:

	Year ended December 31		
	2016	2017	2018
Short-term employee benefits and costs	$ 6.2	$ 7.5	$ 6.2
Post-employment and other long-term benefits	0.4	0.6	0.3
Stock-based compensation (including DSUs to eligible directors)	12.3	12.4	14.8
	$ 18.9	$ 20.5	$ 21.3

19. PENSION AND NON-PENSION POST-EMPLOYMENT BENEFIT PLANS:

(a) Plan summaries:

We provide pension and non-pension post-employment benefit plans for our employees. Such plans include defined benefit pension plans for our employees in the United Kingdom (U.K.) that generally provide participants with stated benefits on retirement based on their pensionable service, either in annuities and/or lump sum payments. The U.K defined benefit pension plans are comprised of a Main pension plan and a Supplementary pension plan, both of which are closed to new members. The U.K. Main pension plan is our largest defined benefit pension plan. The Supplementary pension plan does not have any active members. Approximately 1% of the U.K. Main pension plan members remain active employees of the Company. Defined contribution pension plans are offered to certain employees, mainly in Canada and the U.S. We provide non-pension post-employment benefits (under other benefit plans) to retired and terminated employees in Canada, the U.S., Mexico and Thailand. These benefits may include one-time retirement and specified termination benefits, medical, surgical, hospitalization coverage, supplemental health, dental and/or group life insurance.

In March 2017, the Trustees of our U.K. Main pension plan entered into an agreement with a third party insurance company to purchase an annuity for participants in such plan who have retired. The cost of the annuity was £123.7 million (approximately $154.3 at the exchange rate at the time of recording) and was funded with existing plan assets. The annuity is held as an asset of the Main pension plan. Although we retain ultimate responsibility for the payment of benefits to plan participants, the annuity substantially hedges the financial risk component of the associated pension obligations for such retired participants. The purchase of the annuity resulted in a non-cash loss of $17.0 which we recorded in OCI and simultaneously re-classified to deficit during the first quarter of 2017. We also reduced the value of our pension assets by $17.0 during the first quarter of 2017, which was recorded in other non-current assets on our consolidated balance sheet. The cost of this annuity is subject to a true-up adjustment in the near term, and we may be required to pay additional premium amounts to the insurance company after completion of data verification of all retired participants.

In April 2017, the Trustees of our U.K. Supplementary pension plan entered into an agreement with a third party insurance company to purchase an annuity for all participants of this plan, all of whom are retired. The cost of the annuity was £9.1 million (approximately $11.7 at the exchange rate at the time of recording) and was funded with existing plan assets. The annuity is held as an asset of such plan. We currently anticipate transferring the pension annuity to individual plan members and winding up the Supplementary pension plan in the first half of 2019. Although we retain ultimate responsibility for the payment of benefits to plan participants until such wind-up is complete, the annuity substantially hedges the financial risk component of the associated pension obligations for such retired participants. The purchase of the annuity resulted in a non-cash loss of $1.9 which we recorded during the second quarter of 2017 in other charges (see note 16) in our consolidated statement of operations, with a corresponding reduction in the value of our pension assets which is recorded in other non-current assets on our consolidated balance sheet. As we anticipate winding up this plan, the non-cash loss was recorded through our consolidated statement of operations.

In June 2018, the Trustees of the U.K. Main pension plan entered into an agreement with a third party insurance company to purchase an annuity for participants in such plan who have not yet retired. The cost of the annuity was £156.1 million (approximately $209.2 at the exchange rate at the time of recording) and was funded with existing plan assets. The purchase of the annuity resulted in a non-cash loss of $63.3 for the second quarter of 2018 which we recorded in OCI and simultaneously re-classified to deficit, and the recognition of an additional pension obligation on our consolidated balance sheet after we fully reduced the pension asset to zero. The cost of this annuity is subject to a true-up adjustment within 12 months of the purchase of the annuity, and we may be required to pay additional premium amounts to the insurance company after completion of data verification for such non-retired participants.

The overall governance of our pension plans is conducted by our Global Compensation Committee which, through annual reviews, approves material plan changes, reviews funding levels, investment performance, compliance matters and plan assumptions, and ensures that the plans are administered in accordance with local statutory requirements. We have established a Pension Committee to govern our Canadian pension plans. The U.K. pension plans are governed by a Board of Trustees, composed of employee and company representation. Both the Canadian Pension Committee and the U.K. Board of Trustees review funding levels, investment performance and compliance matters for their respective plans. Our pension funding policy is to contribute amounts sufficient, at minimum, to meet local statutory funding requirements. For our defined benefit pension plans (primarily U.K.), local regulatory bodies either define the minimum funding requirement or approve the funding plans submitted by us. We may make additional discretionary contributions taking into account actuarial assessments and other factors. The contributions that we make to support ongoing plan obligations are recorded in the respective asset or liability accounts on our consolidated balance sheet.

Our U.K. plans require an actuarial valuation to be completed every three years. The actuarial valuation was completed using a measurement date of April 2016; the next valuation will have a measurement date of April 2019.

We currently fund our non-pension post-employment benefit plans as we incur benefit payment obligations thereunder. Excluding our mandatory plans, the most recent actuarial valuations for our largest non-pension post-employment benefit plans were completed using measurement dates of May 2016 (Canada) and December 2018 (U.S.). The next actuarial valuations for these plans will have measurement dates of May 2019 and December 2019, respectively. We accrue the expected costs of providing non-pension post-employment benefits during the periods in which the employees render service.

We used a measurement date of December 31, 2018 for the accounting valuation for pension and non-pension post-employment benefits.

Our pension plans are exposed to market risks such as changes in interest rates, inflation, and fluctuations in investment values, as well as financial risks including counterparty risks of financial institutions from which annuities have been purchased for specified plans. See note 21(c). Our plans are also exposed to non-financial risks, including the membership's mortality and demographic changes, as well as regulatory changes.

We manage the funding level risk of defined benefit pension plans through our asset allocation strategy for each plan. In the U.K., we follow an active de-risking strategy and allocate a higher level of the plan assets to debt instruments if the funding level of the plan improves. Certain of the obligations under our U.K. defined benefit pension plans have been hedged with the purchase of annuities with insurance companies. See above.

Pension fund assets are invested primarily in fixed income and equity securities. Asset allocation between fixed income and equity securities is adjusted based on the expected life of the plan and the expected retirement dates of the plan participants. Our pension funds do not invest directly in our shares, but may invest indirectly as a result of the inclusion of our shares in certain investment funds. All of our plan assets are measured at their fair value using inputs described in the fair value hierarchy in note 21. At December 31, 2018, $26.5 (December 31, 2017 — $247.0) of our plan assets were measured using level 1 inputs of the fair value hierarchy and $266.5 (December 31, 2017 — $148.5) of our plan assets (comprised of insurance annuities) were measured using level 3 inputs of the fair value hierarchy. At December 31, 2018, none (December 31, 2017 — none) of our plan assets were measured using level 2 inputs of the fair value hierarchy. Approximately 97% of our plan assets consist of annuities purchased with insurance companies and assets held with financial institutions with a Standard and Poor's long-term rating of A- or above at December 31, 2018. The annuities purchased for the U.K. pension plans are held with financial institutions that are governed by local regulatory bodies. The remaining assets are held with financial institutions where ratings are not available or are below A-. For these institutions, Celestica monitors counterparty risk based on the diversification of plan assets. These

(in millions of U.S. dollars, except percentages and per share amounts)

plan assets are maintained in segregated accounts by a custodian that is independent from the fund managers. We believe that the counterparty risk is low.

Plan assets are measured at their fair values; however, the amounts we are permitted to record for defined benefit plan assets may be restricted under IFRS. See note 2(n) for a description of this restriction. Based on a review of the terms, conditions, and statutory minimum funding requirements of our defined benefit plans, we have determined that the present value of future pension refunds or reductions in future contributions to our pension plans exceeds the total of the fair value of plan assets net of the present value of related obligations. This determination was made on a plan-by-plan basis. As a result of our assessment, there were no reductions to the amounts we recorded for defined benefit plan assets as at December 31, 2018 or 2017.

(b) Plan financials:

The table below presents the market value of plan assets:

	Fair Market Value at December 31		Actual Asset Allocation (%) at December 31	
	2017	2018	2017	2018
Quoted market prices:				
Debt investment funds	$ 225.2	$ 10.2	57%	4%
Equity investment funds	7.0	6.6	2%	2%
Non-quoted market prices:				
Insurance annuities	148.5	266.5	37%	91%
Other	14.8	9.7	4%	3%
Total	$ 395.5	$ 293.0	100%	100%

The following tables provide a summary of the financial position of our pension and other benefit plans:

	Pension Plans Year ended December 31		Other Benefit Plans Year ended December 31	
	2017	2018	2017	2018
Plan assets, beginning of year	$ 377.2	$ 395.5	$ —	$ —
Interest income	10.0	9.4	—	—
Actuarial losses in other comprehensive income [(i)]	(6.1)	(82.2)	—	—
Administrative expenses paid from plan assets	(1.4)	(1.4)	—	—
Employer contributions	2.4	2.7	—	—
Employer direct benefit payments	0.1	1.0	2.5	2.3
Employer direct settlement payments	—	—	2.0	2.5
Settlement payments from employer	—	—	(2.0)	(2.5)
Settlement payments from plan (see note 19(a))	(11.7)	0.1	—	—
Benefit payments from plan	(10.5)	(12.7)	—	—
Benefit payments from employer	(0.1)	(1.0)	(2.5)	(2.3)
Foreign currency exchange rate changes and other	35.6	(18.4)	—	—
Plan assets, end of year	$ 395.5	$ 293.0	$ —	$ —

(i) Actuarial gains or losses are determined based on actual return on plan assets less interest income as set forth in the table above. For 2018, includes a $63.3 loss resulting from the purchase of annuities in June 2018. For 2017, includes a $17.0 loss resulting from the purchase of annuities in March 2017 (see note 19(a) above).

(in millions of U.S. dollars, except percentages and per share amounts)

	Pension Plans Year ended December 31		Other Benefit Plans Year ended December 31	
	2017	2018	2017	2018
Accrued benefit obligations, beginning of year	$ 325.6	$ 355.8	$ 65.8	$ 75.5
Current service cost	2.1	1.8	2.0	2.2
Past service cost and settlement/curtailment losses	1.9	0.1	0.6	1.2
Interest cost	8.7	8.6	2.6	2.6
Actuarial losses (gains) in other comprehensive income from:				
— Changes in demographic assumptions	5.4	(3.7)	0.2	—
— Changes in financial assumptions	2.9	(19.9)	2.9	(3.5)
— Experience adjustments	0.1	0.2	0.6	(0.5)
Settlement payments from employer	—	—	(2.0)	(2.5)
Settlement payments from plan	(11.7)	0.1	—	—
Benefit payments from plan	(10.5)	(12.7)	—	—
Benefit payments from employer	(0.1)	(1.0)	(2.5)	(2.3)
Foreign currency exchange rate changes and other	31.4	(19.7)	5.3	(4.6)
Accrued benefit obligations, end of year	$ 355.8	$ 309.6	$ 75.5	$ 68.1
Weighted average duration of benefit obligations (in years)	19	18	14	13

The present value of the defined benefit obligations, the fair value of plan assets and the surplus or deficit in our defined benefit pension and other benefit plans are summarized as follows:

	Pension Plans December 31		Other Benefit Plans December 31	
	2017	2018	2017	2018
Accrued benefit obligations, end of year	$ (355.8)	$ (309.6)	$ (75.5)	$ (68.1)
Plan assets, end of year	395.5	293.0	—	—
Excess (deficiency) of plan assets over accrued benefit obligations	$ 39.7	$ (16.6)	$ (75.5)	$ (68.1)

The following table outlines the plan balances as reported on our consolidated balance sheet:

	December 31 2017			December 31 2018		
	Pension Plans	Other Benefit Plans	Total	Pension Plans	Other Benefit Plans	Total
Pension and non-pension post-employment benefit obligations	$ (23.2)	$ (74.6)	$ (97.8)	$ (21.1)	$ (67.7)	$ (88.8)
Current other post-employment benefit obligations [(i)]	—	(0.9)	(0.9)	—	(0.4)	(0.4)
Non-current net pension assets (note 10)	62.9	—	62.9	4.5	—	4.5
	$ 39.7	$ (75.5)	$ (35.8)	$ (16.6)	$ (68.1)	$ (84.7)

(i) In connection with certain restructuring actions announced prior to the end of 2017, we reclassified a current portion of the accumulated post-employment benefits totaling $0.9 to accrued and other current liabilities on our consolidated balance sheet as of December 31, 2017. The current portion of post-employment benefits as of December 31, 2018 was $0.4.

(in millions of U.S. dollars, except percentages and per share amounts)

The following table outlines the net expense recognized in our consolidated statement of operations for pension and non-pension post-employment benefit plans:

	Pension Plans Year ended December 31			Other Benefit Plans Year ended December 31		
	2016	2017	2018	2016	2017	2018
Current service cost	$ 1.7	$ 2.1	$ 1.8	$ 1.9	$ 2.0	$ 2.2
Net interest cost (income)	(1.6)	(1.3)	(0.8)	2.6	2.6	2.6
Past service cost and settlement/curtailment losses	—	1.9	0.1	—	0.6	1.2
Plan administrative expenses and other	1.1	1.3	1.3	—	—	—
	1.2	4.0	2.4	4.5	5.2	6.0
Defined contribution pension plan expense (note 19(c))	10.0	9.4	9.6	—	—	—
Total expense for the year	$ 11.2	$ 13.4	$ 12.0	$ 4.5	$ 5.2	$ 6.0

We generally record the expenses for pension plans and non-pension post-employment benefits in cost of sales and SG&A expenses depending on the nature of the expenses. Our settlement loss in 2017 of $1.9 in pension plans arose as a result of annuity purchases for our U.K. Supplementary plan in April 2017. See note 19(a) above.

The following table outlines the gains and losses, net of tax, recognized in OCI and reclassified directly to deficit:

	Year ended December 31		
	2016	2017	2018
Cumulative losses, beginning of year	$ 13.0	$ (4.1)	$ 14.1
Loss on pension annuity purchases (note 19(a))	—	17.0	63.3
Actuarial losses (gains) recognized during the year [(i)]	(17.1)	1.2	(8.4)
Cumulative losses (gains), end of year [(ii)]	$ (4.1)	$ 14.1	$ 69.0

(i) Net of income tax recovery of $0.1 for 2018 (2017 — $0.0 income tax recovery; 2016 — net of $1.4 income tax expense).

(ii) Net of income tax recovery of $0.8 as at December 31, 2018 (December 31, 2017 — net of $0.7 income tax recovery; December 31, 2016 — net of $0.7 income tax recovery).

The following percentages and assumptions were used in measuring the plans for the years indicated:

	Pension Plans			Other Benefit Plans		
	2016	2017	2018	2016	2017	2018
Weighted average discount rate at December 31 [(i)] for:						
Benefit obligations	2.6	2.5	2.9	3.9	3.6	3.8
Net pension cost	3.8	2.6	2.5	4.1	3.9	3.6
Weighted average rate of compensation increase for:						
Benefit obligations	3.9	4.0	4.1	4.6	4.6	4.2
Net pension cost	3.8	3.9	4.0	4.6	4.6	4.6
Healthcare cost trend rates:						
Immediate trend	—	—	—	5.9	5.8	5.7
Ultimate trend	—	—	—	4.5	4.5	4.0
Year the ultimate trend rate is expected to be achieved	—	—	—	2030	2030	2040

(i) The weighted average discount rate is determined using publicly available rates for highly-rated bonds by currency in countries where there is a pension or non-pension benefit plan. A lower discount rate would increase the present value of the benefit obligation.

(in millions of U.S. dollars, except percentages and per share amounts)

Management applied significant judgment in determining these assumptions. We evaluate these assumptions on a regular basis taking into consideration current market conditions and historical market data. Actual results could differ materially from those estimates and assumptions.

A one percentage-point increase or decrease in one of the following actuarial assumptions, holding other assumptions constant in each case, would increase (decrease) our benefit obligations as follows:

	Pension Plans Year ended December 31, 2018		Other Benefit Plans Year ended December 31, 2018	
	1% Increase	1% Decrease	1% Increase	1% Decrease
Discount rate	$ (48.1)	$ 62.1	$ (8.0)	$ 9.7
Healthcare cost trend rate	$ —	$ —	$ 6.2	$ (5.1)

The sensitivity figures shown above were calculated by determining the change in our benefit obligations as at December 31, 2018 due to a 100 basis point increase or decrease to each of our significant actuarial assumptions used, primarily the discount rate and healthcare cost trend rate, in isolation, leaving all other assumptions unchanged from the original calculation.

(c) Plan contributions:

In 2018, we made contributions to our pension plans of $13.3 (2017 — $11.9) of which $9.6 (2017 — $9.4) was for defined contribution plans and $3.7 (2017 — $2.5) was for defined benefit plans. In 2018, we made aggregate contributions to our non-pension post-employment benefit plans of $4.8 (2017 — $4.5) to fund benefit payments.

We currently estimate that our 2019 contributions will be $2.4 for defined benefit pension plans, $9.6 for defined contribution pension plans, and $3.6 for our non-pension post-employment benefit plans. Our actual contributions could differ materially from these estimates.

20. INCOME TAXES:

	Year ended December 31		
	2016	2017	2018
	(restated)	(restated)	
Current income tax expense:			
Current year [(i)]	$ 48.3	$ 39.3	$ 44.4
Adjustments for prior years, including changes to net provisions related to tax uncertainties [(ii)]	(34.1)	(0.2)	(4.7)
	14.2	39.1	39.7
Deferred income tax expense (recovery):			
Origination and reversal of temporary differences [(i)]	20.0	(5.6)	6.2
Changes in previously unrecognized tax losses and deductible temporary differences, including adjustments for prior years [(iii)]	(9.5)	(5.9)	(62.9)
	10.5	(11.5)	(56.7)
Income tax expense	$ 24.7	$ 27.6	$ (17.0)

(in millions of U.S. dollars, except percentages and per share amounts)

A reconciliation of income taxes calculated at the statutory income tax rate to the income tax expense at the effective tax rate is as follows:

	Year ended December 31		
	2016	2017	2018
	(restated)	(restated)	
Earnings before income taxes	$ 163.0	$ 133.1	$ 81.9
Income tax expense at Celestica's statutory income tax rate of 26.5% (2017 and 2016 — 26.5%)	$ 43.2	$ 35.3	$ 21.7
Impact on income taxes from:			
Manufacturing and processing deduction	(0.1)	(0.1)	(0.1)
Foreign income taxed at different rates	(0.1)	(7.6)	(9.1)
Foreign exchange	4.8	(6.8)	3.8
Other, including non-taxable/non-deductible items and changes to net provisions related to tax uncertainties [(i)(ii)]	(25.3)	3.4	11.3
Change in unrecognized tax losses and deductible temporary differences [(iii)]	2.2	3.4	(44.6)
Income tax expense	$ 24.7	$ 27.6	$ (17.0)

(i) These line items for 2016 and 2017 in the two tables above were negatively impacted by a deferred tax expense of $8.0 and $4.0, respectively, related to taxable temporary differences associated with the then-anticipated repatriation of undistributed earnings from certain of our Chinese subsidiaries, of which $6.0 and $3.5 was realized as a current tax expense for withholding tax on dividends paid in 2017 and 2018, respectively.

(ii) These line items for 2016 in the two tables above were favorably impacted by the reversal of provisions of $34 previously recorded for tax uncertainties related to the resolution of a transfer pricing matter for one of our Canadian subsidiaries (discussed below).

(iii) These line items for 2018 in the two tables above include the recognition of an aggregate of $53.3 of deferred tax assets in our U.S. group of subsidiaries (discussed below).

Our effective income tax rate can vary significantly period-to-period for various reasons, including as a result of the mix and volume of business in various tax jurisdictions within the Americas, Europe and Asia, in jurisdictions with tax holidays and tax incentives, and in jurisdictions for which no net deferred income tax assets have been recognized because management believed it was not probable that future taxable profit would be available against which tax losses and deductible temporary differences could be utilized. Our effective income tax rate can also vary due to the impact of restructuring charges, foreign exchange fluctuations, operating losses, cash repatriations, and changes in our provisions related to tax uncertainties.

During 2018, we recorded a net income tax recovery of $17.0 which was favorably impacted by the recognition of $3.7 and $49.6 of previously unrecognized deferred tax assets in our U.S. group of subsidiaries (collectively, DTA Benefits) as a result of our Atrenne and Impakt acquisitions, respectively (which partially offset the net deferred tax liabilities of $56.6 that arose in connection with such acquisitions), as well as the reversal of $6.0 of previously accrued Mexican taxes (described below). These favorable impacts were offset, in part, by adverse taxable foreign exchange impacts resulting from the weakening of the Malaysian ringgit and Chinese renminbi relative to the U.S. dollar (our functional currency). During the second quarter of 2018, we received a favorable conclusion to our application for a bi-lateral advance pricing arrangement (BAPA) between the United States and Mexican tax authorities and reversed $6.0 of Mexican income taxes previously accrued to reflect the approved BAPA terms.

During 2017, we recorded a net income tax expense of $27.6 which was favorably impacted by the recognition of a deferred income tax benefit of $4.3 (Solar Benefit) related to our solar assets (described below), as well as taxable foreign exchange benefits resulting from the strengthening of the Malaysian ringgit and Chinese renminbi relative to the U.S. dollar, which were offset in part by $4.0 deferred tax expense related to taxable temporary differences associated with the then-anticipated repatriation of undistributed earnings from certain of our Chinese subsidiaries, and a $2.0 deferred tax expense related to the U.S. Tax Reform (defined below). In connection with our exit from the solar panel manufacturing business, we withdrew one of our tax incentives in Thailand (which related solely to such operations) during the second quarter of 2017. The withdrawal of this incentive allowed us to apply tax losses arising from the disposition of our solar assets against other taxable profits in Thailand, resulting in the recognition of the Solar Benefit in 2017 and ultimately realized in 2018.

The United States Tax Cuts and Jobs Act (U.S. Tax Reform) was enacted on December 22, 2017 and became effective January 1, 2018. We believe that we recorded all significant one-time impacts resulting from enactment of the U.S. Tax Reform in the fourth quarter of 2017 (consisting of a non-cash increase to our deferred income tax expense of $2.0 to re-value our previously recognized net deferred tax assets), but will continue to assess additional impacts, if any, throughout 2019 as they become known due to changes in our interpretations and assumptions, as well as applicable changes in our business and additional regulatory guidance that may be issued. No significant amounts resulting from the U.S. Tax Reform were recorded during 2018.

During 2016, we recorded a net income tax expense of $24.7 which was favorably impacted by the reversal of provisions previously recorded for tax uncertainties related to the resolution of a transfer pricing matter for one of our Canadian subsidiaries. In connection therewith, we recorded aggregate income tax recoveries of $45 million Canadian dollars (approximately $34 at the exchange rates at the time of recording), as well as aggregate refund interest income of $14.3 (see below). Our net income tax expense for 2016 was negatively impacted by withholding taxes of $1.5 pertaining to the repatriation of $50.0 from a U.S. subsidiary, deferred tax expense of $8.0 related to taxable temporary differences associated with the then-anticipated repatriation of undistributed earnings from certain of our Chinese subsidiaries, as well as taxable foreign exchange impacts of $7.3 resulting from the weakening of the Malaysian ringgit and Chinese renminbi relative to the U.S. dollar. There was no tax impact recorded in 2016 associated with the $21.2 non-cash impairment charges (through restructuring), however, as discussed above, we recorded the Solar Benefit in 2017 which was then realized in 2018. See note 16(a).

(in millions of U.S. dollars, except percentages and per share amounts)

Changes in deferred tax assets and liabilities for the periods indicated are as follows:

	Unrealized foreign exchange gains	Accounting provisions not currently deductible	Pensions and non-pension post-retirement benefits	Tax losses carried forward	Property, plant and equipment and intangibles	Other	Reclassification between deferred tax assets and deferred tax liabilities[(i)]	Total
Deferred tax assets*:								
Balance — January 1, 2017	$ —	$ 10.4	$ —	$ 30.2	$ —	$ 12.6	$ (17.9)	$ 35.3
Credited (charged) to net earnings	—	(1.9)	—	4.5	—	(14.8)	—	(12.2)
Credited (charged) directly to equity	—	—	—	(1.7)	—	—	—	(1.7)
Effects of foreign exchange	—	0.3	—	1.6	—	—	—	1.9
Other	—	—	—	—	6.3	2.2	5.8	14.3
Balance — December 31, 2017	—	8.8	—	34.6	6.3	—	(12.1)	37.6
Credited (charged) to net earnings	—	2.1	—	36.8	—	17.1	—	56.0
Credited (charged) directly to equity	—	—	—	(9.8)	—	1.7	—	(8.1)
Effects of foreign exchange	—	(0.1)	—	(2.1)	—	0.1	—	(2.1)
Other	—	—	—	—	(6.3)	(4.1)	(36.3)	(46.7)
Balance — December 31, 2018	$ —	$ 10.8	$ —	$ 59.5	$ —	$ 14.8	$ (48.4)	$ 36.7
Deferred tax liabilities*:								
Balance — January 1, 2017	$ 26.5	$ —	$ 12.2	$ —	$ 12.8	$ 0.1	$ (16.2)	$ 35.4
Charged (credited) to net earnings	(2.9)	—	0.1	—	(18.7)	(2.8)	—	(24.3)
Charged (credited) directly to equity	—	—	(1.7)	—	—	2.5	—	0.8
Effects of foreign exchange	1.6	—	—	—	(0.4)	—	—	1.2
Other	—	—	—	—	6.3	4.3	4.1	14.7
Balance — December 31, 2017	25.2	—	10.6	—	—	4.1	(12.1)	27.8
Charged (credited) to net earnings	1.5	—	—	—	(2.3)	—	—	(0.8)
Charged (credited) directly to equity	—	—	(9.9)	—	—	—	—	(9.9)
Additions from business combinations	—	—	—	—	56.6	—	—	56.6
Effects of foreign exchange	(2.1)	—	0.1	—	0.5	—	—	(1.5)
Other	—	—	—	—	(6.3)	(4.1)	(36.3)	(46.7)
Balance — December 31, 2018	$ 24.6	$ —	$ 0.8	$ —	$ 48.5	$ —	$ (48.4)	$ 25.5

* Certain of the 2017 figures have been restated to reflect the adoption of IFRS15.

(i) This reclassification reflects the offsetting of deferred tax assets and deferred tax liabilities to the extent they relate to the same taxing authorities and there is a legally enforceable right to such offset.

The amount of deductible temporary differences and unused tax losses for which no deferred tax assets have been recognized at December 31, 2018 is $1,780.4 (December 31, 2017 — $1,977.7). We have not recognized deferred tax assets in respect of these items because, based on management's estimates, it is not probable that future taxable profit will be available against which we can utilize the benefits. A portion of these tax losses expires between 2019 and 2038 and a portion can be carried forward indefinitely to offset taxable profits. The deductible temporary differences do not expire under current tax legislation.

The aggregate amount of temporary differences associated with investments in subsidiaries for which we have not recognized deferred tax liabilities is $5.8 (December 31, 2017 — nil).

During 2018, we recorded deferred tax assets of $5.0 with respect to losses incurred in our U.S. subsidiaries during such year. We recognize deferred tax assets based on our estimate of the future taxable profit we expect our U.S. group of subsidiaries to achieve based on our review of financial projections. We did not record any deferred tax assets related to losses incurred in 2017 for any of our subsidiaries.

Certain countries in which we do business grant tax incentives to attract or retain our business. Our tax expense could increase significantly if certain tax incentives from which we benefit are retracted. A retraction could occur if we fail to satisfy the conditions on which these tax incentives are based, or if they are not renewed or replaced upon expiration. Our tax expense could also increase if tax rates applicable to us in such jurisdictions are otherwise increased, or due to changes in legislation or administrative practices. Changes in our outlook in any particular country could impact our ability to meet the required conditions.

Our tax incentives currently consist of tax holidays for the profits of our Thailand and Laos subsidiaries, as well as tax incentives for dividend withholding taxes for these subsidiaries. These tax incentives are subject to certain conditions with which we intend to comply, and expire between 2019 and 2027. The aggregate tax benefit arising from all of our tax incentives was approximately $4.7 or $0.03 per diluted share for 2018, $7.6 or $0.05 per diluted share for 2017, and $7.3 or $0.05 per diluted share for 2016.

We have multiple income tax incentives in Thailand with varying exemption periods. These incentives initially allow for a 100% income tax exemption (including distribution taxes), which after eight years transition to a 50% income tax exemption for the next five years (excluding distribution taxes). Upon full expiry of each of the incentives, taxable profits associated with such expired tax incentives become fully taxable. As a result of our exit from the solar panel manufacturing business, we withdrew our tax incentive related to our solar panel manufacturing operations in Thailand during the second quarter of 2017 (see above). One of our remaining three Thailand tax incentives expires in 2019, another expires in 2020, and the third incentive will transition to the 50% exemption in 2022, and expire in 2027.

We were granted tax incentives for our Malaysian subsidiaries from 2010 to 2014, however, we did not benefit from any Malaysian tax incentives thereafter. While negotiations for Malaysian incentives are ongoing, we currently expect to be granted new pioneer incentives for only limited portions of our Malaysian business. As a result, we recorded Malaysian income taxes at full statutory tax rates commencing in 2015. As we continue to negotiate tax incentives with Malaysian authorities, including the activities covered, exemption levels, incentive conditions or commitments, and the effective commencement date of the incentive, we are currently unable to quantify the benefits or applicable periods of any such incentives, and there can be no assurance that any such incentives will be granted.

We recorded aggregate current income tax recoveries in the second half of 2016 of $45 million Canadian dollars (approximately $34 at the exchange rates at the time of recording) to reverse previously recorded provisions for tax uncertainties related to transfer pricing, as well as aggregate refund interest income of $19 million Canadian dollars (approximately $14 at the exchange rates at the time of recording) for cash held on account with Canadian tax authorities in connection with the resolution of certain transfer pricing matters (related to 2001 through 2004) and disputed benefits associated with favorable adjustments. In addition, in 2016, the Canadian tax authorities issued revised reassessments pertaining to the re-characterization of certain interest amounts deducted by one of our Canadian entities in 2002 through 2004. As the net impact of the revised reassessments was nominal, we accepted them and the matter was closed in 2016. As a result of the resolution of the foregoing matters, we received $70 million Canadian dollars (approximately $52 at settlement date exchange rates) during the fourth quarter of 2016, representing the refund of cash previously deposited on account with the Canadian tax authorities and related refund interest income. We also received $6 million Canadian dollars (approximately $4 at settlement date exchange rates) in January 2017. The aggregate amount of cash refunds received represented the return of all deposits and related refund interest income with respect to the Canadian tax matters.

See note 24 regarding a Brazilian sales tax contingency.

21. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT:

Our financial assets are comprised primarily of cash and cash equivalents, accounts receivable, and derivatives used for hedging purposes. Our financial liabilities are comprised primarily of accounts payable, certain accrued and other liabilities and provisions, the New Term Loans, borrowings under the New Revolver, and derivatives. We record the majority of our financial assets and liabilities at amortized cost except for derivative assets and liabilities, which we measure at fair value. We classify our short-term investments in money market funds (if applicable) as FVTPL, and initially recognize such assets on our consolidated balance sheet at fair value with subsequent changes recorded in our consolidated statement of operations. The carrying value of the New Term Loans approximates their fair value as they bear interest at a variable market rate. We classify the financial assets and liabilities that we measure at fair value based on the inputs used to determine fair value at the measurement

(in millions of U.S. dollars, except percentages and per share amounts)

date. See note 2 for changes to the classification of our financial assets and liabilities since December 31, 2017 as a result of our adoption of IFRS 9 as of January 1, 2018.

Cash and cash equivalents are comprised of the following:

	December 31	
	2017	2018
Cash	$ 401.5	$ 409.1
Cash equivalents	113.7	12.9
	$ 515.2	$ 422.0

Our current portfolio of cash equivalents consist of bank deposits. The majority of our cash and cash equivalents is held with financial institutions each of which had at December 31, 2018 a Standard and Poor's short-term rating of A-1 or above.

Financial risk management objectives:

We have exposures to a variety of financial risks through our operations. We regularly monitor these risks and have established policies and business practices to mitigate the adverse effects of these potential exposures. We have used derivative financial instruments, such as foreign currency forward and swap contracts, as well as interest rate swaps, to reduce the effects of some of these risks. We do not enter into or trade financial instruments, including derivative financial instruments, for speculative purposes.

(a) Currency risk:

Due to the global nature of our operations, we are exposed to exchange rate fluctuations on our financial instruments denominated in various currencies. The majority of our currency risk is driven by operational costs, including income tax expense, incurred in local currencies by our subsidiaries. As part of our risk management program, we attempt to mitigate currency risk through a hedging program using forecasts of our anticipated future cash flows and balance sheet exposures denominated in foreign currencies. We enter into foreign exchange forward contracts and swaps, generally for periods up to 12 months, to lock in the exchange rates for future foreign currency transactions, which is intended to reduce the variability of our operating costs and future cash flows denominated in local currencies. While these contracts are intended to reduce the effects of fluctuations in foreign currency exchange rates, our hedging strategy does not mitigate the longer-term impacts of changes to foreign exchange rates. Although our functional currency is the U.S. dollar, currency risk on our income tax expense arises as we are generally required to file our tax returns in the local currency for each particular country in which we have operations. While our hedging program is designed to mitigate currency risk vis-à-vis the U.S. dollar, we remain subject to taxable foreign exchange impacts in our translated local currency financial results relevant for tax reporting purposes.

Our major currency exposures at December 31, 2018 are summarized in U.S. dollar equivalents in the following table. The local currency amounts have been converted to U.S. dollar equivalents using spot rates at December 31, 2018.

	Canadian dollar	Romanian Leu	Euro	Thai baht	Chinese renminbi
Cash and cash equivalents	$ 4.1	$ 0.4	$ 8.2	$ 2.3	$ 16.3
Accounts receivable	1.6	—	42.5	1.7	12.4
Income taxes and value-added taxes receivable	16.5	0.8	13.4	3.3	12.3
Other financial assets	—	0.8	1.7	0.5	0.8
Pension and non-pension post-employment liabilities	(70.6)	—	(0.5)	(13.6)	(1.0)
Income taxes and value-added taxes payable	(0.1)	—	(0.3)	(1.2)	—
Accounts payable and certain accrued and other liabilities and provisions	(52.4)	(12.9)	(45.8)	(18.9)	(27.0)
Net financial assets (liabilities)	$ (100.9)	$ (10.9)	$ 19.2	$ (25.9)	$ 13.8

(in millions of U.S. dollars, except percentages and per share amounts)

Foreign currency risk sensitivity analysis:

The financial impact of a one-percentage point strengthening or weakening of the following currencies against the U.S. dollar for our financial instruments denominated in such non-functional currencies is summarized in the following table as at December 31, 2018. The financial instruments impacted by a change in exchange rates include our exposures to the above financial assets or liabilities denominated in non-functional currencies and our foreign exchange forward contracts and swaps.

	Canadian dollar	Romanian Leu	Euro	Thai baht	Chinese renminbi
	Increase (decrease)				
1% Strengthening					
Net earnings	$ —	$ (0.1)	$ (0.1)	$ (0.1)	$ 0.1
Other comprehensive income	1.0	0.4	0.1	0.7	0.6
1% Weakening					
Net earnings	—	0.1	0.1	0.1	(0.1)
Other comprehensive income	(1.0)	(0.4)	(0.1)	(0.7)	(0.6)

(b) Interest rate risk:

Borrowings under the New Credit Facility bear interest at specified rates, plus specified margins. See note 12. Our borrowings under this facility at December 31, 2018 totaled $757.3, comprised of an aggregate of $598.3 under the New Term Loans and, other than ordinary course letters of credit (described below), $159.0 under the New Revolver (December 31, 2017 — $187.5 outstanding under the Prior Term Loan, and other than ordinary course letters of credit, no amounts outstanding under the Prior Revolver). Such borrowings expose us to interest rate risk due to the potential variability in market interest rates. Without accounting for the interest rate swaps described below, a one-percentage point increase in these rates would increase interest expense, based on outstanding borrowings of $757.3 as at December 31, 2018, by $7.6 annually.

As part of our risk management program, we attempt to mitigate interest rate risk through interest rate swaps. In order to partially hedge against our exposure to interest rate variability on the New Term Loans, we entered into 5-year agreements with a syndicate of third-party banks in August and December 2018 to swap the variable interest rate (based on LIBOR plus a margin) with a fixed rate of interest for $350.0 of the total borrowings under the New Term Loans. The terms of the interest rate swap agreements on the floating market rate and the interest payment dates match that of the underlying debt, such that any hedge ineffectiveness is not expected to be significant. The swap agreements include options that allow us to cancel up to $150.0 of the notional amount of the original swap agreements ($75.0 under the November Term Loan starting in December 2020, and $75.0 under the June Term Loan starting in August 2021). The cancellable options in the swap agreements are aligned with our risk management strategy for the New Term Loans as they allow us to make voluntary prepayments of outstanding amounts without premium or penalty, subject to certain conditions. Our unhedged borrowings under the New Credit Facility at December 31, 2018 were $407.3 (comprised of an aggregate of $248.3 under the New Term Loans and $159.0 under the New Revolver). A one-percentage point increase in relevant interest rates would increase interest expense, based on the outstanding amounts of unhedged borrowings of $407.3 as at December 31, 2018, by $4.1 annually.

We obtain third-party valuations of the swaps under the interest rate swap agreements. The valuations of the swaps are primarily measured through various pricing models or discounted cash flow analyses that incorporate observable market parameters, such as interest rate yield curves and volatility, and credit risk adjustments. The valuations of the interest rate swaps are measured primarily based on Level 2 data inputs of the fair value measurement hierarchy. The unrealized portion of the hedge gain or loss of the swaps is recorded in accumulated OCI. The realized portion of the hedge gain or loss of the swap is released from OCI and recognized under finance costs in our consolidated statement of operations in the respective interest payment periods. At December 31, 2018, the fair value of our interest rate swap agreements was a net unrealized loss of $4.4 which we recorded in other non-current liabilities on our consolidated balance sheet. As we have swapped $350.0 of our borrowings under the New Term Loans from floating to fixed rates, the financial impact of a 25 basis point increase in the floating market interest rate would eliminate the net unrealized loss described above, and a 25 basis point decrease in the floating interest rate would increase our unrealized loss on the interest rate swaps by $4.3.

(c) Credit risk:

Credit risk refers to the risk that a counterparty may default on its contractual obligations resulting in a financial loss to us. We believe the risk of counterparty non-performance is relatively low, however, if a key supplier (or any company within such supplier's supply chain) or customer experiences financial difficulties or fails to comply with their contractual obligations, this could result in a financial loss to us. With respect to our financial market activities, we have adopted a policy of dealing only with credit-worthy counterparties to help mitigate the risk of financial loss from defaults. We monitor the credit risk of the counterparties with whom we conduct business, through a combined process of credit rating reviews and portfolio reviews. To attempt to mitigate the risk of financial loss from defaults under our foreign currency forward contracts and swaps, and our interest rate swaps, our contracts are held by counterparty financial institutions, each of which had a Standard and Poor's rating of A-2 or above at December 31, 2018. In addition, we maintain cash and short-term investments in highly-rated investments or on deposit with major financial institutions. Each financial institution with which we have our accounts receivable sales program and the SFP had a Standard and Poor's short-term rating of A-2 or above and a long-term rating of BBB+ or above at December 31, 2018. Each financial institution from which annuities have been purchased for the defined benefit component of our Canadian pension plan had an A.M. Best or Standard and Poor's long-term rating of A or above at December 31, 2018. In addition, the financial institutions from which annuities have been purchased for the defined benefit component of our U.K. pension plans are governed by local regulatory bodies. If an institution from which we purchased annuities for our pension plans defaults on their contractual obligations, this would result in a financial loss to us, as we retain ultimate responsibility for the payment of benefits to plan participants unless and until such pension plans are wound-up.

We also provide unsecured credit to our customers in the normal course of business. Customer exposures that potentially subject us to credit risk include our accounts receivable, inventory on hand, and non-cancellable purchase orders in support of customer demand. From time to time, we extend the payment terms applicable to certain customers and/or provide longer payment terms when deemed commercially reasonable. Longer payment terms, which have become more prevalent, could adversely impact our working capital requirements, and increase our financial exposure and credit risk. We attempt to mitigate customer credit risk by monitoring our customers' financial condition and performing ongoing credit evaluations as appropriate. In certain instances, we may obtain letters of credit or other forms of security from our customers. We may also purchase credit insurance from a financial institution to reduce our credit exposure to certain customers. We consider credit risk in determining our allowance for doubtful accounts, and we believe that such allowance, as adjusted from time to time, is adequate. The carrying amount of financial assets recorded in our consolidated financial statements, net of our allowance for doubtful accounts, represents our estimate of maximum exposure to credit risk. At December 31, 2018, approximately 1% of our gross accounts receivable are over 90 days past due. Accounts receivable are net of an allowance for doubtful accounts of $5.3 at December 31, 2018 (December 31, 2017 — $4.3).

(d) Liquidity risk:

Liquidity risk is the risk that we may not have cash available to satisfy our financial obligations as they come due. The majority of our financial liabilities recorded in accounts payable, accrued and other current liabilities and provisions are due within 90 days. We manage liquidity risk by maintaining a portfolio of liquid funds and investments and having access to a revolving credit facility, intraday and overnight bank overdraft facilities, an accounts receivable sales program and the SFP. Since our $250.0 accounts receivable sales program and the SFP are each on an uncommitted basis, there can be no assurance that any participant bank will purchase all the accounts receivable that we wish to sell thereunder. However, we believe that cash flow from operating activities, together with cash on hand, cash from the sale of accounts receivable, and borrowings available under the New Revolver and intraday and overnight bank overdraft facilities are sufficient to fund our currently anticipated financial obligations.

Fair values:

We estimate the fair value of each class of financial instruments. The carrying values of cash and cash equivalents, accounts receivable, accounts payable, accrued liabilities and provisions, and borrowings under the New Revolver approximate the fair values of these financial instruments due to the short-term nature of these instruments. The carrying value of the New Term Loans approximate their fair value as they bear interest at a variable market rate. The fair values of foreign currency contracts are estimated using generally accepted valuation models based on a discounted cash flow analysis with inputs of observable market data, including currency rates and discount factors. Discount factors are adjusted by our own credit risk or the credit risk of the counterparty, depending on whether the fair values are in liability or asset positions, respectively. We

(in millions of U.S. dollars, except percentages and per share amounts)

obtained third-party valuations of the swaps under our interest rate swap agreements. The valuations of the swaps are primarily measured through various pricing models or discounted cash flow analyses that incorporate observable market parameters, such as interest rate yield curves and volatility, and credit risk adjustments, and are based on Level 2 data inputs of the fair value measurement hierarchy.

Fair value measurements:

In the table below, we have segregated our financial assets and liabilities that are measured at fair value, based on the inputs used to determine fair value at the measurement date. The three levels within the fair value hierarchy, based on the reliability of inputs, are as follows:

- level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities;
- level 2 inputs are inputs other than quoted prices included in level 1 that are observable for the asset or liability either directly (*i.e.* prices) or indirectly (*i.e.* derived from prices); and
- level 3 inputs are inputs for the asset or liability that are not based on observable market data (*i.e.* unobservable inputs).

	December 31, 2017		December 31, 2018	
	Level 1	Level 2	Level 1	Level 2
Assets:				
Foreign currency forwards and swaps	$ —	$ 12.9	$ —	$ 2.1
Liabilities:				
Interest rate swaps	$ —	$ —	$ —	$ (4.4)
Foreign currency forwards and swaps	—	(2.6)	—	(16.3)
	$ —	$ (2.6)	$ —	$ (20.7)

See note 19 for the input levels used to measure the fair value of our pension assets. See note 3 for the input levels used to measure the fair value of acquired assets.

Foreign currency forward and swap contracts are valued using an income approach, by comparing the current quoted market forward rates to our contract rates and discounting the values with appropriate market observable credit risk adjusted rates. We have not valued any of the financial instruments described in the table above using level 3 (unobservable) inputs. There were no transfers of fair value measurements between level 1 and level 2 of the fair value hierarchy in 2018 or 2017.

(in millions of U.S. dollars, except percentages and per share amounts)

Currency derivatives and hedging activities:

We enter into foreign exchange forward contracts to hedge our cash flow exposures and foreign currency swaps to hedge our balance sheet exposures. At December 31, 2018 and 2017, we had foreign exchange forwards and swaps to trade U.S. dollars in exchange for the following currencies:

As at December 31, 2018 Currency	Contract amount of U.S. dollars	Weighted average exchange rate in U.S. dollars	Maximum period in months	Fair value gain/(loss)
Canadian dollar	$ 210.2	$ 0.76	12	$ (10.3)
Thai baht	81.1	0.03	12	(0.7)
Malaysian ringgit	53.4	0.24	12	(0.8)
Mexican peso	25.6	0.05	12	0.2
British pound	5.3	1.27	4	—
Chinese renminbi	66.8	0.15	12	(1.6)
Euro	35.8	1.17	12	0.3
Romanian leu	40.4	0.25	12	(0.9)
Singapore dollar	22.1	0.74	12	(0.3)
Other	3.5	0.01	1	(0.1)
Total	$ 544.2			$ (14.2)

As at December 31, 2017 Currency	Contract amount of U.S. dollars	Weighted average exchange rate in U.S. dollars	Maximum period in months	Fair value gain/(loss)
Canadian dollar	$ 204.8	0.80	12	$ 4.1
Thai baht	79.0	0.03	12	2.2
Malaysian ringgit	48.4	0.23	12	2.6
Mexican peso	29.3	0.05	12	(0.9)
British pound	56.4	1.34	3	(0.5)
Chinese renminbi	71.6	0.15	12	1.5
Euro	28.7	1.19	12	0.1
Romanian leu	28.4	0.25	12	0.6
Singapore dollar	25.0	0.73	12	0.6
Other	4.5			—
Total	$ 576.1			$ 10.3

At December 31, 2018, the fair value of our outstanding contracts was a net unrealized loss of $14.2 (December 31, 2017 — net unrealized gain of $10.3). Changes in the fair value of hedging derivatives to which we apply cash flow hedge accounting, to the extent effective, are deferred in other comprehensive income (loss) until the expenses or items being hedged are recognized in our consolidated statement of operations. Any hedge ineffectiveness, which at December 31, 2018 was not significant, is recognized immediately in our consolidated statement of operations. At December 31, 2018, we recorded $2.1 of derivative assets in other current assets and $16.3 of derivative liabilities in accrued and other current liabilities (December 31, 2017 — $12.9 of derivative assets in other current assets and $2.6 of derivative liabilities in accrued and other current liabilities). The unrealized gains or losses are a result of fluctuations in foreign exchange rates between the contract execution and period-end date.

Certain forward contracts to trade U.S. dollars do not qualify as hedges, most significantly certain Canadian dollar contracts, and we have marked these contracts to market each period in our consolidated statement of operations.

22. CAPITAL DISCLOSURES:

Our main objectives in managing our capital resources are to ensure liquidity and to have funds available for working capital or other investments we determine are required to grow our business. Our capital resources consist of cash provided by operating activities, access to the New Revolver, intraday and overnight bank overdraft facilities, an accounts receivable sales program, the SFP (while available) and our ability to issue debt or equity securities.

We regularly review our borrowing capacity and make adjustments, as permitted, for changes in economic conditions and changes in our requirements. In June 2018, we entered into our $800.0 New Credit Facility, which provides for the $350.0 June Term Loan that matures in June 2025, and the $450.0 New Revolver that matures in June 2023. In November 2018, we utilized the accordion feature under our New Credit Facility to add the incremental $250.0 November Term Loan, maturing in June 2025. The New Credit Facility has an accordion feature that allows us to increase the term loans and/or revolving loan commitments thereunder by approximately $110, plus an unlimited amount to the extent that a specified leverage ratio on a pro forma basis does not exceed specified limits, in each case on an uncommitted basis and subject to the satisfaction of certain terms and conditions. The New Revolver also includes a $50.0 sub-limit for swing line loans, providing for short-term borrowings up to a maximum of ten business days, as well as a $150.0 sub-limit for letters of credit, in each case subject to the overall revolving credit limit. See note 12 for amounts outstanding under the New Credit Facility at December 31, 2018. We had $269.7 available as of December 31, 2018 under the New Revolver for future borrowings. We also have access to $132.8 in intraday and overnight bank overdraft facilities, and we may sell up to $250.0 in accounts receivable, on an uncommitted basis, under an accounts receivable sales program, and/or utilize the uncommitted SFP, if available, to provide short-term liquidity. See note 5. At December 31, 2018, we sold $130.0 of our accounts receivable under our accounts receivable sales program and $50.0 under the SFP. The timing and amounts we may borrow and repay under these facilities can vary significantly from month-to-month depending on our working capital and other cash requirements.

We have commenced NCIBs or SIBs in the past few years, pursuant to which we are permitted to or have repurchased and canceled subordinate voting shares. See note 13 for details. In addition, we have purchased subordinate voting shares from time-to-time in the open market through a broker for delivery under our stock-based compensation plans. We have not distributed, nor do we have any current plan to distribute, any dividends to our shareholders.

Our strategy on capital risk management has not changed significantly since the end of 2017. Other than the restrictive and financial covenants associated with the New Credit Facility described in note 12, we are not subject to any contractual or regulatory capital requirements. While some of our international operations are subject to government restrictions on the flow of capital into and out of their jurisdictions, these restrictions have not had a material impact on our operations or cash flows.

23. WEIGHTED AVERAGE NUMBER OF SHARES DILUTED (in millions):

	2016	2017	2018
Weighted average number of shares (basic)	141.8	143.1	139.4
Dilutive effect of outstanding awards under stock-based compensation plans	2.1	2.1	1.2
Weighted average number of shares (diluted)	143.9	145.2	140.6

For the year ended December 31, 2018, we excluded 0.3 million of stock options (year ended December 31, 2017 — 0.2 million; year ended December 31, 2016 — 0.3 million) from the diluted weighted average per share calculation as they were out-of-the-money.

References to shares in this note 23 are to our subordinate voting shares and our multiple voting shares taken collectively.

(in millions of U.S. dollars, except percentages and per share amounts)

24. COMMITMENTS, CONTINGENCIES AND GUARANTEES:

At December 31, 2018, we have commitments that require future minimum payments as follows:

	Finance Leases	Operating Leases	Other
2019	$ 3.8	$ 31.5	$ 19.7
2020	3.3	23.7	19.7
2021	2.8	14.5	16.5
2022	1.4	9.5	13.7
2023	0.4	6.6	13.5
Thereafter	—	21.6	37.7
Total future minimum payments	11.7	$ 107.4	$ 120.8
Less: amount representing interest for finance leases	(1.3)		
Present value of future minimum finance lease payments (note 12)	10.4		
Less: current portion of finance lease obligations	(3.2)		
Long-term portion of finance lease obligations	$ 7.2		

Our operating lease commitments primarily relate to premises. Our finance lease commitments relate to equipment. See note 2 for a description of IFRS 16, which brings most leases on-balance sheet for lessees under a single model, eliminating the distinction between operating and finance leases, which became effective January 1, 2019. Other commitments represent obligations under IT support agreements, including a new 10-year agreement that we signed with one of our IT service providers in December 2018.

As at December 31, 2018, we had committed $33.6 for capital expenditures, principally for machinery and equipment to support new customer programs.

We have contingent liabilities in the form of letters of credit, letters of guarantee and surety bonds (collectively, Guarantees) which we have provided to various third parties. The foregoing Guarantees cover various payments, including customs and excise taxes, utility commitments and certain bank guarantees. At December 31, 2018, we had $35.7 of Guarantees (December 31, 2017 — $36.8), including $21.3 (December 31, 2017 — $23.2) of letters of credit outstanding under our applicable revolving facility.

We are required to make contributions under our pension and non-pension post-employment benefit plans (see note 19), and quarterly mandatory principal repayments under the New Term Loans (see note 12). See note 21 for our obligations under the foreign exchange contracts we held at December 31, 2018. We are also required to make interest payments on amounts outstanding under the New Credit Facility and under our interest rate swap agreements, the amounts under the swap to be determined based on market rates at the time the interest payments are due (see notes 12 and 21).

In addition to the Guarantees, we provide routine indemnifications, the terms of which range in duration and often are not explicitly defined. These may include indemnifications against third-party intellectual property infringement claims and certain third-party negligence claims for property damage. We have also provided indemnifications in connection with the sale of certain businesses and real property. The maximum potential liability from these indemnifications cannot be reasonably estimated. In some cases, we have recourse against other parties to mitigate our risk of loss from these indemnifications. Historically, we have not made significant payments relating to these types of indemnifications.

Litigation:

In the normal course of our operations, we may be subject to lawsuits, investigations and other claims, including environmental, labor, product, customer disputes and other matters. Management believes that adequate provisions have been recorded where required. Although it is not always possible to estimate the extent of potential costs, if any, management believes

that the ultimate resolution of all such pending matters will not have a material adverse impact on our financial performance, financial position or liquidity.

Income taxes:

We are subject to tax audits of historical information by tax authorities in various jurisdictions, which could result in additional tax expense in future periods relating to prior results. Reviews by tax authorities generally focus on, but are not limited to, the validity of our inter-company transactions, including financing and transfer pricing policies which generally involve subjective areas of taxation and a significant degree of judgment. If any of these tax authorities are successful with their challenges, our income tax expense may be adversely affected and we could also be subject to interest and penalty charges.

The successful pursuit of assertions made by any taxing authority could result in our owing significant amounts of tax, interest and possibly penalties. We believe we adequately accrue for any probable potential adverse tax ruling. However, there can be no assurance as to the final resolution of any claims and any resulting proceedings. If any claims and any ensuing proceedings are determined adversely to us, the amounts we may be required to pay could be material, and could be in excess of amounts accrued.

Other matters:

In 2017, the Brazilian Ministry of Science, Technology, Innovation and Communications (MCTIC) issued assessments seeking to disqualify certain amounts of research and development (R&D) expenses for the years 2006 to 2009, which entitled our Brazilian subsidiary (which ceased operations in 2009) to charge reduced sales tax levies to its customers. The assessments against our Brazilian subsidiary (including interest and penalties) total approximately 39 million Brazilian real (approximately $10 at year-end exchange rates) for such years. Although we cannot predict the outcome of this matter, we believe that our R&D activities for the period are supportable, and it is probable that our position will be sustained upon full examination by the appropriate Brazilian authorities and, if necessary, upon consideration by the Brazilian judicial courts. Our position is supported by our Brazilian legal advisers.

25. SEGMENT AND GEOGRAPHIC INFORMATION:

Operating segments are defined as components of an enterprise that engage in business activities from which they may earn revenue and incur expenses; for which discrete financial information is available; and whose operating results are regularly reviewed by the chief operating decision maker in deciding how to allocate resources and to assess performance. No operating segments have been aggregated to determine our reportable segments.

During the first quarter of 2018, we completed a reorganization of our reporting structure, including our sales, operations and management systems, into two operating and reportable segments: ATS and CCS. Prior to this reorganization, we operated in one reportable segment (Electronic Manufacturing Services), which was comprised of multiple end markets (ATS, Communications and Enterprise during 2017). The change in operating and reportable segments was a result of modifications to our organizational and internal management structure which were initiated in 2017 to streamline business operations and improve profitability and competitiveness, and were completed in early 2018. As a result of these modifications, and commencing in the first quarter of 2018, our Chief Executive Officer (CEO), who is our chief operating decision maker, reviews segment revenue, segment income and segment margin (described below) to assess performance and make decisions about resource allocation. Our prior period financial information has been reclassified to reflect the reorganized segment structure and to conform to the current presentation. The foregoing changes had no impact on our historical consolidated financial position, results of operations or cash flows as previously reported.

Factors considered in determining the two reportable segments included the nature of applicable business activities, management structure, market strategy and margin profiles. Our ATS segment consists of our ATS end market, and is comprised of our aerospace and defense, industrial, smart energy, healthtech, and capital equipment (including semiconductor, display, and power & signal distribution equipment) businesses. Products and services in this segment are extensive and are often more regulated than in our CCS segment, and can include the following: government-certified and highly-specialized manufacturing, electronic and enclosure-related services for aerospace and defense-related customers; high-precision equipment and integrated subsystems used in the manufacture of semiconductors and displays; a wide range of industrial automation, controls, test and measurement devices; advanced solutions for surgical instruments, diagnostic imaging and patient monitoring; and efficiency

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products to help manage and monitor the energy and power industries. Our ATS segment businesses typically have a higher margin profile and longer product life cycles than the businesses in our CCS segment. Our CCS segment consists of our Communications and Enterprise end markets, and is comprised of our enterprise communications, telecommunications, servers and storage businesses. Products and services in this segment consist predominantly of enterprise-level data communications and information processing infrastructure products, and can include routers, switches, servers and storage-related products used by a wide range of businesses and cloud-based service providers to manage digital connectivity, commerce and social media applications. Our CCS segment businesses typically have a lower margin profile and higher volumes than the businesses in our ATS segment, and have been impacted in recent periods (and continue to be impacted) by aggressive pricing, rapid shifts in technology, model obsolescence and the commoditization of certain products.

Segment performance is evaluated based on segment revenue, segment income and segment margin (segment income as a percentage of segment revenue). Revenue is attributed to the segment in which the product is manufactured or the service is performed. Segment income is defined as a segment's net revenue less its cost of sales and its allocable portion of selling, general and administrative expenses and research and development expenses (collectively, Segment Costs). Identifiable Segment Costs are allocated directly to the applicable segment while other Segment Costs, including indirect costs and certain corporate charges, are allocated to our segments based on an analysis of the relative usage or benefit derived by each segment from such costs. Segment income excludes finance costs (net of refund interest), employee stock-based compensation expense, amortization of intangible assets (excluding computer software), net restructuring, impairment and other charges (recoveries), other solar charges, and recognized fair value adjustments for inventory acquired in connection with acquisitions (see note 3), as these costs and charges are managed and reviewed by the CEO at the company level. Net restructuring, impairment and other charges (recoveries) include, in applicable periods, restructuring charges (recoveries), impairment charges (recoveries), Acquisition Costs, legal settlements (recoveries), Toronto transition costs (recoveries), and the accelerated amortization of unamortized deferred financing costs. Our segments do not record inter-segment revenue. Although segment income and segment margin are used to evaluate the performance of our segments, we may incur operating costs in one segment that may also benefit the other segment. Our accounting policies for segment reporting are the same as those applied to the company as a whole.

Our revenue fluctuates from period-to-period depending on numerous factors, including but not limited to: the mix and complexity of the products or services we provide, the extent, timing and rate of new program wins, and the execution of our programs and services, follow-on business, program completions or losses, the phasing in or out of programs, the success in the marketplace of our customers' products, changes in customer demand, and the seasonality of our business. We expect that the pace of technological change, the frequency of customers transferring business among EMS competitors, the level of outsourcing by customers (including decisions to insource), and the dynamics of the global economy will also continue to impact our business from period-to-period.

Information regarding each reportable segment for the periods indicated is set forth below:

Revenue by segment:	**Year ended December 31**					
	2016		**2017**		**2018**	
		% of total		% of total		% of total
ATS	$ 1,954.2	32%	$ 1,958.6	32%	$ 2,209.7	33%
CCS	4,092.4	68%	4,184.1	68%	4,423.5	67%
Total	$ 6,046.6		$ 6,142.7		$ 6,633.2	

(in millions of U.S. dollars, except percentages and per share amounts)

Segment income, segment margin, and reconciliation of segment income to IFRS earnings before income taxes:

	Year ended December 31					
	2016		2017		2018	
		Segment Margin		Segment Margin		Segment Margin
ATS segment income and margin	$ 73.9	3.8%	$ 96.8	4.9%	$ 102.5	4.6%
CCS segment income and margin	149.3	3.6%	120.4	2.9%	111.4	2.5%
Total segment income	223.2		217.2		213.9	
Reconciling items:						
Finance costs, net of refund interest	(4.3)		10.1		24.4	
Employee stock-based compensation expense	33.0		30.1		33.4	
Amortization of intangible assets (excluding computer software)	6.0		5.5		11.6	
Net restructuring, impairment and other charges (note 16)	25.5		37.0		61.0	
Inventory fair value adjustment (note 3)	—		—		1.6	
Other solar charges (inventory and A/R write-down)	—		1.4		—	
IFRS earnings before income taxes	$ 163.0		$ 133.1		$ 81.9	

The following table details our external revenue allocated by manufacturing location among countries that generated in excess of 10% of total revenue for the years indicated:

	Year ended December 31		
	2016	2017	2018
Thailand	36%	34%	32%
China	21%	21%	20%
Malaysia	13%	12%	12%

The following table details our allocation of property, plant and equipment among countries that exceeded 10% of total property, plant and equipment for the years indicated:

	December 31	
	2017	2018
China	23%	19%
Thailand	19%	16%
Malaysia	16%	13%
Romania	16%	15%
United States	*	15%
Canada	*	*

* Less than 10%.

(in millions of U.S. dollars, except percentages and per share amounts)

The following table details our allocation of intangible assets and goodwill among countries that exceeded 10% of total intangible assets and goodwill for the years indicated:

	December 31	
	2017	2018
United States	53%	96%
Malaysia	18%	*
Canada	18%	*

* Less than 10%.

For purposes of the foregoing table, intangible assets and goodwill acquired as part of our Atrenne and Impakt acquisitions have been allocated to the United States in 2018, however, the Impakt intangible assets and goodwill allocation will be adjusted when the final valuation is completed in the first half of 2019.

Customers:

We had two customers that individually represented more than 10% of total revenue in 2018. Cisco Systems accounted for 14% of total revenue in 2018 (2017 — 18%; 2016 — 19%) and Dell Technologies accounted for 10% of total revenue in 2018 (2017 and 2016 — less than 10%). At December 31, 2018, we had two customers that individually represented more than 10% of total accounts receivable. These customers are all in our CCS segment.

We had two customers (from our CCS segment) that individually represented more than 10% of total revenue in 2017. In aggregate, those customers comprised 31% of total revenue. At December 31, 2017, we had two customers (one from each of our segments) that individually represented more than 10% of total accounts receivable.

We had two customers (from our CCS segment) that individually represented more than 10% of total revenue in 2016. In aggregate, those customers comprised 30% of total revenue. At December 31, 2016, we had two customers (one from each of our segments) that individually represented more than 10% of total accounts receivable.

THIRD AMENDMENT TO AMENDED AND RESTATED REVOLVING TRADE RECEIVABLES PURCHASE AGREEMENT

MEMORANDUM OF AGREEMENT made as of the 21st day of November, 2013.

BETWEEN:

CELESTICA INC.,

(hereinafter referred to as the "Servicer"),

- and -

CELESTICA LLC,
CELESTICA CZECH REPUBLIC S.R.O.,
CELESTICA HOLDINGS PTE LTD,
CELESTICA VALENCIA S.A. (SOCIEDAD UNIPERSONAL),
CELESTICA HONG KONG LTD.,
CELESTICA (ROMANIA) S.R.L.,
CELESTICA JAPAN KK,
CELESTICA OREGON LLC
-and-
CELESTICA ELECTRONICS (M.) SDN. BHD.

(hereinafter referred to collectively as the "Sellers"),

DEUTSCHE BANK (MALAYSIA) BERHAD

(hereinafter referred to as "Purchaser" and together with Deutsche Bank, as the "Purchasers")

- and -

DEUTSCHE BANK AG, NEW YORK BRANCH,

(hereinafter referred to as the "Administrative Agent" and "Deutsche Bank").

WHEREAS the Sellers, the Servicer, the Purchasers and the Administrative Agent are parties to an Amended and Restated Revolving Trade Receivables Purchase Agreement dated as of November 4, 2011, as amended by the First Amendment dated as of November 19, 2012 and by the Second Amendment dated as of January 2, 2013 (as so amended, the "Receivables Purchase Agreement");

WHEREAS the Sellers, the Servicer, the Purchasers and the Administrative Agent now wish to further amend the Receivables Purchase Agreement by this amending agreement (this "Amending Agreement");

AND WHEREAS Section 9.1 of the Receivables Purchase Agreement permits written amendments thereto with the written consent of each of the Sellers, the Servicer, the Required Purchasers and the Administrative Agent;

NOW THEREFORE THIS AGREEMENT WITNESSES that, in consideration of the premises, covenants and agreements of the parties herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each party, the parties hereby covenant and agree as follows:

1. **Defined Terms** All capitalized terms and expressions used and not otherwise defined in this Amending Agreement including in the recitals hereto shall have the meanings specified in the Receivables Purchase Agreement.

2. **Amendments of Definitions in Section 1.1:**

2.1 The definition of "Availability Termination Date" is amended and restated in its entirety as follows:

"Availability Termination Date": the earlier of (i) the date that is the ninth anniversary of the Closing Date and (ii) the date on which the Administrative Agent delivers to the Servicer a notice of termination as a result of a Termination Event in accordance herewith (or the date on which such termination becomes effective automatically pursuant to Section 7).

3. **Amendment to the Obligor Limits** Schedule 1.2, "Eligible Buyers, Obligor Limits and Applicable Percentages" is deleted and replaced with Schedule 1.2 attached hereto.

4. **Representations and Warranties** To induce the Administrative Agent and the Purchasers to enter into this Amending Agreement, the Guarantor and each of the Sellers hereby jointly and severally make the following representations and warranties (provided that each of Celestica Czech Republic and Celestica Valencia shall only be responsible hereunder for its own representations and warranties):

(a) The Guarantor and each of the Sellers hereby represents and warrants as of the date of this Amending Agreement that no Termination Event or Incipient Termination Event has occurred and is continuing.

(b) The Guarantor and each of the Sellers hereby represents and warrants as of the date of this Amending Agreement and as of the Effective Date (as defined below) that the audited consolidated balance sheets of Celestica Canada and its consolidated Subsidiaries as at December 31, 2012, and the related statements of income and of cash flows of Celestica Canada for the fiscal year ended on such dates, present fairly in all material respects the consolidated financial condition of Celestica Canada and its consolidated Subsidiaries as at such date, and Celestica Canada's consolidated results of operations and cash flows for the respective fiscal years then ended. All such financial statements, including the related schedules and notes thereto, have been prepared in accordance with GAAP, applied consistently throughout the periods involved (except as approved by Celestica Canada's accountants and disclosed therein).

(c) The Guarantor and each of the Sellers hereby represents and warrants as of the date of this Amending Agreement and as of the Effective Date (as defined below) that since the date of the most recent financial statements made available to the Administrative Agent and the Purchasers there has been no change, development or event that has had or could reasonably be expected to have a Material Adverse Effect.

5. **Ratification** Except for the specific changes and amendments to the Receivables Purchase Agreement contained herein, the Receivables Purchase Agreement and all related documents are in all other respects ratified and confirmed and the Receivables Purchase Agreement as amended hereby shall be read, taken and construed as one and the same instrument.

6. **Counterparts** This Amending Agreement may be executed by one or more of the parties to this Amending Agreement on any number of separate counterparts, and all of said counterparts taken together shall be deemed to constitute one and the same instrument. A set of this Amending Agreement signed by all the parties shall be lodged with the Servicer and the Administrative Agent.

7. **Confirmation of Guarantee** The Guarantor hereby confirms and agrees that (i) the Guarantee is and shall continue to be in full force and effect and is otherwise hereby ratified and confirmed in all respects; and (ii) the Guarantee is and shall continue to be an unconditional and irrevocable guarantee of all of the Obligations (as defined in the Guarantee).

8. **Further Assurances** Each party shall, and hereby agrees to, acknowledge and deliver or cause to be done, executed, acknowledged and delivered, such further acts, deeds, mortgages, transfers and assurances as are reasonably required for the purpose of accomplishing and effecting the intention of this Amending Agreement.

9. **Conditions to Effectiveness** This Amending Agreement shall become effective (such date being the "Effective Date") upon receipt by the Administrative Agent of counterparts hereof, duly executed and delivered by each of the parties hereto. The Administrative Agent shall inform the Guarantor, the Sellers and the Purchasers of the occurrence of the Effective Date.

10. **Successors and Assigns** This Amending Agreement shall be binding upon and inure to the benefit of the Sellers, the Servicer, the Purchasers, the Administrative Agent, and their respective successors and permitted assigns.

11. **Governing Law** This Amending Agreement shall be governed and construed in accordance with the laws of the Province of Ontario.

[intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Amending Agreement to be duly executed and delivered by their proper and duly authorized officers as of the day and year first above written.

CELESTICA INC., as Servicer and as Guarantor

by /s/ Darren Myers
Name: Darren Myers
Title: Authorized Signatory

CELESTICA LLC

by /s/ Darren Myers
Name: Darren Myers
Title: Authorized Signatory

CELESTICA CZECH REPUBLIC S.R.O.

by /s/ Darren Myers
Name: Darren Myers
Title: Authorized Signatory

CELESTICA HOLDINGS PTE LTD

by /s/ Darren Myers
Name: Darren Myers
Title: Authorized Signatory

CELESTICA VALENCIA S.A.
(SOCIEDAD UNIPERSONAL)

by /s/ Darren Myers
Name: Darren Myers
Title: Authorized Signatory

CELESTICA HONG KONG LTD.

by /s/ Darren Myers
Name: Darren Myers
Title: Authorized Signatory

CELESTICA (ROMANIA) S.R.L.

by /s/ Darren Myers
Name: Darren Myers
Title: Authorized Signatory

CELESTICA JAPAN KK

by /s/ Darren Myers
Name: Darren Myers
Title: Authorized Signatory

CELESTICA ELECTRONICS (M) SDN. BHD.

by /s/ Darren Myers

Name: Darren Myers

Title: Authorized Signatory

CELESTICA OREGON LLC

by /s/ Darren Myers

Name: Darren Myers

Title: Authorized Signatory

DEUTSCHE BANK AG, NEW YORK BRANCH, as Administrative Agent and as Purchaser

by /s/ Robert Altman

Name: Robert Altman

Title: Assistant Vice President

by /s/ Albert Hernandez

Name: Albert Hernandez

Title: Assistant Vice President

DEUTSCHE BANK (MALAYSIA) BERHAD, as Purchaser

by /s/ Wendy Ang_____
Name: Wendy Ang
Title: Vice President

by /s/ Karthiyani Ramalingam_____
Name: Karthiyani Ramalingam
Title: Vice President

SCHEDULE 1.2

To the Receivables Purchase Agreement, Eligible Buyers, Obligor Limits and Applicable Percentages

Obligors Names	DB	Citi	Pricing
APPLIED MATERIALS INC	5,000,000		O/N Libor + 1.05%
CISCO SYSTEMS INC	10,000,000		O/N Libor + 0.60%
GOOGLE INC	10,000,000		O/N Libor + 0.50%
HONEYWELL INTERNATIONAL INC		10,000,000	O/N Libor + 0.80%
IBM CORPORATION		10,000,000	O/N Libor + 0.80%
JUNIPER NETWORKS INC		25,000,000	O/N Libor + 1.35%
NEC CORPORATION	20,000,000		O/N JPY Libor + 1.40%
POLYCOM, INC	5,000,000		O/N Libor + 1.40%
IBM Corporation Endicott		10,000,000	O/N Libor + 1.00%
IBM IRELAND PRODUCT DISTRIBUTION LIMITED		45,000,000	O/N Libor + 1.00%
APPLIED MATERIALS ISRAEL LTD	5,000,000		O/N Libor + 1.05%
AMAT-VMO	5,000,000		O/N Libor + 1.05%
APPLIED MATERIALS SE ASIA PTE	5,000,000		O/N Libor + 1.05%
EMC INFORMATION SYSTEMS INTL	10,000,000		O/N Libor + 1.05%
ORACLE AMERICA, INC.	12,500,000	12,500,000	O/N Libor + 0.90%
ORACLE EMEA LTD	2,500,000	2,500,000	O/N Libor + 0.90%
ORACLE USA, INC.	2,500,000	2,500,000	O/N Libor + 0.90%
POLYCOM GLOBAL INC	10,000,000		O/N Libor + 1.50%
Hitachi Global Storage Technologies (Thailand) Ltd	15,000,000		O/N Libor + 1.50%
Hitachi Global Storage Technologies Singapore PTE Ltd	15,000,000		O/N Libor + 1.50%
	132,500,000	**117,500,000**	

Exhibit 4.23

EXECUTION VERSION

NINTH AMENDMENT TO THE AMENDED AND RESTATED

REVOLVING TRADE

RECEIVABLES PURCHASE AGREEMENT AND ACCESSION AGREEMENT

MEMORANDUM OF AGREEMENT made as of the 9th day of March, 2018.

BETWEEN:

CELESTICA INC.,

(hereinafter referred to as the "**Servicer**"),

- and -

CELESTICA LLC,
CELESTICA HOLDINGS PTE LTD,
CELESTICA VALENCIA S.A. (SOCIEDAD UNIPERSONAL),
CELESTICA HONG KONG LTD.,
CELESTICA (ROMANIA) S.R.L.,
CELESTICA JAPAN KK,
CELESTICA OREGON LLC,
CELESTICA ELECTRONICS (M.) SDN. BHD.,
CELESTICA IRELAND LIMITED,
- and -
CELESTICA INTERNATIONAL INC.
(hereinafter referred to collectively as the "**Sellers**"),
- and -

CELESTICA INTERNATIONAL LP by its general partner, Celestica International GP Inc.

(hereinafter referred to as "**Celestica LP**")

- and -

DEUTSCHE BANK (MALAYSIA) BERHAD

(hereinafter referred to as "**Purchaser**", and together with Deutsche Bank, as the "**Purchasers**")

- and -

DEUTSCHE BANK AG, NEW YORK BRANCH,

(hereinafter referred to as the "**Administrative Agent**" and "**Deutsche Bank**").

WHEREAS the Sellers, the Servicer, the Purchasers and the Administrative Agent are parties to an Amended and Restated Revolving Trade Receivables Purchase Agreement, dated as of November 4, 2011, as amended by the First Amendment, dated as of November 19, 2012; by the Second Amendment, dated as of January 2, 2013; by the Third Amendment, dated as of November 21, 2013; by the Fourth Amendment, dated as of November 21, 2014; by the Fifth Amendment, dated as of November 23, 2015; by the Sixth Amendment, dated as of November 23, 2016; by the Seventh Amendment, dated as of October 6, 2017 and by the Eighth Amendment, dated as of November 22, 2017 (as so amended, the "**Receivables Purchase Agreement**");

WHEREAS the Sellers, the Servicer, the Purchasers and the Administrative Agent now wish to further amend the Receivables Purchase Agreement by this Ninth Amendment to the Amended and Restated Revolving Trade Receivables Purchase Agreement and Accession Agreement (this "**Amending Agreement**");

WHEREAS pursuant to Section 5.18(a) of the Receivables Purchase Agreement, the Servicer wishes to designate Celestica LP as a New Seller and the Required Purchasers hereby give their written consent to the addition of Celestica LP as a Seller under the Receivables Purchase Agreement for all purposes contemplated therein and the other Transaction Documents;

WHEREAS, by execution and delivery of this Amending Agreement, Celestica LP hereby agrees to become party to the Receivables Purchase Agreement, in accordance with the terms and conditions set forth below;

WHEREAS, Celestica International Inc. ("**CII**") assigned all of its assets and interests (including its rights under the Receivables Purchase Agreement) to Celestica LP pursuant to an assignment agreement dated February 20, 2018 (the "**Asset Transfer**");

AND WHEREAS Section 9.1 of the Receivables Purchase Agreement permits written amendments thereto with the written consent of each of the Sellers, the Servicer, the Required Purchasers and the Administrative Agent;

NOW THEREFORE THIS AGREEMENT WITNESSES that, in consideration of the premises, covenants and agreements of the parties herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each party, the parties hereby covenant and agree as follows:

1. **Defined Terms:** All capitalized terms and expressions used and not otherwise defined in this Amending Agreement including in the recitals hereto shall have the meanings specified in the Receivables Purchase Agreement.

2. **Accession to Receivables Purchase Agreement:** Celestica LP hereby agrees to become a Seller as contemplated by Section 5.18 of the Receivables Purchase Agreement, including with respect to the Obligations of a Seller under Section 2.9 of the Receivables Purchase Agreement, with the same force and effect as if it were an original party to the Receivables Purchase Agreement. Celestica LP further agrees that it shall

individually be a "Seller" and each reference in the Receivables Purchase Agreement to the "Sellers" shall also include Celestica LP.

3. **Consent to Assignment by Celestica International Inc.**: The Administrative Agent and the Purchasers hereby consent to the Asset Transfer and agree that from and after the date hereof, all rights of CII under the Receivables Purchase Agreement have been assigned to Celestica LP.

4. **Amendments of Definitions in Section 1.1:**

(a) The definition of "Collection Accounts" is amended and restated in its entirety as follows:

""**Collection Accounts**": each of account Nos. #####-##### (maintained by Celestica LLC), #####-#####, #####-##### and #####-##### (maintained by Celestica LLC), #####-### ## (maintained by Celestica Hong Kong), #####-##### (maintained by Celestica Holdings), #####-### (maintained by Celestica Valencia), #######-##### the Japanese Yen Collection Account (maintained by Celestica Japan), ########## (maintained by Celestica Oregon), ############ (maintained by Celestica Romania), ####-#####-### (maintained by Celestica Malaysia), ########## (maintained by Celestica International and assigned to Celestica LP), ############, ############, and ############ (maintained by Celestica Ireland) and ########## (maintained by Celestica LP) in each case with Bank of America and each other account from time to time opened by a Seller and subject to the Lien of the Collection Account Pledge Agreement or, in the case of the Japanese Yen Collection Account subject to the Lien of the Japanese Yen Collection Account Pledge Agreement, or in the case of the Malaysian Collection Account subject to the Lien of the Malaysian Collection Account Pledge Agreement, provided that, except with respect to the Japanese Yen Collection Account and the Malaysian Collection Account, the relevant account bank shall have executed and delivered a Deposit Account Control Agreement or Security Deed, and in the case of the Japanese Yen Collection Account and the Malaysian Collection Account, the relevant account bank shall have acknowledged the notification comprising Annex 2 to the Japanese Yen Collection Account Pledge Agreement and to the Malaysian Collection Account Pledge Agreement, as the case may be, in form and substance satisfactory to the Administrative Agent and shall have taken such other measures as the Administrative Agent shall require to assure its security interest in such account."

(b) A new definition of "Ninth Amendment" is hereby included in the correct alphabetical order:

""**Ninth Amendment**": the Ninth Amendment to the Amended and Restated Revolving Trade Receivables Purchase Agreement and Accession Agreement, dated as of March 9, 2018, by and among the Servicer, the Sellers, Celestica LP, Deutsche Bank (Malaysia) Berhad and Deutsche Bank AG, New York Branch."

5. **Amendments to Schedules:** Schedule 3.15, "Principal Place of Business of the Sellers", is amended by replacing "Celestica International Inc." with "Celestica International LP".

6. **Representations and Warranties** To induce the Administrative Agent and the Purchasers to enter into this Amending Agreement, the Guarantor and each of the Sellers hereby jointly and severally make the following representations and warranties (provided that Celestica Valencia and Celestica Romania shall only be responsible hereunder for its own representations and warranties):

   (a) The Guarantor and each of the Sellers hereby represent and warrant as of the date of this Amending Agreement that no Termination Event or Incipient Termination Event has occurred and is continuing.

   (b) The Guarantor and each of the Sellers hereby represent and warrant as of the date of this Amending Agreement and as of the Effective Date (as defined below) that the audited consolidated balance sheets of Celestica Canada and its consolidated Subsidiaries as at December 31, 2016, and the related statements of income and of cash flows of Celestica Canada for the fiscal year ended on such dates, present fairly in all material respects the consolidated financial condition of Celestica Canada and its consolidated Subsidiaries as at such date, and Celestica Canada's consolidated results of operations and cash flows for the respective fiscal years then ended. All such financial statements, including the related schedules and notes thereto, have been prepared in accordance with GAAP, applied consistently throughout the periods involved (except as approved by Celestica Canada's accountants and disclosed therein).

   (c) The Guarantor and each of the Sellers hereby represent and warrant as of the date of this Amending Agreement and as of the Effective Date (as defined below) that since the date of the most recent financial statements made available to the Administrative Agent and the Purchasers there has been no change, development or event that has had or could reasonably be expected to have a Material Adverse Effect.

7. **Ratification** Except for the specific changes and amendments to the Receivables Purchase Agreement contained herein, the Receivables Purchase Agreement and all related documents are in all other respects ratified and confirmed and the Receivables Purchase Agreement as amended hereby shall be read, taken and construed as one and the same instrument.

8. **Counterparts** This Amending Agreement may be executed by one or more of the parties to this Amending Agreement on any number of separate counterparts, and all of said counterparts taken together shall be deemed to constitute one and the same instrument. A set of this Amending Agreement signed by all the parties shall be lodged with the Servicer and the Administrative Agent.

9. **Confirmation of Guarantee** Guarantor hereby confirms and agrees that (i) the Guarantee is and shall continue to be in full force and effect and is otherwise hereby

ratified and confirmed in all respects; and (ii) the Guarantee is and shall continue to be an unconditional and irrevocable guarantee of all of the Obligations (as defined in the Guarantee).

10. **Further Assurances** Each party shall, and hereby agrees to, acknowledge and deliver or cause to be done, executed, acknowledged and delivered, such further acts, deeds, mortgages, transfers and assurances as are reasonably required for the purpose of accomplishing and effecting the intention of this Amending Agreement.

11. **Conditions to Effectiveness** This Amending Agreement shall become effective (such date being the "**Effective Date**") upon receipt by the Administrative Agent of counterparts hereof, duly executed and delivered by each of the parties hereto. The Administrative Agent shall inform the Guarantor, the Sellers and the Purchasers of the occurrence of the Effective Date. Notwithstanding the foregoing, Celestica LP shall not be permitted to present or cause the Servicer to present on its behalf a Purchase Notice until the satisfaction of the following conditions: receipt by the Administrative Agent of (A) an Assignment Agreement in form and substance satisfactory to the Administrative Agent; (B) the Third Amendment to Collection Account Pledge Agreement in form and substance satisfactory to the Administrative Agent; (C) an executed and delivered Deposit Account Control Agreement in form and substance satisfactory to the Administrative Agent; (D) a closing certificate of Celestica LP in form and substance reasonably acceptable to the Administrative Agent, dated as of the Effective Date, with appropriate insertions and attachments; (E) the executed legal opinion of Canadian counsel to Celestica Inc. and Celestica LP, each in form and substance reasonably satisfactory to the Administrative Agent and its counsel (such legal opinions shall cover such matters incidental to the transactions contemplated by this Amending Agreement and the Transaction Documents as the Administrative Agent may reasonably require, including, without limitation, the creation and perfection of ownership interests and security interests in the Collateral of Celestica LP); (F) execution and delivery of an intercreditor agreement with CIBC in form and substance satisfactory to the Administrative Agent; (G) satisfaction of the perfection requirements described on Schedule 3.14; and (H) such other legal opinions and documentation as the Purchasers may require to verify matters of taxation and perfection in respect of Celestica LP and other matters incidental to the transactions covered by this Amending Agreement.

12. **Successors and Assigns** This Amending Agreement shall be binding upon and inure to the benefit of the Sellers, the Servicer, the Purchasers, the Administrative Agent, and their respective successors and permitted assigns.

13. **Governing Law** This Amending Agreement shall be governed and construed in accordance with the laws of the Province of Ontario.

[remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Amending Agreement to be duly executed and delivered by their proper and duly authorized officers as of the day and year first above written.

CELESTICA INC., as Servicer and as Guarantor

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Authorized Signatory

CELESTICA LLC

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Authorized Signatory

CELESTICA HOLDINGS PTE LTD

By: /s/ Raymond Wu
Name: Raymond Wu
Title: Authorized Signatory

CELESTICA VALENCIA S.A. (SOCIEDAD UNIPERSONAL)

By: /s/ Rob Schormans
Name: Mandeep Chawla
Title: Authorized Signatory

CELESTICA HONG KONG LTD.

By: /s/ Raymond Wu
Name: Raymond Wu
Title: Authorized Signatory

CELESTICA (ROMANIA) S.R.L.

By: /s/ Rob Schormans
Name: Rob Schormans
Title: Authorized Signatory

CELESTICA JAPAN KK

By: /s/ Raymond Wu
Name: Raymond Wu
Title: Authorized Signatory

CELESTICA ELECTRONICS (M) SDN. BHD.

By: /s/ C.C. Yong
Name: C.C. Yong
Title: Authorized Signatory

CELESTICA OREGON LLC

By: /s/ Jason Phillips
Name: Jason Phillips
Title: Authorized Signatory

CELESTICA INTERNATIONAL INC.

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Authorized Signatory

CELESTICA IRELAND LIMITED

By: /s/ John Sweetnam
Name: John Sweetnam
Title: Authorized Signatory

CELESTICA INTERNATIONAL LP, by its general partner, Celestica International GP Inc.

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Authorized Signatory

DEUTSCHE BANK (MALAYSIA) BERHAD, as Purchaser

By: /s/ Chin Cheuk Kuan
Name: Chin Cheuk Kuan
Title: Vice President
Head of Trade Finance
Malaysia

By: /s/ Henry Koo
Name: Henry Koo
Title: Head of Global Subsidiary
Coverage Malaysia

DEUTSCHE BANK AG, NEW YORK BRANCH, as Administrative Agent and as Purchaser

By: /s/ Robert Altman
Name: Robert Altman
Title: Vice President

By: /s/ Sonia Lall
Name: Sonia Lall
Title: Assistant Vice President

Exhibit 4.24

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS DOCUMENT. THE CONFIDENTIAL PORTIONS HAVE BEEN REDACTED AND ARE DENOTED BY ASTERISKS IN BRACKETS [**]. THE CONFIDENTIAL PORTIONS HAVE BEEN SEPARATELY FILED WITH THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION.

TENTH AMENDMENT TO THE AMENDED AND RESTATED REVOLVING TRADE RECEIVABLES PURCHASE AGREEMENT

MEMORANDUM OF AGREEMENT made as of the 23rd day of November, 2018.

BETWEEN:

CELESTICA INC.,

(hereinafter referred to as the **"Servicer"),**

- and –

CELESTICA LLC,
CELESTICA HOLDINGS PTE LTD,
CELESTICA VALENCIA S.A. (SOCIEDAD UNIPERSONAL),
CELESTICA HONG KONG LTD.,
CELESTICA (ROMANIA) S.R.L.,
CELESTICA JAPAN KK,
CELESTICA OREGON LLC,
CELESTICA ELECTRONICS (M.) SDN. BHD.,
CELESTICA IRELAND LIMITED
and
CELESTICA INTERNATIONAL LP

(hereinafter referred to collectively as the **"Sellers"),**

- and -

DEUTSCHE BANK (MALAYSIA) BERHAD

(hereinafter referred to as **"Purchaser",** and together with Deutsche Bank, as the **"Purchasers")**

- and -

DEUTSCHE BANK AG, NEW YORK BRANCH,

(hereinafter referred to as the **"Administrative Agent"** and **"Deutsche Bank").**

WHEREAS the Sellers, the Servicer, the Purchasers and the Administrative Agent are parties to an Amended and Restated Revolving Trade Receivables Purchase Agreement, dated as of November 4, 2011, as amended by the First Amendment, dated as of November 19, 2012; by the Second Amendment, dated as of January 2, 2013; by the Third Amendment, dated as of November 21, 2013, by the Fourth Amendment, dated as of November 21, 2014, by the Fifth Amendment, dated as of November 23, 2015, by the Sixth Amendment, dated as of November 23, 2016, by the Seventh Amendment, dated as of October 6, 2017, by Eighth Amendment, dated as of November 22, 2017, and by Ninth

Amendment, dated as of March 9, 2018 (as so amended, the **"Receivables Purchase Agreement");**

WHEREAS the Sellers, the Servicer, the Purchasers and the Administrative Agent now wish to further amend the Receivables Purchase Agreement by this Tenth Amendment to the Amended and Restated Revolving Trade Receivables Purchase Agreement (this **"Amending Agreement");**

AND WHEREAS Section 9.1 of the Receivables Purchase Agreement permits written amendments thereto with the written consent of each of the Sellers, the Servicer, the Required Purchasers and the Administrative Agent;

NOW THEREFORE THIS AGREEMENT WITNESSES that, in consideration of the premises, covenants and agreements of the parties herein contained and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each party, the parties hereby covenant and agree as follows:

1. **Defined Terms:** All capitalized terms and expressions used and not otherwise defined in this Amending Agreement including in the recitals hereto shall have the meanings specified in the Receivables Purchase Agreement.

2. **Amendments of Definitions in Section 1.1:**

   (a) The definition of "Availability Termination Date" is amended and restated in its entirety as follows:

   "**Availability Termination Date**": the earlier of (i) the date that is the fourteenth anniversary of the Closing Date and (ii) the date on which the Administrative Agent delivers to the Servicer a notice of termination as a result of a Termination Event in accordance herewith (or the date on which such termination becomes effective automatically pursuant to Section 7)."

   (b) A new definition of "Tenth Amendment" is hereby included in the correct alphabetical order:

   "**Tenth Amendment**": the Tenth Amendment to the Amended and Restated Revolving Trade Receivables Purchase Agreement, dated as of November___, 2018, by and among the Servicer, the Sellers, Deutsche Bank (Malaysia) Berhad and Deutsche Bank AG, New York Branch."

3. **Amendment to the Obligor Limits** Schedule 1.2, "Eligible Buyers, Obligor Limits and Applicable Percentages" is deleted and replaced with Schedule 1.2 attached hereto.

4. **Representations and Warranties** To induce the Administrative Agent and the Purchasers to enter into this Amending Agreement, the Guarantor and each of the Sellers hereby jointly and severally make the following representations and warranties (provided that Celestica Valencia and Celestica Romania shall only be responsible hereunder for its own representations and warranties):

(a) The Guarantor and each of the Sellers hereby represent and warrant as of the date of this Amending Agreement that no Termination Event or Incipient Termination Event has occurred and is continuing.

(b) The Guarantor and each of the Sellers hereby represent and warrant as of the date of this Amending Agreement and as of the Effective Date (as defined below) that the audited consolidated balance sheets of Celestica Canada and its consolidated Subsidiaries as of December 31, 2017, and the related statements of income and of cash flows of Celestica Canada for the fiscal year ended on such dates, present fairly in all material respects the consolidated financial condition of Celestica Canada and its consolidated Subsidiaries as at such date, and Celestica Canada's consolidated results of operations and cash flows for the respective fiscal years then ended. All such financial statements, including the related schedules and notes thereto, have been prepared in accordance with GAAP, applied consistently throughout the periods involved (except as approved by Celestica Canada's accountants and disclosed therein).

(c) The Guarantor and each of the Sellers hereby represent and warrant as of the date of this Amending Agreement and as of the Effective Date (as defined below) that since the date of the most recent financial statements made available to the Administrative Agent and the Purchasers there has been no change, development or event that has had or could reasonably be expected to have a Material Adverse Effect.

5. **Ratification** Except for the specific changes and amendments to the Receivables Purchase Agreement contained herein, the Receivables Purchase Agreement and all related documents are in all other respects ratified and confirmed and the Receivables Purchase Agreement as amended hereby shall be read, taken and construed as one and the same instrument.

6. **Counterparts** This Amending Agreement may be executed by one or more of the parties to this Amending Agreement on any number of separate counterparts, and all of said counterparts taken together shall be deemed to constitute one and the same instrument. A set of this Amending Agreement signed by all the parties shall be lodged with the Servicer and the Administrative Agent.

7. **Confirmation of Guarantee** Guarantor hereby confirms and agrees that (i) the Guarantee is and shall continue to be in full force and effect and is otherwise hereby ratified and confirmed in all respects; and (ii) the Guarantee is and shall continue to be an unconditional and irrevocable guarantee of all of the Obligations (as defined in the Guarantee).

8. **Further Assurances** Each party shall, and hereby agrees to, acknowledge and deliver or cause to be done, executed, acknowledged and delivered, such further acts, deeds, mortgages, transfers and assurances as are reasonably required for the purpose of accomplishing and effecting the intention of this Amending Agreement.

9. **Conditions to Effectiveness** This Amending Agreement shall become effective (such date being the "**Effective Date**") upon receipt by the Administrative Agent of counterparts (i) hereof, duly executed and delivered by each of the parties hereto and (ii) of the Fee Letter duly executed and delivered by Celestica Canada. The

Administrative Agent shall inform the Guarantor, the Sellers and the Purchasers of the occurrence of the Effective Date.

10. **Successors and Assigns** This Amending Agreement shall be binding upon and inure to the benefit of the Sellers, the Servicer, the Purchasers, the Administrative Agent, and their respective successors and permitted assigns.

11. **Governing Law** This Amending Agreement shall be governed and construed in accordance with the laws of the Province of Ontario.

[remainder of this page intentionally left blank]

Schedule 1.2

	Spread	DB CLOSING COMMITMENT	HSBC Canada CLOSING COMMITMENT	Global CLOSING COMMITMENT
Cisco Systems Inc	[**]	[**]		[**]
Google Inc	[**]		[**]	[**]
Honeywell International Inc	[**]		[**]	[**]
Honeywell Limited	[**]		[**]	[**]
IBM Corporation	[**]	[**]	[**]	[**]
IBM Corporation Endicott	[**]		[**]	[**]
Juniper Networks Inc	[**]	[**]		[**]
NEC Corporation	[**]	[**]		[**]
AMAT-VMO	[**]	[**]		[**]
Applied Materials SE Asia PTE	[**]	[**]		[**]
Orade America, INC.	[**]	[**]		[**]
Oracle CAPAC Service Ltd	[**]	[**]		[**]
Orade EMEA Ltd	[**]	[**]		[**]
IBM Manufacturing Solutions Pte Ltd	[**]	[**]		[**]
IBM Manufacturing Solutions Pte Ltd	[**]		[**]	[**]
GE Healthcare Austria GmbH & Co OG	[**]	[**]		[**]
TOTAL		[**]	[**]	[**]

[**] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

IN WITNESS WHEREOF, the parties hereto have caused this Amending Agreement to be duly executed and delivered by their properly and duly authorized officers as of the day and year first above written.

CELESTICA INC., as Servicer and as Guarantor

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Authorized Signatory

CELESTICA LLC

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Authorized Signatory

CELESTICA HOLDINGS PTE LTD

By: /s/ Raymond Wu
Name: Raymond Wu
Title: Authorized Signatory

CELESTICA VALENCIA S.A. (SOCIEDAD UNIPERSONAL)

By: /s/ Rob Schormans
Name: Mandeep Chawla
Title: Authorized Signatory

CELESTICA HONG KONG LTD.

By: /s/ Raymond Wu
Name: Raymond Wu
Title: Authorized Signatory

CELESTICA (ROMANIA) S.R.L.

By: /s/ Rob Schormans
Name: Rob Schormans
Title: Authorized Signatory

CELESTICA JAPAN KK

By: /s/ Raymond Wu
Name: Raymond Wu
Title: Authorized Signatory

CELESTICA ELECTRONICS (M) SDN. BHD.

By: /s/ C.C. Yong
Name: C.C. Yong
Title: Authorized Signatory

CELESTICA OREGON LLC

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Authorized Signatory

CELESTICA IRELAND LIMITED

By: /s/ John Sweetnam
Name: John Sweetnam
Title: Authorized Signatory

CELESTICA INTERNATIONAL LP, by its general partner, Celestica International GP Inc.

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Authorized Signatory

DEUTSCHE BANK (MALAYSIA) BERHAD, as Purchaser

By: /s/ Chin Cheuk Kuan
Name: Chin Cheuk Kuan
Title: Vice President
Head of Trade Finance
Malaysia

By: /s/ Wendy Ang
Name: Wendy Ang
Title: Vice President

DEUTSCHE BANK AG, NEW YORK BRANCH, as Administrative Agent and as Purchaser

By: /s/ Robert Altman
Name: Robert Altman
Title: Vice President

By: /s/ Sonia Lall
Name: Sonia Lall
Title: Assistant Vice President

CELESTICA INC.

DIRECTORS' SHARE COMPENSATION PLAN

1. Each director of Celestica Inc. (the "**Corporation**") who is not an employee of the Corporation or any of its subsidiaries or of Onex Corporation (an "**Eligible Director**") shall make an annual election (a "**Share Compensation Election**"), on or before the last business day of each calendar year, to be paid 50%, 75% or 100% of the aggregate of:

   (i) the annual fee ("**Annual Board Fee**") payable to such Eligible Director for services rendered as a member or the Chair (as applicable) of the Board of Directors of the Corporation (the "**Board**");

   (ii) the travel fees payable to such Eligible Director ("**Travel Fees**"); and

   (iii) where applicable, the fee payable to such Eligible Director for services rendered as Chair of the Audit Committee of the Board, Chair of the Compensation Committee of the Board, and/or Chair of any other standing or *ad hoc* committee of the Board from time to time ("**Committee Chair Fees**" and, together with Travel Fees "**Other Compensation**");

   in each case in respect of the immediately following calendar year (the "**Compensation Period**") in deferred share units (each a "**DSU**") as described in more detail herein or in RSUs, as defined in the Corporation's Long-Term Incentive Plan, as amended from time to time (the "**LTIP**"), which RSUs will be granted pursuant to the LTIP but on terms that comply with paragraph 3 (provided that an Eligible Director may not elect both DSUs and RSUs for the same Compensation Period). The percentage referred to above is hereinafter each referred to as a "**Share Compensation Election Percentage**". Annual Board Fees and Other Compensation shall all be as determined by the Board from time to time and are collectively referred to as "**Annual Compensation**".

2. An Eligible Director may elect to receive RSUs in respect of a Compensation Period only if the Eligible Director is, at the time the election is made, in compliance with the minimum share ownership requirements applicable to the Eligible Director under any share ownership policy or guideline adopted by the Board of Directors of the Corporation from time to time.

3. RSUs granted pursuant to an election under paragraph 1 or paragraph 5 shall be governed by the terms of the LTIP, provided that the Share Unit Grant Agreement (as defined in the LTIP) evidencing the allocation of such RSUs shall specify that they will vest in three equal installments on the first, second and third anniversaries of the Date of Grant (as defined in the LTIP and determined as provided in paragraph 7(b)), with each such anniversary being a Release Date (as defined in the LTIP) for the RSUs that vest on such date, provided that any RSUs that remain outstanding and unvested on the date, subject to paragraph 14, on which the Eligible Director is no longer any of the following: (i) a director of the Corporation; (ii) an employee of the Corporation; or (iii) a director or employee of any corporation that does not deal at arm's length with the Corporation (the

"**Retirement Date**") shall immediately vest in full as of such date and such Retirement Date shall be a Release Date for the RSUs that vest on such Retirement Date.

4. Subject to the terms of this Plan, each DSU shall entitle an Eligible Director to receive, in accordance with either paragraph 9 or paragraph 10, a subordinate voting share of the Corporation (a "**Share**") or a cash payment equal to the value of a Share following the Eligible Director's Retirement Date.

5. An individual who becomes an Eligible Director during a Compensation Period shall make a Share Compensation Election and select a Share Compensation Election Percentage to apply in respect of the portion of the portion of the Annual Compensation for such Compensation Period payable in respect of the Corporation's quarterly financial periods ("**Fiscal Quarters**") that commence after the date such Share Compensation Election is made. A Share Compensation Election made under this paragraph 5 shall not be effective in respect of the Eligible Director's Annual Compensation for the Compensation Period in which the individual becomes an Eligible Director if: (i) such election is not made within 30 days after the individual becomes an Eligible Director; or (ii) to the extent required by Section 409A of the United States Internal Revenue Code of 1986, as amended from time to time (the "**Code**"), the individual previously participated in this Plan or any other plan that is required to be aggregated with this Plan for purposes of Section 409A of the Code. Any amount of Annual Compensation for the Fiscal Quarter in which an individual becomes an Eligible Director shall be provided in the form of DSUs.

6. If an Eligible Director does not make a Share Compensation Election in accordance with paragraph 1 or 5, as applicable, his or her Share Compensation Election Percentage for the Compensation Period or portion thereof, as applicable, for Annual Compensation awarded in respect of such Compensation Period shall be deemed to be 100% in DSUs.

7. Annual Compensation is paid to Eligible Directors quarterly, in arrears. The number of DSUs and/or RSUs that an Eligible Director may receive in respect of each Fiscal Quarter shall be determined as follows:

   (a) The number of DSUs to be allocated to an Eligible Director in respect of his or her Annual Compensation shall be equal to one quarter of the Eligible Director's Annual Compensation for the applicable Compensation Period, or, in the event that the date on which an Eligible Director ceases to be an Eligible Director (the "**Termination Date**") occurs during a Fiscal Quarter, a prorated amount of such instalment that reflects the Eligible Director's actual period of service as an Eligible Director from the commencement of the applicable Fiscal Quarter to the Eligible Director's Termination Date, multiplied by (ii) the Share Compensation Election Percentage, divided by (iii) the closing price of the Shares on the New York Stock Exchange) (the "**NYSE**") on the last trading day of the Fiscal Quarter in respect of which the instalment is to be paid or, in the event that the Eligible Director's Termination Date occurs prior to the end of a Fiscal Quarter, such price on the last trading day of the immediately preceding Fiscal Quarter. Such DSUs shall be credited to the Eligible Director's Account (as defined below) as of the last day of the applicable Fiscal

Quarter or, in the event that the Eligible Director's Termination Date occurs prior to the end of such Fiscal Quarter, as of the Eligible Director's Termination Date.

(b) The number of RSUs to be allocated to an Eligible Director in respect of his or her Annual Compensation shall be calculated in accordance with section 19.4 of the LTIP, provided that: (i) the amount of each Grant shall be equal to one quarter of the Eligible Director's Annual Compensation for the applicable Compensation Period, or, in the event that the an Eligible Director's Termination Date occurs during a Fiscal Quarter, a prorated amount of such quarterly instalment that reflects the Eligible Director's actual period of service as an Eligible Director from the commencement of the applicable Fiscal Quarter to the Eligible Director's Termination Date, multiplied by the Share Compensation Election Percentage; and (ii) the Date of Grant shall be the last day of each Fiscal Quarter in the applicable Compensation Period.

8. The Corporation shall keep or cause to be kept records for each Eligible Director, including an account (the "**Account**") showing the number of DSUs, determined in accordance with paragraph 7(a), rounded to two decimal places, that the Eligible Director has been granted. A written confirmation of the balance in each Eligible Director's Account shall be provided by the Corporation to the Eligible Director at least annually, but the Corporation shall have no obligation to issue any certificate or other instrument evidencing the DSUs. Records of RSUs granted to an Eligible Director pursuant to an election under this Plan shall be maintained in accordance with the LTIP.

9. Subject to paragraph 10, on the date that is forty-five (45) days following the Eligible Director's Retirement Date or the following business day if such forty-fifth (45th) day is not a business day (the "**Valuation Date**"), or as soon as practicable thereafter (but in all cases within ninety (90) days following the Eligible Director's Retirement Date), the Corporation, through its Share Plan Administrator, shall deliver to the Eligible Director the number of Shares that equals the number of DSUs in the Eligible Director's Account on the Valuation Date, less such number of Shares the value of which is required to satisfy applicable withholding taxes and source deductions. The Administrator shall, in accordance with the instructions of the Eligible Director or the Eligible Director's legal representative, as applicable, deliver to the Eligible Director or the Eligible Director's legal representative, as applicable, a certificate representing such Shares, or credit such Shares to an account with a broker in the name of the Eligible Director or the Eligible Director's legal representative, as applicable, as soon as practicable thereafter. Settlement of RSUs granted to an Eligible Director pursuant to an election under this Plan shall be made in accordance with the LTIP.

10. The Corporation shall have the right, in its sole discretion, to pay all or a portion of the value of an Eligible Director's DSUs to the Eligible Director or the Eligible Director's legal representative, as applicable, in a lump sum cash payment in an amount equal to the product obtained by multiplying the number of DSUs in the Eligible Director's Account on the Valuation Date by the closing price of the Shares on the NYSE (or, if the Shares are not listed on the NYSE, then on the over the counter market, or, if the Shares are not listed on the over the counter market, the fair market value of the Shares as determined by the Board in good faith) on the Valuation Date, less applicable withholding taxes and source deductions, and shall do so if there is no public market for the Shares. Such lump sum payments shall be made on the Valuation Date, or as soon as practicable thereafter (but in all cases within ninety (90) days following the Eligible Director's Retirement Date).

11. Each Eligible Director who receives Shares under this Plan shall comply with all applicable securities regulations and policies of the Corporation relating to the purchase and sale of Shares.

12. In the event of a (i) capital reorganization, (ii) merger, (iii) amalgamation, (iv) offer for shares of the Corporation which if successful would entitle the offeror to acquire all of the shares of the Corporation or all of one or more particular class(es) of shares of the Corporation to which the offer relates, (v) sale of a material portion of the assets of the Corporation, (vi) arrangement or other scheme of reorganization (a "**Reorganization**") or proposed Reorganization, or (vii) an increase or decrease in the outstanding Shares as a result of a stock split, consolidation, subdivision, reclassification or recapitalization but, for greater certainty, not as a result of the issuance of Shares for additional consideration, by way of a stock dividend or other distribution in the ordinary course or as a result of a rights offering, the Corporation may adjust the Account of each Eligible Director in such manner as the Corporation determines, in its discretion, is equitable to reflect such event. The adjustment so made by the Corporation, if any, shall be conclusive and binding for all purposes of this Plan, and Eligible Directors (and any person claiming through an Eligible Director) shall have no other rights as a result of any change in the Shares or of any other event. In the event of a Reorganization, RSUs granted to an Eligible Director pursuant to an election under this Plan shall be subject to adjustment in accordance with the LTIP.

13. The Corporation may amend or terminate the Plan in whole or in part at any time as it deems necessary or appropriate, but no such amendment or termination shall, without the consent of the Eligible Director or unless required by law, adversely affect the rights of an Eligible Director with respect to DSUs to which the Eligible Director is then entitled under the Plan. Notwithstanding the foregoing, any amendment of the Plan shall be such that the Plan continuously meets the requirements of paragraph 6801(d) of the regulations under the *Income Tax Act* (Canada) or any successor to such provision.

14. The Corporation intends that the Plan comply with the requirements of section 409A of the Code, insofar as this Plan pays benefits that are subject to taxation under the Code that are subject to section 409A of the Code, and intends to administer the Plan accordingly. If any one or more provisions of the Plan may be interpreted to comply with, or be exempt from, Section 409A of the Code, then such provision(s) shall be so interpreted. For greater certainty, notwithstanding anything in the Plan to the contrary, with respect to all Plan benefits payable to or with respect to an Eligible Director (if any Plan benefits payable to or with respect to that Eligible Director are subject to taxation under the Code and are subject to section 409A of the Code), "Retirement Date" shall mean the date on which the Eligible Director has experienced a "separation from service" as defined in Section 409A of the Code and applicable regulations and guidance thereunder such that it is reasonably anticipated that no further services will be performed and provided that, in any event, all payments under the Plan to Eligible Directors who are subject to taxation under the Code shall be made in compliance with Section 409A of the Code.

15. The Board shall have full power and authority, subject to the provisions hereof, to construe and interpret the Plan. The Board's decisions, determinations and interpretations shall be final, conclusive and binding on all past, present and future Eligible Directors and all other persons, if any, having an interest herein. Neither the Board nor its members shall be liable for any action, omission or determination made in good faith with respect to the Plan.

As amended and restated as at January 1, 2019

Exhibit 4.28

DEAL CUSIP: C2348CAA5
REVOLVER CUSIP: C2348CAB3
TERM B CUSIP: C2348CAC1

CREDIT AGREEMENT

Dated as of June 27, 2018

among

CELESTICA INC.,
CELESTICA INTERNATIONAL LP,
CELESTICA (USA) INC. and
CERTAIN SUBSIDIARIES OF CELESTICA INC. IDENTIFIED HEREIN,
as the Borrowers,

CELESTICA INC. and
CERTAIN SUBSIDIARIES OF CELESTICA INC. IDENTIFIED HEREIN,
as the Guarantors,

BANK OF AMERICA, N.A.,
as Administrative Agent, Swing Line Lender and an L/C Issuer,

and

THE OTHER LENDERS PARTY HERETO

CANADIAN IMPERIAL BANK OF COMMERCE, CITIBANK, N.A.,
MUFG BANK, LTD., RBC CAPITAL MARKETS[1] and THE BANK OF NOVA SCOTIA,
as Co-Documentation Agents

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED,
CANADIAN IMPERIAL BANK OF COMMERCE, CITIBANK, N.A.,
MUFG BANK, LTD., RBC CAPITAL MARKETS and THE BANK OF NOVA SCOTIA,
as Joint Lead Arrangers and Joint Bookrunners with respect to the Term B Loan

MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED,
CANADIAN IMPERIAL BANK OF COMMERCE, CITIBANK, N.A., CANADIAN BRANCH,
MUFG BANK, LTD., RBC CAPITAL MARKETS and THE BANK OF NOVA SCOTIA,
as Joint Lead Arrangers and Joint Bookrunners with respect to the Revolving Facility

[1] RBC Capital Markets is the global brand name of the corporate and investment banking business of Royal Bank of Canada and its affiliates.

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SCHEDULES

EXHIBITS

CREDIT AGREEMENT

This CREDIT AGREEMENT ("Agreement") is entered into as of June 27, 2018, among CELESTICA INC., an Ontario corporation (the "Company"), CELESTICA INTERNATIONAL LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), certain Non-U.S. Subsidiaries of the Company party hereto pursuant to Section 2.15 (each a "Non-U.S. Designated Borrower" and, together with the Canadian Borrowers, the "Non-U.S. Borrowers"), CELESTICA (USA) INC., a Delaware corporation (the "Initial U.S. Borrower"), certain U.S. Subsidiaries of the Company party hereto pursuant to Section 2.15 (each a "U.S. Designated Borrower" and, together with the Initial U.S. Borrower, the "U.S. Borrowers"; the U.S. Designated Borrowers together with the Non-U.S. Designated Borrowers, the "Designated Borrowers" and each, a "Designated Borrower"; the U.S. Borrowers together with the Non-U.S. Borrowers, the "Borrowers" and each a, "Borrower"), each Guarantor from time to time party hereto, each Lender from time to time party hereto, and BANK OF AMERICA, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

The Company has requested that the Lenders provide revolving and term loan credit facilities for the purposes set forth herein, and the Lenders are willing to do so on the terms and conditions set forth herein.

In consideration of the mutual covenants and agreements herein contained, the parties hereto covenant and agree as follows:

Article I.
DEFINITIONS AND ACCOUNTING TERMS

1.01 Defined Terms. As used in this Agreement, the following terms shall have the meanings set forth below:

"Accepting Lenders" has the meaning specified in Section 10.01(c).

"Acquired Indebtedness" has the meaning specified in Section 7.03(i).

"Acquisition" means any transaction or series of related transactions for the purpose of or resulting, directly or indirectly, in (a) the acquisition of all or substantially all of the assets of a Person, or of any business or division of a Person, (b) the acquisition of in excess of fifty percent (50%) of the Equity Interests of any Person, or otherwise causing any Person to become a Subsidiary, or (c) a merger, amalgamation or consolidation or any other combination with another Person (other than a Person that is a Restricted Subsidiary before giving effect to such merger, amalgamation or consolidation, provided that the Company or the Restricted Subsidiary is the surviving entity).

"Additional Indebtedness" has the meaning specified in Section 7.03(h).

"Additional Secured Obligations" means (a) all debts, liabilities, obligations, covenants and duties of any Loan Party or any Subsidiary arising under any Secured Swap Contract and (b) all debts, liabilities, obligations, covenants and duties of any Loan Party or any Subsidiary arising under any Secured Cash Management Agreement, in the case of each of clauses (a) and (b), whether direct or indirect (including those acquired by assumption), absolute or contingent, due or to become due, now existing or hereafter

arising and including all costs and expenses incurred in connection with the enforcement and collection of the foregoing and interest and fees that accrue after the commencement by or against any Loan Party or any Affiliate thereof of any proceeding under any Debtor Relief Laws naming such Person as the debtor in such proceeding, regardless of whether such interest and fees are allowed claims in such proceeding; provided that Additional Secured Obligations of a Loan Party shall exclude any Excluded Swap Obligations with respect to such.

"Administrative Agent" means Bank of America (or any of its designated branch offices or affiliates, including Bank of America, N.A., acting through its Canada Branch for Loans denominated in Canadian Dollars) in its capacity as administrative agent under any of the Loan Documents, or any successor administrative agent; provided that, for purposes of the Collateral Documents, each reference to the Administrative Agent with respect to the identity of the holder of the Lien or security interest granted therein shall mean Bank of America, N.A., in its capacity as Administrative Agent under any of the Loan Documents (except as may be expressly stated otherwise in such Collateral Document).

"Administrative Agent's Office" means, with respect to any currency, the Administrative Agent's address and, as appropriate, account as set forth on Schedule 10.02 with respect to such currency, or such other address or account with respect to such currency as the Administrative Agent may from time to time notify the Company and the Lenders.

"Administrative Questionnaire" means an Administrative Questionnaire in substantially the form of Exhibit F-2 or any other form approved by the Administrative Agent.

"Affiliate" means, with respect to a specified Person, another Person that directly, or indirectly through one or more intermediaries, Controls or is Controlled by or is under common Control with the Person specified.

"Aggregate Commitments" means the Commitments of all the Lenders.

"Aggregate Revolving Commitments" means the Revolving Commitments of all the Revolving Lenders. The initial amount of the Aggregate Revolving Commitments in effect on the Closing Date is FOUR HUNDRED FIFTY MILLION DOLLARS ($450,000,000).

"Agreement" means this Credit Agreement.

"Agreement Currency" has the meaning specified in Section 10.20.

"All-In-Yield" means, with respect to any Term Facility, the weighted average yield to maturity with respect to such Term Facility which shall take into account any interest rate margins, interest rate floors or similar devices and shall be deemed to include any original issue discount and any fees (other than facility arrangement, underwriting or other closing fees and expenses not paid for the account of, or distributed to, all Lenders providing such Term Facility) paid or payable to such Lenders in connection with such Term Facility, in each case, as reasonably determined by the Administrative Agent in a manner consistent with customary financial practice based on the Weighted Average Life of such Term Facility, commencing from the borrowing date of such Term Facility and assuming that the interest rate (including the Applicable Rate) for such Term Facility in effect on such borrowing date (after giving effect to the Indebtedness incurred in connection with such Term Facility) shall be the interest rate for the entire Weighted Average Life of such Term Facility.

"Alternative Currency" means each of the following currencies: Canadian Dollars, Euro and Sterling, together with each other currency (other than Dollars) that is approved in accordance with Section 1.06; provided that for each Alternative Currency, such requested currency is an Eligible Currency.

"Alternative Currency Equivalent" means, at any time, with respect to any amount denominated in Dollars, the equivalent amount thereof in the applicable Alternative Currency as determined by the Administrative Agent or the applicable L/C Issuer, as the case may be, at such time on the basis of the Spot Rate (determined in respect of the most recent Revaluation Date) for the purchase of such Alternative Currency with Dollars.

"Alternative Currency Sublimit" means an amount equal to the lesser of (a) $100,000,000 and (b) the Aggregate Revolving Commitments. The Alternative Currency Sublimit is part of, and not in addition to, the Aggregate Revolving Commitments.

"Applicable Non-U.S. Obligor Documents" has the meaning specified in Section 5.25(a).

"Applicable Percentage" means with respect to any Lender at any time, (a) with respect to such Lender's Revolving Commitment at any time, the percentage (carried out to the ninth decimal place) of the Aggregate Revolving Commitments represented by such Lender's Revolving Commitment at such time, provided that if the commitment of each Lender to make Loans and the obligation of the L/C Issuers to make L/C Credit Extensions have been terminated pursuant to Section 8.02 or if the Aggregate Revolving Commitments have expired, then the Applicable Percentage of each Lender shall be determined based on the Applicable Percentage of such Lender most recently in effect, giving effect to any subsequent assignments; and (b) with respect to such Lender's portion of an outstanding Term Facility at any time, the percentage (carried out to the ninth decimal place) of the outstanding principal amount of such Term Facility held by such Lender at such time. The initial Applicable Percentage of each Lender is set forth opposite the name of such Lender on Schedule 2.01 or in the Assignment and Assumption pursuant to which such Lender becomes a party hereto or in any documentation executed by such Lender in connection with an Incremental Facility. The Applicable Percentages shall be subject to adjustment as provided in Section 2.18.

"Applicable Rate" means (a) with respect to the Term B Loan, two percent (2.00%) per annum in the case of Eurocurrency Rate Loans and one percent (1.00%) per annum in the case of Base Rate Loans, (b) with respect to any Incremental Term Loan, the rate per annum set forth in the Incremental Facility Amendment establishing such Incremental Term Loans, subject, in the case of any Incremental Tranche B Term Loan, to the provisions of Section 2.16(j) and (c) with respect to Revolving Loans, Swing Line Loans, Letter of Credit Fees and the commitment fee payable pursuant to Section 2.10(a), the following percentages per annum, based upon the Consolidated Total Leverage Ratio as set forth in the most recent Compliance Certificate received by the Administrative Agent pursuant to Section 6.02(a):

Pricing Level	Consolidated Total Leverage Ratio	Eurocurrency Rate Loans / B/A Fees / Letter of Credit Fees	Base Rate Loans / Canadian Prime Rate Loans	Commitment Fee
1	> 3.00:1.00	2.50%	1.50%	0.50%
2	> 2.00:1.00 but ≤ 3.00:1.00	2.25%	1.25%	0.45%
3	> 1.00:1.00 but ≤ 2.00:1.00	2.00%	1.00%	0.40%
4	≤ 1.00:1.00	1.75%	0.75%	0.35%

Any increase or decrease in the Applicable Rate (other than with respect to the Term B Loan and any Incremental Term Loan) resulting from a change in the Consolidated Total Leverage Ratio shall become effective as of the first Business Day immediately following the date a Compliance Certificate is delivered pursuant to Section 6.02(a); provided, however, that if a Compliance Certificate is not delivered when due in accordance with such Section, then, upon the request of the Required Revolving Lenders, Pricing Level 1 shall apply as of the first Business Day after the date on which such Compliance Certificate was required to have been delivered and shall remain in effect until the first Business Day immediately following the date on which such Compliance Certificate is delivered, whereupon the Applicable Rate (other than with respect to the Term B Loan and any Incremental Term Loan) shall be adjusted based upon the calculation of the Consolidated Total Leverage Ratio contained in such Compliance Certificate. The Applicable Rate (other than with respect to the Term B Loan and any Incremental Term Loan) in effect from the Closing Date through the first Business Day immediately following the date a Compliance Certificate is delivered pursuant to Section 6.02(a) for the fiscal quarter ending September 30, 2018 shall be determined based upon Pricing Level 3. Notwithstanding anything to the contrary contained in this definition, the determination of the Applicable Rate for any period shall be subject to the provisions of Section 2.11(b).

"Applicable Time" means, with respect to any borrowings and payments in any Alternative Currency, the local time in the place of settlement for such Alternative Currency as may be determined by the Administrative Agent or the applicable L/C Issuer, as the case may be, to be necessary for timely settlement on the relevant date in accordance with normal banking procedures in the place of payment.

"Applicant Borrower" has the meaning specified in Section 2.15.

"Approved Fund" means any Fund that is administered or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) an entity or an Affiliate of an entity that administers or manages a Lender.

"Arrangers" means (a) with respect to the Term B Loan, each of the following in its capacity as a joint lead arranger and a joint bookrunner thereof: MLPFS, Canadian Imperial Bank of Commerce, Citibank, N.A., MUFG Bank, Ltd., RBC Capital Markets and The Bank of Nova Scotia; and (b) with respect to the Revolving Facility, each of the following in its capacity as a joint lead arranger and joint bookrunner thereof: MLPFS, Canadian Imperial Bank of Commerce, Citibank, N.A., Canadian Branch, MUFG Bank, Ltd., RBC Capital Markets and The Bank of Nova Scotia.

"Assignment and Assumption" means an assignment and assumption entered into by a Lender and an Eligible Assignee (with the consent of any party whose consent is required by Section 10.06(b)), and accepted by the Administrative Agent, in substantially the form of Exhibit F-1 or any other form (including electronic documentation generated by use of an electronic platform) approved by the Administrative Agent.

"Attributable Indebtedness" means, with respect to any Person on any date, (a) in respect of any capital lease of any Person, the capitalized amount thereof that would appear on a balance sheet of such Person prepared as of such date in accordance with IFRS, (b) in respect of any Synthetic Lease Obligation, the capitalized amount of the remaining lease payments under the relevant lease that would appear on a balance sheet of such Person prepared as of such date in accordance with IFRS if such lease were accounted for as a capital lease and (c) in respect of any Securitization Transaction (other than the DB Receivables Purchase Agreement and any other securitization program that is not recorded as debt in accordance with IFRS), the amount of obligations outstanding on any date of determination that would be characterized as principal if such Securitization Transaction had been structured as a secured loan rather than a sale; provided that, for the avoidance of doubt, no obligations outstanding under the DB Receivables Purchase Agreement or under any other securitization program that is not recorded as debt in accordance with IFRS shall be deemed to be Attributable Indebtedness.

"Audited Financial Statements" means the audited consolidated balance sheet of the Company and its Subsidiaries for the fiscal year ended December 31, 2017, and the related consolidated statements of operations, comprehensive income, changes in equity and cash flows for such fiscal year of the Company and its Subsidiaries, including the notes thereto.

"Authorization to Share Insurance Information" means the authorization, duly executed by the applicable Loan Party or Loan Parties, in form and substance reasonably acceptable to the Administrative Agent, authorizing the sharing of insurance information of the Loan Parties and their Subsidiaries.

"Auto-Extension Letter of Credit" has the meaning specified in Section 2.03(b)(iii).

"Auto-Reinstatement Letter of Credit" has the meaning specified in Section 2.03(b)(iv).

"Availability Period" means, with respect to the Revolving Commitments, the period from and including the Closing Date to the earliest of (a) the Maturity Date applicable to Revolving Loans, Swing Line Loans and Letters of Credit (and the related L/C Obligations), (b) the date of termination of the Aggregate Revolving Commitments pursuant to Section 2.07, and (c) the date of termination of the commitment of each Lender to make Revolving Loans and of the obligation of each L/C Issuer to make L/C Credit Extensions pursuant to Section 8.02.

"B/A Discount Proceeds" means, in respect of any Bankers' Acceptance, the amount that is calculated on the applicable date of Borrowing in accordance with Section 2.04(b).

"B/A Discount Rate" means (a) with respect to any Bankers' Acceptance accepted by a Lender named on Schedule I to the Bank Act (Canada), CDOR on such date, for bankers' acceptances having an identical maturity date to the maturity date of that Bankers' Acceptance; or (b) with respect to any Bankers' Acceptance accepted by any other Lender and for any B/A Equivalent Loan, the rate determined in accordance with clause (a) above plus 0.10% per annum.

"B/A Equivalent Loan" has the meaning specified Section 2.04(f).

"B/A Fee" means, with respect to a Bankers' Acceptance or B/A Equivalent Loan, as applicable, the amount that is calculated by multiplying the face amount of the Bankers' Acceptance or B/A Equivalent Loan, as applicable, by the Applicable Rate for B/A Fees, and multiplying the result by a fraction, the numerator of which is the term of the Bankers' Acceptance or B/A Equivalent Loan, as applicable, and the denominator of which is the number of days in the calendar year.

"Back-Up Indemnity Payment" has the meaning specified in Section 3.01(c).

"Bail-In Action" means the exercise of any Write-Down and Conversion Powers by the applicable EEA Resolution Authority in respect of any liability of an EEA Financial Institution.

"Bail-In Legislation" means, with respect to any EEA Member Country implementing Article 55 of Directive 2014/59/EU of the European Parliament and of the Council of the European Union, the implementing law for such EEA Member Country from time to time which is described in the EU Bail-In Legislation Schedule.

"Bank of America" means Bank of America, N.A. and its successors.

"Bankers' Acceptance" means a depository bill as defined in the Depository Bills and Notes Act (Canada) in Canadian Dollars that is in the form of an order signed by any Canadian Borrower and accepted by a Lender pursuant to this Agreement or, for Lenders not participating in clearing services contemplated in that Act, a draft or bill of exchange in Canadian Dollars that is drawn by any Canadian Borrower and accepted by a Lender pursuant to this Agreement. For this purpose, orders or drafts that become depository bills, drafts and bills of exchange are sometimes collectively referred to as "orders" in this Agreement. All Bankers' Acceptances shall be denominated in Canadian Dollars and are available only to the Canadian Borrowers.

"Bankers' Acceptance Obligations" means the total amount of all Bankers' Acceptances and B/A Equivalent Loans from time to time outstanding and all obligations of the Loan Parties to reimburse the Lenders for their acceptance of any drafts drawn under any Bankers' Acceptance.

"Bankruptcy Code" means the Federal Bankruptcy Reform Act of 1978 (11 U.S.C. § 101, *et seq.*).

"Base Rate" means for any day a fluctuating rate per annum equal to the highest of (a) the Federal Funds Rate plus ½ of one percent (1.00%), (b) the rate of interest in effect for such day as publicly announced from time to time by Bank of America as its "prime rate," and (c) the Eurocurrency Rate plus one percent (1.00%); provided that if the Base Rate shall be less than zero, such rate shall be deemed zero for purposes of this Agreement. The "prime rate" is a rate set by Bank of America based upon various factors including Bank of America's costs and desired return, general economic conditions and other factors, and is used as a reference point for pricing some loans, which may be priced at, above, or below such announced rate. Any change in such prime rate announced by Bank of America shall take effect at the opening of business on the day specified in the public announcement of such change.

"Base Rate Loan" means a Loan that bears interest based on the Base Rate. All Base Rate Loans are only available for Loans denominated in Dollars.

"Beneficial Ownership Certification" means a certification regarding beneficial ownership required by the Beneficial Ownership Regulation.

"Beneficial Ownership Regulation" means 31 C.F.R. § 1010.230.

"Benefit Plan" means any of (a) an "employee benefit plan" (as defined in Section 3(3) of ERISA) that is subject to Title I of ERISA, (b) a "plan" as defined in Section 4975 of the Code or (c) any Person whose assets include (for purposes of ERISA Section 3(42) or otherwise for purposes of Title I of ERISA or Section 4975 of the Code) the assets of any such "employee benefit plan" or "plan".

"Borrower" and "Borrowers" each has the meaning specified in the introductory paragraph hereto.

"Borrower Materials" has the meaning specified in Section 6.02.

"Borrowing" means a borrowing consisting of simultaneous Loans of the same Type, in the same currency, and, in the case of Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans, having the same Interest Period made by each of the Lenders pursuant to Section 2.01.

"Business Day" means any day other than a Saturday, Sunday or other day on which commercial banks are authorized to close under the Laws of, or are in fact closed in, the state where the Administrative Agent's Office with respect to Obligations denominated in Dollars is located and:

(a) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in Dollars, any fundings, disbursements, settlements and payments in Dollars in respect of any such Eurocurrency Rate Loan, or any other dealings in Dollars to be carried out pursuant to this Agreement in respect of any such Eurocurrency Rate Loan, means any such day that is also a London Banking Day;

(b) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in Euro, any fundings, disbursements, settlements and payments in Euro in respect of any such Eurocurrency Rate Loan, or any other dealings in Euro to be carried out pursuant to this Agreement in respect of any such Eurocurrency Rate Loan, means a TARGET Day;

(c) when used in connection with any fundings, disbursements, settlements, payments and interest rate settings as to a Canadian Prime Rate Loan, Bankers' Acceptance or B/A Equivalent Loan, or any other dealings in Canadian Dollars to be carried out pursuant to this Agreement or any of the other Loan Documents, means any such day other than a day on which banking institutions in Toronto, Ontario are authorized by law to close;

(d) if such day relates to any interest rate settings as to a Eurocurrency Rate Loan denominated in a currency other than Dollars or Euro, means any such day on which dealings in deposits in the relevant currency are conducted by and between banks in the London or other applicable interbank market for such currency; and

(e) if such day relates to any fundings, disbursements, settlements and payments in a currency other than Dollars or Euro in respect of a Eurocurrency Rate Loan denominated in a currency other than Dollars or Euro, or any other dealings in any currency other than Dollars or Euro to be carried out pursuant to this Agreement in respect of any such Eurocurrency Rate Loan (other than any interest rate settings), means any such day on which banks are open for foreign exchange business in the principal financial center of the country of such currency.

"Canadian AML Acts" means applicable Canadian law regarding anti-money laundering, anti-terrorist financing, government sanction and "know your client" matters, including the Proceeds of Crime (Money Laundering) and Terrorist Financing Act (Canada).

"Canadian Defined Benefit Pension Plan" means a Canadian Pension Plan that contains or has ever contained a "defined benefit provision" as such term is defined in Section 147.1(1) of the Income Tax Act (Canada).

"Canadian Dollar" and "CAD" means the lawful currency of Canada.

"Canadian Dollar Sublimit" means an amount equal to the lesser of (a) $300,000,000 and (b) the Aggregate Revolving Commitments. The Canadian Dollar Sublimit is part of, and not in addition to, the Aggregate Revolving Commitments.

"Canadian Pension Plan" means a pension plan or plan that is subject to applicable pension benefits legislation in any jurisdiction of Canada and that is organized and administered to provide pensions, pension benefits or retirement benefits for employees and former employees of any Loan Party or any Subsidiary thereof.

"Canadian Prime Rate" means, for any day a fluctuating rate of interest per annum equal to the greater of (a) the per annum rate of interest quoted or established as the "prime rate" of the Administrative Agent which it quotes or establishes for such day as its reference rate of interest in order to determine interest rates for commercial loans in Canadian Dollars in Canada to its Canadian borrowers; and (b) the average CDOR for a 30-day term plus ½ of one percent (1.00%) per annum, adjusted automatically with each quoted or established change in such rate, all without the necessity of any notice to any Borrower or any other Person; provided that if the Canadian Prime Rate shall be less than zero, such rate shall be deemed zero for purposes of this Agreement. Such prime rate is based on various factors including cost and desired return, general economic conditions and other factors, and is used as a reference point for pricing some loans, which may be priced at, above, or below such announced rate. Any change in the prime rate shall take effect at the opening of business on the day specified in the public announcement of such change.

"Canadian Prime Rate Loan" means a Revolving Loan or a Term Loan that bears interest based on the Canadian Prime Rate. All Canadian Prime Rate Loans are only available to the Canadian Borrowers and shall be denominated in Canadian Dollars.

"Canadian Sanctions List" means the list of names subject to the Regulations Establishing a List of Entities made under subsection 83.05(1) of the Criminal Code (Canada), the Regulations Implementing the United Nations Resolutions on the Suppression of Terrorism and/or the United Nations Al-Qaida and Taliban Regulations as published by the Office of the Superintendent of Financial Institutions Canada.

"Canadian Security Agreement" means that certain Canadian Security and Pledge Agreement, dated as of the Closing Date executed in favor of the Administrative Agent, for the benefit of the Secured Parties, by the Company and certain Non-U.S. Obligors.

"Cash Collateralize" means to pledge and deposit with or deliver to the Administrative Agent, for the benefit of one or more of the L/C Issuers or the Lenders, as collateral for L/C Obligations or Bankers' Acceptance Obligations, or obligations of the Lenders to fund participations in respect of L/C Obligations, cash or deposit account balances or, if the Administrative Agent and the applicable L/C Issuer(s) shall agree in their sole discretion, other credit support, in each case pursuant to documentation in form and substance reasonably satisfactory to the Administrative Agent and the applicable L/C Issuer(s). "Cash Collateral" shall have a meaning correlative to the foregoing and shall include the proceeds of such cash collateral and other credit support.

"Cash Equivalents" means, at any date:

(a) securities issued or directly and fully guaranteed or insured by the United States or, in the case of a Non-U.S. Subsidiary, readily marketable obligations issued or directly and fully guaranteed or insured by the government of the country of such Non-U.S. Subsidiary, or any agency or instrumentality thereof (provided that the full faith and credit of the United States or, in the case of a Non-U.S. Subsidiary, the government of the country of such Non-U.S. Subsidiary, is pledged

in support thereof), having maturities of not more than three hundred sixty (360) days from the date of acquisition;

(b) (i) with respect to any U.S. Borrower or any U.S. Subsidiary, Dollar denominated time deposits, certificates of deposit and bankers' acceptances of (A) any Lender under the Revolving Facility, (B) any domestic commercial bank of recognized standing having capital and surplus in excess of $500,000,000 or (C) any bank whose short-term commercial paper rating from S&P is at least A-1 or the equivalent thereof or from Moody's is at least P-1 or the equivalent thereof (any such bank being a "U.S. Approved Bank") and (ii) with respect to the Company or any Non-U.S. Subsidiary, time deposits, certificates of deposit and bankers' acceptances denominated in (x) Dollars, (y) the currency of the country in which such Non-U.S. Subsidiary maintains its chief executive office and principal place of business, provided such country is a member of the Organization for Economic Cooperation and Development or (z) such currency acceptable to the Administrative Agent in its sole discretion, in each case, of (A) any Lender under the Revolving Facility, (B) any domestic commercial bank of recognized standing having capital and surplus in excess of $500,000,000, (C) a bank having capital and surplus in excess of $500,000,000 formed under any state, commonwealth, territory, province or similar political subdivision of the country in which such Non-U.S. Subsidiary maintains its chief executive office and principal place of business, provided such country is a member of the Organization for Economic Cooperation and Development, (D) any bank whose short-term commercial paper rating from S&P is at least A-1 or the equivalent thereof or from Moody's is at least P-1 or the equivalent thereof or (E) a bank or other financial institution acceptable to the Administrative Agent in its sole discretion (any such bank being a "Non-U.S. Approved Bank" and together with any U.S. Approved Bank, each an "Approved Bank"), in each case with maturities of not more than two hundred seventy (270) days from the date of acquisition;

(c) commercial paper and variable or fixed rate notes issued by any Approved Bank (or by the parent company thereof) or any variable rate notes issued by, or guaranteed by, any domestic corporation rated A-1 (or the equivalent thereof) or better by S&P or P-1 (or the equivalent thereof) or better by Moody's and maturing within one hundred eighty (180) days of the date of acquisition;

(d) repurchase agreements entered into by any Person with a bank or trust company (including any Lender under the Revolving Facility) or recognized securities dealer having capital and surplus in excess of $500,000,000 for direct obligations issued by or fully guaranteed by the United States in which such Person shall have a perfected first priority security interest (subject to no other Liens) and having, on the date of purchase thereof, a fair market value of at least one hundred percent (100%) of the amount of the repurchase obligations;

(e) securities with maturities of one (1) year or less from the date of acquisition thereof issued or fully guaranteed by (i) any state, commonwealth or territory of the United States, by any political subdivision or taxing authority of any such state, commonwealth or territory, the securities of any such state, commonwealth or territory being rated at least "Prime-1" (or the then equivalent grade) by Moody's or at least "A-1" (or the then equivalent grade) by S&P or (ii) solely with respect to any Non-U.S. Subsidiary, any state, commonwealth, territory, province or similar political subdivision of the country in which such Non-U.S. Subsidiary maintains its chief executive office and principal place of business, provided such country is a member of the Organization for Economic Cooperation and Development; and

(f) investments, classified in accordance with IFRS as current assets, in money market investment programs registered under the Investment Company Act of 1940 which have the highest rating obtainable from either Moody's or S&P and the portfolios of which substantially all of the Investments in such portfolios are of the character described in the foregoing clauses (a) through (d).

"Cash Management Agreement" means any agreement that is not prohibited by the terms hereof to provide treasury or cash management services, including deposit accounts, overnight draft, credit cards, debit cards, p-cards (including purchasing cards and commercial cards), funds transfer, automated clearinghouse, zero balance accounts, returned check concentration, controlled disbursement, lockbox, account reconciliation and reporting and trade finance services and other cash management services.

"Cash Management Bank" means any Person in its capacity as a party to a Cash Management Agreement that, (a) at the time it enters into a Cash Management Agreement with a Loan Party or any Subsidiary, is a Lender or an Affiliate of a Lender, or (b) at the time it (or its Affiliate) becomes a Lender, is a party to a Cash Management Agreement with a Loan Party or any Subsidiary, in each case in its capacity as a party to such Cash Management Agreement (even if such Person ceases to be a Lender or such Person's Affiliate ceased to be a Lender); provided, however, that for any of the foregoing to be included as a "Secured Cash Management Agreement" on any date of determination by the Administrative Agent, the applicable Cash Management Bank (other than the Administrative Agent or an Affiliate of the Administrative Agent) must have delivered a Secured Party Designation Notice to the Administrative Agent prior to such date of determination.

"CDOR" means, in the case of a Loan denominated in Canadian Dollars, the rate per annum equal to the Canadian Dollar Offered Rate, or a comparable or successor rate which rate is approved by the Administrative Agent, as published on the applicable Bloomberg screen page (or such other commercially available source providing such quotations as may be designated by the Administrative Agent from time to time) at approximately 10:00 a.m., Toronto, Ontario time, on the first day of such Interest Period (or if such day is not a Business Day, then on the immediately preceding Business Day) with a term equivalent to such Interest Period; provided that if CDOR shall be less than zero, such rate shall be deemed zero for purposes of this Agreement.

"CFC" means any Subsidiary that is a controlled foreign corporation within the meaning Section 957 of the Code and that is owned, directly or indirectly, by a U.S. Subsidiary.

"CFC Holdco" means (a) any direct or indirect U.S. Subsidiary that has no material assets other than the Equity Interests of one or more CFCs and (b) any direct or indirect U.S. Subsidiary that has no material assets other than the Equity Interests or Indebtedness of one or more other U.S. Subsidiaries of the type referred to in the immediately preceding clause (a).

"Change in Law" means the occurrence, after the Closing Date, of any of the following: (a) the adoption or taking effect of any law, rule, regulation or treaty, (b) any change in any law, rule, regulation or treaty or in the administration, interpretation, implementation or application thereof by any Governmental Authority or (c) the making or issuance of any request, rule, guideline or directive (whether or not having the force of law) by any Governmental Authority; provided that notwithstanding anything herein to the contrary, (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act and all requests, rules, guidelines or directives thereunder or issued in connection therewith and (y) all requests, rules, guidelines or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States, Canada or foreign regulatory

authorities, in each case pursuant to Basel III, shall in each case be deemed to be a "Change in Law", regardless of the date enacted, adopted or issued.

"Change of Control" means an event or series of events by which:

(a) any "person" or "group" (as such terms are used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, but excluding any employee benefit plan of such person or its subsidiaries, and any person or entity acting in its capacity as trustee, agent or other fiduciary or administrator of any such plan) (other than Onex or any of its Affiliates) becomes the "beneficial owner" (as defined in Rules 13d-3 and 13d-5 under the Securities Exchange Act of 1934, except that a person or group shall be deemed to have "beneficial ownership" of all securities that such person or group has the right to acquire, whether such right is exercisable immediately or only after the passage of time (such right, an "option right")), directly or indirectly, of equity securities of the Company carrying thirty-five percent (35%) or more of the voting power of all outstanding equity securities of the Company on a fully-diluted basis (and taking into account all such securities that such person or group has the right to acquire pursuant to any option right); provided that, notwithstanding anything contradictory in the foregoing, none of the following shall constitute a "Change of Control" hereunder: (x) the acquisition by Onex or any of its Affiliates of any additional equity securities of the Company entitled to vote, (y) a disposition by Onex or any of its Affiliates of any of its equity securities of the Company entitled to vote, including any such disposition which (whether in one transaction or in a series of transactions) results in Onex and/or any of its Affiliates ceasing to beneficially own equity securities of the Company carrying thirty-five percent (35%) or more of the voting power of all outstanding equity securities of the Company (with the understanding that, for purposes of clarity, any transferee(s) thereof, other than any Affiliate(s) of Onex, remain subject to the terms of this definition preceding the proviso to determine if a Change of Control has occurred), and (z) a change in the "beneficial ownership" of Onex or any of its Affiliates;

(b) during any period of twelve (12) consecutive months during which Onex and/or any of its Affiliates does not collectively have beneficial ownership (as defined above) of equity securities of the Company carrying more than fifty percent (50%) of the voting power of all outstanding equity securities of the Company, a majority of the members of the board of directors or other equivalent governing body of the Company cease to be composed of individuals (i) who were members of that board or equivalent governing body on the first day of such period, (ii) whose election or nomination to that board or equivalent governing body was approved by individuals referred to in clause (i) above constituting at the time of such election or nomination at least a majority of that board or equivalent governing body or (iii) whose election or nomination to that board or other equivalent governing body was approved by individuals referred to in clauses (i) and (ii) above constituting at the time of such election or nomination at least a majority of that board or equivalent governing body; or

(c) the Company fails to own and control, directly or indirectly, one hundred percent (100%) of the outstanding Equity Interests (other than (i) directors' qualifying shares and (ii) shares issued to foreign nationals to the extent required by applicable Law) of each other Borrower.

As used in this definition only, an "Affiliate" of Onex means another Person that directly, or indirectly through one or more intermediaries, Controls or is Controlled by or is under common Control with Onex, where "Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ability to exercise voting power, by contract or otherwise; "Controlling" and "Controlled" have meanings correlative thereto.

"Closing Date" means June 27, 2018.

"Code" means the Internal Revenue Code of 1986.

"Collateral" means a collective reference to all property with respect to which Liens in favor of the Administrative Agent are purported to be granted pursuant to and in accordance with the Collateral Documents.

"Collateral Documents" means a collective reference to the Security Agreements, each Joinder Agreement and all other security or pledge agreements or documents as may be executed and delivered by any Loan Party pursuant to the terms of Section 6.15 or any of the Loan Documents.

"Commitment" means, as to each Lender, the Revolving Commitment of such Lender and/or the Term B Loan Commitment of such Lender and shall include, as the context requires, any unfunded commitment of such Lender to fund any portion of an Incremental Term Loan.

"Commodity Exchange Act" means the Commodity Exchange Act (7 U.S.C. Section 1 *et seq.*).

"Company" has the meaning specified in the introductory paragraph hereto.

"Compliance Certificate" means a certificate substantially in the form of Exhibit E.

"Connection Income Taxes" means Other Connection Taxes that are imposed on or measured by net earnings (however denominated) or that are franchise Taxes or branch profits Taxes.

"Consolidated Current Assets" shall mean, as of any date of determination, all assets of the Company and its Restricted Subsidiaries (other than cash and Cash Equivalents) that would, in accordance with IFRS, be classified on a consolidated balance sheet of the Company as current assets as of such date.

"Consolidated Current Liabilities" shall mean, as of any date of determination, all liabilities (without duplication) of the Company and its Restricted Subsidiaries that would, in accordance with IFRS, be classified on a consolidated balance sheet of the Company and its Restricted Subsidiaries as current liabilities as of such date; provided, however, that Consolidated Current Liabilities shall not include (a) current maturities of any long-term Indebtedness, (b) outstanding revolving loans and (c) the current portion of any other long-term liabilities.

"Consolidated EBITDA" means, for any period, for the Company and its Restricted Subsidiaries on a consolidated basis, an amount equal to Consolidated Net Income for such period plus (a) the following without duplication and to the extent deducted (and not added back) in calculating such Consolidated Net Income (other than clause (vi) below): (i) Consolidated Interest Charges for such period (other than the implicit financing costs in respect of Synthetic Lease Obligations), (ii) the provision for federal, state, local and foreign Taxes by the Company and its Restricted Subsidiaries for such period, (iii) depreciation and amortization expense for such period, (iv) non-cash charges and purchase accounting deductions reducing such Consolidated Net Income, including but not limited to (A) any write-offs or write-downs, (B) losses on sales, disposals or abandonment of, or any impairment charges or asset write-offs related to, intangible assets, long-lived assets and investments in debt and equity securities and (C) other non-cash charges, non-cash expenses or non-cash losses, provided that notwithstanding the foregoing, nothing contained in this clause (iv) shall exclude from the calculation of Consolidated EBITDA (1) any non-cash charge that is expected to be paid in cash in any future period or (2) any write-down of accounts receivable), (v) unusual or non-recurring expenses and charges for such period, (vi) the amount of synergies and cost savings projected

by the Company in good faith to be realized as a result of any Permitted Acquisition so long as (A) such synergies and costs savings are (I) reasonably identifiable and factually supportable and (II) reasonably attributable to the Permitted Acquisition specified and reasonably anticipated to result therefrom, and (B) the benefits resulting from such Permitted Acquisition are reasonably expected to be realized within twelve (12) months of the closing date of such Permitted Acquisition, provided that the aggregate amount added pursuant to the foregoing clauses (v) and (vi) shall not exceed twenty-five percent (25%) of Consolidated EBITDA (calculated prior to giving effect to any such adjustment made pursuant to the foregoing clauses (v) or (vi)) for such period and (vii) the amount of any costs, charges, accruals, reserves or expenses attributable to (A) the cost efficiency initiative of the Company and its Subsidiaries initiated in the fourth fiscal quarter of 2017 (as disclosed on the Form 20-F of the Company for the fiscal year ended December 31, 2017 filed with the SEC as in effect on March 12, 2018) and the restructuring actions thereunder, including, but not limited to, reductions to workforce, the potential consolidation of certain sites to better align capacity and infrastructure with current and anticipated customer demand, related transfers of customer programs and production, re-alignment of business processes, management reorganizations and other associated activities or (B) the undertaking and/or implementation of cost savings initiatives, operating expense reductions, operating improvements, product margin synergies and product cost and other synergies and similar initiatives, integration, transition, reconstruction, decommissioning, recommissioning or reconfiguration of fixed assets for alternative uses, restructuring costs (including those related to tax restructurings), charges, accruals, reserves or expenses attributable to the undertaking and/or implementation of cost savings initiatives, operating expense reductions, business optimization and other restructuring costs, charges, accruals, reserves and expenses (including, but not limited to, costs related to the opening, pre-opening, closure, relocation and/or consolidation of locations, recruitment expenses (including headhunter fees and relocation expenses), severance payments, and professional and consulting fees incurred in connection with any of the foregoing); provided that the aggregate amount added pursuant to this clause (vii)(B) shall not exceed $25,000,000 per annum, minus (b) the following without duplication and to the extent included (and not deducted) in calculating such Consolidated Net Income: (i) federal, state, local and foreign Tax recoveries of the Company and its Restricted Subsidiaries for such period, (ii) non-cash items (excluding (A) any non-cash recovery that is expected to be received in cash in any future period and (B) any reversal of a write-down of current assets) increasing Consolidated Net Income for such period and (iii) unusual or non-recurring gains for such period incurred outside the ordinary course of business; provided that in the event of the acquisition by the Company or a Restricted Subsidiary of a newly acquired Restricted Subsidiary or operation (as such term is used in the definition of "Pro Forma Basis"), Consolidated EBITDA will include the Target EBITDA of the newly acquired Restricted Subsidiary or operation on a Pro Forma Basis in accordance with the terms of the definition of "Pro Forma Basis".

"Consolidated Excess Cash Flow" means, for any period for the Company and its Restricted Subsidiaries on a consolidated basis, an amount (if positive) equal to Consolidated Net Income for such period plus (a) the following without duplication: (i) an amount equal to any net decrease in Consolidated Working Capital from the first day to the last day of such period, (ii) to the extent not included in Consolidated Net Income, any cash gains and income (actually received in cash) during such period and (iii) the amount of all non-cash losses, charges and expenses deducted in calculating Consolidated Net Income including for depreciation and amortization for such period, minus (b) the following without duplication: (i) Consolidated Interest Charges actually paid in cash for such period, (ii) cash taxes paid by the Company and its Restricted Subsidiaries during such period, (iii) all scheduled payments of principal on Consolidated Funded Indebtedness (including, without limitation, the Term Loans) actually paid in such period, (iv) an amount equal to any net increase in Consolidated Working Capital from the first day to the last day of such period, (v) the amount of (A) any non-cash gains and income included in calculating Consolidated Net Income for such period and (B) all cash expenses, charges and losses excluded in arriving at such Consolidated Net Income, in each case, to the extent not financed with the proceeds of long-term, non-revolving Indebtedness,

(vi) any required up-front cash payments in respect of Swap Contracts to the extent not financed with the proceeds of long-term, non-revolving Indebtedness and not deducted in arriving at such Consolidated Net Income, (vii) any cash payments actually made during such period that represent a non-cash charge from a previous period and deducted in calculating Consolidated Excess Cash Flow in a previous period, (viii) the aggregate amount of expenditures actually made by the Company or any of its Restricted Subsidiaries in cash during such period for the payment of financing fees, rent and pension and other retirement benefits to the extent that such expenditures are not from such period, (ix) capital expenditures actually paid in cash by the Company or any Restricted Subsidiary, (x) the aggregate amount actually paid in cash by the Company and its Restricted Subsidiaries on account of Permitted Investments, (xi) to the extent not deducted in the calculation of Consolidated Net Income for such period, the amount of Restricted Payments pursuant to Section 7.06(d) and (e) (or otherwise consented to by the Required Lenders) made in cash and (xii) without duplication, the aggregate amount of cash payments made in respect of finance leases for such period; provided that in the case of each of the preceding clauses (b)(viii) through (b)(xi), such amount shall be deducted only to the extent any such amount is (I) paid (1) during such period (other than any such amount paid during such period but prior to the Consolidated Excess Cash Flow Prepayment Date for the immediately preceding period and previously deducted from Consolidated Excess Cash Flow for the immediately preceding period) or (2) following the end of such period but prior to the Consolidated Excess Cash Flow Prepayment Date for such period and, upon the election of the Company by written notice delivered to the Administrative Agent prior to the Consolidated Excess Cash Flow Prepayment Date for such period, deducted from Consolidated Excess Cash Flow for such period and (II) not financed with long-term, non-revolving Indebtedness.

"Consolidated Excess Cash Flow Prepayment Date" has the meaning specified in Section 2.06(b)(iii).

"Consolidated Funded Indebtedness" means, as of any date of determination, for the Company and its Restricted Subsidiaries on a consolidated basis, the sum of (a) the outstanding principal amount of all obligations, whether current or long-term, for borrowed money (including Obligations hereunder) and all obligations evidenced by bonds, debentures, notes, loan agreements or other similar instruments, (b) all purchase money Indebtedness, (c) all obligations (whether direct or contingent) arising under letters of credit (including standby and commercial), bankers' acceptances, bank guaranties, surety bonds and similar instruments, (d) all obligations in respect of the deferred purchase price of property or services (other than trade accounts payable in the ordinary course of business), (e) all Attributable Indebtedness, (f) without duplication, all Guarantees with respect to outstanding Indebtedness of the types specified in clauses (a) through (e) above of Persons other than the Company or any Restricted Subsidiary, and (g) all Indebtedness of the types referred to in clauses (a) through (f) above of any partnership or joint venture (other than a joint venture that is itself a corporation or limited liability company) in which the Company or a Restricted Subsidiary is a general partner or joint venturer, unless such Indebtedness is expressly made non-recourse to the Company or such Restricted Subsidiary.

"Consolidated Interest Charges" means, for any period, for the Company and its Restricted Subsidiaries on a consolidated basis, the sum of (a) all interest, premium payments, debt discount, fees, charges and related expenses of the Company and its Restricted Subsidiaries in connection with borrowed money (including capitalized interest) or in connection with the deferred purchase price of assets, in each case to the extent treated as interest in accordance with IFRS, and (b) the portion of rent expense of the Company and its Restricted Subsidiaries with respect to such period under capital leases that is treated as interest in accordance with IFRS.

"Consolidated Interest Coverage Ratio" means, as of any date of determination, the ratio of (a) Consolidated EBITDA for the period of the four (4) prior fiscal quarters ending on such date to (b) Consolidated Interest Charges for such period.

"Consolidated Net Income" means, for any period, for the Company and its Restricted Subsidiaries on a consolidated basis, the net earnings of the Company and its Restricted Subsidiaries (excluding extraordinary gains and extraordinary losses) for that period.

"Consolidated Secured Indebtedness" means, as of any date of determination, for the Company and its Restricted Subsidiaries on a consolidated basis, all Consolidated Funded Indebtedness secured by Liens.

"Consolidated Secured Leverage Ratio" means, as of any date of determination, the ratio of (a) Consolidated Secured Indebtedness as of such date to (b) Consolidated EBITDA for the period of the four (4) fiscal quarters most recently ended.

"Consolidated Total Leverage Ratio" means, as of any date of determination, the ratio of (a) Consolidated Funded Indebtedness as of such date to (b) Consolidated EBITDA for the period of the four (4) fiscal quarters most recently ended.

"Consolidated Working Capital" means, as of any date of determination, Consolidated Current Assets as of such date minus Consolidated Current Liabilities as of such date; provided that there shall be excluded (a) the effect of reclassification during such period between current assets and long term assets and current liabilities and long term liabilities (with a corresponding restatement of the prior period to give effect to such reclassification), (b) the effect of any Disposition of any Person, facility or line of business or acquisition of any Person, facility or line of business during such period, (c) the effect of any fluctuations in the amount of accrued and contingent obligations under any Swap Contract, and (d) the application of purchase or recapitalization accounting.

"Contractual Obligation" means, as to any Person, any provision of any security issued by such Person or of any agreement, instrument or other undertaking to which such Person is a party or by which it or any of its property is bound.

"Control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ability to exercise voting power, by contract or otherwise. "Controlling" and "Controlled" have meanings correlative thereto. Without limiting the generality of the foregoing, a Person shall be deemed to be Controlled by another Person if such other Person possesses, directly or indirectly, power to vote fifteen percent (15%) or more of the securities having ordinary voting power for the election of directors, managing general partners or the equivalent.

"Controlled Account" means each deposit account and securities account that is subject to an account control agreement and/or blocked account agreement in form and substance reasonably satisfactory to the Administrative Agent and the applicable L/C Issuer.

"Credit Extension" means each of the following: (a) a Borrowing and (b) an L/C Credit Extension.

"DB Receivables Purchase Agreement" means that certain Amended and Restated Revolving Trade Receivables Purchase Agreement, dated as of November 4, 2011, among the Company, Celestica LLC, Celestica Czech Republic s.r.o., Celestica Holdings Pte Ltd., Celestica Valencia S.A., Celestica Hong Kong Ltd., Celestica (Romania) S.R.L., Celestica Japan KK, Celestica Oregon LLC, the other parties thereto and Deutsche Bank AG New York Branch, and any replacement agreement thereof the terms and provisions of

which are not materially more adverse, taken as a whole, to the Lenders than those of the DB Receivables Purchase Agreement.

"Debt Issuance" means the issuance by any Loan Party of any Indebtedness other than Indebtedness permitted under Section 7.03.

"Debtor Relief Laws" means the Bankruptcy Code, the Bankruptcy and Insolvency Act (Canada), the Companies' Creditors Arrangement Act (Canada), the Winding-Up and Restructuring Act (Canada), and all other liquidation, conservatorship, bankruptcy, assignment for the benefit of creditors, moratorium, rearrangement, receivership, insolvency, reorganization, or similar debtor relief Laws of the United States, Canada or other applicable jurisdictions (including any applicable foreign jurisdiction) from time to time in effect and affecting the rights of creditors generally.

"Default" means any event or condition that constitutes an Event of Default or that, with the giving of any notice, the passage of time, or both, would be an Event of Default.

"Default Rate" means (a) with respect to any Obligation for which a rate is specified, a rate per annum equal to two percent (2%) in excess of the rate otherwise applicable thereto and (b) with respect to any Obligation for which a rate is not specified or available, a rate per annum equal to the Base Rate plus the Applicable Rate for Revolving Loans that are Base Rate Loans plus two percent (2%), in each case, to the fullest extent permitted by applicable Law.

"Defaulting Lender" means, subject to Section 2.18(b), any Lender that (a) has failed to (i) fund all or any portion of its Loans within two (2) Business Days of the date such Loans were required to be funded hereunder unless such Lender notifies the Administrative Agent and the Company in writing that such failure is the result of such Lender's determination that one or more conditions precedent to funding (each of which conditions precedent, together with any applicable default, shall be specifically identified in such writing) has not been satisfied, or (ii) pay to the Administrative Agent, any L/C Issuer, the Swing Line Lender or any other Lender any other amount required to be paid by it hereunder (including in respect of its participation in Letters of Credit or Swing Line Loans) within two (2) Business Days of the date when due, (b) has notified the Company, the Administrative Agent, any L/C Issuer or the Swing Line Lender in writing that it does not intend to comply with its funding obligations hereunder, or has made a public statement to that effect (unless such writing or public statement relates to such Lender's obligation to fund a Loan hereunder and states that such position is based on such Lender's determination that a condition precedent to funding (which condition precedent, together with any applicable default, shall be specifically identified in such writing or public statement) cannot be satisfied), (c) has failed, within three (3) Business Days after written request by the Administrative Agent or the Company, to confirm in writing to the Administrative Agent and the Company that it will comply with its prospective funding obligations hereunder (provided that such Lender shall cease to be a Defaulting Lender pursuant to this clause (c) upon receipt of such written confirmation by the Administrative Agent and the Company), or (d) has, or has a direct or indirect parent company that has, (i) become the subject of a proceeding under any Debtor Relief Law, (ii) had appointed for it a receiver, custodian, conservator, trustee, administrator, assignee for the benefit of creditors or similar Person charged with reorganization or liquidation of its business or assets, including the Federal Deposit Insurance Corporation, the Canada Deposit Insurance Corporation or any other state, provincial or federal regulatory authority acting in such a capacity or (iii) become the subject of a Bail-In Action; provided that a Lender shall not be a Defaulting Lender solely by virtue of the ownership or acquisition of any Equity Interest in that Lender or any direct or indirect parent company thereof by a Governmental Authority so long as such ownership interest does not result in or provide such Lender with immunity from the jurisdiction of courts within the United States or (unless such Lender is an agent for all purposes of Her Majesty in right of Canada)

from the enforcement of judgments or writs of attachment on its assets or permit such Lender (or such Governmental Authority) to reject, repudiate, disavow or disaffirm any contracts or agreements made with such Lender. Any determination by the Administrative Agent that a Lender is a Defaulting Lender under any one or more of clauses (a) through (d) above, and of the effective date of such status, shall be conclusive and binding absent manifest error, and such Lender shall be deemed to be a Defaulting Lender (subject to Section 2.18(b)) as of the date established therefor by the Administrative Agent in a written notice of such determination, which shall be delivered by the Administrative Agent to the Company, the L/C Issuers, the Swing Line Lender and each other Lender promptly following such determination.

"Designated Borrower" has the meaning specified in the introductory paragraph hereto.

"Designated Borrower Notice" has the meaning specified in Section 2.15.

"Designated Borrower Request and Assumption Agreement" has the meaning specified in Section 2.15.

"Designated Jurisdiction" means any country or territory to the extent that such country or territory itself is the subject of any Sanction.

"Disposition" or "Dispose" means the sale, transfer, license, lease or other disposition (including any Sale and Leaseback Transaction) of any property by any Person, including any sale, assignment, transfer or other disposal, with or without recourse, of any notes or accounts receivable or any rights and claims associated therewith.

"Disposition Reserves" has the meaning specified in the definition of "Net Cash Proceeds".

"Disqualified Institution" means, on any date, (a) any Person set forth on Schedule 10.06 and (b) any other Person that is a competitor of the Company or any of its Subsidiaries, which Person has been designated by the Company as a "Disqualified Institution" by written notice to the Administrative Agent and the Lenders (by posting such notice to the Platform) not less than two (2) Business Days prior to such date; provided, that, the foregoing shall not apply to retroactively disqualify any Person that has previously acquired an assignment in the Loans or Commitments under this Agreement to the extent that any such Person was not a Disqualified Institution at the time of the applicable assignment; provided, further, that "Disqualified Institutions" shall exclude any Person that the Company has designated as no longer being a "Disqualified Institution" by written notice delivered to the Administrative Agent and the Lenders from time to time.

"Dollar" and "$" mean lawful money of the United States.

"Dollar Equivalent" means, at any time, (a) with respect to any amount denominated in Dollars, such amount, and (b) with respect to any amount denominated in any Alternative Currency, the equivalent amount thereof in Dollars as determined by the Administrative Agent or the applicable L/C Issuer, as the case may be, at such time on the basis of the Spot Rate (determined in respect of the most recent Revaluation Date) for the purchase of Dollars with such Alternative Currency.

"Domestic U.S. Security Agreement" means the U.S. Security and Pledge Agreement, dated as of the Closing Date, executed in favor of the Administrative Agent, for the benefit of the Secured Parties, by the Initial U.S. Borrower and the other Loan Parties that are U.S. Subsidiaries (other than any Specified U.S. Obligors).

"DQ List" has the meaning specified in Section 10.06(h)(iv).

"EEA Financial Institution" means (a) any credit institution or investment firm established in any EEA Member Country which is subject to the supervision of an EEA Resolution Authority, (b) any entity established in an EEA Member Country which is a parent of an institution described in clause (a) of this definition, or (c) any financial institution established in an EEA Member Country which is a subsidiary of an institution described in clauses (a) or (b) of this definition and is subject to consolidated supervision with its parent.

"EEA Member Country" means any of the member states of the European Union, Iceland, Liechtenstein, and Norway.

"EEA Resolution Authority" means any public administrative authority or any Person entrusted with public administrative authority of any EEA Member Country (including any delegee) having responsibility for the resolution of any EEA Financial Institution.

"Eligible Assignee" means any Person that meets the requirements to be an assignee under Section 10.06(b) (subject to such consents, if any, as may be required under Section 10.06(b)(iii)). For the avoidance of doubt, any Disqualified Institution is subject to Section 10.06(h).

"Eligible Currency" means any lawful currency other than Dollars that is readily available, freely transferable and convertible into Dollars in the international interbank market available to the Revolving Lenders in such market and as to which a Dollar Equivalent may be readily calculated. If, after the designation by the Revolving Lenders or the applicable L/C Issuer, as applicable, of any currency as an Alternative Currency, any change in currency controls or exchange regulations or any change in the national or international financial, political or economic conditions are imposed in the country in which such currency is issued, result in, in the reasonable opinion of the Administrative Agent or the Required Revolving Lenders (in the case of any Revolving Loans to be denominated in an Alternative Currency) or the applicable L/C Issuer (in the case of any Letter of Credit to be denominated in an Alternative Currency), (a) such currency no longer being readily available, freely transferable and convertible into Dollars, (b) a Dollar Equivalent is no longer readily calculable with respect to such currency, (c) providing such currency is impracticable for the Revolving Lenders or (d) no longer a currency in which the Required Revolving Lenders are willing to make such Credit Extensions (each of clauses (a), (b), (c), and (d) a "Disqualifying Event"), then the Administrative Agent shall promptly notify the Revolving Lenders, the L/C Issuers and the Company, and such country's currency shall no longer be an Alternative Currency until such time as the Disqualifying Event(s) no longer exist. Within five (5) Business Days after receipt of such notice from the Administrative Agent, the applicable Borrowers shall repay all Revolving Loans denominated in such currency to which the Disqualifying Event applies or convert such Revolving Loans into the Dollar Equivalent of Loans in Dollars, subject to the other terms contained herein.

"Environmental Laws" means any and all federal, state, provincial, territorial, local, foreign and other applicable statutes, laws, regulations, ordinances, rules, judgments, orders, decrees, permits, concessions, grants, franchises, licenses, agreements or governmental restrictions relating to pollution and the protection of the environment or the release of any materials into the environment, including those related to hazardous substances or wastes, air emissions and discharges to waste or public systems.

"Environmental Liability" means any liability, contingent or otherwise (including any liability for damages, costs of environmental remediation, fines, penalties or indemnities), of the Company, any other Loan Party or any of their respective Subsidiaries directly or indirectly resulting from or based upon (a) violation of any Environmental Law, (b) the generation, use, handling, transportation, storage, treatment or disposal of any Hazardous Materials, (c) exposure to any Hazardous Materials, (d) the release or threatened

release of any Hazardous Materials into the environment or (e) any contract, agreement or other consensual arrangement pursuant to which liability is assumed or imposed with respect to any of the foregoing.

"Environmental Permit" means any permit, approval, identification number, license or other authorization required under any Environmental Law.

"Equity Interests" means, with respect to any Person, all of the shares of capital stock of (or other ownership or profit interests in) such Person, all of the warrants, options or other rights for the purchase or acquisition from such Person of shares of capital stock of (or other ownership or profit interests in) such Person, all of the securities convertible into or exchangeable for shares of capital stock of (or other ownership or profit interests in) such Person or warrants, rights or options for the purchase or acquisition from such Person of such shares (or such other interests), and all of the other ownership or profit interests in such Person (including partnership, member or trust interests therein), whether voting or nonvoting, and whether or not such shares, warrants, options, rights or other interests are outstanding on any date of determination.

"ERISA" means the Employee Retirement Income Security Act of 1974.

"ERISA Affiliate" means any trade or business (whether or not incorporated) under common control with the Company within the meaning of Section 414(b) or (c) of the Code (and Sections 414(m) and (o) of the Code for purposes of provisions relating to Section 412 of the Code).

"ERISA Event" means (a) a Reportable Event with respect to a Pension Plan; (b) the withdrawal of the Company or any ERISA Affiliate from a Pension Plan subject to Section 4063 of ERISA during a plan year in which such entity was a "substantial employer" as defined in Section 4001(a)(2) of ERISA or a cessation of operations that is treated as such a withdrawal under Section 4062(e) of ERISA; (c) a complete or partial withdrawal by the Company or any ERISA Affiliate from a Multiemployer Plan or notification that a Multiemployer Plan is in reorganization; (d) the filing of a notice of intent to terminate or the treatment of a Pension Plan amendment as a termination under Section 4041 or 4041A of ERISA; (e) the institution by the PBGC of proceedings to terminate a Pension Plan; (f) any event or condition which constitutes grounds under Section 4042 of ERISA for the termination of, or the appointment of a trustee to administer, any Pension Plan; (g) the determination that any Pension Plan is considered an at-risk plan or a plan in endangered or critical status within the meaning of Sections 430, 431 and 432 of the Code or Sections 303, 304 and 305 of ERISA; or (h) the imposition of any liability under Title IV of ERISA, other than for PBGC premiums due but not delinquent under Section 4007 of ERISA, upon the Company or any ERISA Affiliate.

"EU Bail-In Legislation Schedule" means the EU Bail-In Legislation Schedule published by the Loan Market Association (or any successor person), as in effect from time to time.

"Euro" and "€" mean the single currency of the Participating Member States.

"Eurocurrency Rate" means:

(a) for any Interest Period with respect to a Eurocurrency Rate Loan:

(i) in the case of a Eurocurrency Rate Loan denominated in a LIBOR Quoted Currency, the rate per annum equal to the London Interbank Offered Rate ("LIBOR") or a comparable or successor rate which rate is approved by the Administrative Agent, as published on the applicable Bloomberg screen page (or such other commercially available source providing such quotations as may be designated by the Administrative Agent from time to time) at approximately 11:00 a.m., London time, two (2) Business Days prior to the

commencement of such Interest Period, for deposits in the relevant currency (for delivery on the first day of such Interest Period) with a term equivalent to such Interest Period;

(ii) in the case of a Eurocurrency Rate Loan denominated in Canadian Dollars, the rate per annum equal to CDOR;

(iii) in the case of any other Eurocurrency Rate Loan denominated in a Non-LIBOR Quoted Currency (other than those currencies listed above), the rate per annum designated with respect to such Alternative Currency at the time such Alternative Currency is approved by the Administrative Agent and the Lenders pursuant to Section 1.06(a); and

(b) for any interest rate calculation with respect to a Base Rate Loan on any date, the rate per annum equal to LIBOR, at or about 11:00 a.m., London time determined two (2) Business Days prior to such date for Dollar deposits with a term of one (1) month commencing that day;

provided that (x) to the extent a comparable or successor rate is approved by the Administrative Agent in connection with any rate set forth in this definition, the approved rate shall be applied in a manner consistent with market practice; provided, further that to the extent such market practice is not administratively feasible for the Administrative Agent, such approved rate shall be applied in a manner as otherwise reasonably determined by the Administrative Agent; and (y) if the Eurocurrency Rate shall be less than zero, such rate shall be deemed zero for purposes of this Agreement.

"Eurocurrency Rate Loan" means a Loan that bears interest at a rate based on clause (a) of the definition of "Eurocurrency Rate". Eurocurrency Rate Loans may be denominated in Dollars, Canadian Dollars or in an Alternative Currency. All Loans denominated in an Alternative Currency must be Eurocurrency Rate Loans.

"Event of Default" has the meaning specified in Section 8.01.

"Excluded Accounts" means (a) any account used solely by any Loan Party to disburse payroll and benefits, (b) any fiduciary accounts used solely to administer benefit plans or pay withholding taxes and (c) any account used solely to hold funds in trust for third parties.

"Excluded Property" means, with respect to any Loan Party, (a) any owned or leased real property, (b) any Excluded Account, (c) any IP Rights for which a perfected Lien thereon is not effected either by filing of a UCC or a PPSA financing statement or by appropriate evidence of such Lien being filed in the United States Copyright Office, the United States Patent and Trademark Office, the Canadian Intellectual Property Office or a comparable filing office in a foreign jurisdiction, (d) solely to the extent such Loan Party is a U.S. Subsidiary or is organized under any jurisdiction of Canada, any personal property (other than personal property described in clause (c) above and Equity Interests of any Subsidiary to the extent required to be pledged to secure the Obligations pursuant to Section 6.15) for which the attachment or perfection of a Lien thereon is not governed by the UCC or the PPSA, (e) the Equity Interests of any Subsidiary to the extent not required to be pledged to secure the Obligations pursuant to Section 6.15, (f) any property which, subject to the terms of Section 7.09, is subject to a Lien of the type described in Section 7.01(i) pursuant to documents which prohibit such Loan Party from granting any other Liens in such property, (g) any lease, license, contract, property rights or agreement to which such Loan Party is a party or any of its respective rights or interests therein if and for so long as the grant of a security interest therein shall constitute or result in (i) the abandonment, invalidation or unenforceability of any right, title or interest of

such Loan Party therein or (ii) a breach or termination pursuant to the terms of, or a default under, any such lease, license, contract, property rights or agreement or under applicable law (other than to the extent that any such term would be rendered ineffective pursuant to Section 9-406, 9-407, 9-408 or 9-409 of the UCC or pursuant to the PPSA (or any successor provision or provisions) of any relevant jurisdiction or any other applicable law); provided that to the extent permitted under local law, a security interest shall attach immediately (and such lease, license, contract, property rights or agreement shall immediately cease to be Excluded Property) at such time as the condition causing such abandonment, invalidation or unenforceability shall be remedied, and, to the extent severable, shall attach immediately to any portion of such lease, license, contract, property rights or agreement (and such portion of such lease, license, contract, property rights or agreement shall immediately cease to be Excluded Property) that does not result in any of the consequences specified in the foregoing clauses (i) or (ii); provided, further, that in any jurisdiction where a security interest in favor of the Administrative Agent shall not immediately attach when such lease, license, contract, property rights or agreement shall cease to constitute Excluded Property, upon the written request of the Administrative Agent such Loan Party Agent shall use commercially reasonable efforts to cause a security interest in favor of the Administrative Agent to attach thereto, (h) at any time the DB Receivables Purchase Agreement or any Permitted Securitization Transaction is outstanding, (i) any Securitized Asset that is subject thereto, (ii) the Equity Interests of the Special Purpose Subsidiary for such Permitted Securitization Transaction and (iii) any deposit accounts established pursuant to such DB Receivables Purchase Agreement or Permitted Securitization Transaction for collection of the relevant Securitized Assets, (i) at any time any Permitted Receivables Transaction is outstanding, the accounts receivable subject thereto, (j) consumer goods (as defined under the PPSA) and the last day of the term of any lease or agreement for lease of real property and (k) other assets for which the cost or other negative consequence of obtaining or perfecting a security interest exceeds is excessive in relation to the value to the Lenders of obtaining or perfecting such security interests, as determined by the Administrative Agent in its sole discretion; provided, however, that the security interest granted under the Loan Documents in favor of the Administrative Agent shall attach immediately to any asset of such Loan Party at such time as such asset ceases to meet any of the criteria for "Excluded Property" described in any of the foregoing clauses (a) through (k), including, without limitation, if the terms of the agreement(s) relating thereto that prohibit or limit the pledge or granting of security interest therein, that would give rise to a violation or invalidation of the agreement(s) with respect thereto, (i) are no longer in effect or (ii) have been waived by the other party to any such lease, license or other agreement.

"Excluded Subsidiary" means (a) any Unrestricted Subsidiary, (b) any Immaterial Subsidiary, (c) any Subsidiary organized or formed under the Laws of (i) Romania, (ii) the People's Republic of China or (iii) the Kingdom of Thailand, (d) any Special Purpose Subsidiary, (e) any Subsidiary that is prohibited by applicable Law or Contractual Obligation existing on the Closing Date (or, with respect to any Subsidiary acquired by the Company or a Restricted Subsidiary (and so long as such Contractual Obligation was not incurred in contemplation of such acquisition), on the date such Subsidiary is so acquired) from providing the Guaranty, or if such Guaranty would require the consent, approval, license or authorization of any Governmental Authority or other third party, unless such consent, approval, license or authorization has been received and (f) any other Subsidiary with respect to which the Administrative Agent and the Company reasonably agree that the burden or cost of providing the Guaranty shall outweigh the benefits to be obtained by the Lenders therefrom. Notwithstanding anything to the contrary in this Agreement, no Borrower (including, for the avoidance of doubt, any Designated Borrower) shall constitute an Excluded Subsidiary.

"Excluded Swap Obligation" means, with respect to any Loan Party, any Swap Obligation if, and to the extent that, all or a portion of the Guaranty of such Loan Party of, or the grant under a Loan Document by such Loan Party of a security interest to secure, such Swap Obligation (or any Guarantee thereof) is or becomes illegal under the Commodity Exchange Act (or the application or official interpretation thereof) by virtue of such Loan Party's failure for any reason to constitute an "eligible contract participant" as defined

in the Commodity Exchange Act (determined after giving effect to any applicable "keepwell" provisions in any Loan Document and any and all guarantees of such Loan Party's Swap Obligations by other Loan Parties) at the time the Guaranty of such Loan Party, or grant by such Loan Party of a security interest, becomes effective with respect to such Swap Obligation. If a Swap Obligation arises under a Master Agreement governing more than one Swap Contract, such exclusion shall apply to only the portion of such Swap Obligation that is attributable to Swap Contracts for which such Guaranty or security interest is or becomes illegal.

"Excluded Taxes" means any of the following Taxes imposed on or with respect to any Recipient or required to be withheld or deducted from a payment to a Recipient, (a) Taxes imposed on or measured by net income (however denominated), franchise Taxes, and branch profits Taxes, in each case, (i) imposed as a result of such Recipient being organized under the Laws of, or having its principal office or, in the case of any Lender, its Lending Office located in, the jurisdiction imposing such Tax (or any political subdivision thereof) or (ii) that are Other Connection Taxes, (b) in the case of a Lender, withholding Taxes imposed on amounts payable to or for the account of such Lender with respect to an applicable interest in a Loan or Commitment pursuant to a Law in effect on the date on which (i) such Lender acquires such interest in the Loan or Commitment (other than pursuant to an assignment request by the Company under Section 10.13) or (ii) such Lender changes its Lending Office, except in each case to the extent that, pursuant to Section 3.01(a)(ii), 3.01(a)(iii) or 3.01(c), amounts with respect to such Taxes were payable either to such Lender's assignor immediately before such Lender became a party hereto or to such Lender immediately before it changed its Lending Office, (c) Taxes attributable to such Recipient's failure to comply with Section 3.01(e), (d) any U.S. federal withholding Taxes imposed pursuant to FATCA and (e) any Canadian federal withholding taxes imposed on a Recipient as a result of such Recipient (i) not dealing at arm's length (within the meaning of the ITA) with a Canadian Borrower at the time of such payment, or (ii) being a "specified shareholder" (as defined in subsection 18(5) of the ITA) of a Canadian Borrower or not dealing at arm's length (for the purposes of the ITA) with a "specified shareholder" (as defined in subsection 18(5) of the ITA) of a Canadian Borrower (other than where the non-arm's length relationship arises, or where the Recipient is a "specified shareholder", or does not deal at arm's length with a "specified shareholder", as a result of such Recipient having become a party to, received or perfected a security interest under or received or enforced any rights under, a Loan Document).

"Existing Credit Agreement" means that certain Eighth Amended and Restated Credit Agreement dated as of May 29, 2015 by and among the Company, the other borrowers identified therein, the lenders identified therein and Canadian Imperial Bank of Commerce, as administrative agent.

"Existing Letters of Credit" means those certain letters of credit set forth on Schedule 1.01.

"Facility Termination Date" means the date as of which all of the following shall have occurred: (a) the Aggregate Commitments have terminated, (b) all Obligations have been paid in full (other than contingent indemnification obligations for which no claim or demand has yet been made), and (c) all Letters of Credit have terminated or expired (other than Letters of Credit as to which other arrangements with respect thereto reasonably satisfactory to the Administrative Agent and each applicable L/C Issuer shall have been made).

"FATCA" means Sections 1471 through 1474 of the Code, as of the Closing Date (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), any current or future regulations or official interpretations thereof, any agreements entered into pursuant to Section 1471(b)(1) of the Code and any fiscal or regulatory legislation, rules or practices adopted pursuant

to any intergovernmental agreement, treaty or convention among Governmental Authorities and implementing such Sections of the Code.

"Federal Funds Rate" means, for any day, the rate per annum equal to the weighted average of the rates on overnight federal funds transactions with members of the Federal Reserve System, as published by the Federal Reserve Bank of New York on the Business Day next succeeding such day; provided that (a) if such day is not a Business Day, the Federal Funds Rate for such day shall be such rate on such transactions on the next preceding Business Day as so published on the next succeeding Business Day, (b) if no such rate is so published on such next succeeding Business Day, the Federal Funds Rate for such day shall be the average rate (rounded upward, if necessary, to a whole multiple of 1/100 of one percent (1%)) charged to Bank of America on such day on such transactions as determined by the Administrative Agent and (c) if the Federal Funds Rate shall be less than zero, such rate shall be deemed zero for purposes of this Agreement.

"Fee Letter" means the letter agreement, dated June 1, 2018 among the Canadian Borrowers, the Initial U.S. Borrower, MLPFS, Bank of America and Citibank, N.A.

"FRB" means the Board of Governors of the Federal Reserve System of the United States.

"Fronting Exposure" means, at any time there is a Defaulting Lender, (a) with respect to each L/C Issuer, such Defaulting Lender's Applicable Percentage of the Outstanding Amount of all outstanding L/C Obligations relating to Letters of Credit issued by such L/C Issuer other than L/C Obligations as to which such Defaulting Lender's participation obligation has been reallocated to other Lenders or Cash Collateralized in accordance with the terms hereof, and (b) with respect to the Swing Line Lender, such Defaulting Lender's Applicable Percentage of Swing Line Loans other than Swing Line Loans as to which such Defaulting Lender's participation obligation has been reallocated to other Lenders in accordance with the terms hereof.

"Fund" means any Person (other than a natural Person) that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its activities.

"Governmental Authority" means the government of the United States, Canada or any other nation, or of any political subdivision thereof, whether state, provincial, territorial or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including, without limitation, the Financial Conduct Authority, the Prudential Regulation Authority and any supra-national bodies such as the European Union or the European Central Bank).

"Gross Assets" means, with respect to the Company or any Restricted Subsidiary, the sum of the book value of the gross assets of the Company or such Restricted Subsidiary and each of its Restricted Subsidiaries (other than Restricted Subsidiaries that are Excluded Subsidiaries under clause (a), (c), (d) or (e) of the definition thereof) in each case determined on a consolidated basis as of the last day of the most recently ended fiscal quarter of the Company for which financial statements have been delivered pursuant to Section 6.01.

"Guarantee" means, as to any Person, without duplication, (a) any obligation, contingent or otherwise, of such Person guaranteeing or having the economic effect of guaranteeing any Indebtedness or other obligation payable or performable by another Person (the "primary obligor") in any manner, whether directly or indirectly, and including any obligation of such Person, direct or indirect, (i) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation, (ii) to purchase or lease property, securities or services for the purpose of assuring the obligee in respect of such

Indebtedness or other obligation of the payment or performance of such Indebtedness or other obligation, (iii) to maintain working capital, equity capital or any other financial statement condition or liquidity or level of income or cash flow of the primary obligor so as to enable the primary obligor to pay such Indebtedness or other obligation, or (iv) entered into for the purpose of assuring in any other manner the obligee in respect of such Indebtedness or other obligation of the payment or performance thereof or to protect such obligee against loss in respect thereof (in whole or in part), or (b) any Lien on any assets of such Person securing any Indebtedness or other obligation of any other Person, whether or not such Indebtedness or other obligation is assumed by such Person (or any right, contingent or otherwise, of any holder of such Indebtedness to obtain any such Lien); provided, however, with respect to any Guarantee described in clause (b) above, to the extent the Indebtedness or obligation secured thereby has not been assumed by the guarantor or is nonrecourse to the guarantor, the amount of such Guarantee shall be deemed to be an amount equal to the lesser of the fair market value of the assets subject to such Lien or the Indebtedness or obligation secured thereby. The amount of any Guarantee shall be deemed to be an amount equal to the stated or determinable amount of the related primary obligation, or portion thereof, in respect of which such Guarantee is made or, if not stated or determinable, the maximum reasonably anticipated liability in respect thereof as determined by the guaranteeing Person in good faith. The term "Guarantee" as a verb has a corresponding meaning.

"Guaranty" means, collectively, the Guarantee made by the Guarantors under Article XI in favor of the Secured Parties, together with each other guaranty delivered pursuant to Section 6.14.

"Guarantors" means, collectively, (a) each U.S. Guarantor and (b) each Non-U.S. Guarantor.

"Hazardous Materials" means all explosive or radioactive substances or wastes and all hazardous or toxic substances or other pollutants, including petroleum or petroleum distillates, asbestos or asbestos-containing materials, polychlorinated biphenyls, radon gas, infectious or medical wastes and all other substances or wastes of any nature regulated pursuant to any Environmental Law.

"Hedge Bank" means any Person in its capacity as a party to a Swap Contract that, **(**a**)** at the time it enters into a Swap Contract not prohibited under Article VII, is a Lender or an Affiliate of a Lender, or (b) at the time it (or its Affiliate) becomes a Lender, is a party to a Swap Contract not prohibited under Article VII, in each case, in its capacity as a party to such Swap Contract (even if such Person ceases to be a Lender or such Person's Affiliate ceased to be a Lender); provided, in the case of a Secured Swap Contract with a Person who is no longer a Lender (or Affiliate of a Lender), such Person shall be considered a Hedge Bank only through the stated termination date (without extension or renewal) of such Secured Swap Contract and provided, further, that for any of the foregoing to be included as a "Secured Swap Contract" on any date of determination by the Administrative Agent, the applicable Hedge Bank (other than the Administrative Agent or an Affiliate of the Administrative Agent) must have delivered a Secured Party Designation Notice to the Administrative Agent prior to such date of determination.

"HMT" has the meaning specified in the definition of "Sanction(s)".

"Honor Date" has the meaning specified in Section 2.03(c).

"Hypothecary Representative" has the meaning specified in Section 9.01.

"IFRS" means the International Financial Reporting Standards as issued by the International Accounting Standards Board in effect in Canada from time to time.

"Immaterial Subsidiary" means, as of any date of determination, any Restricted Subsidiary that is not a Guarantor and that has Gross Assets of less than $150,000,000; provided that if the aggregate amount

of the Gross Assets of all Immaterial Subsidiaries that are not Guarantors exceeds twenty percent (20%) of the aggregate amount of the Gross Assets of the Company, the Company shall designate by written notice to the Administrative one or more of such Immaterial Subsidiaries as no longer constituting Immaterial Subsidiaries (which Immaterial Subsidiaries shall be determined by the Company in its sole discretion) such that after such designation the aggregate amount of the Gross Assets of all Immaterial Subsidiaries that are not Guarantors does not exceed twenty percent (20%) of the aggregate amount of the Gross Assets of the Company; provided, further, that notwithstanding the foregoing, the Company shall not be required to cause any Immaterial Subsidiary to become a Guarantor (including without limitation any of the Subsidiaries set forth on Part A of Schedule 6.19) until after the Post-Closing Compliance Date.

"Impacted Loans" has the meaning specified in Section 3.03.

"Incremental Facilities" has the meaning specified in Section 2.16.

"Incremental Facility Amendment" has the meaning specified in Section 2.16.

"Incremental Facility Commitment" has the meaning specified in Section 2.16(g).

"Incremental Revolving Increase" has the meaning specified in Section 2.16.

"Incremental Term Facility" has the meaning specified in Section 2.16.

"Incremental Term Loan" means a term loan made by a Lender to the Borrower under an Incremental Term Facility.

"Incremental Tranche A Facility Commitment" means an Incremental Facility Commitment in respect of an Incremental Tranche A Term Facility.

"Incremental Tranche A Term Facility" has the meaning specified in Section 2.16(h).

"Incremental Tranche A Term Loan" means a term loan made by a Lender to the Borrower under an Incremental Tranche A Term Facility.

"Incremental Tranche B Term Facility" has the meaning specified in Section 2.16(h).

"Incremental Tranche B Term Loan" means a term loan made by a Lender to the Borrower under an Incremental Tranche B Term Facility.

"Indebtedness" means, as to any Person at a particular time, without duplication, all of the following, whether or not included as indebtedness or liabilities in accordance with IFRS:

(a) all obligations of such Person for borrowed money and all obligations of such Person evidenced by bonds, debentures, notes, loan agreements or other similar instruments;

(b) all direct or contingent obligations of such Person arising under letters of credit (including standby and commercial), bankers' acceptances, bank guaranties, surety bonds and similar instruments;

(c) net obligations of such Person under any Swap Contract;

(d) all obligations of such Person to pay the deferred purchase price of property or services (other than trade accounts payable in the ordinary course of business);

(e) indebtedness (excluding prepaid interest thereon) secured by a Lien on property owned or being purchased by such Person (including indebtedness arising under conditional sales or other title retention agreements), whether or not such indebtedness shall have been assumed by such Person or is limited in recourse;

(f) all Attributable Indebtedness of such Person;

(g) all obligations of such Person to purchase, redeem, retire, defease or otherwise make any payment in respect of any Equity Interest in such Person or any other Person, valued, in the case of a redeemable preferred interest, at the greater of its voluntary or involuntary liquidation preference plus accrued and unpaid dividends; and

(h) all Guarantees of such Person in respect of any of the foregoing.

For all purposes hereof, the Indebtedness of any Person shall include the Indebtedness of any partnership or joint venture (other than a joint venture that is itself a corporation or limited liability company) in which such Person is a general partner or a joint venturer, unless such Indebtedness is expressly made non-recourse to such Person. The amount of any net obligation under any Swap Contract on any date shall be deemed to be the Swap Termination Value thereof as of such date. The amount of any Indebtedness described in clause (e), if such Indebtedness has not been assumed or is limited in recourse to the property subject to such Lien, shall be deemed to be an amount equal to the lesser of the fair market value of such property or the Indebtedness secured thereby.

"Indemnified Taxes" means (a) Taxes, other than Excluded Taxes, imposed on or with respect to any payment made by or on account of any obligation of any Loan Party under any Loan Document and (b) to the extent not otherwise described in clause (a), Other Taxes.

"Indemnitees" has the meaning specified in Section 10.04(b).

"Information" has the meaning specified in Section 10.07.

"Initial U.S. Borrower" has the meaning specified in the introductory paragraph hereto.

"Interest Payment Date" means, (a) as to any Eurocurrency Rate Loan, the last day of each Interest Period applicable to such Loan and the Maturity Date applicable thereto; provided, however, that if any Interest Period for a Eurocurrency Rate Loan exceeds three (3) months, the respective dates that fall every three (3) months after the beginning of such Interest Period shall also be Interest Payment Dates; and (b) as to any Base Rate Loan, Canadian Prime Rate Loan or Swing Line Loan, the last Business Day of each March, June, September and December and the Maturity Date applicable thereto under which such Loan was made (with Swing Line Loans being deemed made under the Revolving Facility for purposes of this definition).

"Interest Period" means as to each Eurocurrency Rate Loan, Bankers' Acceptance or B/A Equivalent Loan, the period commencing on the date such Eurocurrency Rate Loan, Bankers' Acceptance or B/A Equivalent Loan, as applicable, is disbursed or converted to or continued as a Eurocurrency Rate Loan, Bankers' Acceptance or B/A Equivalent Loan, as applicable, and ending on the date one (1), two (2), three

(3) or six (6) months thereafter (in each case, subject to availability for the interest rate applicable to the relevant currency), as selected by the appropriate Borrower in its Loan Notice, or such other period that is twelve (12) months or less requested by the applicable Borrower and consented to by all of the Lenders required to fund or maintain a portion of such Loan; provided that:

(a) any Interest Period that would otherwise end on a day that is not a Business Day shall be extended to the next succeeding Business Day unless such Business Day falls in another calendar month, in which case such Interest Period shall end on the next preceding Business Day;

(b) any Interest Period that begins on the last Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall end on the last Business Day of the calendar month at the end of such Interest Period; and

(c) no Interest Period shall extend beyond the Maturity Date applicable to such Loan.

"Interim Financial Statements" has the meaning specified in Section 4.01(a)(xv).

"Investment" means, as to any Person, any direct or indirect acquisition or investment by such Person, whether by means of (a) the purchase or other acquisition of Equity Interests of another Person, (b) a loan, advance or capital contribution to, Guarantee or assumption of debt of, or purchase or other acquisition of any other debt or equity participation or interest in, another Person, including any partnership or joint venture interest in such other Person and any arrangement pursuant to which the investor Guarantees Indebtedness of such other Person, or (c) an Acquisition. For purposes of covenant compliance, the amount of any Investment shall be the amount actually invested, without adjustment for subsequent increases or decreases in the value of such Investment.

"IP Rights" has the meaning specified in Section 5.20.

"IRS" means the United States Internal Revenue Service.

"ISP" means, with respect to any Letter of Credit, the "International Standby Practices 1998" published by the Institute of International Banking Law & Practice, Inc. (or such later version thereof as may be in effect at the time of issuance).

"Issuer Documents" means with respect to any Letter of Credit, the Letter of Credit Application, and any other document, agreement and instrument entered into by the applicable L/C Issuer and the Company (or any Subsidiary) or in favor of the applicable L/C Issuer and relating to such Letter of Credit.

"ITA" means the Income Tax Act (Canada).

"Joinder Agreement" means a joinder agreement substantially in the form of Exhibit J or such other form as may be approved by the Administrative Agent, in either case, executed and delivered in accordance with the provisions of Section 6.14.

"Judgment Currency" has the meaning specified in Section 10.20.

"Junior Payment" means any principal payment on any Additional Indebtedness.

"Laws" means, collectively, all international, foreign, federal, state, provincial, territorial and local statutes, treaties, rules, guidelines, regulations, ordinances, codes and administrative or judicial precedents or authorities, including the interpretation or administration thereof by any Governmental Authority charged with the enforcement, interpretation or administration thereof, and all applicable administrative orders, directed duties, requests, licenses, authorizations and permits of, and agreements with, any Governmental Authority, in each case whether or not having the force of law.

"L/C Advance" means, with respect to each Revolving Lender, such Revolving Lender's funding of its participation in any L/C Borrowing in accordance with its Applicable Percentage. All L/C Advances shall be denominated in Dollars.

"L/C Borrowing" means an extension of credit resulting from a drawing under any Letter of Credit which has not been reimbursed on the date when made or refinanced as a Borrowing. All L/C Borrowings shall be denominated in Dollars.

"L/C Credit Extension" means, with respect to any Letter of Credit, the issuance thereof or extension of the expiry date thereof, or the increase of the amount thereof.

"L/C Issuer" means each of (a) Bank of America, (b) Citibank, N.A., (c) Canadian Imperial Bank of Commerce (in the case of each of the foregoing clauses (a) through (c), through itself or through one of its respective designated Affiliates or branch officers), (d) any Lender appointed by the Company (with the consent of the Administrative Agent) as an L/C Issuer by written notice to the Administrative Agent as a replacement for any L/C Issuer who, at the time of such notice, is a Defaulting Lender and (e) any successor issuer of Letters of Credit hereunder, in each case its capacity as issuer of Letters of Credit hereunder.

"L/C Obligations" means, as at any date of determination, the aggregate amount available to be drawn under all outstanding Letters of Credit plus the aggregate of all Unreimbursed Amounts, including all L/C Borrowings. For purposes of computing the amount available to be drawn under any Letter of Credit, the amount of such Letter of Credit shall be determined in accordance with Section 1.09. For all purposes of this Agreement, if on any date of determination a Letter of Credit has expired by its terms but any amount may still be drawn thereunder by reason of the operation of Rule 3.14 of the ISP, such Letter of Credit shall be deemed to be "outstanding" in the amount so remaining available to be drawn.

"LCA Election" has the meaning specified in Section 1.10.

"LCA Test Date" has the meaning specified in Section 1.10.

"Lender" means each of the Persons identified as a "Lender" on the signature pages hereto, each other Person that becomes a "Lender" in accordance with this Agreement and their successors and assigns and, as the context requires, includes the Swing Line Lender and each L/C Issuer.

"Lending Office" means, as to any Lender, the office or offices of such Lender described as such in such Lender's Administrative Questionnaire, or such other office or offices as a Lender may from time to time notify the Company and the Administrative Agent which office may include any Affiliate of such Lender or any domestic or foreign branch of such Lender or such Affiliate. Unless the context otherwise requires each reference to a Lender shall include its applicable Lending Office.

"Letter of Credit" means any letter of credit issued hereunder providing for the payment of cash upon the honoring of a presentation thereunder and shall include the Existing Letters of Credit. A Letter of

Credit may be a commercial letter of credit or a standby letter of credit. Letters of Credit may be issued in Dollars or in an Alternative Currency.

"Letter of Credit Application" means an application and agreement for the issuance or amendment of a Letter of Credit in the form from time to time in use by the applicable L/C Issuer and, as applicable, shall include such general acceptance agreements, applications, certifications and other documents as the applicable L/C Issuer may require in connection with the creation of Bankers' Acceptances.

"Letter of Credit Expiration Date" means the day that is seven (7) days prior to the Maturity Date then in effect for Letters of Credit (or, if such day is not a Business Day, the next preceding Business Day).

"Letter of Credit Fee" has the meaning specified in Section 2.03(h).

"Letter of Credit Sublimit" means an amount equal to the lesser of (a) $150,000,000 and (b) the Aggregate Revolving Commitments; provided that as of the Closing Date, with respect to each of Bank of America, Citibank, N.A. and Canadian Imperial Bank of Commerce, each in its capacity as an L/C Issuer, such L/C Issuer shall not be obligated to issue Letters of Credit in an amount greater than the amount set forth as its "Letter of Credit Commitment" on Schedule 2.01. The Letter of Credit Sublimit is part of, and not in addition to, the Aggregate Revolving Commitments.

"Leverage Increase Period" has the meaning specified in Section 7.11(b).

"LIBOR" has the meaning specified in the definition of Eurocurrency Rate.

"LIBOR Quoted Currency" means Dollars, Euro and Sterling, in each case as long as there is a published LIBOR rate with respect thereto.

"LIBOR Screen Rate" means the LIBOR quote on the applicable screen page the Administrative Agent designates to determine LIBOR (or such other commercially available source providing such quotations as may be designated by the Administrative Agent from time to time).

"LIBOR Successor Rate" has the meaning specified in Section 3.07.

"LIBOR Successor Rate Conforming Changes" means, with respect to any proposed LIBOR Successor Rate, any conforming changes to the definition of Base Rate, Interest Period, timing and frequency of determining rates and making payments of interest and other administrative matters as may be appropriate, in the discretion of the Administrative Agent, to reflect the adoption of such LIBOR Successor Rate and to permit the administration thereof by the Administrative Agent in a manner substantially consistent with market practice (or, if the Administrative Agent determines that adoption of any portion of such market practice is not administratively feasible or that no market practice for the administration of such LIBOR Successor Rate exists, in such other manner of administration as the Administrative Agent determines in consultation with the Company).

"Lien" means any mortgage, pledge, hypothecation, assignment, deposit arrangement, encumbrance, lien (statutory or other), hypothec, charge, or preference, priority or other security interest or preferential arrangement in the nature of a security interest of any kind or nature whatsoever (including any conditional sale or other title retention agreement, any easement, right of way or other encumbrance on title to real property, and any financing lease having substantially the same economic effect as any of the foregoing).

"Limited Condition Acquisition" means any Permitted Acquisition by one or more of the Loan Parties or their Subsidiaries (a) that is not prohibited hereunder, (b) is financed in whole or in part with a substantially concurrent incurrence of Incremental Term Facilities and (c) whose consummation is not conditioned on the availability of, or on obtaining, third-party financing and which is consummated no more than one hundred eighty (180) days after the applicable Limited Condition Acquisition Agreement date is executed and effective.

"Limited Condition Acquisition Agreement" has the meaning specified in Section 1.10.

"Loan" means an extension of credit by a Lender to a Borrower (including, for greater certainty, a Bankers' Acceptance or a B/A Equivalent Loan) under Article II in the form of a Revolving Loan, Swing Line Loan or Term Loan.

"Loan Documents" means, collectively, this Agreement, the Collateral Documents, each Designated Borrower Request and Assumption Agreement, each Note, each Issuer Document, each Joinder Agreement, each Bankers' Acceptance, any agreement creating or perfecting rights in Cash Collateral pursuant to the provisions of Section 2.17, the Fee Letter, each Incremental Facility Amendment, each Loan Modification Agreement, each intercreditor agreement or subordination agreement contemplated hereby and entered into by the Administrative Agent and each other agreement designated by its terms as a Loan Document (but specifically excluding any Secured Cash Management Agreement and any Secured Swap Contract).

"Loan Modification Agreement" has the meaning specified in Section 10.01(c).

"Loan Modification Offer" has the meaning specified in Section 10.01(c).

"Loan Notice" means a notice of (a) a Borrowing of Loans (other than Swing Line Loans), (b) a conversion of Loans from one Type to the other, or (c) a continuation of Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans pursuant to Section 2.02(a), which shall be substantially in the form of Exhibit A or such other form as may be approved by the Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approved by the Administrative Agent) appropriately completed and signed by a Responsible Officer of the applicable Borrower.

"Loan Parties" means, collectively, each Borrower and each Guarantor.

"London Banking Day" means any day on which dealings in Dollar deposits are conducted by and between banks in the London interbank Eurodollar market.

"Mandatory Cost" means any amount incurred periodically by any Lender during the term of this Agreement which constitutes fees, costs or charges imposed on lenders generally in the jurisdiction in which such Lender is domiciled, subject to regulation or has its Lending Office by any Governmental Authority which are applicable to the Credit Extensions and such Lender's Lending Office.

"Master Agreement" has the meaning specified in the definition of "Swap Contract".

"Material Adverse Effect" means (a) a material adverse change in, or a material adverse effect upon, the operations, business, assets, properties, liabilities (actual or contingent) or condition (financial or otherwise) of the Company and its Restricted Subsidiaries taken as a whole; (b) a material impairment of the rights and remedies of the Administrative Agent or any Lender under any Loan Documents, or of the ability of the Loan Parties, taken as a whole, to perform their obligations under the Loan Documents; or (c) a

material adverse effect upon the legality, validity, binding effect or enforceability against the Loan Parties, taken as a whole, of the Loan Documents.

"Material Restricted Subsidiary" means any Restricted Subsidiary that is not an Immaterial Subsidiary.

"Maturity Date" means (a) as to the Revolving Loans, Swing Line Loans and Letters of Credit (and the related L/C Obligations), June 27, 2023 and (b) as to the Term B Loan, June 27, 2025; provided, however, that, in each case, if such date is not a Business Day, the Maturity Date shall be the next preceding Business Day.

"Minimum Collateral Amount" means, at any time, (a) with respect to Cash Collateral consisting of cash or deposit account balances provided to reduce or eliminate Fronting Exposure during the existence of a Defaulting Lender, an amount equal to one hundred three percent (103%) of the Fronting Exposure of each applicable L/C Issuer with respect to Letters of Credit issued and outstanding at such time, (b) with respect to Cash Collateral consisting of cash or deposit account balances provided in accordance with the provisions of Section 2.17(a)(i), (a)(ii) or (a)(iii), an amount equal to one hundred three percent (103%) of the Outstanding Amount of all L/C Obligations, and (c) otherwise, an amount determined by the Administrative Agent and the applicable L/C Issuer in their sole discretion.

"MLPFS" means Merrill Lynch, Pierce, Fenner & Smith Incorporated (or any other registered broker-dealer wholly-owned by Bank of America Corporation to which all or substantially all of Bank of America Corporation's or any of its subsidiaries' investment banking, commercial lending services or related businesses may be transferred following the date of this Agreement).

"Moody's" means Moody's Investors Service, Inc. and any successor thereto.

"Multiemployer Plan" means any employee benefit plan of the type described in Section 4001(a)(3) of ERISA, to which the Company or any ERISA Affiliate makes or is obligated to make contributions, or during the preceding five plan years, has made or been obligated to make contributions.

"Multiple Employer Plan" means a Plan which has two or more contributing sponsors (including the Company or any ERISA Affiliate) at least two of whom are not under common control, as such a plan is described in Section 4064 of ERISA.

"Net Cash Proceeds" means the aggregate cash or Cash Equivalents proceeds received by the Company or any Restricted Subsidiary in respect of any Disposition, Debt Issuance or Recovery Event, net of (a) costs and direct expenses incurred in connection therewith (including, without limitation, legal, accounting and investment banking fees, costs, underwriting discounts, and sales commissions), (b) Taxes paid or reasonably estimated to be payable as a result thereof or in connection therewith (including pursuant to any Tax sharing arrangement), (c) in the case of any Disposition or any Recovery Event, the amount necessary to retire any Indebtedness secured by a Lien on the related property to the extent such Indebtedness is actually retired and such payment is not prohibited under Section 7.14 and (d) in connection with any Disposition, a reasonable reserve determined by the Company or such Subsidiary in its reasonable business judgment for (i) any reasonably anticipated adjustment in sale price of such asset or assets and (ii) reasonably anticipated liabilities associated with such asset or assets and retained by the Company or any Restricted Subsidiary after such Disposition, including pension and other post-employment benefit liabilities and liabilities related to environmental matters or with respect to any indemnification payments (fixed or contingent) or purchase price adjustments attributable to seller's indemnities and representations and warranties to purchaser in respect of such Disposition undertaken by the Company or such Subsidiary in

connection with such Disposition (the "Disposition Reserves"); it being understood that "Net Cash Proceeds" shall include, without limitation, (a) any cash or Cash Equivalents received upon the sale or other disposition of any non-cash consideration received by the Company or any Restricted Subsidiary in any Disposition, Debt Issuance or Recovery Event and (b) any Disposition Reserves that are no longer necessary with respect to the applicable Disposition; provided, that (x) any amount of the purchase price in connection with any Disposition that is held in escrow shall not be deemed to be received by the Company or any of its Restricted Subsidiaries until such amount is paid to the Company or such Subsidiary out of escrow and (y) (i) Net Cash Proceeds received by the Company or any wholly owned Restricted Subsidiary of the Company shall equal one hundred percent (100%) of the cash proceeds received by the Company or such Restricted Subsidiary pursuant to the foregoing definition and (ii) Net Cash Proceeds received by any Restricted Subsidiary other than a wholly owned Subsidiary of the Company shall equal a percentage of the cash proceeds received by such Subsidiary pursuant to the foregoing definition equal to the percentage of such Restricted Subsidiary's total outstanding Equity Interests owned by the Company and its Restricted Subsidiaries.

"Non-B/A Lender" has the meaning specified in Section 2.04(f).

"Non-Consenting Lender" means any Lender that does not approve any consent, waiver or amendment that (a) requires the approval of all Lenders or all affected Lenders in accordance with the terms of Section 10.01 and (b) has been approved by the Required Lenders.

"Non-Defaulting Lender" means, at any time, each Lender that is not a Defaulting Lender at such time.

"Non-Extension Notice Date" has the meaning specified in Section 2.03(b)(iii).

"Non-LIBOR Quoted Currency" means any currency other than a LIBOR Quoted Currency.

"Non-Reinstatement Deadline" has the meaning specified in Section 2.03(b)(iv).

"Non-U.S. Borrower" has the meaning specified in the introductory paragraph hereto.

"Non-U.S. Guarantors" means, collectively, (a) the Company and each Subsidiary identified as a "Non-U.S. Guarantor" on the signature pages hereto, (b) each other Subsidiary that joins as a Non-U.S. Guarantor pursuant to Section 6.14 or otherwise, (c) with respect to Additional Secured Obligations owing by the Company or any Non-U.S. Subsidiary under the Guaranty, each Non-U.S. Borrower, (d) with respect to Additional Secured Obligations owing by any U.S. Subsidiary under the Guaranty, each Non-U.S. Borrower that is not a Specified Non-U.S. Borrower and (e) the successors and permitted assigns of each of the foregoing to the extent that any such successor or permitted assign is a Non-U.S. Subsidiary or Specified Subsidiary, and, in the case of clause (d), not a CFC or CFC Holdco.

"Non-U.S. Lender" means, with respect to any Borrower, (a) if such Borrower is a U.S. Person, a Lender that is not a U.S. Person, and (b) if such Borrower is not a U.S. Person, a Lender that is resident or organized under the laws of a jurisdiction other than that in which such Borrower is resident for tax purposes. For purposes of this definition, the United States, each state thereof and the District of Columbia shall be deemed to constitute a single jurisdiction.

"Non-U.S. Obligations" means (a) all advances to, and debts, liabilities, obligations, covenants and duties of, any Non-U.S. Obligor arising under any Loan Document or otherwise with respect to any Loan or Letter of Credit, (b) all debts, liabilities, obligations, covenants and duties of any Non-U.S. Obligor or any Non-U.S. Subsidiary arising under any Secured Swap Contract, (c) all Bankers' Acceptance Obligations

and (d) all debts, liabilities, obligations, covenants and duties of any Non-U.S. Obligor or any Non-U.S. Subsidiary arising under any Secured Cash Management Agreement, in the case of each of clauses (a), (b), (c) and (d), whether direct or indirect (including those acquired by assumption), absolute or contingent, due or to become due, now existing or hereafter arising and including all costs and expenses incurred in connection with the enforcement and collection of the foregoing and interest and fees that accrue after the commencement by or against any Non-U.S. Obligor or any Affiliate thereof of any proceeding under any Debtor Relief Laws naming such Person as the debtor in such proceeding, regardless of whether such interest and fees are allowed claims in such proceeding; provided, however, that the "Non-U.S. Obligations" of a Non-U.S. Obligor shall exclude any Excluded Swap Obligations with respect to such Non-U.S. Obligor.

"Non-U.S. Obligor" means any Loan Party that is organized under the laws of a jurisdiction other than the United States, a state thereof or the District of Columbia.

"Non-U.S. Subsidiary" means any Subsidiary that is organized under the laws of a jurisdiction other than the United States, a state thereof or the District of Columbia.

"Note" has the meaning specified in Section 2.12.

"Notice of Loan Prepayment" means a notice of prepayment with respect to a Loan, which shall be substantially in the form of Exhibit C or such other form as may be approved by the Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approved by the Administrative Agent), appropriately completed and signed by a Responsible Officer of the applicable Borrower.

"Obligations" means (a) all advances to, and debts, liabilities, obligations, covenants and duties of, any Loan Party arising under any Loan Document or otherwise with respect to any Loan or Letter of Credit, (b) all debts, liabilities, obligations, covenants and duties of any Loan Party or any Subsidiary arising under any Secured Swap Contract, (c) all Bankers' Acceptance Obligations and (d) all debts, liabilities, obligations, covenants and duties of any Loan Party or any Subsidiary arising under any Secured Cash Management Agreement, in the case of each of clauses (a), (b), (c) and (d), whether direct or indirect (including those acquired by assumption), absolute or contingent, due or to become due, now existing or hereafter arising and including all costs and expenses incurred in connection with the enforcement and collection of the foregoing and interest and fees that accrue after the commencement by or against any Loan Party or any Affiliate thereof of any proceeding under any Debtor Relief Laws naming such Person as the debtor in such proceeding, regardless of whether such interest and fees are allowed claims in such proceeding; provided, however, that the "Obligations" of a Loan Party shall exclude any Excluded Swap Obligations with respect to such Loan Party.

"OFAC" means the Office of Foreign Assets Control of the United States Department of the Treasury.

"Onex" means Onex Corporation.

"Organization Documents" means, (a) with respect to any corporation or, to the extent organized under the laws of a foreign jurisdiction, any company, the certificate or articles of incorporation and the bylaws (or equivalent or comparable constitutive documents with respect to any non-U.S. jurisdiction); (b) with respect to any limited liability company, the certificate or articles of formation or organization and operating agreement or limited liability company agreement; and (c) with respect to any partnership, joint venture, trust or other form of business entity, the partnership, joint venture or other applicable agreement of formation or organization and any agreement, instrument, filing or notice with respect thereto filed in connection with its formation or organization with the applicable Governmental Authority in the jurisdiction

of its formation or organization and, if applicable, any certificate or articles of formation or organization of such entity.

"Other Connection Taxes" means, with respect to any Recipient, Taxes imposed as a result of a present or former connection between such Recipient and the jurisdiction imposing such Tax (other than connections arising from such Recipient having executed, delivered, become a party to, performed its obligations under, received payments under, received or perfected a security interest under, engaged in any other transaction pursuant to or enforced any Loan Document, or sold or assigned an interest in any Loan or Loan Document).

"Other Taxes" means all present or future stamp, court or documentary, intangible, recording, filing or similar Taxes that arise from any payment made under, from the execution, delivery, performance, enforcement or registration of, from the receipt or perfection of a security interest under, or otherwise with respect to, any Loan Document, except any such Taxes that are Other Connection Taxes imposed with respect to an assignment (other than an assignment made pursuant to Section 3.06).

"Outstanding Amount" means (i) with respect to Loans on any date, the Dollar Equivalent of the aggregate outstanding principal amount thereof after giving effect to any borrowings and prepayments or repayments thereof occurring on such date; and (ii) with respect to any L/C Obligations on any date, the Dollar Equivalent of the aggregate outstanding amount of such L/C Obligations on such date after giving effect to any L/C Credit Extension occurring on such date and any other changes in the aggregate amount of the L/C Obligations as of such date, including as a result of any reimbursements of Unreimbursed Amounts or any reductions in the maximum amount available for drawing under Letters of Credit taking effect on such date.

"Overnight Rate" means, for any day, (a) with respect to any amount denominated in Dollars, the greater of (i) the Federal Funds Rate and (ii) an overnight rate determined by the Administrative Agent, the applicable L/C Issuer, or the Swing Line Lender, as the case may be, in accordance with banking industry rules on interbank compensation, and (b) with respect to any amount denominated in an Alternative Currency, the rate of interest per annum at which overnight deposits in the applicable Alternative Currency, in an amount approximately equal to the amount with respect to which such rate is being determined, would be offered for such day by a branch or Affiliate of Bank of America in the applicable interbank market for such currency to major banks in such interbank market.

"Pari Passu Indebtedness" means Indebtedness of the Company or any Loan Party that by its terms is secured on a *pari passu* basis to the Obligations in a manner and to an extent reasonably acceptable to the Administrative Agent (including, without limitation, the entry into intercreditor and/or subordination agreements generally acceptable to the Administrative Agent).

"Participant" has the meaning specified in Section 10.06(d).

"Participating Member State" means any member state of the European Union that adopts or has adopted the Euro, and in each case continues to adopt, as its lawful currency in accordance with legislation of the European Union relating to Economic and Monetary Union.

"Participant Register" has the meaning specified in Section 10.06(d).

"PATRIOT Act" has the meaning specified in Section 10.19.

"PBGC" means the Pension Benefit Guaranty Corporation.

"Pension Act" means the Pension Protection Act of 2006.

"Pension Funding Rules" means the rules of the Code and ERISA regarding minimum required contributions (including any installment payment thereof) to Pension Plans and set forth in, with respect to plan years ending prior to the effective date of the Pension Act, Section 412 of the Code and Section 302 of ERISA, each as in effect prior to the Pension Act and, thereafter, Section 412, 430, 431, 432 and 436 of the Code and Sections 302, 303, 304 and 305 of ERISA.

"Pension Plan" means any employee pension benefit plan (including a Multiple Employer Plan or a Multiemployer Plan) that is maintained or is contributed to by the Company and any ERISA Affiliate and is either covered by Title IV of ERISA or is subject to the minimum funding standards under Section 412 of the Code.

"Permitted Acquisition" means an Acquisition by the Company or any Restricted Subsidiary, provided that (a) no Default or Event of Default has occurred and is continuing or would result from such Acquisition, (b) the property acquired (or the property of the Person acquired) in such Acquisition is used or useful in the same or a similar line of business as the Company and its Subsidiaries were engaged in on the Closing Date (or any reasonable extensions or expansions thereof), (c) in the case of an Acquisition of the Equity Interests of another Person, the board of directors (or other comparable governing body) of such other Person shall have duly approved such Acquisition, (d) subject to the terms of Section 1.10, the representations and warranties made by the Loan Parties contained in Article V or any other Loan Document, or which are contained in any document furnished at any time under or in connection herewith or therewith, shall be true and correct in all material respects (or, if qualified by materiality or reference to Material Adverse Effect, in all respects) on and as of the date of such Acquisition (after giving effect thereto), except to the extent that such representations and warranties specifically refer to an earlier date, in which case they shall be true and correct in all material respects (or, if qualified by materiality or reference to Material Adverse Effect, in all respects) as of such earlier date, (e) on and as of the date of such Acquisition (after giving effect thereto), no Loan Party or any Subsidiary has any liability or contingent liability in respect of a Canadian Defined Benefit Pension Plan in excess of the Threshold Amount or which would reasonably be expected to result in liability of any Loan Party in an aggregate amount in excess of the Threshold Amount, and (f) with respect to any such Acquisition the aggregate consideration for which exceeds $150,000,000, the Company shall have delivered to the Administrative Agent a Pro Forma Compliance Certificate demonstrating that, after giving effect to such Acquisition on a Pro Forma Basis, the Loan Parties would be in Pro Forma Compliance.

"Permitted Amendments" has the meaning specified in Section 10.01(c).

"Permitted Investment" means an Investment permitted under Section 7.02.

"Permitted Liens" means, at any time, Liens in respect of property of the Company or any Restricted Subsidiary permitted to exist at such time pursuant to the terms of Section 7.01.

"Permitted Receivables Transaction" has the meaning set forth in Section 7.05(x).

"Permitted Securitization Transaction" means any Securitization Transaction permitted under clause (i) of Section 7.03(j).

"Person" means any natural person, corporation, limited liability company, trust, joint venture, association, company, partnership, Governmental Authority or other entity.

"Plan" means any employee benefit plan within the meaning of Section 3(3) of ERISA (including a Pension Plan), maintained for employees of the Company or, with respect to any such plan that is subject to Section 412 of the Code or Title IV of ERISA, any ERISA Affiliate or any such Plan to which the Company or, with respect to any such plan that is subject to Section 412 of the Code or Title IV of ERISA, any ERISA Affiliate is required to contribute on behalf of any of its employees and which is subject to ERISA.

"Plan of Reorganization" has the meaning specified in Section 10.06(h)(iii).

"Platform" has the meaning specified in Section 6.02.

"Post-Closing Compliance Date" has the meaning specified in Section 6.19(a).

"PPSA" means the Personal Property Security Act (Ontario); provided that, if perfection or the effect of perfection or non-perfection or the priority of any security interest in any Collateral is governed by the Personal Property Security Act as in effect in a Canadian jurisdiction other than the Province of Ontario, or the Civil Code of Quebec, "PPSA" means the Personal Property Security Act as in effect from time to time in such other jurisdiction or the Civil Code of Quebec, as applicable, for purposes of the provisions hereof relating to such perfection, effect of perfection or non-perfection or priority.

"Pro Forma Basis" and "Pro Forma Effect" means, in respect of a Specified Transaction, that such Specified Transaction and the following transactions in connection therewith (to the extent applicable) shall be deemed to have occurred as of the first day of the applicable four (4) fiscal quarter period for the applicable covenant or requirement: (a) (i) with respect to any Disposition, income statement and cash flow statement items (whether positive or negative) attributable to the Person or property disposed of shall be excluded, (ii) with respect to any Investment, income statement and cash flow statement items (whether positive or negative) attributable to the Person or property acquired shall be included to the extent relating to any period applicable in such calculations to the extent (A) such items are not otherwise included in such income statement items for the Company and its Restricted Subsidiaries in accordance with IFRS or in accordance with any defined terms set forth in Section 1.01, and (B) such items are supported by financial statements or other information reasonably satisfactory to the Administrative Agent, and (iii) with respect to any Acquisition by the Company or a Restricted Subsidiary of (A) a corporation which becomes a new Restricted Subsidiary or (B) any other entity or a group of assets or an operation, provided that such operation comprises a going concern which becomes a division or part of the business of the Company or a Restricted Subsidiary (each, an "operation"), Consolidated EBITDA will include the Target EBITDA of the newly acquired Restricted Subsidiary or operation for its immediately preceding four (4) fiscal quarters completed prior to such acquisition as determined using the following method: (x) if such newly acquired Restricted Subsidiary or operation was, immediately prior to such acquisition, accounted for on a stand-alone basis, each of the components of Consolidated EBITDA applied *mutatis mutandis* as if such definition and its component definitions referred to such newly acquired Restricted Subsidiary or operation ("Target EBITDA") shall only be included in the calculation of Consolidated EBITDA for such newly acquired Restricted Subsidiary or operation, as the case may be, if Target EBITDA can be determined by reference to historical financial statements reasonably satisfactory to the Administrative Agent and (y) if such newly acquired Restricted Subsidiary or operation: (A) was not, immediately prior to such acquisition, accounted for on a stand-alone basis; or (B) was immediately prior to such acquisition, accounted for on a stand-alone basis but, in the determination of the Administrative Agent acting reasonably, the business of such newly acquired Restricted Subsidiary or operation will not be conducted by the Company or its Restricted Subsidiary, as the case may be, in substantially the same form or the same manner as conducted by the seller immediately prior to such acquisition, then subject to the satisfaction of the Administrative Agent and the Required Lenders with the method of determination thereof acting reasonably, Target EBITDA for such newly acquired Restricted

Subsidiary or operation will be determined having regard to historical financial results together with, and having regard to, contractual arrangements and any other changes made or proposed to be made by the Company or its Restricted Subsidiary, as the case may be, to the business of such newly acquired Restricted Subsidiary or operation; (b) any retirement or prepayment of Indebtedness; (c) any incurrence or assumption of Indebtedness by the Company or any of its Restricted Subsidiaries (and if such Indebtedness has a floating or formula rate, such Indebtedness shall have an implied rate of interest for the applicable period for purposes of this definition determined by utilizing the rate which is or would be in effect with respect to such Indebtedness as at the relevant date of determination); and (d) with respect to the designation of any Unrestricted Subsidiary as an Restricted Subsidiary, (i) income statement and cash flow statement items (whether positive or negative) attributable to such Subsidiary shall be included to the extent relating to any period prior to the date of such designation to the extent such items are not otherwise included in such income statement and cash flow statement items for the Company and its Restricted Subsidiaries in accordance with any defined terms set forth in Section 1.01 and (ii) Indebtedness of such Subsidiary shall be included and deemed to have been incurred as of the first day of the applicable period.

"Pro Forma Compliance" means, with respect to any transaction, that after giving effect to such transaction on a Pro Forma Basis, the Loan Parties would be in compliance with the financial covenants set forth in Section 7.11 recomputed as of the end of such period.

"Pro Forma Compliance Certificate" means a certificate of a Responsible Officer of the Company containing reasonably detailed calculations of the financial covenants set forth in Section 7.11 recomputed as of the end of the applicable period after giving effect to the applicable transaction on a Pro Forma Basis.

"PTE" means a prohibited transaction class exemption issued by the U.S. Department of Labor, as any such exemption may be amended from time to time.

"Public Lender" has the meaning specified in Section 6.02.

"Qualified Acquisition" means a Permitted Acquisition with aggregate consideration of at least $150,000,000, or any series of related Permitted Acquisitions in any twelve (12) month period with aggregate consideration for all such Permitted Acquisitions of at least $150,000,000; provided that for any such Permitted Acquisition or series of related Permitted Acquisitions, a Responsible Officer of the Company shall have delivered to the Administrative Agent, prior to the consummation of such Permitted Acquisition or the last in such series of related Permitted Acquisitions, as applicable, a certificate (any such certificate, a "Qualified Acquisition Notice") (i) certifying that such Permitted Acquisition or series of Permitted Acquisitions qualifies as a Qualified Acquisition and (ii) notifying the Administrative Agent that the Company has elected to treat such Permitted Acquisition or series of related Acquisitions as a Qualified Acquisition.

"Qualified Acquisition Notice" has the meaning specified in the definition of "Qualified Acquisition".

"Qualified Acquisition Pro Forma Determination" means, to the extent required in connection with determining the permissibility of any Permitted Acquisition or series of related Permitted Acquisitions that the Loan Parties elect to treat as a Qualified Acquisition, the determination of whether the Loan Parties are in Pro Forma Compliance.

"Qualified ECP Guarantor" means, at any time, each Loan Party with total assets exceeding $10,000,000 or that qualifies at such time as an "eligible contract participant" under the Commodity Exchange

Act and can cause another Person to qualify as an "eligible contract participant" at such time under Section 1a(18)(A)(v)(II) of the Commodity Exchange Act.

"Recipient" means the Administrative Agent, any Lender, any L/C Issuer or any other recipient of any payment to be made by or on account of any obligation of any Loan Party hereunder.

"Recovery Event" means any casualty loss of, damage to or destruction of, or any condemnation or other taking for public use of, any property of the Company or other Loan Party.

"Register" has the meaning specified in Section 10.06(c).

"Related Indemnified Parties" means, with respect to any Indemnitee, (a) any Affiliate of such Person, (b) the respective directors, officers or employees of such Person or any of its Affiliates and (c) the respective agents of such Person or any of its Affiliates, in the case of this clause (c), acting on behalf of, or at the express instructions of, such Person or Affiliate; provided that each such reference to an Affiliate, director, officer or employee shall refer to an Affiliate, director, officer or employee involved in the execution or delivery of this Agreement or any other Loan Document, the performance by the parties hereto of their respective obligations hereunder or thereunder, the consummation of the transactions contemplated hereby or thereby, or, in the case of the Administrative Agent (and any sub-agent thereof) and its Related Parties only, the administration of this Agreement and the other Loan Documents

"Related Parties" means, with respect to any Person, such Person's Affiliates and the partners, directors, officers, employees, agents, trustees, administrators, managers, advisors and representatives of such Person and of such Person's Affiliates.

"Removal Effective Date" has the meaning specified in Section 9.06(b).

"Reportable Event" means any of the events set forth in Section 4043(c) of ERISA, other than events for which the 30-day notice period has been waived.

"Repricing Event" means (a) any optional or mandatory prepayment of the Term B Loan, in whole or in part, with the proceeds of, or conversion of any portion of the Term B Loan into, any new or replacement tranche of Indebtedness bearing interest with an All-In-Yield less than the All-In-Yield of such portion of the Term B Loan (as such All-In-Yields are reasonably determined by the Administrative Agent consistent with generally accepted financial practices) and (b) any amendment to any portion of this Agreement with respect to the Term B Loan which, directly or indirectly, reduces the All-In-Yield applicable to the Term B Loan (except with respect to any Lender that consents to such amendment), in each case of clauses (a) and (b), solely to the extent the primary purpose of such replacement or amendment, as determined by the Administrative Agent, is to reduce the All-In-Yield on the Term B Loan. Notwithstanding the foregoing, "Repricing Event" shall exclude, in any such case, (x) any refinancing or repricing of the Term B Loan or amendment to this Agreement in connection with any Change of Control transaction and (y) any "transformational" acquisition by the Company or any Restricted Subsidiary.

"Request for Credit Extension" means (a) with respect to a Borrowing, conversion or continuation of Loans, a Loan Notice, (b) with respect to an L/C Credit Extension, a Letter of Credit Application, and (c) with respect to a Swing Line Loan, a Swing Line Loan Notice.

"Required Lenders" means, at any time, Lenders having Total Credit Exposures representing more than fifty percent (50%) of the Total Credit Exposures of all Lenders. The Total Credit Exposure of any Defaulting Lender shall be disregarded in determining Required Lenders at any time; provided that, the

amount of any participation in any Swing Line Loan and Unreimbursed Amounts that such Defaulting Lender has failed to fund that have not been reallocated to and funded by another Lender shall be deemed to be held by the Lender that is the Swing Line Lender or an L/C Issuer, as the case may be, in making such determination.

"Required Pro Rata Facilities Lenders" means, at any time, Lenders holding in the aggregate more than fifty percent (50%) of sum of (a) the aggregate Revolving Credit Exposures of all the Lenders at such time, plus (b) the unfunded Incremental Tranche A Facility Commitments at such time, plus (c) the outstanding Incremental Tranche A Term Loans. The Revolving Credit Exposure, Incremental Tranche A Facility Commitments and Incremental Tranche A Term Loans of any Defaulting Lender shall be disregarded in determining Required Pro Rata Facilities Lenders at any time; provided that the amount of any participation in any Swing Line Loan and Unreimbursed Amounts that such Defaulting Lender has failed to fund that have not been reallocated to and funded by another Lender shall be deemed to be held by the Lender that is the Swing Line Lender or applicable L/C Issuer, as the case may be, in making such determination.

"Required Revolving Lenders" means, at any time, Lenders having Revolving Credit Exposures representing more than fifty percent (50%) of the Revolving Credit Exposures of all Lenders having Revolving Credit Exposures. The Revolving Credit Exposure of any Defaulting Lender shall be disregarded in determining Required Revolving Lenders at any time; provided that the amount of any participation in any Swing Line Loan and Unreimbursed Amounts that such Defaulting Lender has failed to fund that have not been reallocated to and funded by another Lender shall be deemed to be held by the Lender that is the Swing Line Lender or applicable L/C Issuer, as the case may be, in making such determination.

"Resignation Effective Date" has the meaning specified in Section 9.06(a).

"Responsible Officer" means the chief executive officer, president, chief financial officer, treasurer, assistant treasurer or controller (or, in foreign jurisdictions, substantially equivalent representatives, including a director or manager) of a Loan Party, and solely for purposes of the delivery of incumbency certificates pursuant to Section 4.01, the secretary or any assistant secretary (or, in foreign jurisdictions, substantially equivalent representatives, including a director or manager) of a Loan Party and, solely for purposes of notices given pursuant to Article II, any other officer or employee or equivalent representative of the applicable Loan Party so designated by any of the foregoing officers, directors or managers in a notice to the Administrative Agent or any other officer or employee of the applicable Loan Party designated in or pursuant to an agreement between the applicable Loan Party and the Administrative Agent. Any document delivered hereunder that is signed by a Responsible Officer of a Loan Party shall be conclusively presumed to have been authorized by all necessary corporate, partnership and/or other action on the part of such Loan Party and such Responsible Officer shall be conclusively presumed to have acted on behalf of such Loan Party. To the extent requested by the Administrative Agent, each Responsible Officer will provide an incumbency certificate and appropriate authorization documentation, in form and substance reasonably satisfactory to the Administrative Agent.

"Restricted Payment" means any dividend or other distribution (whether in cash, securities or other property) with respect to any capital stock or other Equity Interest of the Company or any Subsidiary, or any payment (whether in cash, securities or other property), including any sinking fund or similar deposit, on account of the purchase, redemption, retirement, acquisition, cancellation or termination of any such capital stock or other Equity Interest, or on account of any return of capital to the Company's stockholders, partners or members (or the equivalent Person thereof), including any normal-course issuer bids by the Company.

"Restricted Subsidiary" means any Subsidiary other than an Unrestricted Subsidiary.

"Revaluation Date" means (a) with respect to any Revolving Loan, each of the following: (i) each date of a Borrowing of a Eurocurrency Rate Loan denominated in an Alternative Currency, a Canadian Prime Rate Loan, a Bankers' Acceptance or a B/A Equivalent Loan, (ii) each date of a continuation of a Eurocurrency Rate Loan, a Canadian Prime Rate Loan, a Bankers' Acceptance or a B/A Equivalent Loan denominated in an Alternative Currency pursuant to Section 2.02, and (iii) such additional dates as the Administrative Agent shall determine or the Required Revolving Lenders shall require; and (b) with respect to any Letter of Credit, each of the following: (i) each date of issuance of a Letter of Credit denominated in an Alternative Currency, (ii) each date of an amendment of any such Letter of Credit having the effect of increasing the amount thereof, (iii) each date of any payment by the applicable L/C Issuer under any Letter of Credit denominated in an Alternative Currency, (iv) in the case of all Existing Letters of Credit denominated in Alternative Currencies, the Closing Date, and (v) such additional dates as the Administrative Agent or the applicable L/C Issuer shall determine or the Required Revolving Lenders shall require.

"Revolving Commitment" means, as to each Lender, its obligation to (a) make Revolving Loans (including, for greater certainty, Bankers' Acceptances and B/A Equivalent Loans) to the Borrowers pursuant to Section 2.01(a), (b) purchase participations in L/C Obligations, and (c) purchase participations in Swing Line Loans, in an aggregate principal amount at any one time outstanding not to exceed the applicable Dollar amount set forth opposite such Lender's name on Schedule 2.01 or in the Assignment and Assumption or other documentation pursuant to which such Lender becomes a party hereto or in any documentation executed by such Lender in connection with an Incremental Facility, as applicable, as such amount may be adjusted from time to time in accordance with this Agreement. Revolving Commitments shall include any Incremental Revolving Increase.

"Revolving Credit Exposure" means, as to any Lender at any time, the aggregate Outstanding Amount at such time of its Revolving Loans (including, for greater certainty, Bankers' Acceptances and B/A Equivalent Loans) and the aggregate Outstanding Amount of such Lender's participation in L/C Obligations and Swing Line Loans at such time.

"Revolving Facility" means the revolving facility established pursuant to Section 2.01(a).

"Revolving Lender" means, at any time, a Lender that has a Revolving Commitment, outstanding Revolving Loans (including, for greater certainty, Bankers' Acceptances and B/A Equivalent Loans) or participation interests in outstanding L/C Obligations and Swing Line Loans at such time.

"Revolving Loan" has the meaning specified in Section 2.01(a).

"S&P" means Standard & Poor's Financial Services LLC, a subsidiary of The McGraw-Hill Companies, Inc. and any successor thereto.

"Sale and Leaseback Transaction" means, with respect to the Company or any Restricted Subsidiary, any arrangement, directly or indirectly, with any Person whereby the Company or such Restricted Subsidiary shall sell or transfer any property used or useful in its business, whether now owned or hereafter acquired, and thereafter rent or lease such property or other property that it intends to use for substantially the same purpose or purposes as the property being sold or transferred.

"Same Day Funds" means (a) with respect to disbursements and payments in Dollars, immediately available funds, and (b) with respect to disbursements and payments in an Alternative Currency, same day or other funds as may be determined by the Administrative Agent or the applicable L/C Issuer, as the case may be, to be customary in the place of disbursement or payment for the settlement of international banking transactions in the relevant Alternative Currency.

"Sanction(s)" means any sanction administered or enforced by the United States Government (including without limitation, OFAC), the Canadian Government, the United Nations Security Council, the European Union, Her Majesty's Treasury ("HMT") or other relevant sanctions authority.

"SEC" means the Securities and Exchange Commission, or any Governmental Authority succeeding to any of its principal functions.

"Secured Cash Management Agreement" means any Cash Management Agreement between any Loan Party or any Subsidiary and any Cash Management Bank. For the avoidance of doubt, a holder of Obligations in respect of Secured Cash Management Agreements shall be subject to the provisions of the last paragraph of Section 8.03 and the provisions of Section 9.11.

"Secured Parties" means, collectively, the Administrative Agent, the Lenders (including Designated Lenders), the L/C Issuers, the Indemnitees and each co-agent or sub-agent appointed by the Administrative Agent from time to time pursuant to Section 9.05.

"Secured Party Designation Notice" means a notice from any Lender or an Affiliate of a Lender substantially in the form of Exhibit K.

"Secured Swap Contract" means any Swap Contract between any Loan Party or any Subsidiary and any Hedge Bank. For the avoidance of doubt, a holder of Obligations in respect of a Secured Swap Contract shall be subject to the provisions of the last paragraph of Section 8.03 and the provisions of Section 9.11.

"Securitization Transaction" means any transaction providing for the sale, securitization or other asset-backed financing of Securitized Assets of or owing to the Company or any Restricted Subsidiary (and/or contractual rights relating thereto). The terms and conditions of all Securitization Transactions shall be on an arm's length basis and on commercially reasonable and customary terms (except any interim transfer or sale to an Unrestricted Subsidiary made in the course of a Securitization Transaction which results in a sale, securitization or other asset-backed financing by such Unrestricted Subsidiary on an arm's length basis and on commercially reasonable and customary terms). Except to the extent mandated under any then-existing Securitization Transaction, no new assets may become Securitized Assets during the occurrence and continuance of a Default.

"Securitized Assets" means (a) with respect to the DB Receivables Purchase Agreement, the assets subject to sale under such agreement and (b) with respect to any Securitization Transaction, the assets securitized under such transaction and contributed or transferred to a Special Purpose Subsidiary pursuant thereto, including:

(i) any Securitized Receivable;

(ii) the interest of the Company or any Restricted Subsidiary in any goods (including returned goods), and documentation of title evidencing the shipment or storage of any goods (including returned goods) relating to any sale by the Company or any Restricted Subsidiary giving rise to such Securitized Receivable;

(iii) all guarantees, indemnities, letters of credit, insurance and other agreements (including any and all contracts, understandings, instruments, agreements, leases, invoices, notes or other writings pursuant to which such Securitized Receivable arises or which evidences such Securitized Receivable or under which the applicable customer becomes or is obligated to make payment to the Company or any Restricted Subsidiary in respect of

such Securitized Receivable) or arrangements of whatever character from time to time supporting or securing payment of such Securitized Receivable;

(iv) all collections and other proceeds received and payment or application by the Company or a Restricted Subsidiary of any amounts owed in respect of Securitized Receivables, including, without limitation, purchase price, finance charges, interests, and other similar charges which are net proceeds of the sale or other disposition of repossessed goods or other collateral or property available to be applied thereon; and

(v) all proceeds of, and all amounts received or receivable under, any or all of the foregoing clauses (i) through (iv).

"Securitized Receivable" means an account receivable arising from a sale of goods by the Company or a Restricted Subsidiary which is the subject of (a) a Securitization Transaction or (b) the DB Receivables Purchase Agreement.

"Security Agreements" means, collectively, (a) the U.S. Security Agreements, (b) the Canadian Security Agreement and (c) any other pledge and/or security agreement dated on or after the Closing Date executed in favor of the Administrative Agent, for the benefit of the Secured Parties, by any Non-U.S. Obligor.

"Solvent" and "Solvency" mean, with respect to any Person on any date of determination, that on such date (a) the fair value of the property of such Person is greater than the total amount of liabilities, including contingent liabilities, of such Person, which for this purpose shall include rights of contribution in respect of obligations for which such Person has provided a Guarantee, (b) the present fair saleable value of the assets of such Person is not less than the amount that will be required to pay the probable liability of such Person on its debts as they become absolute and matured, which for this purpose shall include rights of contribution in respect of obligations for which such Person has provided a Guarantee, (c) such Person does not intend to, and does not believe that it will, incur debts or liabilities beyond such Person's ability to pay such debts and liabilities as they mature, (d) such Person is not engaged in business or a transaction, and is not about to engage in business or a transaction, for which such Person's property would constitute an unreasonably small capital, and (e) such Person is able to pay its debts and liabilities, contingent obligations and other commitments as they mature in the ordinary course of business. The amount of contingent liabilities at any time shall be computed as the amount that, in the light of all the facts and circumstances existing at such time, represents the amount that can reasonably be expected to become an actual or matured liability.

"Special Notice Currency" means at any time an Alternative Currency, other than the currency of a country that is a member of the Organization for Economic Cooperation and Development at such time located in North America or Europe.

"Special Purpose Subsidiary" means, with respect to any Permitted Securitization Transaction, the special purpose Subsidiary or Affiliate for such Permitted Securitization Transaction.

"Specified Loan Party" has the meaning specified in Section 11.08(a).

"Specified Local Facility" means any overdraft, working capital, letter of credit or other facility or extension of credit provided by Bank of America or any of its Affiliates to any Non-U.S. Subsidiary.

"Specified Non-U.S. Borrower" means any Non-U.S. Borrower that is a Specified Subsidiary.

"Specified Non-U.S. Loan Party" has the meaning specified in Section 11.08(b).

"Specified Non-U.S. Obligor" means any Non-U.S. Obligor that is a Specified Subsidiary.

"Specified Representations" means the representations and warranties made in Sections 5.01(a) (solely as to the valid existence of the Loan Parties) and (b)(ii) (as it relates to a Loan Party), Section 5.02(a), Section 5.02(b)(i) and (b)(iii) (in each case, as it pertains to the execution, delivery and performance of the Loan Documents, and the granting of guarantees and security interests in respect thereof), Section 5.04, Section 5.14(a) (as it pertains to the use of proceeds of any Credit Extension hereunder), Section 5.14(b), Section 5.19 (after giving effect to the transactions contemplated hereunder to be consummated on the Closing Date, including the initial Credit Extensions hereunder), Section 5.22, Section 5.23 and Section 5.24.

"Specified Subsidiary" means any Subsidiary that is a CFC or a CFC Holdco.

"Specified Transaction" means any Acquisition, any Disposition, any Investment, any incurrence of Indebtedness or any other event that by the terms of the Loan Documents requires compliance on a Pro Forma Basis with a test or covenant, calculation as to Pro Forma Effect with respect to a financial definition, test or covenant or requires such financial definition, test or covenant to be calculated on a Pro Forma Basis.

"Specified U.S. Obligor" means any U.S. Obligor that is a Specified Subsidiary.

"Specified U.S. Security Agreement" means the Specified U.S. Security and Pledge Agreement, dated as of the Closing Date, executed in favor of the Administrative Agent, for the benefit of the Secured Parties, by the Loan Parties that are Specified U.S. Obligors.

"Spot Rate" for a currency means the rate determined by the Administrative Agent or an L/C Issuer, as applicable, to be the rate quoted by the Person acting in such capacity as the spot rate for the purchase by such Person of such currency with another currency through its principal foreign exchange trading office at approximately 11:00 a.m. on the date two (2) Business Days prior to the date as of which the foreign exchange computation is made; provided that the Administrative Agent or such L/C Issuer may obtain such spot rate from another financial institution designated by the Administrative Agent or such L/C Issuer if the Person acting in such capacity does not have as of the date of determination a spot buying rate for any such currency; and provided further that an L/C Issuer may use such spot rate quoted on the date as of which the foreign exchange computation is made in the case of any Letter of Credit denominated in an Alternative Currency.

"Sterling" and "£" mean the lawful currency of the United Kingdom.

"Subordinated Indebtedness" means Indebtedness of the Company or any Restricted Subsidiary that by its terms is subordinated to the Obligations in a manner and to an extent reasonably acceptable to the Administrative Agent (including, without limitation, the entry into intercreditor and/or subordination agreements generally acceptable to the Administrative Agent).

"Subsidiary" of a Person means a corporation, partnership, joint venture, limited liability company or other business entity of which a majority of the shares of securities or other interests having ordinary voting power for the election of directors or other governing body (other than securities or interests having such power only by reason of the happening of a contingency) are at the time beneficially owned, or the management of which is otherwise controlled, directly, or indirectly through one or more intermediaries, or both, by such Person. Unless otherwise specified, all references herein to a "Subsidiary" or to "Subsidiaries" shall refer to a Subsidiary or Subsidiaries of the Company.

"Swap Contract" means (a) any and all rate swap transactions, basis swaps, credit derivative transactions, forward rate transactions, commodity swaps, commodity options, forward commodity contracts,

equity or equity index swaps or options, bond or bond price or bond index swaps or options or forward bond or forward bond price or forward bond index transactions, interest rate options, forward foreign exchange transactions, cap transactions, floor transactions, collar transactions, currency swap transactions, cross-currency rate swap transactions, currency options, spot contracts, or any other similar transactions or any combination of any of the foregoing (including any options to enter into any of the foregoing), whether or not any such transaction is governed by or subject to any master agreement, and (b) any and all transactions of any kind, and the related confirmations, which are subject to the terms and conditions of, or governed by, any form of master agreement published by the International Swaps and Derivatives Association, Inc., any International Foreign Exchange Master Agreement, or any other master agreement (any such master agreement, together with any related schedules, a "Master Agreement"), including any such obligations or liabilities under any Master Agreement.

"Swap Obligation" means with respect to any Loan Party any obligation to pay or perform under any agreement, contract or transaction that constitutes a "swap" within the meaning of Section 1a(47) of the Commodity Exchange Act.

"Swap Termination Value" means, in respect of any one or more Swap Contracts, after taking into account the effect of any legally enforceable netting agreement relating to such Swap Contracts, (a) for any date on or after the date such Swap Contracts have been closed out and termination value(s) determined in accordance therewith, such termination value(s), and (b) for any date prior to the date referenced in clause (a), the amount(s) determined as the mark-to-market value(s) for such Swap Contracts, as determined based upon one or more mid-market or other readily available quotations provided by any recognized dealer in such Swap Contracts (which may include a Lender or any Affiliate of a Lender).

"SWIFT" has the meaning specified in Section 2.03(f).

"Swing Line Borrowing" means a borrowing of a Swing Line Loan pursuant to Section 2.05.

"Swing Line Lender" means Bank of America in its capacity as provider of Swing Line Loans, or any successor swing line lender hereunder.

"Swing Line Loan" has the meaning specified in Section 2.05(a).

"Swing Line Loan Notice" means a notice of a Swing Line Borrowing pursuant to Section 2.05(b), which shall be substantially in the form of Exhibit B or such other form as approved by the Administrative Agent (including any form on an electronic platform or electronic transmission system as shall be approve by the Administrative Agent), appropriately completed and signed by a Responsible Officer of the Company.

"Swing Line Sublimit" means an amount equal to the lesser of (a) $50,000,000 and (b) the Aggregate Revolving Commitments. The Swing Line Sublimit is part of, and not in addition to, the Aggregate Revolving Commitments.

"Synthetic Lease Obligation" means the monetary obligation of a Person under (a) a so-called synthetic, off-balance sheet or tax retention lease, or (b) an agreement for the use or possession of property creating obligations that do not appear on the balance sheet of such Person but which, upon the insolvency or bankruptcy of such Person, would be characterized as the indebtedness of such Person (without regard to accounting treatment).

"TARGET Day" means any day on which TARGET2 (or, if such payment system ceases to be operative, such other payment system, if any, determined by the Administrative Agent to be a suitable replacement) is open for the settlement of payments in Euro.

"TARGET2" means the Trans-European Automated Real-time Gross Settlement Express Transfer payment system which utilizes a single shared platform and which was launched on November 19, 2007.

"Taxes" means all present or future taxes, levies, imposts, duties, deductions, withholdings (including backup withholding), assessments, fees or other charges imposed by any Governmental Authority, including any interest, additions to tax or penalties applicable thereto.

"Term B Loan" has the meaning specified in Section 2.01.

"Term B Loan Commitment" means, as to each Lender, its obligation to make its portion of the Term B Loan to the Company on the Closing Date pursuant to Section 2.01(b), in the principal amount set forth opposite such Lender's name on Schedule 2.01. The aggregate principal amount of the Term B Loan Commitments of all of the Lenders as in effect on the Closing Date is THREE HUNDRED FIFTY MILLION DOLLARS ($350,000,000).

"Term Facility" means the Term B Loan and any Incremental Term Facilities.

"Term Loans" means the Term B Loan and any Incremental Term Loans.

"Threshold Amount" means $50,000,000.

"Toronto Property" means the real property owned by Celestica International Inc. located at 844 Don Mills Road, 1150 Eglinton Avenue East and 1155 Eglinton Avenue East, in Toronto, Canada.

"Total Revolving Outstandings" means the aggregate Outstanding Amount of all Revolving Loans (including, for greater certainty, Bankers' Acceptances and B/A Equivalent Loans), all Swing Line Loans and all L/C Obligations.

"Total Credit Exposure" means, as to any Lender at any time, the unused Commitments of such Lender at such time, the outstanding Loans of such Lender at such time and such Lender's participations in L/C Obligations and Swing Line Loans at such time.

"Trade Date" has the meaning specified in Section 10.06(h)(i).

"Type" means, with respect to a Loan, its character as a Base Rate Loan, a Eurocurrency Rate Loan, a Canadian Prime Rate Loan, a Bankers' Acceptance or a B/A Equivalent Loan.

"UCP" means, with respect to any Letter of Credit, the Uniform Customs and Practice for Documentary Credits, International Chamber of Commerce ("ICC") Publication No. 600 (or such later version thereof as may be in effect at the time of issuance).

"UCC" means the Uniform Commercial Code as in effect in the State of New York; provided that, if perfection or the effect of perfection or non-perfection or the priority of any security interest in any Collateral is governed by the Uniform Commercial Code as in effect in a jurisdiction other than the State of New York, "UCC" means the Uniform Commercial Code as in effect from time to time in such other jurisdiction for purposes of the provisions hereof relating to such perfection, effect of perfection or non-perfection or priority.

"U.S. Borrowers" has the meaning specified in the introductory paragraph hereto.

"U.S. Guarantors" means, collectively, (a) each U.S. Subsidiary identified as a "U.S. Guarantor" on the signature pages hereto, (b) each other U.S. Subsidiary that joins as a U.S. Guarantor pursuant to Section 6.14 or otherwise, (c) with respect to Additional Secured Obligations owing by the Company or any Subsidiary under the Guaranty, each U.S. Borrower that is not a Specified U.S. Obligor, and (d) the successors and permitted assigns of each of the foregoing to the extent that any such successor or permitted assign is a U.S. Subsidiary, and, in the case of clause (c), not a CFC or CFC Holdco.

"U.S. Obligor" means any Loan Party that is organized under the laws of the United States, a state thereof or the District of Columbia.

"U.S. Person" means any Person that is a "United States Person" as defined in Section 7701(a)(30) of the Code.

"U.S. Security Agreements" means, collectively, the Domestic U.S. Security Agreement and the Specified U.S. Security Agreement.

"U.S. Subsidiary" means any Subsidiary that is organized under the laws of the United States, a state thereof or the District of Columbia.

"U.S. Tax Compliance Certificate" has the meaning specified in Section 3.01(e)(ii)(B)(3).

"United States" and "U.S." mean the United States of America.

"Unreimbursed Amount" has the meaning specified in Section 2.03(c)(i).

"Unrestricted Subsidiary" means, collectively, (a) each Subsidiary identified on Schedule 5.13 delivered to the Administrative Agent on the Closing Date and (b) each other Subsidiary designated by the Company as an Unrestricted Subsidiary after the Closing Date pursuant to Section 6.20; provided that, for the avoidance of doubt, any Unrestricted Subsidiary re-designated as a Restricted Subsidiary pursuant to Section 6.20 shall not constitute an Unrestricted Subsidiary.

"Valencia Property" means the real property owned by Celestica Valencia S.A. located at Carratera Valencia Ademuz, Km 17.6, La Pobla de Vallbona, Valencia, Spain.

"Weighted Average Life" means, when applied to any Indebtedness at any date of determination, the period of time (expressed in years) obtained by dividing (a) the sum of the total of the products obtained by multiplying (i) the amount of each scheduled installment, sinking fund, serial maturity or other required payment of principal, including payment at final maturity, in respect thereof, by (ii) the number of years (calculated to the nearest one-twelfth) which will elapse between such date of determination and the making of such payment by (b) the then outstanding principal amount of such Indebtedness as of such date of determination.

"Write-Down and Conversion Powers" means, with respect to any EEA Resolution Authority, the write-down and conversion powers of such EEA Resolution Authority from time to time under the Bail-In Legislation for the applicable EEA Member Country, which write-down and conversion powers are described in the EU Bail-In Legislation Schedule.

1.02 Other Interpretive Provisions. With reference to this Agreement and each other Loan Document, unless otherwise specified herein or in such other Loan Document:

(a) The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation." The word "will" shall be construed to have the same meaning and effect as the word "shall." Unless the context requires otherwise, (i) any definition of or reference to any agreement, instrument or other document (including any Loan Document or Organization Document) shall be construed as referring to such agreement, instrument or other document as from time to time amended, restated, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein or in any other Loan Document), (ii) any reference herein to any Person shall be construed to include such Person's successors and assigns, (iii) the words "hereto," "herein," "hereof" and "hereunder," and words of similar import when used in any Loan Document, shall be construed to refer to such Loan Document in its entirety and not to any particular provision thereof, (iv) all references in a Loan Document to Articles, Sections, Exhibits and Schedules shall be construed to refer to Articles and Sections of, and Exhibits and Schedules to, the Loan Document in which such references appear, (v) any reference to any law shall include all statutory and regulatory provisions consolidating, amending, replacing or interpreting such law and any reference to any law or regulation shall, unless otherwise specified, refer to such law or regulation as amended, modified, extended, restated, replaced or supplemented from time to time, and (vi) the words "asset" and "property" shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, accounts and contract rights.

(b) In the computation of periods of time from a specified date to a later specified date, the word "from" means "from and including;" the words "to" and "until" each mean "to but excluding;" and the word "through" means "to and including."

(c) Section headings herein and in the other Loan Documents are included for convenience of reference only and shall not affect the interpretation of this Agreement or any other Loan Document.

(d) Without prejudice to the generality of any provision of this Agreement, for all other purposes pursuant to which the interpretation or construction of this Agreement, any Collateral Document or any other Loan Document may be subject to the laws of the Province of Quebec or a court or tribunal exercising jurisdiction in the Province of Quebec, (i) "personal property" shall be deemed to include "movable property", (ii) "real property" shall be deemed to include "immovable property" and an "easement" shall be deemed to include a "servitude", (iii) "tangible property" shall be deemed to include "corporeal property", (iv) "intangible property" shall be deemed to include "incorporeal property", (v) "security interest", "lien", "mortgage" and "charge" shall be deemed to include a "hypothec", (vi) all references to filing, registering or recording financing statements shall be deemed to include publication under the Civil Code of Quebec, and all references to releasing any lien shall be deemed to include a release, discharge and mainlevée of a hypothec, (vii) any "right of offset", "right of setoff" or similar expression shall be deemed to include a "right of compensation", (viii) "goods" shall be deemed to include "corporeal movable property" other than chattel paper, documents of title, instruments, money and securities, (ix) an "agent" shall be deemed to include a "mandatary" and (x) "deposit account" or "bank account" shall include "financial accounts" (as defined in the Civil Code of Quebec) maintained by a bank.

1.03 Accounting Terms.

(a) Generally. All accounting terms not specifically or completely defined herein shall be construed in conformity with, and all financial data (including financial ratios and other financial calculations) required to be submitted pursuant to this Agreement shall be prepared in conformity with, IFRS applied on a consistent basis, as in effect from time to time, applied in a manner consistent with that used in preparing the Audited Financial Statements, except as it relates to the Company's adoption of IFRS 15 and IFRS 9 effective January 1, 2018, and as otherwise specifically prescribed herein. Notwithstanding anything to the contrary in the foregoing, for purposes of determining compliance with any covenant (including the computation of any financial covenant set forth in Section 7.11) contained herein, Indebtedness of the Company and its Subsidiaries shall be deemed to be carried at one hundred percent (100%) of the outstanding principal amount thereof.

(b) Changes in IFRS. If at any time any change in IFRS would affect the computation of any financial ratio or requirement set forth in any Loan Document, and either the Company or the Required Lenders (or, in the case of a change affecting the computation of only the Consolidated Interest Coverage Ratio, the Consolidated Total Leverage Ratio, or both, the Required Pro Rata Facilities Lenders) shall so request, the Administrative Agent, the Lenders and the Company shall negotiate in good faith to amend such ratio or requirement to preserve the original intent thereof in light of such change in IFRS (subject to the approval of the Required Lenders (or, in the case of a change affecting the computation of only the Consolidated Interest Coverage Ratio, the Consolidated Total Leverage Ratio, or both, the Required Pro Rata Facilities Lenders)); provided that, until so amended, (i) such ratio or requirement shall continue to be computed in accordance with IFRS prior to such change therein and (ii) the Company shall provide to the Administrative Agent and the Lenders financial statements and other documents required under this Agreement or as reasonably requested hereunder setting forth a reconciliation between calculations of such ratio or requirement made before and after giving effect to such change in IFRS. Without limiting the foregoing, leases shall continue to be classified and accounted for on a basis consistent with that reflected in the Audited Financial Statements (subject to the exceptions noted in clause (a) above) for all purposes of this Agreement, notwithstanding any change in IFRS relating thereto, unless the parties hereto shall enter into a mutually acceptable amendment addressing such changes, as provided for above.

1.04 Rounding. Any financial ratios required to be maintained by the Company pursuant to this Agreement shall be calculated by dividing the appropriate component by the other component, carrying the result to one place more than the number of places by which such ratio is expressed herein and rounding the result up or down to the nearest number (with a rounding-up if there is no nearest number).

1.05 Exchange Rates; Currency Equivalents.

(a) The Administrative Agent or the applicable L/C Issuer, as applicable, shall determine the Spot Rates as of each Revaluation Date to be used for calculating Dollar Equivalent amounts of Credit Extensions and Outstanding Amounts denominated in Alternative Currencies. Such Spot Rates shall become effective as of such Revaluation Date and shall be the Spot Rates employed in converting any amounts between the applicable currencies until the next Revaluation Date to occur. Except for purposes of financial statements delivered by Loan Parties hereunder or calculating financial covenants set forth in Section 7.11 or except as otherwise provided herein, the applicable amount of any currency (other than Dollars) for purposes of the Loan Documents shall be such Dollar Equivalent amount as so determined by the Administrative Agent or the applicable L/C Issuer, as applicable.

(b) Wherever in this Agreement in connection with a Borrowing, conversion, continuation or prepayment of a Eurocurrency Rate Loan, a Canadian Prime Rate Loan, a Bankers' Acceptance or a B/A Equivalent Loan or the issuance, amendment or extension of a Letter of Credit, an amount, such as a required minimum or multiple amount, is expressed in Dollars, but such Borrowing, Eurocurrency Rate Loan, Canadian Prime Rate Loan, Bankers' Acceptance, B/A Equivalent Loan or Letter of Credit is denominated in an Alternative Currency, such amount shall be the relevant Alternative Currency Equivalent of such Dollar amount (rounded to the nearest unit of such Alternative Currency, with 0.5 of a unit being rounded upward), as determined by the Administrative Agent or the applicable L/C Issuer, as the case may be.

(c) The Administrative Agent does not warrant, nor accept responsibility, nor shall the Administrative Agent have any liability with respect to the administration, submission or any other matter related to the rates in the definitions of "Eurocurrency Rate" or "CDOR" or, in either case, with respect to any comparable or successor rate thereto.

1.06 Additional Alternative Currencies.

(a) The Company may from time to time request that Eurocurrency Rate Loans be made and/or Letters of Credit be issued in a currency other than those specifically listed in the definition of "Alternative Currency"; provided that (i) such requested currency is an Eligible Currency and (ii) such requested currency shall only be treated as a "LIBOR Quoted Currency" to the extent that there is a published LIBOR rate for such currency. In the case of any such request with respect to the making of Eurocurrency Rate Loans, such request shall be subject to the approval of the Administrative Agent and each Lender with a Commitment under which such currency is requested to be made available; and in the case of any such request with respect to the issuance of Letters of Credit, such request shall be subject to the approval of the Administrative Agent and the applicable L/C Issuer.

(b) Any such request shall be made to the Administrative Agent not later than 11:00 a.m., twenty (20) Business Days prior to the date of the desired Credit Extension (or such other time or date as may be agreed by the Administrative Agent and, in the case of any such request pertaining to Letters of Credit, the applicable L/C Issuer, in its or their sole discretion). In the case of any such request pertaining to Eurocurrency Rate Loans, the Administrative Agent shall promptly notify each applicable Lender thereof; and in the case of any such request pertaining to Letters of Credit, the Administrative Agent shall promptly notify the applicable L/C Issuer thereof. Each applicable Lender (in the case of any such request pertaining to Eurocurrency Rate Loans) or the applicable L/C Issuer (in the case of a request pertaining to Letters of Credit) shall notify the Administrative Agent, not later than 11:00 a.m., ten (10) Business Days after receipt of such request whether it consents, in its sole discretion, to the making of Eurocurrency Rate Loans or the issuance of Letters of Credit, as the case may be, in such requested currency.

(c) Any failure by a Lender or an L/C Issuer, as the case may be, to respond to such request within the time period specified in the preceding sentence shall be deemed to be a refusal by such Lender or such L/C Issuer, as the case may be, to permit Eurocurrency Rate Loans to be made or Letters of Credit to be issued in such requested currency. If the Administrative Agent and all the applicable Lenders consent to making Eurocurrency Rate Loans in such requested currency and the Administrative Agent and such Lenders reasonably determine that an appropriate interest rate is available to be used for such requested currency, the Administrative Agent shall so notify the Company and (i) the Administrative Agent and such Lenders may amend the definition of

Eurocurrency Rate for any Non-LIBOR Quoted Currency to the extent necessary to add the applicable Eurocurrency Rate for such currency and (ii) to the extent the definition of Eurocurrency Rate reflects the appropriate interest rate for such currency or has been amended to reflect the appropriate rate for such currency, such currency shall thereupon be deemed for all purposes to be an Alternative Currency hereunder for purposes of any Borrowings of Eurocurrency Rate Loans; and if the Administrative Agent and the applicable L/C Issuer consent to the issuance of Letters of Credit in such requested currency, the Administrative Agent shall so notify the Company and such currency shall thereupon be deemed for all purposes to be an Alternative Currency hereunder for purposes of any Letter of Credit issuances. If the Administrative Agent shall fail to obtain consent to any request for an additional currency under this Section 1.06, the Administrative Agent shall promptly so notify the Company. Any specified currency of an Existing Letter of Credit that is neither Dollars nor one of the Alternative Currencies specifically listed in the definition of "Alternative Currency" shall be deemed an Alternative Currency with respect to such Existing Letter of Credit only.

1.07 Change of Currency.

(a) Each obligation of the Borrowers to make a payment denominated in the national currency unit of any member state of the European Union that adopts the Euro as its lawful currency after the Closing Date shall be redenominated into Euro at the time of such adoption. If, in relation to the currency of any such member state, the basis of accrual of interest expressed in this Agreement in respect of that currency shall be inconsistent with any convention or practice in the London interbank market for the basis of accrual of interest in respect of the Euro, such expressed basis shall be replaced by such convention or practice with effect from the date on which such member state adopts the Euro as its lawful currency; provided that if any Borrowing in the currency of such member state is outstanding immediately prior to such date, such replacement shall take effect, with respect to such Borrowing, at the end of the then current Interest Period.

(b) Each provision of this Agreement shall be subject to such reasonable changes of construction as the Administrative Agent may from time to time specify to be appropriate to reflect the adoption of the Euro by any member state of the European Union and any relevant market conventions or practices relating to the Euro.

(c) Each provision of this Agreement also shall be subject to such reasonable changes of construction as the Administrative Agent may from time to time specify to be appropriate to reflect a change in currency of any other country and any relevant market conventions or practices relating to the change in currency.

1.08 Times of Day. Unless otherwise specified, all references herein to times of day shall be references to Eastern time (daylight or standard, as applicable).

1.09 Letter of Credit Amounts. Unless otherwise specified herein, the amount of a Letter of Credit at any time shall be deemed to be the Dollar Equivalent of the stated amount of such Letter of Credit in effect at such time; provided, however, that with respect to any Letter of Credit that, by its terms or the terms of any Issuer Document related thereto, provides for one or more automatic increases in the stated amount thereof, the amount of such Letter of Credit shall be deemed to be the Dollar Equivalent of the maximum stated amount of such Letter of Credit after giving effect to all such increases, whether or not such maximum stated amount is in effect at such time.

1.10 Limited Condition Acquisition. It is understood and agreed that, notwithstanding anything to the contrary in this Agreement, if the proceeds of any Incremental Term Facility are being used to finance

a Limited Condition Acquisition, and the Company has obtained commitments of Lenders to fund such Incremental Term Facility ("Incremental Financing Commitments"), then (a) the conditions set forth in Section 2.16(b), clauses (i)(B)(1) and (i)(B)(2) of Section 2.16(f), Section 4.02(a), Section 4.02(b), and clause (a) in the definition of "Permitted Acquisition" shall be limited as follows, if and to the extent such Lenders so agree in their Incremental Financing Commitments: (i) the conditions set forth in Section 2.16(d) and Section 4.02(a) shall be limited such that the only representations and warranties the accuracy of which shall be a condition to the availability of such Incremental Term Facility shall be (A) the Specified Representations, and (B) such representations and warranties under the definitive agreement governing such Limited Condition Acquisition (the "Limited Condition Acquisition Agreement") as entitle the applicable Loan Party (or the applicable Subsidiary) to terminate its obligations under such Limited Condition Acquisition Agreement or decline to consummate such Limited Condition Acquisition, in each case, without paying any penalty or compensation to the other party or incurring liability for breach if such representations and warranties fail to be true and correct, and (ii) the reference in Section 2.16(b), Section 4.02(b) and clause (a) in the definition of "Permitted Acquisition" to no Default or no Event of Default, as applicable, means (A) no Default or no Event of Default, as applicable, shall have occurred and be continuing at the time of the execution of the Limited Condition Acquisition Agreement, and (B) no Event of Default under Section 8.01(a), 8.01(f) or 8.01(g) shall have occurred and be continuing at the time of the funding of such Incremental Term Facility in connection with the consummation of such Limited Condition Acquisition, and (b) for purposes of determining whether the conditions set forth in Section 2.16(l) or clause (f) in the definition of "Permitted Acquisition" have been satisfied in connection with such Limited Condition Acquisition, at the Company's option (the Company's election to exercise such option in connection with any Limited Condition Acquisition, a "LCA Election"), the date of determination of whether any such condition has been satisfied shall be deemed to be the date the definitive agreement governing such Limited Condition Acquisition is executed (the "LCA Test Date"), and if, for the Limited Condition Acquisition and the funding of such Incremental Term Facility in connection with the consummation of such Limited Condition Acquisition, the Loan Party or the applicable Subsidiary would have satisfied such condition on the relevant LCA Test Date, such condition shall be deemed to have been satisfied. If the Company has made a LCA Election for any Limited Condition Acquisition, then in connection with any calculation of any ratio, test or basket availability with respect to any Specified Transaction (each, a "Subsequent Transaction") following the relevant LCA Test Date and prior to the earlier of the date on which such Limited Condition Acquisition is consummated and the date that the definitive agreement governing such Limited Condition Acquisition is terminated or expires without consummation of such Limited Condition Acquisition, for purposes of determining whether such Subsequent Transaction is permitted under this Agreement, any such ratio, test or basket shall be calculated and tested both on (x) a Pro Forma Basis assuming such Limited Condition Acquisition and the other transactions in connection therewith have been consummated until such time as the applicable Limited Condition Acquisition has actually closed or the applicable Limited Condition Acquisition Agreement has been terminated or expires without consummation of such Limited Condition Acquisition, and (y) a standalone basis without giving effect to such Limited Condition Acquisition and the other transactions in connection therewith. It is understood and agreed that this Section 1.10 shall not limit the conditions set forth in Section 4.02 or in the definition of "Permitted Acquisition" with respect to any proposed Borrowing of Revolving Loans or Swing Line Loans or any issuance of Letters of Credit, in each case, in connection with such Limited Condition Acquisition or otherwise.

ARTICLE II.
THE COMMITMENTS AND CREDIT EXTENSIONS

2.01 Revolving Loans and Term B Loan.

(a) Revolving Loans. Subject to the terms and conditions set forth herein, each Revolving Lender severally agrees to make loans (each such loan, a "Revolving Loan") to the Borrowers or any of them in Dollars or in one or more Alternative Currencies from time to time, on any Business Day during the Availability Period, in an aggregate amount not to exceed at any time outstanding the amount of such Lender's Revolving Commitment; provided, however, that after giving effect to any Borrowing of Revolving Loans:

(i) the Total Revolving Outstandings shall not exceed the Aggregate Revolving Commitments;

(ii) the aggregate Outstanding Amount of the Revolving Loans of any Lender, plus such Lender's Applicable Percentage of the Outstanding Amount of all L/C Obligations, plus such Lender's Applicable Percentage of the Outstanding Amount of all Swing Line Loans shall not exceed such Lender's Revolving Commitment;

(iii) the aggregate Outstanding Amount of all Revolving Loans denominated in Alternative Currencies, other than Revolving Loans denominated in Canadian Dollars, shall not exceed the Alternative Currency Sublimit;

(iv) the aggregate Outstanding Amount of all Revolving Loans denominated in Canadian Dollars shall not exceed the Canadian Dollar Sublimit; and

(v) Revolving Loans denominated in Canadian Dollars shall not be extended to any Borrower other than a Canadian Borrower.

Within the limits of each Lender's Revolving Commitment, and subject to the other terms and conditions hereof, each Borrower may borrow under this Section 2.01(a), prepay under Section 2.06, and reborrow under this Section 2.01. Revolving Loans may be Base Rate Loans, Canadian Prime Rate Loans, Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans as further provided herein.

(b) Term B Loan. Subject to the terms and conditions set forth herein, each Lender severally agrees to make its portion of a term loan (the "Term B Loan") to the Company in Dollars on the Closing Date in an amount not to exceed such Lender's Term B Loan Commitment. Amounts repaid on the Term B Loan may not be reborrowed. The Term B Loan may consist of Base Rate Loans or Eurocurrency Rate Loans, or a combination thereof, as further provided herein, provided, however, any Borrowings made on the Closing Date shall be made as Base Rate Loans unless the Company delivers a funding indemnity letter not less than three (3) Business Days prior to the date of such Borrowing.

2.02 Borrowings, Conversions and Continuations of Loans.

(a) Each Borrowing, each conversion of Loans from one Type to the other, and each continuation of Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans shall be made upon a Borrower's irrevocable notice to the Administrative Agent, which may be given by (A) telephone or (B) a Loan Notice; provided that any telephonic notice must be confirmed immediately by delivery to the Administrative Agent of a Loan Notice. Each such Loan Notice must be received by the Administrative Agent not later than 11:00 a.m. (i) three (3) Business Days prior to the requested date of any Borrowing of, conversion to or continuation of Eurocurrency Rate Loans denominated in Dollars or of any conversion of Eurocurrency Rate Loans denominated in Dollars

to Base Rate Loans, (ii) four (4) Business Days (or five (5) Business Days in the case of a Special Notice Currency) prior to the requested date of any Borrowing or continuation of Eurocurrency Rate Loans denominated in Alternative Currencies or any Borrowing of, conversion to or continuation of Bankers' Acceptances or B/A Equivalent Loans, and (iii) on the requested date of any Borrowing of Base Rate Loans or Canadian Prime Rate Loans. Each Borrowing of, conversion to or continuation of Eurocurrency Rate Loans shall be in a principal amount of $1,000,000 or a whole multiple of $1,000,000 in excess thereof. Except as provided in Sections 2.03(c) and 2.04(c), each Borrowing of or conversion to Base Rate Loans or Canadian Prime Rate Loans shall be in a principal amount of $500,000 or a whole multiple of $100,000 in excess thereof. Each Loan Notice shall specify (i) whether the Company is requesting a Borrowing, a conversion of Loans from one Type to the other, or a continuation of Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans, (ii) the requested date of the Borrowing, conversion or continuation, as the case may be (which shall be a Business Day), (iii) the principal amount of Loans to be borrowed, converted or continued, (iv) the Type of Loans to be borrowed or to which existing Loans are to be converted, (v) if applicable, the duration of the Interest Period with respect thereto, (vi) the currency of the Loans to be borrowed, and (vii) if applicable, the Designated Borrower. If a Borrower fails to specify a currency in a Loan Notice requesting a Borrowing, then the Loans so requested shall be made in Dollars. If a Borrower fails to specify a Type of Loan in a Loan Notice or if a Borrower fails to give a timely notice requesting a conversion or continuation, then the applicable Loans shall be made as, or converted to, Base Rate Loans; provided, however, that in the case of a failure to timely request a continuation of Loans denominated in (x) Canadian Dollars, such Loans shall be continued as (or converted into) Canadian Prime Rate Loans or (y) an Alternative Currency (other than Canadian Dollars), such Loans shall be continued as Eurocurrency Rate Loans in their original currency with an Interest Period of one (1) month. Any automatic conversion to Base Rate Loans or Canadian Prime Rate Loans shall be effective as of the last day of the Interest Period then in effect with respect to the applicable Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans. If a Borrower requests a Borrowing of, conversion to, or continuation of Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans in any such Loan Notice, but fails to specify an Interest Period, it will be deemed to have specified an Interest Period of one (1) month. No Loan may be converted into or continued as a Loan denominated in a different currency, but instead must be prepaid in the original currency of such Loan and reborrowed in the other currency.

(b) Following receipt of a Loan Notice, the Administrative Agent shall promptly notify each Lender of the amount (and currency) of its Applicable Percentage of the applicable Loans, and if no timely notice of a conversion or continuation is provided by the applicable Borrower, the Administrative Agent shall notify each Lender of the details of any automatic conversion to Base Rate Loans or Canadian Prime Rate Loans or continuation of Loans denominated in a currency other than Dollars, in each case as described in the preceding subsection. In the case of a Borrowing, each Lender shall make the amount of its Loan available to the Administrative Agent in Same Day Funds at the Administrative Agent's Office for the applicable currency not later than 1:00 p.m., in the case of any Loan denominated in Dollars, and not later than the Applicable Time specified by the Administrative Agent in the case of any Loan in an Alternative Currency, in each case on the Business Day specified in the applicable Loan Notice. Upon satisfaction of the applicable conditions set forth in Section 4.02 (and, if such Borrowing is the initial Credit Extension, Section 4.01), the Administrative Agent shall make all funds so received available to the applicable Borrower in like funds as received by the Administrative Agent either by, as directed by such Borrower, (i) crediting the account of such Borrower on the books of Bank of America with the amount of such funds or (ii) wire transfer of such funds, in each case in accordance with instructions provided to (and reasonably acceptable to) the Administrative Agent by such Borrower; provided, however, that if,

on the date the Loan Notice with respect to such Borrowing denominated in Dollars is given by a Borrower, there are L/C Borrowings outstanding, then the proceeds of such Borrowing, first, shall be applied to the payment in full of any such L/C Borrowings, and, second, shall be made available to the applicable Borrower as provided above.

(c) Except as otherwise provided herein, a Eurocurrency Rate Loan, a Bankers' Acceptance and a B/A Equivalent Loan may be continued or converted only on the last day of an Interest Period for such Eurocurrency Rate Loan, Bankers' Acceptance or B/A Equivalent Loan. During the existence of a Default, no Loans may be requested as, converted to or continued as Eurocurrency Rate Loans (whether in Dollars or any Alternative Currency), Bankers' Acceptances or B/A Equivalent Loans without the consent of the Required Lenders, and the Required Lenders may demand that any or all of the then outstanding Eurocurrency Rate Loans denominated in an Alternative Currency be prepaid, or redenominated into Dollars in the amount of the Dollar Equivalent thereof, on the last day of the then current Interest Period with respect thereto.

(d) The Administrative Agent shall promptly notify the Company and the Lenders of the interest rate applicable to any Interest Period for Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans upon determination of such interest rate.

(e) After giving effect to all Borrowings, all conversions of Revolving Loans and Term Loans from one Type to the other, and all continuations of Revolving Loans and Term Loans as the same Type, there shall not be more than ten Interest Periods in effect.

(f) Notwithstanding anything to the contrary in this Agreement, any Lender may exchange, continue or rollover all or a portion of its Loans in connection with any refinancing, extension, loan modification or similar transaction permitted by the terms of this Agreement, pursuant to a cashless settlement mechanism approved by the Company, the Administrative Agent, and such Lender.

2.03 Letters of Credit.

(a) The Letter of Credit Commitment.

(i) Subject to the terms and conditions set forth herein, (A) each L/C Issuer agrees, in reliance upon the agreements of the Revolving Lenders set forth in this Section 2.03, (1) from time to time on any Business Day during the period from the Closing Date until the Letter of Credit Expiration Date, to issue Letters of Credit denominated in Dollars or in one or more Alternative Currencies for the account of the Company or any Restricted Subsidiary, and to amend Letters of Credit previously issued by it, in accordance with subsection (b) below, and (2) to honor drawings under the Letters of Credit; and (B) the Revolving Lenders severally agree to participate in Letters of Credit issued for the account of the Company and any drawings thereunder; provided that after giving effect to any L/C Credit Extension with respect to any Letter of Credit, (x) the Total Revolving Outstandings shall not exceed the Aggregate Revolving Commitments, (y) the Revolving Credit Exposure of any Lender shall not exceed such Lender's Revolving Commitment and (z) the aggregate Outstanding Amount of the L/C Obligations shall not exceed the Letter of Credit Sublimit. Each request by the Company for the issuance or amendment of a Letter of Credit shall be deemed to be a representation by the Company that the L/C Credit Extension so requested complies with the conditions set forth in the proviso to the preceding sentence. Within the foregoing limits, and subject to the terms and conditions hereof, the Company's ability to

obtain Letters of Credit shall be fully revolving, and accordingly the Company may, during the foregoing period, obtain Letters of Credit to replace Letters of Credit that have expired or that have been drawn upon and reimbursed. All Existing Letters of Credit shall be deemed to have been issued pursuant hereto and deemed L/C Obligations, and from and after the Closing Date shall be subject to and governed by the terms and conditions hereof.

(ii) No L/C Issuer shall issue any Letter of Credit, if:

(A) subject to Section 2.03(b)(iii), the expiry date of the requested Letter of Credit would occur more than twelve (12) months after the date of issuance or last extension, unless the Required Revolving Lenders have approved such expiry date; or

(B) the expiry date of the requested Letter of Credit would occur after the Letter of Credit Expiration Date, unless all the Revolving Lenders have approved such expiry date.

(iii) No L/C Issuer shall be under any obligation to issue any Letter of Credit if:

(A) any order, judgment or decree of any Governmental Authority or arbitrator shall by its terms purport to enjoin or restrain such L/C Issuer from issuing such Letter of Credit, or any Law applicable to such L/C Issuer or any request or directive (whether or not having the force of law) from any Governmental Authority with jurisdiction over such L/C Issuer shall prohibit, or request that such L/C Issuer refrain from, the issuance of letters of credit or related bankers' acceptances generally or such Letter of Credit in particular or shall impose upon such L/C Issuer with respect to such Letter of Credit any restriction, reserve or capital requirement (for which such L/C Issuer is not otherwise compensated hereunder) not in effect on the Closing Date, or shall impose upon such L/C Issuer any unreimbursed loss, cost or expense which was not applicable on the Closing Date and which such L/C Issuer in good faith deems material to it;

(B) the issuance of such Letter of Credit would violate one or more policies of such L/C Issuer applicable to letters of credit generally;

(C) except as otherwise agreed by the Administrative Agent and such L/C Issuer, the Letter of Credit is in an initial stated amount less than the Dollar Equivalent of $100,000, in the case of a commercial Letter of Credit, or $250,000, in the case of a standby Letter of Credit (or, in each case, such lesser amount as such L/C Issuer may agree in its sole discretion);

(D) except as otherwise agreed by the Administrative Agent and such L/C Issuer, the Letter of Credit is to be denominated in a currency other than Dollars or an Alternative Currency;

(E) such L/C Issuer does not as of the issuance date of the requested Letter of Credit issue Letters of Credit in the requested currency; or

(F) any Lender is at that time a Defaulting Lender, unless such L/C Issuer has entered into arrangements, including the delivery of Cash Collateral, satisfactory to such L/C Issuer (in its sole discretion) with the Company or such Lender to eliminate such L/C Issuer's actual or potential Fronting Exposure (after giving effect to Section 2.18(a)(iv)) with respect to the Defaulting Lender arising from either the Letter of Credit then proposed to be issued or that Letter of Credit and all other L/C Obligations as to which such L/C Issuer has actual or potential Fronting Exposure, as it may elect in its sole discretion.

(iv) No L/C Issuer shall amend any Letter of Credit if such L/C Issuer would not be permitted at such time to issue the Letter of Credit in its amended form under the terms hereof.

(v) No L/C Issuer shall be under any obligation to amend any Letter of Credit if (A) such L/C Issuer would have no obligation at such time to issue the Letter of Credit in its amended form under the terms hereof, or (B) the beneficiary of the Letter of Credit does not accept the proposed amendment to the Letter of Credit.

(vi) Each L/C Issuer shall act on behalf of the Lenders with respect to any Letters of Credit issued by it and the documents associated therewith, and each L/C Issuer shall have all of the benefits and immunities (A) provided to the Administrative Agent in Article IX with respect to any acts taken or omissions suffered by such L/C Issuer in connection with Letters of Credit issued by it or proposed to be issued by it and Issuer Documents pertaining to such Letters of Credit as fully as if the term "Administrative Agent" as used in Article IX included such L/C Issuer with respect to such acts or omissions, and (B) as additionally provided herein with respect to such L/C Issuer.

(b) Procedures for Issuance and Amendment of Letters of Credit; Auto-Extension Letters of Credit.

(i) Each Letter of Credit shall be issued or amended, as the case may be, upon the request of the Company delivered to the applicable L/C Issuer (with a copy to the Administrative Agent, if Bank of America is not the applicable L/C Issuer) in the form of a Letter of Credit Application, appropriately completed and signed by a Responsible Officer of the Company. Such Letter of Credit Application may be sent by facsimile, by United States mail or Canada Post, by overnight courier, by electronic transmission using the system provided by such L/C Issuer, by personal delivery or by any other means acceptable to such L/C Issuer. Such Letter of Credit Application must be received by the applicable L/C Issuer and the Administrative Agent not later than 11:00 a.m. at least two (2) Business Days (or such later date and time as the Administrative Agent and such L/C Issuer may agree in a particular instance in their sole discretion) prior to the proposed issuance date or date of amendment, as the case may be. In the case of a request for an initial issuance of a Letter of Credit, such Letter of Credit Application shall specify in form and detail reasonably satisfactory to the applicable L/C Issuer: (A) the proposed issuance date of the requested Letter of Credit (which shall be a Business Day); (B) the amount and currency thereof (and in the absence of specification of currency, shall be deemed a request for a Letter of Credit denominated in Dollars); (C) the expiry date thereof; (D) the name and address of the beneficiary thereof; (E) the documents to be presented by such beneficiary in case of any drawing thereunder; (F) the full text of any certificate to be presented by such beneficiary

in case of any drawing thereunder; (G) the purpose and nature of the requested Letter of Credit; and (H) such other matters as such L/C Issuer may require. In the case of a request for an amendment of any outstanding Letter of Credit, such Letter of Credit Application shall specify in form and detail reasonably satisfactory to such L/C Issuer (A) the Letter of Credit to be amended; (B) the proposed date of amendment thereof (which shall be a Business Day); (C) the nature of the proposed amendment; and (D) such other matters as such L/C Issuer may require. Additionally, the Company shall furnish to such L/C Issuer and the Administrative Agent such other documents and information pertaining to such requested Letter of Credit issuance or amendment, including any Issuer Documents, as such L/C Issuer or the Administrative Agent may require.

(ii) Promptly after receipt of any Letter of Credit Application, the applicable L/C Issuer will confirm with the Administrative Agent (by telephone or in writing) that the Administrative Agent has received a copy of such Letter of Credit Application from the Company and, if not, such L/C Issuer will provide the Administrative Agent with a copy thereof. Unless such L/C Issuer has received written notice from any Lender, the Administrative Agent or any Loan Party, at least one Business Day prior to the requested date of issuance or amendment of the applicable Letter of Credit, that one or more applicable conditions contained in Article IV shall not then be satisfied, then, subject to the terms and conditions hereof, such L/C Issuer shall, on the requested date, issue a Letter of Credit for the account of the Company (or the applicable Restricted Subsidiary) or enter into the applicable amendment, as the case may be, in each case in accordance with such L/C Issuer's usual and customary business practices. Immediately upon the issuance of each Letter of Credit, each Revolving Lender shall be deemed to, and hereby irrevocably and unconditionally agrees to, purchase from such L/C Issuer a risk participation in such Letter of Credit in an amount equal to the product of such Lender's Applicable Percentage times the amount of such Letter of Credit.

(iii) If the Company so requests in any applicable Letter of Credit Application, the applicable L/C Issuer may, in its sole discretion, agree to issue a Letter of Credit that has automatic extension provisions (each, an "Auto-Extension Letter of Credit"); provided that any such Auto-Extension Letter of Credit must permit such L/C Issuer to prevent any such extension at least once in each twelve-month period (commencing with the date of issuance of such Letter of Credit) by giving prior notice to the beneficiary thereof not later than a day (the "Non-Extension Notice Date") in each such twelve-month period to be agreed upon at the time such Letter of Credit is issued. Unless otherwise directed by such L/C Issuer, the Company shall not be required to make a specific request to such L/C Issuer for any such extension. Once an Auto-Extension Letter of Credit has been issued, the Lenders shall be deemed to have authorized (but may not require) the applicable L/C Issuer to permit the extension of such Letter of Credit at any time to an expiry date not later than the Letter of Credit Expiration Date; provided, however, that such L/C Issuer shall not permit any such extension if (A) such L/C Issuer has determined that it would not be permitted, or would have no obligation, at such time to issue such Letter of Credit in its revised form (as extended) under the terms hereof (by reason of the provisions of clause (ii) or (iii) of Section 2.03(a) or otherwise), or (B) it has received notice (which may be by telephone or in writing) on or before the day that is seven (7) Business Days before the Non-Extension Notice Date (1) from the Administrative Agent that the Required Revolving Lenders have elected not to permit such extension or (2) from the Administrative Agent, any Lender or the Company that one

or more of the applicable conditions specified in Section 4.02 is not then satisfied, and in each case directing such L/C Issuer not to permit such extension.

(iv) If the Company so requests in any applicable Letter of Credit Application, the applicable L/C Issuer may, in its sole discretion, agree to issue a Letter of Credit that permits the automatic reinstatement of all or a portion of the stated amount thereof after any drawing thereunder (each, an "Auto-Reinstatement Letter of Credit"). Unless otherwise directed by such L/C Issuer, the Company shall not be required to make a specific request to the applicable L/C Issuer to permit such reinstatement. Once an Auto-Reinstatement Letter of Credit has been issued, except as provided in the following sentence, the Lenders shall be deemed to have authorized (but may not require) the applicable L/C Issuer to reinstate all or a portion of the stated amount thereof in accordance with the provisions of such Letter of Credit. Notwithstanding the foregoing, if such Auto-Reinstatement Letter of Credit permits the applicable L/C Issuer to decline to reinstate all or any portion of the stated amount thereof after a drawing thereunder by giving notice of such non-reinstatement within a specified number of days after such drawing (the "Non-Reinstatement Deadline"), such L/C Issuer shall not permit such reinstatement if it has received a notice (which may be by telephone or in writing) on or before the day that is seven (7) Business Days before the Non-Reinstatement Deadline (A) from the Administrative Agent that the Required Revolving Lenders have elected not to permit such reinstatement or (B) from the Administrative Agent, any Lender or the Company that one or more of the applicable conditions specified in Section 4.02 is not then satisfied (treating such reinstatement as an L/C Credit Extension for purposes of this clause) and, in each case, directing such L/C Issuer not to permit such reinstatement.

(v) Promptly after its delivery of any Letter of Credit or any amendment to a Letter of Credit to an advising bank with respect thereto or to the beneficiary thereof, the applicable L/C Issuer will also deliver to the Company and the Administrative Agent a true and complete copy of such Letter of Credit or amendment.

(c) Drawings and Reimbursements; Funding of Participations.

(i) Upon receipt from the beneficiary of any Letter of Credit of any notice of a drawing under such Letter of Credit, the applicable L/C Issuer shall notify the Company and the Administrative Agent thereof. In the case of a Letter of Credit denominated in an Alternative Currency, the Company shall reimburse such L/C Issuer in such Alternative Currency, unless (A) the applicable L/C Issuer (at its option) shall have specified in such notice that it will require reimbursement in Dollars, or (B) in the absence of any such requirement for reimbursement in Dollars, the Company shall have notified such L/C Issuer promptly following receipt of the notice of drawing that the Company will reimburse such L/C Issuer in Dollars. In the case of any such reimbursement in Dollars of a drawing under a Letter of Credit denominated in an Alternative Currency, the applicable L/C Issuer shall notify the Company of the Dollar Equivalent of the amount of the drawing promptly following the determination thereof. If the Company is notified prior to 11:00 a.m. on the date of any payment by an L/C Issuer under a Letter of Credit to be reimbursed in Dollars, or prior to the Applicable Time on the date of any payment by an L/C Issuer under a Letter of Credit to be reimbursed in an Alternative Currency (each such date, an "Honor Date"), the Company shall reimburse the applicable L/C Issuer through the Administrative Agent in an amount equal to the amount of such drawing and in the applicable currency on such

date (or, if notified after such time, then no later than 11:00 a.m. on the next succeeding Business Day with respect to any payment by the applicable L/C Issuer under a Letter of Credit to be reimbursed in Dollars or the Applicable Time on the next succeeding Business Day with respect to any payment by the applicable L/C Issuer under a Letter of Credit to be reimbursed in an Alternative Currency). In the event that (A) a drawing denominated in an Alternative Currency is to be reimbursed in Dollars pursuant to the second sentence in this Section 2.03(c)(i) and (B) the Dollar amount paid by the Company, whether on or after the Honor Date, shall not be adequate on the date of that payment to purchase in accordance with normal banking procedures a sum denominated in the Alternative Currency equal to the drawing, the Company agrees, as a separate and independent obligation, to indemnify the applicable L/C Issuer for the loss resulting from its inability on that date to purchase the Alternative Currency in the full amount of the drawing. If the Company fails to timely reimburse an L/C Issuer on the Honor Date, the Administrative Agent shall promptly notify each Lender of the Honor Date, the amount of the unreimbursed drawing (expressed in Dollars in the amount of the Dollar Equivalent thereof in the case of a Letter of Credit denominated in an Alternative Currency) (the "Unreimbursed Amount"), and the amount of such Lender's Applicable Percentage thereof. In such event, the Company shall be deemed to have requested a Borrowing of Revolving Loans that are Base Rate Loans to be disbursed on the Honor Date in an amount equal to the Unreimbursed Amount, without regard to the minimum and multiples specified in Section 2.02 for the principal amount of Revolving Loans that are Base Rate Loans, but subject to the amount of the unutilized portion of the Aggregate Revolving Commitments and the conditions set forth in Section 4.02 (other than the delivery of a Loan Notice) and provided that, after giving effect to such Borrowing, the Total Revolving Outstandings shall not exceed the Aggregate Revolving Commitments. Any notice given by an L/C Issuer or the Administrative Agent pursuant to this Section 2.03(c)(i) may be given by telephone if promptly confirmed in writing; provided that the lack of such an immediate confirmation shall not affect the conclusiveness or binding effect of such notice.

(ii) Each Revolving Lender shall upon any notice pursuant to Section 2.03(c)(i) make funds available (and the Administrative Agent may apply Cash Collateral provided for this purpose) for the account of the applicable L/C Issuer, in Dollars, at the Administrative Agent's Office for Dollar-denominated payments in an amount equal to its Applicable Percentage of the Unreimbursed Amount not later than 1:00 p.m. on the Business Day specified in such notice by the Administrative Agent, whereupon, subject to the provisions of Section 2.03(c)(iii), each Revolving Lender that so makes funds available shall be deemed to have made a Revolving Loan that is a Base Rate Loan to the Company in such amount. The Administrative Agent shall remit the funds so received to the applicable L/C Issuer in Dollars.

(iii) With respect to any Unreimbursed Amount that is not fully refinanced by a Borrowing of Revolving Loans that are Base Rate Loans because the conditions set forth in Section 4.02 cannot be satisfied or for any other reason, the Company shall be deemed to have incurred from the applicable L/C Issuer an L/C Borrowing in the amount of the Unreimbursed Amount that is not so refinanced, which L/C Borrowing shall be due and payable on demand (together with interest) and shall bear interest at the Default Rate. In such event, each Revolving Lender's payment to the Administrative Agent for the account of the applicable L/C Issuer pursuant to Section 2.03(c)(ii) shall be deemed payment in

respect of its participation in such L/C Borrowing and shall constitute an L/C Advance from such Lender in satisfaction of its participation obligation under this Section 2.03.

(iv) Until each Revolving Lender funds its Revolving Loan or L/C Advance pursuant to this Section 2.03(c) to reimburse the applicable L/C Issuer for any amount drawn under any Letter of Credit issued by such L/C Issuer, interest in respect of such Lender's Applicable Percentage of such amount shall be solely for the account of such L/C Issuer.

(v) Each Revolving Lender's obligation to make Revolving Loans or L/C Advances to reimburse each L/C Issuer for amounts drawn under Letters of Credit issued by such L/C Issuer, as contemplated by this Section 2.03(c), shall be absolute and unconditional and shall not be affected by any circumstance, including (A) any setoff, counterclaim, recoupment, defense or other right which such Lender may have against an L/C Issuer, the Company, any Subsidiary or any other Person for any reason whatsoever; (B) the occurrence or continuance of a Default, or (C) any other occurrence, event or condition, whether or not similar to any of the foregoing; provided, however, that each Revolving Lender's obligation to make Revolving Loans pursuant to this Section 2.03(c) is subject to the conditions set forth in Section 4.02 (other than delivery by the Company of a Loan Notice). No such making of an L/C Advance shall relieve or otherwise impair the obligation of the Company to reimburse an L/C Issuer for the amount of any payment made by such L/C Issuer under any Letter of Credit, together with interest as provided herein.

(vi) If any Revolving Lender fails to make available to the Administrative Agent for the account of an L/C Issuer any amount required to be paid by such Lender pursuant to the foregoing provisions of this Section 2.03(c) by the time specified in Section 2.03(c)(ii), then, without limiting the other provisions of this Agreement, such L/C Issuer shall be entitled to recover from such Lender (acting through the Administrative Agent), on demand, such amount with interest thereon for the period from the date such payment is required to the date on which such payment is immediately available to such L/C Issuer at a rate per annum equal to the applicable Overnight Rate from time to time in effect, plus any administrative, processing or similar fees customarily charged by such L/C Issuer in connection with the foregoing. If such Lender pays such amount (with interest and fees as aforesaid), the amount so paid shall constitute such Lender's Revolving Loan included in the relevant Borrowing or L/C Advance in respect of the relevant L/C Borrowing, as the case may be. A certificate of an L/C Issuer submitted to any Revolving Lender (through the Administrative Agent) with respect to any amounts owing under this clause (vi) shall be conclusive absent manifest error.

(d) Repayment of Participations.

(i) At any time after an L/C Issuer has made a payment under any Letter of Credit issued by such L/C Issuer and has received from any Revolving Lender such Lender's L/C Advance in respect of such payment in accordance with Section 2.03(c), if the Administrative Agent receives for the account of such L/C Issuer any payment in respect of the related Unreimbursed Amount or interest thereon (whether directly from the Company or otherwise, including proceeds of Cash Collateral applied thereto by the Administrative Agent), the Administrative Agent will distribute to such Lender its Applicable Percentage thereof in Dollars and in the same funds as those received by the Administrative Agent.

(ii) If any payment received by the Administrative Agent for the account of an L/C Issuer pursuant to Section 2.03(c)(i) is required to be returned under any of the circumstances described in Section 10.05 (including pursuant to any settlement entered into by an L/C Issuer in its discretion), each Revolving Lender shall pay to the Administrative Agent for the account of such L/C Issuer its Applicable Percentage thereof on demand of the Administrative Agent, plus interest thereon from the date of such demand to the date such amount is returned by such Lender, at a rate per annum equal to the applicable Overnight Rate from time to time in effect. The obligations of the Revolving Lenders under this clause shall survive the payment in full of the Obligations and the termination of this Agreement.

(e) Obligations Absolute. The obligation of the Company to reimburse each L/C Issuer for each drawing under each Letter of Credit issued by such L/C Issuer and to repay each L/C Borrowing shall be absolute, unconditional and irrevocable, and shall be paid strictly in accordance with the terms of this Agreement under all circumstances, including the following:

(i) any lack of validity or enforceability of such Letter of Credit, this Agreement, or any other Loan Document;

(ii) the existence of any claim, counterclaim, setoff, defense or other right that the Company or any Subsidiary may have at any time against any beneficiary or any transferee of such Letter of Credit (or any Person for whom any such beneficiary or any such transferee may be acting), the applicable L/C Issuer or any other Person, whether in connection with this Agreement, the transactions contemplated hereby or by such Letter of Credit or any agreement or instrument relating thereto, or any unrelated transaction;

(iii) any draft, demand, endorsement, certificate or other document presented under or in connection with such Letter of Credit proving to be forged, fraudulent, invalid or insufficient in any respect or any statement therein being untrue or inaccurate in any respect; or any loss or delay in the transmission or otherwise of any document required in order to make a drawing under such Letter of Credit;

(iv) waiver by such L/C Issuer of any requirement that exists for such L/C Issuer's protection and not the protection of the Company or any waiver by such L/C Issuer which does not in fact materially prejudice the Company;

(v) honor of a demand for payment presented electronically even if such Letter of Credit requires that demand be in the form of a draft;

(vi) any payment made by such L/C Issuer in respect of an otherwise complying item presented after the date specified as the expiration date of, or the date by which documents must be received under, such Letter of Credit if presentation after such date is authorized by the UCC, the ISP or the UCP, as applicable;

(vii) any payment by such L/C Issuer under such Letter of Credit against presentation of a draft or certificate that does not strictly comply with the terms of such Letter of Credit; or any payment made by such L/C Issuer under such Letter of Credit to any Person purporting to be a trustee in bankruptcy, debtor-in-possession, assignee for the benefit of creditors, liquidator, receiver or other representative of or successor to any beneficiary or any transferee of such Letter of Credit, including any arising in connection with any proceeding under any Debtor Relief Law;

(viii) any adverse change in the relevant exchange rates or in the availability of the relevant Alternative Currency to the Company or any Subsidiary or in the relevant currency markets generally; or

(ix) any other circumstance or happening whatsoever, whether or not similar to any of the foregoing, including any other circumstance that might otherwise constitute a defense available to, or a discharge of, the Company or any Subsidiary.

The Company shall promptly examine a copy of each Letter of Credit and each amendment thereto that is delivered to it and, in the event of any claim of noncompliance with the Company's instructions or other irregularity, the Company will immediately notify the applicable L/C Issuer. The Company shall be conclusively deemed to have waived any such claim against such L/C Issuer and its correspondents unless such notice is given as aforesaid.

(f) Role of L/C Issuer. Each Lender and the Company agree that, in paying any drawing under a Letter of Credit, the applicable L/C Issuer shall not have any responsibility to obtain any document (other than any sight draft, certificates and documents expressly required by the Letter of Credit) or to ascertain or inquire as to the validity or accuracy of any such document or the authority of the Person executing or delivering any such document. None of the L/C Issuers, the Administrative Agent, any of their respective Related Parties nor any correspondent, participant or assignee of any L/C Issuer shall be liable to any Lender for (i) any action taken or omitted in connection herewith at the request or with the approval of the Lenders, the Required Pro Rata Facilities Lenders, the Required Revolving Lenders or the Required Lenders, as applicable; (ii) any action taken or omitted in the absence of bad faith, gross negligence or willful misconduct; or (iii) the due execution, effectiveness, validity or enforceability of any document or instrument related to any Letter of Credit or Issuer Document. The Company hereby assumes all risks of the acts or omissions of any beneficiary or transferee with respect to its use of any Letter of Credit; provided, however, that this assumption is not intended to, and shall not, preclude the Company's pursuing such rights and remedies as it may have against the beneficiary or transferee at law or under any other agreement. None of the L/C Issuers, the Administrative Agent, any of their respective Related Parties nor any correspondent, participant or assignee of any L/C Issuer shall be liable or responsible for any of the matters described in clauses (i) through (viii) of Section 2.03(e); provided, however, that anything in such clauses to the contrary notwithstanding, the Company may have a claim against an L/C Issuer, and an L/C Issuer may be liable to the Company, to the extent, but only to the extent, of any direct, as opposed to consequential or exemplary, damages suffered by the Company which the Company proves, as determined by a final non-appealable judgment of a court of competent jurisdiction, were caused by such L/C Issuer's bad faith, willful misconduct or gross negligence or such L/C Issuer's willful failure to pay under any Letter of Credit after the presentation to it by the beneficiary of a sight or time draft and certificate(s) strictly complying with the terms and conditions of a Letter of Credit. In furtherance and not in limitation of the foregoing, an L/C Issuer may accept documents that appear on their face to be in order, without responsibility for further investigation, regardless of any notice or information to the contrary, and such L/C Issuer shall not be responsible for the validity or sufficiency of any instrument transferring, endorsing or assigning or purporting to transfer, endorse or assign a Letter of Credit or the rights or benefits thereunder or proceeds thereof, in whole or in part, which may prove to be invalid or ineffective for any reason. The L/C Issuers may send a Letter of Credit or conduct any communication to or from the beneficiary via the Society for Worldwide Interbank Financial Telecommunication ("SWIFT") message or overnight courier, or any other commercially reasonable means of communicating with a beneficiary.

(g) Applicability of ISP and UCP; Limitation of Liability. Unless otherwise expressly agreed by the applicable L/C Issuer and the Company when a Letter of Credit is issued (including any such agreement applicable to an Existing Letter of Credit), (i) the rules of the ISP shall apply to each standby Letter of Credit and (ii) the rules of the UCP shall apply to each commercial Letter of Credit. Notwithstanding the foregoing, no L/C Issuer shall be responsible to the Company for, and no L/C Issuer's rights and remedies against the Company shall be impaired by, any action or inaction of such L/C Issuer required or permitted under any Law, order, or practice that is required or permitted to be applied to any Letter of Credit or this Agreement, including the Law or any order of a jurisdiction where such L/C Issuer or the beneficiary is located, the practice stated in the ISP or UCP, as applicable, or in the decisions, opinions, practice statements, or official commentary of the ICC Banking Commission, the Bankers Association for Finance and Trade - International Financial Services Association (BAFT-IFSA), or the Institute of International Banking Law & Practice, whether or not any Letter of Credit chooses such Law or practice.

(h) Letter of Credit Fees. The Company shall pay to the Administrative Agent for the account of each Revolving Lender in accordance, subject to adjustment as provided in Section 2.18, with its Applicable Percentage, in Dollars, a Letter of Credit fee (the "Letter of Credit Fee") (A) for each commercial Letter of Credit equal to one-half (½) of one percent (1.00%) per annum times the Dollar Equivalent of the daily amount available to be drawn under such Letter of Credit, and (B) for each standby Letter of Credit equal to the Applicable Rate for Letter of Credit Fees times the Dollar Equivalent of the daily amount available to be drawn under such Letter of Credit. For purposes of computing the daily amount available to be drawn under any Letter of Credit, the amount of such Letter of Credit shall be determined in accordance with Section 1.09. Letter of Credit Fees shall be (x) due and payable on the first (1st) Business Day after the end of each March, June, September and December, commencing with the first such date to occur after the issuance of such Letter of Credit, on the Letter of Credit Expiration Date and thereafter on demand and (y) computed on a quarterly basis in arrears. If there is any change in the Applicable Rate during any quarter, the daily amount available to be drawn under each Letter of Credit shall be computed and multiplied by the Applicable Rate separately for each period during such quarter that such Applicable Rate was in effect. Notwithstanding anything to the contrary contained herein, upon the request of the Required Revolving Lenders, while any Event of Default exists, all Letter of Credit Fees shall accrue at the Default Rate.

(i) Fronting Fee and Documentary and Processing Charges Payable to L/C Issuer. The Company shall pay directly to each L/C Issuer for its own account, in Dollars, a fronting fee (i) with respect to each commercial Letter of Credit issued by such L/C Issuer, at the rate specified in the Fee Letter or otherwise agreed in writing by the applicable L/C Issuer and the Company, as applicable, in each case computed on the Dollar Equivalent of the amount of such Letter of Credit and due and payable upon the issuance thereof, (ii) with respect to any amendment of a commercial Letter of Credit issued by such L/C Issuer increasing the amount of such Letter of Credit, at a rate separately agreed between the Company and such L/C Issuer, computed on the Dollar Equivalent of the amount of such increase, and due and payable upon the effectiveness of such amendment, and (iii) with respect to each standby Letter of Credit issued by such L/C Issuer, at the rate per annum specified in the Fee Letter or otherwise agreed in writing by such L/C Issuer and the Company, as applicable, in each case computed on the Dollar Equivalent of the daily amount available to be drawn under such Letter of Credit on a quarterly basis in arrears and due and payable on the first (1st) Business Day after the end of each March, June, September and December in respect of the most recently-ended quarterly period (or portion thereof, in the case of the first payment), commencing with the first such date to occur after the issuance of such Letter of Credit, on the Letter of Credit Expiration

Date and thereafter on demand. For purposes of computing the daily amount available to be drawn under any Letter of Credit, the amount of such Letter of Credit shall be determined in accordance with Section 1.09. In addition, the Company shall pay directly to each L/C Issuer for its own respective account, in Dollars, the customary issuance, presentation, amendment and other processing fees, and other standard costs and charges, of such L/C Issuer relating to letters of credit as from time to time in effect. Such customary fees and standard costs and charges are due and payable on demand and are nonrefundable.

(j) Conflict with Issuer Documents. In the event of any conflict between the terms hereof and the terms of any Issuer Document, the terms hereof shall control.

2.04 Bankers' Acceptances.

(a) Bankers' Acceptances. Upon acceptance of each Bankers' Acceptance or the making of each B/A Equivalent Loan, the applicable Canadian Borrower shall pay to the applicable Revolving Lenders the B/A Fee. To facilitate such payment, each such Revolving Lender shall be entitled to deduct and retain for its own account the amount of such B/A Fee from the amount to be transferred by such Revolving Lender to the Administrative Agent for the account of the applicable Canadian Borrower pursuant to this Agreement in respect of the purchase of the related Bankers' Acceptance or of such B/A Equivalent Loan.

(b) B/A Discount Proceeds. The B/A Discount Proceeds for a Bankers' Acceptance are equal to the face amount of that Bankers' Acceptance multiplied by the price and shall be rounded to the nearest full cent, with one-half of one cent being rounded up. The price is calculated by dividing one (1) by the sum of one (1) plus the product of (i) the B/A Discount Rate applicable to that Bankers' Acceptance expressed as a decimal fraction, multiplied by (ii) a fraction, the numerator of which is the term in days of that Bankers' Acceptance and the denominator of which is three hundred sixty-five (365). The price shall be rounded to the nearest multiple of 0.001%.

(c) Orders. To facilitate the acceptance of Bankers' Acceptances under this Agreement, each of the Canadian Borrowers appoints each Revolving Lender as its attorney to sign and endorse on its behalf, as and when considered necessary by the Revolving Lender, an appropriate number of orders in the form prescribed by that Revolving Lender. Each Revolving Lender may, at its option, execute any order in handwriting or by the facsimile or mechanical signature of any of its authorized officers, and the Revolving Lenders are authorized to accept or pay, as the case may be, any order of a Canadian Borrower that purports to bear such a signature notwithstanding that the signatory has ceased to be an authorized officer of such Revolving Lender. Any such order or Bankers' Acceptance shall be as valid as if the individual were an authorized officer at the date of issue of the order or Bankers' Acceptance. Any order or Bankers' Acceptance signed by a Revolving Lender as attorney for a Canadian Borrower, whether signed in handwriting or by facsimile or mechanical signature may be dealt with by the Administrative Agent or any Revolving Lender to all intents and purposes and shall bind such Canadian Borrower as if duly signed and issued by such Canadian Borrower. The receipt by the Administrative Agent of a notice requesting a Borrowing by way of Bankers' Acceptances shall be each Revolving Lender's sufficient authority to execute, and each Revolving Lender shall, subject to the terms and conditions of this Agreement, execute orders in accordance with that request and the advice of the Administrative Agent given pursuant to this Agreement. The executed orders shall be deemed to have been presented for acceptance.

(d) Prepayment. No Bankers' Acceptance may be paid before its maturity date.

(e) Calculations.

(i) In advising a Revolving Lender of the amount it is to deliver to the Administrative Agent in respect of any Borrowing, the Administrative Agent shall allow for deduction by each Revolving Lender of the applicable B/A Fee in connection with a Borrowing by way of Bankers' Acceptances and may also net other amounts payable in the same currency by the applicable Canadian Borrower to the Administrative Agent for the account of that Revolving Lender on the date of Borrowing.

(ii) Notwithstanding any other provision of this Agreement, the amount to be transferred by a Revolving Lender to the Administrative Agent in connection with any Bankers' Acceptance accepted by that Revolving Lender shall be determined by the B/A Discount Proceeds calculated with respect to the Bankers' Acceptance rather than the actual proceeds of any sale of that Bankers' Acceptance. Accordingly, in respect of any particular Bankers' Acceptance accepted by it, a Revolving Lender (a) shall be entitled to retain for its own account the amount, if any, by which any actual proceeds of sale exceed the calculated B/A Discount Proceeds with respect to the Bankers' Acceptance, and (b) shall be required to pay out of its own funds the amount, if any, by which the actual proceeds of sale are less than the calculated B/A Discount Proceeds.

(f) B/A Equivalent Loan Request. Whenever a Canadian Borrower requests a Borrowing that includes Bankers' Acceptances, each Revolving Lender that is not permitted by applicable Law or by customary market practice to accept Bankers' Acceptances or for any other reason elects by notice to the Administrative Agent from time to time not to do so (a "Non-B/A Lender") shall, in lieu of accepting its pro rata amount of Bankers' Acceptances, make available to the applicable Canadian Borrower on the date of Borrowing a Loan (a "B/A Equivalent Loan") in Canadian Dollars and in an amount equal to the B/A Discount Proceeds of the Bankers' Acceptances that the Non-B/A Lender would otherwise have accepted, less the B/A Fee that would otherwise have been applicable. The B/A Equivalent Loan shall have a term equal to the term of the Bankers' Acceptances that the Non-B/A Lender would otherwise have accepted and the applicable Canadian Borrower shall, at the end of that term, be obligated to pay the Non-B/A Lender an amount equal to the aggregate face amount of the Bankers' Acceptances that it would otherwise have accepted. All provisions of this Agreement applicable to Bankers' Acceptances and Lenders that accept Bankers' Acceptances shall apply *mutatis mutandis* to B/A Equivalent Loans and Non-B/A Lenders.

(g) Maturity, Etc. On the date of maturity of each Bankers' Acceptance or B/A Equivalent Loan, the applicable Canadian Borrower shall pay to the Administrative Agent, for the account of each of the applicable Revolving Lenders, in Canadian Dollars, an amount equal to the full face amount of such Bankers' Acceptance or B/A Equivalent Loan, as the case may be. The Canadian Borrowers shall not claim from a Revolving Lender any days of grace for the payment at maturity of any Bankers' Acceptance or B/A Equivalent Loan accepted by the Revolving Lenders pursuant to this Agreement. The Canadian Borrowers waive any defense to payment that might otherwise exist if for any reason a Bankers' Acceptance is held at maturity by a Revolving Lender in its own right, and the doctrine of merger shall not apply to any Bankers' Acceptance that is at any time held by a Revolving Lender in its own right. Any executed orders to be used as Bankers' Acceptances shall be held by a Revolving Lender in safekeeping with the same degree of care as if they were the Revolving Lender's own property, and shall be kept at the place at which executed orders are ordinarily held by the Revolving Lender.

(h) Arrangement. It shall be the responsibility of each Revolving Lender to arrange, in accordance with normal market practice, for the sale on each date of Borrowing of the Bankers' Acceptances issued by the applicable Canadian Borrower and to be accepted by that Revolving Lender, failing which the provisions of this Agreement relating to Non-B/A Lenders shall apply.

(i) Irrevocability. The obligations of the Canadian Borrowers with respect to Bankers' Acceptances under this Agreement shall be unconditional and irrevocable, and shall be paid strictly in accordance with the terms of this Agreement under all circumstances, including: (i) any lack of validity or enforceability of any order accepted by a Revolving Lender as a Bankers' Acceptance; or (ii) the existence of any claim, set-off, defence or other right that the applicable Canadian Borrower may have at any time against the holder of a Bankers' Acceptance, a Revolving Lender or any other Person or entity, whether in connection with this Agreement or otherwise. No Canadian Borrower shall enter into any agreement or arrangement of any kind with any Person to whom Bankers' Acceptances have been delivered by which such Canadian Borrower undertakes to replace the Bankers' Acceptances on a continuing basis with other Bankers' Acceptances, nor shall such Canadian Borrower directly or indirectly take, use or provide Bankers' Acceptances as security for loans or advances from any other Person.

(j) Rollover. Any difference between the actual proceeds of a newly issued Bankers' Acceptance and the amount required to pay a maturing Bankers' Acceptance that is being rolled over or the amount required to pay a Canadian Prime Rate Loan that is being converted to a Bankers' Acceptance, shall be paid by the applicable Canadian Borrower to the Administrative Agent from its own resources not later than 11:00 a.m. Toronto, Ontario time on the requested date of such Borrowing, conversion or continuation, or may be advanced as a Canadian Prime Rate Loan if such Canadian Borrower is otherwise entitled to a Loan under the Revolving Facility.

2.05 Swing Line Loans.

(a) Swing Line Facility. Subject to the terms and conditions set forth herein, the Swing Line Lender, in reliance upon the agreements of the other Revolving Lenders set forth in this Section 2.05, may in its sole discretion make loans in Dollars (each such loan, a "Swing Line Loan") to the Borrowers or any of them from time to time on any Business Day during the Availability Period in an aggregate amount not to exceed at any time outstanding the amount of the Swing Line Sublimit, notwithstanding the fact that such Swing Line Loans, when aggregated with the Applicable Percentage of the Outstanding Amount of Revolving Loans and L/C Obligations of the Revolving Lender acting as Swing Line Lender, may exceed the amount of such Lender's Revolving Commitment; provided, however, that (x) after giving effect to any Swing Line Loan, (i) the Total Revolving Outstandings shall not exceed the Aggregate Revolving Commitments, and (ii) the Revolving Credit Exposure of any Lender shall not exceed such Lender's Revolving Commitment, (y) no Borrower shall use the proceeds of any Swing Line Loan to refinance any outstanding Swing Line Loan, and (z) the Swing Line Lender shall not be under any obligation to make any Swing Line Loan if it shall determine (which determination shall be conclusive and binding absent manifest error) that it has, or by such Credit Extension may have, Fronting Exposure. Within the foregoing limits, and subject to the other terms and conditions hereof, each Borrower may borrow under this Section 2.05, prepay under Section 2.06, and reborrow under this Section 2.05. Each Swing Line Loan shall be a Base Rate Loan. Immediately upon the making of a Swing Line Loan, each Revolving Lender shall be deemed to, and hereby irrevocably and unconditionally agrees to, purchase from the Swing Line Lender a risk participation in such Swing Line Loan in an amount equal to the product of such Lender's Applicable Percentage times the amount of such Swing Line Loan.

(b) Borrowing Procedures. Each Swing Line Borrowing shall be made upon the applicable Borrower's irrevocable notice to the Swing Line Lender and the Administrative Agent, which may be given by (A) telephone or (B) by a Swing Line Loan Notice; provided that any telephonic notice must be confirmed promptly by delivery to the Swing line Lender and the Administrative Agent of a Swing Line Loan Notice. Each such Swing Line Loan Notice must be received by the Swing Line Lender and the Administrative Agent not later than 1:00 p.m. on the requested borrowing date, and shall specify (i) the amount to be borrowed, which shall be a minimum principal amount of $100,000, and (ii) the requested borrowing date, which shall be a Business Day. Promptly after receipt by the Swing Line Lender of any telephonic Swing Line Loan Notice, the Swing Line Lender will confirm with the Administrative Agent (by telephone or in writing) that the Administrative Agent has also received such Swing Line Loan Notice and, if not, the Swing Line Lender will notify the Administrative Agent of the contents thereof. Unless the Swing Line Lender has received notice (by telephone or in writing) from the Administrative Agent (including at the request of any Revolving Lender) prior to 2:00 p.m. on the date of the proposed Swing Line Borrowing (A) directing the Swing Line Lender not to make such Swing Line Loan as a result of the limitations set forth in the first proviso to the first sentence of Section 2.05(a), or (B) that one or more of the applicable conditions specified in Article IV is not then satisfied, then, subject to the terms and conditions hereof, the Swing Line Lender will, not later than 3:00 p.m. on the borrowing date specified in such Swing Line Loan Notice, make the amount of its Swing Line Loan available to the applicable Borrower.

(c) Refinancing of Swing Line Loans.

(i) The Swing Line Lender at any time in its sole discretion may request, on behalf of the applicable Borrower (and each Borrower hereby irrevocably authorizes the Swing Line Lender to so request on its behalf), that each Revolving Lender make a Base Rate Loan in an amount equal to such Lender's Applicable Percentage of the amount of Swing Line Loans then outstanding. Such request shall be made in writing (which written request shall be deemed to be a Loan Notice for purposes hereof) and in accordance with the requirements of Section 2.02, without regard to the minimum and multiples specified therein for the principal amount of Revolving Loans that are Base Rate Loans, but subject to the unutilized portion of the Aggregate Revolving Commitments and the conditions set forth in Section 4.02. The Swing Line Lender shall furnish the Company with a copy of the applicable Loan Notice promptly after delivering such notice to the Administrative Agent. Each Revolving Lender shall make an amount equal to its Applicable Percentage of the amount specified in such Loan Notice available to the Administrative Agent in Same Day Funds (and the Administrative Agent may apply Cash Collateral available with respect to the applicable Swing Line Loan) for the account of the Swing Line Lender at the Administrative Agent's Office for Dollar-denominated payments not later than 1:00 p.m. on the day specified in such Loan Notice, whereupon, subject to Section 2.05(c)(ii), each Revolving Lender that so makes funds available shall be deemed to have made a Revolving Loan that is a Base Rate Loan to the applicable Borrower in such amount. The Administrative Agent shall remit the funds so received to the Swing Line Lender.

(ii) If for any reason any Swing Line Loan cannot be refinanced by such a Borrowing of Revolving Loans in accordance with Section 2.05(c)(i), the request for Revolving Loans that are Base Rate Loans submitted by the Swing Line Lender as set forth herein shall be deemed to be a request by the Swing Line Lender that each of the Revolving Lenders fund its risk participation in the relevant Swing Line Loan and each Revolving

Lender's payment to the Administrative Agent for the account of the Swing Line Lender pursuant to Section 2.05(c)(i) shall be deemed payment in respect of such participation.

(iii) If any Revolving Lender fails to make available to the Administrative Agent for the account of the Swing Line Lender any amount required to be paid by such Lender pursuant to the foregoing provisions of this Section 2.05(c) by the time specified in Section 2.05(c)(i), the Swing Line Lender shall be entitled to recover from such Revolving Lender (acting through the Administrative Agent), on demand, such amount with interest thereon for the period from the date such payment is required to the date on which such payment is immediately available to the Swing Line Lender at a rate per annum equal to the applicable Overnight Rate from time to time in effect, plus any administrative, processing or similar fees customarily charged by the Swing Line Lender in connection with the foregoing. If such Revolving Lender pays such amount (with interest and fees as aforesaid), the amount so paid shall constitute such Revolving Lender's Loan included in the relevant Borrowing or funded participation in the relevant Swing Line Loan, as the case may be. A certificate of the Swing Line Lender submitted to any Revolving Lender (through the Administrative Agent) with respect to any amounts owing under this clause (iii) shall be conclusive absent manifest error.

(iv) Each Revolving Lender's obligation to make Revolving Loans or to purchase and fund risk participations in Swing Line Loans pursuant to this Section 2.05(c) shall be absolute and unconditional and shall not be affected by any circumstance, including (A) any setoff, counterclaim, recoupment, defense or other right which such Revolving Lender may have against the Swing Line Lender, any Borrower or any other Person for any reason whatsoever, (B) the occurrence or continuance of a Default, or (C) any other occurrence, event or condition, whether or not similar to any of the foregoing; provided, however, that each Revolving Lender's obligation to make Loans pursuant to this Section 2.05(c) is subject to the conditions set forth in Section 4.02. No such funding of risk participations shall relieve or otherwise impair the obligation of each Borrower to repay Swing Line Loans made to such Borrower, together with interest as provided herein.

(d) Repayment of Participations.

(i) At any time after any Revolving Lender has purchased and funded a risk participation in a Swing Line Loan, if the Swing Line Lender receives any payment on account of such Swing Line Loan, the Swing Line Lender will distribute to such Revolving Lender its Applicable Percentage thereof in the same funds as those received by the Swing Line Lender.

(ii) If any payment received by the Swing Line Lender in respect of principal or interest on any Swing Line Loan is required to be returned by the Swing Line Lender under any of the circumstances described in Section 10.05 (including pursuant to any settlement entered into by the Swing Line Lender in its discretion), each Revolving Lender shall pay to the Swing Line Lender its Applicable Percentage thereof on demand of the Administrative Agent, plus interest thereon from the date of such demand to the date such amount is returned, at a rate per annum equal to the applicable Overnight Rate. The Administrative Agent will make such demand upon the request of the Swing Line Lender. The obligations of the Revolving Lenders under this clause shall survive the payment in full of the Obligations and the termination of this Agreement.

(e) Interest for Account of Swing Line Lender. The Swing Line Lender shall be responsible for invoicing each Borrower for interest on the Swing Line Loans made to such Borrower. Until each Revolving Lender funds its Revolving Loans that are Base Rate Loan or risk participation pursuant to this Section 2.05 to refinance such Lender's Applicable Percentage of any Swing Line Loan, interest in respect of such Applicable Percentage shall be solely for the account of the Swing Line Lender.

(f) Payments Directly to Swing Line Lender. Each Borrower shall make all payments of principal and interest in respect of the Swing Line Loans made to such Borrower directly to the Swing Line Lender.

2.06 Prepayments.

(a) Voluntary Prepayments of Loans.

(i) Revolving Loans and Term Loans. Any Borrower may, upon delivery of a Notice of Loan Prepayment to the Administrative Agent, at any time or from time to time voluntarily prepay Revolving Loans and Term Loans (but not Bankers' Acceptances or B/A Equivalent Loans) in whole or in part without premium or penalty except as set forth in Section 2.06(a)(iii); provided that, unless otherwise agreed by the Administrative Agent, (A) such notice must be received by the Administrative Agent not later than 12:00 noon (x) three (3) Business Days prior to any date of prepayment of Eurocurrency Rate Loans denominated in Dollars, (y) four (4) Business Days (or five (5) Business Days in the case of a prepayment of Loans denominated in Special Notice Currencies) prior to any date of prepayment of Eurocurrency Rate Loans denominated in Alternative Currencies and (z) on the date of prepayment of Base Rate Loans and Canadian Prime Rate Loans; (B) any such prepayment of Eurocurrency Rate Loans shall be in a principal amount of the Dollar Equivalent of $1,000,000 or a whole multiple of the Dollar Equivalent of $500,000 in excess thereof (or, if less, the entire principal amount thereof then outstanding); (C) any prepayment of Base Rate Loans and Canadian Prime Rate Loans shall be in a principal amount of $1,000,000 or a whole multiple of $500,000 in excess thereof (or, if less, the entire principal amount thereof then outstanding); and (D) any prepayment of any of the Term Loans shall be applied to such tranche of the Term Loans as the applicable Borrower making such prepayment shall direct in its sole discretion; provided that, absent such direction any prepayment shall be applied ratably to the Term Loans then outstanding (and to the principal installments thereof in direct order of maturity). Each such notice shall specify the date and amount of such prepayment and the Type(s) of Loans to be prepaid and, if Eurocurrency Rate Loans are to be prepaid, the Interest Period(s) of such Loans. The Administrative Agent will promptly notify each Lender of its receipt of each such notice, and of the amount of such Lender's Applicable Percentage of such prepayment; provided that any such notice delivered by a Borrower may be conditioned upon the effectiveness of other transactions, in which case such notice may be revoked or its effectiveness deferred by such Borrower (by notice to the Administrative Agent on or prior to the specified effective date) if such condition is not satisfied, subject to the payment of breakage costs in accordance with Section 3.05. If such notice is given by a Borrower, such Borrower shall make such prepayment and the payment amount specified in such notice shall be due and payable on the date specified therein. Any prepayment of a Eurocurrency Rate Loan shall be accompanied by all accrued interest on the amount prepaid, together with any additional amounts required pursuant to Section 2.06(a)(iii) and Section 3.05. Subject to Section 2.18, each such

prepayment shall be applied to the Loans of the Lenders in accordance with their respective Applicable Percentages.

(ii) Swing Line Loans. Any Borrower may, upon delivery of a Notice of Loan Prepayment to the Swing Line Lender (with a copy to the Administrative Agent), at any time or from time to time, voluntarily prepay Swing Line Loans in whole or in part without premium or penalty; provided that, unless otherwise agreed to by the Swing Line Lender, (A) such notice must be received by the Swing Line Lender and the Administrative Agent not later than 2:00 p.m. on the date of the prepayment, and (B) any such prepayment shall be in a minimum principal amount of $100,000 or a whole multiple of $100,000 in excess thereof (or, if less, the entire principal thereof then outstanding). Each such notice shall specify the date and amount of such prepayment. If such notice is given by a Borrower, such Borrower shall make such prepayment and the payment amount specified in such notice shall be due and payable on the date specified therein.

(iii) Prepayment Premium. In the event that on or prior to the date that is six (6) months after the Closing Date, (A) a Repricing Event occurs or (B) a Lender holding a portion of the Term B Loan is deemed a Non-Consenting Lender and must assign its Term B Loan pursuant to Section 10.13 in connection with any waiver, amendment or modification that would reduce the effective All-In-Yield in effect with respect to the Term B Loan, then in each case the aggregate principal amount to be prepaid or repaid or assigned, as applicable, will be subject to a prepayment premium in an amount equal to one percent (1.00%) of (x) the principal amount of the Term B Loan that is prepaid (in the case of an optional or mandatory prepayment of the Term B Loan described in clause (a) of the definition of "Repricing Event"), (y) the aggregate outstanding principal amount of the Term B Loan (in the case of an amendment described in clause (b) of the definition of "Repricing Event") or (z) the principal amount of the Term B Loan that is assigned (in the case of the foregoing clause (B)). Such prepayment premium shall be paid by the Company to the Administrative Agent, for the account of the applicable Lenders or such Non-Consenting Lenders, as applicable, on the date of such prepayment or repayment or the effective date of such assignment, as applicable.

(b) Mandatory Prepayments of Loans.

(i) Revolving Commitments.

(A) If for any reason the Total Revolving Outstandings at any time exceed the Aggregate Revolving Commitments then in effect, the Borrowers shall promptly prepay Revolving Loans (other than Bankers' Acceptances) and/or Swing Line Loans and/or Cash Collateralize the L/C Obligations and Bankers' Acceptance Obligations in an aggregate amount equal to such excess; provided, however, that the Borrowers shall not be required to Cash Collateralize the L/C Obligations or Bankers' Acceptance Obligations pursuant to this Section 2.06(b)(i) unless after the prepayment in full of the Revolving Loans and Swing Line Loans the Total Revolving Outstandings exceed the Aggregate Revolving Commitments then in effect.

(B) In the case of Loans and Letters of Credit denominated in an Alternative Currency, the Administrative Agent will at periodic intervals, and may,

at its discretion at other times, recalculate the aggregate Outstanding Amount of all Revolving Loans and L/C Obligations denominated in Alternative Currencies to account for fluctuations in exchange rates affecting such Alternative Currency. Such calculations by the Administrative Agent will be based on the Spot Rate. If, as a result of any such recalculation or otherwise, the Total Revolving Outstandings exceed the Aggregate Revolving Commitments then in effect by more than the Dollar Equivalent of $500,000, the Borrowers will promptly prepay Revolving Loans and/or Swing Line Loans and/or Cash Collateralize the L/C Obligations and Bankers' Acceptance Obligations in an aggregate amount equal to such excess.

(ii) Dispositions and Recovery Events. The Borrowers shall prepay the Loans and/or Cash Collateralize the L/C Obligations and Bankers' Acceptance Obligations as hereafter provided in an aggregate amount equal to one hundred percent (100%) of the Net Cash Proceeds in excess of $50,000,000 during any fiscal year received by the Company or any Restricted Subsidiary from all Dispositions (other than Dispositions permitted by Sections 7.05(a) through (x)) and Recovery Events to the extent such Net Cash Proceeds in excess of $50,000,000 are not reinvested in assets (excluding current assets as classified by IFRS) that are useful or usable in the business of the Company and its Restricted Subsidiaries within three hundred sixty-five (365) days of the date of such Disposition or Recovery Event; provided, however, if any portion of such Net Cash Proceeds are not so reinvested within such 365-day period but within such 365-day period are contractually committed to be reinvested, then upon the termination of such contract or if such Net Cash Proceeds are not so reinvested within five hundred forty-five (545) days of initial receipt, such remaining portion shall constitute Net Cash Proceeds as of the date of such termination or expiry and shall be immediately applied to the prepayment of the Term Loans as set forth in this Section 2.06(b)(ii). Any prepayment pursuant to this clause (ii) shall be applied as set forth in clause (v) below.

(iii) Consolidated Excess Cash Flow. Within ten (10) Business Days after the date that the annual consolidated financial statements of the Company and its Restricted Subsidiaries are required to be delivered pursuant to Section 6.01(a) after the end of each fiscal year ending after the Closing Date (the "Consolidated Excess Cash Flow Prepayment Date"), commencing with the fiscal year ending December 31, 2019, the Company shall prepay (or cause to be prepaid) the Term Loans as hereafter provided in an aggregate amount equal to the difference of (A) the product of Consolidated Excess Cash Flow for such year times (I) fifty percent (50%), if the Consolidated Secured Leverage Ratio as of the end of such fiscal year is equal to or greater than 2.75:1.00 or (II) twenty-five percent (25%), if the Consolidated Secured Leverage Ratio as of the end of such fiscal year is less than 2.75:1.00 but greater than or equal to 2.25:1.00, minus (B) the aggregate amount of optional principal prepayments of Term Loans and optional prepayments of Revolving Loans (to the extent accompanied by a permanent reduction in the Aggregate Revolving Commitments) in each case made pursuant to Section 2.06(a) (1) during such fiscal year (other than any optional prepayments made prior to the Consolidated Excess Cash Flow Prepayment Date for such fiscal year to the extent such optional prepayments were applied to reduce the Consolidated Excess Cash Flow prepayment required under this clause (iii) for the prior fiscal year) or (2) following the end of such fiscal year but prior to the Consolidated Excess Cash Flow Prepayment Date for such fiscal year and, upon the election of the Company by written notice delivered to the Administrative Agent prior to the Consolidated Excess Cash Flow Prepayment Date for such period, applied to reduce the Consolidated Excess Cash Flow

prepayment required under this clause (iii), in each case, except to the extent financed with long-term, non-revolving Indebtedness minus (C) the portion of Consolidated Net Income attributable to any Non-U.S. Subsidiaries (other than Non-U.S. Subsidiaries organized under any jurisdiction of Canada), except to the extent of any cash actually repatriated to the Company or any of its Restricted Subsidiaries that are U.S. Subsidiaries or Non-U.S. Subsidiaries organized under any jurisdiction of Canada; provided, however, that if the Consolidated Secured Leverage Ratio as of the last day of such fiscal year is less than 2.25:1.00, then the Company shall not be required to make any prepayment pursuant to this clause (iii) for such fiscal year. Any prepayment pursuant to this clause (iii) shall be applied as set forth in clause (v) below.

(iv) Debt Issuances. Within one (1) Business Day of receipt by the Company or any Restricted Subsidiary of the Net Cash Proceeds of any Debt Issuance, the Company shall prepay the Loans and/or Cash Collateralize the L/C Obligations and Bankers' Acceptance Obligations as hereafter provided in an aggregate amount equal to one hundred percent (100%) of such Net Cash Proceeds. Any prepayment pursuant to this clause (iv) shall be applied as set forth in clause (v) below.

(v) Application of Mandatory Prepayments. All amounts required to be paid pursuant to this Section 2.06(b) shall be applied as follows:

(A) with respect to all amounts prepaid pursuant to Section 2.06(b)(i), first, ratably to the L/C Borrowings and the Swing Line Loans, second, to the outstanding Revolving Loans, and, third, to Cash Collateralize the Bankers' Acceptance Obligations and the remaining L/C Obligations; and

(B) with respect to all amounts prepaid pursuant to Sections 2.06(b)(ii), (iii) and (iv), first ratably to the Term Loans (initially, to the first eight principal amortization payments scheduled to be made in direct order of maturity and, thereafter, on a *pro rata* basis to the remaining principal amortization payments of the applicable Term Loan), second, ratably to the L/C Borrowings and the Swing Line Loans, third, to the outstanding Revolving Loans, and fourth, to Cash Collateralize the Bankers' Acceptance Obligations and the remaining L/C Obligations (without a commitment reduction thereunder).

Within the parameters of the applications set forth above, prepayments shall be applied first to Base Rate Loans and Canadian Prime Rate Loans and then to Eurocurrency Rate Loans, Bankers' Acceptances and B/A Equivalent Loans in direct order of Interest Period maturities. All prepayments under this Section 2.06(b) shall be subject to Section 3.05, but otherwise without premium or penalty except as set forth in Section 2.06(a)(iii) (solely to the extent such prepayment constitutes a Repricing Event), and shall be accompanied by interest on the principal amount prepaid through the date of prepayment and any additional amounts required pursuant to Section 2.06(a)(iii) (solely to the extent such prepayment constitutes a Repricing Event).

2.07 Termination or Reduction of Commitments. The Company may, upon notice to the Administrative Agent, terminate the Aggregate Revolving Commitments, or from time to time permanently reduce the Aggregate Revolving Commitments; provided that (i) any such notice shall be received by the

Administrative Agent not later than 11:00 a.m. five (5) Business Days prior to the date of termination or reduction, (ii) any such partial reduction shall be in an aggregate amount of $10,000,000 or any whole multiple of $1,000,000 in excess thereof, (iii) the Company shall not terminate or reduce the Aggregate Revolving Commitments if, after giving effect thereto and to any concurrent prepayments hereunder, the Total Revolving Outstandings would exceed the Aggregate Revolving Commitments, and (iv) if, after giving effect to any reduction of the Aggregate Revolving Commitments, the Alternative Currency Sublimit, Canadian Dollar Sublimit, the Letter of Credit Sublimit or the Swing Line Sublimit exceeds the amount of the Aggregate Revolving Commitments, such sublimit shall be automatically reduced by the amount of such excess. The Administrative Agent will promptly notify the Lenders of any such notice of termination or reduction of the Aggregate Revolving Commitments. Subject to clause (iv) of the proviso to the first sentence in this Section 2.07, the amount of any such Aggregate Revolving Commitment reduction shall not be applied to the Alternative Currency Sublimit, the Canadian Dollar Sublimit, the Letter of Credit Sublimit or the Swing Line Sublimit unless otherwise specified by the Company. Any reduction of the Aggregate Revolving Commitments shall be applied to the Commitment of each Lender according to its Applicable Percentage. All fees accrued until the effective date of any termination of the Aggregate Revolving Commitments shall be paid on the effective date of such termination.

2.08 Repayment of Loans.

(a) Revolving Loans. Each Borrower shall repay to the Lenders on the Maturity Date for Revolving Loans the aggregate principal amount of all Revolving Loans made to such Borrower outstanding on such date.

(b) Swing Line Loans. The Company shall repay each Swing Line Loan on the earlier to occur of (i) the date ten (10) Business Days after such Loan is made and (ii) the Maturity Date for Swing Line Loans.

(c) Term B Loan. The Company shall repay the outstanding principal amount of the Term B Loan in quarterly installments of $875,000 commencing on September 30, 2018 and on each December 31, March 31, June 30 and September 30 thereafter with the remaining outstanding balance due and payable on the Maturity Date of the Term B Loan (as such installments may hereafter be adjusted as a result of prepayments made pursuant to Section 2.06 and increases with respect to any increase to the Term B Loan pursuant to Section 2.16), unless accelerated sooner pursuant to Section 8.02.

(d) Incremental Term Loans. The applicable Borrower(s) shall repay any Incremental Term Loan in accordance with the terms of the Incremental Facility Amendment establishing such Incremental Term Loan, in each case subject to the provisions of Section 2.16(i) or Section 2.16(j), as applicable.

2.09 Interest.

(a) Subject to the provisions of clause (b) below, (i) each Eurocurrency Rate Loan shall bear interest on the outstanding principal amount thereof for each Interest Period at a rate per annum equal to the Eurocurrency Rate for such Interest Period plus the Applicable Rate; (ii) each Base Rate Loan shall bear interest on the outstanding principal amount thereof from the applicable borrowing date at a rate per annum equal to the Base Rate plus the Applicable Rate; (iii) each Canadian Prime Rate Loan shall bear interest on the outstanding principal amount thereof from the applicable borrowing date at a rate per annum equal to the Canadian Prime Rate plus the Applicable Rate; and

(iv) each Swing Line Loan shall bear interest on the outstanding principal amount thereof from the applicable borrowing date at a rate per annum equal to the Base Rate plus the Applicable Rate.

(b)

(i) Upon the occurrence and during the continuance of an Event of Default specified in Section 8.01(a), 8.01(f) or 8.01(g), the Borrowers shall pay interest on all outstanding Obligations hereunder at a fluctuating interest rate per annum at all times equal to the Default Rate to the fullest extent permitted by applicable Laws.

(ii) Upon the request of the Required Lenders while any Event of Default arising as a result of a breach of Section 7.11 exists, the Borrowers shall pay interest on the principal amount of all outstanding Obligations hereunder at a fluctuating interest rate per annum at all times equal to the Default Rate to the fullest extent permitted by applicable Laws.

(iii) Accrued and unpaid interest on past due amounts (including interest on past due interest) shall be due and payable upon demand.

(c) Interest on each Loan (other than a Bankers' Acceptance or B/A Equivalent Loan) shall be due and payable in arrears on each Interest Payment Date applicable thereto and at such other times as may be specified herein. Interest hereunder shall be due and payable in accordance with the terms hereof before and after judgment, and before and after the commencement of any proceeding under any Debtor Relief Law.

(d) For the purposes of the Interest Act (Canada), (i) whenever a rate of interest or fee rate hereunder is calculated on the basis of a year (the "deemed year") that contains fewer days than the actual number of days in the calendar year of calculation, such rate of interest or fee rate shall be expressed as a yearly rate by multiplying such rate of interest or fee rate by the actual number of days in the calendar year of calculation and dividing it by the number of days in the deemed year, (ii) the principle of deemed reinvestment of interest shall not apply to any interest calculation hereunder and (iii) the rates of interest stipulated herein are intended to be nominal rates and not effective rates or yields. Each Loan Party hereby irrevocably agrees not to plead or assert, whether by way of defense or otherwise, in any proceeding relating to this Agreement and the other Loan Documents, that the interest payable under this Agreement and the calculation thereof has not been adequately disclosed to it, whether pursuant to section 4 of the Interest Act (Canada) or any other applicable law or legal principle.

2.10 Fees. In addition to certain fees described in subsections (h) and (i) of Section 2.03:

(a) Commitment Fee. The Company shall pay to the Administrative Agent, for the account of each Revolving Lender in accordance with its Applicable Percentage, a commitment fee (the "Commitment Fee") in Dollars equal to the product of (i) the Applicable Rate times (ii) the actual daily amount by which the Aggregate Revolving Commitments exceed the sum of (A) the Outstanding Amount of all Revolving Loans plus (B) the Outstanding Amount of all L/C Obligations, subject to adjustment as provided in Section 2.18. The Commitment Fee shall accrue at all times during the Availability Period (and thereafter so long as any Revolving Loans, Swing Line Loans or L/C Obligations remain outstanding), including at any time during which one or more of the conditions in Article IV is not met, and shall be due and payable quarterly in arrears on the last Business Day of each March, June, September and December, commencing with the first such date to occur after the Closing Date, and on the last day of the Availability Period. The Commitment Fee

shall be calculated quarterly in arrears, and if there is any change in the Applicable Rate during any quarter, the actual daily amount shall be computed and multiplied by the Applicable Rate separately for each period during such quarter that such Applicable Rate was in effect. For purposes of clarification, Swing Line Loans shall not be considered outstanding for purposes of determining the unused portion of the Aggregate Revolving Commitments.

(b) Other Fees.

(i) The Company shall pay to the Arrangers and the Administrative Agent for their own respective accounts, in Dollars, fees in the amounts and at the times specified in the Fee Letter. Such fees shall be fully earned when paid and shall not be refundable for any reason whatsoever.

(ii) The Company shall pay to the Lenders, in Dollars, such fees as shall have been separately agreed upon in writing in the amounts and at the times so specified. Such fees shall be fully earned when paid and shall not be refundable for any reason whatsoever.

2.11 Computation of Interest and Fees.

(a) All computations of interest for Base Rate Loans (including Base Rate Loans determined by reference to the Eurocurrency Rate) and Loans denominated in Canadian Dollars and all computations of B/A Fees and fees under the Fee Letter shall be made on the basis of a year of three hundred sixty-five (365) or three hundred sixty-six (366) days, as the case may be, and actual days elapsed. All other computations of fees and interest shall be made on the basis of a three hundred sixty (360) day year and actual days elapsed (which results in more fees or interest, as applicable, being paid than if computed on the basis of a three hundred sixty-five (365) day year), or, in the case of interest in respect of Loans denominated in Alternative Currencies as to which market practice differs from the foregoing, in accordance with such market practice. Interest shall accrue on each Loan for the day on which the Loan is made, and shall not accrue on a Loan, or any portion thereof, for the day on which the Loan or such portion is paid, provided that any Loan that is repaid on the same day on which it is made shall, subject to Section 2.13(a), bear interest for one day. Each determination by the Administrative Agent of an interest rate or fee hereunder shall be conclusive and binding for all purposes, absent manifest error. With respect to all Non-LIBOR Quoted Currencies, the calculation of the applicable interest rate shall be determined in accordance with market practice.

(b) If, as a result of any restatement of or other adjustment to the financial statements of the Company or for any other reason, the Company or the Lenders determine that (i) the Consolidated Total Leverage Ratio as calculated by the Company as of any applicable date was inaccurate and (ii) a proper calculation of the Consolidated Total Leverage Ratio would have resulted in higher pricing for such period, each Borrower shall immediately and retroactively be obligated to pay to the Administrative Agent for the account of the applicable Lenders or the applicable L/C Issuer, as the case may be, promptly on demand by the Administrative Agent (or, after the occurrence of an actual or deemed entry of an order for relief with respect to any Borrower under the Bankruptcy Code (or any similar provision in any other Debtor Relief Laws), automatically and without further action by the Administrative Agent, any Lender or any L/C Issuer), an amount equal to the excess of the amount of interest and fees that should have been paid for such period over the amount of interest and fees actually paid for such period. This paragraph shall not limit the rights of the Administrative Agent, any Lender or any L/C Issuer, as the case may be, under Section 2.03(c)(iii),

2.03(h) or 2.09(b) or under Article VIII. The Company's obligations under this paragraph shall survive the termination of the Aggregate Commitments and the repayment of all other Obligations hereunder.

2.12 Evidence of Debt.

(a) The Credit Extensions made by each Lender shall be evidenced by one or more accounts or records maintained by such Lender and by the Administrative Agent in the ordinary course of business. The accounts or records maintained by the Administrative Agent and each Lender shall be conclusive absent manifest error of the amount of the Credit Extensions made by the Lenders to the Borrowers and the interest and payments thereon. Any failure to so record or any error in doing so shall not, however, limit or otherwise affect the obligation of the Borrowers hereunder to pay any amount owing with respect to the Obligations. In the event of any conflict between the accounts and records maintained by any Lender and the accounts and records of the Administrative Agent in respect of such matters, the accounts and records of the Administrative Agent shall control in the absence of manifest error. Upon the request of any Lender to a Borrower made through the Administrative Agent, such Borrower shall execute and deliver to such Lender (through the Administrative Agent) a promissory note, which shall evidence such Lender's Loans to such Borrower in addition to such accounts or records. Each such promissory note shall be in the form of Exhibit D (a "Note"). Each Lender may attach schedules to a Note and endorse thereon the date, Type (if applicable), amount, currency and maturity of its Loans and payments with respect thereto.

(b) In addition to the accounts and records referred to in subsection (a) above, each Revolving Lender and the Administrative Agent shall maintain in accordance with its usual practice accounts or records evidencing the purchases and sales by such Revolving Lender of participations in Letters of Credit and Swing Line Loans. In the event of any conflict between the accounts and records maintained by the Administrative Agent and the accounts and records of any Revolving Lender in respect of such matters, the accounts and records of the Administrative Agent shall control in the absence of manifest error.

2.13 Payments Generally; Administrative Agent's Clawback.

(a) General. All payments to be made by a Borrower shall be made free and clear of and without condition or deduction for any counterclaim, defense, recoupment or setoff. Except as otherwise expressly provided herein and except with respect to principal of and interest on Loans denominated in an Alternative Currency, all payments by a Borrower hereunder shall be made to the Administrative Agent, for the account of the respective Lenders to which such payment is owed, at the applicable Administrative Agent's Office in Dollars and in Same Day Funds not later than 2:00 p.m. on the date specified herein. Except as otherwise expressly provided herein, all payments by a Borrower hereunder with respect to principal and interest on Loans denominated in an Alternative Currency shall be made to the Administrative Agent, for the account of the respective Lenders to which such payment is owed, at the applicable Administrative Agent's Office in such Alternative Currency and in Same Day Funds not later than the Applicable Time specified by the Administrative Agent on the dates specified herein. Without limiting the generality of the foregoing, the Administrative Agent may require that any payments due under this Agreement be made in the United States or Canada. If, for any reason, any Borrower is prohibited by any Law from making any required payment hereunder in an Alternative Currency, such Borrower shall make such payment in Dollars in the Dollar Equivalent of the Alternative Currency payment amount. The Administrative Agent will promptly distribute to each applicable Lender its Applicable Percentage (or other

applicable share as provided herein) of such payment in like funds as received by wire transfer to such Lender's Lending Office. All payments received by the Administrative Agent (i) after 2:00 p.m., in the case of payments in Dollars, or (ii) after the Applicable Time specified by the Administrative Agent in the case of payments in an Alternative Currency, shall in each case be deemed received on the next succeeding Business Day and any applicable interest or fee shall continue to accrue. If any payment to be made by any Borrower shall come due on a day other than a Business Day, payment shall be made on the next following Business Day, and such extension of time shall be reflected in computing interest or fees, as the case may be.

(b) Funding by Lenders; Presumption by Administrative Agent. Unless the Administrative Agent shall have received notice from a Lender prior to the proposed date of any Borrowing of Loans (or, in the case of any Borrowing of Base Rate Loans or Canadian Prime Rate Loans, prior to 12:00 noon on the date of such Borrowing) that such Lender will not make available to the Administrative Agent such Lender's share of such Borrowing, the Administrative Agent may assume that such Lender has made such share available on such date in accordance with Section 2.02 (or, in the case of a Borrowing of Base Rate Loans or Canadian Prime Rate Loans, that such Lender has made such share available in accordance with and at the time required by Section 2.02) and may, in reliance upon such assumption, make available to the applicable Borrower a corresponding amount. In such event, if a Lender has not in fact made its share of the applicable Borrowing available to the Administrative Agent, then the applicable Lender and the applicable Borrower severally agree to pay to the Administrative Agent forthwith on demand such corresponding amount in Same Day Funds with interest thereon, for each day from and including the date such amount is made available to such Borrower to but excluding the date of payment to the Administrative Agent, at (A) in the case of a payment to be made by such Lender, the Overnight Rate, plus any administrative, processing or similar fees customarily charged by the Administrative Agent in connection with the foregoing, and (B) in the case of a payment to be made by such Borrower, the interest rate applicable to Base Rate Loans or Canadian Prime Rate Loans or in the case of Alternative Currencies in accordance with such market practice, in each case, as applicable. If such Borrower and such Lender shall pay such interest to the Administrative Agent for the same or an overlapping period, the Administrative Agent shall promptly remit to such Borrower the amount of such interest paid by such Borrower for such period. If such Lender pays its share of the applicable Borrowing to the Administrative Agent, then the amount so paid shall constitute such Lender's Loan included in such Borrowing. Any payment by such Borrower shall be without prejudice to any claim such Borrower may have against a Lender that shall have failed to make such payment to the Administrative Agent.

(i) Payments by Borrowers; Presumptions by Administrative Agent. Unless the Administrative Agent shall have received notice from a Borrower prior to the time at which any payment is due by such Borrower to the Administrative Agent for the account of the Lenders or an L/C Issuer hereunder that such Borrower will not make such payment, the Administrative Agent may assume that such Borrower has made such payment on such date in accordance herewith and may, in reliance upon such assumption, distribute to the Lenders or such L/C Issuer, as the case may be, the amount due. In such event, if such Borrower has not in fact made such payment, then each of the Lenders or such L/C Issuer, as the case may be, severally agrees to repay to the Administrative Agent forthwith on demand the amount so distributed to such Lender or such L/C Issuer, in Same Day Funds with interest thereon, for each day from and including the date such amount is distributed to it to but excluding the date of payment to the Administrative Agent, at the Overnight Rate.

A notice of the Administrative Agent to any Lender or Borrower with respect to any amount owing under this subsection (b) shall be conclusive, absent manifest error.

(c) Failure to Satisfy Conditions Precedent. If any Lender makes available to the Administrative Agent funds for any Loan to be made by such Lender to any Borrower as provided in the foregoing provisions of this Article II, and such funds are not made available to such Borrower by the Administrative Agent because the conditions to the applicable Credit Extension set forth in Article IV are not satisfied or waived in accordance with the terms hereof, the Administrative Agent shall return such funds (in like funds as received from such Lender) to such Lender, without interest.

(d) Obligations of Lenders Several. The obligations of the Lenders hereunder to make Loans (including by accepting Bankers' Acceptances), to fund participations in Letters of Credit and Swing Line Loans and to make payments pursuant to Section 10.04(c) are several and not joint. The failure of any Lender to make any Loan, to fund any such participation or to make any payment under Section 10.04(c) on any date required hereunder shall not relieve any other Lender of its corresponding obligation to do so on such date, and no Lender shall be responsible for the failure of any other Lender to so make its Loan, to purchase its participation or to make its payment under Section 10.04(c).

(e) Funding Source. Nothing herein shall be deemed to obligate any Lender to obtain the funds for any Loan in any particular place or manner or to constitute a representation by any Lender that it has obtained or will obtain the funds for any Loan in any particular place or manner.

2.14 Sharing of Payments by Lenders. If any Lender shall, by exercising any right of setoff or counterclaim or otherwise, obtain payment in respect of any principal of or interest on any of the Loans made by it, or the participations in L/C Obligations or in Swing Line Loans held by it resulting in such Lender's receiving payment of a proportion of the aggregate amount of such Loans or participations and accrued interest thereon greater than its *pro rata* share thereof as provided herein, then the Lender receiving such greater proportion shall (a) notify the Administrative Agent of such fact, and (b) purchase (for cash at face value) participations in the Loans and subparticipations in L/C Obligations and Swing Line Loans of the other Lenders, or make such other adjustments as shall be equitable, so that the benefit of all such payments shall be shared by the Lenders ratably in accordance with the aggregate amount of principal of and accrued interest on their respective Loans and other amounts owing them, provided that:

(i) if any such participations or subparticipations are purchased and all or any portion of the payment giving rise thereto is recovered, such participations or subparticipations shall be rescinded and the purchase price restored to the extent of such recovery, without interest; and

(ii) the provisions of this Section shall not be construed to apply to (x) any payment made by or on behalf of any Borrower pursuant to and in accordance with the express terms of this Agreement (including the application of funds arising from the existence of a Defaulting Lender or Disqualified Institution), (y) the application of Cash Collateral provided for in Section 2.17, or (z) any payment obtained by a Lender as consideration for the assignment of or sale of a participation in any of its Loans or subparticipations in L/C Obligations or Swing Line Loans to any assignee or participant, other than an assignment to the Company or any Subsidiary thereof (as to which the provisions of this Section shall apply).

Each Loan Party consents to the foregoing and agrees, to the extent it may effectively do so under applicable law, that any Lender acquiring a participation pursuant to the foregoing arrangements may exercise against such Loan Party rights of setoff and counterclaim with respect to such participation as fully as if such Lender were a direct creditor of such Loan Party in the amount of such participation.

2.15 Designated Borrowers.

(a) The Company may at any time, upon not less than fifteen (15) Business Days' notice from the Company to the Administrative Agent (or such shorter period as may be agreed by the Administrative Agent in its sole discretion), designate any Restricted Subsidiary of the Company (an "Applicant Borrower") as a Designated Borrower to receive Loans hereunder by delivering to the Administrative Agent (which shall promptly deliver counterparts thereof to each Lender) a duly executed notice and agreement in substantially the form of Exhibit G (a "Designated Borrower Request and Assumption Agreement"). The parties hereto acknowledge and agree that prior to any Applicant Borrower becoming entitled to utilize the credit facilities provided for herein (i) the Administrative Agent and the Lenders that are to provide Commitments and/or Loans in favor of an Applicant Borrower must each agree to such Applicant Borrower becoming a Designated Borrower and (ii) the Administrative Agent and such Lenders shall have received such supporting resolutions, incumbency certificates, opinions of counsel and other documents or information, in form, content and scope reasonably satisfactory to the Administrative Agent, as may be required by the Administrative Agent, and Notes signed by such new Borrowers to the extent any Lender so requires (the requirements in clauses (i) and (ii) hereof, the "Designated Borrower Requirements"). If the Designated Borrower Requirements are met, the Administrative Agent shall send a notice in substantially the form of Exhibit H (a "Designated Borrower Notice") to the Company and the Lenders specifying the effective date upon which the Applicant Borrower shall constitute a Designated Borrower for purposes hereof, whereupon each of the Lenders agrees to permit such Designated Borrower to receive Loans hereunder, on the terms and conditions set forth herein, and each of the parties agrees that such Designated Borrower otherwise shall be a Borrower for all purposes of this Agreement; provided that no Loan Notice or Letter of Credit Application may be submitted by or on behalf of such Designated Borrower until the date five (5) Business Days after such effective date (or such shorter period as agreed by the Administrative Agent in its sole discretion).

(b) Each Subsidiary of the Company that becomes a "Designated Borrower" pursuant to this Section 2.15 hereby irrevocably appoints the Company as its agent for all purposes relevant to this Agreement and each of the other Loan Documents, including (i) the giving and receipt of notices, (ii) the execution and delivery of all documents, instruments and certificates contemplated herein and all modifications hereto, and (iii) the receipt of the proceeds of any Loans made by the Lenders to any such Designated Borrower hereunder. Any acknowledgment, consent, direction, certification or other action which might otherwise be valid or effective only if given or taken by all Borrowers, or by each Borrower acting singly, shall be valid and effective if given or taken only by the Company, whether or not any such other Borrower joins therein. Any notice, demand, consent, acknowledgement, direction, certification or other communication delivered to the Company in accordance with the terms of this Agreement shall be deemed to have been delivered to each Designated Borrower.

(c) The Company may from time to time, upon not less than fifteen (15) Business Days' notice from the Company to the Administrative Agent (or such shorter period as may be agreed by

the Administrative Agent in its sole discretion), terminate a Designated Borrower's status as such, provided that there are no outstanding Loans payable by such Designated Borrower, or other amounts payable by such Designated Borrower on account of any Loans made to it, as of the effective date of such termination. The Administrative Agent will promptly notify the Lenders of any such termination of a Designated Borrower's status.

2.16 Increase in Commitments.

The Borrowers may from time to time add one or more tranches of term loans or increase outstanding tranches of term loans (each an "Incremental Term Facility") and/or increase commitments under any Revolving Facility (each such increase, an "Incremental Revolving Increase"; each Incremental Term Facility and each Incremental Revolving Increase are collectively referred to as "Incremental Facilities") to this Agreement at the option of the Company by an agreement in writing entered into by the Borrowers, the Administrative Agent and each Person (including any existing Lender) that agrees to provide a portion of such Incremental Facility (and, for the avoidance of doubt, shall not require the consent of any other Lender) (each an "Incremental Facility Amendment"); provided that:

(a) the aggregate principal amount of all Incremental Facilities established under this Section 2.16 shall not exceed the sum of:

(i) $150,000,000; plus

(ii) an unlimited amount so long as, in the case of this clause (ii), after giving effect to the relevant Incremental Facility on a Pro Forma Basis, the Consolidated Secured Leverage Ratio does not exceed 2.50:1.00 (assuming the full amount of such Incremental Facility is fully drawn and without "netting" the cash proceeds of such Incremental Facility or any other simultaneous incurrence of debt on the consolidated balance sheet of the Company);

provided that any Incremental Facility may be incurred under either sub-clauses (i) or sub-clause (ii) of this clause (a) as selected by the Company in its sole discretion and if any Incremental Facility is intended to be incurred in part under both sub-clauses (i) and (ii) then the permissibility of the portion of such Incremental Facility to be incurred under sub-clause (ii) shall first be determined without giving effect to the portion of such Incremental Facility incurred under sub-clause (i), but giving full Pro Forma Effect to the use of proceeds of the entire amount of such Incremental Facility;

(b) no Event of Default shall exist on the effective date of any Incremental Facility or would exist after giving effect to any Incremental Facility;

(c) no existing Lender shall be under any obligation to provide any Incremental Facility Commitment and any such decision whether to provide an Incremental Facility Commitment shall be in such Lender's sole and absolute discretion;

(d) each Incremental Facility shall be in an aggregate principal amount of at least $10,000,000 and each Incremental Facility Commitment shall be in a minimum principal amount of at least $1,000,000, in the case of an Incremental Revolving Increase, and at least $1,000,000 in

the case of an Incremental Term Facility (or, in each case, such lesser amounts as the Administrative Agent may agree);

(e) each Person providing an Incremental Facility Commitment shall qualify as an Eligible Assignee;

(f) the Borrowers shall deliver to the Administrative Agent:

(i) a certificate of each Loan Party dated as of the date of such increase signed by a Responsible Officer of such Loan Party (A) certifying and attaching resolutions adopted by the board of directors or equivalent governing body of such Loan Party approving such Incremental Facility and (B) in the case of the Company, certifying that, before and after giving effect to such increase, (1) the representations and warranties of each Loan Party contained in Article V or any other Loan Document, or which are contained in any document furnished at any time under or in connection herewith or therewith, shall be true and correct in all material respects (or, if qualified by materiality or reference to Material Adverse Effect, in all respects) on and as of the date of such increase, except to the extent that such representations and warranties specifically refer to an earlier date, in which case they shall be true and correct in all material respects (or, if qualified by materiality or reference to Material Adverse Effect, in all respects) as of such earlier date, (2) no Default or Event of Default exists and (3) such Incremental Facility or Incremental Facilities have been incurred in compliance with this Agreement;

(ii) such amendments to the Collateral Documents as the Administrative Agent may reasonably request to cause the Collateral Documents to secure the Obligations after giving effect to such Incremental Facility; and

(iii) customary opinions of legal counsel to the Loan Parties, addressed to the Administrative Agent and each Lender (including each Person providing an Incremental Facility Commitment), dated as of the effective date of such Incremental Facility;

(g) the Administrative Agent shall have received documentation from each Person providing a commitment in respect of such requested Incremental Facility or Incremental Facilities (each such commitment, an "Incremental Facility Commitment") evidencing its Incremental Facility Commitment and its obligations under this Agreement in form and substance reasonably acceptable to the Administrative Agent;

(h) in the case of an Incremental Term Facility, the Administrative Agent shall have determined in its reasonable discretion whether such Incremental Term Facility consists of a tranche A term loan (an "Incremental Tranche A Term Facility") or a tranche B term loan (an "Incremental Tranche B Term Facility");

(i) in the case of an Incremental Term Facility that is an Incremental Tranche A Term Facility:

(i) the interest rate, interest rate margins, fees, discount, prepayment premiums, amortization and final maturity date for such Incremental Term Facility shall be as agreed by the Loan Parties and the Lenders providing such Incremental Term Facility; provided that:

(A) the final maturity of such Incremental Term Facility shall not be earlier than the later of (1) the Maturity Date with respect to the Revolving Loans and (2) the final maturity date of any then outstanding Incremental Tranche A Term Loan; and

(B) the Weighted Average Life of such Incremental Term Facility shall not be shorter than the then remaining Weighted Average Life of any then outstanding Incremental Tranche A Term Loan;

(ii) the proceeds of such Incremental Term Facility shall be used for the purposes described in the definitive documentation for such Incremental Term Facility;

(iii) such Incremental Term Facility shall share ratably in any prepayments of the other Term Facilities pursuant to Section 2.06 (or otherwise provide for more favorable prepayment treatment for the then outstanding Term Facilities) and shall have ratable voting rights as the other Term Facilities (or otherwise provide for more favorable voting rights for the then outstanding Term Facilities); and

(iv) if such Incremental Term Facility consists of one or more new tranches of term loans, the other terms thereof, if not consistent with the terms applicable to the Term B Loan, shall be reasonably acceptable to the Administrative Agent;

(j) in the case of an Incremental Term Facility that is an Incremental Tranche B Term Facility:

(i) the interest rate, interest rate margins, fees, discount, prepayment premiums, amortization and final maturity date for such Incremental Term Facility shall be as agreed by the Loan Parties and the Lenders providing such Incremental Term Facility; provided that:

(A) the final maturity of such Incremental Term Facility shall not be earlier than the later of (1) the Maturity Date with respect to the Term B Loan and (2) the final maturity date of any then outstanding Incremental Tranche B Term Loan;

(B) the Weighted Average Life of such Incremental Term Facility shall not be shorter than the then remaining Weighted Average Life of the Term B Loan or any then outstanding Incremental Tranche B Term Loan;

(C) if the All-In-Yield on such Incremental Term Facility exceeds the All-In-Yield on the Term B Loan or any then outstanding Incremental Tranche B Term Facility by more than ½ of one percent (1.00%) per annum, then the Applicable Rate or fees payable by the Borrowers with respect to the Term B Loan and each then outstanding Incremental Tranche B Term Facility shall on the effective date of such Incremental Term Facility be increased to the extent necessary to cause the All-In-Yield on the Term B Loan and each then outstanding Incremental Tranche B Term Facility to be not more than ½ of one percent (1.00%) less than the All-In-Yield on such Incremental Term Facility (such increase to be allocated as reasonably determined by the Administrative Agent in consultation with the Borrowers); provided, that the provisions of this clause (C) shall not apply to any Incremental

Term Facility provided after the first twelve (12) months following the Closing Date;

(ii) the proceeds of such Incremental Term Facility shall be used for the purposes described in the definitive documentation for such Incremental Term Facility;

(iii) such Incremental Term Facility shall share ratably in any prepayments of the Term B Loan and any then outstanding Incremental Tranche B Term Loan pursuant to Section 2.06 (or otherwise provide for more favorable prepayment treatment for the then outstanding Term Facilities) and shall have ratable voting rights as the other Term Facilities (or otherwise provide for more favorable voting rights for the then outstanding Term Facilities); and

(iv) if such Incremental Term Facility consists of one or more new tranches of term loans, the other terms thereof, if not consistent with the terms applicable to the Term B Loan, shall be reasonably acceptable to the Administrative Agent;

(k) in the case of any Incremental Revolving Increase with respect to the Revolving Facility:

(i) such Incremental Revolving Increase shall have the same terms (including interest rate and interest rate margins, provided that, subject to clause (ii) below, such Incremental Revolving Increase may be issued with a utilization fee and/or additional unused fee payable solely to the Lenders under such Incremental Revolving Increase) applicable to the Revolving Facility; and

(ii) the existing Lenders under the Revolving Facility shall on the effective date of such Incremental Revolving Increase make such assignments (which assignments shall not be subject to the requirements set forth in Section 10.06(b)) of the outstanding Revolving Loans and participation interests in Letters of Credit and Swing Line Loans under the Revolving Facility to the Lenders providing such Incremental Revolving Increase and the Administrative Agent may make such adjustments to the Register as are necessary so that, after giving effect to such assignments and adjustments, each Lender under the Revolving Facility (including the Lenders providing such Incremental Revolving Increase) will hold revolving loans and participation interests in Letters of Credit and Swing Line Loans under the Revolving Facility equal to its *pro rata* share thereof; and

(l) the Company shall have delivered to the Administrative Agent a Pro Forma Compliance Certificate demonstrating that after giving effect to the incurrence of such Incremental Facility on a Pro Forma Basis (without "netting" the cash proceeds of such Incremental Facility or any other simultaneous incurrence of debt on the consolidated balance sheet of the Company and assuming, in the case of any Incremental Facility that consists of an Incremental Revolving Increase, the full amount of such Incremental Facility is fully drawn) the Loan Parties would be in Pro Forma Compliance;

provided, further, that the conditions set forth in the foregoing proviso shall be subject to the provisions of Section 1.10 in the case of any Incremental Term Facility used to finance a Limited Condition Acquisition.

The Incremental Facility Commitments and credit extensions thereunder shall constitute Commitments and Credit Extensions under, and shall be entitled to all the benefits afforded by, this Agreement and the other Loan Documents, and shall, without limiting the foregoing, benefit equally and ratably from the Guarantees and security interests created by the Collateral Documents. The Lenders hereby authorize the Administrative Agent to enter into, and the Lenders agree that this Agreement and the other Loan Documents shall be amended by, such Incremental Facility Amendments to the extent (and only to the extent) the Administrative Agent deems necessary in order to establish Incremental Facilities on terms consistent with and/or to effect the provisions of this Section 2.16. This Section 2.16 shall supersede any provisions in Section 10.01 to the contrary. The Administrative Agent shall promptly notify each Lender as to the effectiveness of each Incremental Facility Amendment.

2.17 Cash Collateral.

(a) Certain Credit Support Events. If (i) an L/C Issuer has honored any full or partial drawing request under any Letter of Credit and such drawing has resulted in an L/C Borrowing, (ii) as of the Letter of Credit Expiration Date, any L/C Obligation for any reason remains outstanding, (iii) the Company shall be required to provide Cash Collateral pursuant to Section 2.06 or Section 8.02, or (iv) there shall exist a Defaulting Lender, the Company shall immediately (in the case of clause (iii) above) or within one (1) Business Day (in all other cases) following any request by the Administrative Agent or an L/C Issuer, provide Cash Collateral in an amount not less than the applicable Minimum Collateral Amount (determined in the case of Cash Collateral provided pursuant to clause (iv) above, after giving effect to Section 2.18(a)(iv) and any Cash Collateral provided by the Defaulting Lender). Additionally, if the Administrative Agent notifies the Company at any time that the Outstanding Amount of all L/C Obligations at such time exceeds the Letter of Credit Sublimit then in effect, then, within two (2) Business Days after receipt of such notice, the Company shall provide Cash Collateral for the Outstanding Amount of the L/C Obligations in an amount not less than the amount by which the Outstanding Amount of all L/C Obligations exceeds the Letter of Credit Sublimit.

(b) Grant of Security Interest. The Company, and to the extent provided by any Defaulting Lender, such Defaulting Lender, hereby grants to (and subjects to the control of) the Administrative Agent, for the benefit of the Administrative Agent, each L/C Issuer and the Lenders, and agrees to maintain, a first priority security interest in all such cash, deposit accounts and all balances therein, and all other property so provided as collateral pursuant hereto, and in all proceeds of the foregoing, all as security for the obligations to which such Cash Collateral may be applied pursuant to Section 2.17(c). If at any time the Administrative Agent determines that Cash Collateral is subject to any right or claim of any Person other than the Administrative Agent or an L/C Issuer as herein provided, or that the total amount of such Cash Collateral is less than the Minimum Collateral Amount, the Company will, promptly upon demand by the Administrative Agent, pay or provide to the Administrative Agent additional Cash Collateral in an amount sufficient to eliminate such deficiency. All Cash Collateral (other than credit support not constituting funds subject to deposit) shall be maintained in one or more Controlled Accounts at Bank of America. The Company shall pay on demand therefor from time to time all customary account opening, activity and other administrative fees and charges in connection with the maintenance and disbursement of Cash Collateral.

(c) Application. Notwithstanding anything to the contrary contained in this Agreement, Cash Collateral provided under any of this Section 2.17 or Sections 2.03, 2.06, 2.18 or 8.02 in respect of Letters of Credit shall be held and applied to the satisfaction of the specific L/C Obligations, obligations to fund participations therein (including, as to Cash Collateral provided by a Defaulting Lender, any interest accrued on such obligation) and other obligations for which the Cash Collateral was so provided, prior to any other application of such property as may otherwise be provided for herein.

(d) Release. Cash Collateral (or the appropriate portion thereof) provided to reduce Fronting Exposure or to secure other obligations shall be released to the Person providing such Cash Collateral promptly following (i) the elimination of the applicable Fronting Exposure or other obligations giving rise thereto (including by the termination of Defaulting Lender status of the applicable Lender (or, as appropriate, its assignee following compliance with Section 10.06(b)(vi))) or (ii) the determination by the Administrative Agent and the L/C Issuers that there exists excess Cash Collateral; provided, however, (x) any such release shall be without prejudice to, and any disbursement or other transfer of Cash Collateral shall be and remain subject to, any other Lien conferred under the Loan Documents and the other applicable provisions of the Loan Documents, and (y) the Person providing Cash Collateral and the L/C Issuers may agree that Cash Collateral shall not be released but instead held to support future anticipated Fronting Exposure or other obligations.

2.18 Defaulting Lenders.

(a) Adjustments. Notwithstanding anything to the contrary contained in this Agreement, if any Lender becomes a Defaulting Lender, then, until such time as that Lender is no longer a Defaulting Lender, to the extent permitted by applicable Law:

(i) Waivers and Amendments. Such Defaulting Lender's right to approve or disapprove any amendment, waiver or consent with respect to this Agreement shall be restricted as set forth in the definition of "Required Lenders", "Required Pro Rata Facilities Lenders", "Required Revolving Lenders" and Section 10.01.

(ii) Defaulting Lender Waterfall. Any payment of principal, interest, fees or other amounts received by the Administrative Agent for the account of such Defaulting Lender (whether voluntary or mandatory, at maturity, pursuant to Article VIII or otherwise) or received by the Administrative Agent from a Defaulting Lender pursuant to Section 10.08 shall be applied at such time or times as may be determined by the Administrative Agent as follows: first, to the payment of any amounts owing by such Defaulting Lender to the Administrative Agent hereunder; second, to the payment on a *pro rata* basis of any amounts owing by such Defaulting Lender to the L/C Issuers or Swing Line Lender hereunder; third, to Cash Collateralize the L/C Issuers' Fronting Exposure with respect to such Defaulting Lender in accordance with Section 2.17; fourth, as the Company may request (so long as no Default exists), to the funding of any Loan in respect of which such Defaulting Lender has failed to fund its portion thereof as required by this Agreement, as determined by the Administrative Agent; fifth, if so determined by the Administrative Agent and the Company, to be held in a deposit account and released *pro rata* in order to (x) satisfy such Defaulting Lender's potential future funding obligations with respect to Loans under this Agreement and (y) Cash Collateralize the L/C Issuers' future Fronting Exposure with respect to such Defaulting Lender with respect to future Letters of Credit issued under this Agreement, in

accordance with Section 2.17; sixth, to the payment of any amounts owing to the Lenders, the L/C Issuers or Swing Line Lender as a result of any judgment of a court of competent jurisdiction obtained by any Lender, any L/C Issuer or the Swing Line Lender against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations under this Agreement; seventh, so long as no Default exists, to the payment of any amounts owing to the Company as a result of any judgment of a court of competent jurisdiction obtained by the Company against such Defaulting Lender as a result of such Defaulting Lender's breach of its obligations under this Agreement; and eighth, to such Defaulting Lender or as otherwise directed by a court of competent jurisdiction; provided that if (x) such payment is a payment of the principal amount of any Loans or L/C Borrowings in respect of which such Defaulting Lender has not fully funded its appropriate share, and (y) such Loans were made or the related Letters of Credit were issued at a time when the conditions set forth in Section 4.02 were satisfied or waived, such payment shall be applied solely to pay the Loans of, and L/C Obligations owed to, all Non-Defaulting Lenders on a *pro rata* basis prior to being applied to the payment of any Loans of, or L/C Obligations owed to, such Defaulting Lender until such time as all Loans and funded and unfunded participations in L/C Obligations and Swing Line Loans are held by the Lenders *pro rata* in accordance with the Commitments hereunder without giving effect to Section 2.18(a)(iv). Any payments, prepayments or other amounts paid or payable to a Defaulting Lender that are applied (or held) to pay amounts owed by a Defaulting Lender or to post Cash Collateral pursuant to this Section 2.18(a)(ii) shall be deemed paid to and redirected by such Defaulting Lender, and each Lender irrevocably consents hereto.

(iii) Certain Fees.

(A) No Defaulting Lender shall be entitled to receive any fee payable under Section 2.10(a) for any period during which that Lender is a Defaulting Lender (and the Company shall not be required to pay any such fee that otherwise would have been required to have been paid to that Defaulting Lender).

(B) Each Defaulting Lender shall be entitled to receive Letter of Credit Fees and B/A Fees for any period during which that Lender is a Defaulting Lender only to the extent allocable to its Applicable Percentage of the stated amount of Letters of Credit and Bankers' Acceptances for which it has provided Cash Collateral pursuant to Section 2.17.

(C) With respect to any Letter of Credit Fee or B/A Fee not required to be paid to any Defaulting Lender pursuant to clause (A) or (B) above, the Company shall (x) pay to each Non-Defaulting Lender that portion of any such fee otherwise payable to such Defaulting Lender with respect to such Defaulting Lender's participation in L/C Obligations that has been reallocated to such Non-Defaulting Lender pursuant to clause (iv) below, (y) pay to an L/C Issuer the amount of any such fee otherwise payable to such Defaulting Lender to the extent allocable to such L/C Issuer's Fronting Exposure to such Defaulting Lender, and (z) not be required to pay the remaining amount of any such fee.

(iv) Reallocation of Applicable Percentages to Reduce Fronting Exposure. All or any part of such Defaulting Lender's participation in L/C Obligations and Swing Line Loans shall be reallocated among the Non-Defaulting Lenders in accordance with their

respective Applicable Percentages (calculated without regard to such Defaulting Lender's Commitment) but only to the extent that such reallocation does not cause the aggregate Revolving Credit Exposure of any Non-Defaulting Lender to exceed such Non-Defaulting Lender's Commitment. Subject to Section 10.21, no reallocation hereunder shall constitute a waiver or release of any claim of any party hereunder against a Defaulting Lender arising from that Lender having become a Defaulting Lender, including any claim of a Non-Defaulting Lender as a result of such Non-Defaulting Lender's increased exposure following such reallocation.

(v) Cash Collateral, Repayment of Swing Line Loans. If the reallocation described in clause (a)(iv) above cannot, or can only partially, be effected, the Company shall, without prejudice to any right or remedy available to it hereunder or under applicable Law, (x) first, prepay Swing Line Loans in an amount equal to the Swing Line Lenders' Fronting Exposure and (y) second, Cash Collateralize the L/C Issuers' Fronting Exposure in accordance with the procedures set forth in Section 2.17.

(b) Defaulting Lender Cure. If the Company, the Administrative Agent, Swing Line Lender and the L/C Issuers agree in writing that a Lender is no longer a Defaulting Lender, the Administrative Agent will so notify the parties hereto, whereupon as of the effective date specified in such notice and subject to any conditions set forth therein (which may include arrangements with respect to any Cash Collateral), that Lender will, to the extent applicable, purchase at par that portion of outstanding Loans of the other Lenders or take such other actions as the Administrative Agent may determine to be necessary to cause the Loans and funded and unfunded participations in Letters of Credit and Swing Line Loans to be held on a *pro rata* basis by the Lenders in accordance with their Applicable Percentages (without giving effect to Section 2.18(a)(iv)), whereupon such Lender will cease to be a Defaulting Lender; provided that no adjustments will be made retroactively with respect to fees accrued or payments made by or on behalf of the Company while that Lender was a Defaulting Lender; and provided, further, that except to the extent otherwise expressly agreed by the affected parties, no change hereunder from Defaulting Lender to Lender will constitute a waiver or release of any claim of any party hereunder arising from that Lender's having been a Defaulting Lender.

2.19 Designated Lenders.

Each of the Administrative Agent, each L/C Issuer, the Swing Line Lender and each Lender at its option may make any Credit Extension or otherwise perform its obligations hereunder through any Lending Office (each, a "Designated Lender"); provided that any exercise of such option shall not affect the obligation of such Borrower to repay any Credit Extension in accordance with the terms of this Agreement. Any Designated Lender shall be considered a Lender; provided that in the case of an Affiliate or branch of a Lender, such provisions that would be applicable with respect to Credit Extensions actually provided by such Affiliate or branch of such Lender shall apply to such Affiliate or branch of such Lender to the same extent as such Lender; provided that for the purposes only of voting in connection with any Loan Document, any participation by any Designated Lender in any outstanding Credit Extension shall be deemed a participation of such Lender.

2.20 Joint and Several Liability.

(a) Each U.S. Borrower that is not a Specified U.S. Obligor and each Non-U.S. Borrower that is not a Specified Non-U.S. Borrower shall be jointly and severally liable for the

Obligations regardless of which Borrower actually receives Credit Extensions hereunder or the amount of such Credit Extensions received or the manner in which the Administrative Agent, any L/C Issuer or any Lender accounts for such Credit Extensions on its books and records, provided that the obligations of each such Borrower under the Loan Documents shall be limited to an aggregate amount equal to the largest amount that would not render such obligations subject to avoidance under the Debtor Relief Laws.

(b) Each Non-U.S. Borrower and U.S. Borrower that is a Specified U.S. Obligor shall be jointly and severally liable for the Non-U.S. Obligations regardless of which Borrower actually receives Credit Extensions hereunder or the amount of such Credit Extensions received or the manner in which the Administrative Agent, any L/C Issuer or any Lender accounts for such Credit Extensions on its books and records, provided that the obligations of each such Non-U.S. Borrower under the Loan Documents shall be limited to an aggregate amount equal to the largest amount that would not render such obligations subject to avoidance under the Debtor Relief Laws.

ARTICLE III.
TAXES, YIELD PROTECTION AND ILLEGALITY

3.01 Taxes.

(a) Payments Free of Taxes; Obligation to Withhold; Payments on Account of Taxes.

(i) Any and all payments by or on account of any obligation of any Loan Party under any Loan Document shall be made without deduction or withholding for any Taxes, except as required by applicable Laws. If any applicable Laws (as determined in the good faith discretion of the Administrative Agent or any Loan Party) require the deduction or withholding of any Tax from any such payment by the Administrative Agent or a Loan Party, then the Administrative Agent or such Loan Party shall be entitled to make such deduction or withholding, upon the basis of the information and documentation to be delivered pursuant to clause (e) below.

(ii) If any Loan Party or the Administrative Agent shall be required by the Code to withhold or deduct any Taxes from any payment, then (A) such Loan Party or the Administrative Agent shall withhold or make such deductions as are determined by such Loan Party or the Administrative Agent to be required based upon the information and documentation it has received pursuant to clause (e) below, (B) such Loan Party or the Administrative Agent shall timely pay the full amount withheld or deducted to the relevant Governmental Authority in accordance with applicable Laws, and (C) to the extent that the withholding or deduction is made on account of Indemnified Taxes, the sum payable by the applicable Loan Party shall be increased as necessary so that after any required withholding or the making of all required deductions (including deductions applicable to additional sums payable under this Section 3.01) the applicable Recipient receives an amount equal to the sum it would have received had no such withholding or deduction been made.

(iii) If any Loan Party or the Administrative Agent shall be required by any applicable Laws other than the Code to withhold or deduct any Taxes from any payment, then (A) such Loan Party or the Administrative Agent, as required by such Laws, shall withhold or make such deductions as are determined by it to be required based upon the information and documentation it has received pursuant to clause (e) below, (B) such Loan Party or the Administrative Agent, to the extent required by such Laws, shall timely pay the

full amount withheld or deducted to the relevant Governmental Authority in accordance with such Laws, and (C) to the extent that the withholding or deduction is made on account of Indemnified Taxes, the sum payable by the applicable Loan Party shall be increased as necessary so that after any required withholding or the making of all required deductions (including deductions applicable to additional sums payable under this Section 3.01) the applicable Recipient receives an amount equal to the sum it would have received had no such withholding or deduction been made.

(b) Payment of Other Taxes by the Loan Parties. Without limiting the provisions of clause (a) above, the Loan Parties shall timely pay to the relevant Governmental Authority in accordance with applicable Law, or at the option of the Administrative Agent timely reimburse it for the payment of, any Other Taxes.

(c) Tax Indemnifications.

(i) Each of the Loan Parties shall, and does hereby, jointly and severally indemnify each Recipient, and shall make payment in respect thereof within ten (10) days after demand therefor, for the full amount of any Indemnified Taxes (including Indemnified Taxes imposed or asserted on or attributable to amounts payable under this Section 3.01) payable or paid by such Recipient or required to be withheld or deducted from a payment to such Recipient, and any penalties, interest and reasonable expenses arising therefrom or with respect thereto, whether or not such Indemnified Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to the Company by a Lender or an L/C Issuer (with a copy to the Administrative Agent), or by the Administrative Agent on its own behalf or on behalf of a Lender or an L/C Issuer, shall be conclusive absent manifest error. Each of the Loan Parties shall, and does hereby, jointly and severally indemnify the Administrative Agent, and shall make payment in respect thereof within ten (10) days after demand therefor, for any amount which a Lender or an L/C Issuer for any reason fails to pay indefeasibly to the Administrative Agent as required pursuant to Section 3.01(c)(ii) below; provided, however, that no Loan Party shall have any obligation to indemnify any party hereunder for Indemnified Taxes, Other Taxes or any other liability that arises from such party's own gross negligence or willful misconduct. To the extent that a Loan Party pays an amount to the Administrative Agent pursuant to the preceding sentence (a "Back-Up Indemnity Payment"), then upon request of the Company, the Administrative Agent shall use commercially reasonable efforts to exercise its set-off rights described in the last sentence of clause (c)(ii) below (on behalf of itself or the Loan Parties) to collect the applicable Back-Up Indemnity Payment amount from the applicable Lender or L/C Issuer and shall pay the amount so collected to the Company net of any reasonable expenses incurred by the Administrative Agent in its efforts to collect (through set-off or otherwise) from such Lender or L/C Issuer with respect to clause (c)(ii), below.

(ii) Each Lender and each L/C Issuer shall, and does hereby, severally indemnify, and shall make payment in respect thereof within ten (10) days after demand therefor, (A) the Administrative Agent against any Indemnified Taxes attributable to such Lender or such L/C Issuer (but only to the extent that any Loan Party has not already indemnified the Administrative Agent for such Indemnified Taxes and without limiting the obligation of the Loan Party to do so), (B) the Administrative Agent and the Loan Party, as applicable, against any Taxes attributable to such Lender's failure to comply with the

provisions of Section 10.06(d) relating to the maintenance of a Participant Register and (C) the Administrative Agent and the Loan Party, as applicable, against any Excluded Taxes attributable to such Lender or such L/C Issuer, in each case, that are payable or paid by the Administrative Agent or a Loan Party in connection with any Loan Document, and any reasonable expenses arising therefrom or with respect thereto, whether or not such Taxes were correctly or legally imposed or asserted by the relevant Governmental Authority. A certificate as to the amount of such payment or liability delivered to any Lender by the Administrative Agent shall be conclusive absent manifest error. Each Lender and each L/C Issuer hereby authorizes the Administrative Agent to set off and apply any and all amounts at any time owing to such Lender or such L/C Issuer, as the case may be, under this Agreement or any other Loan Document against any amount due to the Administrative Agent under this clause (ii).

(d) Evidence of Payments. As soon as practicable after any payment of Taxes by any Loan Party to a Governmental Authority as provided in this Section 3.01, the Company shall deliver to the Administrative Agent the original or a certified copy of a receipt issued by such Governmental Authority evidencing such payment, a copy of any return required by Laws to report such payment or other evidence of such payment reasonably satisfactory to the Administrative Agent.

(e) Status of Lenders; Tax Documentation.

(i) Any Lender that is entitled to an exemption from or reduction of withholding Tax with respect to payments made under any Loan Document shall deliver to the Company and the Administrative Agent, at the time or times reasonably requested by the Company or the Administrative Agent, such properly completed and executed documentation prescribed by applicable Law or the taxing authorities of a jurisdiction pursuant to such applicable Law or reasonably requested by the Company or the Administrative Agent as will permit such payments to be made without withholding or at a reduced rate of withholding. In addition, any Lender, if reasonably requested by the Company or the Administrative Agent, shall deliver such other documentation prescribed by applicable Law or reasonably requested by the Company or the Administrative Agent as will enable the Company or the Administrative Agent to determine whether or not such Lender is subject to backup withholding or information reporting requirements. Notwithstanding anything to the contrary in the preceding two sentences, the completion, execution and submission of such documentation (other than such documentation either (A) set forth in Section 3.01(e)(ii)(A), (ii)(B) and (ii)(D) below or (B) required by applicable law other than the Code or the taxing authorities of the jurisdiction pursuant to such applicable law to comply with the requirements for exemption or reduction of withholding tax in that jurisdiction) shall not be required if in the Lender's reasonable judgment such completion, execution or submission would subject such Lender to any material unreimbursed cost or expense or would materially prejudice the legal or commercial position of such Lender.

(ii) Without limiting the generality of the foregoing, in the event that any Borrower is a U.S. Person,

(A) any Lender that is a U.S. Person shall deliver to the Company, such Borrower(s), and the Administrative Agent on or prior to the date on which such Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Company, any such Borrower, or the

Administrative Agent), executed copies of IRS Form W-9 certifying that such Lender is exempt from U.S. federal backup withholding tax;

(B) any Non-U.S. Lender shall, to the extent it is legally entitled to do so, deliver to the Company, such Borrower(s), and the Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Non-U.S. Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Company, any such Borrower, or the Administrative Agent), whichever of the following is applicable:

(1) in the case of a Non-U.S. Lender claiming the benefits of an income tax treaty to which the United States is a party (x) with respect to payments of interest under any Loan Document, executed copies of IRS Form W-8BEN-E (or W-8BEN, as applicable) establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "interest" article of such tax treaty and (y) with respect to any other applicable payments under any Loan Document, IRS Form W-8BEN-E (or W-8BEN, as applicable) establishing an exemption from, or reduction of, U.S. federal withholding Tax pursuant to the "business profits" or "other income" article of such tax treaty;

(2) executed copies of IRS Form W-8ECI;

(3) in the case of a Non-U.S. Lender claiming the benefits of the exemption for portfolio interest under Section 881(c) of the Code, (x) a certificate substantially in the form of Exhibit I-1 to the effect that such Non-U.S. Lender is not a "bank" within the meaning of Section 881(c)(3)(A) of the Code, a "10 percent shareholder" of the Company within the meaning of Section 881(c)(3)(B) of the Code, or a "controlled foreign corporation" described in Section 881(c)(3)(C) of the Code (a "U.S. Tax Compliance Certificate") and (y) executed copies of IRS Form W-8BEN-E (or W-8BEN, as applicable); or

(4) to the extent a Non-U.S. Lender is not the beneficial owner, executed copies of IRS Form W-8IMY, accompanied by IRS Form W-8ECI, IRS Form W-8BEN-E (or W-8BEN, as applicable), a U.S. Tax Compliance Certificate substantially in the form of Exhibit I-2 or Exhibit I-3, IRS Form W-9, and/or other certification documents from each beneficial owner, as applicable; provided that if the Non-U.S. Lender is a partnership and one or more direct or indirect partners of such Non-U.S. Lender are claiming the portfolio interest exemption, such Non-U.S. Lender may provide a U.S. Tax Compliance Certificate substantially in the form of Exhibit I-4 on behalf of each such direct and indirect partner;

(C) any Non-U.S. Lender shall, to the extent it is legally entitled to do so, deliver to the Company, such Borrower(s) and the Administrative Agent (in such number of copies as shall be requested by the recipient) on or prior to the date on which such Non-U.S. Lender becomes a Lender under this Agreement (and from time to time thereafter upon the reasonable request of the Company, any such

Borrower or the Administrative Agent), executed copies of any other form prescribed by applicable law as a basis for claiming exemption from or a reduction in U.S. federal withholding Tax, duly completed, together with such supplementary documentation as may be prescribed by applicable law to permit the Company, such Borrower(s) or the Administrative Agent to determine the withholding or deduction required to be made; and

(D) if a payment made to a Lender under any Loan Document would be subject to U.S. federal withholding Tax imposed by FATCA if such Lender were to fail to comply with the applicable reporting requirements of FATCA (including those contained in Section 1471(b) or 1472(b) of the Code, as applicable), such Lender shall deliver to the Company, such Borrower(s) and the Administrative Agent at the time or times prescribed by Law and at such time or times reasonably requested by the Company or the Administrative Agent such documentation prescribed by applicable Law (including as prescribed by Section 1471(b)(3)(C)(i) of the Code) and such additional documentation reasonably requested by the Company, any such Borrower or the Administrative Agent as may be necessary for the Company, such Borrower(s) and the Administrative Agent to comply with their obligations under FATCA and to determine that such Lender has complied with such Lender's obligations under FATCA or to determine the amount to deduct and withhold from such payment. Solely for purposes of this clause (D), "FATCA" shall include any amendments made to FATCA after the date of this Agreement.

(iii) Each Lender agrees that if any form or certification it previously delivered pursuant to this Section 3.01 expires or becomes obsolete or inaccurate in any respect, it shall update such form or certification or promptly notify the Company, such Borrower(s) and the Administrative Agent in writing of its legal inability to do so.

(f) Treatment of Certain Refunds. Unless required by applicable Laws, at no time shall the Administrative Agent have any obligation to file for or otherwise pursue on behalf of a Lender or an L/C Issuer, or have any obligation to pay to any Lender or any L/C Issuer, any refund of Taxes withheld or deducted from funds paid for the account of such Lender or such L/C Issuer, as the case may be. If any Recipient determines, in its sole discretion exercised in good faith, that it has received a refund of any Taxes as to which it has been indemnified by any Loan Party or with respect to which any Loan Party has paid additional amounts pursuant to this Section 3.01, it shall pay to such Loan Party an amount equal to such refund (but only to the extent of indemnity payments made, or additional amounts paid, by a Loan Party under this Section 3.01 with respect to the Taxes giving rise to such refund), net of all out-of-pocket expenses (including Taxes) incurred by such Recipient, and without interest (other than any interest paid by the relevant Governmental Authority with respect to such refund), provided that each Loan Party, upon the request of the Recipient, agrees to repay the amount paid over to such Loan Party (plus any penalties, interest or other charges imposed by the relevant Governmental Authority) to the Recipient in the event the Recipient is required to repay such refund to such Governmental Authority. Notwithstanding anything to the contrary in this subsection, in no event will the applicable Recipient be required to pay any amount to such Loan Party pursuant to this subsection the payment of which would place the Recipient in a less favorable net after-Tax position than such Recipient would have been in if the Tax subject to indemnification and giving rise to such refund had not been deducted, withheld or otherwise imposed and the indemnification payments or additional amounts with respect to such Tax had never been paid. This subsection shall not be construed to require any Recipient to make available its tax returns (or any

other information relating to its taxes that it deems confidential) to any Loan Party or any other Person.

(g) Survival. Each party's obligations under this Section 3.01 shall survive the resignation or replacement of the Administrative Agent or any assignment of rights by, or the replacement of, a Lender or an L/C Issuer, the termination of the Commitments and the repayment, satisfaction or discharge of all other Obligations.

3.02 Illegality.

(a) If any Lender determines in good faith that any Change in Law has made it unlawful, or that any Governmental Authority has asserted that it is unlawful, for any Lender or its applicable Lending Office to perform any of its obligations hereunder or make, maintain or fund or charge interest with respect to any Credit Extension or to determine or charge interest rates based upon the Eurocurrency Rate or B/A Discount Rate, or any Governmental Authority has imposed material restrictions on the authority of such Lender to purchase or sell, or to take deposits of, Dollars or any Alternative Currency in the applicable interbank market, then, on notice thereof by such Lender to the Company through the Administrative Agent, (i) any obligation of such Lender to issue, make, maintain, fund or charge interest with respect to any such Credit Extension or to make or continue Eurocurrency Rate Loans in the affected currency or currencies or, in the case of Eurocurrency Rate Loans in Dollars or Canadian Dollars, to convert Base Rate Loans or Canadian Prime Rate Loans to Eurocurrency Rate Loans, shall be suspended, and (ii) if such notice asserts the illegality of such Lender making or maintaining Base Rate Loans the interest rate on which is determined by reference to the Eurocurrency Rate component of the Base Rate, the interest rate on which Base Rate Loans of such Lender shall, if necessary to avoid such illegality, be determined by the Administrative Agent without reference to the Eurocurrency Rate component of the Base Rate, in each case until such Lender notifies the Administrative Agent and the Company that the circumstances giving rise to such determination no longer exist. Upon receipt of such notice, (x) the Borrowers shall, upon demand from such Lender (with a copy to the Administrative Agent), prepay or, if applicable and such Loans are denominated in Dollars, convert all Eurocurrency Rate Loans of such Lender to Base Rate Loans (the interest rate on which Base Rate Loans of such Lender shall, if necessary to avoid such illegality, be determined by the Administrative Agent without reference to the Eurocurrency Rate component of the Base Rate), or if applicable and such Loans are denominated in Canadian Dollars, convert all Eurocurrency Rate Loans of such Lender to Canadian Prime Rate Loans, in each case, either on the last day of the Interest Period therefor, if such Lender may lawfully continue to maintain such Eurocurrency Rate Loans to such day, or immediately, if such Lender may not lawfully continue to maintain such Eurocurrency Rate Loans and (y) if such notice asserts the illegality of such Lender determining or charging interest rates based upon the Eurocurrency Rate, the Administrative Agent shall during the period of such suspension compute the Base Rate applicable to such Lender without reference to the Eurocurrency Rate component thereof until the Administrative Agent is advised in writing by such Lender that it is no longer illegal for such Lender to determine or charge interest rates based upon the Eurocurrency Rate. Upon any such prepayment or conversion, the Borrowers shall also pay accrued interest on the amount so prepaid or converted.

(b) If, in any applicable jurisdiction, the Administrative Agent, any L/C Issuer or any Lender or any Designated Lender determines in good faith that any Change in Law has made it unlawful, or that any Governmental Authority has asserted that it is unlawful, for the Administrative Agent, any L/C Issuer or any Lender or its applicable Designated Lender to (i) perform any of its obligations hereunder or under any other Loan Document, (ii) to fund or maintain its participation

in any Loan or Letter of Credit or (iii) issue, make, maintain, fund or charge interest or fees with respect to any Credit Extension to a Non-U.S. Borrower, such Person shall promptly notify the Administrative Agent, then, upon the Administrative Agent notifying the Company, and until such notice by such Person is revoked, any obligation of such Person to issue, make, maintain, fund or charge interest or fees with respect to any such Credit Extension shall be suspended, and to the extent required by applicable Law, cancelled. Upon receipt of such notice, the Loan Parties shall, (A) repay that Person's participation in the Loans or other applicable Obligations on the last day of the Interest Period for each Loan or other Obligation occurring after the Administrative Agent has notified the Company or, if earlier, the date specified by such Person in the notice delivered to the Administrative Agent (being no earlier than the last day of any applicable grace period permitted by applicable Law), (B) to the extent applicable to an L/C Issuer, Cash Collateralize that portion of applicable L/C Obligations comprised of the aggregate undrawn amount of Letters of Credit to the extent not otherwise Cash Collateralized and (C) take all reasonable actions requested by such Person to mitigate or avoid such illegality.

3.03 Inability to Determine Rates.

(a) If in connection with any request for a Eurocurrency Rate Loan, a Bankers' Acceptance or a B/A Equivalent Loan or a conversion to or continuation thereof, (i) the Administrative Agent determines in good faith (A) deposits (whether in Dollars, Canadian Dollars or an Alternative Currency) are not being offered to banks in the applicable interbank market for such currency, or Bankers' Acceptances are no longer being traded in the Canadian market for Bankers' Acceptances, for the applicable amount and Interest Period of such Eurocurrency Rate Loan, Bankers' Acceptance or a B/A Equivalent Loan, for the applicable amount and Interest Period of such Eurocurrency Rate Loan, Bankers' Acceptance or a B/A Equivalent Loan, (B) adequate and reasonable means do not exist for determining the Eurocurrency Rate or B/A Discount Rate, as applicable, for any requested Interest Period with respect to a proposed Eurocurrency Rate Loan (whether in Dollars or in Alternative Currency), Bankers' Acceptance or B/A Equivalent Loan, or in connection with an existing or proposed Base Rate Loan, (C) for any reason a market for Bankers' Acceptances does not exist at any time or the Lenders cannot for other reasons, after reasonable efforts, readily sell Bankers' Acceptances or perform their other obligations under this Agreement with respect to Bankers' Acceptances, or (D) a fundamental change has occurred in the foreign exchange or interbank markets with respect to such Alternative Currency (including changes in national or international financial, political or economic conditions or currency exchange rates or exchange controls) (in each case with respect to clause (i), "Impacted Loans") or (ii) the Administrative Agent or the Required Lenders determine that for any reason the Eurocurrency Rate or B/A Discount Rate, as applicable, for any requested Interest Period with respect to a proposed Eurocurrency Rate Loan, Bankers' Acceptance or a B/A Equivalent Loan does not adequately and fairly reflect the cost to such Lenders of funding such Eurocurrency Rate Loan, Bankers' Acceptance or a B/A Equivalent Loan, as applicable, the Administrative Agent will promptly so notify the Company and each Lender. Thereafter, (x) the obligation of the Lenders to make or maintain Eurocurrency Rate Loans in the affected currency or currencies or to sell Bankers' Acceptances shall be suspended, (to the extent of the affected Eurocurrency Rate Loans or Interest Periods), and (y) in the event of a determination described in the preceding sentence with respect to the Eurocurrency Rate component of the Base Rate, the utilization of the Eurocurrency Rate component in determining the Base Rate shall be suspended, in each case until the Administrative Agent (upon the instruction of the Required Lenders) revokes such notice. Upon receipt of such notice, the Company may revoke any pending request for a Borrowing of, conversion to or continuation of Eurocurrency Rate Loans in the affected currency or currencies (to the extent of the affected Eurocurrency Rate Loans or

Interest Periods), Bankers' Acceptances or B/A Equivalent Loans, or, failing that, will be deemed to have converted such request into a request for a Borrowing of Base Rate Loans in Dollars (or, if applicable, Canadian Prime Rate Loans) in the amount specified therein.

(b) Notwithstanding the foregoing, if the Administrative Agent has made the determination described in clause (a)(i) of this Section 3.03, the Administrative Agent, in consultation with the Company and the Required Lenders, may establish an alternative interest rate for the Impacted Loans, in which case, such alternative rate of interest shall apply with respect to the Impacted Loans until (i) the Administrative Agent revokes the notice delivered with respect to the Impacted Loans under clause (a)(i) of this Section 3.03, (ii) the Administrative Agent or the Required Lenders notify the Administrative Agent and the Company that such alternative interest rate does not adequately and fairly reflect the cost to such Lenders of funding the Impacted Loans, or (ii) any Lender determines that any Change in Law has made it unlawful, or that any Governmental Authority has asserted that it is unlawful, for such Lender or its applicable Lending Office to make, maintain or fund Loans whose interest is determined by reference to such alternative rate of interest or to determine or charge interest rates based upon such rate or any Governmental Authority has imposed material restrictions on the authority of such Lender to do any of the foregoing and provides the Administrative Agent and the Company written notice thereof.

(c) Notwithstanding anything contained in this Article III to the contrary, a Lender shall not be entitled to exercise the rights under Section 3.02 to the extent such Lender is not generally exercising such rights against other similarly situated borrowers under similar circumstances.

3.04 Increased Costs; Reserves on Eurocurrency Rate Loans.

(a) Increased Costs Generally. If any Change in Law shall:

(i) impose, modify or deem applicable any reserve, special deposit, compulsory loan, insurance charge or similar requirement against assets of, deposits with or for the account of, or credit extended or participated in by, any Lender (except any reserve requirement contemplated by Section 3.04(e)) or any L/C Issuer;

(ii) subject any Recipient to any Taxes (other than (A) Indemnified Taxes, (B) Taxes described in clauses (b) through (e) of the definition of Excluded Taxes and (C) Connection Income Taxes) on its loans, loan principal, letters of credit, commitments, or other obligations, or its deposits, reserves, other liabilities or capital attributable thereto; or

(iii) impose on any Lender or any L/C Issuer or the applicable interbank market any other condition, cost or expense affecting this Agreement or Eurocurrency Rate Loans made by such Lender or any Letter of Credit or participation therein;

and the result of any of the foregoing shall be to increase the cost to such Lender of making, converting to, continuing or maintaining any Loan (or of maintaining its obligation to make any such Loan), or to increase the cost to such Lender or such L/C Issuer of participating in, issuing or maintaining any Letter of Credit (or of maintaining its obligation to participate in or to issue any Letter of Credit), or to reduce the amount of any sum received or receivable by such Lender or such L/C Issuer hereunder (whether of principal, interest or any other amount) then, upon request of such Lender or such L/C Issuer, in each case in

an amount deemed by such Lender or such L/C Issuer to be material, the Company will pay (or cause the applicable Designated Borrower to pay) to such Lender or such L/C Issuer, as the case may be, such additional amount or amounts as will compensate such Lender or such L/C Issuer, as the case may be, for such additional costs incurred or reduction suffered, provided that the Borrowers shall not be required to compensate a Lender or the L/C Issuer pursuant to this Section 3.04(a) for any additional amounts incurred more than ninety (90) days prior to the date that such Lender or the L/C Issuer notifies the Borrowers of the Change in Law giving rise to such additional amounts and of such Lender's or the L/C Issuer's intention to claim compensation therefor; provided that, if the Change in Law giving rise to such additional amounts is retroactive, then such 90-day period referred to above shall be extended to include the period of retroactive effect thereof.

(b) Capital Requirements. If any Lender or any L/C Issuer determines that any Change in Law affecting such Lender or such L/C Issuer or any Lending Office of such Lender or such Lender's or such L/C Issuer's holding company, if any, regarding capital or liquidity requirements has or would have the effect of reducing the rate of return on such Lender's or such L/C Issuer's capital or on the capital of such Lender's or such L/C Issuer's holding company, if any, as a consequence of this Agreement, the Commitments of such Lender or the Loans made by, or participations in Letters of Credit or Swing Line Loans held by, such Lender, or the Letters of Credit issued by such L/C Issuer, to a level below that which such Lender or such L/C Issuer or such Lender's or such L/C Issuer's holding company could have achieved but for such Change in Law (taking into consideration such Lender's or such L/C Issuer's policies and the policies of such Lender's or such L/C Issuer's holding company with respect to capital adequacy), in each case in an amount deemed by such Lender or such L/C Issuer to be material, then from time to time the Company will pay (or cause the applicable Designated Borrower to pay) to such Lender or such L/C Issuer, as the case may be, such additional amount or amounts as will compensate such Lender or such L/C Issuer or such Lender's or such L/C Issuer's holding company for any such reduction suffered.

(c) Certificates for Reimbursement. A certificate of a Lender or an L/C Issuer (i) setting forth in reasonable detail the amount or amounts necessary to compensate such Lender or such L/C Issuer or its holding company, as the case may be, as specified in clauses (a) or (b) of this Section 3.04 and (ii) setting forth in reasonable detail the manner in which such amount was deferred, which shall be conclusive absent manifest error, and shall be delivered to the Company. The Company shall pay (or cause the applicable Designated Borrower to pay) such Lender or such L/C Issuer, as the case may be, the amount shown as due on any such certificate within ten (10) days after receipt thereof. Notwithstanding anything contained in this Article III to the contrary, a Lender shall not be entitled to any compensation pursuant to Section 3.04 to the extent such Lender is not generally imposing such charges or requesting such compensation from other similarly situated borrowers under similar circumstances.

(d) Delay in Requests. Failure or delay on the part of any Lender or any L/C Issuer to demand compensation pursuant to the foregoing provisions of this Section 3.04 shall not constitute a waiver of such Lender's or such L/C Issuer's right to demand such compensation, provided that no Borrower shall be required to compensate a Lender or an L/C Issuer pursuant to the foregoing provisions of this Section 3.04 for any increased costs incurred or reductions suffered more than nine (9) months prior to the date that such Lender or such L/C Issuer, as the case may be, notifies the Company of the Change in Law giving rise to such increased costs or reductions and of such

Lender's or such L/C Issuer's intention to claim compensation therefor (except that, if the Change in Law giving rise to such increased costs or reductions is retroactive, then the nine-month period referred to above shall be extended to include the period of retroactive effect thereof).

(e) Additional Reserve Requirements. The Company shall pay (or cause the applicable Designated Borrower to pay) to each Lender, (i) as long as such Lender shall be required to maintain reserves with respect to liabilities or assets consisting of or including Eurocurrency funds or deposits (currently known as "Eurocurrency liabilities"), additional interest on the unpaid principal amount of each Eurocurrency Rate Loan equal to the actual costs of such reserves allocated to such Loan by such Lender (as determined by such Lender in good faith, which determination shall be conclusive), and (ii) as long as such Lender shall be required to comply with any reserve ratio requirement or analogous requirement of any central banking or financial regulatory authority imposed in respect of the maintenance of the Commitments or the funding of the Eurocurrency Rate Loans, such additional costs (expressed as a percentage per annum and rounded upwards, if necessary, to the nearest five decimal places) equal to the actual costs allocated to such Commitment or Loan by such Lender (as determined by such Lender in good faith, which determination shall be conclusive), which shall be due and payable on each date on which interest is payable on such Loan, provided the Company shall have received at least ten (10) days' prior notice (with a copy to the Administrative Agent) of such additional interest or costs from such Lender. If a Lender fails to give notice ten (10) days prior to the relevant Interest Payment Date, such additional interest or costs shall be due and payable ten (10) days from receipt of such notice.

3.05 Compensation for Losses. The Company shall compensate (or cause the applicable Designated Borrower to compensate) such Lender for, and hold such Lender harmless from, any loss, cost or expense incurred by it as a result of:

(a) any continuation, conversion, payment or prepayment of any Loan other than a Base Rate Loan or Canadian Prime Rate Loan on a day other than the last day of the Interest Period for such Loan (whether voluntary, mandatory, automatic, by reason of acceleration, or otherwise);

(b) any failure by any Borrower (for a reason other than the failure of such Lender to make a Loan) to prepay, borrow, continue or convert any Loan other than a Base Rate Loan or Canadian Prime Rate Loan on the date or in the amount notified by the Company or the applicable Designated Borrower;

(c) any failure by any Borrower to make payment of any Loan or drawing under any Letter of Credit (or interest due thereon) denominated in an Alternative Currency on its scheduled due date or any payment thereof in a different currency; or

(d) any assignment of a Eurocurrency Rate Loan, Bankers' Acceptance or B/A Equivalent Loan on a day other than the last day of the Interest Period therefor as a result of a request by the Company pursuant to Section 10.13;

including any foreign exchange losses and any loss or expense arising from the liquidation or reemployment of funds obtained by it to maintain such Loan, from fees payable to terminate the deposits from which such funds were obtained or from the performance of any foreign exchange contract, but in any event, excluding loss of anticipated profit. The Company will (or will cause the applicable Borrower to), within ten (10) Business Days after the Company's (or applicable

Borrower's) receipt of a certificate of the type described in Section 3.04(c), pay such Lender such additional amounts as will compensate such Lender for such losses, costs and expenses.

For purposes of calculating amounts payable by the Company (or the applicable Designated Borrower) to the Lenders under this Section 3.05, each Lender shall be deemed to have funded each Eurocurrency Rate Loan made by it at the Eurocurrency Rate for such Loan by a matching deposit or other borrowing in the interbank market for such currency for a comparable amount and for a comparable period, whether or not such Eurocurrency Rate Loan was in fact so funded.

3.06 Mitigation Obligations; Replacement of Lenders.

(a) Designation of a Different Lending Office. If any Lender requests compensation under Section 3.04, or requires any Borrower to pay any Indemnified Taxes or additional amounts to any Lender, any L/C Issuer, or any Governmental Authority for the account of any Lender or any L/C Issuer pursuant to Section 3.01, or if any Lender gives a notice pursuant to Section 3.02, then at the request of the Company such Lender or such L/C Issuer shall, as applicable, use reasonable efforts to designate a different Lending Office for funding or booking its Loans hereunder or to assign its rights and obligations hereunder to another of its offices, branches or affiliates, if, in the judgment of such Lender or such L/C Issuer, such designation or assignment (i) would eliminate or reduce amounts payable pursuant to Section 3.01 or 3.04, as the case may be, in the future, or eliminate the need for the notice pursuant to Section 3.02, as applicable, and (ii) in each case, would not subject such Lender or such L/C Issuer, as the case may be, to any unreimbursed cost or expense and would not otherwise be disadvantageous to such Lender or such L/C Issuer, as the case may be. The Company hereby agrees to pay (or cause the applicable Designated Borrower to pay) all reasonable costs and expenses incurred by any Lender or any L/C Issuer in connection with any such designation or assignment.

(b) Replacement of Lenders. If any Lender requests compensation under Section 3.04, or if any Borrower is required to pay any Indemnified Taxes or additional amounts to any Lender or any Governmental Authority for the account of any Lender pursuant to Section 3.01 and, in each case, such Lender has declined or is unable to designate a different lending office in accordance with Section 3.06(a), the Company may replace such Lender in accordance with Section 10.13.

3.07 Successor LIBOR.

Notwithstanding anything to the contrary in this Agreement or any other Loan Documents (including Section 10.01 hereof), if the Administrative Agent determines (which determination shall be conclusive absent manifest error), or the Company or the Required Lenders notify the Administrative Agent (with, in the case of the Required Lenders, a copy to the Company) that the Company or Required Lenders (as applicable) have determined, that:

(a) adequate and reasonable means do not exist for ascertaining LIBOR for the applicable currency for any requested Interest Period because the LIBOR Screen Rate for the applicable currency is not available or published on a current basis and such circumstances are unlikely to be temporary; or

(b) the administrator of the LIBOR Screen Rate for the applicable currency or a Governmental Authority having jurisdiction over the Administrative Agent has made a public statement identifying a specific date after which LIBOR for the applicable currency or the LIBOR

Screen Rate for the applicable currency shall no longer be made available, or used for determining the interest rate of loans denominated in the applicable currency (such specific date, the "Scheduled Unavailability Date"), or

(c) syndicated loans currently being executed, or that include language similar to that contained in this Section, are being executed or amended (as applicable) to incorporate or adopt a new benchmark interest rate to replace LIBOR for the applicable currency,

then, reasonably promptly after such determination by the Administrative Agent or receipt by the Administrative Agent of such notice, as applicable, the Administrative Agent and the Company may amend this Agreement to replace LIBOR for the applicable currency with an alternate benchmark rate (including any mathematical or other adjustments to the benchmark (if any) incorporated therein), giving due consideration to any evolving or then-existing convention for similar syndicated credit facilities denominated in the applicable currency for such alternative benchmarks (any such proposed rate, a "LIBOR Successor Rate"), together with any proposed LIBOR Successor Rate Conforming Changes and any such amendment shall become effective at 5:00 p.m. on the fifth Business Day after the Administrative Agent shall have posted such proposed amendment to all Lenders and the Company unless, prior to such time, Lenders comprising the Required Lenders have delivered to the Administrative Agent written notice that such Required Lenders do not accept such amendment.

If no LIBOR Successor Rate has been determined and the circumstances under clause (a) above exist or the Scheduled Unavailability Date has occurred (as applicable), the Administrative Agent will promptly so notify the Company and each Lender. Thereafter, (x) the obligation of the Lenders to make or maintain Eurocurrency Rate Loans in the applicable currency shall be suspended (to the extent of the affected Eurocurrency Rate Loans or Interest Periods), and (y) if the applicable currency is Dollars, then the Eurocurrency Rate component shall no longer be utilized in determining the Base Rate. Upon receipt of such notice, the applicable Borrower may revoke any pending request for a Borrowing of, conversion to or continuation of Eurocurrency Rate Loans denominated in the applicable currency (to the extent of the affected Eurocurrency Rate Loans or Interest Periods) or, failing that, will be deemed to have converted such request into a request for a Borrowing of Base Rate Loans (subject to the foregoing clause (y)) in the amount specified therein.

Notwithstanding anything else herein, any definition of LIBOR Successor Rate shall provide that in no event shall such LIBOR Successor Rate be less than zero for purposes of this Agreement.

3.08 Survival. All obligations of the Loan Parties under this Article III shall survive termination of the Aggregate Commitments, repayment of all other Obligations hereunder, resignation of the Administrative Agent and the Facility Termination Date.

ARTICLE IV.

CONDITIONS PRECEDENT TO CREDIT EXTENSIONS

4.01 Conditions of Initial Credit Extension. The obligation of each L/C Issuer and each Lender to make its initial Credit Extension hereunder is subject to satisfaction of the following conditions precedent:

(a) The Administrative Agent's receipt of the following, each of which shall be originals or telecopies (followed promptly by originals) unless otherwise specified, each properly executed by a Responsible Officer of the signing Loan Party, each dated the Closing Date (or, in the case of certificates of governmental officials, a recent date before the Closing Date) and each in form and substance reasonably satisfactory to the Administrative Agent and each of the Lenders:

(i) executed counterparts of this Agreement and each other Loan Document;

(ii) as to each Borrower, a Note executed by such Borrower in favor of each Lender requesting Notes;

(iii) searches of filings made under the UCC, the PPSA, the Bank Act (Canada) or other applicable Law, in each case in the jurisdiction of formation of each Loan Party and each other jurisdiction reasonably deemed appropriate by the Administrative Agent;

(iv) such UCC and PPSA financing statements or similar documents required under any other applicable Law in the name of each Loan Party for each appropriate jurisdiction as is necessary, in the Administrative Agent's reasonable discretion, to perfect the Administrative Agent's security interest in the Collateral;

(v) all certificates evidencing any certificated Equity Interests pledged to the Administrative Agent pursuant to the Security Agreements, together with duly executed in blank, undated stock powers attached thereto (unless, with respect to the pledged Equity Interests of any Non-U.S. Subsidiary, such stock powers are deemed unnecessary by the Administrative Agent in its reasonable discretion under the law of the jurisdiction of organization of such Person);

(vi) searches of ownership of, and Liens on, United States and Canadian intellectual property registrations and applications of each Loan Party in the appropriate governmental offices;

(vii) duly executed notices of grant of security interest in the form required by the Security Agreements as are necessary, in the Administrative Agent's reasonable discretion, to perfect the Administrative Agent's security interest in the United States and Canadian intellectual property registrations and applications of the Loan Parties;

(viii) such certificates of resolutions or other action, incumbency certificates and/or other certificates of Responsible Officers of each Loan Party as the Administrative Agent may reasonably require evidencing the identity, authority and capacity of each Responsible Officer thereof authorized to act as a Responsible Officer in connection with this Agreement and the other Loan Documents to which such Loan Party is a party;

(ix) such documents and certifications as the Administrative Agent may reasonably require to evidence that each Loan Party is duly organized or formed, and that each of the Borrowers and the Restricted Subsidiaries is validly existing and in good standing in its jurisdiction of organization or formation;

(x) a favorable opinion of each of (A) Arnold & Porter Kaye Scholer LLP, U.S. counsel to the Loan Parties, (B) Blake, Cassels & Graydon LLP, Canadian counsel to the Loan Parties and (C) local counsel to the Loan Parties in each other jurisdiction for which

the Administrative Agent has requested a legal opinion, in each case addressed to the Administrative Agent and each Lender, as to such matters concerning the Loan Parties and the Loan Documents as the Administrative Agent may reasonably request;

(xi) a certificate signed by a Responsible Officer of the Company certifying (A) that the conditions specified in Sections 4.01(b), 4.01(c), 4.02(a) and 4.02(b) have been satisfied and (B) that there has been no event or circumstance since the date of the Audited Financial Statements that has had or could be reasonably expected to have, either individually or in the aggregate, a Material Adverse Effect;

(xii) a certificate signed by the chief financial officer of the Company certifying that the Company and its Subsidiaries are Solvent on a consolidated basis after giving effect to the Credit Extensions to be made hereunder on the Closing Date;

(xiii) a perfection certificate in form and substance reasonably satisfactory to the Administrative Agent and signed by a Responsible Officer of the Company;

(xiv) evidence reasonably satisfactory to the Administrative Agent that all insurance required to be maintained pursuant to the Loan Documents has been obtained and is in effect; and

(xv) copies of (A) the audited consolidated balance sheets of the Company and its Subsidiaries for the fiscal years ended December 31, 2015, 2016 and 2017, and the related consolidated statements of operations, comprehensive income, changes in equity and cash flows for such fiscal years of the Company and its Subsidiaries, including the notes thereto, (B) unaudited consolidated financial statements of the Company and its Subsidiaries for each fiscal quarter ending on or after March 31, 2018 and at least sixty (60) days prior to the Closing Date, including balance sheets and statements of income or operations, shareholders' equity and cash flows (the "Interim Financial Statements") and annual projections for the Company and its Subsidiaries for the five (5) full fiscal years ending after the Closing Date.

(b) Substantially concurrently herewith, all obligations under the Existing Credit Agreement shall have been repaid in full (other than contingent indemnification obligations for which no claim or demand has yet been made), all commitments thereunder shall have been terminated and all Liens securing the same shall have been released (or arrangements satisfactory to the Administrative Agent for such release shall have been made).

(c) There shall not exist any action, suit, investigation or proceeding pending or, to the knowledge of the Company or any other Loan Party, threatened in writing in any court or before any arbitrator or governmental authority that would reasonably be expected to have a Material Adverse Effect.

(d) The Administrative Agent and the Lenders shall have completed due diligence of the Loan Parties and their respective Subsidiaries in scope, and with results, reasonably satisfactory to the Administrative Agent and the Lenders, including OFAC, FCPA and Corruption of Foreign Public Officials Act (Canada).

(e) The Administrative Agent and the Lenders shall have received all documentation and other information with respect to each Loan Party requested in writing at least five (5) Business

Days prior to the Closing Date by the Administrative Agent that any Lender determines is required by regulatory authorities under applicable Law, including without limitation the PATRIOT Act, the Canadian AML Acts and applicable U.S. and Canadian law regarding anti-money laundering, anti-terrorist financing, government sanction and "know your customer" matters.

(f) At least three (3) Business Days prior to the Closing Date, any Borrower that qualifies as a "legal entity customer" under the Beneficial Ownership Regulation shall have delivered to each Lender that so requests a Beneficial Ownership Certification in relation to such Borrower.

(g) Unless waived by the Administrative Agent, the Company shall have paid (i) all fees and expenses required to be paid on the Closing Date pursuant to the Fee Letter or other writing between or among the Company and any lender(s) and (ii) all fees, charges and disbursements of counsel to the Administrative Agent (directly to such counsel if requested by the Administrative Agent) to the extent invoiced at least three (3) Business Days prior to the Closing Date, plus such additional amounts of such fees, charges and disbursements as shall constitute its reasonable estimate of such fees, charges and disbursements incurred or to be incurred by it through the closing proceedings and as shall be identified in the invoice provided at least three (3) Business Days prior to the Closing Date (provided that such estimate shall not thereafter preclude a final settling of accounts between the Company and the Administrative Agent).

Without limiting the generality of the provisions of the last paragraph of Section 9.03, for purposes of determining compliance with the conditions specified in this Section 4.01, each Lender that has signed this Agreement shall be deemed to have consented to, approved or accepted or to be satisfied with, each document or other matter required thereunder to be consented to or approved by or acceptable or satisfactory to a Lender unless the Administrative Agent shall have received notice from such Lender prior to the proposed Closing Date specifying its objection thereto.

4.02 Conditions to all Credit Extensions. The obligation of each Lender to honor any Request for Credit Extension (including a Request for Credit Extension relating to an advance under an Incremental Facility but excluding a Loan Notice requesting only a conversion of Loans to the other Type or a continuation of Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans) is subject to the following conditions precedent:

(a) The representations and warranties of (i) the Borrowers contained in Article V and (ii) each Loan Party contained in each other Loan Document, or which are contained in any document furnished at any time under or in connection herewith or therewith, shall be true and correct in all material respects (or, if qualified by materiality or reference to Material Adverse Effect, in all respects) on and as of the date of such Credit Extension, except to the extent that such representations and warranties specifically refer to an earlier date, in which case they shall be true and correct in all material respects (or, if qualified by materiality or reference to Material Adverse Effect, in all respects) as of such earlier date, and except that for purposes of this Section 4.02, the representations and warranties contained in clauses (a) and (b) of Section 5.05 shall be deemed to refer to the most recent statements furnished pursuant to clauses (a) and (b), respectively, of Section 6.01.

(b) No Default or Event of Default shall exist, or would result from such proposed Credit Extension or from the application of the proceeds thereof.

(c) The Administrative Agent and, if applicable, the applicable L/C Issuer(s) or the Swing Line Lender shall have received a Request for Credit Extension in accordance with the requirements hereof.

(d) If the applicable Borrower is a Designated Borrower, then the conditions of Section 2.15 to the designation of such Borrower as a Designated Borrower shall have been met to the satisfaction of the Administrative Agent.

(e) In the case of a Credit Extension to be denominated in an Alternative Currency, such currency remains an Eligible Currency.

(f) There shall be no restriction, limitation, prohibition or material impediment imposed under Law or by any Governmental Authority as to the proposed Credit Extension or the repayment thereof or as to rights created under any Loan Document or as to application of the proceeds of the realization of any such rights.

Notwithstanding anything to the contrary contained in this Agreement, the conditions set forth in clauses (a) and (b) of this Section 4.02 shall be subject to the provisions of Section 1.10 in the case of any Incremental Term Facility used to finance a Limited Condition Acquisition.

Each Request for Credit Extension (other than a Loan Notice requesting only a conversion of Loans to the other Type or a continuation of Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans) submitted by any Borrower shall be deemed to be a representation and warranty that the conditions specified in Sections 4.02(a) and (b) have been satisfied on and as of the date of the applicable Credit Extension.

ARTICLE V.

REPRESENTATIONS AND WARRANTIES

Each Loan Party jointly and severally represents and warrants to the Administrative Agent and the Lenders that:

5.01 Existence, Qualification and Power. Each Loan Party and each Restricted Subsidiary (a) is (i) duly organized or formed, (ii) validly existing and (iii) in good standing (to the extent applicable) under the Laws of the jurisdiction of its incorporation or organization, (b) has all requisite power and authority and all requisite governmental licenses, authorizations, consents and approvals to (i) own or lease its assets and carry on its business and (ii) execute, deliver and perform its obligations under the Loan Documents to which it is a party, and (c) is duly qualified and is licensed and (to the extent applicable) in good standing under the Laws of each jurisdiction where its ownership, lease or operation of properties or the conduct of its business requires such qualification or license; except in each case referred to in clause (b)(i) or (c), to the extent that failure to do so would not reasonably be expected to have a Material Adverse Effect.

5.02 Authorization; No Contravention. The execution, delivery and performance by each Loan Party of each Loan Document to which such Person is party, (a) have been duly authorized by all necessary corporate or other organizational action, and (b) do not and will not (i) contravene the terms of any of such Person's Organization Documents; (ii) conflict with or result in any breach or contravention of, or the creation of any Lien (other than Liens under the Loan Documents) under, or require any payment to be made under (A) any material Contractual Obligation to which such Person is a party or affecting such Person or the

properties of such Person or any Restricted Subsidiary or (B) any material order, injunction, writ or decree of any Governmental Authority or any arbitral award to which such Person or its property is subject; or (iii) violate any material Law.

5.03 Governmental Authorization; Other Consents. No material approval, consent, exemption, authorization, or other material action by, or material notice to, or material filing with, any Governmental Authority or any other Person is necessary or required in connection with the execution, delivery or performance by, or enforcement against, any Loan Party of this Agreement or any other Loan Document other than (a) those that have already been obtained and are in full force and effect, (b) filings to perfect the Liens created by the Collateral Documents and (c) any filing required to release Liens securing the Existing Credit Agreement.

5.04 Binding Effect. This Agreement has been, and each other Loan Document, when delivered hereunder, will have been, duly executed and delivered by each Loan Party that is party thereto. This Agreement constitutes, and each other Loan Document when so delivered will constitute, a legal, valid and binding obligation of such Loan Party, enforceable against each Loan Party that is party thereto in accordance with its terms, except to the extent that the enforceability thereof may be limited by applicable Debtor Relief Laws or by general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law).

5.05 Financial Statements; No Material Adverse Effect.

(a) The Audited Financial Statements (i) were prepared in accordance with IFRS consistently applied throughout the period covered thereby, except as otherwise expressly noted therein; (ii) fairly present in all material respects the financial condition of the Company and its Subsidiaries as of the date thereof and their results of operations for the period covered thereby in accordance with IFRS consistently applied throughout the period covered thereby, except as otherwise expressly noted therein; and (iii) show all material indebtedness and other liabilities, direct or contingent, of the Company and its Subsidiaries as of the date thereof, including liabilities for taxes, material commitments and Indebtedness.

(b) The Interim Financial Statements (i) were prepared in accordance with IFRS consistently applied throughout the period covered thereby, except as otherwise expressly noted therein, and (ii) fairly present in all material respects the financial condition of the Company and its Subsidiaries as of the date thereof and their results of operations for the period covered thereby, subject, in the case of clauses (i) and (ii), to the absence of footnotes and to normal year-end audit adjustments and (iii) show all material indebtedness and other liabilities, direct or contingent, of the Company and its consolidated Subsidiaries as of the date of such financial statements, including liabilities for taxes, material commitments and Indebtedness.

(c) Since the date of the Audited Financial Statements, there has been no event or circumstance, either individually or in the aggregate, that has had or would reasonably be expected to have a Material Adverse Effect.

5.06 Litigation. There are not any actions, suits or proceedings at law or in equity or by or before any Governmental Authority now pending or, to the knowledge of the Company, threatened (and reasonably likely to be commenced) in writing against the Company or any of its Restricted Subsidiaries or any property or rights of the Company or any of its Restricted Subsidiaries as to which there is a reasonable likelihood of an adverse determination and which, if adversely determined, would individually or in the aggregate result in a Material Adverse Effect.

5.07 No Default. Neither any Loan Party nor any Restricted Subsidiary thereof is in default under or with respect to any Contractual Obligation that could, either individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. No Default has occurred and is continuing or would result from the consummation of the transactions contemplated by this Agreement or any other Loan Document.

5.08 Ownership of Property; Liens. Each Loan Party and each Restricted Subsidiary has good record and marketable title in fee simple (or similar concept under the Law of any applicable jurisdiction) to, or valid leasehold interests (or similar concept under the Law of any applicable jurisdiction) in, all real property necessary or used in the ordinary conduct of its business, except for such defects in title as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The property of the Loan Parties and the Restricted Subsidiaries is subject to no Liens, other than Permitted Liens.

5.09 Environmental Compliance. The Loan Parties and their Restricted Subsidiaries conduct in the ordinary course of business a review of the effect of existing Environmental Laws and claims alleging potential liability or responsibility for violation of any Environmental Law on their respective businesses, operations and properties, and as a result thereof the Company has reasonably concluded that such Environmental Laws and claims would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

5.10 Insurance. The properties of the Company and the Restricted Subsidiaries are insured with financially sound and reputable insurance companies not Affiliates of the Company, in such amounts, with such deductibles and covering such risks as are customarily carried by companies engaged in similar businesses and owning similar properties in localities where the applicable Loan Party operates.

5.11 Taxes. The Company and the Restricted Subsidiaries have filed all federal, state, provincial and territorial income tax returns and other tax returns and reports required to be filed, except where such failure to file would not reasonably be likely to have a Material Adverse Effect, and have paid all federal, state, provincial and territorial income and other taxes, assessments, fees and other governmental charges levied or imposed upon them or their properties, income or assets otherwise due and payable, except those which are being contested in good faith by appropriate proceedings diligently conducted and for which adequate reserves have been provided in accordance with IFRS or in respect of which such failure to pay would not reasonably be likely to have a Material Adverse Effect. To the knowledge of the Company and its Restricted Subsidiaries, there is no proposed Tax assessment against the Company or any Restricted Subsidiary that would, if made, have a Material Adverse Effect. Neither the Company nor any Restricted Subsidiary is party to any tax sharing agreement.

5.12 ERISA and Canadian Pension Plan Compliance.

(a) Each Plan is in compliance in all material respects with the applicable provisions of ERISA, the Code and other federal or state laws. Each Pension Plan that is intended to be a qualified plan under Section 401(a) of the Code has received a favorable determination letter from the IRS to the effect that the form of such Plan is qualified under Section 401(a) of the Code and the trust related thereto has been determined by the IRS to be exempt from federal income tax under Section 501(a) of the Code, or an application for such a letter is currently being processed by the IRS. To the best knowledge of the Company, nothing has occurred that would prevent or cause the loss of such tax-qualified status.

(b) There are no pending or, to the best knowledge of the Company, threatened claims, actions or lawsuits, or action by any Governmental Authority, with respect to any Plan that would

reasonably be expected to have a Material Adverse Effect. There has been no prohibited transaction or violation of the fiduciary responsibility rules with respect to any Plan that has resulted or would reasonably be expected to result in a Material Adverse Effect.

(c) (i) Other than as would not reasonably be expected to result in a Material Adverse Effect, (i) no ERISA Event has occurred, and neither the Company nor, to the knowledge of the Borrowers, any ERISA Affiliate is aware of any fact, event or circumstance that would reasonably be expected to constitute or result in an ERISA Event with respect to any Pension Plan; (ii) the Company and, to the knowledge of the Borrowers, each ERISA Affiliate has met all applicable requirements under the Pension Funding Rules in respect of each Pension Plan, and no waiver of the minimum funding standards under the Pension Funding Rules has been applied for or obtained; (iii) as of the most recent valuation date for any Pension Plan, the funding target attainment percentage (as defined in Section 430(d)(2) of the Code) is sixty percent (60%) or higher and neither the Company nor, to the knowledge of the Borrowers, any ERISA Affiliate knows of any facts or circumstances that would reasonably be expected to cause the funding target attainment percentage for any such plan to drop below sixty percent (60%) as of the most recent valuation date; (iv) neither the Company nor, to the knowledge of the Borrowers any ERISA Affiliate has incurred any liability to the PBGC other than for the payment of premiums, and there are no premium payments which have become due that are unpaid; (v) neither the Company nor any ERISA Affiliate has engaged in a transaction that could be subject to Section 4069 or Section 4212(c) of ERISA; and (vi) no Pension Plan has been terminated by the plan administrator thereof nor by the PBGC, and no event or circumstance has occurred or exists that would reasonably be expected to cause the PBGC to institute proceedings under Title IV of ERISA to terminate any Pension Plan.

(d) As of the Closing Date none of the Borrowers is or will be using "plan assets" (within the meaning of 29 CFR § 2510.3-101, as modified by Section 3(42) of ERISA) of one or more Benefit Plans in connection with the Loans, the Letters of Credit or the Commitments.

(e) (i) Each Canadian Pension Plan is in compliance in all material respects with the applicable provisions of all applicable Laws and (ii) each Canadian Pension Plan has received a confirmation of registration from the Canada Revenue Agency and, to the best knowledge of the Company, nothing has occurred which would prevent, or cause the loss of, such registration. Each Loan Party and each Subsidiary has made all required contributions to each Canadian Pension Plan.

(f) There are no pending or, to the best knowledge of the Company, threatened claims, actions or lawsuits, or action by any Governmental Authority, with respect to any Canadian Pension Plan that could reasonably be expected to have a Material Adverse Effect. There has been no violation of fiduciary duty with respect to any Canadian Pension Plan that has resulted or would reasonably be expected to result in a Material Adverse Effect.

(g) No Loan Party or Subsidiary maintains, contributes to, or has any liability or contingent liability with respect to, a Canadian Defined Benefit Pension Plan.

5.13 Subsidiaries; Equity Interests. Set forth on Schedule 5.13 is a complete and accurate list as of the Closing Date of each Subsidiary, together with (a) such Subsidiary's jurisdiction of organization, (b) the number of shares of each class of Equity Interests of such Subsidiary outstanding, (c) the number and percentage of each class of outstanding shares of such Subsidiary owned (directly or indirectly) by the Company or any Subsidiary and (d) an indication as to whether such Subsidiary is a Restricted Subsidiary or an Unrestricted Subsidiary, an Excluded Subsidiary (and, if so, the type (e.g., an Immaterial Subsidiary)

of such Excluded Subsidiary), a CFC Holdco and/or a CFC. The outstanding Equity Interests of each Restricted Subsidiary are validly issued, fully paid and non-assessable (to the extent applicable) and are owned by a Loan Party in the amounts specified on Schedule 5.13 free and clear of all Liens other than the Liens created pursuant to the applicable Collateral Documents and inchoate and other non-consensual Permitted Liens.

5.14 Margin Regulations; Investment Company Act.

(a) No Loan Party is engaged or will engage, principally or as one of its important activities, in the business of purchasing or carrying margin stock (within the meaning of Regulation U issued by the FRB), or extending credit for the purpose of purchasing or carrying margin stock and the Credit Extensions hereunder will not be used to purchase or carry margin stock in violation of Regulation U or to extend credit to others for the purpose of purchasing or carrying margin stock or for any purpose that would violate the provisions of Regulation X issued by the FRB, as in effect from time to time.

(b) None of the Company, any Person Controlling the Company, or any Restricted Subsidiary is or is required to be registered as an "investment company" under the Investment Company Act of 1940.

5.15 Disclosure. No report, financial statement, certificate or other written information furnished (other than projected financial information and information of a general economic or industry-specific nature) by or on behalf of any Loan Party to the Administrative Agent or any Lender in connection with the transactions contemplated hereby and the negotiation of this Agreement or delivered hereunder or under any other Loan Document (in each case, as modified or supplemented by other information so furnished), when taken as a whole, contains any material misstatement of fact or omits to state any material fact necessary to make the statements therein not materially misleading in light of the circumstances under which they were made; provided that, with respect to projected financial information, the Company represents only that such projected financial information were prepared in good faith based upon assumptions believed to be reasonable at the time and estimates as of the date of preparation (it being understood and agreed that such projections are as to future events and are not to be viewed as facts and are subject to significant uncertainties and contingencies, many of which are beyond the control of the Company and its Subsidiaries, that no assurance can be given that any particular projection will be realized, that actual results during the period or periods covered by any such projected financial information may differ significantly from the projected results and such differences may be material, and that such projected financial information are not a representation by the Company or any of its Subsidiaries that such projections will be achieved. As of the Closing Date, to the knowledge of the Company the information included in the Beneficial Ownership Certification, if applicable, is true and correct in all respects.

5.16 Compliance with Laws. Each Loan Party and each Restricted Subsidiary is in compliance in all material respects with the requirements of all applicable Laws and all orders, writs, injunctions and decrees applicable to it or to its properties, except in such instances in which (a) such requirement of Law or order, writ, injunction or decree is being contested in good faith by appropriate proceedings diligently conducted or (b) the failure to comply therewith, either individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect.

5.17 Taxpayer Identification Number; Other Identifying Information. The true and correct U.S. taxpayer identification number of the Initial U.S. Borrower and each Designated Borrower that is a U.S. Subsidiary and a party hereto on the Closing Date is set forth on Schedule 10.02. The true and correct

unique corporate or other identification number of each Canadian Borrower and each Designated Borrower that is a Non-U.S. Subsidiary and a party hereto on the Closing Date that has been issued by its jurisdiction of organization and the name of such jurisdiction are set forth on Schedule 5.17.

5.18 Casualty, Etc. As of the Closing Date, neither the businesses nor the properties of any Loan Party or any of its Restricted Subsidiaries are affected by any fire, explosion, accident, strike, lockout or other labor dispute, drought, storm, hail, earthquake, embargo, act of God or of the public enemy or other casualty (whether or not covered by insurance) that, either individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect.

5.19 Solvency. The Company and its Restricted Subsidiaries, on a consolidated basis, are Solvent.

5.20 Intellectual Property; Licenses, Etc. The Company and its Restricted Subsidiaries own, or possess the right to use, all of the trademarks, service marks, trade names, copyrights, patents, patent rights, franchises, licenses and other intellectual property rights (collectively, "IP Rights") that are reasonably necessary for the operation of their respective businesses except where and to the extent any lack of ownership or possession would not reasonably be expected to have a Material Adverse Effect, without conflict with the rights of any other Person except where and to the extent any such conflict would not reasonably be expected to have a Material Adverse Effect. To the knowledge of the Company, no slogan or other advertising device, product, process, method, substance, part or other material now employed, or now contemplated to be employed, by the Company or any Loan Party infringes upon any rights held by any other Person that would reasonably be expected to have a Material Adverse Effect. No claim or litigation regarding any of the foregoing is pending or, to the knowledge of the Borrowers, threatened in writing (and reasonably likely to be commenced), which, either individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect.

5.21 Labor Matters. Except as set forth on Schedule 5.21, there are no collective bargaining agreements or Multiemployer Plans covering the employees of the Company or any Restricted Subsidiary as of the Closing Date and neither the Company nor any Restricted Subsidiary has suffered any material strikes, walkouts, work stoppages or other labor difficulty in the three (3) years preceding the Closing Date.

5.22 OFAC. Neither the Company, nor any of its Subsidiaries, nor, to the knowledge of the Company and its Subsidiaries, any director, officer, employee, agent, affiliate or representative thereof, is an individual or entity that is, or is owned or controlled by any individual or entity that is (i) currently the subject or target of any Sanctions, (ii) included on OFAC's List of Specially Designated nationals, the Canadian Sanctions List, HMT's Consolidated List of Financial Sanctions Targets and the Investment Ban List, or any similar list enforced by any other relevant sanctions authority or (iii) located, organized or resident in a Designated Jurisdiction. The Loan Parties have instituted and maintained policies and procedures designed to promote and achieve compliance with the foregoing.

5.23 Anti-Corruption Laws.

To the extent applicable, the Company and its Subsidiaries have conducted their businesses in compliance in all material respects with the United States Foreign Corrupt Practices Act of 1977, the Corruption of Foreign Public Officials Act (Canada), the UK Bribery Act 2010, and, to the extent applicable, other similar anti-corruption legislation in other jurisdictions and have instituted and maintained policies and procedures designed to promote and achieve compliance with such laws.

5.24 Collateral Documents.

The Collateral Documents create valid security interests in, and Liens on, the Collateral purported to be covered thereby, which security interests and Liens are currently (or, upon delivery of Collateral to the Administrative Agent and/or when the appropriate filings or other actions required by the applicable Collateral Document or by applicable law have been filed or taken, will be) perfected security interests and Liens (to the extent such security interests and Liens are required to be perfected under the terms of the Collateral Documents) to the extent such security interests and Liens can be perfected by such delivery, filings and actions, prior to all other Liens other than Permitted Liens.

5.25 Representations as to Non-U.S. Obligors.

Each of the Company and each Non-U.S. Obligor represents and warrants to the Administrative Agent and the Lenders that:

(a) Such Non-U.S. Obligor is subject to civil and commercial Laws with respect to its obligations under this Agreement and the other Loan Documents to which it is a party (collectively as to such Non-U.S. Obligor, the "Applicable Non-U.S. Obligor Documents"), and the execution, delivery and performance by such Non-U.S. Obligor of the Applicable Non-U.S. Obligor Documents constitute and will constitute private and commercial acts and not public or governmental acts. Neither such Non-U.S. Obligor nor any of its property has any immunity from jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) under the laws of the jurisdiction in which such Non-U.S. Obligor is organized and existing in respect of its obligations under the Applicable Non-U.S. Obligor Documents.

(b) The Applicable Non-U.S. Obligor Documents are in proper legal form under the Laws of the jurisdiction in which such Non-U.S. Obligor is organized and existing for the enforcement thereof against such Non-U.S. Obligor under the Laws of such jurisdiction, and to ensure the legality, validity, enforceability, priority or admissibility in evidence of the Applicable Non-U.S. Obligor Documents. It is not necessary to ensure the legality, validity, enforceability, priority or admissibility in evidence of the Applicable Non-U.S. Obligor Documents that the Applicable Non-U.S. Obligor Documents be filed, registered or recorded with, or executed or notarized before, any court or other authority in the jurisdiction in which such Non-U.S. Obligor is organized and existing or that any registration charge or stamp or similar tax be paid on or in respect of the Applicable Non-U.S. Obligor Documents or any other document, except for (i) any such filing, registration, recording, execution or notarization as has been or will promptly be made or is not required to be made until the Applicable Non-U.S. Obligor Document or any other document is sought to be enforced and (ii) any charge or tax as has been or will be timely paid.

(c) There is no tax, levy, impost, duty, fee, assessment or other governmental charge, or any deduction or withholding, imposed by any Governmental Authority in or of the jurisdiction in which such Non-U.S. Obligor is organized and existing on or by virtue of the execution or delivery of the Applicable Non-U.S. Obligor Documents, except as has been disclosed to the Administrative Agent.

(d) The execution, delivery and performance of the Applicable Non-U.S. Obligor Documents executed by such Non-U.S. Obligor are, under applicable foreign exchange control regulations of the jurisdiction in which such Non-U.S. Obligor is organized and existing, not subject to any notification or authorization except (i) such as have been made or obtained or (ii) such as

cannot be made or obtained until a later date (provided that any notification or authorization described in clause (ii) shall be made or obtained as soon as is reasonably practicable).

5.26 EEA Financial Institutions.

No Loan Party is an EEA Financial Institution.

ARTICLE VI.

AFFIRMATIVE COVENANTS

Each Loan Party hereby covenants and agrees that such Loan Party shall, and shall cause each of its Restricted Subsidiaries to:

6.01 Financial Statements. Deliver to the Administrative Agent (who will make such documents available to each Lender), in form and detail reasonably satisfactory to the Administrative Agent and the Required Lenders:

(a) as soon as available, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company a consolidated balance sheet of the Company and its Subsidiaries as at the end of such fiscal year, and the related consolidated statements of operations, comprehensive income, changes in shareholders' equity, and cash flows for such fiscal year, setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail and prepared in accordance with IFRS, audited and accompanied by a report and opinion of KPMG LLP or another independent certified public accountant of nationally recognized standing reasonably acceptable to the Required Lenders, which report and opinion shall be prepared in accordance with generally accepted auditing standards and shall not be subject to any "going concern" or like qualification or exception (other than any qualification or exception in the last year of this Agreement and due solely to the impending maturity of the Loans and Commitments hereunder) or any qualification or exception as to the scope of such audit; and

(b) as soon as available, but in any event within sixty (60) days after the end of each of the first three (3) fiscal quarters of each fiscal year of the Company, a consolidated balance sheet of the Company and its Subsidiaries as at the end of such fiscal quarter, the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for such fiscal quarter and for the portion of the Company's fiscal year then ended, in each case setting forth in comparative form the figures for the corresponding fiscal quarter of the previous fiscal year and the corresponding portion of the previous fiscal year, all in reasonable detail, certified by a Responsible Officer of the Company as fairly presenting the financial condition, results of operations, shareholders' equity and cash flows of the Company and its Restricted Subsidiaries in accordance with IFRS, subject only to normal year-end audit adjustments and the absence of footnotes.

As to any information contained in materials furnished pursuant to Section 6.02(c), the Company shall not be separately required to furnish such information under subsection (a) or (b) above, but the foregoing shall not be in derogation of the obligation of the Company to furnish the information and materials described in subsections (a) and (b) above at the times specified therein.

6.02 Certificates; Other Information. Deliver to the Administrative Agent (who will make such documents available to each Lender), in form and detail reasonably satisfactory to the Administrative Agent and the Required Lenders:

(a) concurrently with the delivery of the financial statements referred to in Sections 6.01(a) and (b), (i) a duly completed Compliance Certificate signed by the chief executive officer, chief financial officer, treasurer or controller of the Company (which delivery may, unless the Administrative Agent or a Lender requests executed originals, be by electronic communication including fax or email and shall be deemed to be an original authentic counterpart thereof for all purposes) and (ii) a report signed by a Responsible Officer of the Company that supplements Schedule 5.13 such that, as supplemented, such Schedule would be accurate and complete in all material respects as of the last day of the period covered by the Compliance Certificate described in the foregoing clause (i) (provided that if no supplement is required to cause such Schedule to be accurate and complete in all material respects as of such date, then the Company shall not be required to deliver such a report);

(b) concurrently with the delivery of the financial statements referred to in Sections 6.01(a) and (b), for any period in which there exist any Unrestricted Subsidiaries, unaudited consolidating financial statements reflecting adjustments necessary to eliminate the accounts of Unrestricted Subsidiaries (if any) from such financial statements delivered pursuant to Section 6.01(a) or (b), as applicable, all in reasonable detail and certified by a responsible Officer of the Company as fairly presenting in all material respects the financial condition, results of operations, comprehensive income, shareholders' equity and cash flows of the Company and its Restricted Subsidiaries in accordance with IFRS, subject only to normal year-end audit adjustments and the absence of footnotes;

(c) promptly after the same are available, copies of each annual report, proxy or financial statement or other report or communication sent to the stockholders of the Company, and copies of all annual, regular, periodic and special reports and registration statements which the Company may file or be required to file with the SEC under Section 13 or 15(d) of the Securities Exchange Act of 1934, or under any other applicable securities Laws, and in any case not otherwise required to be delivered to the Administrative Agent pursuant hereto;

(d) promptly following any request therefor, provide information and documentation reasonably requested by the Administrative Agent or any Lender for purposes of compliance with applicable "know your customer" and anti-money-laundering rules and regulations, including, without limitation, the PATRIOT Act, the Beneficial Ownership Regulation and the Canadian AML Acts; and

(e) promptly, such additional information regarding the business, financial or corporate affairs of the Company or any Subsidiary, or compliance with the terms of the Loan Documents, as the Administrative Agent or any Lender may from time to time reasonably request.

Documents required to be delivered pursuant to Section 6.01(a) or (b) or Section 6.02(c) (to the extent any such documents are included in materials otherwise filed with the SEC or any national securities exchange) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date (i) on which the Company posts such documents, or provides a link thereto on the Company's website on the Internet at the website address listed on Schedule 10.02; or (ii) on which such documents (A) are

available on the website of the SEC at http://www.sec.gov, (B) are available on the website of the Canadian Securities Administrators at https://www.sedar.com or (C) are posted on the Company's behalf on another Internet or intranet website, if any, to which each Lender and the Administrative Agent have access (whether a commercial, third-party website or whether sponsored by the Administrative Agent); provided that, in the case of documents that are not available on http://www.sec.gov or https://www.sedar.com, (x) the Company shall deliver paper copies (which may include .pdf files) of such documents to the Administrative Agent or any Lender upon its request to the Company to deliver such paper copies until a written request to cease delivering paper copies is given by the Administrative Agent or such Lender and (y) the Company shall notify (which may be by facsimile or electronic mail) the Administrative Agent (by facsimile or electronic mail) of the posting of any such documents. The Administrative Agent shall have no obligation to request the delivery of or to maintain paper copies of the documents referred to above, and in any event shall have no responsibility to monitor compliance by the Company with any such request by a Lender for delivery, and each Lender shall be solely responsible for requesting delivery to it or maintaining its copies of such documents.

The Company hereby acknowledges that (a) the Administrative Agent and/or each Arranger may, but shall not be obligated to, make available to the Lenders and any L/C Issuer materials and/or information provided by or on behalf of the Company hereunder (collectively, "Borrower Materials") by posting the Borrower Materials on IntraLinks, Syndtrak, ClearPar, or a substantially similar electronic transmission system (the "Platform") and (b) certain of the Lenders (each, a "Public Lender") may have personnel who do not wish to receive material non-public information with respect to the Company or its Affiliates, or the respective securities of any of the foregoing, and who may be engaged in investment and other market-related activities with respect to such Persons' securities. The Company hereby agrees that (w) all Borrower Materials that are to be made available to Public Lenders shall be clearly and conspicuously marked "PUBLIC" which, at a minimum, shall mean that the word "PUBLIC" shall appear prominently on the first page thereof; (x) by marking Borrower Materials "PUBLIC," the Company shall be deemed to have authorized the Administrative Agent, the Arranger, the L/C Issuers and the Lenders to treat such Borrower Materials as not containing any material non-public information with respect to the Company or its securities for purposes of Canadian federal and provincial securities laws and United States federal and state securities laws (provided, however, that to the extent such Borrower Materials constitute Information, they shall be treated as set forth in Section 10.07); (y) all Borrower Materials marked "PUBLIC" are permitted to be made available through a portion of the Platform designated "Public Side Information;" and (z) the Administrative Agent and the Arrangers shall be entitled to treat any Borrower Materials that are not marked "PUBLIC" as being suitable only for posting on a portion of the Platform not designated "Public Side Information." Notwithstanding the foregoing, the Company shall not be under any obligation to mark any Borrower Materials "PUBLIC."

6.03 Notices. Promptly notify the Administrative Agent (who will make such notice available to each Lender):

(a) of the occurrence of any Default;

(b) of any matter that has resulted or would reasonably be expected to result in a Material Adverse Effect;

(c) of the occurrence of any ERISA Event or any material failure by any Loan Party or any Subsidiary to perform its obligations under a Canadian Pension Plan;

(d) of the acquisition, as a result of the consummation of a Permitted Acquisition, of any Canadian Defined Benefit Pension Plan and copies of all documentation relating thereto and, thereafter, promptly after any request by the Administrative Agent or any Lender, copies of all actuarial valuation reports in respect thereof;

(e) of any material change in accounting policies or financial reporting practices by the Company or any Subsidiary; and

(f) the entering into by the Company or any Subsidiary of any Permitted Securitization Transaction (together with such information regarding such Permitted Securitization Transaction as the Administrative Agent or any Lender may reasonably request).

Each notice pursuant to this Section 6.03 shall be accompanied by a statement of a Responsible Officer of the Company setting forth details of the occurrence referred to therein and stating what action the Company has taken and proposes to take with respect thereto. Each notice pursuant to Section 6.03(a) shall describe with particularity any and all provisions of this Agreement and any other Loan Document that have been breached.

6.04 Payment of Obligations. Pay and discharge as the same shall become due and payable, all its material obligations and liabilities, including (a) all Tax liabilities, assessments and governmental charges or levies upon it or its properties or assets, unless the same are being contested in good faith by appropriate proceedings diligently conducted and adequate reserves in accordance with IFRS are being maintained by the Company or such Restricted Subsidiary or in respect of which such failure to pay would not reasonably be likely to have a Material Adverse Effect; and (b) all lawful claims which, if unpaid, would by law become a Lien upon its property (other than Permitted Liens).

6.05 Preservation of Existence, Etc.

(a) Preserve, renew and maintain in full force and effect its legal existence and good standing (to the extent applicable) under the Laws of the jurisdiction of its organization except in a transaction permitted by Sections 7.04 or 7.05;

(b) take all reasonable action to maintain all rights, privileges, permits, licenses and franchises necessary or desirable in the normal conduct of its business, except to the extent that failure to do so would not reasonably be expected to have a Material Adverse Effect; and

(c) preserve or renew all of its registered patents, trademarks, trade names and service marks, the non-preservation of which would reasonably be expected to have a Material Adverse Effect.

6.06 Maintenance of Properties.

(a) Maintain, preserve and protect all of its material properties and equipment necessary in the normal operation of its business in good working order and condition, ordinary wear and tear and damage by casualty or condemnation excepted; and

(b) make all necessary repairs thereto and renewals and replacements thereof, except to the extent that (i) any of such properties or equipment are obsolete or are being replaced in the ordinary course of business, (ii) the Company or any of its Restricted Subsidiaries reasonably determine that the continued maintenance, repaid, renewal or replacement of any of its properties or equipment is no longer commercially practicable and is not in the best interests of the Company or any of its Restricted Subsidiaries, or (iii) where the failure to do so would not reasonably be expected to have a Material Adverse Effect.

6.07 Maintenance and Evidence of Insurance.

(a) Maintenance of Insurance. Maintain with financially sound and reputable insurance companies not Affiliates of the Company or any Subsidiary, insurance with respect to its properties and business against loss or damage of the kinds customarily insured against by Persons engaged in the same or similar business, of such types and in such amounts as are customarily carried under similar circumstances by such other Persons, including, without limitation, liability, casualty, property, terrorism and business interruption insurance.

(b) Evidence of Insurance. Cause the Administrative Agent to be named as lenders' loss payable or loss payee (other than with respect to business interruption insurance) and as mortgagee, as its interest may appear, and/or additional insured with respect of any such insurance providing liability coverage or coverage in respect of any Collateral, and cause, unless otherwise agreed to by the Administrative Agent and, to the extent available and customarily agreed to by the relevant insurance provider, each provider of any such insurance to agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to the Administrative Agent that it will give the Administrative Agent thirty (30) days' prior written notice before any such policy or policies shall be altered or cancelled (or ten (10) days' prior notice in the case of cancellation due to the nonpayment of premiums or, with respect to insurance premiums issued by non-U.S. insurance companies, to the extent available, as substantially similar notice as is practicable). Annually, upon expiration of current insurance coverage, the Loan Parties shall provide, or cause to be provided, to the Administrative Agent, such evidence of insurance as required by the Administrative Agent, including, but not limited to: (i) evidence of such insurance policies, (ii) declaration pages for each insurance policy and (iii) to the extent available from the relevant insurance provider, lender's loss payable endorsement (or other evidence that the Administrative Agent has substantially the same or similar standing under any insurance policies issued by non-U.S. insurance companies) if the Administrative Agent for the benefit of the Secured Parties is not on the declarations page for such policy. As requested by the Administrative Agent, the Loan Parties agree to deliver to the Administrative Agent an Authorization to Share Insurance Information.

6.08 Compliance with Laws. Comply in all material respects with the requirements of all Laws and all orders, writs, injunctions and decrees applicable to it or to its business or property, except in such instances in which (a) such requirement of Law or order, writ, injunction or decree is being contested in good faith by appropriate proceedings diligently conducted; or (b) the failure to comply therewith would not reasonably be expected to have a Material Adverse Effect.

6.09 Books and Records. (a) Maintain proper books of record and account, in which full, materially true and correct entries in conformity with IFRS consistently applied shall be made of all material financial transactions and matters involving the assets and business of the Company or such Restricted Subsidiary, as the case may be, and (b) maintain such books of record and account in material conformity with all applicable requirements of any Governmental Authority having regulatory jurisdiction over the Company or such Restricted Subsidiary, as the case may be.

6.10 Inspection Rights. Upon the request of the Administrative Agent on behalf of any Lender, permit representatives and independent contractors of the Administrative Agent (which may include representatives of Lenders) to visit and inspect any of its properties, to examine its corporate, financial and operating records, and make copies thereof or abstracts therefrom, and to discuss its affairs, finances and accounts with its directors, officers, and independent public accountants (provided, that one or more representatives of the Company shall be invited (with reasonable advance notice) to attend any such meetings with such independent public accountants (provided that the failure of any such representatives of the Company to attend any such meeting shall not preclude such meeting from occurring), all at the expense of the Lenders when no Event of Default exists, and at such reasonable times during normal business hours, upon reasonable advance notice to the Company and no more than once per year; provided, however, that when an Event of Default exists, the Administrative Agent or any Lender (or any of their respective representatives or independent contractors) may do any of the foregoing at the expense of the Company at any time during normal business hours and without advance notice; provided, further that notwithstanding anything to the contrary herein, neither the Company nor any of its Restricted Subsidiaries shall be required to disclose, permit the inspection, examination or making of copies of or taking abstracts from, or discuss any document, information, or other matter (a) that constitutes non-financial trade secrets or non-financial proprietary information of the Company and its Restricted Subsidiaries and/or any of its customers and/or suppliers, (b) in respect of which disclosure to the Administrative Agent or any Lender (or any of their respective representatives or agents) is prohibited by applicable Law, (c) that is subject to attorney-client or similar privilege or constitutes attorney work product or (d) in respect of which the Company or any Subsidiary owes confidentiality obligations to any third party (it being understood that the Company or any of its Subsidiaries shall inform the Administrative Agent of the existence and nature of the confidential records, documents or other information not being provided and, following a reasonable request from the Administrative Agent, use commercially reasonable efforts to request consent from an applicable contractual counterparty to disclose such information (but shall not be required to incur any cost or expense or pay any consideration of any type to such party in order to obtain such consent)).

6.11 Use of Proceeds. Use the proceeds of the Credit Extensions (a) consisting of the Term B Loan to refinance Indebtedness outstanding under the Existing Credit Agreement, to pay professional fees and other expenses associated therewith and for general corporate purposes of the Company and its Subsidiaries (including for capital expenditures, Permitted Acquisitions, working capital needs, the payment of transaction fees and expenses, Investments, Restricted Payments and any other purpose not prohibited by the terms of the Loan Documents) not in contravention of any Law or of any Loan Document and (b) under the Revolving Facility and any Incremental Facility for general corporate purposes of the Company and its Subsidiaries (including for capital expenditures, Permitted Acquisitions, working capital needs, the payment of transaction fees and expenses, Investments, Restricted Payments and any other purpose not prohibited by the terms of the Loan Documents) of the Company and its Subsidiaries not in contravention of any Law or of any Loan Document.

6.12 Compliance with Environmental Laws. Comply, in all material respects, with all applicable Environmental Laws and Environmental Permits and obtain and renew all Environmental Permits necessary for its operations and properties; provided, however, that neither the Company nor any of its

Restricted Subsidiaries shall be required to undertake any action under any Environmental Laws and Environmental Permits to the extent that its obligation to do so is being contested in good faith and by proper proceedings and appropriate reserves are being maintained with respect to such circumstances in accordance with IFRS.

6.13 Maintenance of Ratings. Use commercially reasonable efforts (it being understood and agreed that "commercially reasonable efforts" shall in any event include the payment by the Company of customary rating agency fees and cooperation with information and data requests by Moody's and S&P in connection with their ratings process) to obtain and maintain (a) a public corporate family rating of the Company and a rating of the credit facilities provided under this Agreement, in each case from Moody's, (b) a public corporate credit rating of the Company and a rating of the credit facilities provided under this Agreement, in each case from S&P and (c) a current, non-credit-enhanced, senior secured long-term debt rating with respect to the Term B Loan from each of S&P and Moody's; provided, that in no event shall the Company be required to maintain a specific rating with any such agency.

6.14 Covenant to Guarantee Obligations.

(a) Within forty-five (45) days (or such later date as the Administrative Agent may agree in its sole discretion) after (x) the acquisition or formation of any Restricted Subsidiary (other than an Excluded Subsidiary) or (y) the date on which any Excluded Subsidiary ceases to be an Excluded Subsidiary, cause such Restricted Subsidiary to (i) become a U.S. Guarantor (if such Subsidiary is a U.S. Subsidiary and not a CFC Holdco) or a Non-U.S. Guarantor (if such Subsidiary is a Non-U.S. Subsidiary or a CFC Holdco), as applicable, by executing and delivering to the Administrative Agent a Joinder Agreement or such other documents as the Administrative Agent shall deem appropriate for such purpose and (ii) upon the request of the Administrative Agent in its reasonable discretion, deliver to the Administrative Agent such Organization Documents, resolutions and favorable opinions of counsel, all in form, content and scope reasonably satisfactory to the Administrative Agent; provided that notwithstanding anything to the contrary contained in this Agreement or any other Loan Document, no Specified Subsidiary shall be required to provide a Guarantee in respect of any of the Obligations other than the Non-U.S. Obligations.

(b) If any Subsidiary (including, to the extent permitted by applicable Law, any Excluded Subsidiary other than any Special Purpose Subsidiary or any other Subsidiary with respect to which the Administrative Agent and the Company reasonably agree that the burden or cost of such Person providing the Guaranty shall outweigh the benefits to be obtained by the Lenders therefrom) that is not a Guarantor provides a Guarantee in respect of any Additional Indebtedness issued by a Loan Party, cause such Subsidiary to, concurrently with providing such Guarantee in respect of such Additional Indebtedness (or at such later date that the Administrative Agent may agree in its sole discretion), (i) become a U.S. Guarantor (if such Subsidiary is a U.S. Subsidiary and not a CFC Holdco) or a Non-U.S. Guarantor (if such Subsidiary is a Non-U.S. Subsidiary or a CFC Holdco), as applicable, by executing and delivering to the Administrative Agent a Joinder Agreement or such other documents as the Administrative Agent shall deem reasonably appropriate for such purpose and (ii) upon the request of the Administrative Agent in its reasonable discretion, deliver to the Administrative Agent such Organization Documents, resolutions and favorable opinions of counsel, all in form, content and scope reasonably satisfactory to the Administrative Agent; provided that notwithstanding anything to the contrary contained in this Agreement or any other Loan Document, no Specified Subsidiary shall be required to provide a Guarantee in respect of any of the Obligations other than the Non-U.S. Obligations.

Notwithstanding anything to the contrary contained herein, (x) the Company may from time to time, upon notice to the Administrative Agent, elect to cause any Subsidiary that would otherwise be an Excluded Subsidiary to become a U.S**.** Guarantor (if such Subsidiary is a U.S. Subsidiary and not a CFC Holdco) or a Non-U.S. Guarantor (if such Subsidiary is a Non-U.S. Subsidiary or a CFC Holdco), as applicable, provided that the requirements set forth in the foregoing clause (a) applicable to any Subsidiary that is required to provide the Guaranty pursuant to such clause are satisfied, and (y) the Subsidiaries set forth on Part A of Schedule 6.19 shall not be required to comply with this Section 6.14 until the Post-Closing Compliance Date.

6.15 Covenant to Give Security. Except with respect to Excluded Property:

(a) Cause each U.S. Obligor that is not a Specified U.S. Obligor (in each case, whether now or hereafter existing) to grant or cause to be granted a first priority perfected (or similar concept under any applicable non-U.S. Laws) security interest (subject to Permitted Liens) in the following (to the extent not constituting Excluded Property), in each case to secure the Obligations pursuant to the Domestic U.S. Security Agreement, in each case on the Closing Date or, if acquired thereafter, within forty-five (45) days (or such later date as the Administrative Agent may agree in its sole discretion) of the acquisition thereof:

(i) (A) one hundred percent (100%) of the issued and outstanding Equity Interests of any Restricted Subsidiary that is a U.S. Subsidiary and not a CFC Holdco directly owned by such U.S. Obligor; (B) sixty-five percent (65%) of the issued and outstanding Equity Interests entitled to vote (within the meaning of Treas. Reg. Section 1.956-2(c)(2)) of any Restricted Subsidiary that is (x) a CFC directly owned by such U.S. Obligor or (y) a CFC Holdco directly owned by such U.S. Obligor; and (C) one hundred percent (100%) of the issued and outstanding Equity Interests not entitled to vote (within the meaning of Treas. Reg. Section 1.956-2(c)(2)) of any Restricted Subsidiary that is (x) a CFC directly owned by such U.S. Obligor or (y) a CFC Holdco directly owned by such U.S. Obligor; and

(ii) all personal property of such U.S. Obligor;

(b) Cause each Non-U.S. Obligor that is not a Specified Non-U.S. Obligor (in each case, whether now or hereafter existing) to grant or cause to be granted a first priority perfected (or similar concept under any applicable non-U.S. Laws) security interest (subject to Permitted Liens) in the following (to the extent not constituting Excluded Property), in each case to secure the Obligations pursuant to the Canadian Security Agreement or, upon the request of the Administrative Agent, another non-U.S. Security Agreement, in each case on the Closing Date or, if acquired thereafter, within forty-five (45) days (or such later date as the Administrative Agent may agree in its sole discretion) of the acquisition thereof:

(i) (A) one hundred percent (100%) of the issued and outstanding Equity Interests of any Restricted Subsidiary directly owned by such Non-U.S. Obligor; (B) sixty-five percent (65%) of the issued and outstanding Equity Interests entitled to vote (within the meaning of Treas. Reg. Section 1.956-2(c)(2)) of any Restricted Subsidiary that is a CFC Holdco directly owned by such Non-U.S. Obligor; and (C) one hundred percent (100%) of the issued and outstanding Equity Interests not entitled to vote (within the meaning of Treas. Reg. Section 1.956-2(c)(2)) of any Restricted Subsidiary that is a CFC Holdco directly owned by such Non-U.S. Obligor; provided that the foregoing clauses (B) and (C) shall not apply with respect to any security interest granted to secure the Non-U.S Obligations; and

(ii) all personal property of such Non-U.S. Obligor;

(c) Cause each Specified U.S. Obligor (whether now or hereafter existing) to grant a first priority perfected security interest (subject to Permitted Liens) in the following (to the extent not constituting Excluded Property), in each case to secure the Non-U.S. Obligations pursuant to the Specified U.S. Security Agreement or, upon the request of the Administrative Agent, another pledge and/or security agreement in favor of the Administrative Agent, for the benefit of the Secured Parties, in form and substance reasonably acceptable to the Administrative Agent, in each case on the Closing Date or, if acquired thereafter, within thirty (30) days (or such later date as the Administrative Agent may agree in its sole discretion exercised reasonably) of the acquisition thereof:

(i) one hundred percent (100%) of the issued and outstanding Equity Interests of any Restricted Subsidiary directly owned by such Specified U.S. Obligor; and

(ii) all personal property of such Specified U.S. Obligor;

(d) Cause each Specified Non-U.S. Obligor (whether now or hereafter existing) to grant a first priority perfected security interest (subject to Permitted Liens) in the following (to the extent not constituting Excluded Property), in each case to secure the Non-U.S. Obligations pursuant to the Canadian Security Agreement or, upon the request of the Administrative Agent, another pledge and/or security agreement in favor of the Administrative Agent, for the benefit of the Secured Parties, in form and substance reasonably acceptable to the Administrative Agent, in each case on the Closing Date or, if acquired thereafter, within thirty (30) days (or such later date as the Administrative Agent may agree in its sole discretion, exercised reasonably) of the acquisition thereof:

(i) one hundred percent (100%) of the issued and outstanding Equity Interests of any Restricted Subsidiary directly owned by such Specified Non-U.S. Obligor; and

(ii) all personal property of such Specified Non-U.S. Obligor;

(e) At any time upon reasonable request of the Administrative Agent (but, for the avoidance of doubt, subject to any applicable time periods set forth in Section 6.16 and this Section 6.15), promptly execute and deliver any and all further instruments and documents and take all such other action (including promptly completing any registration or stamping of documents as may be applicable) as the Administrative Agent reasonably may deem necessary or desirable to maintain in favor of the Administrative Agent, for the benefit of the Secured Parties, Liens and insurance rights on the Collateral that are duly perfected in accordance with the requirements of, or the obligations of the Loan Parties under, the Loan Documents and all applicable Laws.

Notwithstanding anything to the contrary contained herein, the Subsidiaries set forth on Part A of Schedule 6.19 shall not be required to comply with this Section 6.15 until the Post-Closing Compliance Date.

6.16 Anti-Corruption Laws. Conduct its business in material compliance with the United States Foreign Corrupt Practices Act of 1977, the Corruption of Foreign Public Officials Act (Canada), the UK Bribery Act 2010, and other similar anti-corruption legislation in other jurisdictions applicable to the Company and its Restricted Subsidiaries and maintain procedures designed to promote and achieve compliance with such laws; provided that no Non-U.S. Subsidiary shall be required to comply with anti-corruption legislation of any jurisdiction other than the Laws applicable in its jurisdiction of organization if such compliance would cause such Person to violate the laws of its jurisdiction of organization.

6.17 Further Assurances. Promptly upon request by the Administrative Agent, or any Lender through the Administrative Agent, (a) correct any material defect or error that may be discovered in any Loan Document or in the execution, acknowledgment, filing or recordation thereof, and (b) do, execute, acknowledge, deliver, record, re-record, file, re-file, register and re-register any and all such further acts, deeds, certificates, assurances and other instruments (including promptly completing any registration or stamping of documents as may be applicable) as the Administrative Agent, or any Lender through the Administrative Agent, may reasonably require from time to time in order to (i) carry out more effectively the purposes of the Loan Documents, (ii) to the fullest extent permitted by applicable Law, subject any Loan Party's or any of its Subsidiaries' properties, assets, rights or interests (other than, in each case, Excluded Property) to the Liens now or hereafter intended to be covered by any of the Collateral Documents, (iii) perfect and maintain the validity, effectiveness and priority of any of the Collateral Documents and any of the Liens intended to be created thereunder and (iv) assure, convey, grant, assign, transfer, preserve, protect and confirm more effectively unto the Secured Parties the rights granted or now or hereafter intended to be granted to the Secured Parties under any Loan Document or under any other instrument executed in connection with any Loan Document to which any Loan Party or any of its Subsidiaries is or is to be a party, and cause each of its Subsidiaries to do so.

6.18 Pari Passu Ranking. Ensure that the payment obligations of the Loan Parties under the Loan Documents rank and continue to rank at least *pari passu* with the claims of all of the Loan Parties' other unsecured and unsubordinated creditors, except for obligations mandatorily preferred by law applying to companies generally.

6.19 Post-Closing Obligations.

(a) By no later than the date that is sixty (60) days after the Closing Date (or such later date as the Administrative Agent may agree in its sole discretion) (the "Post-Closing Compliance Date"), cause the Subsidiaries set forth on Part A of Schedule 6.19 to comply with the requirements of Sections 6.14 and 6.15; provided that (x) any of the Subsidiaries set forth on Part A of Schedule 6.19 shall be exempted from this Section 6.19 and from the requirements of Section 6.14 and/or Section 6.15 (or any of them) in the event that the Administrative Agent and the Company reasonably agree that the burden or cost of such Subsidiary complying with Section 6.14 and/or Section 6.15 (or any aspect of such Sections) would outweigh the benefits to be obtained by the Lenders therefrom and (y) from the Closing Date through and including the Post-Closing Compliance Date, (i) for purposes of determining compliance with Sections 7.01, 7.02 and 7.03 (regardless of whether such Subsidiaries have, in fact, become Guarantors and Loan Parties hereunder), all intercompany Liens, intercompany Investments and intercompany Indebtedness of the Subsidiaries set forth on Part A of Schedule 6.19 in existence on the Closing Date shall be deemed to be set forth on Schedules 7.01, 7.02 and 7.03, respectively (regardless of whether actually set forth thereon).

(b) Undertake all actions listed on Part B of Schedule 6.19, in each case as promptly as practicable and in any event within the time periods set forth on such Schedule (or such longer periods of time as may be agreed to by the Administrative Agent in its sole discretion).

6.20 Designation of Subsidiaries.

(a) The Company may at any time designate any Restricted Subsidiary as an Unrestricted Subsidiary or any Unrestricted Subsidiary as a Restricted Subsidiary; provided that (i) no Default or Event of Default shall exist immediately prior or immediately after giving effect to such designation; (ii) the Company shall have delivered to the Administrative Agent a Pro Forma

Compliance Certificate demonstrating that after giving effect to such designation on a Pro Forma Basis, the Loan Parties would be in Pro Forma Compliance; (iii) no Restricted Subsidiary may be designated as an Unrestricted Subsidiary if such Restricted Subsidiary or any of its Subsidiaries (A) owns any Equity Interests or Indebtedness of, or owns or holds any Liens on, any property of the Company or any Restricted Subsidiary or (B) Guarantees any Indebtedness of the Company or any Restricted Subsidiary; (iv) any Unrestricted Subsidiary that has been designated as a Restricted Subsidiary may not subsequently be re-designated as an Unrestricted Subsidiary; (v) no Restricted Subsidiary may be designated as an Unrestricted Subsidiary if such Person were a Restricted Subsidiary on the Closing Date; and (vi) no Restricted Subsidiary may be designated as an Unrestricted Subsidiary unless concurrent with such designation such Restricted Subsidiary is designated as an "unrestricted subsidiary" (or otherwise not be subject to the covenants) under any Additional Indebtedness.

(b) The designation of any Restricted Subsidiary as an Unrestricted Subsidiary shall constitute an Investment by the Company in such Subsidiary on the date of such designation in an amount equal to the outstanding amount of all Investments by the Company and its Restricted Subsidiaries in such Subsidiary on such date. Accordingly, such designation shall be permitted only if the Investment represented thereby would be permitted under Section 7.02.

(c) The designation of any Unrestricted Subsidiary as a Restricted Subsidiary shall constitute (i) the incurrence on the date of such designation of any Investment, Indebtedness or Liens of such Subsidiary existing on such date and (ii) for purposes of calculating the outstanding amount of Investments by the Company and its Restricted Subsidiaries in all Unrestricted Subsidiaries, a return on all Investments by the Company and its Restricted Subsidiaries in such Subsidiary in an amount equal to the outstanding amount of all such Investments in such Subsidiary on the date of such designation.

(d) If at any time any Unrestricted Subsidiary (i) owns any Equity Interests or Indebtedness of, or owns or holds any Liens on, any property of the Company or any Restricted Subsidiary, (ii) Guarantees any Indebtedness of the Company or any Restricted Subsidiary or (iii) ceases to be an "unrestricted subsidiary" (or otherwise becomes subject to the covenants) under any Additional Indebtedness, then the Company shall, concurrently therewith, re-designate such Unrestricted Subsidiary as a Restricted Subsidiary.

ARTICLE VII.

NEGATIVE COVENANTS

Each Loan Party hereby covenants that no Loan Party shall, nor shall it permit any of its Restricted Subsidiaries (or, with respect to Section 7.16 and Section 7.17, its Unrestricted Subsidiaries) to, directly or indirectly:

7.01 Liens. Create, incur, assume or suffer to exist any Lien upon any of its property, assets or revenues, whether now owned or hereafter acquired, other than the following:

(a) Liens pursuant to any Loan Document;

(b) Liens existing on the Closing Date and listed on Schedule 7.01 and any renewals or extensions thereof, provided that (i) the property covered thereby is not changed, (ii) the amount

secured or benefited thereby is not increased except as contemplated by Section 7.03(b), (iii) the direct or any contingent obligor with respect thereto is not changed, and (iv) any renewal or extension of the obligations secured or benefited thereby is permitted by Section 7.03(b);

(c) Liens for Taxes that are (i) not yet due or (ii) being contested in good faith and by appropriate proceedings diligently conducted and for which adequate reserves with respect thereto are maintained on the books of the applicable Person in accordance with IFRS;

(d) carriers', warehousemen's, mechanics', materialmen's, repairmen's or other like Liens arising in the ordinary course of business (i) which are not overdue for a period of more than thirty (30) days or (ii) which are being contested in good faith and by appropriate proceedings diligently conducted, if adequate reserves with respect thereto are maintained on the books of the applicable Person;

(e) Liens incurred in the ordinary course of business in connection with workers' compensation, unemployment insurance and other social security legislation, other than any Lien imposed by ERISA or in respect of a Canadian Pension Plan;

(f) deposits and other Liens to secure the performance of bids, trade contracts and leases (other than Indebtedness), tenders, statutory obligations, surety bonds (other than bonds related to judgments or litigation), leases, performance bonds, government contracts and other obligations of a like nature incurred in the ordinary course of business;

(g) easements, rights-of-way, restrictions and other similar encumbrances affecting real property which, in the aggregate, are not substantial in amount, and which do not in any case materially detract from the value of the property subject thereto or materially interfere with the ordinary conduct of the business of the applicable Person;

(h) Liens securing judgments for the payment of money (or appeal or other surety bonds relating to such judgments) not constituting an Event of Default under Section 8.01(h);

(i) Liens securing Indebtedness permitted under Section 7.03(e); provided that (i) such Liens do not at any time encumber any property other than the property financed by such Indebtedness and (ii) the Indebtedness secured thereby does not exceed the cost or fair market value, whichever is lower, of the property being acquired on the date of acquisition; and

(j) licenses (including licenses of intellectual property), sublicenses, leases or subleases granted to third parties in the ordinary course of business not interfering with the business of the Company or any Restricted Subsidiary in any material respect;

(k) Liens in favor of customs and revenue authorities arising as a matter of law which secure payment of customs duties in connection with the importation of goods;

(l) any interest of title of a lessor under, and Liens arising from UCC financing statements (or equivalent filings, registrations or agreements in foreign jurisdictions) relating to, leases permitted by this Agreement;

(m) normal and customary rights of setoff or bankers' liens upon deposits of cash in favor of banks or other depository institutions;

(n) Liens securing Acquired Indebtedness, provided that (i) such Liens do not at any time encumber any property other than the property financed by such Indebtedness and (ii) such Liens existed prior to the applicable Permitted Acquisition and were not incurred in connection with, or in anticipation or contemplation of, the applicable Permitted Acquisition;

(o) Liens securing Subordinated Indebtedness and Pari Passu Indebtedness, in each case, to the extent permitted under Section 7.03(h);

(p) Liens on Securitized Assets created or deemed to exist in connection with (i) any Permitted Securitization Transaction or (ii) the DB Receivables Purchase Agreement;

(q) Liens pursuant to any Loan Document securing (x) Secured Cash Management Agreements and (y) Secured Swap Contracts;

(r) purported Liens evidenced by the filing of UCC financing statements in respect of consignment of goods;

(s) with respect to any real property occupied, owned or leased by any Borrower or any of their Subsidiaries, leases, subleases, tenancies, options, concession agreements, rental agreements occupancy agreements, franchise agreements, access agreements and any other agreements, whether or not of record and whether now in existence or hereafter entered into, of the real properties of any Loan Party or any Restricted Subsidiary granted by such Person to third parties, in each case entered into in the ordinary course of such Person's business and so long as, to the extent such real properties are subject to Liens, such Liens do not materially interfere with the ordinary conduct of business of the Loan Parties or their Restricted Subsidiaries, taken as a whole, and do not materially impair the use of such property for its intended purposes;

(t) Liens arising by operation of law under Article 4 of the Uniform Commercial Code in connection with collection of items provided for therein or under Article 2 of the Uniform Commercial Code in favor of a reclaiming seller of goods or buyer of goods;

(u) Liens attaching solely to (i) cash earnest money deposits in connection with any letter of intent or purchase agreement and (ii) proceeds of an asset disposition permitted hereunder that are held in escrow to secure obligations under the sale documentation relating to such disposition;

(v) any laws, regulations or ordinances now or hereafter in effect (including, but not limited to, zoning, building and environmental protection) as to the use, occupancy, subdivision or improvement of real property occupied, owned or leased by the Company or any of its Restricted Subsidiaries adopted or imposed by any Governmental Authority;

(w) Liens of landlords under leases where the Company or any of its Restricted Subsidiaries is the tenant, securing performance by the tenant under the lease arising by statute or under any lease or related contractual obligation entered into in the ordinary course of business;

(x) (i) Liens that are customary contractual rights of setoff or netting relating to (A) the establishment of depositary relations with banks not granted in connection with the issuance of Indebtedness, (B) pooled deposit or sweep accounts of the Company or any Restricted Subsidiary to permit satisfaction of overdraft or similar obligations or to secure negative cash balances in local accounts of foreign Restricted Subsidiaries incurred in the ordinary course of business of the Company or any Restricted Subsidiary, (C) purchase orders and other agreements entered into with

customers of the Company or any Restricted Subsidiary in the ordinary course of business and (D) commodity trading or other brokerage accounts incurred in the ordinary course of business, (ii) Liens encumbering reasonable customary initial deposits and margin deposits and (iii) Liens on the proceeds of any Indebtedness incurred in connection with any transaction permitted hereunder, which proceeds have been deposited into an escrow account on customary terms to secure such Indebtedness pending the application of proceeds to finance such transaction;

(y) Liens securing insurance premium financing arrangements; provided, that such Liens only encumber the insurance premiums, policies or dividends with respect to the policies that were financed with the funds advanced under such arrangements;

(z) Liens on cash or cash equivalents arising in connection with the defeasance, discharge or redemption of Indebtedness;

(aa) Liens arising out of conditional sale, title retention, consignment, bailment or similar arrangements for the purchase, sale or shipment of goods entered into in the ordinary course of business;

(bb) Liens (i) on cash advances or escrow deposits in favor of the seller of any property to be acquired by the Company or any Restricted Subsidiary to be applied against the purchase price therefor or otherwise in connection with any escrow arrangements with respect thereto or any disposition permitted under Section 7.05 and (ii) consisting of an agreement to dispose of any property in a disposition permitted under Section 7.05 solely to the extent such disposition, as the case may be, would have been permitted on the date of the creation of such Lien;

(cc) Liens on securities which are the subject of repurchase agreements referred to in the definition of "Cash Equivalents" granted under such repurchase agreements in favor of the counterparties thereto;

(dd) undetermined or inchoate Liens and charges arising or potentially arising under statutory provisions incidental to current operations which have not at the time been filed or registered in accordance with applicable Law or of which written notice has not been duly given in accordance with applicable Law, or which although filed or registered, relate to obligations not due or delinquent; and

(ee) Liens not otherwise permitted by this Section 7.01 securing obligations in an aggregate principal amount not to exceed $50,000,000 at any one time outstanding.

7.02 Investments. Make any Investments, except:

(a) Investments held by the Company or such Restricted Subsidiary in the form of Cash Equivalents;

(b) advances to officers, directors and employees of the Company and Subsidiaries in an aggregate amount not to exceed $5,000,000 at any time outstanding, for travel, entertainment, relocation and analogous ordinary business purposes;

(c) Investments in the Company or any Loan Party; provided that in the case of any such Investment by a Restricted Subsidiary that is not a Loan Party in a Loan Party, (i) such Investment shall be subordinated to the Obligations in a manner and to an extent reasonably

acceptable to the Administrative Agent and (ii) such Investment shall not be repaid unless no Event of Default exists;

(d) Investments of any Restricted Subsidiary that is not a Loan Party in any other Restricted Subsidiary that is not a Loan Party;

(e) Investments consisting of extensions of credit in the nature of accounts receivable or notes receivable arising from the grant of trade credit in the ordinary course of business, and Investments received in satisfaction or partial satisfaction thereof from financially troubled account debtors to the extent reasonably necessary in order to prevent or limit loss;

(f) Guarantees permitted by Section 7.03;

(g) Permitted Acquisitions;

(h) Investments of any Person in existence at the time such Person becomes a Subsidiary pursuant to a Permitted Acquisition; provided such Investment was not made in connection with or anticipation of such Person becoming a Subsidiary;

(i) to the extent constituting Investments, deposit accounts maintained in the ordinary course of business and cash pooling arrangements in the ordinary course of business;

(j) Investments of the Company or any Restricted Subsidiary in any Special Purpose Subsidiary in connection with any Permitted Securitization Transaction, provided that such Investments are customary in Securitization Transactions;

(k) to the extent constituting Investments, Restricted Payments permitted under Section 7.06;

(l) Investments existing on, or contractually committed to as of, the Closing Date and described in Schedule 7.02 or consisting of intercompany Investments between or among the Company and its Subsidiaries outstanding on the Closing Date and any modification, replacement, renewal or extension thereof so long as such modification, renewal or extension thereof does not increase the amount of such Investment except, in the case of any such Investment described on Schedule 7.02, by the terms thereof as in effect on the date hereof and described on Schedule 7.02 or as otherwise permitted by this Section 7.02;

(m) Swap Contracts permitted under Section 7.03(d).

(n) Investments (including debt obligations and Equity Interests) (i) received by the Company or any of its Subsidiaries as a creditor pursuant to a bankruptcy, insolvency, receivership or plan of reorganization under any Debtor Relief Law of any Person or a composition or readjustment of the debts of such Person, (ii) in settlement of a dispute or delinquent account, (iii) upon foreclosure with respect to any secured Investment or other transfer of title with respect to any secured Investment and/or (iv) as a result of the settlement, compromise, resolution of litigation, arbitration or other disputes;

(o) Investments consisting of (i) deposits or prepaid expenses or (ii) endorsements for collection or deposit and customary trade arrangements, in each case made or incurred in the ordinary course of business;

(p) any Investment received as non-cash consideration from any Disposition permitted by Section 7.05;

(q) Investments comprised of notes payable, or Equity Interests issued by account debtors to the Company or any Restricted Subsidiary pursuant to negotiated agreements with respect to settlement of such account debtor's account in the ordinary course of business;

(r) Investments by a Loan Party and/or any Subsidiary that is not a Loan Party in any Restricted Subsidiary which is not a Loan Party consisting of the contribution or Disposition of the Equity Interests of any Restricted Subsidiary which is not a Loan Party;

(s) Investments consisting of Indebtedness to the extent permitted under Section 7.03, Permitted Liens, transactions to the extent permitted by Section 7.04, and Restricted Payments and Junior Payments to the extent permitted by Section 7.06;

(t) Investments in any Subsidiary in connection with reorganizations and activities related to tax planning; provided that after giving effect to any such reorganization and related activities, the security interest of the Administrative Agent in the Collateral, taken as a whole, is not materially impaired and after giving effect to such Investment, the Company and its Subsidiaries shall otherwise be in compliance with Section 7.02;

(u) Investments comprised of notes owing to any Loan Party or any wholly owned Subsidiary in connection with the Disposition of the Toronto Property; and

(v) other Investments in an aggregate amount not to exceed at any time outstanding the sum of (i) $75,000,000 plus (ii) an unlimited amount so long as both before and after giving effect to such Investment on a Pro Forma Basis, the Consolidated Secured Leverage Ratio shall be less than 2.50:1.00.

For purposes of covenant compliance, the amount of any Investment shall be the amount actually invested, without adjustment for subsequent increases or decreases in the value of such Investment, but in each case, net of any return in respect thereof, including dividends, interest, distributions, returns of principal, profits on sale, repayments, income and similar amounts.

7.03 Indebtedness. Create, incur, assume or suffer to exist any Indebtedness, except:

(a) Indebtedness under the Loan Documents, Secured Cash Management Agreements and Secured Swap Contracts;

(b) Indebtedness outstanding on the Closing Date and listed on Schedule 7.03 and any refinancings, refundings, renewals or extensions thereof; provided that the amount of such Indebtedness is not increased at the time of such refinancing, refunding, renewal or extension except by an amount equal to a reasonable premium or other reasonable amount paid, and fees and expenses reasonably incurred, in connection with such refinancing and by an amount equal to any existing commitments unutilized thereunder;

(c) Guarantees of the Company or any Loan Party in respect of Indebtedness otherwise permitted hereunder of the Company or any Loan Party; provided that if such Indebtedness is subordinated to the Obligations, such Guarantee shall be subordinated to the Obligations on terms at least as favorable to the Lenders as those contained in the subordination of such Indebtedness;

(d) obligations (contingent or otherwise) of the Company or any Loan Party existing or arising under any Swap Contract, provided that such obligations are (or were) entered into by such Person in the ordinary course of business for the purpose of directly mitigating risks associated with liabilities, commitments, investments, assets, or property held or reasonably anticipated by such Person, or changes in the value of securities issued by such Person, and not for purposes of speculation or taking a "market view";

(e) Indebtedness in respect of capital leases, Synthetic Lease Obligations and purchase money obligations for fixed or capital assets within the limitations set forth in Section 7.01(i); provided, however, that the aggregate amount of all such Indebtedness at any one time outstanding shall not exceed $150,000,000;

(f) Indebtedness in respect of workers' compensation claims, self-insurance obligations, performance bonds, surety, appeal or similar bonds and completion guarantees provided by the Company and its Restricted Subsidiaries in the ordinary course of business;

(g) intercompany Indebtedness permitted under Section 7.02; provided that in the case of Indebtedness owing by a Loan Party to any Subsidiary that is not a Loan Party, such Indebtedness shall be unsecured and subordinated in right of payment to the Obligations on a basis, and pursuant to an agreement, reasonably acceptable to the Administrative Agent;

(h) Pari Passu Indebtedness, Subordinated Indebtedness and unsecured Indebtedness (any such Indebtedness, "Additional Indebtedness"); provided in each case that (i) after giving effect to the incurrence of such Indebtedness and the application of the proceeds thereof on a Pro Forma Basis, (A) the Loan Parties would be in Pro Forma Compliance and (B) solely with respect to Pari Passu Indebtedness and Subordinated Indebtedness, the Consolidated Secured Leverage Ratio would be less than 2.50:1.00, (ii) with respect to the incurrence of (A) any such Subordinated Indebtedness or unsecured Indebtedness, in each case, in excess of $100,000,000 or (B) any such Pari Passu Indebtedness, the Company shall have delivered to the Administrative Agent a Pro Forma Compliance Certificate demonstrating compliance with the immediately preceding sub-clauses (A) and (B) of the immediately preceding clause (i), as applicable; (iii) no Default or Event of Default shall exist at the time of, or would result from, the incurrence of, such Indebtedness; (iv) the maturity date of such Indebtedness shall be at least ninety-one (91) days after the later of (A) the latest Maturity Date and (B) the maturity date for any Incremental Term Loan; (v) the Weighted Average Life of any such Indebtedness shall not be shorter than the then remaining Weighted Average Life of any other Term Loan; (vi) such Additional Indebtedness shall be subject to intercreditor or subordination agreements, as applicable, reasonably acceptable to the Administrative Agent; and (vii) the terms and conditions including such financial maintenance covenants (if any) applicable to such Additional Indebtedness shall not be, when taken as a whole, materially more restrictive (as determined by the Administrative Agent acting reasonably) than those contained in the Loan Documents;

(i) Indebtedness of any Borrower or any Restricted Subsidiary assumed or acquired connection with Permitted Acquisition (any such Indebtedness, "Acquired Indebtedness"), provided that (i) such Indebtedness shall exist prior to the applicable Permitted Acquisition and was not incurred in connection with, in anticipation or contemplation of, the applicable Permitted Acquisition and (ii) the aggregate principal amount of all such Indebtedness shall not exceed $25,000,000 at any one time outstanding;

(j) (i) Attributable Indebtedness under any Securitization Transaction (other than, for the avoidance of doubt, any Permitted Receivables Transaction or the DB or the DB Receivables Purchase Agreement, each of which is governed by the provisions of the immediately succeeding clauses (ii) and (iii)), (ii) to the extent constituting Indebtedness, the obligations of the Company or any Restricted Subsidiary pursuant to any Permitted Receivables Transaction and (iii) to the extent constituting Indebtedness, the obligations of the Company or any Restricted Subsidiary pursuant to the DB Receivables Purchase Agreement; provided that the aggregate amount of all Indebtedness and all outstanding sales of receivables permitted pursuant to this clause (j) shall not exceed at any time outstanding (A) so long as (I) the Company maintains a current public corporate family rating of BB- or better from S&P or Ba3 or better from Moody's, (II) no Credit Extension (other than Letters of Credit and Term Loans) shall be outstanding and (III) no extension of credit shall be outstanding under any other credit facility under which the Company or any Restricted Subsidiary is a borrower (other than any letter of credit issued in the ordinary course of business), fifty percent (50%) or (B) under all other circumstances, thirty percent (30%), in each case, of the aggregate book value of the trade accounts receivable of or owing to the Loan Parties, determined on a consolidated basis prior to giving effect to prior Securitization Transactions, prior Permitted Receivables Transactions and the DB Receivables Purchase Agreement, in each case to the extent not collected on or prior to the date on which the relevant transaction is completed; provided, further, that solely with respect to any Securitization Transaction entered into pursuant to sub-clause (i) of this clause (j), (x) no Default or Event of Default shall exist immediately prior to or immediately after giving effect to such Securitization Transaction, (y) prior to entering into such Securitization Transaction, the Company shall have delivered to the Administrative Agent a Pro Forma Compliance Certificate demonstrating that, after giving effect to such Securitization Transaction on a Pro Forma Basis, the Loan Parties would be in Pro Forma Compliance and (z) such Securitization Transaction shall be non-recourse to the Company and its Restricted Subsidiaries other than with respect to purchase or repurchase obligations for breaches of representations and warranties, performance guaranties and indemnity obligations and other similar undertakings in each case that are customary for similar standard market accounts receivable securitizations;

(k) accrued expenses (including salaries, accrued vacation and other compensation), current trade or other accounts payable and other current liabilities arising in the ordinary course of business and not past due more than 90 days except to the extent being contested in good faith and by appropriate proceedings;

(l) Indebtedness arising from agreements providing for indemnification, adjustment of purchase price or similar obligations (including contingent earn-out obligations) incurred in connection with any disposition permitted hereunder, any acquisition or other purchase of assets or Equity Interests permitted hereunder, and Indebtedness arising from surety bonds, performance bonds or similar instruments securing the performance of the Company or any Restricted Subsidiary pursuant to such agreement;

(m) Indebtedness arising in connection with endorsement of instruments for deposit in the ordinary course of business;

(n) Indebtedness in respect of premium financing arrangements; provided that the aggregate principal amount of such Indebtedness shall not exceed the annual premium amount and shall be secured only by the Liens described in Section 7.01(x);

(o) Indebtedness consisting of unsecured guarantees by the Company or any of its Restricted Subsidiaries of operating leases of any Loan Party (other than the Company);

(p) Indebtedness in respect of commercial credit cards, stored value cards, employee credit cards, purchasing cards and treasury management services and other netting services, overdraft protections, automated clearing-house arrangements, employee credit card programs, controlled disbursement, ACH transactions, return items, interstate depository network service, Society for Worldwide Interbank Financial Telecommunication transfers, cash pooling and operational foreign exchange management, and, in each case, similar arrangements and otherwise in connection with cash management or customary banking arrangements, and deposit accounts, in each case to the extent incurred in the ordinary course of business; provided that, to the extent any such arrangements create Indebtedness obligations or liabilities by a Loan Party to or with respect to any Subsidiary that is not a Loan Party, such Indebtedness obligations or liabilities must be permitted under Section 7.02;

(q) Indebtedness representing deferred compensation to employees of the Company and its Subsidiaries;

(r) (i) Indebtedness in respect of guarantees of the obligations of suppliers, customers and licensees in the ordinary course of business and (ii) Indebtedness incurred in the ordinary course of business in respect of obligations of the Company or any Subsidiary to pay the deferred purchase price of goods or services or progress payments in connection with such goods and services;

(s) unfunded pension fund and other employee benefit plan obligations and liabilities incurred in the ordinary course of business to the extent that the unfunded amounts would not otherwise cause an Event of Default;

(t) Indebtedness consisting of obligations owing under any dealer, customer or supplier incentive, supply, license or similar agreements entered into in the ordinary course of business;

(u) Indebtedness consisting of (i) take-or-pay obligations contained in supply arrangements and/or (ii) obligations to reacquire assets or inventory in connection with customer financing arrangements, in each case, in the ordinary course of business;

(v) Indebtedness of any Non-U.S. Subsidiary under (i) any Specified Local Facility or (ii) any other local overdraft, working capital, letter of credit or other facility or extension of credit, in each case incurred in the ordinary course of business of such Non-U.S. Subsidiary, in an aggregate amount for all such Indebtedness incurred pursuant to this clause (v) not to exceed $50,000,000 at any time outstanding; provided that, in the event that any such facility is secured, to the extent deemed necessary or appropriate by the Administrative Agent in its sole discretion, any such secured Indebtedness shall be subject to an intercreditor agreement in form and substance reasonably acceptable to the Administrative Agent;

(w) to the extent constituting Indebtedness, customer deposits and advance payments received in the ordinary course of business from customers for goods and services purchased in the ordinary course of business; and

(x) other Indebtedness in an aggregate principal amount not to exceed $100,000,000 at any time outstanding.

Notwithstanding anything to the contrary in this Section 7.03 or otherwise, no Special Purpose Subsidiary shall contract, create, incur, assume or permit to exist any Indebtedness other than Indebtedness existing from time to time under any Permitted Securitization Transaction.

7.04 Fundamental Changes. Merge, amalgamate, dissolve, liquidate, consolidate with or into another Person, or Dispose of (whether in one transaction or in a series of transactions) all or substantially all of its assets (whether now owned or hereafter acquired) to or in favor of any Person, except that, so long as no Event of Default exists or would result therefrom:

(a) (i) the Company may merge, amalgamate or consolidate with any of its Subsidiaries; provided that the Company is the continuing or surviving Person, and (ii) any Restricted Subsidiary may merge, amalgamate or consolidate with (or engage in any similar transaction, including to be acquired by or wound up into) any of the Company or one or more other Restricted Subsidiaries; provided that (x) if a Guarantor is a party thereto, the continuing or surviving Person is a Borrower or a Guarantor, (y) if any Borrower is a party thereto, a Borrower is the continuing or surviving Person and (z) if any Canadian Borrower is a party to any amalgamation, the new created "amalgamated" Person shall provide to the Administrative Agent customary documents and other deliverables with respect to the such Person;

(b) the Company or any Restricted Subsidiary may merge or amalgamate with any other Person in connection with a Permitted Acquisition, provided that (i) if the Company is a party thereto, the Company is the continuing or surviving Person, (ii) if a Borrower is a party thereto, a Borrower is the continuing or surviving Person and (iii) if a Guarantor is a party thereto, such surviving Person shall be a Borrower or a Guarantor;

(c) any Restricted Subsidiary may Dispose of all or substantially all of its assets (upon voluntary liquidation or otherwise) to the Company or to another Restricted Subsidiary; provided that (i) if the transferor in such a transaction is a Loan Party, then the transferee must be a Loan Party and (ii) if the transferor in such a transaction is a Borrower, the transferee must be a Borrower; and

(d) (i) each of the dissolutions, liquidations, consolidations and other Disposals that are in process or slated to occur and described in Schedule 7.04 may be consummated and (ii) any Subsidiary that is an Immaterial Subsidiary or an Unrestricted Subsidiary may be dissolved, liquidated, or consolidated with or into another Person, provided that with respect to any consolidation with or into another Person pursuant to this clause (ii), (x) if a Borrower is a party thereto, a Borrower is the continuing or surviving Person, (y) if a Guarantor is a party thereto, such surviving Person shall be a Borrower or a Guarantor and (z) if a Restricted Subsidiary is a party thereto, such surviving Person shall be a Restricted Subsidiary; and

(e) any Disposition to the extent permitted by Section 7.05 (other than, for the avoidance of doubt, pursuant to clause (e) of such Section) shall be permitted under this Section 7.04.

7.05 Dispositions. Make any Disposition or enter into any agreement to make any Disposition, except:

(a) Dispositions of used, obsolete, damaged, worn-out or surplus equipment, or property no longer useful in the conduct of the business or otherwise economically impracticable to maintain, whether now owned or hereafter acquired, in the ordinary course of business;

(b) Disposition of inventory, goods held for sale and other assets and licenses of intellectual property (including on an intercompany basis), in each case in the ordinary course of business;

(c) Dispositions of equipment or real property to the extent that (i) such property is exchanged for credit against the purchase price of similar replacement property or (ii) the proceeds of such Disposition are reasonably promptly applied to the purchase price of such replacement property;

(d) Dispositions of property (including, for the avoidance of doubt, owned Equity Interests) to the Company or to another Restricted Subsidiary; provided that if the transferor of such property is a Loan Party, the transferee thereof must be a Loan Party;

(e) Dispositions permitted by Section 7.04 or Section 7.06;

(f) non-exclusive licenses of IP Rights in the ordinary course of business and substantially consistent with past practice for terms not exceeding five (5) years;

(g) Dispositions of accounts receivable in connection with the collection or compromise thereof;

(h) licenses, sublicenses, leases or subleases granted to others not interfering in any material respect with the business of the Company and its Restricted Subsidiaries;

(i) Dispositions of Cash Equivalents in the ordinary course of business;

(j) to the extent constituting Dispositions, Recovery Events;

(k) Dispositions of Securitized Assets by (i) any Special Purpose Subsidiary in connection with any Permitted Securitization Transaction or (ii) the DB Receivables Purchase Agreement;

(l) the Disposition of each of (i) the Toronto Property and (ii) all or any part of the Valencia Property, in the case of each of the foregoing clauses (i) and (ii), to any Person other than a Subsidiary in a single transaction or series of related transactions;

(m) the Disposition of non-core or non-strategic assets acquired in connection with a Permitted Acquisition or similar Investment; *provided* that (x) to the extent required by Section 2.06(b)(ii), such Net Cash Proceeds from any such sale are reinvested or applied in prepayment of the Loans in accordance with the provisions of Section 2.06(b)(v), (y) immediately after giving effect thereto, no Event of Default would exist and (z) the fair market value of such non-core or non-strategic assets (determined as of the date of acquisition thereof by the applicable Loan Party or Restricted Subsidiary, as the case may be) so Disposed shall not exceed twenty-five percent (25%) of the purchase price paid for all such assets acquired in such Permitted Acquisition;

(n) the termination of a lease due to the default of the landlord thereunder or pursuant to any right of termination of the tenant under the lease;

(o) Dispositions of equipment or real property to the extent that (i) such property is exchanged for credit against the purchase price of similar replacement property or (ii) the proceeds

of such Disposition are reasonably promptly applied to the purchase price of such similar replacement property;

(p) the lease or sub-lease of any real or personal property in the ordinary course of business and the termination or non-renewal of any real property lease not used or not necessary to the operations of the Company or any Restricted Subsidiary;

(q) Dispositions in the ordinary course of business consisting of the abandonment of intellectual property rights which, in the reasonable good faith determination of the Company, are not material to the conduct of the business of the Company and its Subsidiaries, taken as a whole;

(r) Dispositions of Investments in joint ventures or any Restricted Subsidiaries that are not wholly owned Subsidiaries to the extent required by, or made pursuant to, buy/sell arrangements between joint venture or similar parties set forth in the relevant joint venture arrangements and/or similar binding arrangements;

(s) Dispositions or consignments of equipment, inventory or other assets (including leasehold interests in real property) with respect to facilities that are temporarily not in use, held for sale or closed;

(t) Dispositions in connection with the termination or unwinding of Swap Contracts;

(u) Dispositions of Equity Interests or Indebtedness of Unrestricted Subsidiaries;

(v) exchanges or swaps, including transactions covered by Section 1031 of the Code (or any comparable provision of any foreign jurisdiction), of property or assets so long as the exchange or swap is made for fair value (as reasonably determined by the Company) for like property or assets; provided that (i) within ninety (90) days of any such exchange or swap, in the case of any Loan Party and to the extent such property does not constitute Excluded Property, the Administrative Agent has a perfected Lien having the same priority as any Lien held on the property so exchanged or swapped and (ii) any Net Cash Proceeds received as a "cash boot" in connection with any such transaction shall be applied and/or reinvested as (and to the extent) required by Section 2.06;

(w) any merger, consolidation, Disposition or conveyance, the sole purpose and effect of which is to reincorporate or reorganize (i) any U.S. Subsidiary in another jurisdiction in the U.S. or (ii) any Non-U.S. Subsidiary in the U.S. or any other jurisdiction; provided, that any Loan Party involved in such transaction does not become an Excluded Subsidiary (except to the extent that it is or becomes an Immaterial Subsidiary so long as it remains a Loan Party hereunder) as a result of such transaction and any Restricted Subsidiary does not become an Unrestricted Subsidiary as a result of such transaction unless the designation of such Restricted Subsidiary as an Unrestricted Subsidiary is permitted under Section 6.20 at such time; and

(x) Dispositions of accounts receivable due from any customer of the Company or any Restricted Subsidiary in connection with such customer's supplier financing program pursuant to a customary receivables sale agreement (each such Disposition, a "Permitted Receivables Transaction"); provided that (i) any such sale is made on a nonrecourse basis to the Company and its Restricted Subsidiaries other than with respect to the representations given by the Company or the applicable Restricted Subsidiary, as the case may be, in connection with such receivables, (ii) if the Company or such Restricted Subsidiary, as the case may be, receives an updated pricing schedule that provides for a total "discount rate" resulting in more than a five percent (5%) discount on the

total amount of each account receivable sold pursuant to such receivables sale agreement (i.e., discounting any such receivable so that the receivables would be sold for less than "95 cents on the dollar"), the Company or such Restricted Subsidiary, as the case may be, does not permit any such receivables to be sold at such discount rate for more than five (5) Business Days after its receipt of such updated pricing schedule and (iii) any lien release and UCC-3 financing statement amendment to be filed in connection with such lien release shall be reasonably satisfactory (including with respect to the terms and conditions thereof in the case of any such lien release) to the Administrative Agent and such UCC-3 financing statement amendment shall be promptly filed by the Administrative Agent after entering into such lien release; and

(y) Dispositions not otherwise permitted under this Section 7.05, so long as (i) no Default or Event of Default has occurred and is continuing, (ii) at least seventy-five percent (75%) of the consideration paid in connection therewith shall be cash or Cash Equivalents paid contemporaneously with consummation of the transaction, (iii) the consideration paid in connection therewith shall be in an amount not less than the fair market value of the property disposed of (as reasonably determined by the Company), (iv) such transaction does not involve the Disposition of a minority Equity Interest in any Loan Party (other than the Company), (v) such Disposition does not involve a Disposition of receivables other than receivables owned by or attributable to other property concurrently being disposed of in a Disposition otherwise permitted under this Section 7.05, and (vi) the aggregate net book value of all of the assets subject to Dispositions made in reliance on this clause (y) shall not exceed $45,000,000 in any fiscal year.

7.06 Restricted Payments and Junior Payments. Declare or make, directly or indirectly, any Restricted Payment or any Junior Payment, or incur any obligation (contingent or otherwise) to do so, except:

(a) each Restricted Subsidiary may make Restricted Payments to the Company, the Guarantors and any other Person that owns an Equity Interest in such Restricted Subsidiary, ratably according to their respective holdings of the type of Equity Interest in respect of which such Restricted Payment is being made;

(b) the Company and each Subsidiary may declare and make dividend payments or other distributions payable solely in the common stock or other common Equity Interests of such Person;

(c) the Company and each Subsidiary may purchase, redeem or otherwise acquire Equity Interests issued by it with the proceeds received from the substantially concurrent issue of new shares of its common stock or other common Equity Interests;

(d) to the extent constituting Restricted Payments, (i) transactions contemplated by or required under any of (A) the Long Term Incentive Plan of the Company, (B) the Celestica Share Unit Plan of the Company or (C) the Directors' Share Compensation Plan of the Company or any replacement or successor plan thereto, and (ii) transactions contemplated by or required under any other employment, compensation or separation agreement or arrangement entered into by the Company or any Restricted Subsidiary in the ordinary course of business; and

(e) the Company may make Restricted Payments and Junior Payments (including, without limitation, normal-course issuer bids) in an aggregate amount during the term of this Agreement not to exceed the sum of (i) $50,000,000 plus (ii) an unlimited amount so long as both before and after giving effect to such Restricted Payment or Junior Payment, as applicable, on a Pro

Forma Basis, the Consolidated Secured Leverage Ratio shall be less than 2.50:1.00; provided that no Default or Event of Default then exists or would arise therefrom.

7.07 Change in Nature of Business. Engage in any material line of business other than those lines of business conducted by the Company and its Restricted Subsidiaries on the Closing Date and/or any business similar, complementary, ancillary, adjacent, reasonably related or incidental thereto.

7.08 Transactions with Affiliates. Enter into any transaction of any kind with any Affiliate (other than the Company or a Restricted Subsidiary) of the Company, whether or not in the ordinary course of business, other than (a) reasonable and customary compensation and reimbursement expenses of officers and directors, (b) stock option plans for officers, management and other employees, (c) transactions solely between or among the Company and/or one or more Restricted Subsidiaries or any Person that becomes a Restricted Subsidiary as a result of such transaction, (c) any dividends or distributions on account of shares of any Equity Interests issued by Subsidiaries of the Company ratably to the holders thereof, (d) transactions between or among the Company and/or one or more Restricted Subsidiaries and their Affiliates that are required under applicable Law or by any Governmental Authority, (e) transactions entered into on or prior to the Closing Date and described on Schedule 7.08 and (f) other transactions on terms not materially less favorable to the Company or such Restricted Subsidiary as would be obtainable by the Company or such Restricted Subsidiary at the time in a comparable arm's length transaction with a Person other than an Affiliate.

7.09 Burdensome Agreements. Enter into any Contractual Obligation (other than this Agreement or any other Loan Document) that (a) limits the ability (i) of any Restricted Subsidiary to make Restricted Payments to the Company or any Loan Party or to otherwise transfer property to the Company or any Loan Party, (ii) of any Restricted Subsidiary to Guarantee the Indebtedness of the Borrowers or (iii) of the Company or any Restricted Subsidiary to create, incur, assume or suffer to exist Liens on property of such Person; provided, however, that this clause (iii) shall not prohibit any negative pledge (x) incurred or provided in favor of any holder of Indebtedness permitted under Section 7.03(e) solely to the extent any such negative pledge relates to the property financed by or the subject of such Indebtedness or (y) contained in the DB Receivables Purchase Agreement or in any document or instrument governing any Permitted Securitization Transaction or any Permitted Receivables Transaction, provided that any such restriction relates only to the applicable Securitized Assets or, in the case of any Permitted Receivables Transaction, accounts receivable actually sold, conveyed, pledged, encumbered or otherwise contributed pursuant to the DB Receivables Purchase Agreement, to such Permitted Securitization Transaction or to such Permitted Receivables Transaction, as applicable; or (b) requires the grant of a Lien to secure an obligation of such Person if a Lien is granted to secure another obligation of such Person, in the case of each of clauses (a) and (b), other than Contractual Obligations:

(a) set forth in any agreement evidencing (i) Indebtedness of a Restricted Subsidiary that is not a Loan Party permitted by Section 7.03, (ii) Indebtedness permitted by Section 7.03 that is secured by a Permitted Lien if the relevant restriction applies only to the Person obligated under such Indebtedness and its Restricted Subsidiaries or the property or assets intended to secure such Indebtedness and (iii) Indebtedness permitted pursuant to clauses (e), (j) and/or (w) of Section 7.03 (including any refinancings or replacements of any of the foregoing);

(b) that are or were created by virtue of any Lien granted upon, Disposition of, transfer of, agreement to transfer or grant of, any option or right with respect to any property, assets or Equity Interests not otherwise prohibited under this Agreement; provided that such Lien is only on or with

respect to the property, assets or Equity Interests subject to such Disposition, transfer, agreement to transfer or option or right;

(c) arising under or as a result of applicable Law or the requirements of any Governmental Authority or the terms of any license, authorization, concession or permit obtained in the ordinary course of business;

(d) arising under customary non-assignment provisions with respect to assignments, leases, subletting or other transfers (including the granting of any Lien) contained in leases, subleases, licenses, sublicenses, joint venture agreements and other agreements, in each case entered into in the ordinary course of business;

(e) imposed by customary provisions in partnership agreements, limited liability company organizational governance documents, joint venture agreements and other similar agreements but solely with respect to the Equity Interests of such partnership, limited liability company or joint venture;

(f) that are assumed in connection with any acquisition of property or the Equity Interests of any Person, so long as the relevant encumbrance or restriction relates solely to the Person and its subsidiaries (including the Equity Interests of the relevant Person or Persons) and/or property so acquired and was not created in connection with or in anticipation of such acquisition;

(g) set forth in any agreement for any Disposition of any Restricted Subsidiary (or all or substantially all of the property and/or assets thereof) that restricts the payment of dividends or other distributions or the making of cash loans or advances by such Restricted Subsidiary pending such Disposition;

(h) set forth in agreements or instruments which prohibit the payment of dividends or the making of other distributions with respect to any class of Equity Interests of a Person other than on a pro rata basis;

(i) set forth in documents which exist on the Closing Date and were not created in contemplation thereof and which are set forth on Schedule 7.09;

(j) on cash, other deposits or net worth or similar restrictions imposed by Persons under contracts entered into in the ordinary course of business or for whose benefit such cash, other deposits or net worth or similar restrictions exist;

(k) arising in any Swap Contract and/or any agreement relating to any Swap Obligation or obligations of the type referred to in Section 7.03(d);

(l) arising pursuant to an agreement or instrument relating to any Indebtedness permitted to be incurred hereunder if the relevant restrictions, taken as a whole, are not materially less favorable to the Lenders than the restrictions contained in this Agreement, taken as a whole (as determined in good faith by the Company);

(m) relating to any asset (or all of the assets) of and/or the Equity Interests of any Restricted Subsidiary which are imposed pursuant to an agreement entered into in connection with any Disposition of such asset (or assets) and/or all or a portion of the Equity Interests of the relevant Person that is permitted or not restricted by this Agreement;

(n) set forth in any agreement relating to any Permitted Lien that limits the right of the Company or any Restricted Subsidiary to Dispose of or encumber the assets subject thereto; and

(o) imposed by any amendments, modifications, restatements, renewals, increases, supplements, refundings, replacements or refinancings of the contracts, instruments or obligations referred to in clauses (a) through (n) above; provided that such amendments, modifications, restatements, renewals, increases, supplements, refundings, replacements or refinancing are, in the reasonable judgment of the Company, not materially more restrictive with respect to such encumbrances and other restrictions, taken as a whole, than those in effect prior to such amendment, modification, restatement, renewal, increase, supplement, refunding, replacement or refinancing.

7.10 Use of Proceeds. Use the proceeds of any Credit Extension, whether directly or indirectly, and whether immediately, incidentally or ultimately, to purchase or carry margin stock (within the meaning of Regulation U of the FRB) or to extend credit to others for the purpose of purchasing or carrying margin stock or to refund indebtedness originally incurred for such purpose.

7.11 Financial Covenants.

(a) Consolidated Interest Coverage Ratio. Except with the consent of the Required Pro Rata Facilities Lenders, permit the Consolidated Interest Coverage Ratio as of the end of any fiscal quarter of the Company to be less than 3.25:1.00.

(b) Consolidated Total Leverage Ratio. Except with the consent of the Required Pro Rata Facilities Lenders, permit the Consolidated Total Leverage Ratio at any time during any period of four (4) fiscal quarters of the Company to be greater than 4.00:1.00; provided, that, upon the occurrence of a Qualified Acquisition, for the four (4) fiscal quarters commencing with the fiscal quarter during which such Qualified Acquisition closes (each such period, a "Leverage Increase Period"), the required ratio set forth above may, upon receipt by the Administrative Agent of a Qualified Acquisition Notice, be increased to 4.50:1.00; provided further, that (i) the maximum Consolidated Total Leverage Ratio permitted pursuant to this Section 7.11(b) shall revert to 4.00:1.00 following the end of each Leverage Increase Period, (ii) for at least two (2) fiscal quarters ending immediately following each Leverage Increase Period, the Consolidated Total Leverage Ratio as of the end of each such fiscal quarter shall not be permitted to be greater than 4:00:1.00 prior to giving effect to another Leverage Increase Period and (iii) the Leverage Increase Period shall apply for purposes of determining compliance with this Section 7.11(b), for purposes of any Qualified Acquisition Pro Forma Determination and for purposes of determining Pro Forma Compliance in connection with the incurrence of Indebtedness under Section 7.03(h).

7.12 Organization Documents; Fiscal Year; Legal Name, Jurisdiction of Formation and Form of Entity.

(a) Amend, modify or change its Organization Documents in a manner materially adverse to the Lenders;

(b) Change the Company's fiscal year;

(c) Without providing ten (10) days (or such lesser period as the Administrative Agent may agree) prior written notice to the Administrative Agent, change its name, jurisdiction of formation or form of organization; or

(d) Make any change in accounting policies or reporting practices, except as required by IFRS.

7.13 Sale Leasebacks. Enter into any Sale and Leaseback Transaction; provided that any Sale and Leaseback Transaction shall be permitted so long as such Sale and Leaseback Transaction (1) cash consideration is received by the Company or any of its Restricted Subsidiaries for the property subject thereto, (2) the Company or its applicable Restricted Subsidiary would otherwise be permitted to enter into, and remain liable under, the applicable underlying lease and (3) the aggregate fair market value of the property sold pursuant to all such Sale and Leaseback Transactions under this Section 7.13 shall not exceed $50,000,000.

7.14 Amendments to and Prepayments of Additional Indebtedness.

(a) Amend or modify any of the terms of any Additional Indebtedness if after giving effect to such amendment or modification the terms of such Additional Indebtedness would not satisfy the requirements of clauses (iv) through (vii) of Section 7.03(h);

(b) Make (or give any notice with respect thereto) any voluntary prepayment or redemption or acquisition for value of (including without limitation, by way of depositing money or securities with the trustee with respect thereto before due for the purpose of paying when due), or refund, refinance or exchange, any Additional Indebtedness except for (i) Junior Payments permitted by Section 7.06 and (ii) in the case of the giving of notice with respect to any such voluntary prepayment, redemption, acquisition for value, refund, refinance or exchange, any such notice given in connection with the repayment in full of all Obligations and the termination of the Aggregate Commitments;

(c) Amend or modify any of the subordination provisions applicable to any Subordinated Indebtedness without the prior written consent of the Administrative Agent; or

(d) Make any payments in respect of any Subordinated Indebtedness in violation of the subordination provisions applicable to such Subordinated Indebtedness

7.15 Canadian Pension Matters. Maintain, contribute to, or incur any liability or contingent liability in respect of a Canadian Defined Benefit Pension Plan, except as a result of the consummation of a Permitted Acquisition, or with the prior written consent of the Administrative Agent.

7.16 Sanctions. Directly or knowingly indirectly, use any Credit Extension or the proceeds of any Credit Extension, or lend, contribute or otherwise make available such Credit Extension or the proceeds of any Credit Extension to any Person, to fund any activities of or business with any Person, or in any Designated Jurisdiction, that, at the time of such funding, is the subject of Sanctions, or in any other manner that will result in a violation by any Person (including any Person participating in the transaction, whether as Lender, Arranger, Administrative Agent, L/C Issuer, Swing Line Lender, or otherwise) of Sanctions.

7.17 Anti-Corruption Laws. Directly or knowingly indirectly use any Credit Extension or the proceeds of any Credit Extension for any purpose which would breach the United States Foreign Corrupt Practices Act of 1977, the Corruption of Foreign Public Officials Act (Canada), the UK Bribery Act 2010, and other similar anti-corruption legislation in other jurisdictions in which a Borrower or any of its Subsidiaries conducts business or owns property.

ARTICLE VIII.

EVENTS OF DEFAULT AND REMEDIES

8.01 Events of Default. Any of the following shall constitute an Event of Default:

(a) Non-Payment. Any Borrower or any other Loan Party fails to pay (i) when and as required to be paid herein, and in the currency required hereunder, any amount of principal of any Loan or any L/C Obligation, or (ii) within five (5) Business Days after the same becomes due, any interest on any Loan or on any L/C Obligation, or any fee due hereunder, or (iii) within five (5) Business Days after the same becomes due, any other amount payable hereunder or under any other Loan Document; or

(b) Specific Covenants. Any Loan Party fails to perform or observe any term, covenant or agreement contained in any of Section 6.01, 6.02, 6.03(a), 6.05(a) or 6.10 or Article VII; provided that any such failure to observe or perform any of the covenants set forth in Section 7.11 shall not constitute an Event of Default for purposes of the Term B Loan or any Incremental Tranche B Term Facility unless and until the Administrative Agent or the Required Pro Rata Facilities Lenders first exercise any remedy in accordance with this Article VIII in respect of such breach (and until such time, the failure to comply with Section 7.11 shall only constitute an Event of Default with respect to the Aggregate Revolving Commitments and any Incremental Tranche A Term Facilities); provided, further, that any Event of Default under any of the covenants set forth in Section 7.11 may be amended, waived or otherwise modified from time to time by the Required Pro Rata Facilities Lenders pursuant to Section 10.01; or

(c) Other Defaults. Any Loan Party fails to perform or observe any other covenant or agreement (not specified in clauses (a) or (b) above) contained in any Loan Document on its part to be performed or observed and such failure continues for thirty (30) days after the earlier of (i) a Responsible Officer of a Loan Party having actual knowledge of such failure, or (ii) receipt by a Responsible Officer of the Company of notice from the Administrative Agent or any Lender of such failure; or

(d) Representations and Warranties. Any representation, warranty, certification or statement of fact made or deemed made by or on behalf of the Company or any other Loan Party herein, in any other Loan Document, or in any document delivered in connection herewith or therewith shall be incorrect or misleading in any respect (or in any material respect if such representation or warranty is not by its terms already qualified as to materiality or Material Adverse Effect) when made or deemed made; or

(e) Cross-Default. (i) The Company or any Restricted Subsidiary (A) fails to make any payment when due (whether by scheduled maturity, required prepayment, acceleration, demand, or otherwise) in respect of any Indebtedness or Guarantee (other than Indebtedness hereunder and Indebtedness under Swap Contracts) having an aggregate principal amount (including amounts owing to all creditors under any combined or syndicated credit arrangement) of more than the Threshold Amount and the continuation of such failure beyond any applicable grace or cure period, or (B) after giving effect to any applicable grace or cure period, fails to observe or perform any other agreement or condition relating to any such Indebtedness or Guarantee or contained in any instrument or agreement evidencing, securing or relating thereto, or any other event occurs, the effect of which default or other event is to cause, or to permit the holder or holders of such Indebtedness or the beneficiary or beneficiaries of such Guarantee (or a trustee or agent on behalf of such holder or

holders or beneficiary or beneficiaries) to cause, with the giving of notice if required, such Indebtedness to be demanded or to become due or to be repurchased, prepaid, defeased or redeemed (automatically or otherwise), or an offer to repurchase, prepay, defease or redeem such Indebtedness to be made, prior to its stated maturity, or such Guarantee to become payable or cash collateral in respect thereof to be demanded (provided that any breach of any covenant or agreement contained in Section 7.11 that may give rise to an event described in clause (B) above shall not, by itself, constitute an Event of Default for purposes of the Term B Loan or any Incremental Tranche B Term Facility unless and until the Administrative Agent or Required Pro Rata Facilities Lenders shall first exercise any remedy in accordance with this Article VIII as a result of such breach); or (ii) there occurs under any Swap Contract an Early Termination Date (as defined in such Swap Contract) resulting from (A) any event of default under such Swap Contract as to which the Company or any Restricted Subsidiary is the Defaulting Party (as defined in such Swap Contract) or (B) any Termination Event (as so defined) under such Swap Contract as to which the Company or any Restricted Subsidiary is an Affected Party (as so defined) and, in either event, the Swap Termination Value owed by the Company or such Restricted Subsidiary as a result thereof is greater than the Threshold Amount and, in the case of any Termination Event not arising out of a default by the Company or any Restricted Subsidiary, such Swap Termination Value has not been paid by the Company or such Restricted Subsidiary when due; or

(f) Insolvency Proceedings, Etc. Any Loan Party or any Material Restricted Subsidiary institutes or consents to the institution of any proceeding under any Debtor Relief Law, or makes an assignment for the benefit of creditors; makes a proposal to its creditors or files notice of its intention to do so, institutes any other proceeding under applicable Law seeking to adjudicate it a bankrupt or an insolvent, or seeking liquidation, dissolution, winding-up, reorganization, compromise, arrangement, adjustment, protection, moratorium, relief, stay of proceedings of creditors, composition of it or its debts or any other similar relief; or applies for or consents to the appointment of any receiver, receiver-manager, trustee, custodian, conservator, liquidator, rehabilitator or similar officer for it or for all or any material part of its property; or any receiver, receiver-manager, trustee, custodian, conservator, liquidator, rehabilitator or similar officer is appointed without the application or consent of such Person and the appointment continues undischarged or unstayed for sixty (60) consecutive calendar days; or any proceeding under any Debtor Relief Law relating to any such Person or to all or any material part of its property is instituted without the consent of such Person and continues undismissed or unstayed for sixty (60) calendar days, or an order for relief is entered in any such proceeding; or

(g) Inability to Pay Debts; Attachment. (i) Any Loan Party or any Material Restricted Subsidiary becomes unable or admits in writing its inability or fails generally to pay its debts as they become due, or (ii) any writ or warrant of attachment or execution or similar process is issued or levied against all or any material part of the property of any such Person and is not released, vacated or fully bonded within thirty (30) days after its issue or levy; or

(h) Judgments. There is entered against the Company or any Restricted Subsidiary (i) one or more final judgments or orders for the payment of money in an aggregate amount (as to all such judgments or orders) exceeding the Threshold Amount (to the extent not covered by independent third-party insurance as to which the insurer does not dispute coverage), or (ii) any one or more non-monetary final judgments that have, or would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect and, in either case, (A) enforcement proceedings are commenced by any creditor upon such judgment or order, or (B) there is a period

of thirty (30) consecutive days during which a stay of enforcement of such judgment, by reason of a pending appeal or otherwise, is not in effect; or

(i) ERISA and Canadian Pension Plan Events. (i) An ERISA Event occurs with respect to a Pension Plan or Multiemployer Plan which has resulted or would reasonably be expected to result in liability of the Company under Title IV of ERISA to the Pension Plan, Multiemployer Plan or the PBGC in an aggregate amount in excess of the Threshold Amount, (ii) the Company or any ERISA Affiliate fails to pay when due, after the expiration of any applicable grace period, any installment payment with respect to its withdrawal liability under Section 4201 of ERISA under a Multiemployer Plan in an aggregate amount in excess of the Threshold Amount or (iii) any failure by any Loan Party or any Subsidiary to perform its obligations under, or the incurrence by any Loan Party or any Subsidiary of any liability or contingent liability in respect of, a Canadian Pension Plan which has resulted or could reasonably be expected to result in liability of any Loan Party in an aggregate amount in excess of the Threshold Amount; or

(j) Invalidity of Loan Documents. Any Loan Document, at any time after its execution and delivery and for any reason other than as expressly permitted hereunder or satisfaction in full of all the Obligations (other than contingent indemnification obligations for which no claim or demand has yet been made), ceases to be in full force and effect; or any Loan Party or any Subsidiary contests in any manner the validity or enforceability of any Loan Document for any reason other than satisfaction in full of all the Obligations (other than contingent indemnification obligations for which no claim or demand has yet been made); or any Loan Party denies that it has any or further liability or obligation under any Loan Document, or purports to revoke, terminate or rescind any provision of any Loan Document (other than upon satisfaction in full of the Obligations (other than contingent indemnification obligations for which no claim or demand has yet been made); or

(k) Change of Control. There occurs any Change of Control; or

(l) Subordinated Indebtedness. The subordination provisions applicable to any Subordinated Indebtedness shall, in each case, in whole or in part, terminate, cease to be effective or cease to be legally valid, binding and enforceable against any holder of such Subordinated Indebtedness.

8.02 Remedies Upon Event of Default. If any Event of Default occurs and is continuing:

(a) if such Event of Default is an Event of Default specified in Section 8.01(b) above as a result of any Loan Party's failure to perform or observe Section 7.11, the Administrative Agent shall, at the request of, or may, with the consent of, the Required Pro Rata Facilities Lenders, take any or all of the following actions:

(i) declare the commitment of each Revolving Lender to make Revolving Loans, the commitment of each Lender in respect of any unfunded Incremental Tranche A Term Loan, any obligation of the Swing Line Lender to make Swing Line Loans and any obligation of the L/C Issuers to make L/C Credit Extensions to be terminated, whereupon such commitments and obligations shall be terminated;

(ii) declare the unpaid principal amount of all outstanding Revolving Loans, Swing Line Loans, Incremental Tranche A Term Loans, all interest accrued and unpaid thereon, and all other amounts owing or payable hereunder or under any other Loan Document in respect of the Revolving Commitments and Incremental Tranche A Term Loans

to be immediately due and payable, without presentment, demand, protest or other notice of any kind, all of which are hereby expressly waived by each Borrower; and

(iii) require that the Borrowers Cash Collateralize the L/C Obligations (in an amount equal to the Minimum Collateral Amount with respect thereto); or

(b) if such Event of Default is any Event of Default other than an Event of Default specified in Section 8.01(b) above as a result of any Loan Party's failure to perform or observe Section 7.11 (or, if (x) such Event of Default is an Event of Default specified in Section 8.01(b) above as a result of any Loan Party's failure to perform or observe Section 7.11 and (y) the Administrative Agent has taken any of the actions described in the immediately preceding clause (a)), the Administrative Agent shall, at the request of, or may, with the consent of, the Required Lenders, take any or all of the following actions:

(i) declare the commitment of each Lender to make Loans and any obligation of the L/C Issuers to make L/C Credit Extensions to be terminated, whereupon such commitments and obligation shall be terminated;

(ii) declare the unpaid principal amount of all outstanding Loans, all interest accrued and unpaid thereon, and all other amounts owing or payable hereunder or under any other Loan Document to be immediately due and payable, without presentment, demand, protest or other notice of any kind, all of which are hereby expressly waived by each Borrower;

(iii) require that the Borrowers Cash Collateralize the L/C Obligations (in an amount equal to the Minimum Collateral Amount with respect thereto); and

(iv) exercise on behalf of itself and the Lenders all rights and remedies available to it and the Lenders under the Loan Documents or applicable law or equity;

provided, however, that upon the occurrence of an actual or deemed entry of an order for relief with respect to any Borrower under the Bankruptcy Code (or any similar occurrence in any other Debtor Relief Laws), the obligation of each Lender to make Loans and any obligation of the L/C Issuers to make L/C Credit Extensions shall automatically terminate, the unpaid principal amount of all outstanding Loans and all interest and other amounts as aforesaid shall automatically become due and payable, and the obligation of the Borrowers to Cash Collateralize the L/C Obligations as aforesaid shall automatically become effective, in each case without further act of the Administrative Agent or any Lender.

8.03 Application of Funds. After the exercise of remedies provided for in Section 8.02 (or after the Loans have automatically become immediately due and payable and the L/C Obligations have automatically been required to be Cash Collateralized as set forth in the proviso to Section 8.02), any amounts received on account of the Obligations shall, subject to the provisions of Sections 2.16 and 2.17, be applied by the Administrative Agent in the following order:

First, to payment of that portion of the Obligations constituting fees, indemnities, expenses and other amounts (including fees, charges and disbursements of counsel to the Administrative Agent and amounts payable under Article III) payable to the Administrative Agent in its capacity as such;

Second, to payment of that portion of the Obligations constituting fees, indemnities and other amounts (other than principal, interest and Letter of Credit Fees) payable to the Lenders and the L/C Issuer (including fees, charges and disbursements of counsel to the respective Lenders and applicable L/C Issuers payable in accordance with the terms of this Agreement and any of the other Loan Documents and amounts payable under Article III), ratably among them in proportion to the respective amounts described in this clause Second payable to them;

Third, to payment of (i) that portion of the Obligations constituting accrued and unpaid Letter of Credit Fees and interest on the Loans and L/C Borrowings and (ii) accrued and unpaid interest and fees with respect to any Specified Local Facility, all ratably among Bank of America or any of its Affiliates (with respect to any Specified Local Facility), the Lenders and the L/C Issuers in proportion to the respective amounts described in this clause Third payable to them;

Fourth, to payment of that portion of the Obligations constituting (i) unpaid principal of the Loans and L/C Borrowings, (ii) Swap Termination Values under any Secured Swap Contract (to the extent such Secured Swap Contract shall have been terminated and as to which the Administrative Agent shall have received notice of such termination and the Swap Termination Value thereof), (iii) amounts owing under any Secured Cash Management Agreements, (iv) obligations to Cash Collateralize that portion of L/C Obligations comprised of the aggregate undrawn amount of Letters of Credit and (v) payment of the unpaid principal of any Specified Local Facility, all ratably among Bank of America or any of its Affiliates (with respect to any Specified Local Facility), the Lenders (and in the case of Secured Swap Contracts, any Affiliate of a Lender) and the L/C Issuers in proportion to the respective amounts described in this clause Fourth held by them;

Fifth, to the Administrative Agent for the account of each L/C Issuer, to Cash Collateralize that portion of L/C Obligations comprised of the aggregate undrawn amount of Letters of Credit issued by it to the extent not otherwise Cash Collateralized by the Company pursuant to Sections 2.03 and 2.16; and

Last, the balance, if any, after all of the Obligations have been indefeasibly paid in full (other than contingent indemnification obligations for which no claim or demand has been made), to the applicable Loan Party or Loan Parties or as otherwise required by Law.

Subject to Sections 2.03(c) and 2.16, amounts used to Cash Collateralize the aggregate undrawn amount of Letters of Credit pursuant to clause Fifth above shall be applied to satisfy drawings under such Letters of Credit as they occur. If any amount remains on deposit as Cash Collateral after all Letters of Credit have either been fully drawn or expired, such remaining amount shall be applied to the other Obligations, if any, in the order set forth above. Notwithstanding the foregoing, payments and Cash Collateral provided by a Designated Borrower shall only be applied to the Obligations of such Designated Borrower. Excluded Swap Obligations with respect to any Loan Party shall not be paid with amounts received from such Loan Party or such Loan Party's assets, but appropriate adjustments shall be made with respect to payments from other Loan Parties to preserve the allocation to Obligations otherwise set forth above in this Section.

Notwithstanding anything in this Section 8.03 to the contrary, amounts received from any Specified Non-U.S. Obligor or Specified U.S. Obligor with respect to the Obligations shall only be applied to satisfy Non-U.S. Obligations.

Notwithstanding the foregoing, Obligations arising under Secured Cash Management Agreements and Secured Swap Contracts shall be excluded from the application described above if the Administrative Agent has not received a Secured Party Designation Notice, together with such supporting documentation as the Administrative Agent may request, from the applicable Lender or Affiliate thereof, as the case may be (unless such Lender or Affiliate is the Administrative Agent or an Affiliate thereof, in which case no Secured Party Designation Notice is required). Each Affiliate of a Lender that is not a party to this Agreement that has given the notice contemplated by the preceding sentence shall, by such notice, be deemed to have acknowledged and accepted the appointment of the Administrative Agent pursuant to the terms of Article IX for itself and its Affiliates as if a "Lender" party hereto. Notwithstanding the foregoing, payments and Cash Collateral provided by a Designated Borrower shall only be applied to the Obligations of such Designated Borrower. Excluded Swap Obligations with respect to any Loan Party shall not be paid with amounts received from such Loan Party or such Loan Party's assets, but appropriate adjustments shall be made with respect to payments from other Loan Parties to preserve the allocation to Obligations otherwise set forth above in this Section.

ARTICLE IX.

ADMINISTRATIVE AGENT

9.01 Appointment and Authority. Each of the Lenders and each of the L/C Issuers hereby irrevocably appoints Bank of America to act on its behalf as the Administrative Agent hereunder and under the other Loan Documents and authorizes the Administrative Agent to take such actions on its behalf and to exercise such powers as are delegated to the Administrative Agent by the terms hereof or thereof, together with such actions and powers as are reasonably incidental thereto. The provisions of this Article are solely for the benefit of the Administrative Agent, the Lenders and the L/C Issuers, and neither the Company nor any other Loan Party shall have rights as a third party beneficiary of any of such provisions. It is understood and agreed that the use of the term "agent" herein or in any other Loan Documents (or any other similar term) with reference to the Administrative Agent is not intended to connote any fiduciary or other implied (or express) obligations arising under agency doctrine of any applicable Law. Instead such term is used as a matter of market custom, and is intended to create or reflect only an administrative relationship between contracting parties.

The Administrative Agent shall also act as the "collateral agent" under the Loan Documents, and each of the Lenders (in its capacities as a Lender, Swing Line Lender (if applicable), party to any Secured Swap Contract and party to any Secured Cash Management Agreement) and each of the L/C Issuers hereby irrevocably appoints and authorizes the Administrative Agent to act as the agent of such Lender and such L/C Issuer for purposes of acquiring, holding and enforcing any and all Liens on Collateral, together with such powers and discretion as are reasonably incidental thereto. In this connection, the Administrative Agent, as "collateral agent" and any co-agents, sub-agents and attorneys-in-fact appointed by the Administrative Agent pursuant to Section 9.05 for purposes of holding or enforcing any Lien on the Collateral (or any portion thereof) granted under the Collateral Documents, or for exercising any rights and remedies thereunder at the direction of the

Administrative Agent, shall be entitled to the benefits of all provisions of this Article IX and Article X (including Section 10.04(c)), as though such co-agents, sub-agents and attorneys-in-fact were the "collateral agent" under the Loan Documents as if set forth in full herein with respect thereto.

Without limiting the powers of the collateral agent pursuant to the terms hereof or of the other Loan Documents, for the purposes of holding any Liens granted by any of the Loan Parties under the laws of the Province of Quebec pursuant to the Collateral Documents, each of the Lenders and each of the L/C Issuers hereby acknowledges that the collateral agent shall be and act as the hypothecary representative of all present and future Lenders (in its capacities as a Lender, Swing Line Lender (if applicable), party to any Secured Swap Contract and party to any Secured Cash Management Agreement) and L/C Issuers for all purposes of Article 2692 of the Civil Code of Quebec (the "Hypothecary Representative"). Each of the Secured Parties therefore appoints, to the extent necessary, the collateral agent as its Hypothecary Representative to hold the Liens created pursuant to such Collateral Documents in order to secure the Obligations. The collateral agent accepts to act as Hypothecary Representative of all present and future Secured Parties for all purposes of Article 2692 of the Civil Code of Quebec.

9.02 Rights as a Lender. The Person serving as the Administrative Agent hereunder shall have the same rights and powers in its capacity as a Lender as any other Lender and may exercise the same as though it were not the Administrative Agent and the term "Lender" or "Lenders" shall, unless otherwise expressly indicated or unless the context otherwise requires, include the Person serving as the Administrative Agent hereunder in its individual capacity. Such Person and its Affiliates may accept deposits from, lend money to, own securities of, act as the financial advisor or in any other advisory capacity for and generally engage in any kind of business with any Loan Party or any Subsidiary or other Affiliate thereof as if such Person were not the Administrative Agent hereunder and without any duty to account therefor to the Lenders.

9.03 Exculpatory Provisions. The Administrative Agent shall not have any duties or obligations except those expressly set forth herein and in the other Loan Documents, and its duties hereunder shall be administrative in nature. Without limiting the generality of the foregoing, the Administrative Agent:

(a) shall not be subject to any fiduciary or other implied duties, regardless of whether a Default has occurred and is continuing;

(b) shall not have any duty to take any discretionary action or exercise any discretionary powers, except discretionary rights and powers expressly contemplated hereby or by the other Loan Documents that the Administrative Agent is required to exercise as directed in writing by the Required Lenders (or such other number or percentage of the Lenders as shall be expressly provided for herein or in the other Loan Documents), provided that the Administrative Agent shall not be required to take any action that, in its opinion or the opinion of its counsel, may expose the Administrative Agent to liability or that is contrary to any Loan Document or applicable law, including for the avoidance of doubt any action that may be in violation of the automatic stay under any Debtor Relief Law or that may effect a forfeiture, modification or termination of property of a Defaulting Lender in violation of any Debtor Relief Law; and

(c) shall not, except as expressly set forth herein and in the other Loan Documents, have any duty to disclose, and shall not be liable for the failure to disclose, any information relating to any Loan Party or any of its Affiliates that is communicated to or obtained by the Person serving as the Administrative Agent or any of its Affiliates in any capacity.

The Administrative Agent shall not be liable for any action taken or not taken by it (i) with the consent or at the request of the Required Lenders (or such other number or percentage of the Lenders as shall be necessary, or as the Administrative Agent shall believe in good faith shall be necessary, under the circumstances as provided in Sections 10.01 and 8.02) or (ii) in the absence of its own gross negligence or willful misconduct as determined by a court of competent jurisdiction by final and nonappealable judgment. The Administrative Agent shall be deemed not to have knowledge of any Default unless and until notice describing such Default is given in writing to the Administrative Agent by the Company, a Lender or an L/C Issuer.

The Administrative Agent shall not be responsible for or have any duty to ascertain or inquire into (i) any statement, warranty or representation made in or in connection with this Agreement or any other Loan Document, (ii) the contents of any certificate, report or other document delivered hereunder or thereunder or in connection herewith or therewith, (iii) the performance or observance of any of the covenants, agreements or other terms or conditions set forth herein or therein or the occurrence of any Default, (iv) the validity, enforceability, effectiveness or genuineness of this Agreement, any other Loan Document or any other agreement, instrument or document or (v) the satisfaction of any condition set forth in Article IV or elsewhere herein, other than to confirm receipt of items expressly required to be delivered to the Administrative Agent.

9.04 Reliance by Administrative Agent.

The Administrative Agent shall be entitled to rely upon, and shall not incur any liability for relying upon, any notice, request, certificate, consent, statement, instrument, document or other writing (including any electronic message, Internet or intranet website posting or other distribution) believed by it to be genuine and to have been signed, sent or otherwise authenticated by the proper Person. The Administrative Agent also may rely upon any statement made to it orally or by telephone and believed by it to have been made by the proper Person, and shall not incur any liability for relying thereon. In determining compliance with any condition hereunder to the making of a Loan, or the issuance, extension, renewal or increase of a Letter of Credit, that by its terms must be fulfilled to the satisfaction of a Lender or an L/C Issuer, the Administrative Agent may presume that such condition is satisfactory to such Lender or such L/C Issuer unless the Administrative Agent shall have received notice to the contrary from such Lender or such L/C Issuer prior to the making of such Loan or the issuance of such Letter of Credit. The Administrative Agent may consult with legal counsel (who may be counsel for the Company), independent accountants and other experts selected by it, and shall not be liable for any action taken or not taken by it in accordance with the advice of any such counsel, accountants or experts.

9.05 Delegation of Duties. The Administrative Agent may perform any and all of its duties and exercise its rights and powers hereunder or under any other Loan Document by or through any one or more sub-agents appointed by the Administrative Agent. The Administrative Agent and any such sub-agent may perform any and all of its duties and exercise its rights and powers by or through their respective Related Parties. The exculpatory provisions of this Article shall apply to any such sub-agent and to the Related Parties of the Administrative Agent and any such sub-agent, and shall apply to their respective activities in connection with the syndication of the credit facilities provided for herein as well as activities as Administrative Agent. The Administrative Agent shall not be responsible for the negligence or misconduct of any sub-agents except to the extent that a court of competent jurisdiction determines in a final and non-

appealable judgment that the Administrative Agent acted with gross negligence or willful misconduct in the selection of such sub-agents.

9.06 Resignation of Administrative Agent.

(a) The Administrative Agent may at any time give notice of its resignation to the Lenders, the L/C Issuers and the Company. Upon receipt of any such notice of resignation, the Required Lenders shall have the right, in consultation with the Company, and, at all times other than during the existence of an Event of Default, with the Company's consent (such consent not to be unreasonably withheld), to appoint a successor, which shall be a bank with an office in the United States, or an Affiliate of any such bank with an office in the United States. If no such successor shall have been so appointed by the Required Lenders and shall have accepted such appointment within thirty (30) days after the retiring Administrative Agent gives notice of its resignation (or such earlier day as shall be agreed by the Required Lenders) (the "Resignation Effective Date"), then the retiring Administrative Agent may (but shall not be obligated to) on behalf of the Lenders and the L/C Issuers, appoint a successor Administrative Agent meeting the qualifications set forth above; provided that in no event shall any such successor Administrative Agent be a Defaulting Lender. Whether or not a successor has been appointed, such resignation shall become effective in accordance with such notice on the Resignation Effective Date.

(b) If the Person serving as Administrative Agent is a Defaulting Lender pursuant to clause (d) of the definition thereof, the Required Lenders may, to the extent permitted by applicable Law, by notice in writing to the Company and such Person remove such Person as Administrative Agent and, in consultation with the Company and, at all times other than during the existence of an Event of Default, with the Company's consent (such consent not to be unreasonably withheld), appoint a successor. If no such successor shall have been so appointed by the Required Lenders and shall have accepted such appointment within thirty (30) days (or such earlier day as shall be agreed by the Required Lenders) (the "Removal Effective Date"), then such removal shall nonetheless become effective in accordance with such notice on the Removal Effective Date.

(c) With effect from the Resignation Effective Date or the Removal Effective Date (as applicable) (i) the retiring or removed Administrative Agent shall be discharged from its duties and obligations hereunder and under the other Loan Documents (except that in the case of any collateral security held by the Administrative Agent on behalf of the Lenders or the L/C Issuers under any of the Loan Documents, the retiring or removed Administrative Agent shall continue to hold such collateral security until such time as a successor Administrative Agent is appointed) and (ii) except for any indemnity payments or other amounts then owed to the retiring or removed Administrative Agent, all payments, communications and determinations provided to be made by, to or through the Administrative Agent shall instead be made by or to each Lender and each L/C Issuer directly, until such time, if any, as the Required Lenders appoint a successor Administrative Agent as provided for above. Upon the acceptance of a successor's appointment as Administrative Agent hereunder, such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring (or removed) Administrative Agent (other than as provided in Section 3.01(g) and other than any rights to indemnity payments or other amounts owed to the retiring or removed Administrative Agent as of the Resignation Effective Date or the Removal Effective Date, as applicable), and the retiring or removed Administrative Agent shall be discharged from all of its duties and obligations hereunder or under the other Loan Documents (if not already discharged therefrom as provided above in this Section 9.06). The fees payable by the Company to a successor Administrative Agent shall be the same as those payable to its predecessor unless otherwise agreed

between the Company and such successor. After the retiring or removed Administrative Agent's resignation or removal hereunder and under the other Loan Documents, the provisions of this Article and Section 10.04 shall continue in effect for the benefit of such retiring or removed Administrative Agent, its sub agents and their respective Related Parties in respect of any actions taken or omitted to be taken by any of them (A) while the retiring or removed Administrative Agent was acting as Administrative Agent and (B) after such resignation or removal for as long as any of them continues to act in any capacity hereunder or under the other Loan Documents, including (1) acting as collateral agent or otherwise holding any collateral security on behalf of any of the Lenders and (2) in respect of any actions taken in connection with transferring the agency to any successor Administrative Agent.

(d) Any resignation by or removal of Bank of America as Administrative Agent pursuant to this Section shall also constitute its resignation as an L/C Issuer and Swing Line Lender. If Bank of America resigns as an L/C Issuer, it shall retain all the rights, powers, privileges and duties of an L/C Issuer hereunder with respect to all Letters of Credit outstanding as of the effective date of its resignation as an L/C Issuer and all L/C Obligations with respect thereto, including the right to require the Lenders to make Base Rate Loans or fund risk participations in Unreimbursed Amounts pursuant to Section 2.03(c). If Bank of America resigns as Swing Line Lender, it shall retain all the rights of the Swing Line Lender provided for hereunder with respect to Swing Line Loans made by it and outstanding as of the effective date of such resignation, including the right to require the Lenders to make Base Rate Loans or fund risk participations in outstanding Swing Line Loans pursuant to Section 2.05(c). Upon the appointment by the Company of a successor L/C Issuer or Swing Line Lender hereunder (which successor shall in all cases be a Lender other than a Defaulting Lender), (a) such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring L/C Issuer or Swing Line Lender, as applicable, (b) the retiring L/C Issuer and Swing Line Lender shall be discharged from all of their respective duties and obligations hereunder or under the other Loan Documents, and (c) the successor L/C Issuer shall issue letters of credit in substitution for the Letters of Credit, if any, outstanding at the time of such succession or make other arrangements satisfactory to Bank of America to effectively assume the obligations of Bank of America with respect to such Letters of Credit.

9.07 Non-Reliance on Administrative Agent and Other Lenders. Each Lender and each L/C Issuer acknowledges that it has, independently and without reliance upon the Administrative Agent or any other Lender or any of their Related Parties and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Agreement. Each Lender and each L/C Issuer also acknowledges that it will, independently and without reliance upon the Administrative Agent or any other Lender or any of their Related Parties and based on such documents and information as it shall from time to time deem appropriate, continue to make its own decisions in taking or not taking action under or based upon this Agreement, any other Loan Document or any related agreement or any document furnished hereunder or thereunder.

9.08 No Other Duties, Etc. Anything herein to the contrary notwithstanding, none of the Bookrunners or Arrangers listed on the cover page hereof shall have any powers, duties or responsibilities under this Agreement or any of the other Loan Documents, except in its capacity, as applicable, as the Administrative Agent, a Lender or an L/C Issuer hereunder.

9.09 Administrative Agent May File Proofs of Claim; Credit Bidding. In case of the pendency of any proceeding under any Debtor Relief Law or any other judicial proceeding relative to any Loan Party, the Administrative Agent (irrespective of whether the principal of any Loan or L/C Obligation shall then be

due and payable as herein expressed or by declaration or otherwise and irrespective of whether the Administrative Agent shall have made any demand on any Borrower) shall be entitled and empowered, by intervention in such proceeding or otherwise.

(a) to file and prove a claim for the whole amount of the principal and interest owing and unpaid in respect of the Loans, L/C Obligations and all other Obligations that are owing and unpaid and to file such other documents as may be necessary or advisable in order to have the claims of the Lenders, the L/C Issuers and the Administrative Agent (including any claim for the reasonable compensation, expenses, disbursements and advances of the Lenders, the L/C Issuers and the Administrative Agent and their respective agents and counsel and all other amounts due the Lenders, the L/C Issuers and the Administrative Agent under Sections 2.03(h) and (i), 2.09 and 10.04) allowed in such judicial proceeding; and

(b) to collect and receive any monies or other property payable or deliverable on any such claims and to distribute the same;

and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Lender and each L/C Issuer to make such payments to the Administrative Agent and, in the event that the Administrative Agent shall consent to the making of such payments directly to the Lenders and the L/C Issuers, to pay to the Administrative Agent any amount due for the reasonable compensation, expenses, disbursements and advances of the Administrative Agent and its agents and counsel, and any other amounts due the Administrative Agent under Sections 2.09 and 10.04.

Nothing contained herein shall be deemed to authorize the Administrative Agent to authorize or consent to or accept or adopt on behalf of any Lender or any L/C Issuer any plan of reorganization, arrangement, adjustment or composition affecting the Obligations or the rights of any Lender or any L/C Issuer to authorize the Administrative Agent to vote in respect of the claim of any Lender or any L/C Issuer in any such proceeding.

The holders of the Obligations hereby irrevocably authorize the Administrative Agent, at the direction of the Required Lenders, to credit bid all or any portion of the Obligations (including accepting some or all of the Collateral in satisfaction of some or all of the Obligations pursuant to a deed in lieu of foreclosure or otherwise) and in such manner purchase (either directly or through one or more acquisition vehicles) all or any portion of the Collateral (a) at any sale thereof conducted under the provisions of the Bankruptcy Code, including under Sections 363, 1123 or 1129 of the Bankruptcy Code, or any similar Debtor Relief Laws in any other jurisdictions to which a Loan Party is subject, (b) at any other sale or foreclosure or acceptance of collateral in lieu of debt conducted by (or with the consent or at the direction of) the Administrative Agent (whether by judicial action or otherwise) in accordance with any applicable Law. In connection with any such credit bid and purchase, the Obligations owed to the holders thereof shall be entitled to be, and shall be, credit bid on a ratable basis (with Obligations with respect to contingent or unliquidated claims receiving contingent interests in the acquired assets on a ratable basis that would vest upon the liquidation of such claims in an amount proportional to the liquidated portion of the contingent claim amount used in allocating the contingent interests) in the asset or assets so purchased (or in the Equity Interests or debt instruments of the acquisition vehicle or vehicles that are used to consummate such purchase). In connection with any such bid (i) the Administrative Agent shall

be authorized to form one or more acquisition vehicles to make a bid, (ii) to adopt documents providing for the governance of the acquisition vehicle or vehicles (provided that any actions by the Administrative Agent with respect to such acquisition vehicle or vehicles, including any disposition of the assets or Equity Interests thereof shall be governed, directly or indirectly, by the vote of the Required Lenders, irrespective of the termination of this Agreement and without giving effect to the limitations on actions by the Required Lenders contained in clauses (a)(i) through (a)(x) of Section 10.01 of this Agreement), and (iii) to the extent that Obligations that are assigned to an acquisition vehicle are not used to acquire Collateral for any reason (as a result of another bid being higher or better, because the amount of Obligations assigned to the acquisition vehicle exceeds the amount of debt credit bid by the acquisition vehicle or otherwise), such Obligations shall automatically be reassigned to the Lenders *pro rata* and the Equity Interests and/or debt instruments issued by any acquisition vehicle on account of the Obligations that had been assigned to the acquisition vehicle shall automatically be cancelled, without the need for any Lender or any acquisition vehicle to take any further action.

9.10 Collateral and Guaranty Matters. Without limiting the provisions of Section 9.09, each the Lenders (including in its capacities as a party to any Secured Cash Management Agreement and a party to any Secured Swap Contract) and each of the L/C Issuers irrevocably authorize the Administrative Agent, at its option and in its discretion:

(a) to release or authorize the release of any Lien on any property granted to or held by the Administrative Agent under any Loan Document (i) upon the occurrence of the Facility Termination Date, (ii) that is sold or otherwise disposed of or to be sold or otherwise disposed of as part of or in connection with any sale or other disposition permitted hereunder or under any other Loan Document, or (iii) subject to Section 10.01, if approved, authorized or ratified in writing by the Required Lenders;

(b) to subordinate any Lien on any property granted to or held by the Administrative Agent under any Loan Document to the holder of any Lien on such property that is permitted by Section 7.01(i);

(c) to release any Guarantor from its obligations under any Guaranty if such Person ceases to be a Restricted Subsidiary as a result of a transaction permitted under the Loan Documents;

(d) to release any Lien granted to or held by the Administrative Agent under any Loan Document on the Equity Interests of any Unrestricted Subsidiary;

(e) at any time the DB Receivables Purchase Agreement or any Permitted Securitization Transaction is outstanding, release any Lien granted to or held by the Administrative Agent under any Loan Document on (i) any Securitized Asset that is subject thereto and (ii) the Equity Interests of any Special Purpose Subsidiary for such Permitted Securitization Transaction;

(f) to subordinate or release any Lien granted to or held by the Administrative Agent under any Loan Document to the holder of any Lien on such property that is permitted by Section 7.01(dd); and

(g) to enter into and perform each intercreditor agreement or subordination agreement contemplated hereby.

Upon request by the Administrative Agent at any time, the Required Lenders will confirm in writing the Administrative Agent's authority to release or subordinate its interest in particular types or items of property, or to release any Guarantor (other than, for the avoidance of doubt, any Borrower) from its obligations under the Guaranty pursuant to this Section 9.10.

The Administrative Agent shall not be responsible for or have a duty to ascertain or inquire into any representation or warranty regarding the existence, value or collectability of the Collateral, the existence, priority or perfection of the Administrative Agent's Lien thereon, or any certificate prepared by any Loan Party in connection therewith, nor shall the Administrative Agent be responsible or liable to the Lenders for any failure to monitor or maintain any portion of the Collateral.

9.11 Secured Cash Management Agreements and Secured Swap Contracts. No Lender or Affiliate thereof party to a Secured Swap Contract or Secured Cash Management Agreement that obtains the benefit of Section 8.03, any Guaranty or any Collateral by virtue of the provisions hereof or any Collateral Document shall have any right to notice of any action or to consent to, direct or object to any action hereunder or under any other Loan Document or otherwise in respect of the Collateral (including the release or impairment of any Collateral) or to notice of or to consent to any amendment, waiver or modification of the provisions hereof or of any Guaranty or any Collateral Document (including any release or impairment with respect to any Guarantor) other than in its capacity as a Lender and, in such case, only to the extent expressly provided in the Loan Documents. Notwithstanding any other provision of this Article IX to the contrary, the Administrative Agent shall not be required to verify the payment of, or that other satisfactory arrangements have been made with respect to, Obligations arising under Secured Cash Management Agreements and Secured Swap Contracts except to the extent expressly provided herein and unless the Administrative Agent has received a Secured Party Designation Notice of such Obligations, together with such supporting documentation as the Administrative Agent may request, from the applicable Lender or Affiliate thereof, as the case may be. The Administrative Agent shall not be required to verify the payment of, or that other satisfactory arrangements have been made with respect to, Obligations arising under Secured Cash Management Agreements and Secured Swap Contracts in the case of the date that (a) all Commitments have terminated, (b) all Obligations arising under the Loan Documents have been paid in full (other than contingent indemnification obligations for which no claim or demand has yet been made), and (c) all Letters of Credit have terminated or expired (other than Letters of Credit that have been Cash Collateralized).

9.12 ERISA Matters.

(a) Each Lender (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and each Arranger and their respective Affiliates, and not, for the avoidance of doubt, to or for the benefit of the Company or any other Loan Party, that at least one of the following is and will be true:

(i) such Lender is not using "plan assets" (within the meaning of 29 CFR § 2510.3-101, as modified by Section 3(42) of ERISA) of one or more Benefit Plans in connection with the Loans, the Letters of Credit or the Commitments,

(ii) the transaction exemption set forth in one or more PTEs, such as PTE 84-14 (a class exemption for certain transactions determined by independent qualified professional asset managers), PTE 95-60 (a class exemption for certain transactions involving insurance company general accounts), PTE 90-1 (a class exemption for certain transactions involving

insurance company pooled separate accounts), PTE 91-38 (a class exemption for certain transactions involving bank collective investment funds) or PTE 96-23 (a class exemption for certain transactions determined by in-house asset managers), is applicable with respect to such Lender's entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement,

(iii) (A) such Lender is an investment fund managed by a "Qualified Professional Asset Manager" (within the meaning of Part VI of PTE 84-14), (B) such Qualified Professional Asset Manager made the investment decision on behalf of such Lender to enter into, participate in, administer and perform the Loans, the Letters of Credit, the Commitments and this Agreement, (C) the entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement satisfies the requirements of sub-sections (b) through (g) of Part I of PTE 84-14 and (D) to the best knowledge of such Lender, the requirements of subsection (a) of Part I of PTE 84-14 are satisfied with respect to such Lender's entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement, or

(iv) such other representation, warranty and covenant as may be agreed in writing between the Administrative Agent, in its sole discretion, and such Lender.

(b) In addition, unless sub-clause (i) in the immediately preceding clause (a) is true with respect to a Lender or such Lender has not provided another representation, warranty and covenant as provided in sub-clause (iv) in the immediately preceding clause (a), such Lender further (x) represents and warrants, as of the date such Person became a Lender party hereto, to, and (y) covenants, from the date such Person became a Lender party hereto to the date such Person ceases being a Lender party hereto, for the benefit of, the Administrative Agent and each other Arranger and their respective Affiliates, and not, for the avoidance of doubt, to or for the benefit of the Company or any other Loan Party, that:

(i) none of the Administrative Agent or any Arranger or any of their respective Affiliates is a fiduciary with respect to the assets of such Lender (including in connection with the reservation or exercise of any rights by the Administrative Agent under this Agreement, any Loan Document or any documents related to hereto or thereto),

(ii) the Person making the investment decision on behalf of such Lender with respect to the entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement is independent (within the meaning of 29 CFR § 2510.3-21) and is a bank, an insurance carrier, an investment adviser, a broker-dealer or other person that holds, or has under management or control, total assets of at least $50,000,000, in each case as described in 29 CFR § 2510.3-21(c)(1)(i)(A)-(E),

(iii) the Person making the investment decision on behalf of such Lender with respect to the entrance into, participation in, administration of and performance of the Loans, the Letters of Credit, the Commitments and this Agreement is capable of evaluating investment risks independently, both in general and with regard to particular transactions and investment strategies (including in respect of the Obligations),

(iv) the Person making the investment decision on behalf of such Lender with respect to the entrance into, participation in, administration of and performance of the Loans,

the Letters of Credit, the Commitments and this Agreement is a fiduciary under ERISA or the Code, or both, with respect to the Loans, the Letters of Credit, the Commitments and this Agreement and is responsible for exercising independent judgment in evaluating the transactions hereunder, and

(v) no fee or other compensation is being paid directly to the Administrative Agent or any Arranger or any their respective Affiliates for investment advice (as opposed to other services) in connection with the Loans, the Letters of Credit, the Commitments or this Agreement.

(c) The Administrative Agent and each Arranger hereby informs the Lenders that each such Person is not undertaking to provide impartial investment advice, or to give advice in a fiduciary capacity, in connection with the transactions contemplated hereby, and that such Person has a financial interest in the transactions contemplated hereby in that such Person or an Affiliate thereof (i) may receive interest or other payments with respect to the Loans, the Letters of Credit, the Commitments and this Agreement, (ii) may recognize a gain if it extended the Loans, the Letters of Credit or the Commitments for an amount less than the amount being paid for an interest in the Loans, the Letters of Credit or the Commitments by such Lender or (iii) may receive fees or other payments in connection with the transactions contemplated hereby, the Loan Documents or otherwise, including structuring fees, commitment fees, arrangement fees, facility fees, upfront fees, underwriting fees, ticking fees, agency fees, administrative agent or collateral agent fees, utilization fees, minimum usage fees, letter of credit fees, fronting fees, deal-away or alternate transaction fees, amendment fees, processing fees, term out premiums, bankers' acceptance fees, breakage or other early termination fees or fees similar to the foregoing.

ARTICLE X.

MISCELLANEOUS

10.01 Amendments, Etc.

(a) Except as otherwise provided in this Section 10.01, no amendment or waiver of any provision of this Agreement or any other Loan Document, and no consent to any departure by the Company or any other Loan Party therefrom, shall be effective unless in writing signed by the Required Lenders and the Company or the applicable Loan Party, as the case may be, and acknowledged by the Administrative Agent, and each such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given; provided, however, that no such amendment, waiver or consent shall:

(i) except as provided in Section 4.01, waive any condition set forth in Section 4.01(a) without the written consent of each Lender;

(ii) extend or increase the Commitment of any Lender (or reinstate any Commitment terminated pursuant to Section 8.02) without the written consent of such Lender whose Commitment is being extended, increased or reinstated (it being understood and agreed that a waiver of any condition precedent set forth in Section 4.02 or of any Default or of a mandatory reduction in Commitments is not considered an extension, increase or reinstatement in Commitments of any Lender);

(iii) postpone any date fixed by this Agreement or any other Loan Document for any payment (excluding mandatory prepayments) of principal, interest, fees or other amounts due to the Lenders (or any of them) or any scheduled or mandatory reduction of the Aggregate Commitments hereunder or under any other Loan Document without the written consent of each Lender directly affected thereby;

(iv) reduce the principal of, or the rate of interest specified herein on, any Loan or L/C Borrowing, or (subject to clause (b) of this Section 10.01) any fees or other amounts payable hereunder or under any other Loan Document without the written consent of each Lender entitled to receive such amount (it being understood that neither of the following constitutes a reduction in the rate of interest on any Loan or L/C Borrowing or any fees or other amounts: (A) any amendment to the definition of "Default Rate" or waiver of any obligation of the Borrowers to pay interest or Letter of Credit Fees at the Default Rate or (B) any amendment to or waiver of any financial covenant hereunder (or any defined term or component defined term used therein) even if the effect of such amendment or waiver would be to reduce the rate of interest on any Loan or L/C Borrowing or to reduce any fee payable hereunder);

(v) change Section 8.03 in a manner that would alter the *pro rata* sharing of payments required thereby without the written consent of each Lender directly affected thereby;

(vi) change any provision of this Section 10.01 or the definition of "Required Lenders", "Required Pro Rata Facilities Lenders", "Required Revolving Lenders" or any other provision hereof specifying the number or percentage of Lenders required to amend, waive or otherwise modify any rights hereunder or make any determination or grant any consent hereunder, without the written consent of each Lender;

(vii) release any Borrower without the consent of each Lender, or, except in connection with a transaction permitted under Section 7.04 or Section 7.05, release all or substantially all of the value of the Guaranty without the written consent of each Lender whose Obligations are guaranteed thereby, except, in either case, to the extent any such release is permitted pursuant to Section 9.10 (in which case such release may be made by the Administrative Agent acting alone);

(viii) release or authorize the release of all or substantially all of the Collateral under the Collateral Documents without the written consent of each Lender whose Obligations hereunder are secured by such Collateral, it being understood that to the extent that Collateral comprises assets which are permitted to be sold pursuant to Section 7.05 or released pursuant to Section 9.10, such Collateral may be released without the consent of any of the Lenders;

(ix) amend Section 1.06 without the written consent of each Lender and L/C Issuer obligated to make Credit Extensions in Alternative Currencies; or

(x) change Section 2.15 in a manner that would alter the requirement that each of the Lenders obligated to make Credit Extensions to an Applicant Borrower approve the addition thereof as a Designated Borrower, without the written consent of each such Lender;

(xi) prior to the termination of the Aggregate Revolving Commitments, unless also signed by the Required Revolving Lenders, no such amendment, waiver or consent shall (A) waive any Default or Event of Default for purposes of Section 4.02(b), (B) amend, change, waive, discharge or terminate Sections 4.02 or 8.01 in a manner adverse to the Revolving Lenders or (C) amend, change, waive, discharge or terminate this clause (xi);

(xii) unless also signed by Lenders (other than Defaulting Lenders) holding in the aggregate at least a majority of the aggregate Outstanding Amount of the Term Loans entitled to receive prepayments pursuant to Section 2.06(b), no such amendment, waiver or consent shall (A) amend, change, waive, discharge or terminate Section 2.06(b)(v) so as to alter the manner of application of proceeds of any mandatory prepayment required by Section 2.06(b)(ii), (iii), (iv), or (v) (other than to allow the proceeds of such mandatory prepayments to be applied ratably with other Term Loans under this Agreement) or (B) amend, change, waive, discharge or terminate this clause (xii) (other than to provide Lenders of other Term Loans with proportional rights under this clause (xii));

(xiii) unless in writing and signed by each L/C Issuer in addition to the Lenders required above, no amendment, waiver or consent shall affect the rights or duties of the L/C Issuers under this Agreement or any Issuer Document relating to any Letter of Credit issued or to be issued by it;

(xiv) unless in writing and signed by the Swing Line Lender in addition to the Lenders required above, no amendment, waiver or consent shall affect the rights or duties of the Swing Line Lender under this Agreement;

(xv) unless in writing and signed by the Administrative Agent in addition to the Lenders required above, no amendment, waiver or consent shall affect the rights or duties of the Administrative Agent under this Agreement or any other Loan Document.

(b) Notwithstanding anything to the contrary in this Section 10.01:

(i) any amendment, waiver or consent with respect to (A) Section 7.11 (or any defined term or component defined term used therein) or any Default or Event of Default or exercise of remedies by the Required Pro Rata Facilities Lenders in respect or as a result thereof, (B) the second proviso in Section 8.01(b), (C) clause (a) of Section 8.02 or (D) the parenthetical provisions referencing Section 7.11 in Section 10.03 will not require the consent of the Required Lenders but shall be effective if, and only if, signed by the Required Pro Rata Facilities Lenders and the Loan Parties and acknowledged by the Administrative Agent;

(ii) the Fee Letter may be amended, or rights or privileges thereunder waived, in a writing executed only by the parties thereto.

(iii) any amendment, waiver or consent with respect to the definitions of "Alternative Currency Sublimit", "Canadian Dollar Sublimit", "Letter of Credit Sublimit" and "Swing Line Sublimit", Section 1.06, Section 2.03, Section 2.05 and Section 2.15 will not require the consent of the Required Lenders but shall be effective if, and only if, signed by the Required Revolving Lenders, the Loan Parties and any party whose consent is required pursuant to clauses (a)(ix), (a)(x), (a)(xiii), (a)(xiv) or (a)(xv) above and acknowledged by the Administrative Agent;

(iv) only the written consent of the Administrative Agent and the Loan Parties shall be required to amend this Agreement solely to implement requirements reasonably deemed necessary by the Administrative Agent to add a Designated Borrower hereunder or to obtain pledges of Equity Interests in Non-U.S. Obligors in accordance with this Agreement (including pursuant to additional Collateral Documents);

(v) an Incremental Facility Amendment shall be effective if signed only by Company (and any other applicable Borrower), the Administrative Agent and each Person that agrees to provide a portion of the applicable Incremental Facility;

(vi) no Defaulting Lender shall have any right to approve or disapprove any amendment, waiver or consent hereunder (and any amendment, waiver or consent which by its terms requires the consent of all Lenders or each affected Lender may be effected with the consent of the applicable Lenders other than Defaulting Lenders), except that (A) the Commitment of any Defaulting Lender may not be increased or extended without the consent of such Lender and (B) any waiver, amendment or modification requiring the consent of all Lenders or each affected Lender that by its terms affects any Defaulting Lender disproportionately adversely relative to other affected Lenders shall require the consent of such Defaulting Lender;

(vii) each Lender is entitled to vote as such Lender sees fit on any bankruptcy reorganization plan that affects the Loans, and each Lender acknowledges that the provisions of Section 1126(c) of the Bankruptcy Code supersedes the unanimous consent provisions set forth herein;

(viii) the Required Lenders shall determine whether or not to allow a Loan Party to use cash collateral in the context of a bankruptcy or insolvency proceeding and such determination shall be binding on all of the Lenders;

(ix) this Agreement may be amended with the written consent of only the Company, the Administrative Agent, the L/C Issuers and the Lenders obligated to make Credit Extensions in Alternative Currencies to amend the definition of "Alternative Currency", "LIBOR Quoted Currency", "Non-LIBOR Quoted Currency" or "Eurocurrency Rate" solely to add additional currency options and the applicable interest rate with respect thereto, in each case solely to the extent permitted pursuant to Section 1.06;

(x) only the written consent of the Administrative Agent and the Company shall be required to make amendments contemplated by Section 3.07;

(xi) this Agreement may be amended and restated in accordance with this Section 10.01 but without the consent of a specific Lender if, upon giving effect to such amendment and restatement, such Lender shall no longer be a party to this Agreement (as so amended and restated), the Commitments of such Lender shall have terminated, such Lender shall have no other commitment or other obligation hereunder and shall have been paid in full all principal, interest and other amounts then owing to it or then accrued for its account under this Agreement; and

(xii) only the written consent of the Administrative Agent and the Company shall be required to amend, modify or supplement this Agreement or any other Loan Document to cure or correct administrative errors or omissions, any ambiguity, omission, defect or

inconsistency or to effect administrative changes or to extend an existing Lien over additional property, and such amendment shall become effective without any further consent of any other party to such Loan Document so long as (A) such amendment, modification or supplement does not adversely affect the rights of any Lender or other holder of Obligations in any material respect and (B) the Lenders shall have received at least five (5) Business Days' prior written notice thereof and the Administrative Agent shall not have received, within five (5) Business Days of the date of such notice to the Lenders, a written notice from the Required Lenders stating that the Required Lenders object to such amendment.

(c) In addition, notwithstanding anything to the contrary in this Section 10.01, the Company may, by written notice to the Administrative Agent from time to time, make one or more offers (each, a "Loan Modification Offer") to all the Lenders holdings Commitments and/or Loans of a particular class or tranche to make one or more amendments or modifications to (i) allow the maturity of such Commitments or Loans of the accepting Lenders to be extended, (ii) modify the Applicable Rate and/or fees payable with respect to such Loans and Commitments of the accepting Lenders, (iii) modify any covenants or other provisions or add new covenants or provisions that are agreed between the Company, the Administrative Agent and the Accepting Lenders; provided that such modified or new covenants and provisions are applicable only during periods after the latest Maturity Date that is in effect on the effective date of such amendment, and (iv) any other amendment to a Loan Document required to give effect to the amendments described in clauses (i), (ii) and (iii) of this paragraph ("Permitted Amendments", and any amendment to this Agreement to implement Permitted Amendments, a "Loan Modification Agreement") pursuant to procedures reasonably specified by the Administrative Agent and reasonably acceptable to the Company. Such notice shall set forth (x) the terms and conditions of the requested Permitted Amendments and (y) the date on which such Permitted Amendments are requested to become effective. Permitted Amendments shall become effective only with respect to the applicable class or tranche of Commitments and/or Loans of the Lenders that accept the applicable Loan Modification Offer (such Lenders, the "Accepting Lenders") and, in the case of any Accepting Lender, only with respect to such Lender's Commitments and/or Loans as to which such Lender's acceptance has been made. The Company, each other Borrower and each Accepting Lender shall execute and deliver to the Administrative Agent a Loan Modification Agreement and such other documentation as the Administrative Agent shall reasonably specify to evidence the acceptance of the Permitted Amendments and the terms and conditions thereof, and the Loan Parties shall also deliver such resolutions, opinions and other documents as reasonably requested by the Administrative Agent. The Administrative Agent shall promptly notify each Lender as to the effectiveness of each Loan Modification Agreement. Each of the parties hereto hereby agrees that (1) upon the effectiveness of any Loan Modification Agreement, this Agreement shall be deemed amended to the extent (but only to the extent) necessary to reflect the existence and terms of the Permitted Amendments evidenced thereby and only with respect to the applicable class or tranche of Commitments and Loans of the Accepting Lenders as to which such Lenders' acceptance has been made, (2) any applicable Lender who is not an Accepting Lender may be replaced by the Company in accordance with Section 10.13, and (3) to the extent relating to Revolving Commitments and Revolving Loans, the Administrative Agent and the Company shall be permitted to make any amendments or modifications to any Loan Documents necessary to allow any borrowings, prepayments, participations in Letters of Credit and Swing Line Loans and commitment reductions to be ratable across each class of Revolving Commitments the mechanics for which may be implemented through the applicable Loan Modification Agreement and may include technical changes related to the borrowing and repayment procedures of the Lenders; provided that with the consent of the Accepting Lenders such prepayments and commitment reductions and reductions in

participations in Letters of Credit and Swing Line Loans may be applied on a non-ratable basis to the class of non-Accepting Lenders.

(d) In addition, notwithstanding anything to the contrary in this Section 10.01, this Agreement and any other Loan Document may be amended with only the consent of the Company and the Administrative Agent solely to the extent necessary to incorporate jurisdiction-specific provisions deemed reasonably necessary or appropriate by the Company, the Administrative Agent and their respective legal counsel in connection with the joinder of any Subsidiary as a Guarantor in accordance with the terms of Section 6.14 and the granting of security interests by such Subsidiary in accordance with the terms of Section 6.15.

10.02 Notices; Effectiveness; Electronic Communication.

(a) Notices Generally. Except in the case of notices and other communications expressly permitted to be given by telephone (and except as provided in clause (b) below), all notices and other communications provided for herein shall be in writing and shall be delivered by hand or overnight courier service, mailed by certified or registered mail or sent by facsimile as follows, and all notices and other communications expressly permitted hereunder to be given by telephone shall be made to the applicable telephone number, as follows:

(i) if to the Company or any other Loan Party, the Administrative Agent, an L/C Issuer or the Swing Line Lender, to the address, facsimile number, electronic mail address or telephone number specified for such Person on Schedule 10.02; and

(ii) if to any other Lender, to the address, facsimile number, electronic mail address or telephone number specified in its Administrative Questionnaire (including, as appropriate, notices delivered solely to the Person designated by a Lender on its Administrative Questionnaire then in effect for the delivery of notices that may contain material non-public information relating to the Company).

Notices and other communications sent by hand or overnight courier service, or mailed by certified or registered mail, shall be deemed to have been given when received; notices and other communications sent by facsimile shall be deemed to have been given when sent (except that, if not given during normal business hours for the recipient, shall be deemed to have been given at the opening of business on the next Business Day for the recipient). Notices and other communications delivered through electronic communications to the extent provided in clause (b) below, shall be effective as provided in such clause (b).

(b) Electronic Communications. Notices and other communications to the Lenders and the L/C Issuers hereunder may be delivered or furnished by electronic communication (including e-mail, FpML messaging, and Internet or intranet websites) pursuant to procedures approved by the Administrative Agent, provided that the foregoing shall not apply to notices to any Lender or any L/C Issuer pursuant to Article II if such Lender or such L/C Issuer, as applicable, has notified the Administrative Agent that it is incapable of receiving notices under such Article by electronic communication. The Administrative Agent, the Swing Line Lender, any L/C Issuer or the Company may each, in its discretion, agree to accept notices and other communications to it hereunder by electronic communications pursuant to procedures approved by it, provided that approval of such procedures may be limited to particular notices or communications.

Unless the Administrative Agent otherwise prescribes, (i) notices and other communications sent to an e-mail address shall be deemed received upon the sender's receipt of an acknowledgement from the intended recipient (such as by the "return receipt requested" function, as available, return e-mail or other written acknowledgement), and (ii) notices or communications posted to an Internet or intranet website shall be deemed received upon the deemed receipt by the intended recipient at its e-mail address as described in the foregoing clause (i) of notification that such notice or communication is available and identifying the website address therefor; provided that, for both clauses (i) and (ii), if such notice, email or other communication is not sent during the normal business hours of the recipient, such notice, email or communication shall be deemed to have been sent at the opening of business on the next business day for the recipient.

(c) The Platform. THE PLATFORM IS PROVIDED "AS IS" AND "AS AVAILABLE." THE AGENT PARTIES (AS DEFINED BELOW) DO NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE BORROWER MATERIALS OR THE ADEQUACY OF THE PLATFORM, AND EXPRESSLY DISCLAIM LIABILITY FOR ERRORS IN OR OMISSIONS FROM THE BORROWER MATERIALS. NO WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF THIRD PARTY RIGHTS OR FREEDOM FROM VIRUSES OR OTHER CODE DEFECTS, IS MADE BY ANY AGENT PARTY IN CONNECTION WITH THE BORROWER MATERIALS OR THE PLATFORM. In no event shall the Administrative Agent or any of its Related Parties (collectively, the "Agent Parties") have any liability to any Borrower, any Lender, any L/C Issuer or any other Person for losses, claims, damages, liabilities or expenses of any kind (whether in tort, contract or otherwise) arising out of the Company's, any Loan Party's or the Administrative Agent's transmission of Borrower Materials or notices through the platform, any other electronic platform or electronic messaging service, or through the Internet, except to the extent such losses, claims, damages, liabilities or expenses are determined by a court of competent jurisdiction by final and nonappealable judgment to have resulted from the gross negligence, bad faith or willful misconduct of such Agent Party; provided that in no event shall any Agent Party have any liability to any Borrower or any Subsidiary, any Lender, any L/C Issuer or any other Person for indirect, special, incidental, consequential or punitive damages (as opposed to direct or actual damages).

(d) Change of Address, Etc. Each of the Borrowers, the Administrative Agent, each L/C Issuer and the Swing Line Lender may change its address, facsimile or telephone number for notices and other communications hereunder by notice to the other parties hereto. Each other Lender may change its address, facsimile or telephone number for notices and other communications hereunder by notice to the Company, the Administrative Agent, the L/C Issuers and the Swing Line Lender. In addition, each Lender agrees to notify the Administrative Agent from time to time to ensure that the Administrative Agent has on record (i) an effective address, contact name, telephone number, facsimile number and electronic mail address to which notices and other communications may be sent and (ii) accurate wire instructions for such Lender. Furthermore, each Public Lender agrees to cause at least one individual at or on behalf of such Public Lender to at all times have selected the "Private Side Information" or similar designation on the content declaration screen of the Platform in order to enable such Public Lender or its delegate, in accordance with such Public Lender's compliance procedures and applicable Law, including Canadian federal and provincial securities laws and United States federal and state securities Laws, to make reference to Borrower Materials that are not made available through the "Public Side Information" portion of the Platform and that may contain material non-public information with respect to the Company or its securities

for purposes of Canadian federal and provincial securities laws or United States federal or state securities laws.

(e) Reliance by Administrative Agent, L/C Issuer and Lenders. The Administrative Agent, the L/C Issuers and the Lenders shall be entitled to rely and act upon any notices (including telephonic notices, Loan Notices, Letter of Credit Applications and Swing Line Loan Notices) purportedly given by or on behalf of any Loan Party even if (i) such notices were not made in a manner specified herein, were incomplete or were not preceded or followed by any other form of notice specified herein, or (ii) the terms thereof, as understood by the recipient, varied from any confirmation thereof. The Company shall indemnify the Administrative Agent, each L/C Issuer, each Lender and the Related Parties of each of them from all losses, costs, expenses and liabilities resulting from the reliance by such Person on each notice purportedly given by or on behalf of any Loan Party, except to the extent that such losses, costs, expenses or liabilities are determined by a court of competent jurisdiction in a final and non-appealable judgment to have resulted from the bad faith, gross negligence or willful misconduct of, or material breach of this Agreement or any other Loan Document by, the Administrative Agent, such L/C Issuer or such Lender, or, in each case, any of its Related Parties, or, such Related Party, as applicable. All telephonic notices to and other telephonic communications with the Administrative Agent may be recorded by the Administrative Agent, and each of the parties hereto hereby consents to such recording.

10.03 No Waiver; Cumulative Remedies; Enforcement. No failure by any Lender or the Administrative Agent to exercise, and no delay by any such Person in exercising, any right, remedy, power or privilege hereunder or under any other Loan Document shall operate as a waiver thereof; nor shall any single or partial exercise of any right, remedy, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power or privilege. The rights, remedies, powers and privileges herein provided, and provided under each other Loan Document, are cumulative and not exclusive of any rights, remedies, powers and privileges provided by law.

Notwithstanding anything to the contrary contained herein or in any other Loan Document, the authority to enforce rights and remedies hereunder and under the other Loan Documents against the Loan Parties or any of them shall be vested exclusively in, and all actions and proceedings at law in connection with such enforcement shall be instituted and maintained exclusively by, the Administrative Agent in accordance with Section 8.02 for the benefit of all the Lenders and all the L/C Issuers; provided, however, that the foregoing shall not prohibit (a) the Administrative Agent from exercising on its own behalf the rights and remedies that inure to its benefit (solely in its capacity as Administrative Agent) hereunder and under the other Loan Documents, (b) any L/C Issuer or the Swing Line Lender from exercising the rights and remedies that inure to its benefit (solely in its capacity as L/C Issuer or Swing Line Lender, as the case may be) hereunder and under the other Loan Documents, (c) any Lender from exercising setoff rights in accordance with Section 10.08 (subject to the terms of Section 2.14), or (d) any Lender from filing proofs of claim or appearing and filing pleadings on its own behalf during the pendency of a proceeding relative to any Loan Party under any Debtor Relief Law; and provided, further, that if at any time there is no Person acting as Administrative Agent hereunder and under the other Loan Documents, then (i) the Required Lenders shall have the rights otherwise ascribed to the Administrative Agent pursuant to Section 8.02 (or, in the case of any Event of Default arising from a breach of Section 7.11, the Required Pro Rata Facilities Lenders shall have the rights otherwise ascribed to the Administrative Agent pursuant to Section 8.02 with respect to the Aggregate Revolving

Commitments, the Incremental Tranche A Term Loans and the Obligations in respect thereof) and (ii) in addition to the matters set forth in clauses (b), (c) and (d) of the preceding proviso and subject to Section 2.14, any Lender may, with the consent of the Required Lenders, enforce any rights and remedies available to it and as authorized by the Required Lenders (or, in the case of any Event of Default arising from a breach of Section 7.11, any Lender with a Revolving Commitment, Revolving Credit Exposure or Incremental Tranche A Term Loan may, with the consent of the Required Pro Rata Facilities Lenders, enforce any rights and remedies available to it with respect to the Aggregate Revolving Commitments, the Incremental Tranche A Term Loans and the Obligations in respect thereof and as authorized by the Required Pro Rata Facilities Lenders).

10.04 Expenses; Indemnity; Damage Waiver.

(a) Costs and Expenses. The Company shall pay (i) all reasonable and documented out-of-pocket fees and expenses incurred by the Administrative Agent, each Arranger, each L/C Issuer and their respective Affiliates (but limited, in the case of legal fees and expenses, to the reasonable and documented and invoiced fees and expenses of one firm of Canadian counsel and one firm of U.S. counsel to the Administrative Agent, the Arrangers, the L/C Issuers and their respective Affiliates, taken as a whole, and, if necessary, one firm of regulatory counsel and one firm of local counsel in each applicable jurisdiction (which may be a single firm for multiple jurisdictions) to all such Persons, taken as a whole (and except allocated costs of in-house counsel) (and, in the case of an actual or perceived conflict of interest between or among such Persons, of another firm of Canadian counsel, another firm of U.S. counsel, another firm of regulatory counsel and another firm of local counsel in each applicable jurisdiction for all such affected Indemnitees taken as a whole, repeated until no such actual or perceived conflict exists among such Persons taken as a whole)), in connection with the syndication of the credit facilities provided for herein, the preparation, negotiation, execution, delivery and administration of this Agreement and the other Loan Documents or any amendments, modifications or waivers of the provisions hereof or thereof (whether or not the transactions contemplated hereby or thereby shall be consummated), (ii) all reasonable out-of-pocket expenses incurred by each L/C Issuer in connection with the issuance, amendment, renewal or extension of any Letter of Credit or any demand for payment thereunder and (iii) all out-of-pocket expenses incurred by the Administrative Agent, any Lender or any L/C Issuer (but limited, in the case of legal fees and expenses, to the reasonable and documented and invoiced fees and expenses of one firm of Canadian counsel and one firm of U.S. counsel to the Administrative Agent, the Arrangers, the Lenders, the L/C Issuers and their respective Affiliates, taken as a whole, and, if necessary, one firm of regulatory counsel and one firm of local counsel in each applicable jurisdiction (which may be a single firm for multiple jurisdictions) to all such Persons, taken as a whole (and except allocated costs of in-house counsel) (and, in the case of an actual or perceived conflict of interest between or among such Persons, of another firm of Canadian counsel, another firm of U.S. counsel, another firm of regulatory counsel and another firm of local counsel in each applicable jurisdiction for all such affected Indemnitees taken as a whole, repeated until no such actual or perceived conflict exists among such Persons taken as a whole)) in connection with the enforcement or protection of its rights (A) in connection with this Agreement and the other Loan Documents, including its rights under this Section, or (B) in connection with the Loans made or Letters of Credit issued hereunder, including all such out-of-pocket expenses incurred during any workout, restructuring or negotiations in respect of such Loans or Letters of Credit.

(b) Indemnification by the Company. The Company shall indemnify the Administrative Agent (and any sub-agent thereof), each Arranger, each Lender and each L/C Issuer, and each Related

Party of any of the foregoing Persons (each such Person being called an "Indemnitee") against, and hold each Indemnitee harmless from, any and all losses, claims, damages, liabilities and related reasonable, documented and invoiced out-of-pocket expenses (limited, in the case of legal fees and expenses, to one firm of Canadian counsel and one firm of U.S. counsel for all Indemnitees taken as a whole and, if necessary, one firm of regulatory counsel and one firm of local counsel in each applicable jurisdiction (which may be a single firm for multiple jurisdictions) for all Indemnitees taken a as a whole (and, in the case of an actual or perceived conflict of interest, of another firm of Canadian counsel, another firm of U.S. counsel, another firm of regulatory counsel and another firm of local counsel in each applicable jurisdiction for all such affected Indemnitees taken as a whole) (in each case, excluding allocated costs of in-house counsel)), incurred by any Indemnitee or asserted or awarded against any Indemnitee by any Person (including the Company or any other Loan Party) other than such Indemnitee and its Related Parties arising out of, in connection with, or as a result of (i) the execution or delivery of this Agreement, any other Loan Document or any agreement or instrument contemplated hereby or thereby, the performance by the parties hereto of their respective obligations hereunder or thereunder, the consummation of the transactions contemplated hereby or thereby, or, in the case of the Administrative Agent (and any sub-agent thereof) and its Related Parties only, the administration of this Agreement and the other Loan Documents (including in respect of any matters addressed in Section 3.01), (ii) any Loan or Letter of Credit or the use or proposed use of the proceeds therefrom (including any refusal by an L/C Issuer to honor a demand for payment under a Letter of Credit if the documents presented in connection with such demand do not strictly comply with the terms of such Letter of Credit), (iii) any actual or alleged presence or release of Hazardous Materials on or from any property owned or operated by a Loan Party or any of its Subsidiaries, or any Environmental Liability related in any way to a Loan Party or any of its Subsidiaries, or (iv) any actual or prospective claim, litigation, investigation or proceeding relating to any of the foregoing, whether based on contract, tort or any other theory, whether brought by a third party or by the Company or any other Loan Party, and regardless of whether any Indemnitee is a party thereto; provided that such indemnity shall not, as to any Indemnitee, be available to the extent that such losses, claims, damages, liabilities or related reasonable, documented and invoiced out-of-pocket expenses (x) are determined by a court of competent jurisdiction by final and nonappealable judgment to have resulted from (a) the gross negligence, bad faith or willful misconduct of such Indemnitee or any of its Related Indemnified Parties or (b) a material breach of such Indemnitee's obligations (or any of its Related Indemnified Parties' obligations) hereunder or under any other Loan Document, (y) arise solely out of, or result from, a claim, litigation, investigation or proceeding brought by one Indemnitee against another Indemnitee except to the extent such claim (1) involves any action or inaction by the Company or any Subsidiary or (2) relates to any action or inaction of such Indemnitee in its capacity as Administrative Agent (or any sub-agent thereof), Arranger or similar title (including, without limitation, arranger, bookrunner, syndication agent, documentation) or (z) relates to any settlement entered into by such Indemnitee without the Company's written consent (such consent not to be unreasonably withheld or delayed); provided that if such settlement is reached with the Company's written consent, or if there is a final and non-appealable judgment by a court of competent jurisdiction in any related proceeding, the Company agrees to indemnify and hold harmless each Indemnified Party in the manner and to the extent set forth above; provided, further that the Company shall be deemed to have consented to any such settlement unless the Company shall object thereto by written notice to the applicable Indemnified Party within ten (10) Business Days after having received notice thereof. Without limiting the provisions of Section 3.01(c), this Section 10.04(b) shall not apply with respect to Taxes other than any Taxes that represent losses, claims, damages, etc. arising from any non-Tax claim.

(c) Reimbursement by Lenders. To the extent that the Company for any reason fails to indefeasibly pay any amount required under clauses (a) or (b) of this Section 10.04 to be paid by it to the Administrative Agent (or any sub-agent thereof), any L/C Issuer, the Swing Line Lender or any Related Party of any of the foregoing, each Lender severally agrees to pay to the Administrative Agent (or any such sub-agent), such L/C Issuer, the Swing Line Lender or such Related Party, as the case may be, such Lender's Applicable Percentage (determined as of the time that the applicable unreimbursed expense or indemnity payment is sought based on each Lender's share of the Total Credit Exposure at such time) of such unpaid amount (including any such unpaid amount in respect of a claim asserted by such Lender), such payment to be made severally among them based on such Lender's Applicable Percentage (determined as of the time that the applicable unreimbursed expense or indemnity payment is sought), provided further that the unreimbursed expense or indemnified loss, claim, damage, liability or related expense, as the case may be, was incurred by or asserted against the Administrative Agent (or any such sub-agent), or such L/C Issuer or the Swing Line Lender in its capacity as such, or against any Related Party of any of the foregoing acting for the Administrative Agent (or any such sub-agent), such L/C Issuer or the Swing Line Lender in connection with such capacity. The obligations of the Lenders under this clause (c) are subject to the provisions of Section 2.13(d).

(d) Waiver of Consequential Damages, Etc. To the fullest extent permitted by applicable Law, no party hereto shall assert, and each party hereto hereby waives, and acknowledges that no other Person shall have, any claim against any party hereto, on any theory of liability, for special, indirect, consequential or punitive damages (as opposed to direct or actual damages) arising out of, in connection with, or as a result of, this Agreement, any other Loan Document or any agreement or instrument contemplated hereby, the transactions contemplated hereby or thereby, any Loan or Letter of Credit or the use of the proceeds thereof; provided that nothing contained in this clause (d) shall limit the Company's indemnification obligations set forth above to the extent such special, indirect, consequential or punitive damages are included in any third party claim in connection with which such Indemnitee is entitled to indemnification hereunder. No Indemnitee shall be liable for any damages arising from the use by unintended recipients of any information or other materials distributed to such unintended recipients by such Indemnitee through telecommunications, electronic or other information transmission systems in connection with this Agreement or the other Loan Documents or the transactions contemplated hereby or thereby other than for direct or actual damages resulting from the gross negligence, bad faith or willful misconduct of such Indemnitee as determined by a final and nonappealable judgment of a court of competent jurisdiction.

(e) Payments. All amounts due under this Section shall be payable not later than ten (10) Business Days after demand therefor.

(f) Survival. The agreements in this Section and the indemnity provisions of Section 10.02(e) shall survive the resignation of the Administrative Agent, an L/C Issuer and the Swing Line Lender, the replacement of any Lender, the termination of the Aggregate Commitments, the repayment, satisfaction or discharge of all the other Obligations and the Facility Termination Date.

10.05 Payments Set Aside. To the extent that any payment by or on behalf of any Loan Party is made to the Administrative Agent, any L/C Issuer or any Lender, or the Administrative Agent, any L/C Issuer or any Lender exercises its right of setoff, and such payment or the proceeds of such setoff or any part thereof is subsequently invalidated, declared to be fraudulent or preferential, set aside or required (including pursuant to any settlement entered into by the Administrative Agent, such L/C Issuer or such Lender in its discretion)

to be repaid to a trustee, receiver or any other party, in connection with any proceeding under any Debtor Relief Law or otherwise, then (a) to the extent of such recovery, the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such setoff had not occurred, and (b) each Lender and each L/C Issuer severally agrees to pay to the Administrative Agent upon demand its applicable share (without duplication) of any amount so recovered from or repaid by the Administrative Agent, plus interest thereon from the date of such demand to the date such payment is made at a rate per annum equal to the applicable Overnight Rate from time to time in effect, in the applicable currency of such recovery or payment. The obligations of the Lenders and the L/C Issuers under clause (b) of the preceding sentence shall survive the payment in full of the Obligations and the termination of this Agreement.

10.06 Successors and Assigns.

(a) Successors and Assigns Generally. The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns permitted hereby, except that neither the Company nor any other Loan Party may assign or otherwise transfer any of its rights or obligations hereunder without the prior written consent of the Administrative Agent and each Lender and no Lender may assign or otherwise transfer any of its rights or obligations hereunder (other than to the extent expressly permitted under Section 2.15(c) or, in the case of the Company or any other Loan Party, Section 7.04) except (i) to an assignee in accordance with the provisions of clause (b) of this Section 10.06, (ii) by way of participation in accordance with the provisions of clause (d) of this Section 10.06, or (iii) by way of pledge or assignment of a security interest subject to the restrictions of clause (f) of this Section 10.06, (and any other attempted assignment or transfer by any party hereto shall be null and void). Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto, their respective successors and assigns permitted hereby, Participants to the extent provided in clause (d) of this Section 10.06 and, to the extent expressly contemplated hereby, the Related Parties of each of the Administrative Agent, the L/C Issuers and the Lenders) any legal or equitable right, remedy or claim under or by reason of this Agreement.

(b) Assignments by Lenders. Any Lender may at any time assign to one or more assignees all or a portion of its rights and obligations under this Agreement (including all or a portion of its Commitment and the Loans (including for purposes of this clause (b), participations in L/C Obligations and in Swing Line Loans) at the time owing to it); provided that (in each case with respect to any credit facility hereunder) any such assignment shall be subject to the following conditions:

(i) Minimum Amounts.

(A) in the case of an assignment of the entire remaining amount of the assigning Lender's Commitment and the Loans at the time owing to it (in each case with respect to any credit facility provided hereunder) or contemporaneous assignments to related Approved Funds (determined after giving effect to such Assignments) that equal at least the amount specified in clause (b)(i)(B) of this Section 10.06 in the aggregate or in the case of an assignment to a Lender, an Affiliate of a Lender or an Approved Fund, no minimum amount need be assigned; and

(B) in any case not described in clause (b)(i)(A) of this Section 10.06, the aggregate amount of the Commitment (which for this purpose includes Loans

outstanding thereunder) or, if the applicable Commitment is not then in effect, the principal outstanding balance of the Loans of the assigning Lender subject to each such assignment, determined as of the date the Assignment and Assumption with respect to such assignment is delivered to the Administrative Agent or, if "Trade Date" is specified in the Assignment and Assumption, as of the Trade Date, shall not be less than $5,000,000 in the case of any assignment in respect of the Revolving Facility, or $1,000,000, in the case of any assignment in respect of the Term Facility unless each of the Administrative Agent and, so long as no Event of Default has occurred and is continuing, the Company otherwise consents (each such consent not to be unreasonably withheld or delayed).

(ii) Proportionate Amounts. Each partial assignment shall be made as an assignment of a proportionate part of all the assigning Lender's rights and obligations under this Agreement with respect to the Loans or the Commitment assigned, except that this clause (ii) shall not (A) apply to the Swing Line Lender's rights and obligations in respect of Swing Line Loans or (B) prohibit any Lender from assigning all or a portion of its rights and obligations among the revolving credit facility or term loan facility provided hereunder on a non-*pro rata* basis;

(iii) Required Consents. No consent shall be required for any assignment except to the extent required by clause (b)(i)(B) of this Section 10.06 and, in addition:

(A) the consent of the Company (such consent not to be unreasonably withheld or delayed) shall be required unless (1) an Event of Default has occurred and is continuing at the time of such assignment or (2) such assignment is to a Lender, an Affiliate of a Lender or an Approved Fund; provided that the Company shall be deemed to have consented to any such assignment unless it shall object thereto by written notice to the Administrative Agent within seven (7) Business Days after having received written notice thereof;

(B) the consent of the Administrative Agent (such consent not to be unreasonably withheld or delayed) shall be required for assignments in respect of (1) any unfunded commitment to a term loan facility provided hereunder or any Revolving Commitment if such assignment is to a Person that is not a Lender with a Commitment in respect of the applicable credit facility subject to such assignment, an Affiliate of such Lender or an Approved Fund with respect to such Lender or (2) any Term Facility to a Person that is not a Lender, an Affiliate of a Lender or an Approved Fund;

(C) the consent of each L/C Issuer (such consent not to be unreasonably withheld or delayed) shall be required for any assignment that increases the obligation of the assignee to participate in exposure under one or more Letters of Credit (whether or not then outstanding); and

(D) the consent of the Swing Line Lender (such consent not to be unreasonably withheld or delayed) shall be required for any assignment in respect of Revolving Loans and Revolving Commitments.

(iv) Assignment and Assumption. The parties to each assignment shall execute and deliver to the Administrative Agent an Assignment and Assumption, together with a

processing and recordation fee in the amount of $3,500; provided, however, that the Administrative Agent may, in its sole discretion, elect to waive such processing and recordation fee in the case of any assignment. The assignee, if it is not a Lender, shall deliver to the Administrative Agent an Administrative Questionnaire.

(v) No Assignment to Certain Persons. No such assignment shall be made (A) to the Company or any of the Company's Affiliates or Subsidiaries, (B) to any Defaulting Lender or any of its Subsidiaries or to any Disqualified Institution, or to any Person who, upon becoming a Lender hereunder, would constitute any of the foregoing Persons described in this clause (B), or (C) to a natural Person (or to a holding company, investment vehicle or trust for, or owned and operated for the primary benefit of a natural Person).

(vi) No Assignment Resulting in Additional Indemnified Taxes, etc. Without the written consent of the Company, no such assignment shall be made to any Person that, on the effective date of such assignment, through its Lending Offices, (A) is not capable of lending to the Borrowers without the imposition of any additional Taxes or Mandatory Costs that would require indemnification payments by any of the Borrowers under this Agreement or (B) is not capable of lending in the Alternative Currencies or at the applicable interest rates.

(vii) Certain Additional Payments. In connection with any assignment of rights and obligations of any Defaulting Lender hereunder, no such assignment shall be effective unless and until, in addition to the other conditions thereto set forth herein, the parties to the assignment shall make such additional payments to the Administrative Agent in an aggregate amount sufficient, upon distribution thereof as appropriate (which may be outright payment, purchases by the assignee of participations or subparticipations, or other compensating actions, including funding, with the consent of the Company and the Administrative Agent, the applicable *pro rata* share of Loans previously requested but not funded by the Defaulting Lender, to each of which the applicable assignee and assignor hereby irrevocably consent), to (x) pay and satisfy in full all payment liabilities then owed by such Defaulting Lender to the Administrative Agent, any L/C Issuer or any Lender hereunder (and interest accrued thereon) and (y) acquire (and fund as appropriate) its full *pro rata* share of all Loans and participations in Letters of Credit and Swing Line Loans in accordance with its Applicable Percentage. Notwithstanding the foregoing, in the event that any assignment of rights and obligations of any Defaulting Lender hereunder shall become effective under applicable Law without compliance with the provisions of this paragraph, then the assignee of such interest shall be deemed to be a Defaulting Lender for all purposes of this Agreement until such compliance occurs.

Subject to acceptance and recording thereof by the Administrative Agent pursuant to clause (c) of this Section 10.06, from and after the effective date specified in each Assignment and Assumption, the assignee thereunder shall be a party to this Agreement and, to the extent of the interest assigned by such Assignment and Assumption, have the rights and obligations of a Lender under this Agreement, and the assigning Lender thereunder shall, to the extent of the interest assigned by such Assignment and Assumption, be released from its obligations under this Agreement (and, in the case of an Assignment and Assumption covering all of the assigning Lender's rights and obligations under this Agreement, such Lender shall cease to be a party hereto) but shall continue to be entitled to the benefits of Sections 3.01, 3.04, 3.05, and 10.04 with respect to facts and

circumstances occurring prior to the effective date of such assignment; provided, that except to the extent otherwise expressly agreed by the affected parties, no assignment by a Defaulting Lender will constitute a waiver or release of any claim of any party hereunder arising from that Lender's having been a Defaulting Lender. Upon request, each Borrower (at its expense) shall execute and deliver a Note to the assignee Lender. Any assignment or transfer by a Lender of rights or obligations under this Agreement that does not comply with this subsection shall be treated for purposes of this Agreement as a sale by such Lender of a participation in such rights and obligations in accordance with clause (d) of this Section 10.06.

(c) Register. The Administrative Agent, acting solely for this purpose as an agent of the Borrowers (and such agency being solely for tax purposes), shall maintain at the Administrative Agent's Office a copy of each Assignment and Assumption delivered to it (or the equivalent thereof in electronic form) and a register for the recordation of the names and addresses of the Lenders, and the Commitments of, and principal amounts (and stated interest) of the Loans and L/C Obligations owing to, each Lender pursuant to the terms hereof from time to time (the "Register"). The entries in the Register shall be conclusive absent manifest error, and the Borrowers, the Administrative Agent and the Lenders shall treat each Person whose name is recorded in the Register pursuant to the terms hereof as a Lender hereunder for all purposes of this Agreement. The Register shall be available for inspection by the Borrowers and any Lender, at any reasonable time and from time to time upon reasonable prior notice.

(d) Participations. Any Lender may at any time, without the consent of, or notice to, any Borrower or the Administrative Agent, sell participations to any Person (other than a natural Person, or a holding company, investment vehicle or trust for, or owned and operated for the primary benefit of a natural Person, a Defaulting Lender or the Company or any of the Company's Affiliates or Subsidiaries) (each, a "Participant") in all or a portion of such Lender's rights and/or obligations under this Agreement (including all or a portion of its Commitment and/or the Loans (including such Lender's participations in L/C Obligations and/or Swing Line Loans) owing to it); provided that (i) such Lender's obligations under this Agreement shall remain unchanged, (ii) such Lender shall remain solely responsible to the other parties hereto for the performance of such obligations and (iii) the Borrowers, the Administrative Agent, the Lenders and the L/C Issuers shall continue to deal solely and directly with such Lender in connection with such Lender's rights and obligations under this Agreement. For the avoidance of doubt, each Lender shall be responsible for the indemnity under Section 10.04(c) without regard to the existence of any participation.

Any agreement or instrument pursuant to which a Lender sells such a participation shall provide that such Lender shall retain the sole right to enforce this Agreement and to approve any amendment, modification or waiver of any provision of this Agreement; provided that such agreement or instrument may provide that such Lender will not, without the consent of the Participant, agree to any amendment, waiver or other modification described in Sections 10.01(a)(i) through Section 10.01(a)(x) that directly affects such Participant. Subject to clause (e) of this Section 10.06, each Borrower agrees that each Participant shall be entitled to the benefits of Sections 3.01, 3.04 and 3.05 to the same extent as if it were a Lender and had acquired its interest by assignment pursuant to clause (b) of this Section 10.06 (it being understood that the documentation required under Section 3.01(e) shall be delivered to the Lender who sells the participation); provided that such Participant (A) agrees to be subject to the provisions of Sections 3.06 and 10.13 as if it were an assignee under clause (b) of this Section 10.06 and (B) shall not be entitled to receive any greater payment under Sections 3.01 or 3.04, with respect to any participation, than the Lender from whom it acquired the

applicable participation would have been entitled to receive, except to the extent such entitlement to receive a greater payment results from a Change in Law that occurs after the Participant acquired the applicable participation. Each Lender that sells a participation agrees, at the Company's request and expense, to use reasonable efforts to cooperate with the Company to effectuate the provisions of Section 3.06 with respect to any Participant. To the extent permitted by law, each Participant also shall be entitled to the benefits of Section 10.08 as though it were a Lender; provided that such Participant agrees to be subject to Section 2.14 as though it were a Lender. Each Lender that sells a participation shall, acting solely for this purpose as a non-fiduciary agent of the Company, maintain a register on which it enters the name and address of each Participant and the principal amounts (and stated interest) of each Participant's interest in the Loans or other obligations under the Loan Documents (the "Participant Register"); provided that no Lender shall have any obligation to disclose all or any portion of the Participant Register (including the identity of any Participant or any information relating to a Participant's interest in any commitments, loans, letters of credit or its other obligations under any Loan Document) to any Person except to the extent that such disclosure is necessary to establish that such commitment, loan, letter of credit or other obligation is in registered form under Section 5f.103-1(c) of the United States Treasury Regulations. The entries in the Participant Register shall be conclusive absent manifest error, and such Lender shall treat each Person whose name is recorded in the Participant Register as the owner of such participation for all purposes of this Agreement notwithstanding any notice to the contrary. For the avoidance of doubt, the Administrative Agent (in its capacity as Administrative Agent) shall have no responsibility for maintaining a Participant Register.

(e) Limitation on Participant Rights. A Participant shall not be entitled to receive any greater payment under Section 3.01 or 3.04 than the applicable Lender would have been entitled to receive with respect to the participation sold to such Participant, except to the extent such entitlement to receive a greater payment results from a Change in Law that occurs after the Participant acquired the applicable participation. Each Lender that sells a participation agrees, at the Company's request and expense, to use reasonable efforts to cooperate with the Company to effectuate the provisions of Section 3.06(b) with respect to any Participant. A Participant that would be a Non-U.S. Lender if it were a Lender shall not be entitled to the benefits of Section 3.01 unless the Company is notified of the participation sold to such Participant and such Participant agrees, for the benefit of the Borrowers, to comply with Section 3.01(e) as though it were a Lender.

(f) Certain Pledges. Any Lender may at any time pledge or assign a security interest in all or any portion of its rights under this Agreement (including under its Note, if any) to secure obligations of such Lender, including any pledge or assignment to secure obligations to a Federal Reserve Bank; provided that no such pledge or assignment shall release such Lender from any of its obligations hereunder or substitute any such pledgee or assignee for such Lender as a party hereto.

(g) Resignation as L/C Issuer or Swing Line Lender after Assignment. Notwithstanding anything to the contrary contained herein, if at any time any Lender acting as an L/C Issuer or Swing Line Lender assigns all of its Revolving Commitment and Revolving Loans pursuant to clause (b) above, such L/C Issuer or Swing Line Lender may, (i) upon thirty (30) days' prior written notice to the Company and the Lenders, resign as an L/C Issuer and/or (ii) upon thirty (30) days' prior written notice to the Company, resign as Swing Line Lender. In the event of any such resignation as L/C Issuer or Swing Line Lender, the Company shall be entitled to appoint from among the Lenders a successor L/C Issuer or Swing Line Lender hereunder; provided, however, that no failure by the Company to appoint any such successor shall affect the resignation of such lender as L/C Issuer or Swing Line Lender, as the case may be. If any Lender resigns as L/C Issuer, it shall retain

all the rights, powers, privileges and duties of an L/C Issuer hereunder with respect to all Letters of Credit outstanding as of the effective date of its resignation as L/C Issuer and all L/C Obligations with respect thereto (including the right to require the Lenders to make Base Rate Loans or fund risk participations in Unreimbursed Amounts pursuant to Section 2.03(c)). If any Lender resigns as Swing Line Lender, it shall retain all the rights of the Swing Line Lender provided for hereunder with respect to Swing Line Loans made by it and outstanding as of the effective date of such resignation, including the right to require the Lenders to make Base Rate Loans or fund risk participations in outstanding Swing Line Loans pursuant to Section 2.05(c). Upon the appointment of a successor L/C Issuer and/or Swing Line Lender, (1) such successor shall succeed to and become vested with all of the rights, powers, privileges and duties of the retiring L/C Issuer or Swing Line Lender, as the case may be, and (2) the successor L/C Issuer shall issue letters of credit in substitution for the applicable Letters of Credit, if any, outstanding at the time of such succession or make other arrangements satisfactory to such resigning L/C Issuer to effectively assume the obligations of such resigning L/C Issuer with respect to such Letters of Credit.

(h) Disqualified Institutions.

(i) Notwithstanding anything to the contrary set forth in this Section 10.06, no assignment or, to the extent the DQ List has been posted on the Platform for all Lenders, participation shall be made to any Person that was a Disqualified Institution as of the date (the "Trade Date") on which the applicable Lender entered into a binding agreement to sell and assign or participate all or a portion of its rights and obligations under this Agreement to such Person (unless the Company has consented to such assignment as otherwise contemplated by this Section 10.06, in which case such Person will not be considered a Disqualified Institution for the purpose of such assignment or participation). For the avoidance of doubt, with respect to any assignee or participant that becomes a Disqualified Institution after the applicable Trade Date (including as a result of the delivery of a notice pursuant to, and/or the expiration of the notice period referred to in, the definition of "Disqualified Institution"), such assignee shall not retroactively be considered a Disqualified Institution. Any assignment in violation of this clause (h)(i) shall not be void, but the other provisions of this clause (g) shall apply.

(ii) If any assignment or participation is made to any Disqualified Institution without the Company's prior consent in violation of clause (i) above, the Company may, at its sole expense and effort, upon notice to the applicable Disqualified Institution and the Administrative Agent, (A) terminate any Revolving Commitment of such Disqualified Institution and repay (or cause the other Borrowers to repay) all obligations of the Borrowers owing to such Disqualified Institution in connection with such Revolving Commitment, (B) in the case of outstanding Term Loans held by Disqualified Institutions, prepay such Term Loan by paying the lesser of (x) the principal amount thereof and (y) the amount that such Disqualified Institution paid to acquire such Term Loans, in each case plus accrued interest, accrued fees and all other amounts (other than principal amounts) payable to it hereunder and under the other Loan Documents and/or (C) require such Disqualified Institution to assign and delegate, without recourse (in accordance with and subject to the restrictions contained in this Section 10.06), all of its interest, rights and obligations under this Agreement and related Loan Documents to an Eligible Assignee that shall assume such obligations at the lesser of (x) the principal amount thereof and (y) the amount that such Disqualified Institution paid to acquire such interests, rights and obligations, in each case plus accrued interest, accrued fees and all other amounts (other than principal amounts) payable to it

hereunder and other the other Loan Documents; provided that (i) the Company or the assigning Disqualified Institution shall have paid to the Administrative Agent the assignment fee (if any) specified in Section 10.06(b), (ii) such assignment does not conflict with applicable Laws and (iii) in the case of clause (B), the Borrowers shall not use the proceeds from any Loans to prepay Term Loans held by Disqualified Institutions.

(iii) Notwithstanding anything to the contrary contained in this Agreement, Disqualified Institutions (A) will not (x) have the right to receive information, reports or other materials provided to Lenders by the Company, the Administrative Agent or any other Lender, (y) attend or participate in meetings attended by the Lenders and the Administrative Agent, or (z) access any electronic site established for the Lenders or confidential communications from counsel to or financial advisors of the Administrative Agent or the Lenders and (B) (x) for purposes of any consent to any amendment, waiver or modification of, or any action under, and for the purpose of any direction to the Administrative Agent or any Lender to undertake any action (or refrain from taking any action) under this Agreement or any other Loan Document, each Disqualified Institution will be deemed to have consented in the same proportion as the Lenders that are not Disqualified Institutions consented to such matter, and (y) for purposes of voting on any plan of reorganization or plan of liquidation pursuant to any Debtor Relief Laws ("Plan of Reorganization"), each Disqualified Institution party hereto hereby agrees (1) not to vote on such Plan of Reorganization, (2) if such Disqualified Institution does vote on such Plan of Reorganization notwithstanding the restriction in the foregoing clause (1), such vote will be deemed not to be in good faith and shall be "designated" pursuant to Section 1126(e) of the Bankruptcy Code (or any similar provision in any other Debtor Relief Laws), and such vote shall not be counted in determining whether the applicable class has accepted or rejected such Plan of Reorganization in accordance with Section 1126(c) of the Bankruptcy Code (or any similar provision in any other Debtor Relief Laws) and (3) not to contest any request by any party for a determination by any applicable court of competent jurisdiction effectuating the foregoing clause (2).

(iv) The Administrative Agent shall have the right, and the Company hereby expressly authorizes the Administrative Agent, to (A) post the list of Disqualified Institutions provided by the Company and any updates thereto from time to time (collectively, the "DQ List") on the Platform, including that portion of the Platform that is designated for "public side" Lenders or (B) provide the DQ List to each Lender requesting the same.

10.07 Treatment of Certain Information; Confidentiality. Each of the Administrative Agent, the Lenders and the L/C Issuers agrees to maintain the confidentiality of the Information (as defined below), except that Information may be disclosed (a) to its Affiliates, its auditors and its and its Affiliates' respective Related Parties (it being understood that the Persons to whom such disclosure is made will be informed of the confidential nature of such Information and instructed to keep such Information confidential), (b) to the extent required or requested by any regulatory authority purporting to have jurisdiction over such Person or its Related Parties (including any self-regulatory authority, such as the National Association of Insurance Commissioners), in which case the Administrative Agent, such Lender or such L/C Issuer shall (i) except with respect to any audit or examination conducted by accountants or any governmental, regulatory, or self-regulatory authority exercising examination or regulatory authority, to the extent practicable and permitted by Law, notify the Company promptly in advance thereof and (ii) use commercially reasonable efforts to ensure that any such Information disclosed is accorded confidential treatment, (c) to the extent required by applicable laws or regulations, by any compulsory legal process or pursuant to the order of any court or administrative agency in any pending legal, judicial or administrative proceeding, in which case the

Administrative Agent, such Lender or such L/C Issuer shall (i) notify the Company of the proposed disclosure in advance to the extent not prohibited by Law, compulsory legal process or the applicable administrative agency, provided if the Administrative Agent, such Lender or such L/C Issuer is unable to notify the Company in advance of such disclosure, such notice shall be delivered promptly thereafter to the extent practicable and permitted by Law and (ii) use commercially reasonable efforts to ensure that any such Information disclosed is accorded confidential treatment, (d) to any other party hereto, provided that no material non-public information with respect to the Company or its Affiliates, or the respective securities of any of the foregoing, may be disclosed to any Public Lender, (e) in connection with the exercise of any remedies hereunder or under any other Loan Document or any action or proceeding relating to this Agreement or any other Loan Document or the enforcement of rights hereunder or thereunder, (f) subject to an agreement containing provisions substantially the same as those of this Section (it being understood and agreed that any "click through" confidentiality agreement used on SyndTrak is acceptable to the parties hereto for purposes of satisfying the requirements of the exception contemplated in this clause (f)), to (i) any assignee of or Participant in, or any prospective assignee of or Participant in, any of its rights and obligations under this Agreement or any Eligible Assignee invited to be a Lender pursuant to Section 2.16 or (ii) any actual or prospective party (or its Related Parties) to any swap, derivative or other transaction under which payments are to be made by reference to any of the Borrowers and their obligations, this Agreement or payments hereunder, (g) on a confidential basis to (i) any rating agency in connection with rating the Company or its Subsidiaries or the credit facilities provided hereunder or (ii) the CUSIP Service Bureau or any similar agency in connection with the issuance and monitoring of CUSIP numbers or other market identifiers with respect to the credit facilities provided hereunder, (h) with the prior written consent of the Company, or (i) to the extent such Information (x) becomes publicly available other than as a result of a breach of this Section or (y) becomes available to the Administrative Agent, any Lender, any L/C Issuer or any of their respective Affiliates on a nonconfidential basis from a source other than the Company; provided that in no event shall any disclosure of Information be made to any Disqualified Institution. In addition, the Administrative Agent and the Lenders may disclose the existence of this Agreement and information about this Agreement to market data collectors, similar service providers to the lending industry and service providers to the Administrative Agent and the Lenders in connection with the administration of this Agreement, the other Loan Documents, and the Commitments.

For purposes of this Section, "Information" means all information received from the Company or any Subsidiary relating to the Company or any Subsidiary or any of their respective businesses, other than any such information that is available to the Administrative Agent, any Lender or any L/C Issuer on a nonconfidential basis prior to disclosure by the Company or any Subsidiary. Any Person required to maintain the confidentiality of Information as provided in this Section shall be considered to have complied with its obligation to do so if such Person has exercised the same degree of care to maintain the confidentiality of such Information as such Person would accord to its own confidential information.

Each of the Administrative Agent, the Lenders and the L/C Issuers acknowledges that (a) the Information may include material non-public information concerning the Company or a Subsidiary, as the case may be, (b) it has developed compliance procedures regarding the use of material non-public information and (c) it will handle such material non-public information in accordance with applicable Law, including Canadian federal and provincial securities laws and United States federal and state securities Laws.

10.08 Right of Setoff. If an Event of Default shall have occurred and be continuing, each Lender, each L/C Issuer and each of their respective Affiliates is hereby authorized at any time and from time to

time, to the fullest extent permitted by applicable law, to set off and apply any and all deposits (general or special, time or demand, provisional or final, in whatever currency) at any time held and other obligations (in whatever currency) at any time owing by such Lender, such L/C Issuer or any such Affiliate to or for the credit or the account of the Company or any other Loan Party against any and all of the obligations of the Company or such Loan Party now or hereafter existing under this Agreement or any other Loan Document to such Lender or such L/C Issuer or their respective Affiliates, irrespective of whether or not such Lender, L/C Issuer or Affiliate shall have made any demand under this Agreement or any other Loan Document and although such obligations of the Company or such Loan Party may be contingent or unmatured or are owed to a branch, office or Affiliate of such Lender or such L/C Issuer different from the branch, office or Affiliate holding such deposit or obligated on such indebtedness; provided, that in the event that any Defaulting Lender shall exercise any such right of setoff, (x) all amounts so set off shall be paid over immediately to the Administrative Agent for further application in accordance with the provisions of Section 2.18 and, pending such payment, shall be segregated by such Defaulting Lender from its other funds and deemed held in trust for the benefit of the Administrative Agent, the L/C Issuers and the Lenders, and (y) the Defaulting Lender shall provide promptly to the Administrative Agent a statement describing in reasonable detail the Obligations owing to such Defaulting Lender as to which it exercised such right of setoff. The rights of each Lender, each L/C Issuer and their respective Affiliates under this Section 10.08 are in addition to other rights and remedies (including other rights of setoff) that such Lender, such L/C Issuer or their respective Affiliates may have. Each Lender and each L/C Issuer agrees to notify the Company and the Administrative Agent promptly after any such setoff and application, provided that the failure to give such notice shall not affect the validity of such setoff and application.

10.09 Interest Rate Limitation. Notwithstanding anything to the contrary contained in any Loan Document, the interest paid or agreed to be paid under the Loan Documents shall not exceed the maximum rate of non-usurious interest permitted by applicable Law (including, without limitation, the Criminal Code (Canada)) (the "Maximum Rate"). If the Administrative Agent or any Lender shall receive interest in an amount that exceeds the Maximum Rate, the excess interest shall be applied to the principal of the Loans or, if it exceeds such unpaid principal, refunded to the Company. In determining whether the interest contracted for, charged, or received by the Administrative Agent or a Lender exceeds the Maximum Rate, such Person may, to the extent permitted by applicable Law, (a) characterize any payment that is not principal as an expense, fee, or premium rather than interest, (b) exclude voluntary prepayments and the effects thereof, and (c) amortize, prorate, allocate, and spread in equal or unequal parts the total amount of interest throughout the contemplated term of the Obligations hereunder.

10.10 Counterparts; Integration; Effectiveness. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Agreement, the other Loan Documents, and any separate letter agreements with respect to fees payable to the Administrative Agent or any L/C Issuer, constitute the entire contract among the parties relating to the subject matter hereof and supersede any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. Except as provided in Section 4.01, this Agreement shall become effective when it shall have been executed by the Administrative Agent and when the Administrative Agent shall have received counterparts hereof that, when taken together, bear the signatures of each of the other parties hereto. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or other electronic imaging means (e.g., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this Agreement.

10.11 Survival of Representations and Warranties. All representations and warranties made hereunder and in any other Loan Document or other document delivered pursuant hereto or thereto or in connection herewith or therewith shall survive the execution and delivery hereof and thereof. Such

representations and warranties have been or will be relied upon by the Administrative Agent and each Lender, regardless of any investigation made by the Administrative Agent or any Lender or on their behalf and notwithstanding that the Administrative Agent or any Lender may have had notice or knowledge of any Default at the time of any Credit Extension, and shall continue in full force and effect as long as any Loan or any other Obligation hereunder (other than contingent indemnification obligations for which no claim or demand has been made) shall remain unpaid or unsatisfied or any Letter of Credit shall remain outstanding.

10.12 Severability. If any provision of this Agreement or the other Loan Documents is held to be illegal, invalid or unenforceable, (a) the legality, validity and enforceability of the remaining provisions of this Agreement and the other Loan Documents shall not be affected or impaired thereby and (b) the parties shall endeavor in good faith negotiations to replace the illegal, invalid or unenforceable provisions with valid provisions the economic effect of which comes as close as possible to that of the illegal, invalid or unenforceable provisions. The invalidity of a provision in a particular jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. Without limiting the foregoing provisions of this Section 10.12, if and to the extent that the enforceability of any provisions in this Agreement relating to Defaulting Lenders shall be limited by Debtor Relief Laws, as determined in good faith by the Administrative Agent, the applicable L/C Issuer or the Swing Line Lender, as applicable, then such provisions shall be deemed to be in effect only to the extent not so limited.

10.13 Replacement of Lenders. If the Company is entitled to replace a Lender pursuant to the provisions of Section 3.06, or if any Lender is a Defaulting Lender or a Non-Consenting Lender, then the Company may, at its sole expense and effort, upon notice to such Lender and the Administrative Agent, require such Lender to assign and delegate, without recourse (in accordance with and subject to the restrictions contained in, and consents required by, Section 10.06), all of its interests, rights (other than its existing rights to payments pursuant to Sections 3.01 and 3.04) and obligations under this Agreement and the related Loan Documents to an Eligible Assignee that shall assume such obligations (which assignee may be another Lender, if a Lender accepts such assignment), provided that:

(a) the Company shall have paid (or caused a Designated Borrower to pay) to the Administrative Agent the assignment fee (if any) specified in Section 10.06(b);

(b) such Lender shall have received payment of an amount equal to the outstanding principal of its Loans and L/C Advances, accrued interest thereon, accrued fees and all other amounts payable to it hereunder and under the other Loan Documents (including any amounts under Section 3.05 and, if applicable, under Section 2.05(d)) from the assignee (to the extent of such outstanding principal and accrued interest and fees) or the Company or applicable Designated Borrower (in the case of all other amounts, including any amounts payable under Section 2.05(d));

(c) in the case of any such assignment resulting from a claim for compensation under Section 3.04 or payments required to be made pursuant to Section 3.01, such assignment will result in a reduction in such compensation or payments thereafter;

(d) such assignment does not conflict with applicable Laws; and

(e) in the case of an assignment resulting from a Lender becoming a Non-Consenting Lender, the applicable assignee shall have consented to the applicable amendment, waiver or consent; provided that the failure by such Non-Consenting Lender to execute and deliver an Assignment and Assumption shall not impair the validity of the removal of such Non-Consenting Lender and the mandatory assignment of such Non-Consenting Lender's Commitments and outstanding Loans and participations in L/C Obligations and Swing Line Loans pursuant to this Section 10.13 shall

nevertheless be effective without the execution by such Non-Consenting Lender of an Assignment and Assumption.

A Lender shall not be required to make any such assignment or delegation if, prior thereto, as a result of a waiver by such Lender or otherwise, the circumstances entitling the Company to require such assignment and delegation cease to apply.

10.14 Governing Law; Jurisdiction; Etc.

(a) GOVERNING LAW. THIS AGREEMENT AND THE OTHER LOAN DOCUMENTS (EXCEPT, AS TO ANY OTHER LOAN DOCUMENT, AS EXPRESSLY SET FORTH THEREIN) AND ANY CLAIMS, CONTROVERSY, DISPUTE OR CAUSE OF ACTION (WHETHER IN CONTRACT OR TORT OR OTHERWISE) BASED UPON, ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT (EXCEPT, AS TO ANY OTHER LOAN DOCUMENT, AS EXPRESSLY SET FORTH THEREIN) AND THE TRANSACTIONS CONTEMPLATED HEREBY AND THEREBY SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

(b) SUBMISSION TO JURISDICTION. THE COMPANY AND EACH OTHER LOAN PARTY IRREVOCABLY AND UNCONDITIONALLY AGREES THAT IT WILL NOT COMMENCE ANY ACTION, LITIGATION OR PROCEEDING OF ANY KIND OR DESCRIPTION, WHETHER IN LAW OR EQUITY, WHETHER IN CONTRACT OR IN TORT OR OTHERWISE, AGAINST THE ADMINISTRATIVE AGENT, ANY LENDER, ANY L/C ISSUER, OR ANY RELATED PARTY OF THE FOREGOING IN ANY WAY RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT OR THE TRANSACTIONS RELATING HERETO OR THERETO, IN ANY FORUM OTHER THAN THE COURTS OF THE STATE OF NEW YORK SITTING IN NEW YORK COUNTY AND OF THE UNITED STATES DISTRICT COURT OF THE SOUTHERN DISTRICT OF NEW YORK, AND ANY APPELLATE COURT FROM ANY THEREOF, AND EACH OF THE PARTIES HERETO IRREVOCABLY AND UNCONDITIONALLY SUBMITS TO THE JURISDICTION OF SUCH COURTS AND AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION, LITIGATION OR PROCEEDING MAY BE HEARD AND DETERMINED IN SUCH NEW YORK STATE COURT OR, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, IN SUCH FEDERAL COURT. EACH OF THE PARTIES HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION, LITIGATION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW. NOTHING IN THIS AGREEMENT OR IN ANY OTHER LOAN DOCUMENT SHALL AFFECT ANY RIGHT THAT THE ADMINISTRATIVE AGENT, ANY LENDER OR ANY L/C ISSUER MAY OTHERWISE HAVE TO BRING ANY ACTION OR PROCEEDING RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT AGAINST THE COMPANY OR ANY OTHER LOAN PARTY OR ITS PROPERTIES IN THE COURTS OF ANY JURISDICTION.

(c) WAIVER OF VENUE. THE COMPANY AND EACH OTHER LOAN PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT IN ANY COURT REFERRED TO IN PARAGRAPH (b) OF THIS SECTION. EACH

OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, THE DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION OR PROCEEDING IN ANY SUCH COURT.

(d) SERVICE OF PROCESS. EACH PARTY HERETO IRREVOCABLY CONSENTS TO SERVICE OF PROCESS IN THE MANNER PROVIDED FOR NOTICES IN SECTION 10.02. NOTHING IN THIS AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY HERETO TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY APPLICABLE LAW.

10.15 Service of Process on the Designated Borrowers. Each Designated Borrower hereby irrevocably designates, appoints and empowers the Company, and successors as the designee, appointee and agent of such Designated Borrower to receive, accept and acknowledge, for and on behalf of such Designated Borrower and its properties, service of any and all legal process, summons, notices and documents which may be served in such action, suit or proceeding relating to this Agreement or the Loan Documents in the case of the courts of the Southern District of New York or of the courts of the State of New York sitting in the city of New York, which service may be made on any such designee, appointee and agent in accordance with legal procedures prescribed for such courts. Each Designated Borrower agrees to take any and all action necessary to continue such designation in full force and effect and should such designee, appointee and agent become unavailable for this purpose for any reason, such Designated Borrower will forthwith irrevocably designate a new designee, appointee and agent, which shall irrevocably agree to act as such, with the powers and for purposes specified in this Section 10.15. Each Designated Borrower further irrevocably consents and agrees to service of any and all legal process, summons, notices and documents out of any of the aforesaid courts in any such action, suit or proceeding relating to this Agreement or the other Loan Documents delivered to such Designated Borrower in accordance with this Section 10.15 or to its then designee, appointee or agent for service. If service is made upon such designee, appointee and agent, a copy of such process, summons, notice or document shall also be provided to the applicable Designated Borrower at the address specified in Section 10.02 by registered or certified mail, or overnight express air courier; provided that failure of such holder to provide such copy to such Designated Borrower shall not impair or affect in any way the validity of such service or any judgment rendered in such action or proceedings. Each Designated Borrower agrees that service upon such Designated Borrower or any such designee, appointee and agent as provided for herein shall constitute valid and effective personal service upon such Designated Borrower with respect to matters contemplated in this Section 10.15 and that the failure of any such designee, appointee and agent to give any notice of such service to such Designated Borrower shall not impair or affect in any way the validity of such service or any judgment rendered in any action or proceeding based thereon. Nothing herein shall, or shall be construed so as to, limit the right of the Administrative Agent or the Lenders to bring actions, suits or proceedings with respect to the obligations and liabilities of each Designated Borrower under, or any other matter arising out of or in connection with, this Agreement, or for recognition or enforcement of any judgment rendered in any such action, suit or proceeding, in the courts of whatever jurisdiction in which the respective offices of the Administrative Agent or the Lenders may be located or assets of such Designated Borrower may be found or as otherwise shall to the Administrative Agent or the Lenders seem appropriate, or to affect the right to service of process in any jurisdiction in any other manner permitted by law.

10.16 Waiver of Jury Trial. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OTHER LOAN DOCUMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY

OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PERSON HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PERSON WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT AND THE OTHER LOAN DOCUMENTS BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION.

10.17 No Advisory or Fiduciary Responsibility. In connection with all aspects of each transaction contemplated hereby (including in connection with any amendment, waiver or other modification hereof or of any other Loan Document), the Company and each other Loan Party acknowledges and agrees, and acknowledges its Affiliates' understanding, that: (i) (A) the arranging and other services regarding this Agreement provided by the Administrative Agent**,** the Arrangers and the Lenders are arm's-length commercial transactions between the Company, each other Loan Party and their respective Affiliates, on the one hand, and the Administrative Agent, the Arrangers and the Lenders, on the other hand, (B) each of the Company and the other Loan Parties has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate, and (C) the Company and each other Loan Party is capable of evaluating, and understands and accepts, the terms, risks and conditions of the transactions contemplated hereby and by the other Loan Documents; (ii) (A) the Administrative Agent, the Arrangers and the Lenders each is and has been acting solely as a principal and, except as expressly agreed in writing by the relevant parties, has not been, is not, and will not be acting as an advisor, agent or fiduciary for the Company, any other Loan Party or any of their respective Affiliates, or any other Person and (B) neither the Administrative Agent, any of the Arrangers nor any Lender has any obligation to the Company, any other Loan Party or any of their respective Affiliates with respect to the transactions contemplated hereby except those obligations expressly set forth herein and in the other Loan Documents; and (iii) the Administrative Agent, the Arrangers, the Lenders and their respective Affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, the other Loan Parties and their respective Affiliates, and neither the Administrative Agent, any of the Arrangers nor any Lender has any obligation to disclose any of such interests to the Company, any other Loan Party or any of their respective Affiliates. To the fullest extent permitted by law, each of the Company and each other Loan Party hereby waives and releases any claims that it may have against the Administrative Agent, the Arrangers or any Lender with respect to any breach or alleged breach of agency or fiduciary duty in connection with any aspect of any transaction contemplated hereby.

10.18 Electronic Execution of Assignments and Certain Other Documents. The words "execute," "execution," "signed," "signature," and words of like import in or related to any document to be signed in connection with this Agreement and the transactions contemplated hereby (including without limitation Assignment and Assumptions, amendments or other modifications, Loan Notices, Swing Line Loan Notices, waivers and consents) shall be deemed to include electronic signatures, the electronic matching of assignment terms and contract formations on electronic platforms approved by the Administrative Agent, or the keeping of records in electronic form, each of which shall be of the same legal effect, validity or enforceability as a manually executed signature or the use of a paper-based recordkeeping system, as the case may be, to the extent and as provided for in any applicable law, including the Federal Electronic Signatures in Global and National Commerce Act, the New York State Electronic Signatures and Records Act, or any other similar state laws based on the Uniform Electronic Transactions Act; provided that notwithstanding anything contained herein to the contrary the Administrative Agent is under no obligation to agree to accept electronic signatures in any form or in any format unless expressly agreed to by the Administrative Agent pursuant to procedures approved by it.

10.19 USA PATRIOT Act and Canadian AML Acts. Each Lender that is subject to the PATRIOT Act (as hereinafter defined) or any Canadian AML Act and the Administrative Agent (for itself and not on behalf of any Lender) hereby notifies the other Loan Parties that pursuant to the requirements of the USA PATRIOT Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)) (the "PATRIOT Act") and the Canadian AML Acts, it is required to obtain, verify and record information that identifies each Loan Party, which information includes the name and address of each Loan Party, information concerning its direct and indirect holders of Equity Interests and other Persons exercising Control over it, and other information that will allow such Lender or the Administrative Agent, as applicable, to identify such Loan Party in accordance with the PATRIOT Act and the Canadian AML Acts. Each Loan Party shall, promptly following a request by the Administrative Agent or any Lender, provide all documentation and other information that the Administrative Agent or such Lender requests in order to comply with its ongoing obligations under applicable "know your customer" and anti-money laundering rules and regulations, including the PATRIOT Act and the Canadian AML Acts.

10.20 Judgment Currency. If, for the purposes of obtaining judgment in any court, it is necessary to convert a sum due hereunder or any other Loan Document in one currency into another currency, the rate of exchange used shall be that at which in accordance with normal banking procedures the Administrative Agent could purchase the first currency with such other currency on the Business Day preceding that on which final judgment is given. The obligation of each Loan Party in respect of any such sum due from it to the Administrative Agent or any Lender hereunder or under the other Loan Documents shall, notwithstanding any judgment in a currency (the "Judgment Currency") other than that in which such sum is denominated in accordance with the applicable provisions of this Agreement (the "Agreement Currency"), be discharged only to the extent that on the Business Day following receipt by the Administrative Agent or such Lender, as the case may be, of any sum adjudged to be so due in the Judgment Currency, the Administrative Agent or such Lender, as the case may be, may in accordance with normal banking procedures purchase the Agreement Currency with the Judgment Currency. If the amount of the Agreement Currency so purchased is less than the sum originally due to the Administrative Agent or any Lender from any Loan Party in the Agreement Currency, such Loan Party agrees, as a separate obligation and notwithstanding any such judgment, to indemnify the Administrative Agent or such Lender, as the case may be, against such loss. If the amount of the Agreement Currency so purchased is greater than the sum originally due to the Administrative Agent or any Lender in such currency, the Administrative Agent or such Lender, as the case may be, agrees to return the amount of any excess to such Loan Party (or to any other Person who may be entitled thereto under applicable law).

10.21 Acknowledgement and Consent to Bail-In of EEA Financial Institutions. Solely to the extent any Lender or any L/C Issuer that is an EEA Financial Institution is a party to this Agreement and notwithstanding anything to the contrary in any Loan Document or in any other agreement, arrangement or understanding among any such parties, each party hereto acknowledges that any liability of any Lender or any L/C Issuer that is an EEA Financial Institution arising under any Loan Document, to the extent such liability is unsecured, may be subject to the write-down and conversion powers of an EEA Resolution Authority and agrees and consents to, and acknowledges and agrees to be bound by:

(a) the application of any Write-Down and Conversion Powers by an EEA Resolution Authority to any such liabilities arising hereunder which may be payable to it by any Lender or L/C Issuer that is an EEA Financial Institution; and

(b) the effects of any Bail-In Action on any such liability, including, if applicable:

(i) a reduction in full or in part or cancellation of any such liability;

(ii) a conversion of all, or a portion of, such liability into shares or other instruments of ownership in such EEA Financial Institution, its parent undertaking, or a bridge institution that may be issued to it or otherwise conferred on it, and that such shares or other instruments of ownership will be accepted by it in lieu of any rights with respect to any such liability under this Agreement or any other Loan Document; or

(iii) the variation of the terms of such liability in connection with the exercise of the write-down and conversion powers of any EEA Resolution Authority.

10.22 Appointment of Company as Agent. Each Loan Party hereby appoints the Company to act as its agent for all purposes of this Agreement, the other Loan Documents and all other documents and electronic platforms entered into in connection herewith and agrees that (a) the Company may execute such documents and provide such authorizations on behalf of such Loan Party as the Company deems appropriate in its sole discretion and each Loan Party shall be obligated by all of the terms of any such document and/or authorization executed on its behalf, (b) any notice or communication delivered by the Administrative Agent, an L/C Issuer or a Lender to the Company shall be deemed delivered to each Loan Party and (c) the Administrative Agent, the L/C Issuers or the Lenders may accept, and be permitted to rely on, any document, authorization, instrument or agreement executed by the Company on behalf of each of the Loan Party.

ARTICLE XI.

GUARANTY

11.01 Guaranty.

(a) Each U.S. Guarantor that is not a Specified U.S. Obligor and each Non-U.S. Guarantor that is not a Specified Non-U.S. Obligor hereby jointly and severally guarantees to each Secured Party and each other holder of Obligations as hereinafter provided, as primary obligor and not as surety, the prompt payment of the Obligations in full when due (whether at stated maturity, as a mandatory prepayment, by acceleration, as a mandatory cash collateralization or otherwise) strictly in accordance with the terms thereof. Each U.S. Guarantor that is not a Specified U.S. Obligor and each Non-U.S. Guarantor that is not a Specified Non-U.S. Obligor hereby further agrees that if any of the Obligations are not paid in full when due (whether at stated maturity, as a mandatory prepayment, by acceleration, as a mandatory cash collateralization or otherwise), such Guarantors will, jointly and severally, promptly pay the same, without any demand or notice whatsoever, and that in the case of any extension of time of payment or renewal of any of the Obligations, the same will be promptly paid in full when due (whether at extended maturity, as a mandatory prepayment, by acceleration, as a mandatory cash collateralization or otherwise) in accordance with the terms of such extension or renewal.

(b) Each Non-U.S. Guarantor hereby jointly and severally guarantees to each Secured Party and each other holder of Non-U.S. Obligations as hereinafter provided, as primary obligor and not as surety, the prompt payment of the Non-U.S. Obligations in full when due (whether at stated maturity, as a mandatory prepayment, by acceleration, as a mandatory cash collateralization or otherwise) strictly in accordance with the terms thereof. Each Non-U.S. Guarantor hereby further agrees that if any of the Non-U.S. Obligations are not paid in full when due (whether at stated maturity, as a mandatory prepayment, by acceleration, as a mandatory cash collateralization or otherwise), such Guarantors will, jointly and severally, promptly pay the same, without any demand or notice whatsoever, and that in the case of any extension of time of payment or renewal of any of the Non-U.S. Obligations, the same will be promptly paid in full when due (whether at extended

maturity, as a mandatory prepayment, by acceleration, as a mandatory cash collateralization or otherwise) in accordance with the terms of such extension or renewal. For the avoidance of doubt, the liabilities established pursuant to this clause (b) are without duplication of the liabilities established pursuant to the foregoing clause (a).

(c) Notwithstanding any provision to the contrary contained herein or in any other of the Loan Documents or the other documents relating to the Obligations, the obligations of each Guarantor (in its capacity as such) under this Agreement and the other Loan Documents shall not exceed an aggregate amount equal to the largest amount that would not render such obligations subject to avoidance under applicable Debtor Relief Laws.

11.02 Obligations Unconditional.

(a) The obligations of the U.S. Guarantors that are not Specified U.S. Obligors and the Non-U.S. Guarantors that are not Specified Non-U.S. Obligors under Section 11.01(a) are joint and several, absolute and unconditional, irrespective of the value, genuineness, validity, regularity or enforceability of any of the Loan Documents or other documents relating to the Obligations, or any substitution, release, impairment or exchange of any other guarantee of or security for any of the Obligations, and, to the fullest extent permitted by applicable Law, irrespective of any other circumstance whatsoever which might otherwise constitute a legal or equitable discharge or defense of a surety or guarantor (other than payment in full of the Obligations (other than contingent indemnification obligations for which no claim or demand has been made)), it being the intent of this Section 11.02 that the obligations of the U.S. Guarantors that are not Specified U.S. Obligors and the Non-U.S. Guarantors that are not Specified Non-U.S. Obligors hereunder shall be absolute and unconditional under any and all circumstances. Each U.S. Guarantor that is not a Specified U.S. Obligor and each Non-U.S. Guarantor that is not a Specified Non-U.S. Obligor agrees that such Guarantor's right of subrogation, indemnity, reimbursement or contribution against any Borrower or any other Loan Party for amounts paid under this Article XI shall be unconditionally postponed until such time as the Obligations have been paid in full (other than contingent indemnification obligations for which no claim or demand has been made) and the Commitments have expired or terminated.

(b) The obligations of the Non-U.S. Guarantors under Section 11.01(b) are joint and several, absolute and unconditional, irrespective of the value, genuineness, validity, regularity or enforceability of any of the Loan Documents or other documents relating to the Non-U.S. Obligations, or any substitution, release, impairment or exchange of any other guarantee of or security for any of the Non-U.S. Obligations, and, to the fullest extent permitted by applicable Law, irrespective of any other circumstance whatsoever which might otherwise constitute a legal or equitable discharge or defense of a surety or guarantor (other than payment in full of the Obligations (other than contingent indemnification obligations for which no claim or demand has been made)), it being the intent of this Section 11.02 that the obligations of the Non-U.S. Guarantors hereunder shall be absolute and unconditional under any and all circumstances. Each Non-U.S. Guarantor agrees that such Guarantor's right of subrogation, indemnity, reimbursement or contribution against any Borrower or any other Loan Party for amounts paid under this Article XI shall be unconditionally postponed until such time as the Non-U.S. Obligations have been paid in full (other than contingent indemnification obligations for which no claim or demand has been made) and the Commitments have expired or terminated.

(c) Without limiting the generality of the foregoing subsections (a) and (b), it is agreed that, to the fullest extent permitted by Law, the occurrence of any one or more of the following shall not alter or impair the liability of any Guarantor hereunder, which shall remain absolute and unconditional as described above:

(i) at any time or from time to time, without notice to any Guarantor, the time for any performance of or compliance with any of the Obligations shall be extended, or such performance or compliance shall be waived;

(ii) any of the acts mentioned in any of the provisions of any of the Loan Documents or other documents relating to the Obligations or any other agreement or instrument referred to therein shall be done or omitted;

(iii) the maturity of any of the Obligations shall be accelerated, or any of the Obligations shall be modified, supplemented or amended in any respect, or any right under any of the Loan Documents or other documents relating to the Obligations or any other agreement or instrument referred to therein shall be waived or any other guarantee of any of the Obligations or any security therefor shall be released, impaired or exchanged in whole or in part or otherwise dealt with;

(iv) any Lien granted to, or in favor of, the Administrative Agent or any other holder of the Obligations as security for any of the Obligations shall fail to attach or be perfected; or

(v) any of the Obligations shall be determined to be void or voidable (including for the benefit of any creditor of any Guarantor) or shall be subordinated to the claims of any Person (including any creditor of any Guarantor).

(d) With respect to its obligations hereunder, each Guarantor hereby expressly waives diligence, presentment, demand of payment, protest and all notices whatsoever, and any requirement that the Administrative Agent or any other holder of the Obligations exhaust any right, power or remedy or proceed against any Person under any of the Loan Documents or any other document relating to the Obligations or any other agreement or instrument referred to therein, or against any other Person under any other guarantee of, or security for, any of the Obligations.

11.03 Reinstatement. Neither the Guarantors' obligations hereunder nor any remedy for the enforcement thereof shall be impaired, modified or released in any manner whatsoever by an impairment, modification, change, release or limitation of the liability of the Borrowers, by reason of any Borrower's bankruptcy or insolvency or by reason of the invalidity or unenforceability of all or any portion of the Obligations. In addition:

(a) The obligations of each U.S. Guarantor that is not a Specified U.S. Obligor and each Non-U.S. Guarantor that is not a Specified Non-U.S. Obligor under this Article XI shall be automatically reinstated if and to the extent that for any reason any payment by or on behalf of any Person in respect of the Obligations is rescinded or must be otherwise restored by any holder of any of the Obligations, whether as a result of any Debtor Relief Law or otherwise, and each such Guarantor agrees that it will indemnify the Administrative Agent and each other holder of the Obligations on demand for all reasonable costs and expenses (including the fees, charges and disbursements of counsel) incurred by the Administrative Agent or such holder of the Obligations in connection with such rescission or restoration, including any such costs and expenses incurred in defending against

any claim alleging that such payment constituted a preference, fraudulent transfer or similar payment under any Debtor Relief Law.

(b) The obligations of each Non-U.S. Guarantor under this Article XI shall be automatically reinstated if and to the extent that for any reason any payment by or on behalf of any Person in respect of the Non-U.S. Obligations is rescinded or must be otherwise restored by any holder of any of the Non-U.S. Obligations, whether as a result of any Debtor Relief Law or otherwise, and each such Guarantor agrees that it will indemnify the Administrative Agent and each other holder of the Non-U.S. Obligations on demand for all reasonable costs and expenses (including the fees, charges and disbursements of counsel) incurred by the Administrative Agent or such holder of the Non-U.S. Obligations in connection with such rescission or restoration, including any such costs and expenses incurred in defending against any claim alleging that such payment constituted a preference, fraudulent transfer or similar payment under any Debtor Relief Law.

11.04 Certain Additional Waivers. Each Guarantor acknowledges and agrees that (a) the guaranty given hereby may be enforced without the necessity of resorting to or otherwise exhausting remedies in respect of any other security or collateral interests, and without the necessity at any time of having to take recourse against the Borrowers hereunder or against any collateral securing the Obligations or otherwise, and (b) it will not assert any right to require the action first be taken against the Borrowers or any other Person (including any co-guarantor) or pursuit of any other remedy or enforcement any other right, and (c) nothing contained herein shall prevent or limit action being taken against the Borrowers hereunder, under the other Loan Documents or the other documents and agreements relating to the Obligations or from foreclosing on any security or collateral interests relating hereto or thereto, or from exercising any other rights or remedies available in respect thereof, if neither the Borrowers nor the Guarantors shall timely perform their obligations, and the exercise of any such rights and completion of any such foreclosure proceedings shall not constitute a discharge of the Guarantors' obligations hereunder unless as a result thereof, the Obligations shall have been paid in full (other than contingent indemnification obligations for which no claim or demand has been made) and the commitments relating thereto shall have expired or terminated, it being the purpose and intent that the Guarantors' obligations hereunder be absolute, irrevocable, independent and unconditional under all circumstances. Each Guarantor further agrees that such Guarantor shall have no right of recourse to security for the Obligations, except through the exercise of rights of subrogation pursuant to Section 11.02 and through the exercise of rights of contribution pursuant to Section 11.06.

11.05 Remedies.

(a) The U.S. Guarantors that are not Specified U.S. Obligors and the Non-U.S. Guarantors that are not Specified Non-U.S. Obligors agree that, to the fullest extent permitted by Law, as between such Guarantors, on the one hand, and the Administrative Agent and the other holders of the Obligations, on the other hand, the Obligations may be declared to be forthwith due and payable as specified in Section 8.02 (and shall be deemed to have become automatically due and payable in the circumstances specified in Section 8.02) for purposes of Section 11.01(a) notwithstanding any stay, injunction or other prohibition preventing such declaration (or preventing the Obligations from becoming automatically due and payable) as against any other Person and that, in the event of such declaration (or the Obligations being deemed to have become automatically due and payable), the Obligations (whether or not due and payable by any other Person) shall forthwith become due and payable by the U.S. Guarantors that are not Specified U.S. Obligors and the Non-U.S. Guarantors that are not Specified Non-U.S. Obligors for purposes of Section 11.01(a). The U.S. Guarantors that are not Specified U.S. Obligors and the Non-U.S. Guarantors that are not Specified Non-U.S. Obligors acknowledge and agree that their obligations hereunder are secured

in accordance with the terms of the Collateral Documents to which they are parties and that the holders of the Obligations may exercise their remedies thereunder in accordance with the terms thereof.

(b) The Non-U.S. Guarantors agree that, to the fullest extent permitted by Law, as between such Guarantors, on the one hand, and the Administrative Agent and the other holders of the Non-U.S. Obligations, on the other hand, the Non-U.S. Obligations may be declared to be forthwith due and payable as specified in Section 8.02 (and shall be deemed to have become automatically due and payable in the circumstances specified in Section 8.02) for purposes of Section 11.01(b) notwithstanding any stay, injunction or other prohibition preventing such declaration (or preventing the Non-U.S. Obligations from becoming automatically due and payable) as against any other Person and that, in the event of such declaration (or the Non-U.S. Obligations being deemed to have become automatically due and payable), the Non-U.S. Obligations (whether or not due and payable by any other Person) shall forthwith become due and payable by the Non-U.S. Guarantors for purposes of Section 11.01(b). The Non-U.S. Guarantors acknowledge and agree that their obligations hereunder are secured in accordance with the terms of the Collateral Documents to which they are parties and that the holders of the Non-U.S. Obligations may exercise their remedies thereunder in accordance with the terms thereof.

11.06 Rights of Contribution.

(a) The U.S. Guarantors that are not Specified U.S. Obligors and the Non-U.S. Guarantors that are not Specified Non-U.S. Obligors hereby agree as among themselves that, in connection with payments made hereunder, each U.S. Guarantor that is not a Specified U.S. Obligor and each Non-U.S. Guarantor that is not a Specified Non-U.S. Obligor shall have a right of contribution from each other U.S. Guarantor that is not a Specified U.S. Obligor and each other Non-U.S. Guarantor that is not a Specified Non-U.S. Obligor in accordance with applicable Law. Such contribution rights shall be subordinate and subject in right of payment to the Obligations until such time as the Obligations have been irrevocably paid in full (other than contingent indemnification obligations for which no claim or demand has been made) and the commitments relating thereto shall have expired or been terminated, and none of the U.S. Guarantors that are not Specified U.S. Obligors and none of the Non-U.S. Guarantors that are not Specified Non-U.S. Obligors shall exercise any such contribution rights until the Obligations have been irrevocably paid in full (other than contingent indemnification obligations for which no claim or demand has been made) and the commitments relating thereto shall have expired or been terminated.

(b) The Non-U.S. Guarantors hereby agree as among themselves that, in connection with payments made hereunder, each Non-U.S. Guarantor shall have a right of contribution from each other Non-U.S. Guarantor in accordance with applicable Law. Such contribution rights shall be subordinate and subject in right of payment to the Non-U.S. Obligations until such time as the Non-U.S. Obligations have been irrevocably paid in full (other than contingent indemnification obligations for which no claim or demand has been made) and the commitments relating thereto shall have expired or been terminated, and none of the Non-U.S. Guarantors shall exercise any such contribution rights until the Non-U.S. Obligations have been irrevocably paid in full (other than contingent indemnification obligations for which no claim or demand has been made) and the commitments relating thereto shall have expired or been terminated.

11.07 Guarantee of Payment; Continuing Guarantee.

(a) The guarantee given by the U.S. Guarantors that are not Specified U.S. Obligors and the Non-U.S. Guarantors that are not Specified Non-U.S. Obligors in this Article XI is a guaranty of payment and not of collection, is a continuing guarantee, and shall apply to all Obligations whenever arising.

(b) The guarantee given by the Non-U.S. Guarantors in this Article XI is a guaranty of payment and not of collection, is a continuing guarantee, and shall apply to all Non-U.S. Obligations whenever arising.

11.08 Keepwell.

(a) Each U.S. Obligor that is not a Specified Non-U.S. Obligor and each Non-U.S. Obligor that is not a Specified Non-U.S. Obligor, in each case, that is a Qualified ECP Guarantor at the time the Guaranty in this Article XI by any Loan Party that is not then an "eligible contract participant" under the Commodity Exchange Act (a "Specified Loan Party") or the grant of a security interest under the Loan Documents by any such Specified Loan Party, in either case, becomes effective with respect to any Swap Obligation, hereby jointly and severally, absolutely, unconditionally and irrevocably undertakes to provide such funds or other support to each Specified Loan Party with respect to such Swap Obligation as may be needed by such Specified Loan Party from time to time to honor all of its obligations under the Loan Documents in respect of such Swap Obligation (but, in each case, only up to the maximum amount of such liability that can be hereby incurred without rendering such Qualified ECP Guarantor's obligations and undertakings under this Article XI voidable under applicable Debtor Relief Laws, and not for any greater amount).

(b) Each Non-U.S. Obligor that is a Qualified ECP Guarantor at the time the Guaranty in this Article XI by any Non-U.S. Obligor that is not then an "eligible contract participant" under the Commodity Exchange Act (a "Specified Non-U.S. Loan Party") or the grant of a security interest under the Loan Documents by any such Specified Non-U.S. Loan Party, in either case, becomes effective with respect to any Swap Obligation, hereby jointly and severally, absolutely, unconditionally and irrevocably undertakes to provide such funds or other support to each Specified Non-U.S. Loan Party with respect to such Swap Obligation as may be needed by such Specified Non-U.S. Loan Party from time to time to honor all of its obligations under the Loan Documents in respect of such Swap Obligation (but, in each case, only up to the maximum amount of such liability that can be hereby incurred without rendering such Qualified ECP Guarantor's obligations and undertakings under this Article XI voidable under applicable Debtor Relief Laws, and not for any greater amount).

(c) The obligations and undertakings of each Qualified ECP Guarantor under this Section shall remain in full force and effect until the Obligations have been indefeasibly paid and performed in full. Each Loan Party intends this Section to constitute, and this Section shall be deemed to constitute, a "keepwell, support, or other agreement" for the benefit of each Specified Loan Party for all purposes of the Commodity Exchange Act.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the date first above written.

BORROWERS:

CELESTICA INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Executive Vice President & Chief Financial Officer

CELESTICA INTERNATIONAL LP,
an Ontario limited partnership, by its general partner,

CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer

CELESTICA (USA) INC.,
a Delaware corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: President

U.S. GUARANTORS:

CELESTICA (USA) INC.,
a Delaware corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: President

CELESTICA (US HOLDINGS) LLC,
a Delaware limited liability company

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: President

CELESTICA LLC,
a Delaware limited liability company

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Executive Vice President

CELESTICA OREGON LLC,
a Delaware limited liability company

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Executive Vice President

CELESTICA PRECISION MACHINING LTD.,
a California corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: President

NON-U.S. GUARANTORS:

CELESTICA INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Executive Vice President & Chief Financial Officer

CELESTICA INTERNATIONAL LP,
an Ontario limited partnership, by its general partner,
CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer

1282088 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer & Corporate Treasurer

1287347 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer & Corporate Treasurer

2480333 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer & Corporate Treasurer

3265598 NOVA SCOTIA COMPANY,
a Nova Scotia unlimited company

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer & Corporate Treasurer

CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer

CELESTICA INTERNATIONAL INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Executive Vice-President, Finance & Chief Financial Officer

1204362 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer & Corporate Treasurer

2281302 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla

Name: Mandeep Chawla

Title: Chief Financial Officer & Corporate Treasurer

MSL SPV SPAIN, INC.,
a Delaware corporation

By: /s/ Robert Ellis

Name: Robert Ellis

Title: Vice President & Secretary

ADMINISTRATIVE AGENT: **BANK OF AMERICA, N.A.**, as Administrative Agent

By: /s/ Anthony W. Kell

Name: Anthony W. Kell

Title: Vice President

LENDERS:

BANK OF AMERICA, N.A., as a Lender, an L/C Issuer and Swing Line Lender

By: /s/ Raymond T. Liu

Name: Raymond T. Liu

Title: Associate

BANK OF AMERICA, N.A., acting through its Canada Branch, as a Lender

By: /s/ Medina Sales de Andrade

Name: Medina Sales de Andrade

Title: Vice President

CANADIAN IMPERIAL BANK OF COMMERCE, as a Lender and an L/C Issuer

By: /s/ Stephen Redding

Name: Stephen Redding

Title: Managing Director

By: /s/ Emma Johnson

Name: Emma Johnson

Title: Director

CITIBANK, N.A., **CANADIAN BRANCH,** as a Lender and an L/C Issuer

By: /s/ Samin Atique

Name: Samin Atique

Title: Authorized Signatory

MUFG BANK, LTD., CANADA BRANCH, as a Lender

By: /s/ Jack Shuai

Name: Jack Shuai

Title: Director

ROYAL BANK OF CANADA, as a Lender

By: /s/ Michael Elsey

Name: Michael Elsey

Title: Authorized Signatory

BANK OF NOVA SCOTIA, as a Lender

By: /s/ Eddy Popp

Name: Eddy Popp

Title: Director

By: /s/ Abigail Denyer

Name: Abigail Denyer

Title: Associate Director

EXPORT DEVELOPMENT CANADA, as a Lender

By: /s/ Allan Quiz

Name: Allan Quiz

Title: Financing Manager

By: /s/ Richard Leong

Name: Richard Leong

Title: Senior Financing Manager

ICICI BANK CANADA, as a Lender

By: /s/ Shandeep Goel

Name: Shandeep Goel
Title: Senior Vice President &
Chief Risk Officer
ICICI Bank Canada

By: /s/ Leslie Mathew

Name: Leslie Mathew
Title: Assistant Vice Presiden
Corporate & Commercial Banking
ICICI Bank Canada

Schedule 1.01

Existing Letters of Credit

Issuer	Loan Party	Beneficiary	Number	Amount
The Canadian Imperial Bank of Commerce	Celestica International Inc. (will be updated to reflect Celestica International LP)	SERP--Royal Trust Corporation (CDN)	SBGT731893	CAD $28,693,000.00
The Canadian Imperial Bank of Commerce	Celestica Inc. on behalf of Celestica LLC (successor by conversion to Celestica Corporation)	Safety National Casualty (Workers' Compensation)	SBGT734214	USD $325,000.00

Schedule 2.01

Commitments and Applicable Percentages

Lender	Revolving Commitment	Applicable Percentage (Revolving Commitments)	Term B Loan Commitment	Applicable Percentage (Term B Loan)	Letter of Credit Commitment
Bank of America, N.A.	$65,000,000.00	14.44%	$350,000,000.00	100.00%	$50,000,000.00
Canadian Imperial Bank of Commerce	$65,000,000.00	14.44%	$0.00	0.00%	$50,000,000.00
Citibank, N.A., Canadian Branch	$65,000,000.00	14.44%	$0.00	0.00%	$50,000,000.00
MUFG Bank, Ltd., Canada Branch	$65,000,000.00	14.44%	$0.00	0.00%	$0.00
Royal Bank of Canada	$65,000,000.00	14.44%	$0.00	0.00%	$0.00
The Bank of Nova Scotia	$65,000,000.00	14.44%	$0.00	0.00%	$0.00
Export Development Canada	$40,000,000.00	8.89%	$0.00	0.00%	$0.00
ICICI Bank Canada	$20,000,000.00	4.44%	$0.00	0.00%	$0.00
Total:	**$450,000,000.00**	**100.00%**	**$350,000,000.00**	**100.00%**	**$150,000,000.00**

Schedule 5.13

Subsidiaries

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
1.	1204362 Ontario Inc.	Ontario	1 common share	Celestica Inc.	100% 1 common share	Restricted	Excluded Subsidiary: Immaterial Subsidiary
2.	1282088 Ontario Inc.	Ontario	8,178 common shares	Celestica Inc.	100% 8,178 common shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
3.	1334607 Ontario Inc.	Ontario	1 common share	Celestica Inc.	100% 1 common share	Restricted	Excluded Subsidiary: Immaterial Subsidiary
4.	1593289 Ontario Inc.	Ontario	3,001 common shares	Celestica Inc.	100% 3,001 common shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
5.	2281302 Ontario Inc.	Ontario	35,295,286.2 common shares	Celestica Inc.	100% 35,295,286.2 common shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
6.	2480333 Ontario Inc.	Ontario	101 common shares	Celestica Inc.	100% 101 common shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
7.	3250297 Nova Scotia Company	Nova Scotia	4,327,358 common shares	Celestica Inc.	100% 4,327,358 common shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
8.	3265598 Nova Scotia Company	Nova Scotia	1,490,001 common shares	Celestica Inc.	100% 1,490,001 common shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
9.	Celestica (USA) Inc.	Delaware	533 shares	Celestica Inc.	100% 533 shares	Restricted	Not Applicable
10.	Celestica Cayman Holdings 1 Limited	Cayman Islands	352,154 Series 1 preference shares 485,970,000 common shares	Celestica Inc.	100% 352,154 Series 1 preference shares 100% 485,970,000 common shares	Restricted	Not Applicable
11.	Celestica do Brasil Ltda.	Brazil	600,472,133 shares	Celestica Inc. Celestica LLC 1334607 Ontario Inc.	89.78% 539,651,053 shares 10.22% 60,821,079 shares 0.00000000168% 1 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
12.	Celestica Employee Nominee Corporation	Ontario	1 common share	Celestica Inc.	100% 1 common share	Restricted	Excluded Subsidiary: Immaterial Subsidiary
13.	Celestica International GP Inc.	Ontario	1 common share	Celestica Inc.	100% 1 common share	Restricted	Not Applicable
14.	Celestica International Inc.	Ontario	1000 preferred shares 1,226,669 common shares	Celestica Inc.	100% 1,000 preferred shares 1,226,669 common shares	Restricted	Not Applicable

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
15.	Celestica International LP	Ontario	90,013,119 Limited Partnership Units 1 General Partner Unit	Celestica International Inc. Celestica International GP Inc.	100% 90,013,119 Limited Partnership Units 100% 1 General Partner Unit	Restricted	Not Applicable
16.	Atrenne Integrated Solutions, Inc.	Delaware	100 shares	Celestica (USA) Inc.	100% 100 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
17.	Celestica (US Holdings) LLC	Delaware	100 units	Celestica (USA) Inc.	100% 100 units	Restricted	Not Applicable
18.	Celestica Oregon LLC	Delaware	101 units	Celestica (USA) Inc.	100% 101 units	Restricted	Not Applicable
19.	Celestica Precision Machining Ltd.	California	666,667 shares	Celestica (USA) Inc.	100% 666,667 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
20.	MSL Overseas Finance B.V.	Netherlands	40,001 shares	Celestica (USA) Inc.	100% 40,001 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary CFC
21.	MSL SPV Spain, Inc.	Delaware	1,000 shares	Celestica (USA) Inc.	100% 1,000 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary CFC Holdco
22.	Abelconn Holdings, LLC	Delaware	N/A	Atrenne Integrated Solutions, Inc.	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
23.	EXT Holding, LLC	Delaware	N/A	Atrenne Integrated Solutions, Inc.	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
24.	Abelconn, LLC	Delaware	N/A	Abelconn Holdings, LLC	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
25.	Airco Industries, LLC dba Photo-Etch	Delaware	N/A	Abelconn, LLC	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
26.	Atrenne Computing Solutions, LLC	Delaware	N/A	EXT Holding, LLC	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
27.	Extrusion Technology PRC Holding (Hong Kong) Limited	Hong Kong	1,250 shares	Atrenne Computing Solutions, LLC	100% 1,250 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary CFC
28.	Extrusion Technology PRC Holdings, LLC	Delaware	N/A	Atrenne Computing Solutions, LLC	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary CFC Holdco
29.	XTech (Xiamen) Mechanical Solutions Corporation	China	N/A	Extrusion Technology PRC Holdings, LLC	100%	Restricted	Excluded Subsidiary: Jurisdiction CFC

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
30.	Celestica (AMS) Sdn. Bhd.	Malaysia	1,500,000 shares	MSL Overseas Finance B.V.	100% 1,500,000 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary CFC
31.	Celestica Ireland Limited	Ireland	850,002 "A" Shares 3,941,000 "B" Shares	MSL Overseas Finance B.V.	100% 850,002 "A" Shares 100% 3,941,000 "B" Shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary CFC
32.	Celestica Valencia, S.A.	Spain	121,000 shares	MSL SPV Spain, Inc.	100% 121,000 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary CFC
33.	Celéstica de Reynosa, S.A. de C.V.	Mexico	1000 class A shares 559,076 class B Shares	Celestica Valencia, S.A.	99.9% 999 class A shares 100% 559,076 class B shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary CFC
				Celestica LLC	0.1% 1 class A share		
34.	Celestica LLC	Delaware	100 units	Celestica (US Holdings) LLC	100% units	Restricted	Not Applicable
35.	Celestica Aerospace Technologies Corporation	Delaware	100 shares	Celestica LLC	100% 100 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
36.	2393853 Ontario Inc.	Ontario	1 common share	Celestica Cayman Holdings 1 Limited	100% 1 common share	Restricted	Excluded Subsidiary: Immaterial Subsidiary
37.	Celestica (Thailand) Limited	Thailand	16,840 shares	Celestica Cayman Holdings 1 Limited	(approx.) 99.96437% 16,834 shares	Restricted	Excluded Subsidiary: Jurisdiction
				Celestica Cayman Holdings 3 Limited	(approx.) .0059383% 1 share		
				Celestica Cayman Holdings 4 Limited	(approx.) .0059383% 1 share		
				Celestica Cayman Holdings 5 Limited	(approx.) .0059383% 1 share		
				Celestica Cayman Holdings 6 Limited	(approx.) .0059383% 1 share		
				Celestica Cayman Holdings 7 Limited	(approx.) .0059383% 1 share		
				Celestica Cayman Holdings 8 Limited	(approx.) .0059383% 1 share		

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
38.	Celestica Asia Pte Limited	Singapore	2 shares	Celestica Cayman Holdings 1 Limited	100% 2 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
39.	Celestica Cayman Holdings 3 Limited	Cayman Islands	2 ordinary shares	Celestica Cayman Holdings 1 Limited	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
40.	Celestica Cayman Holdings 4 Limited	Cayman Islands	2 ordinary shares	Celestica Cayman Holdings 1 Limited	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
41.	Celestica Cayman Holdings 5 Limited	Cayman Islands	2 ordinary shares	Celestica Cayman Holdings 1 Limited	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
42.	Celestica Cayman Holdings 6 Limited	Cayman Islands	2 ordinary shares	Celestica Cayman Holdings 1 Limited	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
43.	Celestica Cayman Holdings 7 Limited	Cayman Islands	2 ordinary shares	Celestica Cayman Holdings 1 Limited	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
44.	Celestica Cayman Holdings 8 Limited	Cayman Islands	2 ordinary shares	Celestica Cayman Holdings 1 Limited	100%	Restricted	Excluded Subsidiary: Immaterial Subsidiary
45.	Celestica Cayman Holdings 9 Limited	Cayman Islands	45,572 ordinary shares	Celestica Cayman Holdings 1 Limited	100% 45,572 ordinary shares	Restricted	Not Applicable

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
46.	Celestica GBS Malaysia Sdn. Bhd.	Malaysia	500,000,000 shares	Celestica Cayman Holdings 1 Limited	100% 500,000,000 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
47.	Celestica Global Limited	Hong Kong	10,000 shares	Celestica Cayman Holdings 1 Limited	100% 10,000 shares	Restricted	Not Applicable
48.	Celestica Holdings Pte Ltd	Singapore	2 ordinary shares	Celestica Cayman Holdings 1 Limited	100% 2 ordinary shares	Restricted	Not Applicable
49.	Celestica Hong Kong Holdings 1 Limited	Hong Kong	10,000 shares	Celestica Cayman Holdings 1 Limited	100% 10,000 shares	Restricted	Not Applicable
50.	Celestica Hong Kong Limited	Hong Kong	18,414,000 shares	Celestica Cayman Holdings 1 Limited	100% 18,414,000 shares	Restricted	Not Applicable
51.	Celestica Limited	United Kingdom	36,500,000 ordinary shares 13,000,000 Non-equity redeemable preference shares	Celestica Cayman Holdings 1 Limited	100% 36,500,000 ordinary shares 100% 13,000,000 non-equity redeemable preference	Restricted	Excluded Subsidiary: Immaterial Subsidiary
52.	Celestica Malaysia Sdn. Bhd.	Malaysia	4,940,000 ordinary shares 4,940,000 redeemable preferred shares	Celestica Cayman Holdings 1 Limited	100% 4,940,000 ordinary shares 100% 4,940,000 redeemable preferred shares	Restricted	Not Applicable

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
53.	Celestica LAO Co., Ltd.	Laos	1,000,000 shares	Celestica (Thailand) Limited	100% 1,000,000 shares	Restricted	Not Applicable
54.	EMS Manufacturing Services (Holdings) Limited	Barbados	102,528,471 shares	Celestica Cayman Holdings 1 Limited	100% 102,528,471 shares	Restricted	Not Applicable
55.	Celestica European Holdings S.Àr.L.	Luxembourg	519,622 shares	Celestica Cayman Holdings 3 Limited	100% 519,622 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
56.	Celestica Austria Holding GmbH	Austria	1 share	Celestica European Holdings S.Àr.L.	100% 1 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
57.	Celestica Austria GmbH	Austria	1 share	Celestica Austria Holding GmbH	100% 1 share	Restricted	Excluded Subsidiary: Immaterial Subsidiary
58.	Celestica Cayman Holdings 2 Limited	Cayman Islands	45,572 ordinary shares	Celestica Cayman Holdings 9 Limited	100% 45,572 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
59.	Celestica Electronics (S) Pte Ltd	Singapore	9,066,790 ordinary shares	Celestica Cayman Holdings 9 Limited	100% 9,066,790 ordinary shares	Restricted	Not Applicable
60.	Celestica Industries (China) Pte Ltd	Singapore	11,100,000 ordinary shares	Celestica Cayman Holdings 9 Limited	100% 11,100,000 ordinary shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
61.	Celestica Electronics (M) Sdn. Bhd.	Malaysia	6,595,900 shares	Celestica Electronics (S) Pte Ltd	100% 6,595,900 shares	Restricted	Not Applicable

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
62.	Celestica Electronics Technology Services (Shanghai) Co. Ltd.	China	N/A	Celestica Industries (China) Pte Ltd	100%	Restricted	Excluded Subsidiary: Jurisdiction
63.	Celestica Technology Consultancy (Shanghai) Co. Ltd.	China	N/A	Celestica Global Limited	100%	Restricted	Excluded Subsidiary: Jurisdiction
64.	Celestica (Dongguan-SSL) Technology Limited	China	N/A	Celestica Hong Kong Holdings 1 Limited	100%	Restricted	Excluded Subsidiary: Jurisdiction
65.	Dongguan Celestica Electronics Ltd.	China	N/A	Celestica Hong Kong Limited	100%	Restricted	Excluded Subsidiary: Jurisdiction
66.	Celestica Technology Consulting (Suzhou) Co. Ltd.	China	N/A	Celestica Hong Kong Limited	100%	Restricted	Excluded Subsidiary: Jurisdiction
67.	Celestica (Suzhou) Technology Co. Ltd.	China	N/A	EMS Manufacturing Services (Holdings) Limited	100%	Restricted	Excluded Subsidiary: Jurisdiction
68.	Celestica Hong Kong Holdings 3 Limited	Hong Kong	1,041,400 shares	2281302 Ontario Inc.	100% 1,041,400 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
69.	Celestica Automation Technology (Wuxi) Co. Ltd.	China	N/A	Celestica Hong Kong Holdings 3 Limited	100%	Restricted	Excluded Subsidiary: Jurisdiction
70.	1287347 Ontario Inc.	Ontario	101 common shares	1282088 Ontario Inc.	100% 101 common shares	Restricted	Not Applicable

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
71.	Celestica de Monterrey, S.A. de C.V.	Mexico	500 Series A 15,662,804 Series B	1282088 Ontario Inc.	99.2% Series A 496 Series A shares 100% Series B 15,662,804 Series B shares	Restricted	Not Applicable
				1287347 Ontario Inc.	0.8% Series A 4 Series A shares		
72.	Celestica de Mexicali S.A. de C.V.	Mexico	500 Class I	1282088 Ontario Inc.	99.2% 496 Class I shares	Restricted	Not Applicable
				1287347 Ontario Inc.	1% 4 Class I shares		
73.	Celestica (Netherlands) B.V.	Netherlands	551,301 shares	3265598 Nova Scotia Company	100% 551,301 shares	Restricted	Not Applicable
74.	Celestica (India) Private Limited	India	16,945,251 shares	Celestica (Netherlands) B.V.	99.99% 16,945,250 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
				Celestica Inc.	0.01% 1 share		
75.	Celestica (Romania) SRL	Romania	49,840,661 shares	Celestica (Netherlands) B.V.	99.997% 49,840,661 shares	Restricted	Excluded Subsidiary: Jurisdiction
			1 share	Celestica International Inc.	0.003% 1 share		
76.	Celestica Business Services SRL	Romania	503,600	Celestica (Netherlands) B.V.	99.999801% 503,599 shares	Restricted	Excluded Subsidiary: Jurisdiction
				Celestica International Inc.	0.000199% 1 share		

	Subsidiary	Subsidiary Jurisdiction	Number of Outstanding Equity Interests in Each Class	Owner of Equity Interest	Number and % of Each Class of Equity Interest Owned by Owner	Type of Subsidiary (Restricted/ Unrestricted)	Excluded Subsidiary[2] (Type of Excluded Subsidiary), CFC Holdco and/or CFC
77.	Celestica Japan KK	Japan	51,950 common shares	Celestica (Netherlands) B.V.	100% 51,950 common shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
78.	Celestica Philippines, Inc.	Philippines	388,790 shares	Celestica (Netherlands) B.V.	100% 388,790 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary
79.	Celestica Laguna, Inc.	Philippines	3339,878,333 shares	Celestica Philippines, Inc.	100% 339,878,333 shares	Restricted	Excluded Subsidiary: Immaterial Subsidiary

[2] Note: Certain Excluded Subsidiaries may also be Guarantors.

Schedule 5.17

Identification Numbers for Canadian Borrowers and Designated Borrowers that are Non-U.S. Subsidiaries

Name of Borrower	Organizational Number	Jurisdiction
Celestica Inc.	1201522	Ontario, CA
Celestica International LP	271121725	Ontario, CA

Schedule 5.21

Labor Matters

1. The following entities are subject to collective bargaining agreements:
    - Celestica de Monterrey S.A. de C.V.
    - Celestica Valencia S.A.
    - Celestica Austria Gmbh
    - Celestica Japan KK
2. There are government-mandated works councils at certain sites in China operated by Subsidiaries organized under the laws of the People's Republic of China.

Schedule 6.19

Post-Closing Obligations; Certain Subsidiaries

Part A:

Subsidiary	Jurisdiction of Organization
Abelconn Holdings, LLC	USA (Delaware)
Abelconn, LLC	USA (Delaware)
Airco Industries, LLC dba Photo-Etch	USA (Delaware)
Atrenne Computing Solutions, LLC	USA (Delaware)
Atrenne Integrated Solutions, Inc.	USA (Delaware)
Celestica (AMS) SDN. BHD.	Malaysia
Celestica (Netherlands) B.V.	Netherlands
Celestica Cayman Holdings 1 Limited	Cayman Islands
Celestica Cayman Holdings 2 Limited	Cayman Islands
Celestica Cayman Holdings 9 Limited	Cayman Islands
Celestica de Mexicali S.A. de C.V.	Mexico
Celestica de Monterrey, S.A. de C.V.	Mexico
Celestica Electronics (M) Sdn. Bhd.	Malaysia
Celestica Electronics (S) PTE LTD	Singapore
Celestica Industries (China) PTE LTD	Singapore
Celestica GBS Malaysia SDN. BHD.	Malaysia
Celestica Global Limited	Hong Kong
Celestica Hong Kong Holdings 1 Limited	Hong Kong
Celestica Hong Kong Holdings 3 Limited	Hong Kong
Celestica Holdings PTE LTD	Singapore
Celestica Hong Kong Limited	Hong Kong
Celestica Ireland Limited	Ireland
Celestica Japan KK	Japan
Celestica Lao Co., Ltd.	Laos
Celestica Limited	United Kingdom
Celestica Malaysia SDN. BHD.	Malaysia
Celestica Valencia, S.A.	Spain
EXT Holding, LLC	USA (Delaware)
Extrusion Technology PRC Holdings, LLC	USA (Delaware)
EMS Manufacturing Services (Holdings) Limited	Barbados
MSL Overseas Finance B.V.	Netherlands

Part B:

1. Within fifteen (15) days of the Closing Date, deliver to the Administrative Agent all certificates constituting Pledged Equity, in suitable form for transfer by delivery or accompanied by duly executed instruments of transfer or assignment in blank, issued by (i) Atrenne Integrated Solutions, Inc., a Delaware corporation, or (ii) MSL SPV Spain, Inc., a Delaware corporation, in each case to the extent such Pledged Equity constitutes Collateral (as defined in the U.S. Security Agreement).

2. Within fifteen (15) days of the Closing Date, deliver to the Administrative Agent a revised Schedule 1 to the Canadian Security Agreement setting forth, with respect to each Grantor (as defined in the Canadian Security Agreement), all Equity Interests owned by such Grantor in any Subsidiary, in each case as of the Closing Date.

3. Within forty-five (45) days of the Closing Date, with respect to any Collateral owned by any U.S. Obligor consisting of an interest in a partnership or limited liability company that by its terms expressly provides that it is a Security governed by Article 8 of the UCC but is not represented by a certificate or other instrument, cause the Administrative Agent to obtain Control (as defined in the U.S. Security Agreement) of such Pledged Equity by (i) arranging for such Pledged Equity to be represented by a certificate and delivering such certificate, in suitable form for transfer by delivery or accompanied by duly executed instruments of transfer or assignment in blank, to the Administrative Agent or (ii) executing and delivering an agreement in form and substance reasonably acceptable to the Administrative Agent pursuant to which the Issuer of such Pledged Equity has agreed that it will comply with instructions originated by the Administrative Agent without further consent by the U.S. Obligor that is the owner of such Pledged Equity.

4. Use commercially reasonable efforts to, within forty-five (45) days of the Closing Date, cause each Deposit Account and each Securities Account (in each case, as defined in the applicable Security Agreement) of a Grantor (other than (i) any Excluded Account, (ii) any Deposit Account (as defined in the applicable Security Agreement) maintained with the Administrative Agent and (iii) any other account in which the balance does not exceed $100,000) to be subject to a Qualifying Control Agreement (as defined in the applicable Security Agreement).

5. Within forty-five (45) days of the Closing Date, (i) cause each Patent and Trademark listed below to be registered with the applicable Loan Party holding beneficial title and (ii) upon such registration, execute and deliver to the Administrative Agent a notice or confirmation with regard to such Patents or Trademarks, as applicable, of the type described in Section 4(c) of the applicable Security Agreement in respect of such Patent or Trademark.

Patents:

Country	Title	Application No.	Application Date	Patent No.	Registration Date
PCT (CAN)	JUNCTION BOX ASSEMBLY FOR SOLAR PHOTOVOLTAIC (PV) PANELS	PCT/CA2017/051320	Nov 6, 2017		
PCT (CAN)	SOLAR PANEL INTERCONNECTION SYSTEM	PCT/CA2017/050338	Mar 15, 2017		
PCT (CAN)	THERMAL TREATMENT FOR PRECONDITIONING OR RESTORATION OF A SOLDER JOINT	PCT/CA2017/050164	Feb 10, 2017		
US	FLEXIBLE BOBBIN FOR ELECTRICAL COMPONENTS	62/623,930	Jan 30, 2018		
US	COMPACT LIGHT MIXING AND DIFFUSING APPARATUS	09/280,102	Mar 29, 1999	6,238,076	May 29, 2001
US	COMPACT FAST BATTERY CHARGER	09/704,079	Nov 1, 2000	6,301,132	Oct 9, 2001
US	SOLDER PASTE WITH A TIME-TEMPERATURE INDICATOR	09/183,680	Oct 30, 1998	6,331,076	Dec 18, 2001

Trademarks:

Country	Title	Application No.	Application Date	Registration No.	Registration Date
US	TCOO	75/131,652	7/9/1996	2,154,546	5/5/1998

Schedule 7.01

Existing Liens

1. Liens described in the following PPSA filings:

Loan Party	Secured Party	Registration Number	Collateral Description
Celestica International Inc.	Hewlett-Packard Financial Services Canada Company	630220815	Equipment, Other Master Lease; all equipment leased pursuant to master lease agreement no. 104195
Celestica International Inc.	Deutsche Bank AG, New York Branch	713286081	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds
Celestica International Inc.	Aggreko Canada Inc.	738126108	Equipment Dryer, Compressor, Cable Box, Hose Box, Whip Checks, etc.
Celestica International LP	Deutsche Bank AG, New York Branch	736853625	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds
Celestica LLC	Hyperthern Inc	694685943	Equipment Fixtures: Agilent test fixture, choppers, checksum, etc.

2. Liens described in the following UCC financing statements:

Loan Party	Secured Party	UCC-1 Financing Statement Number	Jurisdiction	Collateral Description
Celestica Electronics (M.) Sdn. Bhd.	Deutsche Bank AG, New York Branch	2018028721	D.C. Recorder of Deeds	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds
Celestica Holdings Pte Ltd	Deutsche Bank AG, New York Branch	2018028719	D.C. Recorder of Deeds	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds
Celestica Hong Kong Ltd.	Deutsche Bank AG, New York Branch	2018028720	D.C. Recorder of Deeds	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds

Loan Party	Secured Party	UCC-1 Financing Statement Number	Jurisdiction	Collateral Description
Celestica International Inc.	Deutsche Bank AG, New York Branch	2016005195	D.C. Recorder of Deeds	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds
Celestica International LP	Deutsche Bank AG, New York Branch	2018025191	D.C. Recorder of Deeds	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds
Celestica Corporation (Celestica LLC)	Crown Credit Company	20091738456	Delaware	Equipment Master Lease; all equipment leased pursuant to Master Lease Agreement dated Nov. 10, 2005
Celestica LLC	Deutsche Bank AG, New York Branch	20156109754	Delaware	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds

Loan Party	Secured Party	UCC-1 Financing Statement Number	Jurisdiction	Collateral Description
Celestica LLC	Citibank Europe PLC	20172062351	Delaware	All right, title and interest of Celestica LLC in and to all accounts and other forms of obligations owing by Dell Inc. and its subsidiaries and affiliates, arising out of the sale and delivery of goods and services to Dell Inc.
Celestica LLC	Banc of America Leasing and Capital, LLC	20172116769	Delaware	Goods, Other Master Lease; all equipment leased pursuant to Schedule No. 001 to Master Lease Agreement no. 31907-90000 dated October 11, 2016
Celestica LLC	Banc of America Leasing and Capital, LLC	20172116777	Delaware	Goods, Other Master Lease; all equipment leased pursuant to Schedule No. 002 to Master Lease Agreement no. 31907-90000 dated October 11, 2016
Celestica LLC	Amada America, Inc.	20182305445	Delaware	Equipment Amada turret punch press, model AE2510NT, tooling package, software package, etc.
Celestica Oregon LLC	Deutsche Bank AG, New York Branch	20181694518	Delaware	All instruments evidencing the concentration account; scheduled receivables under the Revolving Trade Receivables Purchase Agreement and all related security, interest in applicable goods and all proceeds

Loan Party	Secured Party	UCC-1 Financing Statement Number	Jurisdiction	Collateral Description
Celestica Precision Machining Ltd.	Methods Machine Tools, Incorporated	18-7635173071	California	Equipment One Fanuc Robodrill D21LiB5-24K CNC Vertical Machining Center, Serial Number P181ZH281, with Fanuc 3li-B5, CNC Control
Celestica Precision Machining Ltd.	Methods Machine Tools, Incorporated	18-7635174345	California	Equipment One Fanuc Robodrill D21LiB5-24K CNC Vertical Machining Center, Serial Number P181ZH283, with Fanuc 3li-B5, CNC Control
Celestica Precision Machining Ltd.	Methods Machine Tools, Incorporated	18-7635174466	California	Equipment One Fanuc Robodrill D21LiB5-24K CNC Vertical Machining Center, Serial Number P181ZH282, with Fanuc 3li-B5, CNC Control
Celestica Precision Machining Ltd.	Methods Machine Tools, Incorporated	18-7635174587	California	Equipment One Fanuc Robodrill D21LiB5-24K CNC Vertical Machining Center, Serial Number P181ZH284, with Fanuc 3li-B5, CNC Control
Celestica Precision Machining Ltd.	Methods Machine Tools, Incorporated	18-7635174729	California	Equipment One Fanuc Robodrill D21LiB5-24K CNC Vertical Machining Center, Serial Number P181ZH285, with Fanuc 3li-B5, CNC Control

Loan Party	Secured Party	UCC-1 Financing Statement Number	Jurisdiction	Collateral Description
Celestica Precision Machining Ltd.	Methods Machine Tools, Incorporated	18-7641813312	California	Equipment One Fanuc Robodrill D21LiB5-24K CNC Vertical Machining Center, Serial Number P181ZH371, with Fanuc 3li-B5, CNC Control
Celestica Precision Machining Ltd.	Methods Machine Tools, Incorporated	18-7641813433	California	Equipment One Fanuc Robodrill D21LiB5-24K CNC Vertical Machining Center, Serial Number P181ZH370, with Fanuc 3li-B5, CNC Control

3. Liens on any deposit accounts established pursuant to the DB Receivables Purchase Agreement for collection of the relevant Securitized Assets and the funds held therein and all instruments and certificates evidencing the same.

4. Liens on pension assets of the Celestica Japan KK pension plan held with Sumitomo Trust and Banking Co. Ltd., with current plan assets of approximately 1,865.9B Yen as at March 31, 2018, for application to pension liabilities in Japan.

5. Banc of America Leasing & Capital, LLC and its affiliates, successors and assigns have certain rights to insurance of the Company and its Subsidiaries in connection with the Master Lease Agreement, dated October 11, 2016, between Banc of America Leasing & Capital, LLC and Celestica LLC.

Schedule 7.02

Permitted Investments

1. Celestica LLC owns 17% of the Equity Interest of Proto Services, Inc.

2. Celestica LLC made a $4.5 million advance to a supplier and a customer to facilitate the build out of manufacturing lines in Malaysia.

3. Celestica (Suzhou) Technology Co. Ltd. and Celestica (Dongguan-SSL) Technology Limited hold certain land use rights in China with a value of approximately $5.4 million in the aggregate.

4. Celestica Malaysia Sdn. Bhd. And Celestica Electronics (M) Sdn. Bhd. hold certain land use rights in Malaysia with a value of approximately $4.4 million in the aggregate.

Schedule 7.03

Existing Indebtedness

1. The following intercompany debts:

Creditor	Debtor	Original Principal	Current Principal	Denomination
Celestica (Netherlands) B.V.	Celestica (Romania) SRL	15,000,000.00	15,000,000.00	USD
Celestica (Netherlands) B.V.	Celestica (Romania) SRL	37,000,000.00	37,000,000.00	USD
Celestica (Netherlands) B.V.	Celestica (Romania) SRL	10,000,000.00	10,000,000.00	USD
Celestica (Netherlands) B.V.	Celestica (Romania) SRL	10,000,000.00	10,000,000.00	USD
Celestica (Netherlands) B.V.	Celestica (Romania) SRL	7,000,000.00	7,000,000.00	USD
Celestica (Netherlands) B.V.	Celestica (Romania) SRL	1,000,000.00	1,000,000.00	USD
Celestica Cayman Holdings 1 Limited	Celestica Cayman Holdings 2 Limited	700,000.00	700,000.00	USD
Celestica Cayman Holdings 1 Limited	Celestica Hong Kong Holdings 1 Limited	61,246,510.00	37,258,878.02	USD
Celestica Cayman Holdings 1 Limited	Celestica Hong Kong Holdings 2 Limited	9,999.87	9,999.87	USD
Celestica Cayman Holdings 1 Limited	Celestica Hong Kong Holdings 2 Limited	496,687.00	496,687.00	USD
Celestica Cayman Holdings 1 Limited	Celestica Cayman Holdings 3 Limited	3,607,243.35	3,607,243.35	EUR
Celestica Cayman Holdings 1 Limited	Celestica (Thailand) Limited	505,920,000.00	505,920,000.00	THB

Creditor	Debtor	Original Principal	Current Principal	Denomination
Celestica Cayman Holdings 2 Limited	Celestica Cayman Holdings 9 Limited	34,455,000.00	34,455,000.00	USD
Celestica Cayman Holdings 9 Limited	Celestica Industries (China) PTE LTD	200,000.00	150,000.00	USD
Celestica Cayman Holdings 3 Limited	Celestica European Holdings S.àr.L.	3,607,243.35	3,607,243.35	EUR
Celestica Industries (China) PTE LTD	Celestica Cayman Holdings 1 Limited	2,700,000.00	2,700,000.00	USD
Celestica Industries (China) PTE LTD	Celestica Cayman Holdings 1 Limited	3,600,000.00	3,600,000.00	USD
Celestica Laguna, Inc.	Celestica Hong Kong Limited	5,661,605.00	5,661,605.00	USD
Celestica Laguna, Inc.	Celestica LLC	5,903,753.00	5,903,753.00	USD
Celestica Laguna, Inc.	Celestica (Thailand) Limited	9,998,316.00	9,998,316.00	USD

2. The following bank guarantees:

Issuer	Celestica Entity	Beneficiary	Number	Amount
Bank of America	Celestica de Reynosa, S.A. de C.V.	Administracion Local de Auditoria Fiscal de Reynosa	SB100550/16	MXN 8,494,292.00
Bankinter Credit Facility	Celestica Valencia, S.A.	Spanish Customs	0190454, 0359108	EUR 151,000.00
Bankinter Credit Facility	Celestica Valencia, S.A.	Solred, S.A.	118858	EUR 5,000.00
Citibank	Celestica (Romania) SRL	Romania Customs	5007121703	RON 4,500,000.00
Bank of America	Celestica (AMS) SDN. BHD.	Tenaga Nasional - Supply Electrical Energy	GT110075/18	MYR 1,400,000.00
Bank of America	Celestica (AMS) SDN. BHD.	Tenaga Nasional Bhd	GT110030/17	MYR 650,000.00
Bank of America	Celestica (AMS) SDN. BHD.	Ketua Pengarah Kastam Malaysia (for import raw materials and finished goods))	GT110030/17	MYR 2,400,000.00

Issuer	Celestica Entity	Beneficiary	Number	Amount
Bank of China	Celestica (Suzhou) Technology Co. Ltd.	The People's Republic of China Nanjing Customs (To guarantee the Tax usage)	GC1802517000329	CNY 3,200,000.00
Bank of China	Celestica (Suzhou) Technology Co. Ltd.	The People's Republic of China Nanjing Customs (To guarantee the Tax usage)	GC1802518000055	CNY 3,000,000.00
Bank of America	Celestica (Thailand) Limited	Provincial Electricity Authority	GT419220/11-GT417399/03	THB 44,593,000.00
Bank of America	Celestica (Thailand) Limited	Industrial Estate Authority	GT417804/07-GT417803/07	THB 36,674,805.65
Bank of America	Celestica (Thailand) Limited	Ticon Industrial Connection	GT419008/11-GT423257/18	THB 5,110,000.00
Bank of America	Celestica (Thailand) Limited	H.M. Customs Department	GT419990/13	THB 1,000,000.00
Bank of America	Celestica (Thailand) Limited	Eco Industrial Services Co. Ltd.	GT423258/18	THB 960,000.00
Bank of America	Celestica (Thailand) Limited	Kasetsart University Sriracha	GT423126/17	THB 96,000.00
Bank of America	Celestica Malaysia SDN. BHD.	Nur Distribution - Operations	GT110090/18	MYR 20,000.00
Bank of America	Celestica Malaysia SDN. BHD.	Nur Distribution - Electricity	GT110091/18	MYR 1,223,000.00
Bank of America	Celestica Malaysia SDN. BHD.	Ketua Pengarah Kastam (Custom duties)	GT110011/17	MYR 1,000,000.00
Bank of America	Celestica Electronics (M) SDN. BHD.	Ketua Pengarah Kastam Malaysia (Custom taxes, excise duties, penalties)	GT110058/17	MYR 1,000,000.00
Bank of America	Celestica Electronics (M) SDN. BHD.	Ketua Pengarah Kastam Malaysia (Custom taxes, excise duties, penalties	GT110059/17	MYR 1,000,000.00
Bank of America	Celestica Electronics (M) SDN. BHD.	Tenaga Nasional Berhad (Electricity supply)	GT110069/18	MYR 1,700,000.00
Bank of America	Celestica Electronics (M) SDN. BHD.	Ketua Pengarah Kastam Malaysia	GT109963/17	MYR 3,201,884.00

Issuer	Celestica Entity	Beneficiary	Number	Amount
Bank of America	Celestica Electronics (M) SDN. BHD.	Ketua Pengarah Kastam Malaysia	GT109964/17	MYR 3,000,000.00
Bank of America	Celestica Electronics (M) SDN. BHD.	Tenaga Nasional (Supply electrical energy)	GT110001/17	MYR 220,000.00
Bank of America	Celestica Electronics (M) SDN. BHD.	Government of Malaysia	GT110048/17	MYR 12,000.00
Bank of America	Celestica Electronics (M) SDN. BHD.	Expatriates Service Division	CEM-ESD2	MYR 3,000.00
Bank of America	Celestica (AMS) Sdn. Bhd.	Ketua Pengarah Imigresen Malaysia	KETEUA IMIG2	MYR 750.00
Bank of America	Celestica (AMS) Sdn. Bhd.	Ketua Pengarah Imigresen Malaysia	KETEUA IMIG1	MYR 750.00

3. The following surety bonds:

Celestica Entity	Obligee	Bond Number	Anniversary (Expiry)	Amount	Status
Celestica International Inc.	Canada Customs	M 290404	December 1, 2018	CAD $5,000	Renewable
Celestica LLC	Canada Customs	M 413757	September 15, 2018	CAD $2,097,049	Renewable
Celestica International LP	Canada Customs	M 219635	November 9, 2018	CAD $68,000	Renewable
Celestica Inc.	Dixon R. Doll	M290406	Open penalty	USD $2,100,000	Continuous
Celestica LLC	U.S. Customs	50222016	March 17, 2019	USD $500,000	Renewable
Celestica LLC	Southern California Edison	KO8156189	June 11, 2019	USD $65,000	Renewable
Celestica Oregon Inc.	U.S. Customs	K08518191/110527001	June 9, 2019	USD $50,000	Renewable
Celestica Precision Machining Ltd.	U.S. Customs	170523002	July 26, 2018	USD $50,000	Renewable
Atrenne Computing Solutions LLC	Bureau of Customs and Border Protection	180403013	May17, 2019	USD $50,000	Renewable

Schedule 7.04

Permitted Dissolutions

Entity Name	Type of Fundamental Change Anticipated
1593289 Ontario Inc.	Liquidation
3250297 Nova Scotia Company	Liquidation
Celestica Asia Pte Limited	Merger or Liquidation
Celestica Employee Nominee Corporation	Liquidation
2281302 Ontario Inc.	Liquidation
Celestica Hong Kong Holdings 3 Limited	Liquidation
Celestica Automation Technology (Wuxi) Co. Ltd.	Liquidation
Celestica Cayman Holdings 2 Limited	Merger or Liquidation
Celestica Cayman Holdings 3 Limited	Merger or /Liquidation
Celestica Cayman Holdings 4 Limited	Merger or Liquidation
Celestica Cayman Holdings 5 Limited	Merger or Liquidation
Celestica (US Holdings) LLC	Merger or Liquidation
Extrusion Technology PRC Holding (Hong Kong) Limited	Merger or Liquidation

Schedule 7.08

Existing Transactions with Affiliates

1. Coattail Agreement, dated June 29, 1988, among Onex Corporation, Celestica Inc., and Computershare Trust Company of Canada (as successor to the Montreal Trust Company of Canada), as amended modified or supplemented as of the date hereof.

2. Executive Employment Agreement, dated as of January 1, 2008, among Celestica Inc., Celestica International Inc. and Elizabeth L. Delbianco, as amended modified or supplemented as of the date hereof.

3. Services Agreement, dated January 1, 2009, between Celestica Inc. and Onex, as amended by that certain Amending Agreement, dated as of January 1, 2017 between Celestica Inc. and Onex Corporation.

4. Celestica Inc. is party to an Agreement of Purchase and Sale, dated July 23, 2015, pursuant to which the Company and its Subsidiaries, as applicable, will sell real property located in Toronto, Ontario to a special purpose entity (the "Property Purchaser") to be formed by a consortium of three real estate developers. Approximately 30% of the interests in the Property Purchaser are to be held by a privately-held company in which Mr. Gerald Schwartz, a controlling shareholder of Celestica Inc., has a material interest. Mr. Schwartz also has a non-voting interest in an entity which is to have an approximate 25% interest in the Property Purchaser.

Schedule 7.09

Existing Burdensome Agreements

None.

Schedule 10.02

Administrative Agent's Office, Certain Addresses for Notices

If to any Loan Party:

Celestica Inc.
844 Don Mills Road
Toronto, ON M3C 1V7
Attn: Enzo Vigna
Phone: (416)448-2064
Email: evigna@celestica.com
Web: www.celestica.com

With a copy to:

Celestica Inc.
844 Don Mills Road
Toronto, ON M3C 1V7
Attn: Robert Ellis
Phone: (416)448-2721
Facsimile: (416)448-2817
Email: rellis@celestica.com
Web: www.celestica.com

And

Arnold & Porter Kaye Scholer LLP
250 W 55th Street
New York, New York 10019
Attn: Joel Greenberg
Phone: (212)836-8201
Facsimile: (212)836-8211
Email: Joel.Greenberg@arnoldporter.com

And

Arnold & Porter Kaye Scholer LLP
250 W 55th Street
New York, New York 10019
Attn: Sheryl Gittlitz
Phone: (212)836-8119
Facsimile: (212)836-6619
Email: Sheryl.Gittlitz@arnoldporter.com

And

Blake, Cassels & Graydon LLP
199 Bay Street, Suite 4000
Toronto, Ontario M5L1A9
Attn: Ian Binnie
Phone: (416)863-2400
Facsimile: (416) 863-2653
Email: Ian.Binnie@blakes.com

Name of Borrower	Taxpayer Identification Number
Celestica (USA) Inc.	20-0725094

If to the Administrative Agent and/or Swing Line Lender:

For payments and Requests for Credit Extensions:

Bank of America, N.A.
Mail Code: TX2-984-03-23
Building C
2380 Performance Dr
Richardson, TX, 75082
Attention: Katlyn Tran
Telephone: 469.201.4056
Fax: 214.290.9714
Email: katlyn.tran@baml.com

Wire Instructions:

USD

Bank of America, N.A. (New York)
ABA#: XXXXXXXXX
Account Name: Wire Clearing Acct for Syn Loans - LIQ
Account No.: XXXXXXXXXXXXX
Ref: Celestica, Inc.

CAD

Beneficiary Bank: Bank of America Canada (BOFACATT)
Beneficiary Account Number: XXXXXXXXXXXX
Beneficiary: Bank of America
Ref: Celestica, Inc.

EUR

Beneficiary Bank: Bank of America NT and SA (BOFAGB22)
Beneficiary Account Number: XXXXXXXXXXXXXXXXXXXXX
Beneficiary: Bank of America
Ref: Celestica, Inc.

GBP

Beneficiary Bank: Bank of America NT and SA (BOFAGB22)
Beneficiary Account Number: XXXXXXXXXXXXXXXXXXXXX
Beneficiary: Bank of America
Ref: Celestica, Inc.

For all other Notices as Administrative Agent:

Bank of America, N.A.
Mail Code: TX2-984-03-26
Building C
2380 Performance Dr
Richardson, TX, 75082
Attention: Anthony Kell
Telephone: 214.209.4124
Fax: 214.290.9422
Email: anthony.w.kell@baml.com

If to Bank of America, N.A. as an L/C Issuer:

Bank of America, N.A.
Mail Code: PA6-580-02-30
1 Fleet Way
Scranton, PA, 18507
Attention: Scranton Standby LC Department
Telephone: 800.370.7519
Fax: 800.755.8743
Email: scranton_standby_lc@bankofamerica.com

If to Canadian Imperial Bank of Commerce as an L/C Issuer:

Canadian Imperial Bank of Commerce
595 Bay St, 5th Floor
Toronto, ON M5G 2C2
Attention: Christina Wen
Telephone: 416.861.5183
Email: christina.wen@cibc.com

If to Citibank, N.A., Canadian Branch as an L/C Issuer:

Citibank, N.A.
123 Front Street W
Toronto, ON M5J 2M3
Attention: Mary Vlahos, Sr. Vice President
Telephone: 416.949.5529
Fax: 416.947.5674
Email: mary.vlahos@citi.com

Schedule 10.06

Disqualified Institutions

None.

EXHIBIT A

[FORM OF] LOAN NOTICE

Date: [_____, ____]

To: Bank of America, N.A., as Administrative Agent

Ladies and Gentlemen:

Reference is made to that certain Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

The undersigned hereby requests (select one):

A Borrowing of [Revolving Loans][the Term B Loan][an Incremental Term Loan].

A conversion of [Eurocurrency Rate Loans][Base Rate Loans][Canadian Prime Rate Loans] [Bankers' Acceptances][B/A Equivalent Loans].

A continuation of [Eurocurrency Rate Loans][Bankers' Acceptances][B/A Equivalent Loans].

1. On _____ (a Business Day).

2. In the amount of $_____.

3. Comprised of [Eurocurrency Rate Loans][Base Rate Loans][Canadian Prime Rate Loans] [Bankers' Acceptances][B/A Equivalent Loans].

4. In the following currency: _____.

5. For Eurocurrency Rate Loans, Bankers' Acceptances or B/A Equivalent Loans: with an Interest Period of _____.

6. Applicable Borrower: _____.

With respect to such Borrowing, the undersigned hereby represents and warrants that [(i) such request complies with Section 2.01(a) of the Credit Agreement and (ii)] each of the applicable conditions set forth in Section 4.02 of the Credit Agreement have been satisfied on and as of the date of such Borrowing.

Delivery of an executed counterpart of a signature page of this notice by facsimile or other electronic imaging means (e.g., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this notice.

IN WITNESS WHEREOF, the undersigned Borrower has caused this Loan Notice to be executed by a duly authorized officer as of the date first written above.

[APPLICABLE BORROWER]

By:
Name:
Title:

EXHIBIT B

[FORM OF] SWING LINE LOAN NOTICE

Date: [_____, ____]

To: Bank of America, N.A., as Swing Line Lender
Bank of America, N.A., as Administrative Agent

Ladies and Gentlemen:

Reference is made to that certain Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

The undersigned hereby requests a Swing Line Loan:

1. On _____ (a Business Day).

2. In the amount of $_____.

3. Applicable Borrower: _____.

With respect to such Borrowing, the undersigned hereby represents and warrants that (i) such request complies with the requirements of Section 2.05(a) of the Credit Agreement and (ii) each of the applicable conditions set forth in Section 4.02 of the Credit Agreement have been satisfied on and as of the date of such Borrowing.

Delivery of an executed counterpart of a signature page of this notice by facsimile or other electronic imaging means (e.g., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this notice.

IN WITNESS WHEREOF, the undersigned Borrower has caused this Swing Line Loan Notice to be executed by a duly authorized officer as of the date first written above.

[APPLICABLE BORROWER]

By:
Name:
Title:

EXHIBIT C

[FORM OF] NOTICE OF LOAN PREPAYMENT

TO: Bank of America, N.A., as [Administrative Agent][Swing Line Lender]
[Bank of America, N.A., as Administrative Agent]

RE: Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

DATE: [Date]

The undersigned hereby notifies the Administrative Agent that on [_____] pursuant to the terms of Section 2.06(a) of the Credit Agreement, such Borrower intends to prepay the following Loans as more specifically set forth below:

Voluntary prepayment of [Revolving Loans][Term Loans] in the following amount(s):

Eurocurrency Rate Loans: $_____.
Applicable Interest Period:_____.

[Base Rate Loans][Canadian Prime Rate Loans]: $_____.

Canadian Prime Rate Loans: $_____.

Voluntary prepayment of Swing Line Loans in the following amount(s): $_____.

Delivery of an executed counterpart of a signature page of this notice by fax transmission or other electronic mail transmission (e.g., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this notice.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the undersigned Borrower has caused this Notice of Loan Prepayment to be executed by a duly authorized officer as of the date first written above.

[APPLICABLE BORROWER]

By:
Name:
Title:

EXHIBIT D

[FORM OF] NOTE

[_____, 20__]

FOR VALUE RECEIVED, the undersigned (the "Borrower"), hereby promises to pay to [_____] or its registered assigns (the "Lender"), in accordance with the provisions of the Credit Agreement (as hereinafter defined), the principal amount of each Loan from time to time made by the Lender to the Borrower under that certain Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

The Borrower promises to pay interest on the unpaid principal amount of each Loan from the date of such Loan until such principal amount is paid in full, at such interest rates and at such times as provided in the Credit Agreement. Except as otherwise provided in Section 2.05(f) of the Credit Agreement with respect to Swing Line Loans, all payments of principal and interest shall be made to the Administrative Agent for the account of the Lender in the currency in which such Loan was denominated and in Same Day Funds at the Administrative Agent's Office for such currency. If any amount is not paid in full when due hereunder, such unpaid amount shall bear interest, to be paid upon demand, from the due date thereof until the date of actual payment (and before as well as after judgment) computed at the per annum rate set forth in the Credit Agreement.

This promissory note (this "Note") is one of the Notes referred to in the Credit Agreement, and the holder is entitled to the benefits thereof and may be prepaid in whole or in part subject to the terms and conditions provided therein. Upon the occurrence and continuation of one or more of the Events of Default specified in the Credit Agreement, all amounts then remaining unpaid on this Note shall become, or may be declared to be, immediately due and payable all as provided in the Credit Agreement. Loans made by the Lender shall be evidenced by one or more loan accounts or records maintained by the Lender in the ordinary course of business. The Lender may also attach schedules to this Note and endorse thereon the date, amount, and maturity of its Loans and payments with respect thereto.

The Borrower, for itself, its successors and assigns, hereby waives diligence, presentment, protest and demand and notice of protest, demand, dishonor and non-payment of this Note.

Delivery of an executed counterpart of a signature page of this Note by fax transmission or other electronic mail transmission (e.g., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this Note.

THIS NOTE AND ANY CLAIM, CONTROVERSY, DISPUTE OR CAUSE OF ACTION (WHETHER IN CONTRACT OR TORT OR OTHERWISE) BASED UPON, ARISING OUT OF OR RELATING TO THIS NOTE AND THE TRANSACTIONS CONTEMPLATED HEREBY SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the undersigned has caused this Note to be duly executed and delivered by its officer thereunto duly authorized.

[APPLICABLE BORROWER]

By:

Name:

Title:

EXHIBIT E

[FORM OF] COMPLIANCE CERTIFICATE

☐ Check for distribution to public and private side Lenders

Financial Statement Date: [_____, _____]

To: Bank of America, N.A., as Administrative Agent

Ladies and Gentlemen:

Reference is made to that certain Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

The undersigned Responsible Officer hereby certifies as of the date hereof that he/she is the [chief executive officer][chief financial officer][treasurer][controller] of the Company, and that, as such, he/she is authorized to execute and deliver this Compliance Certificate to the Administrative Agent on the behalf of the Company, and that:

[Use following paragraph 1 for fiscal year-end financial statements]

1. Attached hereto as Schedule 1 are the year-end audited financial statements required by Section 6.01(a) of the Credit Agreement for the fiscal year of the Company ended as of the above date, together with the report and opinion of an independent certified public accountant required by such section.

[Use following paragraph 1 for fiscal quarter-end financial statements]

1. Attached hereto as Schedule 1 are the unaudited financial statements required by Section 6.01(b) of the Credit Agreement for the fiscal quarter of the Company ended as of the above date. Such financial statements fairly present the financial condition, results of operations, shareholders' equity and cash flows of the Company and its Restricted Subsidiaries in accordance with IFRS as at such date and for such period, subject only to normal year-end audit adjustments and the absence of footnotes.

2. The undersigned has reviewed and is familiar with the terms of the Credit Agreement and has made, or has caused to be made under his/her supervision, a detailed review of the transactions and condition (financial or otherwise) of the Company and its Subsidiaries during the accounting period covered by the attached financial statements.

3. A review of the activities of the Company and its Subsidiaries during such fiscal period has been made under the supervision of the undersigned with a view to determining whether during such

fiscal period the Company and each of its Subsidiaries performed and observed all its respective Obligations under the Loan Documents, and

[select one:]

[to the best knowledge of the undersigned during such fiscal period, the Company and each of its Subsidiaries performed and observed each covenant and condition of the Loan Documents applicable to it.]

--or--

[the following covenants or conditions have not been performed or observed and the following is a list of each such Default and its nature and status:]

4. The representations and warranties of the Company and each other Loan Party contained in Article V of the Credit Agreement and in each other Loan Document, or which are contained in any document furnished at any time under or in connection with the Loan Documents, are true and correct in all material respects (or, if qualified by materiality or reference to Material Adverse Effect, in all respects) on and as of the date hereof, except to the extent that such representations and warranties specifically refer to an earlier date, in which case they are true and correct in all material respects (or, if qualified by materiality or reference to Material Adverse Effect, in all respects) as of such earlier date, and except that for purposes of this Compliance Certificate, the representations and warranties contained in clauses (a) and (b) of Section 5.05 of the Credit Agreement shall be deemed to refer to the most recent statements furnished pursuant to clauses (a) and (b), respectively, of Section 6.01 of the Credit Agreement, including the statements in connection with which this Compliance Certificate is delivered.

5. The financial covenant analyses and information set forth on Schedule 2 attached hereto is true and accurate on and as of the date of this Compliance Certificate.

[select one:]

[6. Schedule 5.13 to the Credit Agreement[, as such Schedule has been supplemented pursuant to the Compliance Certificates delivered to the Administrative Agent for the fiscal period[s] of the Company ended [_____],] is accurate and complete in all material respects as of the above date, and no supplement is required to cause such Schedule to be accurate and complete in all material respects as of such date.]

--or--

[7. Attached hereto as Schedule 3 is a supplement to Schedule 5.13 to the Credit Agreement such that, as supplemented by such Schedule 3, Schedule 5.13 would be accurate in all material respects as of the above date.]

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the undersigned has executed this Compliance Certificate as of [_____, _____].

CELESTICA INC.

By:
Name:
Title:

For the Quarter/Year ended [_____] (the "Statement Date")

SCHEDULE 1
to the Compliance Certificate

See Attached.

For the Quarter/Year ended [_____] (the "Statement Date")

SCHEDULE 2
to the Compliance Certificate
($ in 000's)

I. Section 7.11(a) – Consolidated Interest Coverage Ratio.

A. Consolidated EBITDA for the period of the four fiscal quarters then ending on the above date ("Subject Period")[1]:

1. The net earnings of the Company and its Restricted Subsidiaries (excluding extraordinary gains and extraordinary losses) for the Subject Period ("Consolidated Net Income"): $_____

For the following Lines I.A.2, 3, 4, 5, 6 and 8, without duplication and to the extent deducted (and not added back) in calculating Consolidated Net Income for the Subject Period listed in Line I.A.1:

2. Consolidated Interest Charges for the Subject Period (other than the implicit financing costs in respect of Synthetic Lease Obligations): $_____

3. provision for federal, state, local and foreign Taxes by the Company and its Restricted Subsidiaries for the Subject Period: $_____

4. depreciation and amortization expense for the Subject Period: $_____

5. non-cash charges and purchase accounting deductions reducing Consolidated Net Income for the Subject Period listed in Line I.A.1, including but not limited to (A) any write offs or write downs, (B) losses on sales, disposals or abandonment of, or any impairment charges or asset write offs related to, intangible assets, long-lived assets and investments in debt and equity securities and (C) other non-cash charges, non-cash expenses or non-cash losses for the Subject Period[2]: $_____

6. unusual or non-recurring expenses and charges for the Subject Period[3]: $_____

[1] Calculated for the Company and its Restricted Subsidiaries on a consolidated basis.

[2] Nothing contained in this Line I.A.5 shall exclude from the calculation of Consolidated EBITDA (1) any non-cash charge that is expected to be paid in cash in any future period or (2) any write-down of accounts receivable).

[3] The aggregate amount added to the calculation of Consolidated EBITDA pursuant to this Line I.A.6 and Line I.A.7 shall not exceed twenty-five percent (25%) of Consolidated EBITDA (calculated prior to giving effect to any adjustment made pursuant to this Line I.A.6 and Line I.A.7 for the Subject Period).

7. the amount of synergies and cost savings projected by the Company in good faith to be realized as a result of any Permitted Acquisition so long as (A) such synergies and costs savings are (I) reasonably identifiable and factually supportable and (II) reasonably attributable to the Permitted Acquisition specified and reasonably anticipated to result therefrom, and (B) the benefits resulting from such Permitted Acquisition are reasonably expected to be realized within twelve (12) months of the closing date of such Permitted Acquisition[4]: $_____

8. the amount of any costs, charges, accruals, reserves or expenses attributable to (A) the cost efficiency initiative of the Company and its Subsidiaries initiated in the fourth fiscal quarter of 2017 (as disclosed on the Form 20-F of the Company for the fiscal year ended December 31, 2017 filed with the SEC) and the restructuring actions thereunder, including, but not limited to, reductions to workforce, the potential consolidation of certain sites to better align capacity and infrastructure with current and anticipated customer demand, related transfers of customer programs and production, re-alignment of business processes, management reorganizations and other associated activities or (B) the undertaking and/or implementation of cost savings initiatives, operating expense reductions, operating improvements, product margin synergies and product cost and other synergies and similar initiatives, integration, transition, reconstruction, decommissioning, recommissioning or reconfiguration of fixed assets for alternative uses, restructuring costs (including those related to tax restructurings), charges, accruals, reserves or expenses attributable to the undertaking and/or implementation of cost savings initiatives, operating expense reductions, business optimization and other restructuring costs, charges, accruals, reserves and expenses (including, but not limited to, costs related to the opening, pre-opening, closure, relocation and/or consolidation of locations, recruitment expenses (including headhunter fees and relocation expenses), severance payments, and professional and consulting fees incurred in connection with any of the foregoing) for the Subject Period[5]: $_____

For the following Lines I.A.9, 10 and 11, without duplication and to the extent included (and not deducted) in calculating Consolidated Net Income for the Subject Period listed in Line I.A.1:

9. federal, state, local and foreign Tax recoveries of the Company and its Restricted Subsidiaries for the Subject Period: $_____

[4] The aggregate amount added to the calculation of Consolidated EBITDA pursuant to this Line I.A.7 and Line I.A.6 shall not exceed twenty-five percent (25%) of Consolidated EBITDA (calculated prior to giving effect to any adjustment made pursuant to this Line I.A.7 and Line I.A.6 for the Subject Period).

[5] The aggregate amount added to the calculation of Consolidated EBITDA pursuant to this Line I.A.8 shall not exceed $25,000,000 per annum.

10. non-cash items (excluding (A) any non-cash recovery that is expected to be received in cash in any future period and (B) any reversal of a write-down of current assets) increasing Consolidated Net Income for the Subject Period listed in Line I.A.1: $_____

11. unusual or non-recurring gains for the Subject Period incurred outside the ordinary course of business: $_____

12. Consolidated EBITDA (Lines I.A.1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 - 9 - 10 - 11)[6]: $_____

B. Consolidated Interest Charges for the Subject Period[7]:

1. All interest, premium payments, debt discount, fees, charges and related expenses of the Company and its Restricted Subsidiaries in connection with borrowed money (including capitalized interest) or in connection with the deferred purchase price of assets, in each case to the extent treated as interest in accordance with IFRS for the Subject Period: $_____

2. the portion of rent expense of the Company and its Restricted Subsidiaries with respect to such period under capital leases that is treated as interest in accordance with IFRS: $_____

3. Consolidated Interest Charges (Lines I.B.1 + 2): $_____

C. Consolidated Interest Coverage Ratio (Line I.A.12 ÷ Line I.B.3): _____

D. minimum Consolidated Interest Coverage Ratio permitted for the Subject Period: 3.25:1.00

II. Section 7.11(b) – Consolidated Total Leverage Ratio.

A. Consolidated EBITDA for the Subject Period (Line I.A.12): $_____

B. Consolidated Funded Indebtedness at the Statement Date[8]:

1. the outstanding principal amount of all obligations, whether current or long-term, for borrowed money (including Obligations under the Credit Agreement) and all obligations evidenced by bonds, debentures, notes, loan agreements or other similar instruments: $_____

2. all purchase money Indebtedness: $_____

---

[6] In the event of the acquisition by the Company or a Restricted Subsidiary of a newly acquired Restricted Subsidiary or operation (as such term is used in the definition of "Pro Forma Basis" in the Credit Agreement), Consolidated EBITDA will include the Target EBITDA of the newly acquired Restricted Subsidiary or operation on a Pro Forma Basis in accordance with the terms of the definition of "Pro Forma Basis" in the Credit Agreement.

[7] Calculated for the Company and its Restricted Subsidiaries on a consolidated basis.

[8] Calculated for the Company and its Restricted Subsidiaries on a consolidated basis.

3. all obligations (whether direct or contingent) arising under letters of credit (including standby and commercial), bankers' acceptances, bank guaranties, surety bonds and similar instruments: $_____

4. all obligations in respect of the deferred purchase price of property or services (other than trade accounts payable in the ordinary course of business): $_____

5. all Attributable Indebtedness: $_____

6. without duplication, all Guarantees with respect to outstanding Indebtedness of the types specified in Lines II.B.1 through 5 above of Persons other than the Company or any Restricted Subsidiary: $_____

7. all Indebtedness of the types referred to in Lines II.B.1 through 6 above of any partnership or joint venture (other than a joint venture that is itself a corporation or limited liability company) in which the Company or a Restricted Subsidiary is a general partner or joint venturer, unless such Indebtedness is expressly made non-recourse to the Company or such Restricted Subsidiary: $_____

8. Consolidated Funded Indebtedness (Lines II.B.1 + 2 + 3 + 4 + 5 + 6 + 7): $_____

C. Consolidated Total Leverage Ratio (Line II.B.8 ÷ Line II.A): $_____

D. maximum Consolidated Total Leverage Ratio permitted for the Subject Period: _____: 1.00[9]

[9] The maximum Consolidated Total Leverage Ratio permitted for any Subject Period is 4.00:1.00; provided, that, upon the occurrence of a Qualified Acquisition, for the four (4) fiscal quarters commencing with the fiscal quarter during which such Qualified Acquisition closes (each such period, a "Leverage Increase Period"), the required ratio may, upon receipt by the Administrative Agent of a Qualified Acquisition Notice, be increased to 4.50:1.00; provided further, that (i) the maximum permitted Consolidated Total Leverage Ratio shall revert to 4.00:1.00 following the end of each Leverage Increase Period, (ii) for at least two (2) fiscal quarters ending immediately following each Leverage Increase Period, the Consolidated Total Leverage Ratio as of the end of each such fiscal quarter shall not be permitted to be greater than 4:00:1.00 prior to giving effect to another Leverage Increase Period and (iii) the Leverage Increase Period shall apply for purposes of determining compliance with Section 7.11(b) of the Credit Agreement, for purposes of any Qualified Acquisition Pro Forma Determination and for purposes of determining Pro Forma Compliance in connection with the incurrence of Indebtedness under Section 7.03(h) of the Credit Agreement.

EXHIBIT F-1

[FORM OF] ASSIGNMENT AND ASSUMPTION

This Assignment and Assumption (this "Assignment and Assumption") is dated as of the Effective Date set forth below and is entered into by and between [*Insert name of Assignor*] (the "Assignor") and [*Insert name of Assignee*] (the "Assignee"). Capitalized terms used but not defined herein shall have the meanings given to them in the Credit Agreement identified below (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"), receipt of a copy of which is hereby acknowledged by the Assignee. The Standard Terms and Conditions set forth in Annex 1 attached hereto are hereby agreed to and incorporated herein by reference and made a part of this Assignment and Assumption as if set forth herein in full.

For an agreed consideration, the Assignor hereby irrevocably sells and assigns to the Assignee, and the Assignee hereby irrevocably purchases and assumes from the Assignor, subject to and in accordance with the Standard Terms and Conditions and the Credit Agreement, as of the Effective Date inserted by the Administrative Agent as contemplated below (i) all of the Assignor's rights and obligations as a Lender under the Credit Agreement and any other documents or instruments delivered pursuant thereto to in the amount[s] and equal to the percentage interest[s] identified below of all of the outstanding rights and obligations of the Assignor under the respective facilities identified below (including, without limitation, Letters of Credit, Guarantees and Swing Line Loans included in such facilities) and (ii) to the extent permitted to be assigned under applicable Law, all claims, suits, causes of action and any other right of the Assignor (in its capacity as a Lender) against any Person, whether known or unknown, arising under or in connection with the Credit Agreement, any other documents or instruments delivered pursuant thereto or the loan transactions governed thereby or in any way based on or related to any of the foregoing, including, but not limited to, contract claims, tort claims, malpractice claims, statutory claims and all other claims at law or in equity related to the rights and obligations sold and assigned pursuant to clause (i) above (the rights and obligations sold and assigned pursuant to clauses (i) and (ii) above being referred to herein collectively as, the "Assigned Interest"). Such sale and assignment is without recourse to the Assignor and, except as expressly provided in this Assignment and Assumption, without representation or warranty by the Assignor.

1.	Assignor:	_____ [Assignor [is][is not] a Defaulting Lender.]
2.	Assignee:	_____ [and is an Affiliate/Approved Fund of [*identify Lender*][and is a Non- Public Lender][1]
3.	Borrower(s):	_____
4.	Administrative Agent:	Bank of America, N.A., as the administrative agent under the Credit Agreement
5.	Credit Agreement:	Credit Agreement, dated as of June 27, 2018, among Celestica Inc., an Ontario corporation, Celestica International LP, an Ontario limited partnership, Celestica (USA) Inc., a Delaware corporation, the other

[1] Select as applicable.

Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto, and Bank of America, N.A., as Administrative Agent, an L/C Issuer and Swing Line Lender

6. Assigned Interest:

Facility Assigned	Aggregate Amount of Commitment/Loans for all Lenders*	Amount of Commitment/Loans Assigned*	Percentage Assigned of Commitment/Loans[2]
_____[3]	$_____	$_____	_____%
_____	$_____	$_____	_____%
_____	$_____	$_____	_____%

[7. Trade Date: _____][4]

Effective Date: _____, 20__ [TO BE INSERTED BY ADMINISTRATIVE AGENT AND WHICH SHALL BE THE EFFECTIVE DATE OF RECORDATION OF TRANSFER IN THE REGISTER THEREFOR.]

The terms set forth in this Assignment and Assumption are hereby agreed to:

ASSIGNOR
[NAME OF ASSIGNOR]

By:
Name:
Title:

ASSIGNEE
[NAME OF ASSIGNEE]

By:
Name:
Title:

[2] Set forth, to at least 9 decimals, as a percentage of the Commitment/Loans of all Lenders thereunder.

[3] Fill in the appropriate terminology for the types of facilities under the Credit Agreement that are being assigned under this Assignment (e.g., "Revolving Commitment", "Term B Loan", etc.).

[4] To be completed if the Assignor and the Assignee intend that the minimum assignment amount is to be determined as of the Trade Date.

[Consented to and][5] Accepted:

Bank of America, N.A., as Administrative Agent

By:
Name:
Title:

[Consented to:][6]

Bank of America, N.A., as [an L/C Issuer and] Swing Line Lender

By:
Name:
Title:

[Consented to:][7]

Citibank, N.A., as an L/C Issuer

By:
Name:
Title:

[Consented to:][8]

Canadian Imperial Bank of Commerce, as an L/C Issuer

By:
Name:
Title:

[Consented to:][9]

Celestica Inc.

By:
Name:
Title:

[5] To be added only if the consent of the Administrative Agent is required by the terms of the Credit Agreement.

[6] To be added only if the consent of the Company and/or other parties (e.g. Swing Line Lender, L/C Issuer) is required by the terms of the Credit Agreement.

[7] To be added only if the consent of the Company and/or other parties (e.g. Swing Line Lender, L/C Issuer) is required by the terms of the Credit Agreement.

[8] To be added only if the consent of the Company and/or other parties (e.g. Swing Line Lender, L/C Issuer) is required by the terms of the Credit Agreement.

[9] To be added only if the consent of the Company is required by the terms of the Credit Agreement.

ANNEX 1 TO ASSIGNMENT AND ASSUMPTION

STANDARD TERMS AND CONDITIONS FOR

ASSIGNMENT AND ASSUMPTION

1. Representations and Warranties.

1.1 Assignor. The Assignor (a) represents and warrants that (i) it is the legal and beneficial owner of the Assigned Interest, (ii) the Assigned Interest is free and clear of any lien, encumbrance or other adverse claim, (iii) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby, (iv) it is **[not]** a Defaulting Lender, (v) it has reviewed the DQ List and (vi) the Assignee is **[not]** a Disqualified Institution; and (b) assumes no responsibility with respect to (i) any statements, warranties or representations made in or in connection with the Credit Agreement or any other Loan Document, (ii) the execution, legality, validity, enforceability, genuineness, sufficiency or value of the Loan Documents or any collateral thereunder, (iii) the financial condition of the Company, any of its Subsidiaries or Affiliates or any other Person obligated in respect of any Loan Document or (iv) the performance or observance by the Company, any of its Subsidiaries or Affiliates or any other Person of any of their respective obligations under any Loan Document.

1.2. Assignee. The Assignee (a) represents and warrants that (i) it has full power and authority, and has taken all action necessary, to execute and deliver this Assignment and Assumption and to consummate the transactions contemplated hereby and to become a Lender under the Credit Agreement, (ii) it meets the requirements to be an assignee under Sections 10.06(b)(iii) and (v) of the Credit Agreement (subject to such consents, if any, as may be required under Section 10.06(b)(iii) of the Credit Agreement), (iii) from and after the Effective Date, it shall be bound by the provisions of the Credit Agreement as a Lender thereunder and, to the extent of the Assigned Interest, shall have the obligations of a Lender thereunder, (iv) it is sophisticated with respect to decisions to acquire assets of the type represented by the Assigned Interest and either it, or the Person exercising discretion in making its decision to acquire the Assigned Interest, is experienced in acquiring assets of such type, (v) it has received a copy of the Credit Agreement, and has received or has been accorded the opportunity to receive copies of the most recent financial statements delivered pursuant to Section 6.01 thereof, as applicable, and such other documents and information as it deems appropriate to make its own credit analysis and decision to enter into this Assignment and Assumption and to purchase the Assigned Interest, (vi) it has, independently and without reliance upon the Administrative Agent or any other Lender and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Assignment and Assumption and to purchase the Assigned Interest, (vii) if it is a Foreign Lender, attached hereto is any documentation required to be delivered by it pursuant to the terms of the Credit Agreement, duly completed and executed by the Assignee, (viii) it has reviewed the DQ List and (ix) it is **[not]** a Disqualified Institution; and (b) agrees that (i) it will, independently and without reliance on the Administrative Agent, the Assignor or any other Lender, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking action under the Loan Documents and (ii) it will perform in accordance with their terms all of the obligations which by the terms of the Loan Documents are required to be performed by it as a Lender.

2. Payments. From and after the Effective Date, the Administrative Agent shall make all payments in respect of the Assigned Interest (including payments of principal, interest, fees and other

amounts) to the Assignor for amounts which have accrued to but excluding the Effective Date and to the Assignee for amounts which have accrued from and after the Effective Date. Notwithstanding the foregoing, the Administrative Agent shall make all payments of interest, fees or other amounts paid or payable in kind from and after the Effective Date to the Assignee.

3. General Provisions. This Assignment and Assumption shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and assigns. This Assignment and Assumption may be executed in any number of counterparts, which together shall constitute one instrument. Delivery of an executed counterpart of a signature page of this Assignment and Assumption by telecopy shall be effective as delivery of a manually executed counterpart of this Assignment and Assumption. This Assignment and Assumption shall be governed by, and construed in accordance with, the law of the State of New York.

[FORM OF] ADMINISTRATIVE QUESTIONNAIRE

ADMINISTRATIVE QUESTIONNAIRE – (MULTICURRENCY)

CONFIDENTIAL

1. Information as of date (enter date):

2. Borrower or Deal Name: **Celestica Inc.**

3. Legal Name of Lender of Record for Signature Page:

Markit Entity Identifier (MEI) #:

Fund Manager Name (if applicable):

Legal Address from Tax Document of Lender of Record:

Country:

Address:

City: State/Province: Postal Code:

4. Domestic Funding Address:

Street Address:

Suite/ Mail Code:

City: State:

Postal Code: Country:

5. Eurodollar Funding Address (*if different than #4*):

Street Address:

Suite/ Mail Code:

City: State:

Postal Code: Country:

6. Lender's Contact Information:

Syndicate level information (which may contain material non-public information about the Borrower and its related parties or their respective securities will be made available to the Credit Contact(s). The Credit Contacts identified must be able to receive such information in accordance with his/her institution's compliance procedures and applicable laws, including Federal and State securities laws.

Primary Credit Contact:

First Name:

Middle Name:

Last Name:

Title:

Street Address:

Suite/Mail Code:

City:

State:

Postal Code:

Country:

Office Telephone #:

Office Facsimile #:

Work E-Mail Address:

SyndTrak E-Mail Address:

Secondary Credit Contact:

First Name:

Middle Name:

Last Name:

Title:

Street Address:

Suite/Mail Code:

City:

State:

Postal Code:

Country:

Office Telephone #:

Office Facsimile #:

Work E-Mail Address:

SyndTrak E-Mail Address:

Additional SyndTrak User Access:

Enter E-Mail Addresses of any respective contact who should have access to SyndTrak below.

SyndTrak E-Mail Addresses:

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ADMINISTRATIVE QUESTIONNAIRE – (MULTICURRENCY)

CONFIDENTIAL

Secondary Operations Contact:

First: MI: Last:

Title:

Street Address:

Suite/ Mail Code:

City: State:

Postal Code: Country:

Telephone: Facsimile:

E-Mail Address:

SyndTrak E-Mail Address:

Primary Operations Contact:

First: MI: Last:

Title:

Street Address:

Suite/ Mail Code:

City: State:

Postal Code: Country:

Telephone: Facsimile:

E-Mail Address:

SyndTrak E-Mail Address:

Does Secondary Operations Contact need copy of notices? **YES**
NO

Draft Documentation Contact or Legal Counsel:

First: MI: Last:

Title:

Street Address:

Suite/ Mail Code:

City: State:

Postal Code: Country:

Telephone: Facsimile:

E-Mail Address:

Letter of Credit Contact:

First: MI: Last:

Title:

Street Address:

Suite/ Mail Code:

City: State:

Postal Code: Country:

Telephone: Facsimile:

E-Mail Address:

Operations Closer Contact:

First: **MI:** **Last:**

Title:

Street Address:

Suite/ Mail Code:

City: **State:**

Postal Code: **Country:**

Telephone: **Facsimile:**

E-Mail Address:

7. Currencies and Jurisdictions in Transaction:

PLEASE CHECK BOX OF THE CURRENCIES YOUR INSTITUTION CAN FUND UNDER THIS TRANSACTION:

PLEASE CHECK BOX IF YOUR INSTITUTION CAN FUND UNDER THE FOLLOWING JURISDICTIONS:

8. Lender's Payment Instructions:

Please input payment instructions for each respective currency referenced within Section 6 above in fields below. If your respective institution is unable to fund any of the above currencies, please inform e-mail recipient identified in Section 1 of this Administrative Questionnaire Form immediately. If submitting payment instructions under separate cover, please indentify below.

Are Lender Payment Instructions attached separately? **YES** **NO**

If NO, please complete payment instructions on next page.

Euro Dollar

British Pound Sterling

Canadian Dollar

ADMINISTRATIVE QUESTIONNAIRE – (MULTICURRENCY)

CONFIDENTIAL

Currency: US Dollars

Bank Name:

ABA #:

City: State:

Account #:
Account Name:

Attention:

Currency: Canadian Dollar

Bank Name:

SWIFT #:

Country:

Account #:

Account Name:

FCC Account #:

FCC Account Name:

Attention:

Currency: British Pound Sterling

Bank Name:

SWIFT #:

Country:

Account #:

Account Name:

FCC Account #:

FCC Account Name:

Attention:

Currency: Euro Dollar

Bank Name:

SWIFT #:

Country:

Account #:

Account Name:

FCC Account #:

FCC Account Name:

Attention:

Currency:

Bank Name:

SWIFT #:

Country:

Account #:

Account Name:

FCC Account #:

FCC Account Name:

Attention:

Currency:

Bank Name:

SWIFT #:

Country:

Account #:

Account Name:

FCC Account #:

FCC Account Name:

Attention:

Currency:

Bank Name:

SWIFT #:

Country:

Account #:

Account Name:

FCC Account #:

FCC Account Name:

Attention:

Currency: _____

Bank Name:

SWIFT #:

Country:

Account #:

Account Name:

FCC Account #:

FCC Account Name:

Attention:

ADMINISTRATIVE QUESTIONNAIRE – (MULTICURRENCY)

CONFIDENTIAL

9. Lender's Standby Letter of Credit, Commercial Letter of Credit, and Bankers' Acceptance Fed Wire Payment Instructions (if applicable):

Pay to:

Bank Name:

ABA #:

City: State:

Account #:
Account Name:

Attention:

Use Lender's US Dollars Wire Payment Instructions in Section #8 above? YES NO

10. Lender's Organizational Structure and Tax Status

Please refer to the enclosed withholding tax instructions below and then complete this section accordingly:

Lender Taxpayer Identification Number (TIN): -

Tax Withholding Form Delivered to Bank of America (check applicable one):

W-9 W-8BEN W-8BEN-E W-8ECI W-8EXP W-8IMY

Tax Contact:

First: MI: Last:

Title:

Street Address:

Suite/ Mail Code:

City: State:

Postal Code: Country:

Telephone: Facsimile:

E-Mail Address:

SyndTrak E-Mail Address:

NON–U.S. LENDER INSTITUTIONS

1. Corporations:

If your institution is organized outside of the United States, is classified as a Corporation or other non-flow through entity for U.S. federal income tax purposes, and is the beneficial owner of the interest and other income it receives, you must complete one of the following three tax forms, as applicable to your institution: a.) Form W-8BEN (Certificate of Foreign Status of Beneficial Owner for United States Tax Withholding and Reporting (and a U.S. Tax Compliance Certificate if applicable)) or Form W-8BEN-E, b.) Form W-8ECI (Certificate of Foreign Person's Claim that Income is Effectively Connected with the Conduct of a Trade or Business in the United States), or c.) Form W-8EXP (Certificate of Foreign Government or Other Foreign Organization for United States Tax Withholding and Reporting).

A U.S. taxpayer identification number is required for any institution submitting a Form W-8 ECI. It is also required on Form W-8BEN or Form W-8BEN for certain institutions claiming the benefits of a tax treaty with the U.S. Please refer to the instructions when completing the form applicable to your institution.

2. Flow-Through Entities

If your institution is organized outside the U.S., and is classified for U.S. federal income tax purposes as either a

Partnership, Trust, Qualified or Non-Qualified Intermediary, or other non-U.S. flow-through entity, an original Form

ADMINISTRATIVE QUESTIONNAIRE – (MULTICURRENCY)

CONFIDENTIAL

W-8IMY (Certificate of Foreign Intermediary, Foreign Flow-Through Entity, or Certain U.S. branches for United States Tax Withholding and Reporting) must be completed by the intermediary together with a withholding statement. Flow-through entities other than Qualified Intermediaries are required to include tax forms for each of the underlying beneficial owners.

Please refer to the instructions when completing this form.

U.S. LENDER INSTITUTIONS:

If your institution is incorporated or organized within the United States, you must complete and return Form W-9 (Request for Taxpayer Identification Number and Certification).

Pursuant to the language contained in the tax section of the Credit Agreement, the applicable tax form for your institution must be completed and returned on or prior to the date on which your institution becomes a lender under this Credit Agreement. Failure to provide the proper tax form when requested will subject your institution to U.S. tax withholding.

*Additional guidance and instructions as to where to submit this documentation can be found at this link

11. Bank of America's Payment Instructions:

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Input or attach Bank of America's payment instructions for each respective currency referenced within Section 7 below.

US DOLLAR ONLY Payment Instructions:

Pay to: Bank of America, N.A.

ABA # **xxxxxxxxx**

New York, NY

Account #: **xxxxxxxxxxxx**

Attn: **Wire Clearing Acct for Syn Loans - LIQ**

Ref: Celestica International LP

Foreign Currency Payment Instructions:

Foreign Currency
Payment Instruction

EXHIBIT G

[FORM OF] DESIGNATED BORROWER REQUEST AND ASSUMPTION AGREEMENT

Date: [_____], 20[__]

To: Bank of America, N.A., as Administrative Agent

Ladies and Gentlemen:

This Designated Borrower Request and Assumption Agreement is made and delivered pursuant to Section 2.15(a) of that certain Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

Each of [_____] (the "Applicant Borrower") and the Company hereby confirms, represents and warrants to the Administrative Agent and the Lenders that the Applicant Borrower is a wholly-owned Subsidiary of the Company.

The documents required to be delivered to the Administrative Agent under Section 2.15 of the Credit Agreement will be furnished to the Administrative Agent in accordance with the requirements of the Credit Agreement.

The parties hereto hereby request that the Applicant Borrower be entitled to receive Loans and to have Letters of Credit issued for its account under the Credit Agreement, and understand, acknowledge and agree that neither the Applicant Borrower nor the Company on its behalf shall have any right to request any Loans or Letters of Credit for its account unless and until the date five (5) Business Days after the effective date designated by the Administrative Agent in a Designated Borrower Notice delivered to the Company and the Lenders pursuant to Section 2.15 of the Credit Agreement.

This Designated Borrower Request and Assumption Agreement shall constitute a Loan Document under the Credit Agreement.

THIS DESIGNATED BORROWER REQUEST AND ASSUMPTION AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK. The terms of Sections 10.14 and 10.16 of the Credit Agreement are incorporated herein by reference, *mutatis mutandis*, and the parties hereto agree to such terms.

This Designated Borrower Request and Assumption Agreement may be executed in any number of counterparts, which together shall constitute one instrument. Delivery of an executed counterpart of a signature page of this Agreement by fax transmission or other electronic mail transmission (e.g., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this Agreement.

[*signature page follows*]

IN WITNESS WHEREOF, the parties hereto have caused this Designated Borrower Request and Assumption Agreement to be duly executed and delivered by their proper and duly authorized officers as of the day and year first above written.

[APPLICANT BORROWER]

By: _____

Name:
Title:

CELESTICA INC.,

an Ontario corporation

By: _____

Name:
Title:

EXHIBIT H

[FORM OF] DESIGNATED BORROWER NOTICE

Date: [_____, _____]

To: Celestica Inc.

The Lenders party to the Credit Agreement referred to below

Ladies and Gentlemen:

This Designated Borrower Notice is executed and delivered pursuant to Section 2.15 of that certain Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer, and reference is made thereto for full particulars of the matters described therein.

The parties hereto hereby confirm that from and after [the date hereof][_____, ____], **[Name of Designated Borrower]** (the "Designated Borrower") shall have obligations, duties and liabilities toward each of the other parties to the Credit Agreement identical to those which the Designated Borrower would have had if the Designated Borrower had been an original party to the Credit Agreement as a Borrower. The Designated Borrower confirms its acceptance of, and consents to, all representations and warranties, covenants, and other terms and provisions of the Credit Agreement.

Effective as of [the date hereof][_____, ____] **[Name of Designated Borrower]** shall be a Designated Borrower and be permitted to receive Loans and Letters of Credit for its account on the terms and conditions set forth in the Credit Agreement [and herein] and shall otherwise be a Borrower for all purposes of the Credit Agreement; provided that no Loan Notice or Letter of Credit Application may be submitted by or on behalf of such Designated Borrower until the date five (5) Business Days after such effective date.

The additional terms and conditions applicable to extensions of credit to the Designated Borrower shall be:

[Insert applicable terms and conditions.]

This Designated Borrower Notice shall constitute a Loan Document under the Credit Agreement.

[*signature page follows*]

[1] Include bracketed language if additional terms and conditions apply.

BANK OF AMERICA, N.A.,
as Administrative Agent

By:
Name:
Title:

[DESIGNATED BORROWER]

By:
Name:
Title:

CELESTICA INC.,
an Ontario corporation

By:
Name:
Title:

EXHIBIT I-1

[FORM OF]
U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Lenders That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

Pursuant to the provisions of Section 3.01(e) of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the Loan(s) (as well as any Note(s) evidencing such Loan(s)) in respect of which it is providing this certificate, (ii) it is not a bank within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a ten percent (10%) shareholder of the Company within the meaning of Section 881(c)(3)(B) of the Code and (iv) it is not a controlled foreign corporation described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished the Administrative Agent, the Company and the applicable Borrower(s) with a certificate of its non-U.S. Person status on IRS Form W-8BEN-E (or W-8BEN, as applicable). By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform the Company, such Borrower(s) and the Administrative Agent, and (2) the undersigned shall have at all times furnished the Company, such Borrower(s) and the Administrative Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF LENDER]

By:
Name:
Title:

Date:_____, 20___

EXHIBIT I-2

[FORM OF]
U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Participants That Are Not Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

Pursuant to the provisions of Section 3.01(e) of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record and beneficial owner of the participation in respect of which it is providing this certificate, (ii) it is not a bank within the meaning of Section 881(c)(3)(A) of the Code, (iii) it is not a ten percent (10%) shareholder of the Company within the meaning of Section 881(c)(3)(B) of the Code, and (iv) it is not a controlled foreign corporation as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with a certificate of its non-U.S. Person status on IRS Form W-8BEN-E (or W-8BEN, as applicable). By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform such Lender in writing, and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF PARTICIPANT]

By:
Name:
Title:

Date:_____, 20___

EXHIBIT I-3

[FORM OF]
U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Participants That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

Pursuant to the provisions of Section 3.01(e) of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the participation in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such participation, (iii) with respect to such participation, neither the undersigned nor any of its direct or indirect partners/members is a bank extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a ten percent (10%) shareholder of the Company within the meaning of Section 881(c)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a controlled foreign corporation as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished its participating Lender with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN-E (or W-8BEN, as applicable) or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN-E (or W-8BEN, as applicable) from each of such partner's/member's beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform such Lender and (2) the undersigned shall have at all times furnished such Lender with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF PARTICIPANT]

By:
Name:
Title:

Date:_____, 20___

EXHIBIT I-4

[FORM OF]
U.S. TAX COMPLIANCE CERTIFICATE

(For Foreign Lenders That Are Partnerships For U.S. Federal Income Tax Purposes)

Reference is hereby made to the Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

Pursuant to the provisions of Section 3.01(e) of the Credit Agreement, the undersigned hereby certifies that (i) it is the sole record owner of the Loan(s) (as well as any Note(s) evidencing such Loan(s)) in respect of which it is providing this certificate, (ii) its direct or indirect partners/members are the sole beneficial owners of such Loan(s) (as well as any Note(s) evidencing such Loan(s)), (iii) with respect to the extension of credit pursuant to this Credit Agreement or any other Loan Document, neither the undersigned nor any of its direct or indirect partners/members is a bank extending credit pursuant to a loan agreement entered into in the ordinary course of its trade or business within the meaning of Section 881(c)(3)(A) of the Code, (iv) none of its direct or indirect partners/members is a ten percent (10%) shareholder of the Company within the meaning of Section 881(c)(3)(B) of the Code and (v) none of its direct or indirect partners/members is a controlled foreign corporation related to the Borrower as described in Section 881(c)(3)(C) of the Code.

The undersigned has furnished the Administrative Agent, the Company and the applicable Borrower(s) with IRS Form W-8IMY accompanied by one of the following forms from each of its partners/members that is claiming the portfolio interest exemption: (i) an IRS Form W-8BEN-E (or W-8BEN, as applicable) or (ii) an IRS Form W-8IMY accompanied by an IRS Form W-8BEN-E (or W-8BEN, as applicable) from each of such partner's/member's beneficial owners that is claiming the portfolio interest exemption. By executing this certificate, the undersigned agrees that (1) if the information provided on this certificate changes, the undersigned shall promptly so inform the Company, such Borrower(s) and the Administrative Agent, and (2) the undersigned shall have at all times furnished the Company, such Borrower(s) and the Administrative Agent with a properly completed and currently effective certificate in either the calendar year in which each payment is to be made to the undersigned, or in either of the two calendar years preceding such payments.

Unless otherwise defined herein, terms defined in the Credit Agreement and used herein shall have the meanings given to them in the Credit Agreement.

[NAME OF LENDER]

By:
Name:
Title:

Date:_____, 20___

EXHIBIT J

[FORM OF] JOINDER AGREEMENT

THIS JOINDER AGREEMENT (the "Joinder Agreement"), dated as of [_____], 20[__], is by and between [_____], a [_____] (the "New Subsidiary"), and BANK OF AMERICA, N.A., in its capacity as Administrative Agent under that certain Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time, the "Credit Agreement"; the terms defined therein being used herein as therein defined), among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA) Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer.

The Loan Parties are required by Section 6.14 of the Credit Agreement to cause the New Subsidiary to become a "[U.S.][Non-U.S.] Guarantor"[32] .

Accordingly, the New Subsidiary hereby agrees as follows with the Administrative Agent, for the benefit of the Lenders:

1. The New Subsidiary hereby acknowledges, agrees and confirms that, by its execution of this Joinder Agreement, the New Subsidiary will become, and will be deemed to be, a party to the Credit Agreement and a [U.S.][Non-U.S.] Guarantor" for all purposes of the Credit Agreement, and shall have all of the obligations of a [U.S.][Non-U.S.] Guarantor thereunder as if it had executed the Credit Agreement. The New Subsidiary hereby ratifies, as of the date hereof, and agrees to be bound by, all of the terms, provisions and conditions applicable to a [U.S.][Non-U.S.] Guarantor contained in the Credit Agreement. Without limiting the generality of the foregoing terms of this paragraph 1, the New Subsidiary hereby jointly and severally together with the other [U.S.][Non-U.S.] Guarantors, guarantees to each Lender and the Administrative Agent, as provided in Article XI of the Credit Agreement, the prompt payment of the [Non-U.S.][33] Obligations in full when due (whether at stated maturity, as a mandatory prepayment, by acceleration, a mandatory cash collateralization or otherwise) strictly in accordance with the terms thereof.

2. The New Subsidiary hereby acknowledges, agrees and confirms that, by its execution of this Joinder Agreement, the New Subsidiary will become, and will be deemed to be, a party to the [Domestic U.S.][Canadian][Specified U.S.][34] Security Agreement, and shall have all the obligations of a "Grantor" (as such term is defined in the [Domestic U.S.][Canadian][Specified U.S.] Security Agreement) thereunder as if it had executed the [Domestic U.S.][Canadian][Specified U.S.] Security Agreement. The New Subsidiary hereby ratifies, as of the date hereof, and agrees to be bound by, all of the terms, provisions and conditions contained in the [Domestic U.S.][Canadian][Specified U.S.] Security Agreement. Without limiting the generality of the foregoing terms of this paragraph 2, the New

[32] The New Subsidiary shall be a "U.S. Guarantor" if it is U.S. Subsidiary and not a CFC Holdco or a "Non-U.S. Guarantor" if it is a Non-U.S. Subsidiary or a CFC Holdco.

[33] Include for Non-U.S. Guarantors.

[34] The New Subsidiary shall be deemed to join (i) the U.S. Security Agreement if it is a U.S. Subsidiary that is not a CFC or a CFC Holdco (a "Specified Subsidiary"), (ii) the Specified U.S. Security Agreement if it is a U.S. Subsidiary that is a Specified Subsidiary or (iii) the Canadian Security Agreement if it is a Non-U.S. Subsidiary; provided that if the Administrative Agent has requested that the New Subsidiary enter into another pledge and/or security agreement, indicate the name of such agreement.

Subsidiary hereby grants to the Administrative Agent, for the benefit of the holders of the [Non-U.S.][35] Obligations (with such term having the meaning provided therefor in the [Domestic U.S.][Canadian] [Specified U.S.] Security Agreement), a continuing security interest in, and a right of set off against any and all right, title and interest of the New Subsidiary in and to the Collateral (as such term is defined in Section 2 of the [Domestic U.S.][Canadian][Specified U.S.] Security Agreement) of the New Subsidiary. The New Subsidiary hereby represents and warrants to the Administrative Agent, for the benefit of the holders of the Secured Obligations (as such term is defined in Section 1 of the [Domestic U.S.][Canadian] [Specified U.S.] Security Agreement), that:

(i) The New Subsidiary's exact legal name (as such name appears in the New Subsidiary's articles or certificate of incorporation or similar organizational document), jurisdiction of organization, business number and/or taxpayer identification number and organizational identification number, if any, are set forth on Schedule 1 attached hereto.

(ii) The New Subsidiary's chief executive office is located at the location set forth on Schedule 2 attached hereto.

(iii) Except as set forth on Schedule 3 attached hereto, the New Subsidiary has not in the past five (5) years changed its legal name, used any other legal name or been party to a merger, amalgamation, consolidation or other change in corporate structure.

(iv) The location of all owned and leased real property of the New Subsidiary is as shown on Schedule 4 attached hereto (together with an indication of whether it is owned or leased). If leased, the name and address of the landlord shall be included.

(v) The patents, copyrights, and trademarks listed on Schedule 5 attached hereto constitute all of the registered patents, registered trademarks and registered copyrights of owned by such New Subsidiary as of the date hereof, all patent applications, trademark applications and copyright applications made by such New Subsidiary as of the date hereof and all exclusive patent licenses, trademark licenses and copyright licenses to which such New Subsidiary is a party as of the date hereof.

(vi) The deposit accounts and securities accounts listed on Schedule 6 attached hereto constitute all of the deposit accounts and securities accounts owned by the New Subsidiary.

(vii) Schedule 7 attached hereto sets forth a complete and accurate list of (i) any Pledged Equity owned by the New Subsidiary that is required to be pledged and delivered to the Administrative Agent pursuant to the [Domestic U.S.][Canadian][Specified U.S.] Security Agreement and (ii) any Instruments, Documents and Tangible Chattel Paper constituting Collateral owned by the New Subsidiary that are required to be pledged and delivered to the Administrative Agent pursuant to Section 4(b)(i) of the [Domestic U.S.][Canadian][Specified U.S.] Security Agreement.

3. The New Subsidiary hereby waives acceptance by the Administrative Agent and the Lenders of the guaranty by the New Subsidiary under Article XI of the Credit Agreement upon the execution of this Joinder Agreement by the New Subsidiary.

[35] Include for Non-U.S. Guarantors.

4. This Joinder Agreement may be executed in any number of counterparts (and by different parties hereto in different counterparts), each of which shall be an original, but all of which when taken together shall constitute one and the same instrument. It shall not be necessary in making proof of this Joinder Agreement to produce or account for more than one such counterpart. Delivery of an executed counterpart of a signature page of this Joinder Agreement by fax transmission or other electronic mail transmission (e.g., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this Agreement.

5. THIS JOINDER AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.

[*signature page follows*]

IN WITNESS WHEREOF, the New Subsidiary has caused this Joinder Agreement to be duly executed by its authorized officers, and the Administrative Agent, for the benefit of the Lenders, has caused the same to be accepted by its authorized officer, as of the day and year first above written.

[NEW SUBSIDIARY]

By:_____
Name:
Title:

Acknowledged and accepted:

BANK OF AMERICA, N.A.,
as Administrative Agent

By:_____
Name:
Title:

Schedule 1
TO [FORM OF] JOINDER AGREEMENT

[Legal Name, Jurisdiction of Organization[,][and] Business Number and/or Taxpayer Identification Number [and Organization Identification Number]]

Schedule 2
TO [FORM OF] JOINDER AGREEMENT

[Chief Executive Office]

Schedule 3
TO [FORM OF] JOINDER AGREEMENT

[Changes in Legal Name, Mergers / Changes in Corporate Structure]

Schedule 4
TO [FORM OF] JOINDER AGREEMENT

[Owned and Leased Real Property]

Schedule 5
TO [FORM OF] JOINDER AGREEMENT

[Patents, Copyrights, and Trademarks]

Schedule 6
TO [FORM OF] JOINDER AGREEMENT

[Deposit Accounts and Securities Accounts]

Schedule 7
TO [FORM OF] JOINDER AGREEMENT

[Pledged Equity][and Pledged Instruments, Documents and Tangible Chattel Paper]

EXHIBIT K

[FORM OF] SECURED PARTY DESIGNATION NOTICE

Date: [_____], [_____]

To: Bank of America, N.A., as Administrative Agent

Ladies and Gentlemen:

THIS SECURED PARTY DESIGNATION NOTICE is made by **[**_____], a [_____] (the "Designor"), to **BANK OF AMERICA, N.A.**, as Administrative Agent under that certain Credit Agreement referenced below (in such capacity, the "Administrative Agent"). All capitalized terms not defined herein shall have the meaning ascribed to them in the Credit Agreement.

W I T N E S S E T H :

WHEREAS, Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership (together with the Company, the "Canadian Borrowers"), Celestica (USA), Inc., a Delaware corporation (the "Initial U.S. Borrower"), the other Borrowers from time to time party thereto, the Guarantors from time to time party thereto, the Lenders from time to time party thereto, and Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer have entered into that certain Credit Agreement, dated as of June 27, 2018 (as amended, modified, extended, restated, renewed, replaced or supplemented from time to time in writing, the "Credit Agreement"), pursuant to which certain loans and financial accommodations have been made to the Borrowers;

WHEREAS, in connection with the Credit Agreement, a Lender or an Affiliate of a Lender is permitted to designate its **[Cash Management Agreement/Swap Contract]** as a **["Secured Cash Management Agreement"/"Secured Swap Contract"]** under the Credit Agreement and the Collateral Documents;

WHEREAS, the Credit Agreement requires that the Designor deliver this Secured Party Designation Notice to the Administrative Agent; and

WHEREAS, the Designor has agreed to execute and deliver this Secured Party Designation Notice:

1. Designation. Designor hereby designates the **[Cash Management Agreement/Swap Contract]** described on Schedule 1 hereto to be a "**[Secured Cash Management Agreement/Secured Swap Contract]**" and hereby represents and warrants to the Administrative Agent that such **[Cash Management Agreement/Swap Contract]** satisfies all the requirements under the Loan Documents to be so designated. By executing and delivering this Secured Party Designation Notice, the Designor, as provided in the Credit Agreement, hereby agrees to be bound by all of the provisions of the Loan Documents which are applicable to it as a provider of a **[Secured Cash Management Agreement/ Secured Swap Contract]** and hereby (a) confirms that it has received a copy of the Loan Documents and such other documents and information as it has deemed appropriate to make its own decision to enter into this Secured Party Designation Notice, (b) appoints and authorizes the Administrative Agent to take such action as agent on its behalf and to exercise such powers and discretion under the Credit Agreement, the other Loan Documents or any other instrument or document furnished pursuant thereto as are delegated to the Administrative Agent by the terms thereof, together with such powers as are incidental thereto (including, without limitation, the provisions of Section 9.01 of the Credit Agreement), and (c) agrees that

it will be bound by the provisions of the Loan Documents and will perform in accordance with its terms all the obligations which by the terms of the Loan Documents are required to be performed by it as a provider of a **[Cash Management Agreement/Swap Contract]**. Without limiting the foregoing, the Designor agrees to indemnify the Administrative Agent as contemplated by Section 10.04(c) of the Credit Agreement.

2. GOVERNING LAW. THIS SECURED PARTY DESIGNATION NOTICE SHALL BE GOVERNED BY, AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK.

[signature page follows]

IN WITNESS WHEREOF, the undersigned have caused this Secured Party Designation Notice to be duly executed and delivered by their respective officers thereunto duly authorized as of the date first above written.

DESIGNOR:

By:

Name:

Title:

ADMINISTRATIVE AGENT:

By:

Name:

Title:

Exhibit 4.29

FIRST INCREMENTAL FACILITY AMENDMENT

This FIRST INCREMENTAL FACILITY AMENDMENT (this "Amendment") dated as of November 14, 2018 to the Credit Agreement referenced below is by and among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership, Celestica (USA) Inc., a Delaware corporation (together with the Company and Celestica International LP, the "Borrowers"), the Guarantors party hereto, the Incremental Term B–2 Lender (defined below), and Bank of America, N.A., in its capacity as Administrative Agent (in such capacity, the "Administrative Agent"). Capitalized terms used herein but not otherwise defined herein shall have the meanings provided to such terms in the Credit Agreement (as amended by this Amendment).

W I T N E S S E T H

WHEREAS, revolving credit and term loan facilities have been extended to the Borrowers (together with the additional Borrowers party thereto from time to time) pursuant to that certain Credit Agreement dated as of June 27, 2018 (as amended, modified, increased, extended, restated, renewed, replaced and/or supplemented from time to time, the "Credit Agreement") by and among the Borrowers (including any such additional Borrowers), the Guarantors identified therein, the Lenders identified therein and the Administrative Agent;

WHEREAS, the Company has notified the Administrative Agent that, pursuant to Section 2.16 of the Credit Agreement, Bank of America, N.A. (the "Incremental Term B–2 Lender") has agreed to provide a term loan to the Company in the aggregate principal amount of Two-Hundred Fifty Million Dollars ($250,000,000), which term loan shall constitute an Incremental Tranche B Term Loan as such term is defined and used in the Credit Agreement (the "Incremental Term B–2 Loan");

WHEREAS, the Company, the Incremental Term B–2 Lender and the Administrative Agent have agreed that the Incremental Term B–2 Loan shall (a) have the same amortization and maturity date as the Term B Loan, (b) have an Applicable Rate of two and fifty hundredths percent (2.50%) per annum to the extent advanced as a Eurocurrency Rate Loan and one and fifty hundredths percent (1.50%) per annum to the extent advanced as a Base Rate Loan, (c) provide call protection pursuant to the provisions of Section 2.06(a)(iii) of the Credit Agreement, for the benefit of the Incremental Term B–2 Lender, through, and including, the date that is six (6) months after the date hereof, with the amount of any prepayment premium referred to therein that is payable (subject to the terms and conditions of the Credit Agreement) remaining the same as in the Credit Agreement, and (d) provide pricing protection pursuant to the provisions of Section 2.16(j)(i)(C) of the Credit Agreement, for the benefit of the Incremental Term B–2 Lender, with respect to any Incremental Tranche B Term Facility provided prior to the Maturity Date of the Incremental Term B–2 Loan;

WHEREAS, the Company and the Administrative Agent acknowledge and agree that the advance of the Incremental Term B–2 Loan as described above will, pursuant to Section 2.16(j)(i)(C) of the Credit Agreement, result in an increase of the Applicable Rate payable by the Borrowers with respect to the Term B Loan, and accordingly, the Company and the Administrative Agent have agreed that the Applicable Rate with respect to the Term B Loan shall be increased pursuant to Section 2.16(j)(i)(C) of the Credit Agreement from two percent (2.00%) per annum to two and one-hundred twenty-five thousandths percent (2.125%) per annum to the extent advanced as a Eurocurrency Rate Loan, and from one percent (1.00%) per annum to one and one-hundred twenty-five thousandths percent (1.125%) per annum to the extent advanced as a Base Rate Loan;

WHEREAS, in consideration for the Incremental Term B–2 Loan, the Company is willing to pay the per annum interest rates described above with respect to each of the Incremental Term B–2 Loan and the Term B Loan, and to provide call protection and pricing protection pursuant to the provisions of Sections 2.06(a)(iii) and 2.16(j)(i)(C) of the Credit Agreement, respectively, as described above with respect to the Incremental Term B–2 Loan, in each case for the benefit of the Incremental Term B–2 Lender and each Lender with a Term B Loan Commitment, as applicable;

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Defined Terms. Capitalized terms used herein but not otherwise defined herein shall have the meanings provided to such terms in the Credit Agreement (as amended by this Amendment).

2. Establishment of Incremental Tranche B Term Loan.

2.1. Establishment of Incremental Term B–2 Loan.

(a) Subject to the terms and conditions provided herein, the Incremental Term B–2 Loan is hereby established pursuant to Section 2.16 of the Credit Agreement in the original aggregate principal amount of Two-Hundred Fifty Million Dollars ($250,000,000).

(b) Subject to the terms and conditions set forth herein and in the Credit Agreement (as amended by this Amendment), the Incremental Term B–2 Lender agrees to make its portion of the Incremental Term B–2 Loan to the Company in Dollars in a single advance on the date hereof in an amount not to exceed such Lender's Incremental Term B–2 Loan Commitment as set forth on Schedule 1 hereto.

(c) The Incremental Term B–2 Loan shall constitute a new and separate Term Loan under the Credit Agreement and may consist of Base Rate Loans or Eurocurrency Rate Loans, or a combination thereof, as further provided in the Credit Agreement, provided, however, that any Borrowings made on the date hereof shall be made as Base Rate Loans unless the Company delivers a funding indemnity letter not less than three (3) Business Days (or such shorter period as the Administrative Agent may agree in its sole discretion) prior to the date hereof. Amounts repaid on the Incremental Term B–2 Loan may not be reborrowed.

(d) The Incremental Term B–2 Loan is an Incremental Term Facility incurred, in part, utilizing the amount set forth in the compliance certificate delivered to the Administrative Agent pursuant to Section 4.4 below (the "Incremental Capacity Reduction Amount") of the $150,000,000 aggregate capacity for Incremental Facilities set forth in Section 2.16(a)(i) of the Credit Agreement, with the remaining aggregate principal amount of the Incremental Term B–2 Loan incurred utilizing the ratio incurrence basket set forth in Section 2.16(a)(ii) of the Credit Agreement.

2.2. Amortization. The Company shall repay the outstanding principal amount of the Incremental Term B–2 Loan in equal quarterly installments of $625,000, commencing on March 31, 2019 and on each June 30, September 30, December 31 and March 31 thereafter, with the remaining outstanding principal balance of the Incremental Term B–2 Loan due and payable on the Maturity Date (as such installments may hereafter be adjusted as a result of (A) prepayments of the Incremental Term B–2 Loan made pursuant to Section 2.06 of the Credit Agreement and (B) any increase to the Incremental Term B–2 Loan made pursuant to Section 2.16 of the Credit Agreement), unless accelerated sooner pursuant to Section 8.02 of the Credit Agreement.

2.3. Incremental Facility Amendment. This Amendment is an Incremental Facility Amendment as such term is defined and used in the Credit Agreement.

2.4. Incremental Tranche B Term Loan. The Incremental Term B–2 Loan is an Incremental Term Loan and an Incremental Tranche B Term Loan as such terms are defined and used in the Credit Agreement.

3. Amendments to the Credit Agreement.

3.1. Amendments Related to Incremental Term B–2 Loan. Pursuant to Section 10.01(b)(v) of the Credit Agreement, in connection with the establishment of the Incremental Term B–2 Loan pursuant to this Amendment, the Credit Agreement is hereby amended in the following respects:

(a) Section 1.01 of the Credit Agreement is amended by inserting the following new definitions in the appropriate alphabetical order:

"First Incremental Facility Amendment" means that certain amendment to this Agreement, dated as of the First Incremental Facility Amendment Effective Date, by and among the Borrowers party thereto, the Guarantors party thereto, the Lender party thereto and the Administrative Agent.

"First Incremental Facility Amendment Effective Date" means November 14, 2018.

"Incremental Term B–2 Loan" means the Incremental Tranche B Term Loan made to the Company pursuant to the First Incremental Facility Amendment.

"Incremental Term B–2 Loan Commitment" means, as to each Lender party to the First Incremental Facility Amendment, its obligation to make its portion of the Incremental Term B–2 Loan to the Company on the First Incremental Facility Amendment Effective Date pursuant to Section 2.01(c), in the principal amount set forth opposite such Lender's name on Schedule 1 to the First Incremental Facility Amendment. The aggregate principal amount of the Incremental Term B–2 Loan Commitments of all of the Lenders as in effect on the First Incremental Facility Amendment Effective Date is Two-Hundred Fifty Million Dollars ($250,000,000).

"Interim Interest Period" means, with respect to any Eurocurrency Rate Loan advanced under the Incremental Term B–2 Loan on the First Incremental Facility Amendment Effective Date, the period from the First Incremental Facility Amendment Effective Date to, and including, December 27, 2018.

"Call Protection Period" means, (a) with respect to the Term B Loan, the period from the Closing Date to, and including, the date that is six (6) months after the Closing Date, and (b) with respect to the Incremental Term B–2 Loan, the period from the First Incremental Facility Amendment Effective Date to, and including, the date that is six (6) months after the First Incremental Facility Amendment Effective Date.

(b) In Section 1.01 of the Credit Agreement, the definition of "Applicable Rate" is amended by:

(i) re-designating clauses "(b)" and "(c)" as clauses "(c)" and "(d)", respectively;

(ii) inserting "other" after "with respect to any" in the newly re-designated clause (c) of such definition; and

(iii) in clause (a) thereof:

(A) replacing "two percent (2.00%)" with "two and one-hundred twenty-five thousandths percent (2.125%)";

(B) replacing "one percent (1.00%)" with "one and one-hundred twenty-five thousandths percent (1.125%)"; and

(C) inserting the following after "in the case of Base Rate Loans" in such clause (a): ", (b) with respect to the Incremental Term B–2 Loan, two and fifty hundredths percent (2.50%) per annum in case of Eurocurrency Rate Loans thereunder and one and fifty hundredths percent (1.50%) per annum in case of Base Rate Loans thereunder".

(c) In Section 1.01 of the Credit Agreement, the definition of "Eurocurrency Rate" is amended by:

(i) inserting the following prior to the colon in clause (a) thereof: ", other than the Interim Interest Period with respect to any Eurocurrency Rate Loan advanced under the Incremental Term B–2 Loan on the First Incremental Facility Amendment Effective Date";

(ii) deleting "and" at the end of sub-clause (a)(iii) thereof;

(iii) re-designating clause (b) thereof as a new clause (c) thereof; and

(iv) inserting a new clause (b) thereof to read as follows:

(b) for the Interim Interest Period with respect to any Eurocurrency Rate Loan advanced under the Incremental Term B–2 Loan on the First Incremental Facility Amendment Effective Date, the rate per annum equal to LIBOR, or a comparable or successor rate that is approved by the Administrative Agent, as published on the applicable Bloomberg screen page (or such other commercially available source providing such quotations as may be designated by the Administrative Agent from time to time) at approximately 11:00 a.m., London time, two (2) Business Days prior to the First Incremental Facility Amendment Effective Date, for deposits in Dollars (for delivery on the First Incremental Facility Amendment Effective Date) with a term of one month; and

(d) In Section 1.01 of the Credit Agreement, the definition of "Interest Period" is amended by:

(i) inserting "subject to clause (d) in the proviso immediately below, and" immediately before "in each case";

(ii) deleting "and" at the end of clause (b) thereof;

(iii) deleting the period, and inserting "; and", at the end of clause (c) thereof; and

(iv) inserting a new clause (d) thereof to read as follows:

(d) with respect to any Eurocurrency Rate Loan advanced under the Incremental Term B–2 Loan on the First Incremental Facility Amendment Effective Date, at any time prior to December 27, 2018, the term "Interest Period" shall mean the Interim Interest Period.

(e) In Section 1.01 of the Credit Agreement, the definition of "Maturity Date" is amended by inserting "and the Incremental Term B–2 Loan" after "as to the Term B Loan".

(f) Section 1.01 of the Credit Agreement is amended by replacing the definition of "Repricing Event" in its entirety as follows:

"Repricing Event" means (a) any optional or mandatory prepayment of the Term B Loan or the Incremental Term B–2 Loan, in whole or in part, with the

proceeds of, or conversion of any portion of the Term B Loan or the Incremental Term B–2 Loan into, any new or replacement tranche of Indebtedness bearing interest with an All-In-Yield less than the All-In-Yield of such portion of the Term B Loan or the Incremental Term B–2 Loan (as such All-In-Yields are reasonably determined by the Administrative Agent consistent with generally accepted financial practices) and (b) any amendment to any portion of this Agreement with respect to either the Term B Loan or the Incremental Term B–2 Loan which, directly or indirectly, reduces the All-In-Yield applicable to such Term Loan (except with respect to any Lender that consents to such amendment), in each case of clauses (a) and (b), solely to the extent that the primary purpose of such replacement or amendment, as determined by the Administrative Agent, is to reduce the All-In-Yield on such Term Loan. Notwithstanding the foregoing, "Repricing Event" shall exclude, in any such case, (x) any refinancing or repricing of the Term B Loan, the Incremental Term B–2 Loan or amendment to this Agreement in connection with any Change of Control transaction, and (y) any "transformational" acquisition by the Company or any Restricted Subsidiary.

(g) Section 1.01 of the Credit Agreement is amended by replacing the definition of "Responsible Officer" in its entirety as follows:

"Responsible Officer" means the chief executive officer, president, executive vice president, vice president, chief financial officer, treasurer, assistant treasurer, controller or such other Person who is the highest ranking officer appointed pursuant to the relevant Organization Documents (or, in foreign jurisdictions, substantially equivalent representatives, including a director or manager) of a Loan Party, and solely for purposes of the delivery of incumbency certificates pursuant to Section 4.01, the secretary or any assistant secretary (or, in foreign jurisdictions, substantially equivalent representatives, including a director or manager) of a Loan Party and, solely for purposes of notices given pursuant to Article II, any other officer or employee or equivalent representative of the applicable Loan Party so designated by any of the foregoing officers, directors or managers in a notice to the Administrative Agent or any other officer or employee of the applicable Loan Party designated in or pursuant to an agreement between the applicable Loan Party and the Administrative Agent. Any document delivered hereunder that is signed by a Responsible Officer of a Loan Party shall be conclusively presumed to have been authorized by all necessary corporate, partnership and/or other action on the part of such Loan Party and such Responsible Officer shall be conclusively presumed to have acted on behalf of such Loan Party. To the extent requested by the Administrative Agent, each Responsible Officer will provide an incumbency certificate and appropriate authorization documentation, in form and substance reasonably satisfactory to the Administrative Agent.

(h) The title of Section 2.01 of the Credit Agreement is amended (including in the Table of Contents to the Credit Agreement) to read as follows: "Revolving Loans, Term B Loan and Incremental Term B–2 Loan.".

(i) In Section 2.01 of the Credit Agreement, a new clause (c) is added to read as follows:

(c) Incremental Term B–2 Loan. Subject to the terms and conditions set forth herein and in the First Incremental Facility Amendment, each Lender party to the First Incremental Facility Amendment severally agrees to make its portion of the Incremental Term B–2 Loan to the Company in Dollars on the First Incremental Facility Amendment Effective Date in an amount not to exceed such Lender's Incremental Term B–2 Loan Commitment. Amounts repaid on the Incremental Term B–2 Loan may not be reborrowed. The Incremental Term B–2 Loan may consist of Base Rate Loans or Eurocurrency Rate Loans, or a combination thereof, as further provided herein, provided, however, that any Borrowings made on the First Incremental Facility Amendment Effective Date shall be made as Base

Rate Loans unless the Company delivers a funding indemnity letter not less than three (3) Business Days prior to the date of such Borrowing.

(j) The first sentence of Section 2.06(a)(iii) of the Credit Agreement is amended in its entirety to read as follows:

In the event that, on any day during the relevant Call Protection Period, (A) a Repricing Event occurs with respect to the Term B Loan or the Incremental Term B–2 Loan, or (B) a Lender holding a portion of the Term B Loan or the Incremental Term B–2 Loan, as applicable, is deemed to be a Non-Consenting Lender and must assign its portion of such Term Loan pursuant to Section 10.13 in connection with any waiver, amendment or modification that would reduce the effective All-In-Yield in effect with respect to such Term Loan, then, in each case, the aggregate principal amount to be prepaid or repaid or assigned, as applicable, will be subject to a prepayment premium in an amount equal to one percent (1.00%) of (x) the principal amount of such Term Loan that is prepaid (in the case of an optional or mandatory prepayment of such Term Loan described in clause (a) of the definition of "Repricing Event"), (y) the aggregate outstanding principal amount of such Term Loan (in the case of an amendment described in clause (b) of the definition of "Repricing Event"), or (z) the principal amount of such Term Loan that is assigned (in the case of the foregoing clause (B)).

(k) Section 2.16 of the Credit Agreement is amended by:

(i) replacing the dollar amount "$150,000,000" in clause (a)(i) thereof with the dollar amount equal to $150,000,000 minus the Incremental Capacity Reduction Amount; and

(ii) replacing the language occurring after the semi-colon in clause (j)(i)(C) thereof in its entirety as follows: "provided that, notwithstanding anything to the contrary in the foregoing clause (C), (x) the provisions of this clause (C) shall not apply to any Incremental Tranche B Term Facility established after the first twelve (12) months following the Closing Date in relation to the Term B Loan or any then existing Incremental Tranche B Term Facility other than the Incremental Term B–2 Loan, and (y) the benefits of this clause (C) shall apply to the Incremental Term B–2 Loan established on the First Incremental Facility Amendment Effective Date to the extent any Incremental Tranche B Term Facility is established after the First Incremental Facility Amendment Effective Date;

(l) Section 6.13 of the Credit Agreement is amended by replacing "the Term B Loan" with "each of the Term B Loan and the Incremental Term B–2 Loan".

3.2. Technical Amendments. Pursuant to Section 10.01(b)(xii) of the Credit Agreement, the Credit Agreement is hereby amended in the following respects to correct the administrative errors and omission identified below:

(a) Section 8.03 of the Credit Agreement is amended by:

(i) replacing "Sections 2.16 and 2.17" with "Sections 2.17 and 2.18"; and

(ii) replacing each instance of "and 2.16" with "and 2.17"; and

(b) The definition of "Fee Letter" in Section 1.01 of the Credit Agreement is amended by replacing "means the" with "means, collectively, the letter agreement, dated June 4, 2018 among the Canadian Borrowers, the Initial U.S. Borrower and Bank of America, and the".

4. Conditions Precedent. This Amendment shall become effective as of the date hereof upon satisfaction of each of the following conditions precedent, in each case, in a manner reasonably satisfactory to the Administrative Agent:

4.1. Amendment. Receipt by the Administrative Agent of executed counterparts of this Amendment properly executed by a Responsible Officer of each Loan Party, the Incremental Term B–2 Lender and the Administrative Agent.

4.2. Opinions of Counsel. Receipt by the Administrative Agent of a favorable opinion of each of (A) Arnold & Porter Kaye Scholer LLP, U.S. counsel to the Loan Parties, (B) Blake, Cassels & Graydon LLP, Canadian counsel to the Loan Parties not domiciled in Nova Scotia, and (C) if requested by the Administrative Agent, Stewart McKelvey LLP, Canadian counsel to the Loan Parties domiciled in Nova Scotia, in each case, addressed to the Administrative Agent and the Incremental Term B–2 Lender and dated as of the date hereof, as to such matters concerning the Loan Parties and this Amendment as the Administrative Agent may reasonably request;

4.3. Organization Documents and Resolutions. Receipt by the Administrative Agent of (a) an officer's certificate of each Loan Party, attaching and certifying copies of such Loan Party's Organization Documents (or certifying that there have been no changes to such Organization Documents since their prior delivery to the Administrative Agent) and (b) such certificates of resolutions or other action, incumbency certificates and/or other certificates of a Responsible Officer of each Loan Party as the Administrative Agent may reasonably require evidencing the identity, authority and capacity of each Responsible Officer thereof authorized to act as a Responsible Officer in connection with this Amendment.

4.4. Compliance Certificate. Receipt by the Administrative Agent of a certificate of a Responsible Officer of the Company certifying that:

(a) before and after giving effect to the Incremental Term B–2 Loan on the date hereof, the representations and warranties of the Loan Parties contained in Article V of the Credit Agreement and in each other Loan Document, or which are contained in any document furnished at any time under or in connection therewith, are true and correct in all material respects (or, in the case of any such representations and warranties qualified by materiality or Material Adverse Effect, in all respects as drafted) as of the date hereof with the same effect as if made on and as of the date hereof, except to the extent such representations and warranties specifically refer to an earlier date, in which case, such representations and warranties are true and correct in all material respects (or, in the case of any such representations and warranties qualified by materiality or Material Adverse Effect, in all respects as drafted) as of such earlier date;

(b) before and after giving effect to the Incremental Term B–2 Loan on the date hereof, no event has occurred and is continuing which constitutes a Default or an Event of Default; and

(c) the Incremental Term B–2 Loan has been incurred in compliance with the Credit Agreement, including without limitation Section 2.16 thereof.

4.5. Credit Extension. Receipt by the Administrative Agent of a Request for Credit Extension from the Company relating to the Incremental Term B–2 Loan.

4.6. Beneficial Ownership; Anti-Money Laundering. Upon the reasonable request of the Incremental Term B–2 Lender made at least ten (10) days prior to the date hereof, the Company and each other Loan Party shall have provided to the Incremental Term B–2 Lender the documentation and other information so requested in connection with applicable "know your customer", beneficial ownership, anti-money laundering and anti-terrorist financing rules and regulations, including the PATRIOT Act and the Canadian AML Acts, in each case, at least five (5) days prior to the date hereof;

4.7. Fees. Receipt by the Administrative Agent, each arranger for the transactions contemplated by this Amendment, and the Incremental Term B–2 Lender of any fees required to be paid on or before the date of this Amendment.

4.8. Attorney Costs. The Loan Parties shall have paid all reasonable and documented fees, charges and disbursements of counsel to the Administrative Agent to the extent invoiced prior to or on the date hereof.

5. Reaffirmation. The Loan Parties hereby acknowledge and reaffirm that: (a) they are bound by all of the terms of the Loan Documents to which they are party; (b) this Amendment does not operate to reduce or discharge, or constitute a novation of, their obligations under the Loan Documents; and (c) they are responsible for the observance and full performance of all Obligations, including, without limitation, the repayment of the Loans and reimbursement of any drawings on any Letter of Credit. Furthermore, the Loan Parties acknowledge and confirm that the Liens and security interests referred to in the Credit Agreement are created and granted in favor of the Administrative Agent pursuant to the Collateral Documents and/or other Loan Documents and are valid and subsisting, and agrees that this Agreement is not intended to, and does not, adversely affect or impair, or constitute a novation of, such liens and security interests in any manner.

6. Miscellaneous.

6.1. The Credit Agreement (as amended hereby) and the obligations of the Loan Parties thereunder and under the other Loan Documents are hereby ratified and confirmed and shall remain in full force and effect according to their terms. This Amendment shall not be deemed or construed to be a satisfaction, reinstatement, novation or release of any Loan Document or a waiver by the Administrative Agent, any Lender or any L/C Issuer of any rights and remedies under the Loan Documents, at law or in equity.

6.2. Each of the Loan Parties hereby represents and warrants to the Administrative Agent, the Lenders (including, for the avoidance of doubt, the Incremental Term B–2 Lender) and the L/C Issuers as follows:

(a) The execution, delivery and performance by such Loan Party of this Amendment (i) has been duly authorized by all necessary corporate or other organizational action and (ii) does not and will not (A) contravene the terms of such Person's Organization Documents, (B) conflict with or result in any breach or contravention of, or the creation of any Lien (other than Liens under the Loan Documents) under, or require any payment to be made under (x) any material Contractual Obligation to which such Person is a party or affecting such Person or the properties of such Person or any Restricted Subsidiary, or (y) any material order, injunction, writ or decree of any Governmental Authority or any arbitral award to which such Person or its property is subject, or (C) violate any material Law.

(b) This Amendment has been duly executed and delivered by such Loan Party and constitutes a legal, valid and binding obligation of such Loan Party, enforceable against such Loan Party in accordance with its terms, except to the extent that the enforceability hereof may be limited by applicable Debtor Relief Laws or by general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law).

(c) No material approval, consent, exemption, authorization, or other material action by, or material notice to, or material filing with, any Governmental Authority or any other Person is necessary or required in connection with the execution, delivery or performance by, or enforcement against, such Loan Party of this Amendment other than those that have already been obtained and are in full force and effect.

6.3. This Amendment shall constitute a Loan Document for all purposes.

6.4. This Amendment may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken

together shall constitute a single contract. This Amendment constitutes the entire contract among the parties relating to the subject matter hereof and supersedes any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. This Amendment shall become effective when it shall have been executed by the Administrative Agent and when the Administrative Agent shall have received counterparts hereof that, when taken together, bear the signatures of each of the other parties hereto. Delivery of an executed counterpart of a signature page of this Amendment by facsimile or other electronic imaging means (*e.g.*, "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this Amendment.

6.5. The provisions of this Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns permitted under the Credit Agreement.

6.6. THE TERMS OF SECTIONS 10.14 (GOVERNING LAW; JURISDICTION; ETC.) AND 10.16 (WAIVER OF JURY TRIAL) OF THE CREDIT AGREEMENT ARE INCORPORATED HEREIN BY REFERENCE, *MUTATIS MUTANDIS*.

[*Signature Pages Follow*]

IN WITNESS WHEREOF, each of the parties hereto has caused a counterpart of this First Incremental Facility Amendment to be duly executed and delivered as of the date first above written.

BORROWERS:

CELESTICA INC.,
an Ontario corporation

By: /s/ Elizabeth DelBianco
Name: Elizabeth DelBianco
Title: Executive Vice President

CELESTICA INTERNATIONAL LP,
an Ontario limited partnership, by its general partner,
CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Enzo Vigna
Name: Enzo Vigna
Title: Corporate Treasurer

CELESTICA (USA) INC.,
a Delaware corporation

By: /s/ Robert Ellis
Name: Robert Ellis
Title: Vice President & Secretary

[*Signature Pages Continue*]

U.S. GUARANTORS:

CELESTICA (USA) INC.,
a Delaware corporation

By: /s/ Robert Ellis
Name: Robert Ellis
Title: Vice President & Secretary

CELESTICA (US HOLDINGS) LLC,
a Delaware limited liability company

By: /s/ Robert Ellis
Name: Robert Ellis
Title: Vice President & Secretary

CELESTICA LLC,
a Delaware corporation

By: /s/ Robert Ellis
Name: Robert Ellis
Title: Vice President & Secretary

CELESTICA OREGON LLC,
a Delaware corporation

By: /s/ Robert Ellis
Name: Robert Ellis
Title: Vice President & Secretary

CELESTICA PRECISION MACHINING LTD.,
a California corporation

By: /s/ Robert Ellis
Name: Robert Ellis
Title: Secretary & Treasurer

[*Signature Pages Continue*]

IRON MAN ACQUISITION INC.,
a Delaware corporation

By: /s/ Robert Mionis
Name: Robert Mionis
Title: President

[*Signature Pages Continue*]

NON-U.S. GUARANTORS:

CELESTICA INC.,
an Ontario corporation

By: /s/ Elizabeth DelBianco
Name: Elizabeth DelBianco
Title: Executive Vice President

CELESTICA INTERNATIONAL LP,
an Ontario limited partnership, by its general partner,
CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Enzo Vigna
Name: Enzo Vigna
Title: Corporate Treasurer

1282088 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

1287347 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

[*Signature Pages Continue*]

2480333 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

3265598 NOVA SCOTIA COMPANY,
a Nova Scotia unlimited company

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Enzo Vigna
Name: Enzo Vigna
Title: Corporate Treasurer

CELESTICA INTERNATIONAL INC.,
an Ontario corporation

By: /s/ Elizabeth Del Bianco
Name: Elizabeth DelBianco
Title: Executive Vice-President

[*Signature Pages Continue*]

1204362 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

2281302 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

[*Signature Pages Continue*]

MSL SPV SPAIN, INC.,
a Delaware corporation

By: /s/ Robert Ellis
Name: Robert Ellis
Title: Vice President & Secretary

[*Signature Pages Continue*]

ADMINISTRATIVE AGENT: BANK OF AMERICA, N.A.,
as Administrative Agent

By: /s/ Anthony W. Kell
Name: Anthony W. Kell
Title: Vice President

[*Signature Pages Continue*]

INCREMENTAL TERM B–2
LENDER: BANK OF AMERICA, N.A.

By: /s/ Scott Tolchin
Name: Scott Tolchin
Title: Managing Director

SCHEDULE 1

AGGREGATE INCREMENTAL TERM B–2 LOAN COMMITMENTS

Lender	Incremental Term B–2 Loan Commitment ($)
Bank of America, N.A.	$250,000,000.00
Total	$250,000,000.00

Exhibit 4.30

EXECUTION VERSION

SECOND AMENDMENT

This SECOND AMENDMENT (this "Amendment") dated as of December 21, 2018 to the Credit Agreement referenced below is by and among Celestica Inc., an Ontario corporation (the "Company"), Celestica International LP, an Ontario limited partnership, Celestica (USA) Inc., a Delaware corporation (together with the Company and Celestica International LP, the "Borrowers"), the Guarantors party hereto and Bank of America, N.A., in its capacity as Administrative Agent (in such capacity, the "Administrative Agent"). Capitalized terms used herein but not otherwise defined herein shall have the meanings provided to such terms in the Credit Agreement (as amended by this Amendment).

W I T N E S S E T H

WHEREAS, revolving credit and term loan facilities have been extended to the Borrowers (together with the additional Borrowers party thereto from time to time) pursuant to that certain Credit Agreement dated as of June 27, 2018 (as amended by that certain First Incremental Facility Amendment, dated as of November 14, 2018 and as further amended, modified, increased, extended, restated, renewed, replaced and/or supplemented from time to time prior to the date hereof, the "Credit Agreement") by and among the Borrowers (including any such additional Borrowers), the Guarantors identified therein, the Lenders identified therein and the Administrative Agent;

WHEREAS, pursuant to Section 6.19 of the Credit Agreement, the Company has agreed to cause certain Subsidiaries to comply with the requirements of Sections 6.14 and 6.15 of the Credit Agreement and to become Guarantors and Loan Parties thereunder (the "Post-Closing Joinder Obligation");

WHEREAS, pursuant to Section 10.01(d) thereof, the Credit Agreement may be amended with only the consent of the Company and the Administrative Agent to incorporate jurisdiction-specific provisions deemed reasonably necessary or appropriate in connection with the joinder of any Subsidiary as a Guarantor in accordance with the terms of Section 6.14 of the Credit Agreement and the granting of security interests by such Subsidiary in accordance with the terms of Section 6.15 of the Credit Agreement; and

WHEREAS, the Company and the Administrative Agent agree that certain amendments to the Credit Agreement are required in connection with the Company's compliance with the Post-Closing Joinder Obligation;

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Defined Terms. Capitalized terms used herein but not otherwise defined herein shall have the meanings provided to such terms in the Credit Agreement (as amended by this Amendment).

2. Amendments to the Credit Agreement.

2.1. Amendments Related to the Post-Closing Joinder Obligation. Pursuant to Section 10.01(d) of the Credit Agreement, in connection with the joinder of certain Subsidiaries as Guarantors in accordance with the terms of Section 6.14 thereof and the granting of security interests by such Subsidiary in accordance with the terms of Section 6.15 thereof, the Credit Agreement is hereby amended in the following respects:

(a) In Section 1.01 of the Credit Agreement, the definition of "Environmental Laws" is amended by inserting "technical standards," after "other applicable statutes, laws, regulations, ordinances," in such definition.

(b) In Section 1.01 of the Credit Agreement, the definition of "Non-U.S. Obligor" is amended by inserting "or incorporated" after "that is organized" in such definition.

(c) In Section 1.01 of the Credit Agreement, the definition of "Non-U.S. Subsidiary" is amended by inserting "or incorporated" after "that is organized" in such definition.

(d) Section 1.01 of the Credit Agreement is amended by replacing the definition of "Organization Documents" in its entirety as follows:

> "Organization Documents" means, (a) with respect to any corporation or, to the extent organized or incorporated under the laws of a foreign jurisdiction, any company, the certificate and/or articles of incorporation and the bylaws, memorandum of association, articles of association and/or memorandum and articles of association (or equivalent or comparable constitutive documents with respect to any non-U.S. jurisdiction); (b) with respect to any limited liability company, the certificate and/or articles of formation or organization and operating agreement or limited liability company agreement; and (c) with respect to any partnership, joint venture, trust or other form of business entity, the partnership, joint venture or other applicable agreement of formation or organization and any agreement, instrument, filing or notice with respect thereto filed in connection with its formation or organization with the applicable Governmental Authority in the jurisdiction of its formation or organization and, if applicable, any certificate and/or articles of formation or organization of such entity.

(e) In Section 1.01 of the Credit Agreement, the definition of "Subsidiary" is amended by inserting ", exempted company" after "limited liability company" in such definition.

(f) In Section 1.04 of the Credit Agreement, a new clause (e) is added to read as follows:

> (e) For purposes of this Agreement and the other Loan Documents (other than Articles II, IX and X of this Agreement), where the permissibility of any transaction or the determination of any required action or circumstance, in each case under or with respect to any Security Agreement governed by English law, depends upon compliance with, or is determined by reference to, amounts stated in Dollars, (i) such amounts shall be deemed to refer to Dollars and/or the equivalent amount thereof denominated in any currency other than Dollars, as applicable, and (ii) any requisite currency translation shall, unless otherwise specified, be based on the Spot Rate in effect on the Business Day immediately preceding the date of such transaction or determination. The provisions of any such Security Agreement shall be subject to such reasonable changes of construction as the Administrative Agent

may from time to time specify with the Company's consent (not to be unreasonably withheld) to appropriately reflect a change in currency of any country and any relevant market conventions or practices relating to such change in currency, in each case as it relates to such Security Agreement.

(g) In Section 5.01 of the Credit Agreement, clause (a)(i) of such Section is amended in its entirety to read as follows:

(i) duly incorporated, organized or formed

(h) In Section 5.13 of the Credit Agreement, clause (a) of such Section is amended in its entirety to read as follows:

such Subsidiary's jurisdiction of organization or incorporation (as the case may be),

(i) Section 5.25 of the Credit Agreement is amended in its entirety to read as follows:

5.25 Representations as to Non-U.S. Obligors.

Each of the Company and each Non-U.S. Obligor represents and warrants to the Administrative Agent and the Lenders that:

(a) Such Non-U.S. Obligor is subject to civil and commercial Laws with respect to its obligations under this Agreement and the other Loan Documents to which it is a party (collectively as to such Non-U.S. Obligor, the "Applicable Non-U.S. Obligor Documents"), and the execution, delivery and performance by such Non-U.S. Obligor of the Applicable Non-U.S. Obligor Documents constitute and will constitute private and commercial acts and not public or governmental acts. Neither such Non-U.S. Obligor nor any of its property has any immunity from jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution, execution or otherwise) under the laws of the jurisdiction in which such Non-U.S. Obligor is organized or incorporated (as the case may be) and existing in respect of its obligations under the Applicable Non-U.S. Obligor Documents,

(b) The Applicable Non-U.S. Obligor Documents are in proper legal form under the Laws of the jurisdiction in which such Non-U.S. Obligor is organized or incorporated (as the case may be) and existing for the enforcement thereof against such Non-U.S. Obligor under the Laws of such jurisdiction, and to ensure the legality, validity, enforceability, priority or admissibility in evidence of the Applicable Non-U.S. Obligor Documents. It is not necessary to ensure the legality, validity, enforceability, priority or admissibility in evidence of the Applicable Non-U.S. Obligor Documents that the Applicable Non-U.S. Obligor Documents be filed, registered or recorded with, or executed or notarized before, any court or other authority in the jurisdiction in which such Non-U.S. Obligor is organized or incorporated (as the case may be) and existing or that any registration charge or stamp or similar tax be paid on or in respect of the Applicable Non-U.S. Obligor

Documents or any other document, except for (i) any such filing, registration, recording, execution or notarization as has been or will promptly be made or is not required to be made until the Applicable Non-U.S. Obligor Document or any other document is sought to be enforced and (ii) any charge or tax as has been or will be timely paid.

(c) There is no tax, levy, impost, duty, fee, assessment or other governmental charge, or any deduction or withholding, imposed by any Governmental Authority in or of the jurisdiction in which such Non-U.S. Obligor is organized or incorporated (as the case may be) and existing on or by virtue of the execution or delivery of the Applicable Non-U.S. Obligor Documents, except as has been disclosed to the Administrative Agent.

(d) The execution, delivery and performance of the Applicable Non-U.S. Obligor Documents executed by such Non-U.S. Obligor are, under applicable foreign exchange control regulations of the jurisdiction in which such Non-U.S. Obligor is organized or incorporated (as the case may be) and existing, not subject to any notification or authorization except (i) such as have been made or obtained or (ii) such as cannot be made or obtained until a later date (provided that any notification or authorization described in clause (ii) shall be made or obtained as soon as is reasonably practicable).

(j) In Section 10.04 of the Credit Agreement, the first parenthetical phrase appearing in clause (b) of such Section is amended in its entirety to read as follows:

(and any sub-agent thereof or delegate, administrator or receiver appointed by the Administrative Agent pursuant to the terms of the Loan Documents)

3. Conditions Precedent. This Amendment shall become effective as of the date hereof upon satisfaction of each of the following conditions precedent, in each case, in a manner reasonably satisfactory to the Administrative Agent:

3.1. Amendment. Receipt by the Administrative Agent of executed counterparts of this Amendment properly executed by a Responsible Officer of each Loan Party and by the Administrative Agent.

3.2. Opinions of Counsel. Receipt by the Administrative Agent of a favorable opinion of each of (A) Arnold & Porter Kaye Scholer LLP, U.S. counsel to the Loan Parties, (B) Blake, Cassels & Graydon LLP, Canadian counsel to the Loan Parties not domiciled in Nova Scotia, and (C) if requested by the Administrative Agent, Stewart McKelvey LLP, Canadian counsel to the Loan Parties domiciled in Nova Scotia, in each case, addressed to the Administrative Agent the Lenders and dated as of the date hereof, as to such matters concerning the Loan Parties and this Amendment as the Administrative Agent may reasonably request;

3.3. Fees. Receipt by the Administrative Agent of any fees required to be paid on or before the date of this Amendment.

3.4. Attorney Costs. The Loan Parties shall have paid all reasonable and documented fees, charges and disbursements of counsel to the Administrative Agent to the extent invoiced prior to or on the date hereof.

4. Reaffirmation. The Loan Parties hereby acknowledge and reaffirm that: (a) they are bound by all of the terms of the Loan Documents to which they are party; (b) this Amendment does not operate to reduce or discharge, or constitute a novation of, their obligations under the Loan Documents; and (c) they are responsible for the observance and full performance of all Obligations, including, without limitation, the repayment of the Loans and reimbursement of any drawings on any Letter of Credit. Furthermore, the Loan Parties acknowledge and confirm that the Liens and security interests referred to in the Credit Agreement (as amended hereby) are created and granted in favor of the Administrative Agent pursuant to the Collateral Documents and/or other Loan Documents and are valid and subsisting, and agree that this Agreement is not intended to, and does not, adversely affect or impair, or constitute a novation of, such liens and security interests in any manner.

5. Miscellaneous.

5.1. The Credit Agreement (as amended hereby) and the obligations of the Loan Parties thereunder and under the other Loan Documents are hereby ratified and confirmed and shall remain in full force and effect according to their terms. This Amendment shall not be deemed or construed to be a satisfaction, reinstatement, novation or release of any Loan Document or a waiver by the Administrative Agent, any Lender or any L/C Issuer of any rights and remedies under the Loan Documents, at law or in equity.

5.2. Each of the Loan Parties hereby represents and warrants to the Administrative Agent, the Lenders and the L/C Issuers as follows:

(a) The execution, delivery and performance by such Loan Party of this Amendment (i) has been duly authorized by all necessary corporate or other organizational action and (ii) does not and will not (A) contravene the terms of such Person's Organization Documents, (B) conflict with or result in any breach or contravention of, or the creation of any Lien (other than Liens under the Loan Documents) under, or require any payment to be made under (x) any material Contractual Obligation to which such Person is a party or affecting such Person or the properties of such Person or any Restricted Subsidiary, or (y) any material order, injunction, writ or decree of any Governmental Authority or any arbitral award to which such Person or its property is subject, or (C) violate any material Law.

(b) This Amendment has been duly executed and delivered by such Loan Party and constitutes a legal, valid and binding obligation of such Loan Party, enforceable against such Loan Party in accordance with its terms, except to the extent that the enforceability hereof may be limited by applicable Debtor Relief Laws or by general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law).

(c) No material approval, consent, exemption, authorization, or other material action by, or material notice to, or material filing with, any Governmental Authority or any other Person is necessary or required in connection with the execution, delivery or performance by, or enforcement against, such Loan Party of this Amendment other than those that have already been obtained and are in full force and effect.

5.3. This Amendment shall constitute a Loan Document for all purposes.

5.4. This Amendment may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. This Amendment constitutes the entire contract among

the parties relating to the subject matter hereof and supersedes any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. This Amendment shall become effective when it shall have been executed by the Administrative Agent and when the Administrative Agent shall have received counterparts hereof that, when taken together, bear the signatures of each of the other parties hereto. Delivery of an executed counterpart of a signature page of this Amendment by facsimile or other electronic imaging means (e.g., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this Amendment.

5.5. The provisions of this Amendment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns permitted under the Credit Agreement.

5.6. THE TERMS OF SECTIONS 10.14 (GOVERNING LAW; JURISDICTION; ETC.) AND 10.16 (WAIVER OF JURY TRIAL) OF THE CREDIT AGREEMENT ARE INCORPORATED HEREIN BY REFERENCE, *MUTATIS MUTANDIS*.

[*Signature Pages Follow*]

IN WITNESS WHEREOF, each of the parties hereto has caused a counterpart of this Second Amendment to be duly executed and delivered as of the date first above written.

BORROWERS:

CELESTICA INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Executive Vice President & Chief Financial Officer

CELESTICA INTERNATIONAL LP,
an Ontario limited partnership, by its general partner,
CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer

CELESTICA (USA) INC.,
a Delaware corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: President

[*Signature Pages Continue*]

U.S. GUARANTORS:

CELESTICA (USA) INC.,
a Delaware corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: President

CELESTICA (US HOLDINGS) LLC,
a Delaware limited liability company

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: President

CELESTICA LLC,
a Delaware corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Executive Vice President

CELESTICA OREGON LLC,
a Delaware corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Executive Vice President

CELESTICA PRECISION MACHINING LTD.,
a California corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: President

[*Signature Pages Continue*]

NON-U.S. GUARANTORS: CELESTICA INC.,

an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Executive Vice President & Chief Financial Officer

CELESTICA INTERNATIONAL LP,
an Ontario limited partnership, by its general partner,
CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer

1282088 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

1287347 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

[*Signature Pages Continue*]

2480333 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

3265598 NOVA SCOTIA COMPANY,
a Nova Scotia unlimited company

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

CELESTICA INTERNATIONAL GP INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer

CELESTICA INTERNATIONAL INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Executive Vice-President, Finance & Chief Financial Officer

[*Signature Pages Continue*]

1204362 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

2281302 ONTARIO INC.,
an Ontario corporation

By: /s/ Mandeep Chawla
Name: Mandeep Chawla
Title: Chief Financial Officer & Corporate Treasurer

MSL SPV SPAIN, INC.,
a Delaware corporation

By: /s/ Robert Ellis
Name: Robert Ellis
Title: Vice President & Secretary

[*Signature Pages Continue*]

IRON MAN ACQUISITION INC.,

a Delaware corporation

By: /s/ Robert Mionis
Name: Robert Mionis
Title: President

[*Signature Pages Continue*]

ADMINISTRATIVE AGENT: BANK OF AMERICA, N.A.,
as Administrative Agent

By: /s/ Anthony W. Kell
Name: Anthony W. Kell
Title: Vice President

Exhibit 4.31

Execution Version

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS DOCUMENT. THE CONFIDENTIAL PORTIONS HAVE BEEN REDACTED AND ARE DENOTED BY ASTERISKS IN BRACKETS [**]. THE CONFIDENTIAL PORTIONS HAVE BEEN SEPARATELY FILED WITH THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION.

NOTE: The representations and warranties contained in the following agreement have been made solely for the benefit of the parties thereto and should not be relied on by any other person. In addition, such representations and warranties: (i) have been qualified by disclosure schedules, (ii) are subject to the materiality standards set forth herein, which may differ from what may be considered to be material by investors, and (iii) were made only as of the date of the agreement or such other date as specified therein. Accordingly, investors and security holders should not rely on the representations and warranties as characterizations of the actual state of facts. Moreover, information concerning the subject matter of the representations and warranties may change after the date of the agreement, which subsequent information may or may not be fully reflected in the Company's disclosures.

SECURITIES PURCHASE AND MERGER AGREEMENT

dated as of

October 9, 2018

by and among

IMPAKT HOLDINGS, LLC,

GRAYCLIFF PRIVATE EQUITY PARTNERS III PARALLEL (A-1 BLOCKER) LLC,

GRAYCLIFF PRIVATE EQUITY PARTNERS III PARALLEL LP,

CELESTICA (USA) INC.

IRON MAN ACQUISITION INC.,

IRON MAN MERGER SUB, LLC

and

FORTIS ADVISORS LLC,

in its capacity as Holder Representative

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Annexes

Schedules

SECURITIES PURCHASE AND MERGER AGREEMENT

This Securities Purchase and Merger Agreement (this "Agreement"), dated as of October 9, 2018 is entered into by and among **GRAYCLIFF PRIVATE EQUITY PARTNERS III PARALLEL (A-1 BLOCKER) LLC**, a Delaware limited liability company ("Blocker Company"), **GRAYCLIFF PRIVATE EQUITY PARTNERS III PARALLEL LP (**the "Blocker Seller"), **IMPAKT HOLDINGS, LLC**, a Delaware limited liability company (the "Company"), **CELESTICA (USA) INC.** ("Celestica USA"), **IRON MAN ACQUISITION INC**., a Delaware corporation ("Acquiror"), **IRON MAN MERGER SUB, LLC**, a Delaware limited liability company and a wholly-owned subsidiary of Acquiror ("Merger Sub"), and **FORTIS ADVISORS LLC**, a Delaware limited liability company, solely in its capacity as the initial Holder Representative hereunder (the "Holder Representative"). Certain capitalized terms used herein have the meanings ascribed to such terms in ARTICLE I hereof.

RECITALS

WHEREAS, Acquiror, Merger Sub and the Company are hereby adopting a plan of merger, providing for the merger of Merger Sub with and into the Company, with the Company being the surviving entity;

WHEREAS, on the date hereof, each member of the Board of Managers and holders of Company units who hold, in the aggregate, a number of units entitled to cast votes in excess of that number of votes necessary, in each case, under and in full compliance with any requirements, including any notice requirements, of the DLLCA and the Existing LLC Agreement, for the approval of this Agreement, the other Transaction Documents and the transactions contemplated hereby and thereby by the unitholders of the Company, have determined that this Agreement, the other Transaction Documents, and the transactions contemplated hereby and thereby are fair to, and in the best interests of, the Company and its unitholders, and have approved and adopted this Agreement, the Merger, the other Transaction Documents, and the transactions contemplated hereby and thereby and approved their advisability;

WHEREAS, the holders of at least 90% of the Units will deliver within five (5) Business Days of the execution and delivery of this Agreement, an agreement, *inter alia*, to be bound by the indemnification provisions of this Agreement and to provide specified releases following the Effective Time (collectively, the "Unitholder Agreements");

WHEREAS, the Blocker Seller is the record and beneficial owner of 100% of the equity of the Blocker Company (such interest, the "Blocker Interest"), and as of the Closing, the Blocker Company will be the registered and beneficial owner of 3,404,408 Class A Units of the Company; and

WHEREAS, the Blocker Seller desires to sell to Acquiror and Acquiror desires to acquire from Blocker Seller all of the Blocker Interest in accordance with and subject to the terms set forth herein.

AGREEMENT

In consideration of the mutual agreements hereinafter contained, the Blocker Company, the Blocker Seller, Acquiror, Merger Sub, the Company and the Holder Representative agree as follows:

ARTICLE I.

CERTAIN DEFINITIONS

1.1 As used herein, the following terms shall have the following meanings:

"2016 Agreement" means the Securities Purchase Agreement dated June 22, 2016 among Yong Su Pak, Yong Kil Pak, Impakt Opti Holdings, Inc., Impakt Holdings, LLC and Graycliff Impakt A-1 Coinvestors, LLC.

"Acquiror" has the meaning specified in the Preamble.

"Action" means any action, suit, audit, arbitration, mediation, complaint, counterclaim, examination, investigation, administrative enforcement proceeding, request for information or any other proceeding, in each case, whether criminal or civil, by or before any Governmental Authority at Law or in equity, including any appeal or review thereof and application for leave for appeal or review.

"Adjustment Amount" has the meaning specified in Section 2.7(c).

"Adjustment Escrow Amount" means $[**][1].

"Adjustment Escrow Fund" means a separate account in which the Adjustment Escrow Amount will be deposited to be held in trust with the Escrow Agent for the benefit of the Escrow Participants in accordance with this Agreement and the Escrow Agreement.

"Affiliate" means, with respect to any specified Person, any Person that, directly or indirectly, controls, is controlled by, or is under common control with, such specified Person, through one or more intermediaries or otherwise. For purposes of this definition "control" shall mean, when used with respect to any Person, the power to direct the management and policies of such Person, directly or indirectly, through the ownership of voting securities, by contract or otherwise. For purposes of this Agreement, the Blocker Company shall be deemed an "Affiliate" of the Company.

"Agreed Accounting Principles" means the accounting principles and methodologies set forth on Annex B hereto.

"Agreement" has the meaning specified in the Preamble.

[1] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

"Antitrust Authorities" means the Antitrust Division of the United States Department of Justice, the United States Federal Trade Commission or the antitrust or competition Law authorities of any other jurisdiction (whether United States, foreign or multinational).

"Audited Financial Statements" has the meaning specified in Section 3.8(a).

"Auditor" has the meaning specified in Section 2.7(a).

"Blocker Adjustment Amount" has the meaning specified in Section 2.7(c).

"Blocker Company" has the meaning specified in the Preamble.

"Blocker Company Payment" means a portion of the Closing Consideration distributable to the Blocker Seller as consideration for the sale of the Blocker Interest to Acquiror in accordance with the Distribution Waterfall minus the Estimated Current Blocker Tax Liabilities.

"Blocker Company Interest Acquisition" has the meaning specified in Section 2.1(b).

"Blocker Interest" has the meaning specified in the Recitals.

"Blocker Interest Assignment Certificate" has the meaning specified in Section 2.1(b).

"Blocker Seller" has the meaning specified in the Preamble.

"Board of Managers" means the Board of Managers of the Company.

"Bonus Agreement" the Bonus Agreement dated on or about September 27, 2018.

"Bonus Agreement Payment" means the payments due pursuant to the Bonus Agreement by [**][2], [**][2] and Impakt Opti Holdings, Inc. to the Bonus Payment Recipient, which will be paid by [**][2], [**][2] and Impakt Opti Holdings, Inc. in accordance with the terms of the Bonus Agreement.

"Bonus Payment Recipient" means the individual entitled to payments pursuant to the Bonus Agreement.

"Books and Records" means all information in any form relating to the business of the Company Group, including books of account, financial, tax, business, marketing, sales, personnel and research information and records, client lists, information and records, equipment logs, operating guides and manuals, business reports, plans and projections, litigation records and all other documents, files, correspondence and other information.

"Business Day" means a day other than a Saturday, Sunday or other day on which commercial banks in New York, New York, or Toronto, Ontario are authorized or required by Law to close.

[2] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

"Cash and Cash Equivalents" of any Person as of any date means the cash and cash equivalents required to be reflected as cash and cash equivalents on a consolidated balance sheet of such Person and its Subsidiaries as of such date prepared in accordance with GAAP (which may be a negative number in the event of overdrafts), including cash and checks that are deposits-in-transit net of all checks, outgoing wires or drafts written by or on behalf of such Person and its Subsidiaries but not yet cleared and excluding all security or similar deposits.

"Certificate of Merger" has the meaning specified in Section 2.1(a).

"Change in Control Payment" means (a) any bonus, success fee, change in control payment, severance payment, retention payment, and any other payment, benefit or compensation that is accelerated, accrues or becomes due or payable by any member of the Company Group to any present or former director, employee or consultant of the Company Group or to any other Person or Governmental Authority, including pursuant to any Employee Plan or Contract, in each case as a result of the execution and delivery of this Agreement or the consummation of the transactions contemplated by this Agreement (including any such payment, benefit or compensation conditioned on the occurrence of the Closing or the Merger) but not any action (including any termination of service following the Closing or the Merger) by the Acquiror, Surviving Entity or any of its Subsidiaries taken after the Closing and (b) the employer portion of any payroll Taxes attributable to any amounts described in the preceding clause (a). For greater certainty, any Change of Control Payments (as defined in the DGC Agreement) and any amounts payable under or in connection with the termination of the DGC Agreement that remain unpaid as of the Effective Time shall be treated as Change of Control Payments hereunder. Further, except for the employer portion of any payroll Taxes attributable thereto, any amounts payable under or in connection with the Bonus Agreement shall not be treated as Change of Control Payments hereunder.

"Closing" has the meaning specified in Section 2.2.

"Closing Balance Sheet" has the meaning specified in Section 2.7(a).

"Closing Certificate" has the meaning specified in Section 2.2(b)(i).

"Closing Consideration" has the meaning specified in Section 2.4(a)(ii).

"Closing Consideration Allocation" has the meaning specified in Section 7.5(c)(ii).

"Closing Date" has the meaning specified in Section 2.2.

"Closing Date Cash" means the Cash and Cash Equivalents of the Company Group as of the Reference Time.

"Closing Date Indebtedness" means the aggregate amount of all Indebtedness of the Company Group as of the time of Closing (other than any Indebtedness included in Holder Expenses).

"Closing Date Net Working Capital" means (i) Current Assets minus (ii) Current Liabilities, in each case as of the Reference Time.

"Closing Date Other Adjustment Amount" means, without duplication, the aggregate net amount, whether positive or negative, of the value of the Other Adjustment Items, in each case calculated as of the Reference Time in accordance with the Agreed Accounting Principles.

"Closing Statement" has the meaning specified in Section 2.7(a).

"Code" means the Internal Revenue Code of 1986, as amended.

"Company" has the meaning specified in the Preamble.

"Company Disclosure Schedule" has the meaning specified in the introduction to ARTICLE III.

"Company Group" means the Blocker Company, the Company and each of their respective Subsidiaries.

"Company Intellectual Property" has the meaning specified in Section 3.21(c).

"Company Products" means all products from which the Company and its Subsidiaries have derived within the one (1) year period preceding the date hereof revenue from the sale, license, maintenance or provision thereof.

"Company Transaction" has the meaning specified in Section 5.3.

"Confidentiality Agreement" has the meaning specified in Section 12.13.

"Contracts" means any written or oral contracts, agreements, subcontracts, leases, licenses, bonds, mortgage, indentures and notes.

"Cooley" has the meaning specified in Section 12.7.

"Credit Agreements" means (i) the Credit Agreement dated January 23, 2017 among the Company, A-1 Machine Manufacturing Incorporated and Comerica Bank, as amended March 17, 2017, which includes the Master Revolving Note dated January 23, 2017, the term loan note dated August 31, 2017, the Guaranty dated January 23, 2017 made by Sun Surface Technology the general security agreement dated January 23, 2017 and the pledge agreement dated January 23, 2017, (ii) the Loan Contract, dated April 14, 2017, by and between Industrial Bank of Korea and A-1 Engineering Korea, Inc. and (iii) Loan Contract, dated June 30, 2017, by and between Industrial Bank of Korea and A-1 Engineering Korea, Inc.

"Current Assets" means, without duplication, the aggregate amount of the current assets of the Company and its Subsidiaries measured on a consolidated basis as of the Reference Time and in a manner consistent with the terms set forth in Annex B; provided, however, that "Current Assets" shall exclude: (i) Cash and Cash Equivalents, (ii) Tax assets, (iii) any inventory of the Company and its Subsidiaries that is older than 12 months, (iv) any inventory of the Company and its Subsidiaries to the extent that the Company and its Subsidiaries holds an amount of such inventory that is in excess of 12 months' demand at current and expected levels of demand; (v) any Special

Receivable Amounts, (vi) any amounts in connection with the Other Adjustment Items, (vii) any receivable or other asset of A-1 Engineering Korea, Inc. and A-1 Machine Manufacturing Incorporated related to the approximately $472,000 advance made to Impakt Fluid Systems, LLC, (viii) any current assets of Impakt Fluid Systems, LLC; and (ix) all scrap materials, including material scrapped in the Santa Clara site building reduction cleanup and material sent to South Korea for qualification (not production).

"Current Liabilities" means, without duplication, the aggregate amount of the current liabilities of the Company and its Subsidiaries measured on a consolidated basis as of the Reference Time and in a manner consistent with the terms set forth in Annex B, which shall include any current Tax liabilities, calculated in accordance with Section 7.5(i) and 7.5(j); provided, however, that "Current Liabilities" shall exclude (i) any Holder Expenses, (ii) Indebtedness included in Closing Date Indebtedness, (iii) any amounts included in the Other Adjustment Items, (iv) any current liabilities of Impakt Fluid Systems, LLC and (v) the Bonus Agreement Payment Amount.

"Current Blocker Tax Liabilities" means the aggregate amount of current Tax liabilities of the Blocker Company as of the Reference Time, calculated in accordance with Section 7.5(i) and Section 7.5(j).

"Damages" has the meaning specified in Section 9.2(c).

"Deductible" has the meaning specified in Section 9.3(d).

"DGC Agreement" means the Sales Representative Agreement dated as of November 7, 2016 between A-1 Machine Manufacturing Incorporated and DGC Global, Inc.

"Dispute" means any dispute, controversy, claim, counterclaim or similar matter which relates to or arises out of or in connection with this Agreement, including the validity, existence, construction, meaning, performance or effect of this Agreement, or the rights and liabilities of the parties hereto, the Holders and the holders of Phantom Units.

"Distribution Waterfall" is defined in, and shall be calculated in accordance with, the "Distribution Waterfall Schedule" attached hereto as Annex C, which shall be updated as necessary by the Company prior to the Closing.

"DLLCA" means the Delaware Limited Liability Company Act.

"Effective Time" has the meaning specified in Section 2.1.

"Employee Plans" means each "employee benefit plan" (as defined in Section 3(3) of ERISA, whether or not subject to ERISA), and each other (a) retirement, welfare, severance, bonus, incentive, vacation, life, deferred compensation, profit-sharing, or other benefit or compensation plan, program, policy, arrangement or agreement; (b) stock options, stock appreciation rights, or other forms of equity or equity-based compensation or benefits; and (c) employment or offer letters or agreements, separation, termination, change of control or other contract, arrangement or policy providing compensation or benefits, which, in each case, is currently entered into, maintained,

contributed to or required to be contributed to, as the case may be, by the Company or any of its Subsidiaries or under which the Company or any of its Subsidiaries has or may incur any liability or obligation.

"Environment" means any of the following:

(a) land, including surface land, sub-surface strata and any natural or man-made structures;

(b) water, including coastal and inland waters, surface waters, ground waters, drinking water supplies and waters in drains and sewers, surface and sub-surface strata; and

(c) air, including indoor and outdoor air; and

(d) natural resources.

"Environmental Laws" means all Laws, as in effect on or prior to the Closing Date, relating to pollution, the protection of the Environment, Releases of Hazardous Substances or the protection of human health (to the extent related to Hazardous Substances), including, without limitation, CERCLA, the Superfund Amendments and Reauthorization Act, as amended, the Resource Conservation and Recovery Act, as amended, the Toxic Substances Control Act, as amended, the Clean Water Act, as amended, the Clean Air Act, as amended, and any applicable national, international, federal, state or local Law having a similar subject matter.

"Environmental Matter" means:

(a) pollution or contamination of the Environment, including, soil or groundwater contamination or the occurrence or existence of, or the continuation of the existence of, a Release of any Hazardous Substance;

(b) the treatment, disposal or Release of any Hazardous Substance;

(c) exposure of any person to any Hazardous Substance; and/or

(d) the violation of any Environmental Law or any Environmental Permit.

"Environmental Permit" means any Permit issued, granted or required under Environmental Laws.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

"ERISA Affiliate" means any Person that, at any relevant time, is treated as a single employer with the Company or any of its Subsidiaries pursuant to Section 414(b), (c), (m) or (o) of the Code or Section 4001(b) of ERISA.

"Escrow Agent" has the meaning specified in Section 2.5(b)(i).

"Escrow Agreement" has the meaning specified in Section 2.5(b)(i).

"Escrow Fund" means the Indemnity Escrow Fund, the Adjustment Escrow Fund, the Special Escrow Fund and the Current Income Tax Escrow Fund.

"Escrow Participant" means each Holder.

"Estimated Closing Balance Sheet" has the meaning specified in Section 2.6.

"Estimated Closing Date Cash" has the meaning specified in Section 2.6.

"Estimated Closing Date Indebtedness" has the meaning specified in Section 2.6.

"Estimated Closing Date Net Working Capital" has the meaning specified in Section 2.6.

"Estimated Closing Statement" has the meaning specified in Section 2.6.

"Estimated Current Blocker Tax Liabilities" has the meaning specified in Section 2.6.

"Estimated Holder Expenses" has the meaning specified in Section 2.6.

"Estimated Other Adjustment Amount" has the meaning specified in Section 2.6.

"Evaluation Material" has the meaning specified in Section 3.37.

"Excluded Units" has the meaning specified in Section 2.4(a)(i).

"Existing Indebtedness" means Indebtedness pursuant to the Credit Agreements.

"Existing LLC Agreement" means that certain First Amended and Restated Operating Agreement of the Company, dated as of May 2, 2017, as amended on or about December 7, 2017 and February 22, 2018.

"Financial Statements" has the meaning specified in Section 3.8(b).

"Flow-Through Tax Return" means any income Tax Return filed by the Company or any of its Subsidiaries to the extent that (i) the Company or its Subsidiary is treated as a pass-through entity for purposes of such Tax Return and (ii) the results of operations reflected on such Tax Return are allocated to, and reflected on the Tax Returns of, one or more of the holders of Units (or the holders' direct or indirect owners).

"Fraud" means an act in the making of a representation or warranty expressly set forth this Agreement or any certificate delivered pursuant to this Agreement, committed by the Company, the Blocker Company or the Blocker Seller making such express representation or warranty, that such party making such representation or warranty knew or believed to be false or made with reckless indifference to the truth, with intent by it or any of its Representatives to deceive Acquiror or to induce Acquiror to enter into this Agreement, and requires (a) a false representation of fact expressly set forth in the representations and warranties set forth in this Agreement; (b) knowledge by the

party making the representation and warranty or their Representatives that such representation and warranty is false; and (c) an intention to induce Acquiror to act or refrain from acting in reliance upon it or causing Acquiror, in justifiable reliance upon such false representation and with ignorance to the falsity of such representation, to take or refrain from taking action (the parties acknowledge that "taking action" shall include Acquiror executing this Agreement in reliance on the false or recklessly given representation and warranty); or (d) the Acquiror suffering damage by reason of its reliance on the false or recklessly given representation and warranty.

"Fundamental Representations" shall means each of the representations and warranties set forth in Section 3.1 (Organization of the Company), Section 3.2 (Subsidiaries) Section 3.3 (Due Authorization), Section 3.6 (Capitalization of the Company), Section 3.7 (Capitalization of Subsidiaries), Section 3.18 (Brokers' Fees), and Section 3.35 (Blocker Company).

"GAAP" means United States generally accepted accounting principles.

"Government Contract" means any prime contract, subcontract, teaming agreement or arrangement, joint venture, basic ordering agreement, purchase order, task order, delivery order, change order or other contractual commitment of any kind, between the Company or its Subsidiaries and (i) a Governmental Authority, (ii) any prime contractor to a Governmental Authority in its capacity as a prime contractor, or (iii) any subcontractor with respect to any Contract described in clauses (i) or (ii) above. A task, purchase or delivery order under a Government Contract will not constitute a separate Government Contract, for purposes of this definition, but will be part of the Government Contract to which it relates.

"Governmental Authority" means any federal, state, provincial, municipal, local or foreign government, governmental or quasi-governmental authority of any nature, regulatory or administrative agency, governmental commission, department, board, bureau, agency or instrumentality, stock exchange, court, tribunal, arbitrator or arbitral body or mediator of a competent jurisdiction or any individual, entity or body exercising, or entitled to exercise, any governmental, executive, legislative, judicial, administrative, regulatory, audit, investigative, police, military or taxing authority or power on behalf of the above noted entities.

"Governmental Official" means (i) any official, officer, employee or representative of, or any Person acting in an official capacity for or on behalf of, any Governmental Authority, or (ii) any political party or party official or candidate for political office.

"Governmental Order" means any order, judgment, injunction, decree, consent decree, writ, stipulation, determination or award entered by or with any Governmental Authority.

"Hazardous Substance" means, collectively, any (a) petroleum or petroleum products, or derivative or fraction thereof, radioactive materials (including radon gas), asbestos in any form that is friable, urea-formaldehyde foam insulation ("UFI"), and polychlorinated biphenyls ("PCBs") and/or (b) any chemical, material, substance or waste, which is defined, classified, listed or characterized by a Governmental Authority as hazardous, toxic, restricted, ignitable, corrosive, reactive, a pollutant or contaminant, or words of similar meaning and effect.

"Holder" means each holder of Units and Blocker Seller.

"Holder Expenses" means the sum of (i) the fees and expenses arising from the provision of services at or prior to the Closing that have been incurred on or prior to the Closing Date and payable by any member of the Company Group in connection with the preparation, negotiation and execution of this Agreement or any other Transaction Document or the consummation of the transactions contemplated hereby and thereby or in connection with the sale process or pursuing a sale of the Company or the business of the Company to a buyer other than the Acquiror (including all such amounts referred to in Section 3.18) and (ii) the aggregate amount of any Change in Control Payments, in each case, with respect to clauses (i) and (ii), to the extent not paid prior to the Closing. For the avoidance of doubt, Holder Expenses shall not include Taxes other than as expressly set forth in the definition of Change in Control Payments.

"Holder Representative" has the meaning specified in the Preamble.

"Holder Representative Engagement Agreement" means that certain Engagement Agreement by and among the Company, the Holder Representative and the Advisory Group.

"Holder Representative Expense Fund" has the meaning specified in Section 11.2(b).

"HSR Act" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the rules and regulations promulgated thereunder.

"[**][3] Investigation" means the active [**][3] investigation of the affairs of the Company Group.

"Immediate Family" means, with respect to any specified Person, such Person's spouse, parents, children (whether natural or adopted), children of a spouse, and siblings, or any other relative of such Person that shares such Person's home.

"Income Tax" means any federal, state, local, or foreign Tax measured by or imposed on net income or franchise tax imposed in lieu thereof.

"Indebtedness" of any Person as of any date means, without duplication, all liabilities and obligations of such Person and its Subsidiaries, together with accrued and unpaid interest thereon and any prepayment, premium or other penalties and any fees and expenses thereunder due upon repayment thereof, including any such amounts contingent upon or related to the Closing (a) for borrowed money; (b) evidenced by bonds, debentures, notes, debt securities, loans, credit agreements, mortgages, or similar instruments for the payment of which such Person is responsible or liable; (c) as an account party in respect of letters of credit and bankers' acceptances or similar credit or surety transactions, but only to the extent drawn at Closing; (d) with respect to leases required to be treated as capital leases under GAAP; (e) for the deferred purchase price of property, services, equity or other assets (including all seller notes and "earn-out" payments but excluding

[3] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

any accounts payable or accrued expenses incurred in the Ordinary Course of Business and included as a current liability in the Closing Date Net Working Capital); (f) contractual obligations relating to interest rate or exchange rate protection, swap agreements and collar agreements or similar arrangements, (g) any amounts owing in respect of declared but unpaid dividends and any amounts owing in respect of put rights that have been exercised; and (h) all guaranties and other contingent obligations in respect of liabilities for borrowed money of others and similar commitments relating to any of the items set forth in clauses (a) through (g). For the avoidance of doubt, Indebtedness shall not include Taxes.

"Indemnification Escrow Amount" means a cash amount equal to $[**][4].

"Indemnification Escrow Fund" means a separate account in which the Indemnification Escrow Amount will be deposited to be held in trust with the Escrow Agent in accordance with this Agreement and the Escrow Agreement.

"Indemnified Blocker Taxes" means (a) all Taxes imposed on the Blocker Company with respect to a Pre-Closing Tax Period (including Taxes under Section 951 or Section 951A of the Code to the extent attributable to Pre-Closing Tax Periods), (b) all liabilities of the Blocker Company for Taxes of another Person as a result of the Blocker Company being (or having been), on or prior to the Closing Date, a member of an affiliated, consolidated, combined, unitary or similar Tax group, including pursuant to Treasury Regulations Section 1.1502-6 or any analogous or similar Law, (c) all Taxes of any Person imposed on the Blocker Company as a transferee or successor, by contract (other than an Ordinary Commercial Agreement) or pursuant to any Law, which Taxes relate to an event or transaction occurring before the Closing, and (d) to the extent not included in (a) above all Taxes imposed on the Blocker Company under Section 965 of the Code; provided, however, that Indemnified Blocker Taxes shall be calculated in accordance with Section 7.5(i) and Section 7.5(j) and shall not include any Taxes taken into account as Current Blocker Tax Liabilities in the calculation of the Blocker Company Payment.

"Indemnified Person" has the meaning specified in Section 6.1(a).

"Indemnified Taxes" means (a) all Taxes imposed on the Company or its any of its Subsidiaries with respect to a Pre-Closing Tax Period (including Taxes under Section 951 or Section 951A of the Code to the extent attributable to Pre-Closing Tax Periods), (b) all liabilities of the Company or any of its Subsidiaries for Taxes of another Person as a result of the Company or any of its Subsidiaries being (or having been), on or prior to the Closing Date, a member of an affiliated, consolidated, combined, unitary or similar Tax group, including pursuant to Treasury Regulations Section 1.1502-6 or any analogous or similar Law, (c) all Taxes of any Person imposed on the Company or any of its Subsidiaries as a transferee or successor, by contract (other than an Ordinary Commercial Agreement) or pursuant to any Law, which Taxes relate to an event or transaction occurring before the Closing, and (d) to the extent not included in (a) above all Taxes imposed on the Company or any of its Subsidiaries under Section 965 of the Code; provided, however, that Pre-

[4] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

Closing Taxes shall be calculated in accordance with Section 7.5(i) and Section 7.5(j) and shall not include any Taxes taken into account as Change in Control Payments in the calculation of Holder Expenses or as Current Liabilities in the calculation of Closing Date Net Working Capital.

"Intellectual Property" means all intellectual property and proprietary rights throughout the world, whether or not registrable, patentable or otherwise formally protectable, and whether or not registered, patented, otherwise formally protected, or the subject of a pending application therefor, including: (a) all inventions, patents and patent applications; (b) all trademarks, service marks, trade dress, and logos, whether at common law or registered, domain names, social media identities, mobile applications and all applications, registrations, and renewals in connection therewith; (c) all copyrights, and all applications, registrations and renewals in connection therewith and the benefits of any moral rights waivers in respect of works in which copyright subsists; (d) all industrial designs and all applications and registrations in connection therewith; (e) all trade secrets, know-how and proprietary confidential business information.

"Interim Financial Statements" has the meaning specified in Section 3.8(b).

"Key Consents" means those consents listed on Annex O other than the Required Consent.

"Laws" means, with respect to any Person, all provisions of statutes, rules, regulations, ordinances, policy, guidance, and orders of any Governmental Authority, all common law applicable to such Person and all Governmental Orders to which such Person is a party and all other provisions having the force or effect of law issued by any Governmental Authority.

"Leased Real Property" means all leasehold or subleasehold estates and other rights to use or occupy any land, buildings, structures, improvements, fixtures or other interest in real property held by the Company or any of its Subsidiaries.

"Leasehold Improvements" means all buildings, structures, improvements and fixtures located on any Leased Real Property which are owned by the Company or any of its Subsidiaries, regardless of whether title to such buildings, structures, improvements or fixtures are subject to reversion to the landlord or other third party upon the expiration or termination of the lease for such Leased Real Property.

"Letter of Transmittal" has the meaning specified in Section 2.5(c).

"Liability" means, with respect to any Person, any Indebtedness, liability, claim, commitment or other obligation of any kind or character, whether fixed or unfixed, known or unknown, asserted or unasserted, liquidated or unliquidated, joint or several, due or to become due, incurred, absolute, contingent or otherwise, and whether or not the same is required to be accrued on the financial statements of such Person.

"Lien" means any mortgage, deed of trust, collateral security arrangement, pledge, title imperfection, title defect, hypothecation, conditional or installment sales agreement, charge, easement, encroachment, encumbrance, security interest or other lien, reservation or restriction of

any kind. For the avoidance of doubt, "Liens" shall not include non-exclusive licenses of Intellectual Property.

"Material Adverse Effect" means, any event, change, development, effect, condition, fact, or circumstance that, individually or in the aggregate with other events, changes, developments, effects, conditions, facts, or circumstances, that (a) has had, or could reasonably be expected to have, a material adverse effect on the business, operations, results of operations, assets, liabilities or condition (financial or otherwise) of the Company and its Subsidiaries taken as a whole or (b) that does, or would reasonably be expected to, prevent, or materially and adversely impair, delay or affect the ability of such Person or its Subsidiaries to perform their obligations hereunder and to consummate the transactions contemplated hereby (including the Closing and the Merger); provided, however, that, except as set forth in the proviso immediately below, in no event would any of the following, alone or in combination, be deemed to constitute, nor shall any of the following (including the effect of any of the following) be taken into account in determining whether there has been or will be, a "Material Adverse Effect" on or in respect of the Company and its Subsidiaries: (i) any change in economic, business or financial market conditions generally, (ii) any acts of terrorism or war, (iii) earthquakes, floods, natural disasters or other acts of nature, (iv) any change generally affecting any of the industries in which such Person or its Subsidiaries operates, (v) changes in Law or GAAP, (vi) the public announcement of this Agreement or the Merger, (vii) the compliance with the express terms of this Agreement or the taking of any action required by this Agreement or (viii) any failure to meet its financial projections (including, without limitation, revenues, bookings or earnings) of the Company and its Subsidiaries relating to any period after the date hereof (but not excluding any of the reasons for or factors contributing to any such failure); provided further that, the items (and the effects of the items) in clauses (i), (ii), (iii), (iv), and (v) shall be taken into account in determining whether a Material Adverse Effect exists or has occurred if such items have a disproportionate impact on the Company and its Subsidiaries taken as a whole relative to other participants in the industries in which the Company or its Subsidiaries operate.

"Merger" has the meaning specified in Section 2.1.

"Merger Sub" has the meaning specified in the Preamble.

"Merger Sub Units" has the meaning specified in Section 4.8.

"Non-Solicitation Agreement" means those certain Non-Solicitation Agreement to be entered into between Acquiror, the Company and each of the Persons identified in Schedule 8.2(f)(viii) in the form attached hereto as Annex I-A.

"Non-Solicitation and Non-Competition Agreements" means those certain Non-Solicitation and Non-Competition Agreements to be entered into between Acquiror, the Company and each of the Persons identified in Schedule 8.2(f)(viii) in the form attached hereto as Annex I-B.

"Notice of Indemnification Claim" has the meaning specified in Section 9.7.

"Ordinary Commercial Agreement" has the meaning specified in Section 3.16(e).

"Ordinary Course of Business" means, consistent in nature, scope and magnitude with the past practices of the Company Group, in the ordinary course of normal day-to-day operations of the Company Group without requiring the authorization of the equityholders of any of the Company Group or any other separate or special authorization of any nature.

"Other Adjustment Items" means those items set forth on Exhibit M.

"Outside Date" means December 31, 2018 or such later date as may be agreed to in writing by the Parties; provided, that if the Closing has not occurred by the Outside Date as a result of the failure to satisfy the condition set forth in Section 8.1(a), then either Acquiror or the Company may from time to time elect in writing to extend the Outside Date for up to four successive periods of 15 days, provided that such party so electing is then in compliance in all material respects with its obligations under this Agreement and the party so extending the Outside Date reasonably believes that the condition set forth in Section 8.1(a) is capable of being satisfied prior to the Outside Date, as it may be extended.

"Owned Intellectual Property" means Intellectual Property owned by the Company or any of its Subsidiaries.

"Owned Real Property" has the meaning specified in Section 3.20(a).

"Paying Agent" means Epiq Corporate Restructuring, or such other Person as the Acquiror and Holder Representative designate.

"Paying Agent Agreement" means that certain Paying Agent Agreement to be entered into between Acquiror, the Holder Representative and the Paying Agent in form and substance reasonably satisfactory to the Acquiror and the Holder Representative.

"Permits" has the meaning specified in Section 3.19.

"Permitted Liens" means (a) mechanics, materialmen's and similar Liens for labor, materials or supplies provided with respect to Leased Real Property incurred in the Ordinary Course of Business for amounts which are not due and payable and which would not, individually or in the aggregate, materially impair the business conducted thereon; (b) Liens for current Taxes not yet due and delinquent or which are being contested in good faith through appropriate proceedings and for which appropriate reserves have been established in accordance with GAAP; (c) easements, covenants, conditions, restrictions and other similar matters of record affecting title to any Leased Real Property which do not or would not, individually or in the aggregate, materially impair the use or occupancy of such Leased Real Property in the operation of the business conducted thereon; (d) Liens securing payment, or any other obligations, of the Company Group with respect to Existing Indebtedness solely to the extent they will be released without liability or obligation to the Acquiror, Surviving Entity or its Subsidiaries as of the Closing; (e) zoning, building codes and other land use Laws regulating the use or occupancy of any Leased Real Property or the activities conducted thereon which are imposed by any Governmental Authority having jurisdiction over such Leased

Real Property which are not violated by the current use or occupancy of such Leased Real Property or the operation of the business thereon; and (f) Liens associated with the Credit Agreements and other Liens described on Schedule 1.1, which will all be released at Closing.

"Person" means any individual, firm, corporation, partnership, limited liability company, unlimited liability company, incorporated or unincorporated association, joint venture, joint stock company, trust, a sole proprietorship, labor union or other employee representative body, Governmental Authority or other entity of any kind.

"Phantom Unit Acknowledgment and Release" means an acknowledgment, release and agreement to the appointment of the Holder Representative under Article XI hereof, in a form reasonably satisfactory to Acquiror, confirming their agreement that the Distribution Waterfall accurately reflects the amounts to which such Person is entitled with respect to his or her Phantom Units.

"Phantom Unit Cash Payment" has the meaning specified in Section 2.4.

"Phantom Units" means any awards granted under the Phantom Units Plan.

"Phantom Units Plan" means the Company's 2016 Phantom Units Plan amended as of December 7, 2017.

"Post-Closing Tax Period" means any taxable period beginning after the Closing Date and, with respect to any Straddle Period, the portion of such Straddle Period beginning after the Closing Date.

"Pre-Closing Reorganization" means the transactions described in Annex L.

"Pre-Closing Tax Period" means any taxable period that ends on or prior to the Closing Date and, with respect to any Straddle Period, the portion of such Straddle Period ending on the Closing Date.

"Principal Customers" has the meaning specified in Section 3.26.

"Principal Suppliers" has the meaning specified in Section 3.26.

"Pro Rata Portion" means, with respect to each Escrow Participant, an amount, rounded to the nearest one one-hundredth of one percent with 0.005% rounded up, equal to the quotient (expressed as a percentage) obtained by dividing (A) the total amount of Closing Consideration due to such Escrow Participant pursuant to Section 2.4(c) by (B) the total amount of Closing Consideration due to all of the Escrow Participants pursuant to Section 2.4(c).

"Real Property" means the Owned Real Property and the Leased Real Property.

"Real Property Leases" has the meaning specified in Section 3.20(b).

"Reference Time" means 11:59 p.m., New York City time, on the day immediately preceding the Closing Date; provided that the Reference Time for purposes of calculating the Tax assets and Tax liabilities included in the Closing Date Net Working Capital and Current Blocker Tax Liabilities shall be 11:59 p.m., local time for each location of the Company or any of its Subsidiaries, on the Closing Date.

"Registered Intellectual Property" means all Intellectual Property that is the subject of registration (or an application for registration), including (a) patents and patent applications; (b) trademark registrations and applications; (c) copyright registrations and applications; (d) industrial design registrations and applications; and (e) domain name registrations.

"Release" means any release, spill, emission, leaking, pumping, injection, deposit, disposal, discharge, dispersal, migration or leaching into the Environment.

"Release Date" means each of (i) the date that is [**][5] months after the Closing Date, (ii) [**][5], (iii) [**][5] and (iv) [**][5].

"Representatives" has the meaning specified in Section 5.3.

"Required Consent" means that consent listed on Annex O as a Required Consent.

"R&W Insurance Policy" means that certain Representations and Warranties Insurance Policy, which shall be bound immediately prior to the signing of this Agreement and for the benefit of Acquiror as the named insured, substantially in the form attached as Annex D.

"Securities Act" has the meaning specified in Section 4.10.

"Software" means all computer software (in object code or source code format).

"Solvent" means that, with respect to any Person and as of any date of determination, (a) the amount of the "present fair saleable value" of the assets of such Person, will, as of such date, exceed the amount of all "liabilities of such Person, contingent or otherwise," as of such date, as such quoted terms are generally determined in accordance with applicable federal laws governing determinations of the insolvency of debtors, (b) the present fair saleable value of the assets of such Person will, as of such date, be greater than the amount that will be required to pay the liability of such Person on its indebtedness as its indebtedness becomes absolute and matured, (c) such Person will not have, as of such date, an unreasonably small amount of capital with which to conduct its business, (d) such Person will be able to pay its indebtedness as it matures, and (e) with respect to each Subsidiary, solvent as determined by the applicable laws of the jurisdiction of incorporation of such Subsidiary. For purposes of the foregoing definition only, "indebtedness" means a liability in connection with another Person's (i) right to payment, whether or not such a right is reduced to judgment, liquidated, unliquidated, fixed, contingent, matured, unmatured, disputed, undisputed,

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legal, equitable, secured or unsecured or (ii) right to any equitable remedy for breach of performance if such breach gives rise to a right of payment, whether or not such right to an equitable remedy is reduced to judgment, fixed, contingent, matured, unmatured, disputed, undisputed, secured or unsecured.

"Special Escrow Amount" means a cash amount equal to $[**][6].

"Special Escrow Fund" means an account in which the Special Escrow Amount will be deposited in three sub-accounts, consisting of separate sub-accounts of $[**][6] for Special Escrow Tax Losses, $[**][6] for Unsatisfied Current Income Taxes and unsatisfied Current Blocker Tax Liabilities, and $[**][6] for [**][6] Investigation Losses, to be held in trust with the Escrow Agent in accordance with this Agreement and the Escrow Agreement.

"Special Escrow Tax Losses" means the Losses attributable to the Indemnified Taxes, if any, arising out of or resulting from: (i) income Taxes imposed by South Korea in respect of the transfer pricing of the Company and its Subsidiaries in Pre-Closing Tax Periods, (ii) income Taxes imposed by South Korea in respect of the sale and lease of the Songdo land and buildings between A-1 Engineering Korea, Inc. and YKS Investments, LLC, (iii) income Taxes imposed by the United States in respect of compensation deductions claimed by A-1 Manufacturing, Inc., on its income Tax Returns for 2009-2015 Tax years, (iv) income Taxes imposed by the United States under Section 965 of the Code; and (v) income Taxes imposed by the United States in respect of any failure to reconcile book income and Tax income of A-1 Machine Manufacturing, Inc., for the 2016 Tax year.

"Special Receivable Amounts" has the meaning specified in Section 6.3.

"Straddle Period" means any taxable period that includes (but does not end on) the Closing Date.

"Subsidiary" means, with respect to any Person, any other Person of which 50% or more of the voting power of the equity securities or equity interests (or equivalent) sufficient to elect at least a majority of its Board of Directors or other governing body (or, if there is no such voting power, 50% or more of the equity securities or equity interests (or equivalent)), or the legal power to direct the business or policies of such Person, is owned, directly or indirectly, by such Person.

"Surviving Entity" has the meaning specified in Section 2.1(a).

"Target Closing Date Net Working Capital" means $[**][6].

"Tax" or "Taxes" means all taxes (whether federal, state, local or non-U.S.) including, without limitation, income, profits, gross receipts, alternative minimum, value added, sales, use, goods and services, property, personal property (tangible and intangible), real property gains, stamp, excise, customs, duty, franchise, capital, capital stock, transfer, escheat, unclaimed payments,

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estimated, former Code Section 59A, net proceeds, production, ad valorem, turnover, documentary, inventory, registration, license, withholding, social security (or similar), unemployment, disability, payroll, employment, occupational, windfall profit, severance, or other taxes imposed by any Governmental Authority, including any interest, penalty, or addition thereto, and any liability for such amounts as a result of being a partner of a partnership, a successor to a former corporation under a prior merger or liquidation transaction, or a member of a combined, consolidated, unitary or affiliated group (including pursuant to Treasury Regulation Section 1.1502-6 or comparable provisions of state, local or non-U.S. tax law) an including any liability for taxes as a transferee or successor or otherwise by operation of applicable Law.

"Tax Returns" means any return, declaration, report, claim for refund or credit, or information return or statement relating to Taxes, and any amendment thereto.

"Termination Date" has the meaning specified in Section 9.1.

"Third-Party Claim" has the meaning specified in Section 9.4.

"Transaction Deduction" means all items of loss or deduction for applicable income Tax purposes resulting from or attributable to: (i) items included in Closing Date Net Working Capital, Closing Date Indebtedness, or Holder Expenses, (ii) any compensatory payments made pursuant to this Agreement (including, subject to Section 7.5(l), the portion of the Bonus Agreement Payment that is payable upon Closing and payments in respect of Phantom Units, including the cost recharge for amounts payable with respect to Phantom Units held by employees of A-1 Engineering Korea, Inc., pursuant to any transfer pricing agreement with A-1 Engineering Korea, Inc.), and (iii) any fees, expenses, premiums and penalties with respect to the prepayment of debt and the write-off or acceleration of the amortization of deferred financing.

"Transaction Documents" means, collectively, this Agreement, the Escrow Agreement, the Paying Agent Agreement, the Stock Assignment Agreement, the Closing Certificate, the Letter of Transmittal and each other agreement and certificate executed and delivered by the parities hereto in connection with the transactions contemplated hereby.

"Transfer Taxes" has the meaning specified in Section 2.10.

"Transferors" has the meaning specified in Section 12.7.

"Units" has the meaning specified in Section 3.6(a).

"Unsatisfied Current Income Taxes" means the Indemnified Taxes of the Company and its Subsidiaries, if any, that are income Taxes for taxable periods beginning on or after January 1, 2018, as calculated in accordance with Section 7.5(i) and 7.5(j). For the avoidance of doubt, Unsatisfied Current Income Taxes shall not include any Taxes that were (a) paid prior to the Closing Date, (b) included as Current Liabilities in the calculation of Closing Date Net Working Capital, or (c) are attributable to the post-closing portion of a Straddle Period as calculated in accordance with Section 7.5(i) and 7.5(j).

"Unvested Phantom Units" means Phantom Units that remain subject to vesting conditions as of the Closing (after giving effect to the transactions that will occur on the Closing Date).

"Unvested Units" means Units that remain subject to vesting conditions as of the Closing (after giving effect to the transactions that will occur on the Closing Date).

"WARN Act" has the meaning specified in Section 3.15(d).

"Withholding Agents" has the meaning specified in Section 2.9.

1.2 As used herein, the phrase "to the knowledge" of any Person shall mean the actual knowledge, after due inquiry, of, in the case of the Company, those individuals listed on Schedule 1.2, and in the case of all other Persons, such Person's executive officers. For the purposes of the foregoing, "due inquiry" shall include reasonable review of applicable records and inquiry of all officers and senior managers of the Company Group who have responsibility for the matter as to which a particular representation and warranty, condition, or other obligation hereunder relates.

ARTICLE II.

THE MERGER AND SALE OF INTEREST

2.1 Merger and Sale of Blocker Interest.

(a) The constituent entities to the Merger are the Company and Merger Sub. Upon the terms and subject to the conditions set forth in this Agreement, and in accordance with the DLLCA, at the Effective Time, Merger Sub shall be merged with and into the Company (the "Merger") and the separate existence of Merger Sub shall thereupon cease. The Company shall continue as the surviving entity in the Merger (hereinafter referred to for the periods on and after the Effective Time as the "Surviving Entity"), and shall be a wholly-owned subsidiary of the Acquiror (directly and through its ownership of the Blocker Company). The separate existence of the Company, with all its rights, privileges, immunities, powers and franchises, shall continue unaffected by the Merger, except as provided in Section 2.3. The Merger shall have the effects set forth in the DLLCA. On the Closing Date, Merger Sub and the Company shall cause a Certificate of Merger between Merger Sub and the Company (the "Certificate of Merger") to be executed and filed with the Secretary of State of Delaware as provided in Section 18-209 of the DLLCA. For purposes of this Agreement, the "Effective Time" shall mean the time at which the Certificate of Merger has been duly filed in the Office of the Secretary of State of Delaware and has become effective in accordance with the DLLCA or at such later time as may be agreed by the parties in writing and specified in the Certificate of Merger.

(b) Upon the terms and subject to the conditions set forth in this Agreement, immediately prior to the Effective Time, the Blocker Seller shall sell, assign, transfer and deliver to the Acquiror, and the Acquiror shall purchase and accept delivery from the Blocker Seller of all of the Blocker Interest, which Blocker Interest shall constitute all of the outstanding equity securities (and rights to acquire equity securities) of Blocker Company, free and clear of any Liens (other than Liens created by blue sky or securities laws) (the "Blocker Interest Acquisition"). The Blocker

Seller shall deliver to Acquiror the Blocker Interest free and clear of all Liens (other than Liens created by blue sky or securities laws) by executing a Blocker Interest Assignment Certificate in the form attached hereto as Annex E (a "Blocker Interest Assignment Certificate"). Payment by Acquiror for the Blocker Interest shall be made in accordance with Sections 2.4(c) and 2.5.

2.2 Closing.

(a) Closing Date. The closing for the Merger and sale of the Blocker Interest (the "Closing") shall take place by electronic exchange of documents and signature pages at 10 A.M. Pacific Time on the date which is five (5) Business Days after the date on which all conditions set forth in ARTICLE VIII shall have been satisfied or waived (other than those conditions that by their terms are to be satisfied at the Closing) or such other time and place as Acquiror and the Company may mutually agree. The date on which the Closing occurs is referred to in this Agreement as the "Closing Date." The parties hereto acknowledge and agree that the Blocker Company Stock Acquisition shall be deemed to have been consummated immediately prior to the Effective Time and the consummation of the Merger, but neither the Blocker Company Stock Acquisition nor the Merger shall be consummated unless both transactions are consummated.

(a) Deliveries of the Company. At the Closing, the Company shall deliver, or cause to be delivered, to Acquiror:

(i) bringdown certificates signed by officers of the Company and the Blocker Company, dated the Closing Date, certifying that the conditions specified in Section 8.2(a), Section 8.2(b) and Section 8.2(c) have been fulfilled, in the form of Annex J (the "Closing Certificate");

(ii) a factual certificate signed by a senior officer of each member of Company Group and the Blocker Company, dated as of the Closing Date, in the form of Annex K;

(iii) a duly authorized and executed certificate, in a form reasonably satisfactory to Acquiror, dated as of the Closing Date and sworn under penalties of perjury, in the form and substance of Treasury Regulations promulgated under Section 1445 of the Code, certifying that fifty percent or more of the value of the gross assets of the Company do not consist of U.S. real property interests, or that ninety percent or more of the value of the gross assets of the Company do not consist of U.S. real property interests plus cash or cash equivalents in accordance with Treasury Regulation Section 1.1445-11T;

(iv) a duly authorized and executed Internal Revenue Service Form W-9, in a form reasonably satisfactory to Acquiror, from each Holder (other than the Blocker Seller);

(v) a duly authorized and executed certificate, in a form reasonably satisfactory to Acquiror, dated as of the Closing Date and sworn under penalty of perjury, in the form of Treasury Regulations Sections 1.897-2(h) and 1.1445-2(c),

certifying that Blocker Company is not a United States real property holding corporation and a notice to be mailed (together with a copy of the certificate) to the Internal Revenue Service in accordance with Section 1.897-2(h)(2) of the Treasury Regulations;

(vi) the Required Consent;

(vii) payoff letters duly executed by each lender of the Indebtedness of the Company Group, including the Existing Indebtedness, indicating that, upon payment of the amount specified in such payoff letter, all outstanding obligations of the Company Group arising under or relating to such Indebtedness shall be repaid and extinguished in full and that upon receipt of such amount such Person shall release its Liens and other security interests in, and shall file, or authorize the Company to file, Uniform Commercial Code Termination Statements and such other documents necessary to release of record its Liens and other security interests in, the assets and properties of the Company Group;

(viii) duly executed resignations in the form attached hereto in Annex H of the officers, members and directors of each member of the Company Group and the Blocker Company, as requested by Acquiror at least three (3) Business Days prior to the Closing;

(ix) the Non-Solicitation Agreement and the Non-Solicitation and Non-Competition Agreements, duly executed by each of the Persons identified in Schedule 2.2(b)(ix);

(x) the Escrow Agreement, duly executed by the Holder Representative;

(xi) the Paying Agent Agreement, duly executed by the Holder Representative and the Paying Agent;

(xii) a certificate of good standing, or equivalent document, dated not more than ten (10) days prior to the Closing Date with respect to each member of the Company Group;

(xiii) any Books and Records in the possession or control of the Holders or their Affiliates (other than the Company Group);

(xiv) the Certificate of Merger, executed by the Company;

(xv) Letters of Transmittal duly executed and correctly completed by Holders representing at least 95% of the Units;

(xvi) the Phantom Unit Acknowledgment and Releases, duly executed by each holder of Phantom Units;

(xvii) the certificate or certificates, if any, representing the Blocker Interest, accompanied by irrevocable security transfer powers of attorney duly executed in blank by the holders of record or their authorized powers of attorney, together with evidence satisfactory to Acquiror that Acquiror has been entered upon the books of the Blocker Company as the holder of the Blocker Interest;

(xviii) evidence in form satisfactory to the Acquiror, acting reasonably, that the Pre-Closing Reorganization has been completed;

(xix) a direction from [**][7], [**][7] and Impakt Opti Holdings, Inc. directing Acquiror to pay a portion of their respective Closing Consideration along with any other amounts payable to them pursuant to the terms and conditions of this Agreement to the Company, for further payment to the Bonus Payment Recipient, in satisfaction of the Bonus Agreement Payment, in form and substance satisfactory to the Acquiror in its reasonable discretion;

(xx) acknowledgements and releases executed by each holder of Class A Units in respect of the allocation of Closing Consideration pursuant to the Distribution Waterfall, in form and substance satisfactory to the Acquiror in its reasonable discretion;

(xxi) acknowledgements and releases executed by Holders representing at least 75% of the Class B Units and B-1 Units in respect of the allocation of Closing Consideration pursuant to the Distribution Waterfall, in form and substance satisfactory to the Acquiror in its reasonable discretion; and

(xxii) the Blocker Interest Assignment Certificate, duly executed by the Blocker Seller and the Blocker Company.

(b) Deliveries of Acquiror. At the Closing, Acquiror shall deliver, or cause to be delivered, to the Company:

(i) a certificate signed by an officer of Acquiror, dated the Closing Date, certifying that the conditions specified in Section 8.3(a) and Section 8.3(b) have been fulfilled.

(ii) the Escrow Agreement, duly executed by Acquiror.

(iii) the Paying Agent Agreement, duly executed by the Acquiror and the Paying Agent;

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[7] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

(iv) evidence satisfactory to the Company that the R&W Insurance Policy is in full force and effect, subject to the occurrence of the Effective Time.

2.3 Certificate of Formation and Limited Liability Company Agreement of the Surviving Entity; Officers and Managers of the Surviving Entity. At the Effective Time, (a) the certificate of formation and limited liability company agreement of the Surviving Entity shall be the certificate of formation and limited liability company agreement of Merger Sub as in effect immediately prior to the Effective Time, until thereafter amended as provided therein and under the DLLCA, and (b) the officers and managers of the Surviving Entity shall be the officers and managers of Merger Sub immediately prior to the Effective Time. The Company shall cause each of the officers and managers of the Company to tender their written resignation of such position in the form attached hereto in Annex H, immediately prior to, and effective as of, the Closing.

2.4 Conversion of Company Units and Phantom Units.

(a) At the Effective Time and immediately after the consummation of the Blocker Interest Acquisition, by virtue of the Merger and without any action on the part of any Person:

(i) all Units held by Acquiror, directly or indirectly (consisting of those Units held by Blocker Company following the purchase of the Blocker Interest) shall remain as outstanding membership units in the Surviving Entity but shall not be converted into the right to receive any portion of the Closing Consideration (such Units are referred to as the "Excluded Units");

(ii) (A) all Unvested Units shall be cancelled and terminated for no consideration and (B) all of the other Units that are outstanding (and for the avoidance of doubt, other than any Excluded Units) shall thereupon be cancelled and shall cease to exist and shall be automatically converted into and become the right to receive, along with the holders of vested Phantom Units and the Blocker Seller, a portion of the Closing Consideration (without any interest or dividends thereon), as allocated pursuant to Section 2.4(c), and additional payments, if any, pursuant to Section 2.7(d), Section 6.3, Section 7.5(h), Section 9.8 and Section 11.2(b), if applicable. "Closing Consideration" shall mean an amount equal to, in each case, without duplication, $329,000,000 plus or minus (as applicable) (1) the Estimated Closing Date Net Working Capital minus the Target Closing Date Net Working Capital (which difference may be positive or negative) minus (2) the Estimated Closing Date Indebtedness plus (3) the Estimated Closing Date Cash minus (4) the Adjustment Escrow Amount minus (5) the amount of the Holder Representative Expense Fund minus (6) the Estimated Holder Expenses minus (7) the Indemnification Escrow Amount minus (8) the Special Escrow Amount minus and plus or minus (as applicable) (9) the Estimated Closing Date Other Adjustment Amount.

(iii) Any Units (other than Unvested Units and Excluded Units), and any certificates or agreements representing such Units, shall thereafter represent only the right to receive payment in accordance with this Section 2.4 and additional

payments, if any, pursuant to Section 2.7(d), Section 6.3, Section 7.5(h), Section 9.8 and Section 11.2(b), if applicable.

(b) At the Effective Time and immediately after the consummation of the Blocker Company Stock Acquisition, by virtue of the Merger and without any action on the part of any Person, all Unvested Phantom Units shall be cancelled and terminated for no consideration. All other outstanding Phantom Units (other than Unvested Phantom Units) as of the Effective Time shall terminate and be automatically converted into the right of the holder to receive a portion of the Closing Consideration, as allocated pursuant to Section 2.4(c) after giving effect to any required Tax withheld in accordance with Section 2.9 (the "Phantom Unit Cash Payments"). As of the Effective Time, each holder of a Phantom Unit shall cease to have any rights under or with respect thereto, except with respect to holders of vested Phantom Units, the right to receive their respective Phantom Unit Cash Payment.

(c) The Closing Consideration shall be allocated so that each holder of Units (and, for the avoidance of doubt, other than Excluded Units and Unvested Units), each holder of Phantom Units (other than in respect of Unvested Phantom Units) outstanding as of the Effective Time and the Blocker Seller shall be entitled to receive, in full settlement of such Units, Phantom Units and the Blocker Interest, respectively, such portion of the Closing Consideration calculated in accordance with the Distribution Waterfall (after giving effect to any required Tax withheld in accordance with Section 2.9), which amounts shall be paid in accordance with Section 2.5.

(d) The Company shall take all such actions as may be necessary to accomplish the foregoing under the Company's 2016 Amended and Restated Restricted Equity Plan and the Phantom Units Plan, including giving any required notices under such plans, and to terminate such plans effective as of no later than immediately prior to, but subject to, the Effective Time.

(e) At the Effective Time, and immediately after the consummation of the Blocker Company Stock Acquisition, by virtue of the Merger and without any action on the part of any Person, the membership interests of Merger Sub issued and outstanding immediately prior to the Effective Time shall collectively be converted into membership interest in the Surviving Entity.

2.5 Payment and Exchange.

(a) Paying Agent Engagement. At or prior to the Effective Time, the Holder Representative, Acquiror and the Paying Agent shall enter into the Paying Agent Agreement for purposes of paying the Closing Consideration to the holders of Units and Phantom Units and to the Blocker Seller (in accordance with Section 2.4(c)).

(b) Closing Payments. Subject to the terms and conditions hereof, at the Closing, the Acquiror shall pay, unless otherwise stated, by wire transfer of immediately available funds, as follows

(i) each of the Adjustment Escrow Amount, Indemnification Escrow Amount, and Special Escrow Amount by wire transfer of immediately available funds to Citibank, N.A. as escrow agent of the parties hereto (the "Escrow Agent")

(the Adjustment Escrow Amount, Indemnification Escrow Amount, and the Special Escrow Amount to each be held and invested by the Escrow Agent in accordance with the terms of an Escrow Agreement in the form attached hereto as Annex F (the "Escrow Agreement")) pursuant to the terms of the Escrow Agreement;

(ii) the Estimated Closing Date Indebtedness to the Company's Lenders pursuant to the terms of pay-off letters, which have been provided to Acquiror by the Company in writing at least three (3) Business Days prior to Closing, and that are reasonably acceptable to Acquiror (the "Pay-off Letters"), to the Persons and in the amounts specified on the Estimated Closing Statement;

(iii) the Holder Representative Expense Fund to the an account designated by the Holder Representative in writing at least three (3) Business Days prior to Closing;

(iv) the Estimated Holder Expenses to the Persons entitled thereto as directed in writing by the Company in writing at least three (3) Business Days prior to the Closing Date;

(v) the amount of the Phantom Unit Cash Payment to A-1 Engineering Korea, Inc., which entity shall make such payments to the holders of Phantom Units as determined pursuant to Section 2.4(c) through its payroll systems no later than five (5) Business Days following the Effective Time, subject to withholding in accordance with Section 2.9, to each holder of Phantom Units who has delivered a Phantom Unit Acknowledgment and Release to the Company;

(vi) the portion of the Bonus Agreement Payment that is payable upon Closing, to A-1 Manufacturing, Inc.; and

(vii) the amount equal to the Closing Consideration, minus the amount of the Phantom Unit Cash Payment, and minus the portion of the Bonus Agreement Payment that is payable upon Closing, to the Paying Agent.

The amounts paid or advanced by the Acquiror pursuant to Sections 2.5(b)(ii), (iv) and (v) shall constitute an equity contribution from the Acquiror to the Company and downstream equity contributions from the Company (or a Subsidiary, as applicable) to each applicable member of the Company Group on whose behalf Indebtedness, Holder Expenses, Phantom Unit Cash Payment, or the portion of the Bonus Agreement Payment that is payable upon Closing, is being paid or repaid, in each case made as of the time of Closing.

(c) Paying Agent Payments.

(i) After the Effective Time, each holder of vested Units other than Excluded Units who delivers a completed and duly executed letter of transmittal, substantially in the form attached hereto as Annex G with respect to all Units held by such holder (a "Letter of Transmittal"), shall be entitled to receive, in exchange

for vested Units, from the Paying Agent, such portion of the Closing Consideration pursuant to Section 2.4(c) into which such holder's vested Units shall have been converted as a result of the Merger, and the Acquiror and the Holder Representative shall cause the Paying Agent to make such payments pursuant to the terms of the Paying Agent Agreement. All Closing Consideration paid upon the delivery of a Letter of Transmittal in accordance with the terms hereof in accordance with the wire instructions set out in the Letter of Transmittal shall be deemed to have been paid in full satisfaction of all rights pertaining to Units to which such Letter of Transmittal relates.

(ii) The Acquiror and the Holder Representative shall cause the Paying Agent to pay to the Blocker Seller the amount of the Closing Consideration attributable to such Person as determined pursuant to Section 2.4(c) pursuant to the terms of the Paying Agent Agreement.

(iii) Any obligation of the Acquiror to make a payment to any Person hereunder shall be fully satisfied by the Acquiror when such payment is made in the name of such Person in accordance with payment instructions received by the Acquiror from the Company or the Holder Representative, and the Acquiror shall have no responsibility or Liability whatsoever for any payment made in accordance with such instructions or for any action taken, or omission made, by such Person after the Acquiror has made such payment.

2.6 Estimated Adjustment Amount. At least three (3) Business Days prior to the Closing Date, the Company shall deliver to Acquiror an updated Distribution Waterfall Schedule, an unaudited consolidated balance sheet of the Company Group (the "Estimated Closing Balance Sheet") and an estimated closing statement (the "Estimated Closing Statement") setting forth, with reasonable supporting detail, its good faith estimate of (i) the Closing Date Net Working Capital (the "Estimated Closing Date Net Working Capital"), (ii) the Closing Date Indebtedness (the "Estimated Closing Date Indebtedness"), (iii) the Holder Expenses (the "Estimated Holder Expenses"), (iv) the Closing Date Cash (the "Estimated Closing Date Cash"), (v) the Closing Date Other Adjustment Amount (the "Estimated Closing Date Other Adjustment Amount"), (vi) the Closing Consideration calculated based on the items in the foregoing clauses (i) through (v), and (vii) the Current Blocker Tax Liabilities (the "Estimated Current Blocker Tax Liabilities"). The Estimated Closing Balance Sheet and the Estimated Closing Statement shall be prepared in accordance with the Agreed Accounting Principles. A portion of the sample Estimated Closing Balance Sheet and Estimated Closing Statement calculated as of November 5, 2018 are included as Schedule 2.6, which portion shows only a sample calculation of the Estimated Closing Date Net Working Capital and a sample calculation of the Estimated Closing Date Other Adjustment Amount. Prior to the Closing, the Company shall consider in good faith any comments that the Acquiror has on the Estimated Closing Balance Sheet and the Estimated Closing Statement and work with the Acquiror in good faith to resolve any differences that they may have with respect to the computation of any of the items in the Estimated Closing Statement; provided that if the parties are unable to resolve any comments prior to the Closing, the amounts of the Estimated Closing Date Net Working Capital, Estimated Closing Date Indebtedness, Estimated Holder Expenses, Estimated Closing Date

Cash, Estimate Closing Date Other Adjustment Amount and Estimated Current Blocker Tax Liabilities as reflected in the Estimated Closing Balance Sheet and Estimated Closing Statement delivered by the Company shall be used for purposes of calculating the Closing Consideration and Blocker Company Payment.

2.7 Adjustment Amount.

(a) As soon as reasonably practicable following the Closing Date, and in any event on or before the date that is the later of forty-five (45) days after the Closing Date and January 31, 2019, Acquiror shall prepare and deliver to the Holder Representative an unaudited consolidated balance sheet of the Company Group (the "Closing Balance Sheet") and an unaudited consolidated statement of the Company Group as of the close of business on the Closing Date (the "Closing Statement") setting forth (i) a calculation of the Closing Date Net Working Capital, (ii) a calculation of the Closing Date Indebtedness, (iii) a calculation of the Holder Expenses, (iv) a calculation of the Closing Date Cash, (v) a calculation of the Closing Date Other Adjustment Amount, (vi) the Closing Consideration calculated based on the items in the foregoing clauses (i) through (v), and (vii) the Current Blocker Tax Liabilities. The Closing Balance Sheet, the Closing Statement, including the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash and the Closing Date Other Adjustment Amount and the Current Blocker Tax Liabilities shall be determined on a consolidated basis using the Agreed Accounting Principles, and shall not include any changes in assets or liabilities as a result of purchase or other non-cash accounting adjustments or other changes arising from or resulting as a consequence of the transactions contemplated hereby. The parties agree that the purpose of preparing the Closing Balance Sheet and the Closing Statement, including the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash and the Closing Date Other Adjustment Amount and the related purchase price adjustment contemplated by this Section 2.7 is to measure the amount of the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash, the Closing Date Other Adjustment Amount, the Closing Consideration, and the Current Blocker Tax Liabilities, and such processes are not intended to permit the introduction of different judgments, accounting methods, policies, principles, practices, procedures, classifications or estimation methodologies for the purpose of preparing the Closing Statement or determining the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash, the Closing Date Other Adjustment Amount, and the Current Blocker Tax Liabilities unless such differences are required by GAAP. Following the Closing, Holder Representative and its representatives shall have the right to reasonable access following prior notice to the books, records, the chief financial officer and auditors of the Company Group to the extent relevant for its review of the Closing Statement and the Surviving Entity shall cause the employees and auditors of the Company Group to reasonably cooperate with the Holder Representative in connection with its review of the Closing Statement (subject to customary access agreements as may be required by such auditors).

(b) If the Holder Representative shall disagree with the calculation pursuant to Section 2.7(a) of the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash, the Closing Date Other Adjustment Amount, the Closing Consideration, and/or the Current Blocker Tax Liabilities, it shall notify Acquiror of such

disagreement in writing, setting forth in reasonable detail the particulars of such disagreement (and providing all supporting documentation reasonably necessary for the Acquiror to evaluate such disagreement), within thirty (30) days after its receipt of the Closing Statement. In the event that the Holder Representative does not provide such a notice of disagreement within such thirty (30) day period, the Holder Representative shall be deemed to have accepted the Closing Statement and the calculation of the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash, the Closing Date Other Adjustment Amount, the calculation of Closing Consideration based thereon, and the calculation of the Current Blocker Tax Liabilities delivered by Acquiror, which shall be final, binding and conclusive on all parties (and any other Person) for all purposes hereunder. In the event any such notice of disagreement is timely provided, Acquiror and the Holder Representative shall use commercially reasonable efforts for a period of thirty (30) days (or such longer period as they may mutually agree) to resolve any disagreements with respect to the calculations of the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash, the Closing Date Other Adjustment Amount, the Closing Consideration, and/or the Current Blocker Tax Liabilities; provided, however, that any such calculation not specifically objected to by the Holder Representative in such notice of disagreement shall be deemed acceptable and shall be final and binding on the parties (and any other Person) upon delivery of such notice of disagreement. If, at the end of such period, the Holder Representative and the Acquiror are unable to resolve such disagreements, then the New York office of the National Disputes Practice of BDO USA, LLP (or such other independent accounting firm of recognized national standing as may be mutually selected by Acquiror and the Holder Representative, or if no such other accounting firm is willing to serve, then such other qualified Person upon whom the Holder Representative and the Acquiror shall mutually agree) (the "Auditor") shall resolve any remaining disagreements, it being understood that the Auditor shall be functioning as an expert and not as an arbitrator and shall not have any authority to interpret any provision of this Agreement. The parties shall use their respective commercially reasonable efforts to cause the Auditor to determine as promptly as practicable, but in any event within thirty (30) days of the date on which such dispute is referred to the Auditor, (i) whether the Closing Statement was prepared in accordance with the standards set forth in Section 2.7(a), (ii) if any mathematical errors were made in the Closing Statement in calculating the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash, the Closing Date Other Adjustment Amount, the Closing Consideration, and/or the Current Blocker Tax Liabilities, and (iii) based solely on its determinations in clause (i) and (ii) of this sentence and only with respect to the remaining disagreements submitted to the Auditor, to what extent (if any) the Closing Date Net Working Capital, the Closing Date Indebtedness, the Holder Expenses, the Closing Date Cash, the Closing Date Other Adjustment Amount, the Closing Consideration, and/or the Current Blocker Tax Liabilities require adjustment, and the Auditor (x) shall make no other determination and (y) may not assign a value greater than the greatest positive or negative adjustment requested by a party. The fees and expenses of the Auditor shall be paid by Acquiror and the Holder Representative (on behalf of the Escrow Participants) in the same proportion that the aggregate amount of the items unsuccessfully disputed or defended, as the case may be, by each (as finally determined by the Auditor) bears to the total amount of the disputed items. Any fees and expenses payable by the Holder Representative under this Section 2.7(b) after the Closing shall be paid first from the Holder Representative Expense Fund. The Auditor shall conduct its determination activities in a manner wherein all material submitted to it are held in confidence and shall not be disclosed to third parties.

The parties hereto agree that judgment may be entered upon the determination of the Auditor in any court having jurisdiction over the party against which such determination is to be enforced.

(c) The "Adjustment Amount," which may be positive or negative, shall mean (i) the Closing Date Net Working Capital minus the Estimated Closing Date Net Working Capital, plus or minus (as applicable) (ii) the Estimated Closing Date Indebtedness minus the Closing Date Indebtedness, plus or minus (as applicable) (iii) the Estimated Holder Expenses minus the Holder Expenses, plus or minus (as applicable) (iv) the Closing Date Cash minus the Estimated Closing Date Cash, plus or minus (as applicable) (v) the Closing Date Other Adjustment Amount minus the Estimated Closing Date Other Adjustment Amount. If the Adjustment Amount is a positive number and is in excess of $100,000, then the Closing Consideration shall be increased by the full amount of the Adjustment Amount, and if the Adjustment Amount is a negative number, the absolute value of which is in excess of $100,000, the Closing Consideration shall be decreased by the full amount of the absolute value of the Adjustment Amount. If the Adjustment Amount is a number, the absolute value of which is $100,000 or less, the Adjustment Amount shall be deemed to be $0. Such adjustments to the Closing Consideration shall be paid in accordance with Section 2.7(d). The "Blocker Adjustment Amount," which may be positive or negative, shall mean the Current Blocker Tax Liabilities minus the Estimated Current Blocker Tax Liabilities. If the Blocker Adjustment Amount is a negative number, then the Blocker Company Payment shall be increased by the full amount of the absolute value of the Blocker Adjustment Amount, and if the Blocker Adjustment Amount is a positive number, the Blocker Company Payment shall be decreased by the full amount of the absolute value of the Blocker Adjustment Amount.

(d) Within three (3) Business Days following the final determination of the Adjustment Amount in accordance with Sections 2.7(b) and 2.7(c) hereof: (i) if the Adjustment Amount is a positive number, (A) Acquiror and the Holder Representative shall execute joint written instructions to the Escrow Agent instructing the Escrow Agent to pay (I) to the Payment Agent for disbursement to the Blocker Seller an amount equal to a portion of the Adjustment Escrow Fund (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with all interest earned thereon) in accordance with the Distribution Waterfall, (II) to the Payment Agent for disbursement to the former holders of Units (and, for the avoidance of doubt, other than any Excluded Units and Unvested Units) a portion of the Adjustment Escrow Fund (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with all interest earned thereon) in accordance with the Distribution Waterfall and (III) to A-1 Manufacturing, Inc. for disbursement to the Bonus Payment Recipient a portion of the Adjustment Escrow Fund (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with all interest earned thereon) in accordance with the Distribution Waterfall and (B) Acquiror shall pay or cause the Paying Agent to pay (I) to the Blocker Seller, an amount equal to a portion of the Adjustment Amount (as finally determined) in accordance with the Distribution Waterfall, (II) to the Paying Agent, for the accounts of the former holders of vested Units (and, for the avoidance of doubt, other than any Excluded Units), cash in an amount equal to a portion of the Adjustment Amount (as finally determined) in accordance with the Distribution Waterfall and (III) to A-1 Manufacturing, Inc. for distribution to the Bonus Payment Recipient, cash in an amount equal to a portion of the Adjustment Amount (as finally determined) in accordance with the Distribution Waterfall; and (ii) if the Adjustment Amount is a negative number, (A) Acquiror and the Holder

Representative shall execute joint written instructions to the Escrow Agent instructing the Escrow Agent to pay to Acquiror out of the Adjustment Escrow Fund an amount equal to the absolute value of the Adjustment Amount (as finally determined) (not to exceed the amount in the Adjustment Escrow Fund), together with the interest earned thereon earned and (B) if the absolute value of the Adjustment Amount is less than an amount equal to the amount in the Adjustment Escrow Fund on the date of payment, the Acquiror and the Holder Representative shall execute joint written instructions to the Escrow Agent instructing Escrow Agent to pay (I) to the Blocker Seller, an amount equal to the portion of the balance of the Adjustment Escrow Amount (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with any interest earned thereon) in accordance with the Distribution Waterfall, (II) to the former holders of vested Units (other than Excluded Units) a portion of the balance of the Adjustment Escrow Amount (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with any interest earned thereon) in accordance with the Distribution Waterfall and (III) to A-1 Manufacturing, Inc. for distribution to the Bonus Payment Recipient a portion of the balance of the Adjustment Escrow Amount (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with any interest earned thereon) in accordance with the Distribution Waterfall. If the Adjustment Amount is zero, (A) the Escrow Agent shall pay (I) to the Blocker Seller an amount equal to a portion of the Adjustment Escrow Amount (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with all interest earned thereon) in accordance with the Distribution Waterfall (II) to the former holders of vested Units (and, for the avoidance of doubt, other than any holder of Excluded Units) a portion of the Adjustment Escrow Amount (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with all interest earned thereon) in accordance with the Distribution Waterfall and (III) to A-1 Manufacturing, Inc. for distribution to the Bonus Payment Recipient a portion of the Adjustment Escrow Amount (less any fees and expenses payable by the Holder Representative pursuant to Section 2.7(b), together with all interest earned thereon) in accordance with the Distribution Waterfall.

(e) Within three (3) Business Days following the final determination of the Blocker Adjustment Amount in accordance with Section 2.7(b) and 2.7(c) hereof: (i) if the Blocker Adjustment Amount is a negative number, (A) Acquiror shall pay or cause the Paying Agent to pay to the Blocker Seller an amount equal to the absolute value of the Blocker Adjustment Amount (as finally determined); and (ii) if the Blocker Adjustment Amount is a positive number, (A) the Blocker Seller shall pay to the Acquiror an amount equal to the absolute value of the Blocker Adjustment Amount (as finally determined) and if such payment is not made, Acquiror may recover such amount owing from the $[**][8] portion of the Special Escrow Fund for Unsatisfied Current Income Taxes and unsatisfied Current Blocker Tax Liabilities.

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[8]Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

2.8 Paying Agent. Promptly following the date which is six (6) months after the Effective Time, Acquiror shall instruct the Paying Agent to deliver to Acquiror by wire transfer of immediately available funds to an account or accounts specified by Acquiror the undistributed portion of the Closing Consideration (including any interest or other income resulting from the investment of the Closing Consideration), Letters of Transmittal and other documents in its possession relating to the transactions contemplated hereby. Thereafter, each former holder of vested Units (other than Excluded Units) who has not delivered a Letter of Transmittal may deliver such Letter of Transmittal to Acquiror and (subject to applicable abandoned property, escheat and similar laws) receive in consideration therefor, and Acquiror shall promptly pay, the portion of the Closing Consideration deliverable in respect thereof as determined in accordance with this ARTICLE II without any interest thereon. None of Acquiror, Merger Sub, Blocker Company, Blocker Seller, the Company, the Surviving Entity or the Paying Agent shall be liable to any Person in respect of any cash or property delivered to a public official pursuant to any applicable abandoned property, escheat or similar law.

2.9 Withholding Rights. Notwithstanding anything else in this Agreement or any other document to the contrary, each of Acquiror, the Surviving Entity, Paying Agent, Escrow Agent, the Company and its Subsidiaries and any other applicable payor (the "Withholding Agents") shall be entitled to deduct and withhold any required Taxes from any payments to be made hereunder, which Taxes are required to be deducted or withheld with respect to the making of any such payment under applicable Law; provided, however, except with respect to payments in the nature of compensation to be made to employees or former employees, Acquiror shall notify the Holder Representative prior to any such withholding and each Withholding Agent shall use commercially reasonable efforts to minimize any such withholdings or deductions. The Company shall provide such assistance and information in its possession as may be reasonably requested by Acquiror to determine the amount of any such withholding. To the extent that amounts are so withheld by any Withholding Agent, such withheld amounts shall be remitted by the Withholding Agent to the applicable Governmental Authority and, to the extent such amounts have been duly remitted, such amounts shall be treated for all purposes of this Agreement as having been paid to the applicable recipient in respect of which such deduction and withholding was made by the Withholding Agent. Subject to Section 7.5(k)(i), any amounts payable in respect of Phantom Units that are subject to payroll Tax withholdings shall be paid through the payroll of A-1 Engineering Korea, Inc. Subject to Section 7.5(k)(i), any amounts payable in respect of the Bonus Agreement and any change in control payments to employees shall be paid through the payroll systems of the applicable Subsidiaries of the Company.

2.10 Transfer Taxes. All transfer, documentary, sales, use, stamp, registration and other substantially similar Taxes and fees incurred in connection with this Agreement (collectively, "Transfer Taxes") will be borne 50% by Acquiror and 50% by the Holders and paid when due. Notwithstanding anything in this Agreement to the contrary, any Tax Returns that must be filed in connection with Transfer Taxes shall be prepared and filed when due by the party primarily or customarily responsible under applicable Law for filing such Tax Returns, and such party will use reasonable best efforts to provide such Tax Returns to the other party at least ten (10) days prior to the due date for such Tax Returns. Upon the filing of Tax Returns in connection with Transfer Taxes, the filing party shall provide the other party with evidence satisfactory to the other party that such Transfer Taxes have been filed and paid.

ARTICLE III.
REPRESENTATIONS AND WARRANTIES OF THE COMPANY AND BLOCKER COMPANY

As a material inducement to Merger Sub and Acquiror to enter into this Agreement and complete the transactions contemplated hereby, each of the Company and, solely for purposes of Section 3.17 and Section 3.35, Blocker Company and the Blocker Seller, hereby represents and warrants to Acquiror and Merger Sub as follows, subject only to such exceptions as are specifically disclosed in writing in the disclosure schedule supplied by the Company to Acquiror and Merger Sub dated as of the date hereof (together with each Schedule identified in this ARTICLE III, the "Company Disclosure Schedule"):

3.1 Organization of the Company. The Company has been duly formed and is validly existing as a limited liability company in good standing under the laws of the State of Delaware and has the power and authority to own, lease or otherwise hold and operate its properties and assets, to perform its obligations under its contracts and to conduct its business as it is now being conducted. The copies of the Company's certificate of formation and the Existing LLC Agreement previously made available by the Company to Acquiror are true, correct and complete, and are currently in full force and effect. No consent or approval of any vested Class B Unitholder or Class B-1 Unitholder was required for any 2016, 2017 or 2018 amendment to the Existing LLC Agreement. The Company is duly licensed or qualified and in good standing as a foreign entity in each jurisdiction in which the ownership, leasing or operation of its assets or properties or conduct of its business is such as to require it to be so licensed or qualified, except, in each case, where the failure to be so qualified or licensed or in good standing would not have a Material Adverse Effect. At Closing, the Distribution Waterfall will be in accordance with applicable provisions of the Existing LLC Agreement.

3.2 Subsidiaries. The Subsidiaries of the Company are set forth in Schedule 3.2 attached hereto, together with their jurisdiction of organization, the number of authorized and outstanding shares of capital stock or other equity interests, as well as the percentage ownership by the Company or other Subsidiary of the Company, as applicable, of each such Subsidiary, and the director and officers of each such Subsidiary. Such Subsidiaries have been duly formed or organized and are validly existing and in good standing under the laws of their jurisdiction of formation and organization and have the power and authority to own or lease their properties, to perform their obligations under their contracts and to conduct their business as it is now being conducted. The Company has previously provided to Acquiror true, correct and complete copies of the organizational documents of each of its Subsidiaries as presently in effect. Each such Subsidiary is duly licensed or qualified and in good standing as a foreign entity (or other entity, if applicable) in each jurisdiction in which its ownership, leasing or operation of assets or properties or conduct of its business is such as to require it to be so licensed or qualified, except, in each case, where the failure to be so qualified or licensed or in good standing would not have a Material Adverse Effect.

3.3 Due Authorization. The Company has all requisite company power and authority to execute and deliver this Agreement and each other Transaction Document to which it is a party and to consummate the transactions contemplated hereby and thereby. The execution and delivery of this Agreement and each other Transaction Document to which it is a party, and the consummation

of the transactions contemplated hereby and thereby by the Company have been duly and validly authorized and approved and adopted by the Board of Managers and the holders of the requisite number of Units, and no other proceeding on the part of the Company is necessary to authorize the execution or delivery of this Agreement, the Transaction Documents to which it is a party, or performance of the transactions contemplated hereby and thereby. The Company has duly executed and delivered this Agreement and each Transaction Document to which it is a party, and this Agreement and such Transaction Documents constitute the legal, valid and binding obligation of the Company, enforceable against the Company in accordance with their respective terms, subject to applicable bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar Laws of general applicability relating to or affecting creditors' rights and to general equity principles.

3.4 No Conflict. The execution and delivery by the Company of this Agreement or any other Transaction Document to which it is, or is specified to be, a party, and the consummation of the transactions contemplated hereby and thereby (a) do not and will not conflict with, violate any provision of, or result in the breach of the certificate of formation, Existing LLC Agreement or other organizational documents of the Company or any of its Subsidiaries, (b) do not and will not conflict with or violate any provision of any applicable Laws, and (c) do not and will not conflict with, violate any provision of, result in the breach of, or give rise to a right of termination, cancellation or acceleration of any obligation or change of any material terms of, or to a loss of a benefit under, or to increased, additional, accelerated or guaranteed rights or entitlements of any Person under, any Contract required to be listed pursuant to Section 3.13(a), or any Governmental Order applicable to any of them, or (d) result in the creation of any Lien upon any of the properties or assets of the Company or any of its Subsidiaries, or constitute an event which (with or without notice or lapse of time or both) would result in any such conflict, violation, breach, acceleration, termination or creation of a Lien.

3.5 Governmental Approvals; Consents. No consent, approval or authorization of, or designation, declaration or filing with, any Governmental Authority or other Person is required on the part of the Company or any of its Subsidiaries with respect to the Company's execution, delivery and performance of this Agreement and the other Transaction Documents to which it is, or is specified to be, a party, or the consummation of the transactions contemplated hereby and thereby, except for applicable requirements of the HSR Act or any similar foreign law.

3.6 Capitalization of the Company.

(a) The authorized membership interests of the Company consist solely of Class A Units (the "Class A Units"), Class B Units (the "Class B Units") and Class B-1 Units (the "Class B-1 Units" and, together with the Class A Units and the Class B Units, each a "Unit" and, collectively, the "Units"). As of the date of this Agreement, there are 40,080,160 Class A Units, 10,092,499 Class B Units and 2,500,000 Class B-1 Units issued and outstanding. Class A Units are the only Units entitled to vote. All of the issued and outstanding Units have been duly authorized and validly issued and (to the extent vested) are fully paid and non-assessable and are held beneficially and of record by the Persons and in the amounts listed on Schedule 3.6(a) free and clear of any Liens, and are not subject to, or issued in violation of, any Contract pursuant to which any Person has a purchase option, call option, right of first refusal, preemptive right, subscription right or any similar right in

respect of such Units. There are no bonds, debentures, notes or other indebtedness of the Company having the right to vote (or convertible into, or exchangeable for, securities having the right to vote) on any matters on which holders of Units may vote. Schedule 3.6(a) contains a complete and accurate list, for each award of Class B Units, Class B-1 Units and Phantom Units, of (i) the recipient of such award, (ii) the number of Units or Phantom Units subject to the award, (iii) the participation threshold, (iv) the grant date, and (v) vesting schedule, including what portion of the award will be Unvested Units or Phantom Units, as applicable. The Distribution Waterfall accurately reflects the amounts payable in respect of the vested Units, Phantom Units, and the Blocker Interest and the Bonus Agreement. No unit certificates have been issued in respect of any of the Units.

(b) Other than the Phantom Units set forth on Schedule 3.2(b), the Company has not granted or authorized any options, warrants, purchase rights, subscription rights, exchange rights, conversion rights, rights of first refusal, preemptive rights, or other rights, Contracts or commitments providing for the issuance, registration, voting, disposition, acquisition or other transfer of Units or any other securities of, or equity interests in, the Company, or any rights or interests exercisable therefore, or any stock appreciation, phantom stock, restricted stock, profit participation or similar rights with respect to the Company, and there is no agreement or arrangement not yet fully performed which would result in the creation of any of the foregoing, and there are no other commitments or Contracts to which the Company is a party (i) for the issuance or sale of additional Units or other equity interests in the Company, or for the repurchase or redemption of Units or other equity interests in the Company; (ii) obligating the Company to issue, deliver or sell, or cause to be issued, delivered or sold any security convertible or exercisable for or exchangeable into any membership interests of or other equity interest in, the Company; or (iii) obligating the Company to issue, grant, extend or enter into any such option, warrant, right, security, commitment, Contract or agreement. Other than the Existing LLC Agreement, there are no agreements to which the Company is a party of any kind that may obligate the Company to issue, purchase, redeem or otherwise acquire any of its Units or other equity-linked securities. No equity interests in the Company are held in treasury by the Company or any of its Subsidiaries and there are no outstanding or authorized equity appreciation, phantom equity, profit participation or similar rights with respect to the Company other than the Class B Units, Class B-1 Units, and the Phantom Units.

(c) There is no Contract outstanding among the Company and any one or more Holders, or among some or all of the Holders in respect of the Company, governing the affairs of the Company or any Subsidiary or the relationship, rights and duties of the respective Holders, nor are there any voting trusts, pooling arrangements or other similar agreements with respect to the ownership or voting of any equity interest of any member of the Company Group. There are no accrued and unpaid dividends on any equity interests of the Company. No claim has been made asserting that any Person is the holder or beneficial owner of, or has the right to acquire beneficial ownership of any securities (including options and warrants) of, or any other voting, equity or ownership interest in any member of the Company Group. None of the outstanding equity or other securities of any member of the Company Group was issued in violation of the Securities Act or other applicable Law.

3.7 Capitalization of Subsidiaries. The outstanding equity interests of each of the Company's Subsidiaries have been duly authorized and validly issued and are fully paid and

nonassessable. Other than as set forth on Schedule 3.7, the Company or one or more of its wholly-owned Subsidiaries own of record and beneficially all the issued and outstanding equity interests of such Subsidiaries free and clear of any Liens, and no such equity interests are subject to, or was issued in violation of, any Contract, the Securities Act or other applicable Law or the applicable Subsidiary's constating documents. No Person has a warrant, purchase option, call option, other purchase right, right of first refusal, preemptive right, voting right, subscription right or any similar right in respect of equity interest in any Subsidiary, whether or not issued and outstanding. No Subsidiary of the Company has granted or authorized any outstanding options, warrants, rights or other securities exercisable or exchangeable for any equity interests of such Subsidiaries, any other commitments or agreements providing for the issuance of additional equity interests, the sale of treasury shares, or the repurchase or redemption of such Subsidiaries' equity interests or any agreements of any kind which may obligate any Subsidiary of the Company to issue, purchase, register for sale, dispose, redeem or otherwise acquire or transfer any of its equity interests, and there is no agreement of arrangement not yet fully performed which would result in the creation of any of the foregoing. Except for its interests in its wholly-owned Subsidiaries and except for the equity interests set forth in Schedule 3.7, the Company does not own, directly or indirectly, any capital stock, membership interest, partnership interest, joint venture interest or other equity or equity-linked interest, or other ownership interests in any Person. No claim has been made asserting that any Person is the holder or beneficial owner of, or has the right to acquire beneficial ownership of any securities of, or any other voting, equity or ownership interest in any Subsidiary of the Company.

3.8 Financial Statements.

(a) The Company has provided Acquiror the audited consolidated balance sheets of the Company and its Subsidiaries as of December 31, 2017, December 31, 2016 and December 31, 2015 and related statements of operations, cash flows and changes in members' equity for the twelve month periods then ended (the "Audited Financial Statements"). Copies of the Audited Financial Statements are included in Schedule 3.8.

(b) The Company has provided Acquiror the interim consolidated balance sheets as of, and statements of operations, cash flows and changes in members' equity of the Company and its Subsidiaries for the six (6) months ended, June 30, 2018 (the "Interim Financial Statements" and together with the Audited Financial Statements, the "Financial Statements"). A copy of the Interim Financial Statements is included in Schedule 3.8.

(c) Each of the Financial Statements has been prepared from the books and records of the Company and its Subsidiaries in accordance with GAAP applied on a consistent basis throughout the periods covered thereby and presents fairly in all material respects the consolidated financial position, results of operations, cash flows and members' equity of the Company and its Subsidiaries at and as of the dates and for the periods stated in such Financial Statements, except that the Interim Financial Statements (i) may not contain all footnotes required by GAAP and (ii) may be subject to normal year-end audit adjustments that will not exceed, in the aggregate, $250,000.

3.9 Undisclosed Liabilities. Except as set forth in Schedule 3.9, the Company Group has no Liabilities except for (i) Liabilities reflected or reserved for on the Interim Financial

Statements or disclosed in the notes thereto, (ii) Liabilities that have arisen since the date of the Interim Financial Statements in the Ordinary Course of Business of the Company and its Subsidiaries (none of which is a Liability for breach of Contract, breach of warranty, tort, infringement or violation of Law), (iii) Liabilities disclosed in the Company Disclosure Schedule, (iv) performance Liabilities under Contracts (none of which is a Liability for any breach of such Contract) or (v) Liabilities that do not, in the aggregate, exceed $250,000.

3.10 Litigation and Proceedings. Except as set forth in Schedule 3.10, there are no, and for the past five (5) years, there have been no, pending or, to the knowledge of the Company, threatened, Actions against or involving the Company or any of its Subsidiaries, any of their respective assets, properties or businesses or their respective officers, directors, agents or employees (in each case, in their capacity as such). Neither the Company nor any of its Subsidiaries has received any written notification of any, and to the Company's knowledge, there is no, investigation by any Governmental Authority involving the Company or any of its Subsidiaries, or any of their respective assets. There is no Governmental Order outstanding against or affecting the Company Group or any of their respective properties or assets.

3.11 Legal Compliance. Except with respect to matters set forth in Schedule 3.11, (x) the Company and its Subsidiaries are currently (and at all times since January 1, 2013 have been) in material compliance with all Laws, and (y) since January 1, 2013, neither the Company nor any of its Subsidiaries has received any written communication from a Governmental Authority that alleges that the Company or any of its Subsidiaries is not in material compliance with any such applicable Law, Governmental Order or Action.

3.12 Compliance with Anti-Corruption Laws.

(a) None of the Company or any of its Subsidiaries, nor any director, manager, or officer thereof (nor, to the knowledge of the Company, any employee or Person acting for or on behalf of any of the Company or any of its Subsidiaries), has (i) used any funds for unlawful contributions, gifts, gratuities, entertainment or other unlawful expenses related to political activity; (ii) made any unlawful payment or offered, promised or authorized the payment of anything of value to any foreign or domestic government officials or employees of any foreign or domestic political parties or candidate for political office for the purpose of influencing any act or decision of such official or of the government to obtain or retain business or direct business to any Person in violation of Law; (iii) made any other contribution, payment, gift, gratuity, entertainment or any other item or service of any value, directly or indirectly, in violation of Law to any Governmental Official, including but not limited to, bribes, gratuities, kickbacks, lobbying expenditures, political contributions or contingent fee payments; (iv) violated any applicable money laundering or anti-terrorism law or regulation; or (v) otherwise taken any action which would cause the Company or any of its Subsidiaries to be in violation of applicable Laws, whether U.S. or non-U.S., governing corrupt practices, money laundering, anti-bribery or anticorruption, including the U.S. Foreign Corrupt Practices Act of 1977, as amended, 15 U.S.C. 78dd-1 et seq. (all such Laws, and any successors or replacements thereof, "Anti-Corruption Laws"), and no Action has been filed or commenced against any member of the Company Group or any of its directors, managers, officers, or employees alleging any failure so to comply. The Company Group has not received any written

communication or other written notice alleging that any member of the Company Group or any of their respective directors, managers and officers, agents or employees, is, or may be, in violation of, or has, or may have, any material liability under Anti-Corruption Laws. To the knowledge of the Company, there are no current, pending or threatened Actions against or involving the Company Group or their directors, officers or managers, relating to, or resulting from, a violation or alleged violation of any Anti-Corruption Laws. The Company Group has never made a voluntary, directed, or involuntary disclosure to any Governmental Authority with respect to any alleged act or omission arising under or relating to any noncompliance with any Anti-Corruption Laws.

3.13 Contracts; No Defaults.

(a) Schedule 3.13(a) contains a listing of all Contracts (other than any Contract that is an Employee Plan or a Real Property Lease) described in clauses (i) through (xix) below to which the Company or any of its Subsidiaries is a party or by which the Company or any of its Subsidiaries or any of their assets is bound as of the date hereof. True, correct and complete copies of Contracts referred to in clauses (i) through (xviii) below have been delivered to or made available to Acquiror or its agents or representatives.

(i) any Contract concerning a partnership or joint venture or similar arrangement that is currently in place;

(ii) any collective bargaining agreement or other Contract with a labor organization, labor management council or other employee representative relating to employees of the Company or any of its Subsidiaries;

(iii) any Contract relating to the acquisition or disposition of any business or assets outside of the Ordinary Course of Business (whether by merger, sale/purchase of stock, sale/purchase of substantial assets or otherwise) entered into since January 1, 2013 or which contains outstanding earn-out or other similar contingent payment obligations;

(iv) any Contract pursuant to which the Company or any of its Subsidiaries incurred a continuing obligation to pay amounts in respect of indemnification obligations outside the Ordinary Course of Business;

(v) Contracts (other than inter-company Contracts between the Company and any of its Subsidiaries) relating to the incurrence or guarantee of Indebtedness or the making of any loan or advance;

(vi) any Contract that (i) restricts the ability of the Company or any of its Subsidiaries to freely engage or compete in any line of business or with any Person anywhere in the world or (ii) contains exclusivity or exclusive dealing obligations or "most favoured nation" pricing obligations;

(vii) any Contract that requires any member of the Company Group to purchase all or substantially all of its requirements for a particular product or service

from a specific vendor or supplier or to make periodic minimum purchases of a particular product or service from a specific vendor or supplier;

(viii) each Contract pursuant to which (i) the Company or any of its Subsidiaries grants to a third Person a license to any Owned Intellectual Property (other than non-exclusive licenses granted to customers or end users in the Ordinary Course of Business) or (ii) a third Person grants to the Company or any of its Subsidiaries a license to use any Intellectual Property (other than license agreements for commercially available Software);

(ix) any material settlement, conciliation, or similar agreement with any Governmental Authority or pursuant to which the Company or any of its Subsidiaries is obligated to pay any consideration after the date of this Agreement;

(x) any Contract between the Company or any of its Subsidiaries, on the one hand, and any Affiliate, officer, member, director, executive employee or equityholder (whether direct or indirect) of the Company or its Subsidiaries (other than the Company or any Subsidiary) or any of their Immediate Family members, on the other hand;

(xi) other than Contracts covered by Section 3.13(a)(x), any Contract for the employment or engagement of any person on a full-time, part-time, consulting or other basis and providing for annual compensation in excess of $200,000;

(xii) any Contract involving capital expenditures by the Company or any of its Subsidiaries in excess of $250,000;

(xiii) any hedging, swap, forward, future, interest rate, commodity or currency exchange agreement or similar hedging or derivative instrument;

(xiv) any Contract with a Principal Customer or a Principal Supplier;

(xv) any Contract granting to any Person an option or a first refusal, first-offer or similar preferential right to purchase or acquire any assets or securities of a member of the Company Group;

(xvi) any Contract providing for payments or benefits upon a change of control of the Company Group or that would provide a counterparty with a right to terminate, or provide for any acceleration of any, or additional, benefits upon a change of control of the Company Group;

(xvii) any Contract that is a settlement, conciliation or similar Contract that imposes any obligations upon the Company Group after the date of this Agreement in excess of $100,000;

(xviii) any Contract that involves remaining payments to or from the Company Group in excess of $250,000 per annum or $500,000 in aggregate; and

(xix) any Contract that has a remaining term of more than one (1) year from the date hereof and cannot be terminated by the Company Group without penalty on less than sixty (60) days' notice.

(b) As of the date hereof, all the Contracts required to be listed pursuant to Section 3.13(a) (the "Material Contracts") are (i) in full force and effect (ii) represent the legal, valid and binding obligations of the Company or one of its Subsidiaries party thereto and, to the knowledge of the Company, represent the legal, valid and binding obligations of the other parties thereto. Except as set forth on Schedule 3.13(b), (A) neither the Company nor any of its Subsidiaries party thereto (with or without the lapse of time or the giving of notice, or both) is in breach of or default under, or in the past five years has materially breached or been in material default under, any such Material Contract, (B) to the Company's knowledge, no other party to such Material Contract is (with or without the lapse of time or the giving of notice, or both) in breach of or default under, any such Material Contract, (C) neither the Company nor any of its Subsidiaries have received any claim or notice of a breach of or default under any such Material Contract, (D) to the knowledge of the Company, no event has occurred which individually or together with other events, would reasonably be expected to result in a breach of or a default under, or permit the termination, modification or acceleration of, any such Material Contract (in each case, with or without notice or lapse of time or both), (E) no member of the Company Group has received notice of an intention of any third party under any Material Contract to cancel, terminate or modify the terms of any such Material Contract, or accelerate the obligations of a member of the Company Group thereunder; except in each of clauses (A), (B), (C), (D) as would only have a *de minimus* effect on the Company and its Subsidiaries taken as a whole.

(c) Neither the Company nor any of its Subsidiaries is, or in the past five (5) years has been, a party to any Government Contract. None of the Contracts to which the Company or a Subsidiary is a party includes any clauses, provisions or requirements incorporated expressly or by reference from the Federal Acquisition Regulation ("FAR") or any applicable U.S. Government agency supplement, included the U.S. Department of Defense Supplement to the FAR, as amended.

3.14 Employee Benefit Plans.

(a) Schedule 3.14(b) contains a correct and complete list of each Employee Plan (except for offer letters that are in substantially the same form as the template made available to Acquiror, that are terminable at will, without cost or penalty, and that do not provide for severance or change in control benefits). Correct and complete copies of the following documents, with respect to each of the Employee Plans, if applicable, have been made available to Acquiror: (i) most recent plan and related trust documents, and amendments thereto; (ii) the most recent Form 5500; (iii) the most recent actuarial report; (iv) summary plan descriptions and summaries of material modifications that have been distributed to such Employee Plan participants in the past year; (v) the most recent determination letter issued by the Internal Revenue Service; and (vi) all material insurance or annuity contracts or other funding instruments.

(b) No Employee Plan is, and none of the Company, any of its Subsidiaries or any ERISA Affiliate has any liability or obligation (contingent or otherwise) with respect to, a: (i) "multiemployer plan" (as defined in Section 3(37) of ERISA), (ii) "defined benefit plan" (as defined

in Section 3(35) of ERISA), (iii) plan subject to Section 302 or Title IV of ERISA or Section 412 or Code; or (iv) plan, program, policy, agreement or arrangement that provides retiree or post-termination health or life insurance benefits (other than health continuation coverage required by Section 4980B of the Code).

(c) Each Employee Plan has been established, maintained, funded and administered in all material respects with the terms thereof and the applicable requirements of ERISA, the Code and any other applicable Laws. Each Employee Plan that is intended to be qualified under Section 401(a) of the Code has received a favorable determination letter from the Internal Revenue Service or is a preapproved plan which is the subject of a favorable opinion or advisory letter from the Internal Revenue Service, and, to the Company's knowledge, there are no facts or circumstances that would be reasonably expected to adversely affect the qualified status of such plan. Except as would not reasonably be expected to result in material liability to the Company or any of its Subsidiaries, all contributions or payments (including all employer contributions, employee salary reduction contributions and premium or benefit payments) that are due have been made within the time periods prescribed by the terms of each Employee Plan, ERISA, the Code and other applicable Law.

(d) Other than claims for benefits in the ordinary course, there are no actual or, to the knowledge of the Company, threatened claims, audits, investigations, litigation, actions, hearings or other proceedings involving any Employee Plan. No "prohibited transaction" (within the meaning of Section 406 of ERISA or Section 4975 of the Code) or breach of fiduciary duty (as determined under ERISA) has occurred in connection with any Employee Plan, which would reasonably be expected to subject the Company or any of its Subsidiaries to any material liability.

(e) Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby will (either alone or in combination with another event) (i) result in any payment becoming due, or increase the amount of any compensation or benefits due, to any current or former employee, officer, director or contractor of the Company or any of its Subsidiaries or with respect to any Employee Plan; (ii) increase any benefits or compensation otherwise payable under any Employee Plan; or (iii) result in the acceleration of the time of payment or vesting or the funding of any such compensation or benefits.

(f) Each Employee Plan maintained, sponsored or contributed to for the benefit of employees located outside the United States (each, a "Non-U.S. Plan") (A) complies in all material respects with applicable Law, (B) is fully funded and/or book reserved, as appropriate, based upon reasonable actuarial assumptions, to the extent such Non-U.S. Plan is required to be funded and/or book-reserved, (C) has been registered to the extent required, and has been maintained in good standing with applicable governmental authorities, in all material respects, and (D) if intended to qualify for special Tax treatment, meets all requirements for such treatment in all material respects. Except as set forth on Schedule 3.14(f), neither the Company nor any of its Subsidiaries have ever provided or have any obligation to provide defined benefit pensions or other post-employment benefits in each case within the meaning of GAAP. Neither the Company nor of its Subsidiaries, nor any of their respective agents or delegates, have breached any fiduciary obligation with respect to the administration or investment of any Non-U.S. Plan.

(g) The Company or its Subsidiaries can terminate any Employee Plan (other than any bilateral agreement between the Company or its Subsidiary and any employee or service provider thereof) without payment of any additional contribution or amount (other than customary administrative and termination expenses) and, except as otherwise mandated by applicable Law, without the vesting or acceleration of any benefits promised by such Employee Plan.

3.15 Labor Relations.

(a) Neither the Company nor any of its Subsidiaries is a party to any collective bargaining agreement or other Contract with any labor organization, labor management council or other employee representatives, there are no such Contracts that are binding on the Company or any of its Subsidiaries, and neither the Company nor any of its Subsidiaries is currently negotiating any such Contract. In connection with the transactions contemplated by this Agreement, the Company and its Subsidiaries have satisfied any applicable notice or bargaining requirements and obtained any necessary consents arising under applicable Law or any Contract with any labor management council or other employee representative.

(b) There are no strikes, work stoppages, unfair labor practice charges or complaints, slowdown, lockouts, material grievances, or other material labor disputes pending or, to the knowledge of the Company, threatened against or involving the Company or any of its Subsidiaries, and neither the Company nor any of its Subsidiaries has experienced any such dispute in the past five (5) years. To the knowledge of the Company, there are no ongoing or threatened union organizing or decertification activities relating to employees of the Company or any of its Subsidiaries and no such activities have occurred within the past five (5) years.

(c) To the knowledge of the Company, no officer, executive, or key employee of the Company or any of its Subsidiaries: (i) has any present intention to terminate his or her employment with the Company or any of its Subsidiaries; or (ii) is party to or bound by any non-competition, non-solicitation, confidentiality, proprietary rights, or similar Contract that could materially restrict such Person in the performance of his or her employment duties or the ability of the Company or any of its Subsidiaries to operate the business.

(d) Within the past five (5) years, neither the Company nor any of its Subsidiaries has implemented any employee layoffs or plant closures that gave rise to notice obligations under the Worker Adjustment and Retraining Notification Act of 1988, as amended, or any similar or related Law (collectively, the "WARN Act").

(e) Schedule 3.15(e) sets forth the following: a true, complete and accurate list of each employee, independent contractor, director or consultant of any of the Company or any of its Subsidiaries, his or her date(s) of hire, position and title (if any), current rate of compensation (including bonuses, commissions and incentive compensation, if any), and in the case of an employee, whether such employee is hourly or salaried, whether such employee is exempt or non-exempt, the number of such employee's accrued sick days and vacation days, whether such employee is absent from active employment and, if so, the date such employee became inactive, the reason for inactive status and, if applicable, the anticipated date of return to active employment. Except as disclosed on Schedule 3.15(e), neither the Company nor any of its Subsidiaries has any unsatisfied

Liability to any previously terminated employee or independent contractor. The Company has made available to Acquiror all written employee handbooks, policies, programs and arrangements.

(f) The Company and its Subsidiaries have complied in all material respects with all applicable Laws relating to labor, labor relations or employment, including, without limitation, any provisions thereof relating to equal employment opportunity, wages, hours, overtime regulation, employee safety and health, immigration control, drug testing, termination pay, vacation pay, fringe benefits, collective bargaining, temporary workers (including the *Act on the Protection of Temporary Agency Workers* (Korea)) and the payment and/or accrual of the same and all taxes, insurance and all other costs and expenses applicable thereto, and neither the Company nor any of its Subsidiaries is liable for any arrearage, or any taxes, costs or penalties for failure to comply with any of the foregoing. Each Person whom the Company or any of its Subsidiaries has retained as an independent contractor qualifies or qualified as an independent contractor and not as an employee under all applicable Laws and the terms of all applicable Employee Plans. Within the past three (3) years, there have not been any allegations or Actions concerning employment discrimination, wage payment, overtime obligations or other issues pertaining to unlawful employment practices pending against the Company or any of its Subsidiaries or, to the knowledge of the Company, threatened, nor to the knowledge of the Company is there any basis for any such allegation or Action.

(g) All persons employed by the Company or any of its Subsidiaries in the United States are employees at will or otherwise employed such that the Company or its Subsidiaries may lawfully terminate their employment at any time, with or without cause, without creating any material cause of action against the Company or any of its Subsidiaries or otherwise giving rise to any material liability of the Company or any of its Subsidiaries for wrongful discharge, breach of contract or tort or any other similar cause at law or in equity. A true and correct copy of any form of confidentiality, noncompetition, nonsolicitation, or proprietary rights agreement currently in force between the Company or any of its Subsidiaries and their respective employees, officers, directors or independent contractors, and any material variances therefrom, has been made available to Acquiror.

(h) The Company and its Subsidiaries have in their files a U.S. Citizenship and Immigration Services Form I-9 (or similar document under applicable foreign Law) that was validly and properly completed and, if necessary, that has been properly updated, in accordance with applicable Law for each current or former employee of the Company or any of its Subsidiaries with respect to whom such form is required to be maintained by the Company or any of its Subsidiaries under applicable Law. Neither the Company nor any of its Subsidiaries have hired or continued to employ unauthorized workers or used the services of any unauthorized worker through a staffing agency, Contract or subcontract. Schedule 3.15(h) lists each employee of the Company or any of its Subsidiaries who holds a temporary work authorization, including H-1B, L-1, F-1 or J-1 visas or work authorizations (the "Work Permits"), and shows for each such employee the type of Work Permit and the length of time remaining on such Work Permit. With respect to each Work Permit, all of the information that the Company and its Subsidiaries provided to the Department of Labor and the Immigration and Naturalization Service or the Department of Homeland Security (or similar Governmental Authority) in the application for such Work Permit was true and complete in all

material respects. The Company and its Subsidiaries received the appropriate notice of approval from such Governmental Authorities with respect to each such Work Permit.

(i) There have been no statements, either written or oral, or communications made or materials provided to any employee or former employee of the Company or any of its Subsidiaries by any Person that provide for or could be construed as a contract or promise regarding continued employment or terms and conditions of employment with Acquiror or the Company or its Subsidiaries following the Closing or any pension, welfare, or other insurance-type benefits other than benefits under the Employee Plans.

3.16 Tax Matters of the Company and its Subsidiaries.

(a) All Taxes imposed on the Company and any of its Subsidiaries have been fully paid (whether or not shown as owing on any Tax Return). The Company and all of its Subsidiaries have withheld and paid all Taxes required to have been withheld and paid in connection with any amounts paid or owing to any shareholder, employee, creditor, independent contractor, or other third party.

(b) All income and other material Tax Returns required to be filed by or with respect to the Company and all of its Subsidiaries have been filed with the appropriate Governmental Authority and each such Tax Return is true, correct and complete in all material respects. None of the Company or any of its Subsidiaries currently is the beneficiary of any extension of time within which to file any Tax Return, other than an extension requested in the Ordinary Course of Business of no longer than six (6) months.

(c) No federal, state or local tax audits, investigations, suits, claims, actions or administrative or judicial Tax proceedings are pending or being conducted with respect to any of the Company or its Subsidiaries.

(d) There is not in force any waiver or agreement for any extension of time for the assessment or payment of any Tax of or with respect to the Company or any of its Subsidiaries.

(e) None of the Company or any of its Subsidiaries is a party to or bound by any Tax allocation, Tax sharing, or Tax indemnity agreement (other than any agreement entered into in the Ordinary Course of Business and not primarily related to Taxes (an "Ordinary Commercial Agreement")).

(f) In the past five (5) years, neither the Company nor any of its Subsidiaries has received any written claim by a taxing authority in a jurisdiction where the Company or any of its Subsidiaries does not file Tax Returns that such Person is or may be subject to taxation by such jurisdiction.

(g) There are no Liens for Taxes (other than for Taxes not yet due and delinquent) upon the assets of the Company or any of its Subsidiaries.

(h) None of the Company nor any of its Subsidiaries (i) has been a member of an affiliated, consolidated, combined, unitary or similar group filing a consolidated federal income Tax Return other than a group of which the Company is the parent or (ii) has any liability for the Taxes of any Person (other than any of the Company or its Subsidiaries) under Treas. Reg. Section 1.1502-6 (or any similar provision of state, local or non-U.S. law), as a transferee or successor, or by Contract (other than any Ordinary Commercial Agreement).

(i) Schedule 3.16(i) sets forth the classification of each of the Company and the Company's Subsidiaries for U.S. federal Income Tax purposes.

(j) None of the Company or any of its Subsidiaries will be required to include any item of income in, or exclude any item of deduction from, taxable income for any taxable period (or portion thereof) ending after the Closing Date as a result of any (i) change in method of accounting under Code Section 481 (or any corresponding provision of state, local or non-U.S. Law) that is made on or before the Closing Date for a taxable period ending on or prior to the Closing Date; (ii) use of an improper method of accounting in any taxable period ending on or before the Closing Date; (iii) "closing agreement" as described in Code Section 7121 (or any corresponding or similar provision of state, local or non-U.S. Tax Law) entered into on or before the Closing Date; (iv) installment sale or open transaction disposition made on or prior to the Closing; (v) prepaid amount received on or prior to the Closing Date (other than a prepaid amount received in the Ordinary Course of Business); or (vi) election under Code Section 108(i) (or any corresponding or similar provision of state, local or non-U.S. Tax Law).

(k) None of the Company or any of its Subsidiaries is or has been a party to any "listed transaction" as defined in Code Section 6707A and Treasury Regulation Section 1.6011-4.

(l) Each Employee Plan that is a "nonqualified deferred compensation plan" (as defined for purposes of Code Section 409A(d)(1)) is in documentary and operational compliance with Code Section 409A and the applicable guidance issued thereunder in all material respects. None of the Company or any of its Subsidiaries has any indemnity obligation for any Taxes imposed under Section 4999 or 409A of the Code.

(m) None of the Company or any of its Subsidiaries is a party to any contract, arrangement or plan that has resulted or could result, separately or in the aggregate, in the payment of any "excess parachute payment" within the meaning of Code Section 280G (or any corresponding provision of state, local or non-U.S. Law) as a result of the consummation of the transactions contemplated by this Agreement (either alone or in conjunction with any other event).

(n) None of the Company or any of its Subsidiaries will be required to report, or include in income, any amount pursuant to Code Section 965 (including Code Section 965(h)) for any Post-Closing Tax Period.

(o) With respect to each Class B Unit and Class B-1 Unit, either (x) such Unit qualifies as a "profits interest" within the meaning of IRS Revenue Procedure 93-27, 1993-2 C.B. 343, as clarified by IRS Revenue Procedure 2001-43, 2001-2 C.B. 191, or (y) the holder thereof duly and timely filed an election with respect to such Unit under Section 83(b) of the Code.

3.17 Tax Matters of Blocker Company.

(a) All Taxes imposed on Blocker Company have been fully paid (whether or not shown as owing on any Tax Return). Blocker Company has withheld and paid all Taxes required to have been withheld and paid in connection with any amounts paid or owing to any shareholder, employee, creditor, independent contractor, or other third party.

(b) All income and other material Tax Returns required to be filed by or with respect to Blocker Company have been filed with the appropriate Governmental Authority and each such Tax Return is true, correct and complete in all material respects. Blocker Company is not the beneficiary of any extension of time within which to file any Tax Return, other than an extension requested in the Ordinary Course of Business of no longer than six (6) months.

(c) No federal, state or local tax audits, investigations, suits, claims, actions or administrative or judicial Tax proceedings are pending or being conducted with respect to Blocker Company.

(d) There is not in force any waiver or agreement for any extension of time for the assessment or payment of any Tax of or with respect to Blocker Company.

(e) Blocker Company is not a party to or bound by any Tax allocation, Tax sharing, or Tax indemnity agreement (other than any Ordinary Commercial Agreement).

(f) In the past five (5) years, Blocker Company has not received any written claims by a taxing authority in a jurisdiction where Blocker Company does not file Tax Returns that such Person is or may be subject to taxation by such jurisdiction.

(g) There are no Liens for Taxes (other than for Taxes not yet due and delinquent) upon the assets of Blocker Company.

(h) Blocker Company (i) has not been a member of an affiliated, consolidated, combined, unitary or similar group filing a consolidated federal income Tax Return or (ii) has no liability for the Taxes of any Person under Treas. Reg. Section 1.1502-6 (or any similar provision of state, local or non-U.S. law), as a transferee or successor, or by Contract (other than any Ordinary Commercial Agreement).

(i) Blocker Company will not be required to include any item of income in, or exclude any item of deduction from, taxable income for any taxable period (or portion thereof) ending after the Closing Date as a result of any (i) change in method of accounting under Code Section 481 (or any corresponding provision of state, local or non-U.S. Law) that is made on or before the Closing Date for a taxable period ending on or prior to the Closing Date; (ii) use of an improper method of accounting in any taxable period ending on or before the Closing Date; (iii) "closing agreement" as described in Code Section 7121 (or any corresponding or similar provision of state, local or non-U.S. Tax Law) entered into on or before the Closing Date; (iv) installment sale or open transaction disposition made on or prior to the Closing; (v) prepaid amount received on or prior to the Closing Date (other than a prepaid amount received in the Ordinary Course of

Business); or (vi) election under Code Section 108(i) (or any corresponding or similar provision of state, local or non-U.S. Tax Law).

(j) Blocker Company is not and has not been a party to any "listed transaction" as defined in Code Section 6707A and Treasury Regulation Section 1.6011-4.

(k) Blocker Company is not a "United States real property holding corporation" within the meaning of Code Section 897(c).

(l) Each Employee Plan of the Blocker Company that is a "nonqualified deferred compensation plan" (as defined for purposes of Code Section 409A(d)(1)) is in documentary and operational compliance with Code Section 409A and the applicable guidance issued thereunder in all material respects. Blocker Company does not have an indemnity obligation for any Taxes imposed under Section 4999 or 409A of the Code.

(m) Blocker Company is not a party to any contract, arrangement or plan that has resulted or could result, separately or in the aggregate, in the payment of any "excess parachute payment" within the meaning of Code Section 280G (or any corresponding provision of state, local or foreign Law) as a result of the consummation of the transactions contemplated by this Agreement (either alone or in conjunction with any other event).

(n) Blocker Company will not be required to report, or include in income, any amount pursuant to Code Section 965 (including Code Section 965(h)) for any Post-Closing Tax Period.

3.18 Brokers' Fees. Except for Stifel, Nicolaus & Company, Incorporated and Lincoln International LLC, no broker, finder, investment banker or other Person is entitled to any brokerage fee, financial advisory fee, finders' fee or other similar fee, commission or payment (all of which shall be treated as Holder Expenses) in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of the Company or any of its Subsidiaries.

3.19 Licenses, Permits and Authorizations. The Company and its Subsidiaries have obtained all of the licenses, certificates, security clearances, approvals, consents, filings, registrations, notifications, authorizations and permits (collectively, "Permits") from any Governmental Authority or other Person necessary to permit the Company and its Subsidiaries to own, operate, use and maintain their assets in the manner in which they are now operated and maintained and to conduct the business of the Company and its Subsidiaries as currently conducted, which Permits are listed on Schedule 3.19. Each of the Company and its Subsidiaries is currently in compliance in all material respects with its obligations under, and the terms of, each Permit, and (i) no event has occurred or condition or state of facts exists which constitutes or after notice or lapse of time or both, would constitute a breach or default in any material respect under any such Permit or which permits or, after notice or lapse of time or both, would permit revocation or termination of any such Permit, or which would materially affect the rights of the Company or any of its Subsidiaries under any such Permit, (ii) no notice of cancellation, revocation, non-renewal, or of material default concerning any such Permit has been received by the Company or any of its Subsidiaries since January 1, 2013, and (iii) each such Permit is valid, subsisting and in full force

and effect. No Permit will expire, terminate or fail to continue in full force and effect as a result of the consummation of the transactions contemplated hereby.

3.20 Real Property.

(a) Schedule 3.20(a) lists all real property owned by the Company or any of its Subsidiaries (collectively, "Owned Real Property").

(b) Schedule 3.20(b) lists all Leased Real Property. True, correct and complete copies of all leases, subleases or similar agreements entered into in connection with the Leased Real Property (collectively, "Real Property Leases") and amendments thereto, if any, have been previously made available to Acquiror.

(c) With respect to each of the Real Property Leases, (i) the Company and its Subsidiaries have legal, valid, binding and enforceable leasehold estates in, and enjoy peaceful and undisturbed possession of, all Leased Real Property leased by them, as applicable, free and clear of all Liens except Permitted Liens; (ii) the assignment of such Real Property Lease to Acquiror pursuant to this Agreement does not require the consent of any other party to such Real Property Lease, will not result in a breach of or default under such Real Property Lease, or otherwise cause such Real Property Lease to cease to be legal, valid, binding, enforceable and in full force and effect on identical terms following the Closing; (iii) the Company's or Subsidiary's possession and quiet enjoyment of the Leased Real Property under such Real Property Lease has not been disturbed, and to the Company's knowledge, there are no disputes with respect to such Real Property Lease; (iv) neither the Company or Subsidiary nor any other party to the Real Property Lease is in material breach or default under such Real Property Lease, and no event has occurred or circumstance exists which, with the delivery of notice, the passage of time or both, would constitute such a breach or default, or permit the termination, modification or acceleration of rent under such Real Property Lease; (v) no security deposit or portion thereof deposited with respect to such Real Property Lease has been applied in respect of a breach or default under such Real Property Lease which has not been redeposited in full, and if each Real Property Lease were to expire on the date hereof by the terms of such Real Property Lease through no fault of the Company Group, the applicable member of the Company Group would be entitled to receive the full amount of any security deposit paid to the landlord in connection with each Real Property Lease; (vi) neither the Company nor Subsidiary owes, or will owe in the future, any brokerage commissions or finder's fees with respect to such Real Property Lease; (vii) the other party to such Real Property Lease is not an affiliate of, and otherwise does not have any economic interest in, the Company or any Subsidiary; (viii) the Company or Subsidiary has not subleased, licensed or otherwise granted any Person the right to use or occupy such Leased Real Property or any portion thereof; and (ix) the Company or Subsidiary has not collaterally assigned or granted any other security interest in such Real Property Lease or any interest therein. To the knowledge of the Company, there are no pending appropriation, condemnation, eminent domain or like proceedings relating to any Leased Real Property, and neither the Company nor any of its Subsidiaries has received any written threat of such proceedings. None of the Leased Real Property has suffered any material damage by fire or other casualty which has not heretofore been repaired and restored in all material respects. Neither the Company nor any of

its Subsidiaries has received any written notice of any material violation of any building, zoning or subdivision laws with respect to any of the Leased Real Property.

(d) The Owned Real Property and the Leased Real Property comprise all of the real property owned, leased or occupied by the Company and its Subsidiaries.

3.21 Intellectual Property.

(a) Schedule 3.19(a) identifies each item of Registered Intellectual Property owned by the Company or any of its Subsidiaries, all of which is recorded in the applicable Intellectual Property office solely in the name of the Company or any of its Subsidiaries and which is also subsisting and, to the knowledge of the Company, valid and enforceable.

(b) Schedule 3.19(b) identifies all of the Company Products. The Company Products operate substantially in accordance with their documentation, except for routine deficiencies that can be corrected in the ordinary course of maintenance and support consistent with historical practices.

(c) The Company and its Subsidiaries own and possess all right, title and interest in and to, or have a license to use, all Intellectual Property that is used in the operation of the business (collectively, the "Company Intellectual Property"). The Company Intellectual Property shall be available for use by Acquiror immediately after the Closing Date on substantially the same terms and conditions to those under which the business and the Company or an applicable Subsidiary of the Company owned or used the Company Intellectual Property immediately prior to the Closing Date.

(d) All employees and independent contractors of the Company and its Subsidiaries who have developed any Owned Intellectual Property have done so pursuant to an agreement that granted the Company or its applicable Subsidiary ownership of the employee's or independent contractor's development.

(e) To the knowledge of the Company, the Company and its Subsidiaries do not infringe or otherwise violate the Intellectual Property of any third party, and neither the Company nor any of its Subsidiaries has received any notices, requests for indemnification or threats from any third party related to the foregoing.

(f) To the knowledge of the Company, no third party is infringing or otherwise violating the Owned Intellectual Property.

(g) Neither the Company nor any of its Subsidiaries uses any open source Software (a) in a manner that would grant or purport to grant to any Person any rights to or immunities under any of the Owned Intellectual Property, or (b) under any license requiring the Company or any of its Subsidiaries to disclose or distribute the Company's proprietary source code in any of the Company Products, to license such source code for the purpose of making derivative works, or to make available for redistribution to any Person such source code at no or minimal charge.

(h) All computer hardware and Software systems used or relied upon by the Company or any of its Subsidiaries in the conduct of the business are sufficient for the current needs of such business and are subject to commercially reasonable disaster recovery procedures. The Company and its Subsidiaries have taken commercially reasonable measures to prevent the introduction of any virus, worm, or similar disabling code or program into such systems. To the knowledge of the Company, no Person has obtained unauthorized access to any of the Company Group's computer hardware, Software systems or any data comprised thereby.

(i) The Company and its Subsidiaries have taken commercially reasonable measures to maintain in confidence all trade secrets comprising any of the Owned Intellectual Property.

3.22 Environmental Matters.

(a) The Company and its Subsidiaries are, and since January 1, 2013 have been, in material compliance with all Environmental Laws and Environmental Permits. No member of the Company Group has received written notice, including, without limitation, any request for information pursuant to CERCLA Section 104(e) or any similar Environmental Law, alleging that any member of the Company Group is or may be potentially responsible for any Release of Hazardous Substances with respect to the Real Property, for any material costs arising under, or material violation of, Environmental Laws with respect thereto. No Action pursuant to Environmental Law is pending or, to the Company's knowledge, threatened against or affecting any of member of the Company Group or the Real Property.

(b) Neither the Company nor its Subsidiaries has handled, disposed of, arranged for the disposal of, manufactured, distributed, exposed any Person to, or Released any Hazardous Substance, that has given rise to or could reasonably be expected to give rise to material Liabilities pursuant to Environmental Laws.

(c) The Company has made available to the Acquiror true and complete copies of all environmental site assessments, remediation reports, compliance audits and any other material records and correspondence in the custody or control of any member of the Company Group relating to Environmental Matters with respect to the Real Property.

(d) Schedule 3.22(d) sets forth a list of all material Environmental Permits held by the Company Group. To the knowledge of the Company, such Environmental Permits constitute all the material licenses and permits required under the Environmental Laws in connection with the conduct of the business of the Company Group as presently conducted. Such Environmental Permits are in full force and effect and the Company Group has not received any written notice from any Governmental Authority asserting that such Governmental Authority intends to revoke or suspend any such Environmental Permit.

(e) The Company has not entered into, sustained or assumed any Liability, Governmental Order, settlement, judgment, injunction or decree relating to any failure to comply with Environmental Law or any Hazardous Substance.

3.23 Absence of Certain Changes or Events.

(a) Since December 31, 2017 there has not been a Material Adverse Effect.

(b) Since December 31, 2017, other than in connection with the transactions contemplated by this Agreement and as set out on Schedule 3.23(b):

(i) the Company and its Subsidiaries have conducted their business and operated their properties in the Ordinary Course of Business; and

(ii) the Company and its Subsidiaries have not taken any action that would constitute a breach of Section 5.1, if such action had been taken after the date of this Agreement.

3.24 Related Party Transactions. Other than compensation payable to officers, managers and directors and employee expense reimbursement obligations, there are no outstanding amounts payable to or receivable from, or advances by the Company or any of its Subsidiaries to, and neither the Company nor any of its Subsidiaries is otherwise a creditor or debtor (with respect to any loan obligation) to, or party to any Contract or transaction with (other than the Existing LLC Agreement and other Contracts relating to the issuance of Units, Blocker Interest or Phantom Units, any employment or retention agreement or any employee benefit plan or obligation relating thereto), any Holder, Phantom Unit Holder, indirect equityholder, manager, director, officer or other Affiliate of the Company or any of its Subsidiaries (other than the Company or any Subsidiary), including any private equity fund sponsor relating to any unitholder or Phantom Unit holder (whether direct or indirect), or any of their Immediate Family members. The Company has made available to Acquiror all Contracts of which it has knowledge that is entered into between or among the Holders or Phantom Unit holders of the Company relating to the Company or the membership interests of the Company.

3.25 Insurance. Schedule 3.25 contains an accurate and complete list of all insurance policies maintained by the Company or any of its Subsidiaries. True and correct copies of all such policies have been made available to the Acquiror. Each such policy is in full force and effect and all premiums due with respect to all such policies have been paid or are otherwise on a payment plan. Neither the Company, nor any of its Subsidiaries, is in any default with respect to its obligations under any such policy, or has received notice of cancelation or termination with respect to any such policy. The policies provide coverage in such amounts and against such losses and claims as is generally maintained for comparable businesses and properties, may be required by applicable Law or is required by any and all Material Contracts to which any member of the Company Group is a party. No insurer has advised the Company Group in writing that it intends to reduce coverage, increase premiums or fail to renew an existing policy. Except as set forth in Schedule 3.25, there are no claims involving more than $200,000 in any individual circumstance pending under any policies and no such claim has been made under any of such insurance policies in the last five (5) years.

3.26 Customers and Suppliers. Schedule 3.26(a) sets forth a true and complete list of the 10 largest customers of the Company and its Subsidiaries (determined by reference to the revenues

of the Company and its Subsidiaries generated by such customers for the 12 month period ended December 31, 2017) (the "Principal Customers"). Schedule 3.25(b) sets forth a true and complete list of the 10 largest suppliers of the Company and its Subsidiaries (determined by reference to the payments made to such suppliers by the Company and its Subsidiaries for the 12 month period ended December 31, 2017) (the "Principal Suppliers"). Since December 31, 2017, none of the Principal Customers or the Principal Suppliers has canceled or otherwise terminated, or provided written notice to the Company or any of its Subsidiaries of its intent to, terminate its relationship with the Company or any of its Subsidiaries, and none of the Principal Customers or Principal Suppliers have amended (in any material respect) a Contract with the Company Group or stopped or materially reduced the volume of purchases or supplies of products or services to or from the Company Group, and no Principal Customer or Principal Supplier has provided written notice of its intent to cancel, terminate or amend (in any material respect) a Contract with the Company Group or to stop or materially reduce the volume of purchases or sales of products or services to or from the Company Group. There are no unresolved material disputes with any Principal Customer or Principal Supplier.

3.27 Export Control. Except as set forth in Schedule 3.27:

(a) The Company and its Subsidiaries are in compliance in all material respects with all applicable statutory and regulatory requirements under the Arms Export Control Act (22 U.S.C. § 2778), the International Traffic in Arms Regulations (ITAR) (22 C.F.R. §§ 120 et seq.), the Export Control Reform Act of 2018, the Export Administration Regulations (EAR) (15 C.F.R. §§ 730 et seq.) and Executive Orders based on the authority vested in the President under the International Emergency Economic Powers Act (IEEPA), as amended, the Trading with the Enemy Act (TWEA) and other U.S. Sanctions laws; and sanctions administered by the Office of Foreign Assets Controls ("OFAC") or the U.S. Department of State, including, but not limited to sanctions under the Countering America's Adversaries Through Sanctions Act, the Iran Sanctions Act of 1996, as amended (50 U.S.C § 1701 note), and other relevant Laws and Executive Orders, together with any similar Laws in the United States or any other jurisdiction application to the operations of the Company Group (collectively, and any successors or replacements thereof, the "Export Control Laws"). Since January 1, 2013, neither the Company nor any of its Subsidiaries has received written, or to the knowledge of the Company, oral communication from any Governmental Authority or any other Person of any actual or alleged violation, breach or noncompliance with the Export Control Laws.

(b) The Company and its Subsidiaries are in material compliance with the Anti-Boycott Act of 2018 and the anti-boycott regulations administered by the U. S. Department of Commerce and the U.S. Department of Treasury and Section 999 of the Internal Revenue Code, and all Laws and regulations administered by the Bureau of Customs and Border Protection in the U.S. Department of Homeland Security. To the knowledge of the Company, neither the Company nor any of its Subsidiaries has received any communication during the past five years that alleges that the Company or any of its Subsidiaries is not, or may not be in compliance with, or has, or may have, any liability under the Export Control Laws.

(c) Since January 1, 2013, neither the Company nor any of its Subsidiaries has (i) entered into a Consent Agreement with the Directorate of Defense Trade Controls ("DDTC"), or (ii) had any fines or penalties imposed by the State or Commerce Departments or OFAC in connection with violations of the Export Control Laws. None of the Company or any of its Subsidiaries have any open investigations, voluntary disclosures or enforcement actions that are currently being reviewed by the State or Commerce Departments or OFAC.

3.28 Ownership and Sufficiency of Assets. The Company and each of its Subsidiaries owns valid title to, or a valid leasehold interest in, or license of, or right to use free and clear of all Liens other than Permitted Liens, all of the properties and tangible assets (whether real, personal, or mixed, but excluding Intellectual Property of the Company and its Subsidiaries) which are shown on the Interim Financial Statements, except for personal property and assets sold since the date of the Interim Financial Statements in the Ordinary Course of Business. The property and assets owned and leased by the Company Group constitute all of the material property and assets necessary for the conduct of their respective businesses in the ordinary course as presently conducted by the Company Group, and such property and assets are in sufficient condition in all material respects for their current use (subject to routine maintenance and repair).

3.29 Inventory. The inventory of the Company Group (the "Inventory") consists of raw materials, work-in-process and finished goods as set forth on the balance sheet included in the Interim Financial Statements in accordance with GAAP applied on a consistent basis, and such Inventory consists of a quality and quantity that is usable and saleable in the Company Group's Ordinary Course of Business, except as reserved for on the Financial Statements.

3.30 Receivables. The accounts receivable recorded in the Interim Financial Statements and all accounts receivable arising since the date of the Interim Financial Statements (a) have arisen from bona fide transactions entered into by the Company Group involving the sale of goods or the rendering of services in the Ordinary Course of Business; and (b) subject to a reserve for bad debts shown on the Interim Financial Statements, constitute only valid, undisputed claims of the relevant member of the Company Group not subject to claims of set-off or other defenses or counterclaims.

3.31 Banking Information. Schedule 3.31 sets forth the name and location (including municipal address) of each bank, trust company or other institution in which the Company Group has an account, money on deposit or a safety deposit box and the name of each Person authorized to draw thereon or to have access thereto and the name of each Person holding a power of attorney from the Company Group and a summary of the terms thereof.

3.32 Products and Services. The products produced by the Company Group have been manufactured in accordance with, and meet all material requirements of, applicable Law and meet the specifications in all Contracts with customers of the Company Group relating to the sale of such products in all material respects. Without limiting the generality of Section 3.10, there are no claims pending, in progress or threatened against any member of the Company Group pursuant to any product warranty or with respect to the production, distribution or sale of defective or inferior products or with respect to any warnings or instructions concerning such products. All services provided by the Company Group to their respective customers have been provided in material accordance with applicable Law and the terms of all Contracts relating thereto in all material respects.

3.33 Books and Records. The Books and Records have been maintained in accordance with commercially reasonable business practices. The minute books of the Company Group have been maintained in accordance with applicable Law and are complete and accurate in all material respects. The stock certificate book, register of stockholders, register of transfers and register of directors and officers of each member of the Company Group are complete and accurate in all material respects. All bank accounts of the Company Group and Books and Records are in the possession and sole control of the Company Group.

3.34 Internal Investigations. Except for audits performed in the Ordinary Course of Business, there are no internal investigations or inquiries being conducted by the Company, its Subsidiaries or any third party at the request of the Company or its Subsidiaries concerning any financial, accounting, conflict of interest, illegal activity, fraudulent or deceptive conduct or other material misfeasance or malfeasance issues.

3.35 Blocker Company.

(a) The consummation of the transactions contemplated by this Agreement have been duly authorized by all necessary entity action on the part of Blocker Company and Blocker Seller (including consent required for a related party transaction), and no further entity action on their part is or will be required to authorize the transactions contemplated hereby. The Blocker Company and the Blocker Seller have duly executed and delivered this Agreement and each Transaction Document to which they are a party, and this Agreement and such Transaction Documents constitute the legal, valid and binding obligation of the Blocker Company and the Blocker Seller, enforceable against the Blocker Company and the Blocker Seller in accordance with their respective terms, subject to applicable bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar Laws of general applicability relating to or affecting creditors' rights and to general equity principles.

(b) Blocker Company is a limited liability company duly organized, validly existing and in good standing under the Laws of the State of Delaware. Blocker Seller is a limited partnership duly formed, validly existing and in good standing under the Laws of the State of Delaware.

(c) The execution and delivery by the Blocker Company and the Blocker Seller of this Agreement or any other Transaction Document to which they are, or are specified to be, a party, and the consummation of the transactions contemplated hereby and thereby (a) do not and will not conflict with, violate any provision of, or result in the breach of any constating document or other organizational document of the Blocker Company or the Blocker Seller, (b) do not and will not conflict with or violate any provision of any applicable Laws, and (c) do not and will not conflict with, violate any provision of, result in the breach of, or give rise to a right of termination, cancellation or acceleration of any obligation or change of any material terms of, or to a loss of a benefit under, or to increased, additional, accelerated or guaranteed rights or entitlements of any Person under, any Contract or any Governmental Order applicable to any of them, or (d) result in the creation of any Lien upon any of the properties or assets of the Blocker Company, or constitute an event which (with or without notice or lapse of time or both) would result in any such conflict, violation, breach, acceleration, termination or creation of a Lien.

(d) Blocker Company does not own or hold the right or obligation to acquire any stock, partnership interest or joint venture interest, other equity security, note or other instruments in, or to make a capital contribution in, any other Person, other than as set forth on Schedule 3.35(d).

(e) The Blocker Seller is the sole member of the Blocker Company. The issued and outstanding equity securities of Blocker Company consist solely of the Blocker Interest, which is wholly owned of record and beneficially by the Blocker Seller. No certificate has been issued representing the Blocker Interest, and the Blocker Interest is not unitized. There are no rights, subscriptions, warrants, options, convertible debentures or notes, conversion rights, rights (including pre-emptive rights), calls, derivatives, commitments or plans or agreements of any kind outstanding which would enable any Person to purchase or otherwise acquire any equity interest in the capital of Blocker Company or other securities of Blocker Company including any securities convertible into or exchangeable or exercisable for an interest in the capital of Blocker Company or other securities of Blocker Company. No Person other than Acquiror has, or has any right capable of becoming, any agreement, option, right or privilege for the purchase or other acquisition from the Blocker Seller of any of the Blocker Interest. There are no restrictions of any kind on the transfer of the Blocker Interest except those set out in the limited liability company agreement of Blocker Company. The Blocker Interest has been validly issued in compliance with applicable Law and are fully paid and non-assessable.

(f) The Blocker Seller is the sole lawful record and beneficial owners of, and has good and valid title to, the Blocker Interest free and clear of all Liens (other than Liens created by blue sky or securities laws).

(g) Blocker Company, except with respect to rights and obligations under this Agreement, (i) does not have, and has never had, any assets, activities, operations or employees other than those operations that are incidental to its holdings of the Units (whether directly or indirectly), its corporate existence and other compliance with corporate existence, (ii) has never incurred any Indebtedness or incurred or become subject to any liabilities other than liabilities for income or franchise Taxes; (iii) is not and has never been a party to any Contracts other than this Agreement; and (iv) does not have any Liabilities. There are no outstanding litigation, claims or proceedings in progress, pending or threatened against or relating to Blocker Company before any Governmental Authority.

(h) After giving effect to the Pre-Closing Reorganization, Blocker Seller will hold 3,404,408 Class A Units.

3.36 Impakt Fluid Systems.

(a) Impakt Fluid Systems, LLC was created for the sole purpose of supplying certain products and services to A-1 Engineering Korea, Inc. and A-1 Machine Manufacturing Incorporated, and Impakt Fluid Systems, LLC has not carried on any business other than the production and sale of products and services to A-1 Engineering Korea, Inc. and A-1 Machine Manufacturing Incorporated.

(b) The supply of products and services by Impakt Fluid Systems, LLC to A-1 Engineering Korea, Inc. and A-1 Machine Manufacturing Incorporated have been made on terms and conditions that are fair and reasonable to Impakt Fluid Systems, LLC in all material respects.

(c) Other than as described in Schedule 3.36, and without limiting the generality of Section 3.10, there are no, and there have been no, pending or, to the knowledge of the Company, threatened, Actions against or involving Impakt Fluid Systems, LLC, any of its respective assets, properties or businesses or its respective officers, directors, agents, employees or members (in each case, in their capacity as such), nor to the knowledge of the Company is there any factual or legal basis on which any such Action might be commenced with any reasonable likelihood of success.

(d) Impakt Fluid Systems, LLC is a Subsidiary of the Company, and all employees of Impakt Fluid Systems, LLC are listed on Schedule 3.15(e).

3.37 Disclaimer. Except for the representations and warranties contained in this ARTICLE III (including the portion of the Company Disclosure Schedule that is specifically responsive to representations and warranties in this ARTICLE III), no member of the Company Group, the Blocker Seller, or any of their respective managers, directors, officers, employees, securityholders, agents, Affiliates or representatives, or any other Person, has made or shall be deemed to have made any representation or warranty to Acquiror or Merger Sub, express or implied, at law or in equity, with respect to the Company Group or the Blocker Seller or the execution and delivery of this Agreement or the transactions contemplated hereby, including, without limitation, as to the accuracy or completeness of any information, documents or materials regarding the Company Group or any Blocker Seller furnished or made available to Acquiror, Merger Sub and their representatives in any "data rooms," "virtual data rooms," management presentations or in any other form in expectation of, or in connection with, this Agreement or the transactions contemplated hereby ("Evaluation Material"). Each of the Company, on behalf of every member of the Company Group, and the Blocker Seller hereby disclaims any such representations or warranties and Acquiror and Merger Sub hereby disclaim any reliance upon any such representations, warranties or Evaluation Material and acknowledge and agree that no member of the Company Group, the Blocker Seller, or any of their respective managers, directors, officers, employees, securityholders, agents, Affiliates or representatives, or any other Person, shall have or be subject to any liability to Acquiror, Merger Sub or any other Person resulting from the distribution to Acquiror of, or Acquiror's use or reliance on, any such Evaluation Material other than in connection with Fraud.

ARTICLE IV.
REPRESENTATIONS AND WARRANTIES OF ACQUIROR AND MERGER SUB

Acquiror and Merger Sub represent and warrant to the Company as follows:

4.1 Corporate Organization. Each of Acquiror and Merger Sub has been duly organized, validly existing and in good standing under the laws of its respective jurisdiction of formation, and both entities have the power and authority to own or lease or otherwise hold its properties and assets and to conduct its business as it is now being conducted. A true, correct and complete copy of Acquiror's and Merger Sub's organizational documents, as in effect on the date of this Agreement,

have been furnished to the Company or its representatives. Each of Acquiror and Merger Sub is duly licensed or qualified and in good standing as a foreign entity each jurisdiction in which the ownership of its property or the character of its activities is such as to require it to be so licensed or qualified, except, in the case where the failure to be so qualified or licensed or in good standing would not or would not reasonably be expected to prevent, materially delay or materially impede the performance by Acquiror or Merger Sub of their obligations under this Agreement or the consummation of the transactions contemplated hereby.

4.2 Due Authorization. Each of Acquiror and Merger Sub has all requisite power and authority to execute and deliver this Agreement and the other Transaction Documents to which it is, or is specified to be, a party, and (subject to the approvals discussed below) to consummate the transactions contemplated hereby and thereby. The execution and delivery of this Agreement and the other Transaction Documents to which Acquiror and/or Merger Sub, as applicable, is specified to be, a party, and the consummation of the transactions contemplated hereby and thereby by Acquiror and/or Merger Sub, as applicable, have been duly and validly authorized and approved by the Board of Directors of Acquiror and approved by Acquiror as the sole member of Merger Sub, and no other corporate proceeding on the part of Acquiror or Merger Sub is necessary to authorize this Agreement, the other Transaction Documents to which it is, or is specified to be, a party, or the transactions contemplated hereby and thereby. This Agreement has been duly and validly executed and delivered by each of Acquiror and Merger Sub, and Acquiror and/or Merger Sub, as applicable, will, subject to the terms and conditions hereof, and, at or prior to the Closing, will, subject to the terms and conditions hereof, duly execute and deliver each other Transaction Document to which it is specified to be a party, and this Agreement constitutes, and each other Transaction Document to which Acquiror and/or Merger Sub, as applicable, is specified to be a party upon execution thereof will constitute a legal, valid and binding obligation of Acquiror and Merger Sub, enforceable against Acquiror and Merger Sub in accordance with its terms, subject to applicable bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and similar laws affecting creditors' rights generally and subject, as to enforceability, to general principles of equity.

4.3 No Conflict. The execution and delivery by Acquiror and Merger Sub of this Agreement or any other Transaction Document to which it is, or is specified to be, a party, and the consummation of the transactions contemplated hereby and thereby (a) do not and will not conflict with, violate any provision of, or result in the breach of the organizational documents of Acquiror or Merger Sub, (b) do not and will not conflict with or violate any provision of any applicable Laws in any material respect, and (c) do not and will not in any material respect conflict with, violate any provision of, result in the breach of, or give rise to a right of termination, cancellation or acceleration of any obligation or to a loss of a material benefit under, or to increased, additional, accelerated or guaranteed rights or entitlements of any Person under, any Contract or other instrument to which Acquiror or Merger Sub is a party or by which Acquiror or Merger Sub may be bound, or any Governmental Order applicable to any of them, or result in the creation of any Lien upon any of the properties or assets of Acquiror or Merger Sub, or constitute an event which (with or without notice or lapse of time or both) would result in any such conflict, violation, breach, acceleration, termination or creation of a Lien, in each case other than to the extent that such conflict, breach,

violation or result would not materially and adversely affect the ability of the Acquiror to perform its obligations under this Agreement.

4.4 Litigation and Proceedings. There are no Actions, or, to the knowledge of Acquiror, investigations, pending before or by any Governmental Authority or, to the knowledge of Acquiror, threatened, against Acquiror or Merger Sub which, if determined adversely, could reasonably be expected to have a material adverse effect on the ability of Acquiror or Merger Sub to enter into and perform its obligations under this Agreement. There is no unsatisfied judgment or any open injunction binding upon Acquiror or Merger Sub which could reasonably be expected to have a material adverse effect on the ability of Acquiror or Merger Sub to enter into and perform its obligations under this Agreement.

4.5 Governmental Authorities; Consents. No consent, approval or authorization of, or designation, declaration or filing with, any Governmental Authority or other Person is required on the part of Acquiror or Merger Sub with respect to Acquiror or Merger Sub's execution, delivery and performance of this Agreement and the other Transaction Documents to which Acquiror and/or Merger Sub, as applicable, is, or is specified to be, a party, or the consummation of the transactions contemplated hereby, except for applicable requirements of the HSR Act or any similar foreign law.

4.6 Ownership of Merger Sub; No Prior Activities. Acquiror owns 100% of the issued and outstanding membership interests of Merger Sub. Merger Sub was formed solely for the purpose of engaging in the transactions contemplated by this Agreement. Except for obligations or liabilities incurred in connection with its formation and the transactions contemplated by this Agreement, Merger Sub has not and will not have incurred, directly or indirectly, through any Subsidiary or Affiliate, any obligations or liabilities or engaged in any business activities of any type or kind whatsoever or entered into any agreements or arrangements with any Person.

4.7 Financial Ability. Acquiror will on the Closing Date have, sufficient unrestricted cash on hand to pay all amounts required to be paid by Acquiror and Merger Sub at the Closing pursuant to the terms of this Agreement, and all of its and its representatives' fees and expenses incurred in connection with the transactions contemplated by this Agreement. Acquiror has no reason to believe that such available cash shall not be available.

4.8 Capitalization of Merger Sub. 100% of the membership interests of Merger Sub are, and at the Effective Time will be, owned by Acquiror or a direct or indirect wholly-owned Subsidiary of Acquiror. Merger Sub has not conducted any business prior to the date of this Agreement and has no, and prior to the Effective Time will have no, assets, liabilities or obligations of any nature other than those incident to its formation and pursuant to this Agreement and the Merger and the other transactions contemplated by this Agreement.

4.9 Brokers' Fees. Except fees described on Schedule 4.9 (which fees shall be the sole responsibility of Acquiror), no broker, finder, investment banker or other Person is entitled to any brokerage fee, financial advisory fee, finders' fee or other similar fee, commission or payment in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of Acquiror or any of its Affiliates.

4.10 Restricted Securities. Acquiror understands and acknowledges that (a) none of the Shares has been registered or qualified under the Securities Act of 1933, as amended (the "Securities Act"), or under any securities laws of any state of the United States or other jurisdiction, in reliance upon specific exemptions thereunder for transactions not involving any public offering, (b) all of the Shares constitute "restricted securities" as defined in Rule 144 under the Securities Act, (c) none of the Shares is traded or tradable on any securities exchange or over the counter and (d) none of the Shares may be sold, transferred or otherwise disposed of unless a registration statement under the Securities Act with respect to such Shares and qualification in accordance with any applicable state securities laws becomes effective or unless such registration and qualification is inapplicable, or an exemption therefrom is available. Acquiror has no present intention to transfer or otherwise dispose any of the Shares acquired hereunder or any interest therein. Acquiror is an "accredited investor" as defined in Rule 501(a) of the Securities Act.

4.11 Solvency. As of the Closing and after giving effect to all of the transactions contemplated by this Agreement, and assuming the accuracy of the representations and warranties in Article III, the Surviving Entity and its Subsidiaries will be Solvent.

4.12 Mass Layoffs. Acquiror does not currently plan any plant closings, reductions in force, or terminations of employees of the Company or any of its Subsidiaries that, in the aggregate, would trigger the WARN Act or any other similar law, rule or regulation of any Governmental Authority.

4.13 Acquiror's Due Diligence; Limitations on Representations and Warranties of the Company and Blocker Company. Acquiror and Merger Sub hereby acknowledge that, except for the representations and warranties of the Company, the Blocker Company and the Blocker Seller expressly set forth in ARTICLE III, they are relying on their own investigation and analysis in entering into this Agreement and the transactions contemplated hereby. Each of Acquiror and Merger Sub is an informed and sophisticated participant in the transactions contemplated by this Agreement and has undertaken such investigation, and has been provided with and has evaluated such Evaluation Material, as it has deemed necessary in connection with the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated by this Agreement. Acquiror and Merger Sub acknowledge that they are consummating the transactions contemplated by this Agreement without any representation or warranty, express or implied, by any member of the Company Group or any of their respective managers, directors, officers, employees, securityholders, agents, Affiliates or representatives, or any other Person, except as expressly set forth in ARTICLE III or any certificate delivered pursuant to Section 8.2. With respect to any projection or forecast delivered by or on behalf of the Company to Acquiror, Acquiror and Merger Sub each acknowledges that (i) there are uncertainties inherent in attempting to make such projections and forecasts; (ii) the accuracy and correctness of such projections and forecasts may be affected by information which may become available through discovery or otherwise after the date of such projections and forecasts; and (iii) it is familiar with each of the foregoing. In furtherance of the foregoing, and not in limitation thereof, Acquiror and Merger Sub each acknowledges that no representation or warranty, express or implied, at law or in equity, of any member of the Company Group or any of their respective managers, directors, officers, employees, securityholders, agents, Affiliates or representatives, or any other Person, including the Evaluation Material and any financial

projection or forecast delivered to Acquiror or Merger Sub with respect to the revenues or profitability which may arise from the operation of the Company or its Subsidiaries either before or after the Effective Time, shall (except as otherwise expressly represented to in this Agreement or in connection with fraud) form the basis of any claim against any member of the Company Group or any of their respective managers, directors, officers, employees, securityholders, agents, Affiliates or representatives, or any other Person with respect thereto.

ARTICLE V.

COVENANTS OF THE COMPANY

5.1 Conduct of Business. From the date of this Agreement through the Closing (the "Interim Period"), the Blocker Company and the Company shall, and shall cause their respective Subsidiaries to, except as contemplated by this Agreement, as set forth in Schedule 5.1, or as consented to by Acquiror in writing (which consent shall not be unreasonably conditioned, withheld, delayed or denied), operate its business in the ordinary course and substantially in accordance with past practice. The Blocker Company shall not take any action during the Interim Period other than as contemplated by this Agreement. Unless otherwise consented to in writing by the Acquiror, only those officers listed on Schedule 5.1 shall be authorized to execute Contracts on behalf of the Company Group during the Interim Period, and each Contract must be signed by two officers. Without limiting the generality of the foregoing, except as contemplated by this Agreement, as set forth in Schedule 5.1, or as consented to by Acquiror in writing, the Blocker Company and the Company shall, and the shall cause their respective Subsidiaries to, except as specifically contemplated by this Agreement:

(a) not change or amend the Company's certificate of formation, the Existing LLC Agreement or other similar organizational documents of the Company, the Blocker Company or its Subsidiaries or Affiliates, except as otherwise required by Law;

(b) not declare, issue, pay or make any dividend or distribution (other than tax distributions pursuant to the Existing LLC Agreement) to the unitholders of the Company, or the Blocker Seller, or set aside any funds for the purpose thereof, or repurchase or otherwise retire for value any equity securities of the Company or the Blocker Company;

(c) not, directly or indirectly (through any merger, consolidation, reorganization, issuance of securities or rights, or otherwise), sell, assign, transfer, convey, lease or otherwise dispose of any assets or properties (other than any Current Assets, Cash and Cash Equivalents), except in the Ordinary Course of Business or in connection with the Pre-Closing Reorganization;

(d) not acquire by merger or consolidation with, or merge or consolidate with, or purchase substantially all of the assets or otherwise acquire any assets or business of, or acquire any equity interests in, or make any investment in, any Person, except in connection with the Pre-Closing Reorganization;

(e) not make any capital investment in, or loans or advances to any Person, or make any guaranty for the benefit of any Person (other than the Company or any direct or indirect wholly owned Subsidiary of the Company or in connection with the Pre-Closing Reorganization);

(f) not make or change in any respect any material Tax election or any material method of Tax accounting (except as required by Law), settle or compromise any Tax liability, consent to any extension or waiver of the limitation period applicable to any Tax claim or assessment, or amend any Tax Return or enter into any closing agreement in respect of Taxes with any Governmental Authority responsible for the administration or imposition of any Tax;

(g) not transfer, issue, sell, pledge, encumber or dispose of any equity of the Company or any of its' Subsidiaries or grant options, warrants, calls or other rights to purchase, redeem or otherwise acquire equity interests of the Company or any of its Subsidiaries or the Blocker Company;

(h) not change any accounting methods or practices, except as required by GAAP;

(i) not adopt a plan or agreement of complete or partial liquidation, dissolution, merger, consolidation, restructuring, recapitalization or other reorganization of the Company or any of its Subsidiaries;

(j) not incur or modify in any respect the terms of any Indebtedness other than in the Ordinary Course of Business;

(k) not implement any employee layoffs that requires notice under the WARN Act;

(l) not assign, license or otherwise transfer any Owned Intellectual Property, other than non-exclusive licenses granted to customers or end users in the Ordinary Course of Business;

(m) not amend, modify, extend, renew or terminate any Real Property Lease outside the Ordinary Course of Business, and not acquire or enter into any new lease, sublease, license (either as lessor, sublessor or licensor, or as lessee, sublesee or licensee), or other agreement for the use or occupancy of any real property, and not change the use being made of any Leased Real Property;

(n) not (i) increase compensation for any officer, director or employee with annual base compensation in excess of $150,000, other than such increases in compensation that are required by Contracts in effect as of the date hereof that have either been disclosed to the Acquiror or that are less than 10% of such Person's annual base compensation or (ii) make any general increase in compensation to any group of employees.

(o) not (i) grant any severance, retention, change in control, bonus or termination pay, other than as required by any existing Contract or any existing Employee Plan or as required

by Law or (ii) establish or amend (other than as required by Law) or terminate any (other than as required by this Agreement) Employee Plan;

(p) not hire or engage or terminate the employment or engagement of any employee, officer, director or independent contractor with annual base compensation in excess of $150,000, other than a termination for cause;

(q) not cancel or waive any Indebtedness, claim or other right except in the Ordinary Course of Business;

(r) not make any capital expenditure (or series of related capital expenditures) involving more than $100,000 individually or more than $250,000 in the aggregate;

(s) not negotiate, enter into, amend (in any material respect), modify (in any material respect), assign or terminate any Material Contract or portion thereof, or any Contract that would have been a Material Contract if such Contract was in force on the date of this Agreement, or take or fail to take any action that would entitle any party to a Material Contract to terminate, modify (in any material respect), cancel or amend a Material Contract; except for any extensions, renewals or replacements of any such Material Contract with one or more Contracts on substantially similar terms;

(t) discharge, settle or satisfy any Actions, other than Actions reflected in the Financial Statements and for amounts not in excess of the amount reserved against therein;

(u) voluntarily allow any material insurance policies to lapse, without renewal or replacement on commercially reasonable terms;

(v) except as would be consistent with the Ordinary Course of Business, not allow to lapse, terminate or materially amend or modify any Permit or any material terms thereof;

(w) not engage in (A) any trade loading practices or any other promotional sales or discount activity with any customers or distributors with the effect of accelerating sales to pre-Closing periods that would otherwise be expected (based on past practice) to occur in post-Closing periods, (B) any other discount activity, deferred revenue activity or inventory overstocking or understocking activity, in each case in a manner outside the Ordinary Course of Business or contrary to generally accepted industry practices;

(x) not take any action inconsistent with the Ordinary Course of Business for the purpose of increasing the amount of Cash and Cash Equivalents of the Company Group, including by accelerating accounts receivable or deferring accounts payable inconsistent with the Ordinary Course of Business;

(y) not enter into any agreement, or otherwise become obligated or committed, to do any action prohibited hereunder.

5.2 Inspection; Cooperation. Subject to confidentiality obligations and similar restrictions that are applicable to information furnished to the Company or any of its Subsidiaries

by third-parties that are in the Company's or any of its Subsidiaries' possession from time to time, in respect of which the Company will use commercially reasonable to obtain consent of any third party to allow such information to be shared with the Acquiror upon the request of the Acquiror, the Company shall, and shall cause its Subsidiaries to, and the Blocker Company and Blocker Seller shall afford to Acquiror and its accountants, counsel and other representatives reasonable access, during normal business hours, in such manner as to not interfere with normal operation of the Company and its Subsidiaries, to all of their and the Company Group's respective properties, Books and Records, contracts, commitments, finances, Tax Returns, records and appropriate officers and employees of the Company Group, shall furnish Acquiror and its representatives with all financial and operating data and other information concerning the affairs of the Company Group as such representatives may reasonably request, and shall instruct its employees, counsel, financial advisors, auditors and other representatives to cooperate in all reasonable respects with Acquiror and its Affiliates and representatives in its and their due diligence investigation of the Company Group. No investigation by Acquiror and its Affiliates, accountants, counsel and other representatives pursuant to this Section 5.2 shall be deemed to modify or otherwise affect the representations and warranties of the Company contained in this Agreement. Notwithstanding the foregoing, the Company and its Subsidiaries shall not be required to provide access to or to disclose information where such access or disclosure would jeopardize the attorney-client privilege of the Company or any of its Subsidiaries or violate any Law applicable to the Company or any of its Subsidiaries or the confidentiality provisions of any Contract to which the Company or any of its Subsidiaries is a party on the date of this Agreement; provided, that, in each case, the Company Group shall, to the extent legally permissible, notify the Acquiror in reasonable detail of the circumstances giving rise to such requirement, contractual obligation or privilege and cooperate to permit disclosure of such information in a manner consistent therewith. To the extent that the Real Property Leases require the landlords thereunder to deliver the following certificate, the Company will use commercially reasonable efforts to obtain a certificate from the landlords thereunder confirming that the Real Property Leases are in full force and effect without modification, that there are no uncured defaults thereunder by the Company or any of its Subsidiaries and that no rent thereunder has been paid more than one month in advance.

5.3 Exclusivity. During the period from the date of this Agreement through the earlier of the Closing or the termination of this Agreement in accordance with the terms hereof, none of Company Group or the Holder Representative shall (and Blocker Seller, Blocker Company and the Company shall cause their respective Affiliates and its and their respective officers, directors, employees, accountants, consultants, investment bankers, legal counsel, agents and other advisors and representatives (collectively, the "Representatives") not to), directly or indirectly, (a) submit, solicit or encourage any proposal or offer from any Person (other than Acquiror and its Affiliates in connection with the transactions contemplated hereby) or enter into any agreement or accept any offer relating to or consummate any (i) reorganization, liquidation, dissolution or recapitalization of any member of the Company Group, (ii) merger or consolidation involving any member of the Company Group, (iii) sale or exclusive license of any material portion assets or any equity securities (or any rights to acquire, or securities convertible into or exchangeable for, any such equity securities) of any member of the Company Group, or (iv) similar transaction or business combination involving any member of the Company Group or their businesses or assets (each of the foregoing transactions described in clauses (i) through (iv), a "Company Transaction"), (b) other than informing Persons

of the existence of this Section 5.3, furnish any information with respect to, engage in or otherwise participate in any negotiations or discussions, or assist or participate in or facilitate in any other manner any effort or attempt by any Person (other than Acquiror and its Affiliates) to do or seek to do any of the foregoing, or (c) except as otherwise required by Law, Governmental Order or similar compulsion, or as contemplated by this Agreement, provide any nonpublic financial or other confidential or proprietary information regarding any member of the Company Group (including this Agreement and any material containing the Acquiror's proposal) to any Person (other than Acquiror's Representatives). Each member of the Company Group shall notify Acquiror promptly (but in any case within two Business Days) after receipt of a proposal for a Company Transaction or any requests for information relating to any member of the Company Group or for access to any of their properties, books or records by any Person which has informed any member of the Company Group or its Representatives that such person is considering making, or has made, a proposal for a Company Transaction. Blocker Seller, Blocker Company and the Company shall immediately terminate all discussions and negotiations with any Persons related to a Company Transaction (other than Acquiror, Merger Sub and their Affiliates and Representatives).

5.4 Confidentiality Agreements. No member of the Company Group nor the Holder Representative shall, without the prior written consent of the Acquiror, release any Person from, or waive any provision of, any confidentiality agreement entered into by such Person in connection with a potential acquisition of the Company Group or the business conducted by it. To the extent that it has not already done so, the Company agrees that, as promptly as practicable after the date of this Agreement, it shall request that access to any online data room utilized for the transactions contemplated by this Agreement by disabled for any Person not a party to this Agreement.

5.5 Section 280G Approval.

(a) The Company shall, prior to the initiation of the requisite unitholder approval procedure under Section 5.5(b) below, (i) use commercially reasonable efforts to obtain a waiver of the right to receive payments and/or benefits that reasonably could constitute "parachute payments" under Section 280G of the Code and regulations promulgated thereunder (a "Parachute Payment Waiver") from each Person who is an employee of A-1 Engineering Korea, Inc. and who, with respect to the Company and its Subsidiaries, reasonably could be a "disqualified individual" (within the meaning of Section 280G of the Code and the regulations promulgated thereunder) and who, with respect to the Company and its Subsidiaries, reasonably might otherwise receive, have received, or have the right or entitlement to receive any parachute payment under Section 280G of the Code; and (ii) obtain a Parachute Payment Waiver from each Person not covered in (i) above who, with respect to the Company and its Subsidiaries, reasonably could be a "disqualified individual" (within the meaning of Section 280G of the Code and the regulations promulgated thereunder) and who, with respect to the Company and its Subsidiaries, reasonably might otherwise receive, have received, or have the right or entitlement to receive any parachute payment under Section 280G of the Code.

(b) Prior to the Closing Date, the Company shall use commercially reasonable efforts to obtain the approval by such number of equityholders of the Company or any applicable Subsidiary of the Company as is required by the terms of Section 280G(b)(5)(B) of the Code so as

to render the parachute payment provisions of Section 280G of the Code inapplicable to any and all payments and/or benefits provided pursuant to contracts or arrangements that, in the absence of such executed Parachute Payment Waivers by the affected Persons under Section 5.5(a) above, might otherwise result, separately or in the aggregate, in the payment of any amount and/or the provision of any benefit that would not be deductible by reason of Section 280G of the Code or that would be subject to an excise tax by reason of Section 4999 of the Code, with such unitholder approval to be solicited in a manner which satisfies all applicable requirements of such Section 280G(b)(5)(B) of the Code and the Treasury Regulations thereunder, including Q-7 of Section 1.280G-1 of such Treasury Regulations. The Parachute Payment Waivers and documents to be provided to the equityholders in connection with the solicitation of unitholder approval shall be in a form reasonably acceptable to Acquiror.

5.6 Benefit Plans. If and to the extent requested by the Acquiror in writing no later than ten (10) Business Days prior to the Closing Date, the Company and its Subsidiaries shall (1) withdraw as a participating employer in the Employee Plan that is a 401(k) plan as of no later than the day before the Closing Date and (2) withdraw as a participating employer in any or all of Employee Plans that are welfare benefit plans as of the Closing Date or such other date as reasonably determined by Acquiror.

5.7 Actions following Time of Calculation. Between 11:59 p.m., Pacific Time, on the day immediately prior to the Closing Date and the time of Closing, no member of the Company Group shall pay any dividend or distributions to its equity holders or incur, or suffer any increase in the amount of, any Indebtedness, or modify the amount of Cash and Cash Equivalents of any member of the Company Group.

5.8 Holder Confidentiality. Each Holder and the Holder Representative shall, and shall cause its, his or her Affiliates and representatives to, keep confidential and not use for any purpose or disclose to any other Person any proprietary or confidential information of the business of the Company Group ("Confidential Information"), unless such information is or becomes generally available to the public other than as a result of a disclosure by such Party in violation of this Agreement. In the event any Holder or the Holder Representative is required by applicable Law to disclose any Confidential Information, such Holder and the Holder Representative shall, to the extent not prohibited by applicable Law, provide Acquiror with prompt notice of such requirements so that Acquiror may seek a protective order or other appropriate remedy or waive compliance with the provisions of this Section 5.8. Each Holder and the Holder Representative agrees that such obligation of confidentiality continues after the Closing Date and upon request of Acquiror, after the Closing, it shall take commercially reasonable steps to return to Acquiror or cause to be destroyed all Confidential Information in its possession or control. To the extent that any Holder is an employee of the Company Group after Closing, such Holder shall, during the term of his/her employment, be permitted to use Confidential Information only in the performance of duties in such employment.

5.9 Pre-Closing Reorganization. Graycliff Impakt A-1 Coinvestors LLC, the Blocker Company and the Blocker Seller shall take, or cause to be taken, all action necessary to effect the Pre-Closing Reorganization, and shall provide evidence of the consummation thereof satisfactory to the Acquiror.

5.10 Underfunded Korean Pension. Prior to the Closing Date, the Company shall cause A-1 Engineering Korea, Inc. to make such payments as are necessary to ensure that the defined benefit pension plan maintained by it with IBK Bank is no longer in deficit. The Company acknowledges that such defined benefit pension plan had a funding deficit of $730,000 as of July 31, 2018.

5.11 Corporate Formalities. Prior to the Closing Date, the Company shall, and shall cause its Subsidiaries to, take such corrective actions as Acquiror shall reasonably request to correct irregularities in the corporate record (and provide evidence thereof to the Acquiror), including, but not limited to, the following:

(a) correct the bylaws of each Subsidiary to clarify that the number of directors of such Subsidiary shall be at least 3 but no more than 5, and ratify all purported actions of the Board of Directors of such Subsidiaries taken prior to such correction;

(b) the Secretary of the Company shall certify all Minutes of Meetings of the Board of Managers and/or the Members of the Company provided to Acquiror;

(c) the Board of Managers and all voting Members of the Company shall ratify all purported resolutions of the Board of Managers and/or Members of the Company provided to Acquiror; and

(d) the Secretary of the Company shall certify the Existing LLC Agreement as the current limited liability agreement of the Company.

5.12 Key Consents. Prior to the Closing Date, the Company shall use commercially reasonable efforts to obtain the Key Consents.

5.13 Deliverables to the Holder Representative. Prior to the Closing Date, the Company shall deliver, or cause to be delivered, to the Holders Representative each of the documents set forth on Schedule A to the Holder Representative Engagement Agreement.

5.14 Physical Inventory. After the date hereof, but prior to the Closing Date, the Company shall conduct a physical inventory and shall deliver, or cause to be delivered, the results of such physical inventory to Acquiror or its representatives at least three (3) Business Days prior to the Closing Date.

ARTICLE VI.

COVENANTS OF ACQUIROR

6.1 Indemnification and Insurance.

(a) For six (6) years after the Effective Time, the Acquiror shall cause the Surviving Entity to, indemnify and hold harmless each present and former member, officer, director, manager, or employee of the Company or any of its Subsidiaries (each, an "Indemnified Person") against any costs or expenses (including reasonable attorneys' fees), judgments, fines, losses, claims,

damages or liabilities incurred in connection with any Action, whether civil, criminal, administrative or investigative, arising out of or pertaining to matters existing or occurring at or prior to the Effective Time brought against the Indemnified Person, whether asserted or claimed prior to, at or after the Effective Time, to the fullest extent, but only to the extent, that the Company or any of its Subsidiaries, as the case may be, would have been permitted under applicable Law and its organizational or governing documents in effect at the time of execution of this Agreement, which documents have been provided to the Acquiror in advance of execution of this Agreement, to indemnify such person (including any requirement to advance expenses as incurred), provided the person to whom such expenses are advanced provides an undertaking to the Surviving Entity to repay such advances if it is ultimately determined that such person is not entitled to indemnification; provided, further, that any determination required to be made with respect to whether an Indemnified Person's conduct complies with the standards set forth under applicable Law and organizational or governing documents of the Company or any of its Subsidiaries shall be made by independent counsel mutually acceptable to the Holder Representative and the Surviving Entity.

(b) From and after the Effective Time, Acquiror shall cause the Surviving Entity to cause the certificate of formation and the limited liability company agreement or comparable organizational documents of the Surviving Entity and each of its Subsidiaries to contain provisions no less favorable to each Indemnified Person to limitation of certain liabilities of directors, managers, officers, employees and agents and indemnification than are set forth as of the date of this Agreement in the certificate of formation and the limited liability company agreement or other comparable organizational documents of the Company and such Subsidiaries, except as required by Law, and the certificate of formation and limited liability company agreement or comparable organizational documents of the Company and each of its Subsidiaries to contain the current provisions regarding indemnification of directors, managers, officers, and employees which provisions in each case shall not be amended, repealed or otherwise modified in a manner that would adversely affect the rights thereunder of the directors, managers, officers or employees of the Company and such Subsidiaries, except as required by Law.

(c) Prior to the Effective Time, the Company shall purchase a premium fully prepaid "tail" insurance policy that shall be effective as of the Effective Time (the "Tail Policy"). For six (6) years after the Effective Time, Acquiror shall, and shall cause the Surviving Entity to, maintain such insurance policy, and to the extent such policy cannot be maintained, to substitute such policy with reputable and financially sound carriers covering those Persons who are currently covered by the Company's directors' and officers' liability insurance policies on terms not materially less favorable than the terms of such current insurance coverage with respect to claims arising from or related to facts or events which occurred at or prior to the Effective Time.

(d) The provisions of this Section 6.1 are intended to be for the benefit of, and shall be enforceable by, each Indemnified Person and his or her heirs and legal representatives, which shall be deemed as third party beneficiaries under this Agreement, and shall be in addition to, and shall not impair, any other rights an Indemnified Person would have been permitted under applicable Law and the organizational or governing documents of the Company and its Subsidiaries in effect on the date of this Agreement to indemnify such person or indemnification agreement or otherwise. Acquiror shall ensure that the Surviving Entity complies with all of its obligations under

this Section 6.1 and Acquiror shall guaranty all such obligations of the Surviving Entity under this Section 6.1 in the event the Surviving Entity disposes of or transfers all, or substantially all, of its assets.

(e) If Acquiror or the Surviving Entity or any of their respective successors or assigns (i) consolidates with or merges into any other Person and is not the continuing or surviving company or entity of such consolidation or merger; or (ii) transfers or conveys all or substantially all its properties and assets to any Person, Acquiror shall cause proper provisions to be made so that the successors and assigns of Acquiror or the Surviving Entity assume the obligations set forth in this Section 6.1.

(f) No member of the Company Group nor the Acquiror shall have any obligation to indemnify or advance any costs of defense to any Indemnified Person pursuant to this Section 6.1 for any amount or in respect of any Action as a result of any claim of the Acquiror, Merger Sub or any of their Affiliates pursuant to the terms and conditions of Article IX of this Agreement or otherwise in connection with the transactions contemplated hereby.

6.2 R&W Insurance. Acquiror has provided evidence satisfactory to the Company that the R&W Insurance Policy will be bound at signing of this Agreement. Acquiror shall not agree to amend the R&W Insurance Policy in a manner that permits the insurer to pursue any subrogation rights against an Indemnified Person or any holder of Units, other than as permitted pursuant to 8(a) of the R&W Insurance Policy. Acquiror shall pay, or cause to be paid when due, the premiums, the mitigation loss fee, and the surplus line Taxes payable in connection with the R&W Insurance Policy, whether due prior to or after the Effective Time.

6.3 Special Receivable Amounts. Without duplication of amounts to which the Escrow Participants are entitled pursuant to Section 7.5(h), any cash payment received by the Company or its Subsidiaries following Closing in respect of the items described in Annex N (the "Special Receivable Amounts") shall be distributed up to the Surviving Entity following receipt, and such Special Receivable Amounts, minus (i) any Taxes incurred in respect of such payments or as a result of any distribution (or deemed distribution) of such payments to the Acquiror, the Company or any Affiliate thereof (provided that the Company and its Subsidiaries shall use commercially reasonable efforts to minimize any such Taxes), and (ii) any out-of-pocket expenses incurred in connection with the collection of such payments by the Acquiror, the Company or any Affiliate thereof, shall be paid over to the Paying Agent for payment to the Escrow Participants and to A-1 Manufacturing, Inc. for payment to the Bonus Payment Recipient in accordance with the Distribution Waterfall. The Company and its Subsidiaries shall have no obligation to take steps to collect the amounts owing relating to additional capital contributed by A-1 Engineering Korea, Inc. to Impakt Fluid Systems, LLC in the amount of up to KRW 600,000,000 or approximately USD $538,938.29 and none of the Special Receivable Amounts shall bear interest.

6.4 Celestica Guarantee. Celestica USA agrees to cause the Acquiror to perform its obligations under this Agreement, as they may be amended, changed, replaced or otherwise modified from time to time, including by providing any necessary funds to the Acquiror to allow it to fulfill its obligations under this Agreement, and undertakes to perform all such obligations to the extent that the Acquiror fails to do so; in each case, to the extent that such obligations are required to be

performed on or prior to Closing or involve the payment of any amounts on account of the Closing Consideration in accordance with Section 2.5 (collectively, the "Guaranteed Obligations"). Without limiting the generality of the foregoing, Celestica USA unconditionally and irrevocably guarantees, covenants and agrees to be jointly and severally liable with the Acquiror for the due and punctual performance of each of the Guaranteed Obligations. This guarantee shall be an obligation for full and prompt performance rather than a secondary guarantee of collectability and can be enforced against Celestica USA directly as a primary obligor without taking action to enforce this Agreement against the Acquiror.

ARTICLE VII.

JOINT COVENANTS

7.1 Confidentiality. Prior to the Effective Time, any information provided to or obtained by Acquiror pursuant to this Agreement will be subject to the Confidentiality Agreement and must be held by Acquiror in accordance with and be subject to the terms of the Confidentiality Agreement. Acquiror agrees to be bound by and comply with the provisions set forth in the Confidentiality Agreement until the Effective Time.

7.2 Antitrust Matters. Subject to the terms and conditions and limitations set forth in this Agreement, each of the Company and Acquiror agrees to take or cause to be taken the following actions:

(a) (i) comply promptly, but in no event later than ten (10) Business Days after the date hereof, with the notification and reporting requirements of the HSR Act and upon the request of the Company use its commercially reasonable efforts to obtain early termination of the waiting period under the HSR Act, (ii) no later than (15) Business Days make such other filings with any similar foreign Antitrust Authority as may be required under any applicable similar foreign law, and exercise commercially reasonable efforts to make such filings promptly after the date hereof, taking into consideration the nature of the requirements of and usual practices under the respective foreign laws and (iii) promptly provide to each and every Antitrust Authority any non-privileged information and documents requested by any Antitrust Authority or that are necessary, proper or advisable to permit consummation of the transactions contemplated by this Agreement.

(b) take commercially reasonable efforts to avoid the entry of any permanent, preliminary or temporary injunction or other order, decree, decision, determination or judgment that would delay, restrain, prevent, enjoin or otherwise prohibit consummation of the transactions contemplated by this Agreement on antitrust or competition grounds, including, without limitation, the defense through litigation on the merits of any claim asserted in any court, agency or other proceeding by any Antitrust Authority, seeking to delay, restrain, prevent, enjoin or otherwise prohibit consummation of such transactions (such claim or proceeding, an "Antitrust Proceeding"). However, notwithstanding the foregoing or any other provision of this Agreement to the contrary, in no event shall the Acquiror or Merger Sub or any of their respective Affiliates be required to (i) sell, lease, encumber, license or otherwise dispose of, or hold separate pending such disposition of, any asset, right, product line, license, category of assets or business or other operation, or interest therein, of any Person within the Company Group or the Acquiror or any of its Affiliates; (ii)

terminate existing relationships, contractual rights or obligations of the Company, the Blocker Company, or Acquiror or of any of their respective Subsidiaries or Affiliates; (iii) terminate any venture or other arrangement of the Company, the Blocker Company or Acquiror or of any of their respective Subsidiaries or Affiliates; (iv) create any relationship, contractual rights or obligations of the Company, the Blocker Company or Acquiror or of any of their respective Subsidiaries or Affiliates; or (v) effectuate any other change or restructuring of the Company, the Blocker Company or Acquiror or of any of their respective Subsidiaries or Affiliates (and, in each case, to enter into agreements or stipulate to the entry of an Governmental Order or decree or file appropriate applications with any Governmental Authority in connection with any of the foregoing). In addition, no Person within the Company Group may take, or agree to take, any of the foregoing actions with respect to any portion of the business, assets or contracts of any Person within the Company Group without the prior written consent of Acquiror.

(c) Each of Acquiror, Merger Sub and the Company will assist and cooperate, and will cause their respective Affiliates to assist and cooperate, with each other party hereto or any Affiliate thereof in preparing and filing any and all written communications that are to be submitted to any Governmental Authority in connection with the transactions contemplated hereby and in obtaining any consents, waivers, authorizations or approvals from any Governmental Authority or third party that may be required to be obtained by any party hereto or any Affiliate thereof in connection with the transactions contemplated hereby, which assistance and cooperation will include: (i) reasonably consulting and cooperating with each other, and consider in good faith the view of each other, in connection with any filing, submission, or oral presentation and in connection with any investigation or other inquiry; (ii) timely furnishing to any other party hereto or Affiliate thereof all information that counsel to such party or Affiliate thereof reasonably determines is required to be included in such documents or would be helpful in obtaining such required consent, waiver, authorization or approval; (iii) promptly providing any other party hereto or Affiliate thereof with copies of all material written communications to or from any Governmental Authority relating to the transactions contemplated by this Agreement; provided, that such copies may be redacted as necessary to address legal privilege or confidentiality concerns, contractual obligations or to comply with applicable Law; and provided, further, that portions of such copies that are competitively sensitive may be designated as "outside antitrust counsel only"; (iv) keeping the other parties hereto reasonably informed of any material communication received or given to or from any Governmental Authority in connection with the transactions contemplated by this Agreement; and (v) providing the other parties hereto with prior notice of, consulting in advance of and permitting such other parties to review and incorporate any other party's reasonable comments in any material communication conveyed to any Governmental Authority or in connection with any proceeding related to the HSR Act or under any other Law, in each case regarding the transactions contemplated by this Agreement.

(d) Neither Acquiror nor Merger Sub, on the one hand, nor the Company nor Holder Representative, on the other hand, will, and shall not permit any of their respective Affiliates to, initiate or participate in, any meeting or substantive communication (whether written or oral, including via emails or conference calls) with any Governmental Authority with respect to any filings, applications, investigation, or other inquiry regarding the transactions contemplated by this Agreement without giving the other parties hereto reasonable prior notice of the meeting or

communication and, to the extent permitted by the relevant Governmental Authority, the opportunity to attend and participate in such meeting or communication or to comment on such communication and to incorporate such reasonable comments in such communication (subject to redaction as provided in Section 7.2(c) above).

(e) Celestica US agrees that it shall not, and shall not permit Celestica Inc. or any of its Subsidiaries to, directly or indirectly, acquire or agree to acquire any assets, business or any person, whether by merger, consolidation, purchasing a substantial portion of the assets of or equity in any person, if the entering into of an agreement relating to or the consummation of such acquisition, merger, consolidation or purchase would reasonably be expected to: (i) impose any material delay in the expiration or termination of any applicable waiting period or impose any delay in the obtaining of, or increase the risk of not obtaining, any authorization, consent, clearance, approval or order of a Governmental Authority necessary to consummate the contemplated transactions, including any approvals and expiration of waiting periods pursuant to the HSR Act or any other applicable Law; (ii) materially increase the risk of any Governmental Authority entering, or materially increase the risk of not being able to remove or successfully challenge, any permanent, preliminary or temporary injunction or other order, decree, decision, determination or judgment that would delay, restrain, prevent, enjoin or otherwise prohibit consummation of the contemplated transactions; or (iii) otherwise delay or impede the consummation of the contemplated transactions.

7.3 Support of Transaction. Subject to the terms and conditions and limitations set forth in this Agreement, Acquiror and the Company shall each, and shall each cause their respective Affiliates to: (a) use commercially reasonable efforts to assemble, prepare and file any information (and, as needed, to supplement such information) as may be reasonably necessary to obtain as promptly as practicable all governmental and regulatory consents required to be obtained in connection with the transactions contemplated hereby, (b) use commercially reasonable efforts to obtain all consents and approvals of third parties that any of Acquiror, the Company, or their respective Affiliates reasonably request or are otherwise required to obtain in connection with the Merger; provided that neither the Company nor its Subsidiaries shall be required to pay any consent fees or other expense reimbursements requested by such third parties in excess of $10,000 in aggregate, (c) execute and deliver such other commercially reasonable documents, certificates and other agreements and take such other commercially reasonable action as may reasonably be necessary or as another party may reasonably request as is consistent with the terms of this Agreement to satisfy the conditions of Article VIII or otherwise to comply with its obligations under this Agreement or to consummate the Merger and the other transactions contemplated by the Transaction Documents, and (d) subject to Section 5.2 in the case of the Company and its Subsidiaries, provide the other parties, and such other parties' employees, officers, accountants, lawyers, financial advisors and other representatives with reasonable access, during normal business hours in such a manner as not to interfere unreasonably with its operations, to its personnel, properties, business and records for any reasonable purposes.

7.4 Notification of Changes. From and after the date of this Agreement, the Company shall promptly (but in any event no later than two (2) Business Days after becoming aware thereof) notify Acquiror in writing of:

(a) the occurrence, or non-occurrence, of any matter, event, circumstance, development or change that, individually or in the aggregate, would, or would be reasonably expected to, make the satisfaction of the conditions set forth in Section 8.2 impossible or unlikely; and

(b) any Action commenced, maintained or, to the Company's knowledge, threatened against of the Company or any of its Affiliates in connection with this Agreement, any Transaction Document, or the transactions contemplated hereby or thereby, including the Merger.

Notwithstanding any other provision of this Agreement, in no event will any notification delivered hereunder be effective to cure or correct any breach of any representation, warranty, covenant, agreement or obligation of the Company, the Holders' Representative, the Blocker Company or the Blocker Seller hereunder, including for purposes of determining whether the conditions to Closing in Section 8.1 or Section 8.2 have been satisfied. In addition, in no event will any notification delivered hereunder limit or otherwise affect any remedies available to Acquiror or Merger Sub hereunder.

7.5 Tax Matters.

(a) Tax Returns.

(i) Subject to this Section 7.5(a)(i), the Company will prepare, or cause to be prepared, and timely file, or cause to be timely filed, all Flow-Through Tax Returns that relate in whole or in part to a Pre-Closing Tax Period (including the pre-Closing portion of any Straddle Period) and that are due after the Closing Date (the "Pre-Closing Flow-Through Tax Returns"). Each Pre-Closing Flow-Through Tax Return will be prepared in accordance with applicable Law and Section 7.5(i) and 7.5(j), and, to the extent not inconsistent with applicable Law and Section 7.5(i) and 7.5(j), in accordance with the past procedures and practices of the Company. For the avoidance of doubt, in connection with the preparation of a Pre-Closing Flow-Through Tax Return for a Straddle Period, the income and other items from such Tax Return shall be allocated as between the portion of the Straddle Period ending on the Closing Date and the portion beginning after the Closing Date based on the closing of the books method provided in Section 706 of the Code and the Treasury regulations thereunder (or any corresponding provision of state or local Law). The Company will provide each Pre-Closing Flow-Through Tax Return to the Holder Representative and the Acquiror for review and comment at least thirty (30) days prior to the due date for filing such Tax Returns (or, if such due date is within sixty (60) days following the Closing Date, as promptly as practicable following the Closing Date). The Company shall make any changes directed by the Holder Representative that are more likely than not to be upheld under applicable Law prior to filing such Tax Returns, and will not cause any such Tax Returns (as revised to reflect the comments of the Holder Representative, if any) to be filed without the consent of Acquiror, which consent will not be unreasonably withheld, conditioned or delayed. The out-of-pocket fees payable to Armanino, LLP in connection with the preparation of the Pre-Closing Flow-Through Tax Returns shall

be borne by the Escrow Participants and paid first from the Holder Representative Expense Fund.

(ii) Acquiror will prepare, or cause to be prepared, and timely file, or cause to be timely filed, all Tax Returns of the Company, its Subsidiaries and Blocker Company (other than Pre-Closing Flow-Through Tax Returns) that relate to any Pre-Closing Tax Period and that are first due after the Closing Date (the "Acquiror Prepared Returns"). Each Acquiror Prepared Return will be prepared in accordance with applicable Law and Section 7.5(i) and 7.5(j), and, to the extent not inconsistent with applicable Law and Section 7.5(i) and 7.5(j), in accordance with past procedures and practices of the Company, its Subsidiaries or Blocker Company, as applicable. Acquiror will provide each Acquiror Prepared Return that relates to income Taxes or that reflects any material amounts of Indemnified Taxes or Indemnified Blocker Taxes to the Holder Representative for review and comment at least thirty (30) days prior to the due date for filing such Tax Returns (or, if such due date is within sixty (60) days following the Closing Date, as promptly as practicable following the Closing Date), and will not file any such Tax Returns without the consent of the Holder Representative, which consent will not be unreasonably withheld, conditioned or delayed. The Acquiror Prepared Returns shall be prepared at the expense of the Acquiror, provided that the out-of-pocket fees payable to Armanino, LLP in connection with the preparation of any Acquiror Prepared Return that is an income Tax Return and relates solely to a taxable period that ends on or prior to the Closing Date shall be borne by the Escrow Participants and paid first from the Holder Representative Expense Fund.

(iii) Acquiror will not, and will not cause or permit any of its Affiliates (including the Company, its Subsidiaries and Blocker Company) to, (i) except for Pre-Closing Flow-Through Tax Returns or Acquiror Prepared Returns prepared and filed in accordance with Section 7.5(a)(i) or 7.5(a)(ii), file or amend any Tax Returns of the Company, its Subsidiaries or Blocker Company for a Pre-Closing Tax Period, (ii) with respect to Pre-Closing Flow-Through Tax Returns or Acquiror Prepared Returns prepared and filed in accordance with Section7.5(a)(i) or 7.5(a)(ii), after the date such Tax Returns are filed pursuant to Section 7.5(a)(i) or 7.5(a)(ii), amend any such Pre-Closing Flow-Through Tax Return or Acquiror Prepared Return, or (iii) make or change any Tax election or change any method of accounting that has retroactive effect to any Tax Return of the Company, its Subsidiaries or Blocker Company for a Pre-Closing Tax Period, in each such case except (A) if such filing or amendment could not reasonably be expected to form the basis for a claim for indemnification pursuant to Section 9.2, or otherwise increase the Escrow Participants' liability for Taxes or reduce the Pre-Closing Tax Refunds that are required to be paid to the Escrow Participants pursuant to Section 7.5(h) or (B) with the Holder Representative's prior written consent (not to be unreasonably withheld, conditioned or delayed, it being understood that such consent would be unreasonably withheld to the extent that any action described under clauses (i) through (iii) above was required by Law). Acquiror will not, and will not permit the Company to, cause

the Company, its Subsidiaries or the Blocker Company to incur any Taxes on the Closing Date after the Closing outside the Ordinary Course of Business (other than as explicitly contemplated by this Agreement).

(b) Tax Election. The Company shall make or otherwise have in place a valid election under Section 754 of the Code with respect to any taxable year (or portion thereof) which includes the Closing.

(c) Closing Consideration Allocation.

(i) The parties hereto agree that the portion of the Closing Consideration that shall be allocated to the Blocker Company shall be equal to the Blocker Company Payment and that the portion of the Closing Consideration allocated to each holder of Units shall be such holder's portion of the Closing Consideration in accordance with the Distribution Waterfall.

(ii) Within fifteen (15) days following the final determination of the Adjustment Amount, the Acquiror shall prepare and deliver to the Holder Representative for its review an allocation of the purchase price (as determined for U.S. federal and applicable state and local income tax purposes, including assumed liabilities and any other relevant items or adjustments but excluding the Blocker Company Payment), among the assets of the Company for U.S. federal, and applicable state and local, Income Tax purposes in accordance with the principles of Section 755 of the Code and the Treasury Regulations thereunder (the "Closing Consideration Allocation"). The Holder Representative will be entitled to review and comment on such Closing Consideration Allocation, and shall provide the Acquiror with comments within sixty (60) days after the Acquiror's delivery of the Closing Consideration Allocation to the Holder Representative. The Acquiror shall consider in good faith all of the Holder Representative's comments to the Closing Consideration Allocation in preparing the final allocation schedule (the "Final Allocation"). If the Holder Representative notifies the Acquiror in writing that Holder Representative objects to one or more items reflected in the Final Allocation, Acquiror and the Holder Representative shall negotiate in good faith to resolve such dispute; provided, however, that if Acquiror and the Holder Representative are unable to resolve any dispute with respect to the Final Allocation within sixty (60) days following the Closing Date, such dispute shall be resolved by the Auditor in accordance with the provisions set forth in Section 2.7(b); provided, however, that the fees and expenses of the Auditor shall be borne equally by Acquiror and the Holder Representative (on behalf of the Escrow Participants). The parties hereto shall file all Tax Returns (including amended returns and claims for refund) and information reports in a manner consistent with the Final Allocation, and none of the parties hereto shall take any Tax position to the contrary on any Tax Return, in any proceeding or audit, or examination; provided, however, that Acquiror's cost for the assets of the Company and its Subsidiaries may differ from the total amount

allocated hereunder to reflect the inclusion in the total cost of items (for example, capitalized acquisition costs) not included in the amount so allocated.

(d) Cooperation. Acquiror, the Blocker Company, the Holder Representative, the Surviving Entity and its Subsidiaries shall cooperate fully, as and to the extent reasonably requested by the other party, in connection with the preparation and filing of Pre-Closing Flow Through Tax Returns or Acquiror Prepared Returns, and any audit, litigation or other proceeding with respect to Taxes. Such cooperation shall include the retention and (upon the other party's request) the provision of records and information which are reasonably relevant to any such audit and making employees available on a mutually convenient basis to provide additional information and explanation of any material provided hereunder. Acquiror, the Blocker Company and the Surviving Entity agree to retain all books and records with respect to Tax matters of the Blocker Company, the Company and its Subsidiaries relating to any taxable period beginning before the Closing Date until the expiration of the applicable statute of limitations (and, to the extent notified by the Holder Representative, any extensions thereof) of the respective taxable periods, and to abide by all record retention agreements entered into with any taxing authority.

(e) Tax Contests.

(i) Acquiror will provide prompt notice to Holder Representative upon receipt by Acquiror or any of its Affiliates of notice of any pending or threatened Tax audits, examinations, assessments or other proceeding of the Company, its Subsidiaries or Blocker Company that relate to any Tax for which any Escrow Participant may be liable (including pursuant to Section 9.2) (such audit, examination, assessment or other proceeding, a "Tax Contest"). Such notice will state the amount of the claim, if known, and the method of computation thereof, the nature of such claim and a reference to the provision of this Agreement upon which such claim is based, all with reasonable particularity.

(ii) With respect to any Tax Contest relating solely to a taxable period ending on or before the Closing Date or relating solely to a Pre-Closing Flow-Through Tax Return, the Holder Representative will have the right to control the conduct of such Tax Contest (including by employing counsel of its choice at the Escrow Participants' expense); provided, that if the disposition of such Tax Contest could reasonably be expected to affect the Tax liabilities of Acquiror (or any of its Affiliates) after the Closing, (1) the Holder Representative will keep Acquiror reasonably informed concerning the progress of such Tax Contest, (2) the Holder Representative will provide Acquiror copies of all material written correspondence relevant to such Tax audit or administrative or court proceeding, and (3) except with respect to Tax Contests relating to Pre-Closing Flow-Through Tax Returns, the Holder Representative will not settle such Tax audit or administrative or court proceeding without the prior written consent of Acquiror, which consent will not be unreasonably withheld, conditioned or delayed.

(iii) With respect to any Tax Contest not described in Section 7.5(e)(ii) (or with respect to any Tax Contest described in Section 7.5(e)(ii) that the Holder

Representative does not elect to control), Acquiror shall have the right to control the conduct of such Tax Contest; provided, however, that (1) Acquiror will keep the Holder Representative reasonably informed concerning the progress of such Tax Contest, (2) Acquiror will provide Holder Representative copies of all material written correspondence relevant to such Tax audit or administrative or court proceeding, and (3) Acquiror will not settle such Tax audit or administrative or court proceeding without the prior written consent of the Holder Representative, which consent will not be unreasonably withheld, conditioned or delayed. To the extent any provisions in this Section 7.5(e) are inconsistent with Section 9.4 with respect to any Tax Contest, this Section 7.5(e) shall control.

(iv) In the case of any Tax audit relating to a taxable period of the Company beginning after December 31, 2017, but ending on the Closing Date, the Company or its "partnership representative" (as defined in the Code) shall elect under Section 6226 of the Code and any Treasury Regulations thereunder (and take all other actions necessary under the Code and any Treasury Regulations to make such election effective) to have each member (who was a member during such taxable period) of the Company take into account its share of any audit adjustments and not to apply Section 6225 of the Code.

(f) Tax Sharing Agreements. All Tax sharing agreements or similar agreements (other than Ordinary Commercial Agreements) with respect to or involving the Blocker Company, the Company or any of its Subsidiaries shall be terminated as of the Closing Date and, after the Closing Date, none of the Blocker Company, the Company or any of its Subsidiaries shall be bound thereby or have any liability thereunder.

(g) No Amendments or Restatements. Acquiror and its Affiliates (including on or after the Closing Date, the Company Group) shall not amend the Existing LLC Agreement with respect to a Pre-Closing Tax Period.

(h) Tax Refunds. Any Tax refund or credit, including any interest paid or credited by a Governmental Authority with respect thereto of the Blocker Company, the Company or its Subsidiaries (whether received as a cash refund or a credit against Taxes otherwise payable) that is attributable to any Pre-Closing Tax Period net of any Taxes incurred as a result of the receipt of such Tax refunds or credits (such Tax refunds or credits, a "Pre-Closing Tax Refund") will be the property of the Escrow Participants, and, (i) if received by Acquiror, the Blocker Company, the Company, its Subsidiaries or any Affiliate thereof, or (ii) when used by Acquiror, the Blocker Company, the Company, its Subsidiaries, or any Affiliate thereof to credit an account with a Governmental Authority, will be paid over promptly to the Paying Agent (for payment to the Escrow Participants in accordance with the Distribution Waterfall) and A-1 Manufacturing, Inc. (for payment to the Bonus Payment Recipient in accordance with the Distribution Waterfall); provided, however, that any Pre-Closing Tax Refund received in respect of the Blocker Company shall be paid only to the Blocker Seller. A Pre-Closing Tax Refund with respect to a Straddle Period shall be determined in accordance with the principles in Section 7.5(j)). Acquiror will, if the Holder Representative so requests, cause the Blocker Company, the Company, or any of its Subsidiaries to file for and use

commercially reasonable efforts to obtain any Pre-Closing Tax Refund that is allocable to the Escrow Participants pursuant to this Section 7.5(h), including amending any Tax Return filed, filing or causing to be filed a claim for a refund of any Taxes paid with respect to any Pre-Closing Tax Period (including to carryback any net operating loss or tax credits to one or more prior taxable years of an entity in the Company Group for state, local or non-U.S. tax purposes) or filing or causing to be filed IRS Form 4466 (and any corresponding state or local tax forms, if applicable), provided that the Escrow Participants will promptly reimburse the Blocker Company, the Company, or its Subsidiaries, as applicable, for any reasonable out-of-pocket expenses incurred in filing, defending or prosecuting any Pre-Closing Tax Refund at the request of the Holder Representative.

(i) Income Tax Matters. Closing Date Net Working Capital, Current Blocker Tax Liabilities, Pre-Closing Tax Refunds, Indemnified Taxes and Indemnified Blocker Taxes shall be calculated, in accordance with the following rules:

(i) The Closing Date shall be treated as the last day of the taxable period of the Blocker Company, the Company and its Subsidiaries for all Tax purposes to the extent permitted or required under applicable Law (and to the extent not permitted by Law, it shall be deemed the last day of the taxable period for purposes of calculating Closing Date Net Working Capital, Pre-Closing Tax Refunds, Indemnified Taxes and Indemnified Blocker Taxes);

(ii) No election under Section 338 of the Code (or any comparable applicable provision of state, local or non-U.S. Tax Law) is made with respect to the acquisition of equity of the Blocker Company, the Company or its Subsidiaries;

(iii) None of the Blocker Company, the Company or its Subsidiaries makes an election under Section 965(h) or 965(n) of the Code.

(iv) A timely election under Revenue Procedure 2011-29, 2011-18 I.R.B. 746, is made to apply the seventy percent (70%) safe-harbor to any "success based fees" as defined in Treasury Regulation Section 1.263(a)-5(f);

(v) To the extent permitted by Law, all Transaction Deductions are deducted by the Blocker Company, the Company or its Subsidiaries, as applicable, on Tax Returns for the taxable period that ends as of the end of the day on the Closing Date (and in the case of a Straddle Period, shall be allocated to the portion of the Straddle Period ending on the Closing Date), subject to Section 7.5(l) in respect of the Bonus Agreement Payment;

(vi) To the extent any Transaction Deductions are not deducted by Blocker Company, the Company or any of its Subsidiaries in the taxable year that includes the Closing Date, such Transaction Deductions are deducted on the first income Tax Return permitted by Law;

(vii) To the extent permitted by Law, any net operating losses of Blocker Company, the Company or its Subsidiaries arising in taxable periods ending (or

deemed to end) on or prior to the Closing Date are applied against income arising in Pre-Closing Tax Periods (including, if permitted by applicable Law, pursuant to a carryback);

(viii) The tax period of any partnership or other pass-through entity or "controlled foreign corporation" (within the meaning of Section 957(a) of the Code or any comparable state, local or non-U.S. Law) in which Blocker Company, the Company or any of its Subsidiaries holds a beneficial interest shall be deemed to terminate at the end of the day on the Closing Date; and

(ix) Any cost recharge for amounts payable with respect to Phantom Units held by employees of A-1 Engineering Korea, Inc., pursuant to any transfer pricing agreement with A-1 Engineering Korea, Inc., shall be included as income for purposes of determining the income Taxes of A-1 Engineering Korea, Inc.

(j) Straddle Period Taxes. For purposes of calculating Indemnified Taxes and Indemnified Blocker Taxes, in the case of Taxes based on income, sales, proceeds, profits, receipts, wages, compensation or similar items and all other Taxes that are not imposed on a periodic basis, the amount of such Taxes that have accrued through the Closing Date for a Straddle Period shall be deemed to be the amount that would be payable if the taxable year or period ended at the end of the day on the Closing Date based on an interim closing of the books (and for such purpose, the tax period of any partnership or other pass-through entity or "controlled foreign corporation" (within the meaning of Section 957(a) of the Code or any comparable state, local or non-U.S. Law) in which Blocker Company, the Company or any of its Subsidiaries holds a beneficial interest shall be deemed to terminate at such time), except that exemptions, allowances or deductions that are calculated on an annual basis (including depreciation and amortization deductions), other than with respect to property placed in service after the Closing, shall be allocated on a per diem basis. In the case of any Taxes that are imposed on a periodic basis for a Straddle Period, the amount of such Taxes that have accrued through the Closing Date shall be the amount of such Taxes for the relevant period (or, in the case of such Taxes determined on an arrears basis, the amount of such Taxes for the immediately preceding period) multiplied by a fraction the numerator of which shall be the number of calendar days from the beginning of the period up to and including the Closing Date and the denominator of which shall be the number of calendar days in the entire period.

(k) Tax Reporting Matters. For all applicable Tax purposes, Acquiror and its Affiliates (including, after the Closing, the Blocker Company, the Company and its Subsidiaries), the Escrow Participants and the Holder Representative agree to, and shall not take any action or filing position inconsistent with, the following Tax treatment of the items specified below:

(i) The Holder Representative Expense Fund shall be treated as having been received and voluntarily set aside by the Escrow Participants on the Closing Date, and no Tax withholding or reporting shall be required in connection with the subsequent distribution of any portion of the Holder Representative Expense Fund to the Escrow Participants.

(ii) Except for the Phantom Unit Cash Payments, the entirety of the Closing Consideration and any amounts payable pursuant to Section 2.7(d), Section 6.3, Section 7.5(h), Section 9.8 and Section 11.2(b) (such amounts, "Post-Closing Consideration") shall be allocated to Units and Shares, as applicable, and none shall be allocated to the Non-Solicitation and Non-Competition Agreements or otherwise treated as compensation.

(iii) For purposes of taxable income recognition, Acquiror shall be treated as the owner of the Escrow Fund and all interest and earnings earned from the investment and reinvestment of amounts in the Escrow Fund, or any portion thereof, shall be allocable to Acquiror pursuant to Code Section 468B(g) and Proposed Treasury Regulations Section 1.468B-8. Acquiror shall be entitled to receive Tax distributions at a rate of 28% with respect to any such interest and earnings so allocated. Except for amounts payable in respect of Phantom Units, and except for payments of the Holder Representative Expense Fund, the rights of the Escrow Participants to Post-Closing Consideration shall be treated as deferred contingent purchase price eligible for installment treatment under Section 453 of the Code and any corresponding provision of foreign, state or local Law, as appropriate, subject to Sections 483 and 1274 of the Code and Treasury Regulations thereunder.

(iv) Any payments made in respect of Phantom Units pursuant to this Agreement shall be treated as compensation paid by A-1 Engineering Korea, Inc. on the Closing Date.

(l) Bonus Agreement Payment Special Provisions. Acqurior and the Company shall make good faith efforts during the period from the date hereof until the Closing to determine whether the deduction of the portion of the Bonus Agreement Payment payable upon Closing by A-1 Manufacturing, Inc. is permitted by Law. Following such good faith efforts, to the extent the Acquiror does not agree that deduction of the Bonus Agreement Payment by A-1 Manufacturing, Inc. is permitted by Law, then Acquiror, Blocker Seller and the Company shall cause this Agreement to be amended pursuant to Section 12.14 to provide that any Pre-Closing Tax Refund to the extent attributable to the disputed portion of the deduction for the Bonus Agreement Payment, determined on a with-and-without basis, shall be held back by Acquiror and paid to the Escrow Participants on (x) December 31, 2020 if the deduction is not the subject of an income Tax audit initiated prior to such date and has not otherwise been disallowed by a Tax authority, or (y) completion of any such audit initiated prior to December 31, 2020, provided that in the event of an audit Pre-Closing Tax Refunds shall be payable only to the extent attributable to the portion of the deduction that has not been disallowed in the audit. For the avoidance of doubt, A-1 Manufacturing, Inc., shall claim a deduction for the portion of the Bonus Agreement Payment payable upon Closing on its income Tax Returns for its Tax year that includes the Closing Date, even if Acquiror disputes whether such deduction is permitted by Law.

ARTICLE VIII.

CONDITIONS TO OBLIGATIONS

8.1 Conditions to Obligations of Acquiror, Merger Sub, Blocker Seller, Blocker Company and the Company. The obligations of Acquiror, Merger Sub, Blocker Seller, Blocker Company and the Company to consummate, or cause to be consummated, the Closing and the Merger are subject to the satisfaction at the Closing of the following conditions, any one or more of which may be waived on its own behalf in writing by any such party:

(a) All waiting periods (and extensions thereof) under the HSR Act applicable to the Merger and the purchase of Shares shall have expired or been terminated.

(b) There shall not be in force any Governmental Order, statute, rule or regulation or Law restraining, enjoining or prohibiting the consummation of the Merger, the purchase of Shares or the other transactions contemplated by this Agreement.

8.2 Conditions to Obligations of Acquiror and Merger Sub. The obligations of Acquiror and Merger Sub to consummate the transactions contemplated by this Agreement (including the Closing and the Merger) are subject to the satisfaction at the Closing of the following additional conditions, any one or more of which may be waived in writing by Acquiror and Merger Sub:

(a) (i) Each of the representations and warranties of the Company, the Blocker Seller and the Blocker Company, as applicable, in Section 3.1 (with respect to the representations and warranties contained in the first and second sentences of such Section 3.1 only), Section 3.2 (with respect to the representations and warranties contained in the first, second and third sentences of such Section 3.2 only), Section 3.3, Section 3.4 (with respect to conflicts with the certificate of formation of the Company or the Existing LLC Agreement only), Section 3.6, Section 3.7, Section 3.18, Section 3.23(a) and Section 3.35, shall be true and correct in all respects at and as of the date of this Agreement and at and as of the Closing Date as though then made other than, solely with respect to the representations and warranties set forth in Section 3.6 and Section 3.35, *de minimis* inaccuracies with respect to the capitalization of the Company or the Blocker Company in respect of which monetary compensation is an adequate remedy and for which the Acquiror will be entitled to full indemnification pursuant to ARTICLE IX (provided that, in each case, any such representation and warranty that addresses matters only as of a certain date specified herein shall be so true and correct in all respects only as of that certain date) and (ii) each of the other representations and warranties set forth in ARTICLE III shall be true and correct in all respects at and as of the date of this Agreement and at and as of the Closing Date as though then made (provided that any such representation and warranty that addresses matters only as of a certain date specified herein shall be so true and correct in all respects only as of that certain date), in each case in this clause (ii) determined without regard to qualifications as to materiality or Material Adverse Effect on the Company and its Subsidiaries, taken as a whole, except to the extent the failure of any such representations and warranties to be true and correct has not resulted in a Material Adverse Effect on the Company and its Subsidiaries, taken as a whole.

(b) Each of the covenants and agreements of the Company, the Holder Representative, the Blocker Seller and the Blocker Company required by this Agreement to be performed as of or prior to the Closing shall have been performed in all material respects.

(c) There shall not have occurred or be continuing a Material Adverse Effect.

(d) The DGC Agreement shall have been fully and lawfully terminated in accordance with its terms.

(e) The Company shall have effected the deliveries required pursuant to Section 2.2(b), each in form and substance satisfactory to the Acquiror.

(f) The Company/Holder Representative shall have delivered the Unitholder Agreements, duly executed by holders of at least 90% of the Units, to the Acquiror.

(g) The Company shall have delivered to the Acquiror evidence that the Pre-Closing Reorganization has been completed on terms satisfactory to the Acquiror, acting reasonably.

(h) The Company shall have delivered to the Acquiror evidence of the approval of this Agreement, the Transactions Documents, and the transactions contemplated hereby and thereby by the requisite Holders as required by the DLLCA and the Existing LLC Agreement, and such approval shall not have been revoked or modified.

8.3 Conditions to the Obligations of the Company, Blocker Seller and Blocker Company. The obligation of the Company, each of the Blocker Seller and the Blocker Company to consummate the transactions contemplated by this Agreement (including the Closing and the Merger) is subject to the satisfaction at the Closing of the following additional conditions, any one or more of which may be waived in writing by the Company:

(a) (i) Each of the representations and warranties of Acquiror and Merger Sub in ARTICLE IV will be true and correct (without giving effect to any limitation as to "materiality" or "material adverse effect" set forth therein) as of the Closing Date as though made at and as of the Closing Date (except to the extent expressly made as of an earlier date, in which case only as of such date), except where the failure of such representations and warranties to be so true and correct would not, individually or in the aggregate, materially delay or materially impair the ability of Acquiror or Merger Sub to consummate the transactions contemplated by this Agreement

(b) Each of the covenants and agreements of Acquiror to be performed as of or prior to the Closing shall have been performed in all material respects.

(c) Acquiror shall have effected the deliveries required pursuant to Section 2.2(c), each in form and substance satisfactory to the Company.

ARTICLE IX.

INDEMNIFICATION

9.1 Expiration of Representations, Warranties and Covenants, Etc. All representations and warranties of the Company, Blocker Seller and Blocker Company set forth in this Agreement shall survive the Effective Time until, and shall terminate and expire and shall cease to have any

further force or effect on the [**][9] month anniversary of the Closing Date; provided that notwithstanding the foregoing, the Fundamental Representations shall expire on the earlier of the [**][9] month anniversary of the Closing Date or the expiration of the applicable statute of limitations, environmental representations and warranties set out in Section 3.22 shall expire on the earlier of the [**][9] month anniversary of the Closing Date or the expiration of applicable statute of limitations, and the tax representations and warranties set out in Section 3.16 and Section 3.17 shall expire on the earlier of the [**][9] month anniversary of the Closing Date or the expiration of the applicable statute of limitations, including any extension thereto (such applicable survival date in any of the foregoing, the "Termination Date"); provided further, however, that if at any time prior to the Termination Date, Acquiror has duly delivered to the Holder Representative a valid Notice of Indemnification Claim (as defined in, and satisfying the requirements set forth in, Section 9.7) then the specific indemnification claim asserted in such Notice of Indemnification Claim shall survive the Termination Date until such time as such claim is resolved. Each of the parties hereto expressly agree pursuant to this Section 9.1 to shorten the statutes of limitation otherwise applicable to all claims and causes of action based directly or indirectly upon inaccuracies in or breaches of the representations and warranties made by the Company and the Blocker Company in this Agreement. The period of time prescribed for the commencement of any action directly or indirectly based upon the representations and warranties of the Company, the Blocker Seller, and the Blocker Company set forth in this Agreement, regardless of the nature of the claims or causes of action alleged therein, and regardless of whether under this Agreement or otherwise, shall expire on the Termination Date.

9.2 Indemnification.

(a) Subject to the limitations set forth in Section 9.3 of this Agreement, from and after the Closing, Acquiror, the Surviving Entity and their Affiliates and their respective officers, directors, managers, employees, shareholders, members, agents and representatives, successors and permitted assigns (collectively, the "Aquiror Indemnitees") shall be indemnified and reimbursed by the Escrow Participants (severally and not jointly, and in accordance with each Escrow Participant's Pro Rata Portion), and held harmless from and against any Damages which an Aquiror Indemnitee suffers as a result or arising out of (i) any breach or any inaccuracy of the representations and warranties of the Company set forth in Article III of this Agreement, the Closing Certificate or the failure of any such representations and warranties to be accurate as of the time of Closing as though then made, (ii) the failure of the Company or the Holder Representative to perform any of its covenants or agreements contained herein or in the Transaction Documents required to be performed by it, (iii) any Indebtedness of any member of the Company Group or Holder Expenses not satisfied on the Closing Date, (iv) any Indemnified Taxes, (v) any Action by any equityholder of the Company Group (or any spouse of any equityholder of the Company Group) relating to the transactions contemplated by this Agreement, including as a result of any misallocation of proceeds or other amounts payable pursuant to this Agreement made in reliance on the Distribution Waterfall,

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[9] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

and (vi) the [**][10] Investigation or any findings in connection with the [**][10] Investigation ("[**][10] Investigation Losses"). Notwithstanding anything to the contrary in this Agreement, no Acquiror Indemnitee shall be entitled to bring any claim or recover pursuant to Section 9.2(a)(ii) any Damages resulting from or arising out of any inaccuracy in or breach of any representation or warranty addressed in the Closing Certificate (it being agreed that any such claim or recovery resulting from or arising out of any inaccuracy in or breach of any representation or warranty addressed in the Closing Certificate shall be made pursuant to Section 9.2(a)(i)).

For greater certainty, in the event the Surviving Entity or any of its Subsidiaries suffers, incurs or otherwise becomes subject to any Damages as a result of or in connection with any inaccuracy in or breach of any representation, warranty, covenant or agreement of the Company hereunder, then (without limiting any of the rights of the Surviving Entity as an Acquiror Indemnitee), Acquiror shall also be deemed, by virtue of its ownership of the equity of the Surviving Entity, to have incurred Damages as a result of and in connection with such inaccuracy or breach but in either case the total amount both the Acquiror and the Surviving Entity may recover shall not exceed the amount of such Damages.

(b) Notwithstanding Section 9.2(a) but subject to the other provisions and including the limitations set forth in this ARTICLE IX, each Acquiror Indemnitee shall be indemnified by the Blocker Seller, jointly and severally, from and against any Damages in which an Acquiror Indemnitee suffers as a result of (i) any breach of the representations and warranties of the Blocker Company and Blocker Seller set forth in Sections 3.17 and 3.35, (ii) any Indemnified Blocker Taxes, (iii) the failure of any of the Blocker Company or Blocker Seller to perform any covenant or agreement contained in this Agreement or the Transaction Documents required to be performed by such Persons, and (iv) the Pre-Closing Reorganization.

(c) For purposes of this ARTICLE IX, "Damages" means, whether or not involving a third party claim, any loss, cost, Liability, claim, interest, fine, penalty, assessment, Tax, damages available at law or in equity (including consequential or special damages, but excluding exemplary or punitive damages except to extent awarded pursuant to a Third-Party Claim), amount paid in settlement or fees or expenses related to any of the foregoing expense (including reasonable legal, accounting, audit, consultant and expert fees and expenses), whether or not involving a third-party claim.

9.3 Limitations on Liability.

(a) Except in the event of (i) Fraud, (ii) breach of any covenant set forth in this Agreement, (iii) breach or inaccuracy of Fundamental Representations, or (iv) breach of the representations and warranties set forth in Section 3.16 or a claim for Indemnified Taxes, in each case solely to the extent of Special Escrow Tax Losses or Unsatisfied Current Income Taxes, Acquiror's sole and exclusive source of recovery pursuant to this ARTICLE IX with respect to any

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[10] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

breach of any representation or warranty of the Company, Blocker Seller or Blocker Company set forth herein and any claim for Indemnified Taxes shall be the Indemnification Escrow Fund.

(b) Notwithstanding anything to the contrary contained in this Agreement, except for any liability for indemnifiable Damages incurred based on Fraud, and without limiting any right of the Company or its Affiliates to pursue any claim under the 2016 Agreement against any applicable Escrow Participant, the aggregate liability of the Escrow Participants for indemnifiable Damages (i) under Section 9.2(a)(iv) and Section 3.16 in respect of Special Escrow Tax Losses shall not exceed the amount contained in the sub-account of the Special Escrow Fund for Special Escrow Tax Losses, and (ii) under Section 9.2(a)(vi) shall not exceed the amount contained in the sub-account of the Special Escrow Fund for [**][11] Investigation Losses. The Acquiror's sole and exclusive source of recovery pursuant to this ARTICLE IX in respect of: (x) Special Escrow Tax Losses shall be the sub-account of the Special Escrow Fund for Special Tax Losses, (y) Unsatisfied Current Income Taxes shall be the sub-account of the Special Escrow Fund for Unsatisfied Current Income Taxes, and (z) [**][11] Investigation Losses shall be the sub-account of the Special Escrow Fund for [**][11] Investigation Losses.

(c) Except in the event of Fraud and subject to Section 9.3(a), each Escrow Participant's aggregate liability for Damages under Section 9.2(a) shall be limited to the portion of the Closing Consideration actually paid to such Escrow Participant pursuant to this Agreement (including any amount paid into escrow that is attributable to such Escrow Participant).

(d) Without limiting the effect of any other limitation set forth in this ARTICLE IX, the indemnification provided for in Section 9.2(a)(i) and Section 9.2(a)(iv) (other than the Fundamental Representations, and the representations and warranties set forth in Section 3.16 or a claim for Indemnified Taxes, in each case solely to the extent of Special Escrow Tax Losses or Unsatisfied Current Income Taxes) shall not apply, and Acquiror shall not be entitled to exercise any indemnification rights under this Agreement, except to the extent that the aggregate amount of the Damages against which Acquiror would otherwise be entitled to be indemnified under Section 9.2(a)(i) exceeds $[**][12] (the "Deductible"). If the aggregate amount of such Damages exceeds the Deductible, then Acquiror shall, subject to the other limitations set forth in this Agreement, be entitled to seek recovery from the Indemnification Escrow Fund only against the portion of such Damages in excess of the Deductible.

(e) The amount of any Damages that are subject to indemnification under this ARTICLE IX shall be calculated net of: (i) the amount of any insurance proceeds (including with respect to the R&W Insurance Policy), indemnification payments, contribution payments or reimbursements received or receivable by Acquiror, the Surviving Entity or any Affiliate of Acquiror

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[11] Certain confidential information contained in this document, marked with asterisks in brackets, has been redacted pursuant to a request for confidential treatment and has been filed separately with the United States Securities and Exchange Commission.

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or the Surviving Entity in connection with such Damages or any of the events or circumstances giving rise or otherwise related to such Damages; (ii) the amount of any reserves or accruals appearing on the Closing Balance Sheet of the Company in connection with such Damages or any of the events or circumstances giving rise or otherwise related to such Damages and (iii) any amounts taken into account in the calculation of Closing Date Net Working Capital, Holder Expenses or Closing Date Indebtedness. Acquiror and the Surviving Entity shall seek, and shall cause each of their respective Affiliates to seek, full recovery under all insurance policies covering any Damages to the same extent as they would if such Damages were not subject to indemnification hereunder.

(f) In no event shall the Acquiror Indemnitees have any right to indemnification under this ARTICLE IX to the extent that the applicable Damages (i) are attributable solely to Post-Closing Tax Periods (other than Damages arising from breaches of the representations and warranties in Sections 3.16(e), 3.16(h), 3.16(j), 3.16(n), 3.17(h), 3.17(i) or 3.17(n) or breach of post-closing covenant); (ii) are incurred as a result of any transaction occurring on the Closing Date but after the Closing outside the Ordinary Course of Business (other than explicitly contemplated by this Agreement or otherwise required by Law), (iii) are due to the unavailability in any Post-Closing Tax Period of any net operating losses, credits or other Tax attributes from a Pre-Closing Tax Period, or (iv) that are attributable to the manner in which Acquiror finances the purchase and sale of the Units or Shares or any of the other transactions contemplated by this Agreement.

(g) For purposes of determining the accuracy or breach of the representations and warranties made by the Company, the Blocker Company and the Blocker Seller set forth in ARTICLE IV hereof, respectively, and for calculating the amount of any Damages arising therefrom, all "***material***", "***Material Adverse Effect***" and similar qualifications and words of similar import contained in such representation and warranty shall be disregarded.

9.4 Defense of Third Party Claims.

(a) *Notice of Claim*. Promptly (and in no event more than fifteen (15) Business Days) after Acquiror, the Surviving Entity or any Affiliate of Acquiror or the Surviving Entity receives notice of any actual or possible claim, demand, suit, action, arbitration, investigation, audit, inquiry or proceeding that has been or may be brought or asserted by a third party against Acquiror, the Surviving Entity or any of Acquiror's other Affiliates and that may give rise to an indemnification claim by Acquiror under this ARTICLE IX (any such actual or possible claim, demand, suit, action, arbitration, investigation, inquiry or proceeding by a third party being referred to as a "Third-Party Claim"), Acquiror shall deliver to the Holder Representative a written notice stating in reasonable detail the nature and basis of such Third-Party Claim and the dollar amount of such Third-Party Claim, to the extent known; provided, however, that the failure to so give such notice shall prevent an Indemnified Person from claiming indemnification with respect to such claim only if, and only to the extent that, such failure results in the forfeiture of rights and defenses otherwise available with respect to such claim that results in actual prejudice to the Escrow Participants or limitation of recovery to the extent so damaged.

(b) *Control of Defense*. Acquiror shall proceed diligently to defend such Third-Party Claim with the assistance of counsel satisfactory to the Holder Representative; provided, however, that (i) the attorneys' fees of Acquiror's counsel and other defense costs incurred by

Acquiror shall only constitute Damages payable from the Indemnification Escrow Fund if and to the extent the losses, liabilities, damages or expenses associated with such third party claim otherwise constitute indemnifiable Damages hereunder, and (ii) neither Acquiror nor the Surviving Entity shall settle, adjust or compromise such Third-Party Claim, or admit any liability with respect to such Third-Party Claim, without the prior written consent of the Holder Representative, which consent may not be unreasonably withheld, conditioned or delayed. Acquiror shall have the right to settle or compromise such Third-Party Claim without the consent of the Holder Representative; provided, however, that, except with the consent of the Holder Representative, no settlement or compromise of any such Third-Party Claim shall be determinative of either the fact that Damages may be recovered from the Escrow Participants in respect of such Third-Party Claim or the amount of Damages that may be recovered in respect of such Third-Party Claim.

9.5 Mitigation. Promptly after Acquiror or the Surviving Entity becomes aware of any event or circumstance that could reasonably be expected to constitute or give rise to any breach of any representation, warranty or covenant by the Company, Blocker Seller or the Blocker Company, Acquiror and the Surviving Entity shall take all commercially reasonable steps to mitigate and minimize all Damages that may result from such breach, including incurring commercially reasonable costs only to the minimum extent necessary to remedy the breach which gives rise to the Damages.

9.6 Exclusivity. After the Closing, the sole and exclusive liability and responsibility of the Escrow Participants to the Acquiror Indemnitees under or in connection with this Agreement shall be as set forth in this ARTICLE IX; provided, for greater certainty, that nothing in this Agreement shall in any way limit the Company's right or, following closing, the Surviving Entity's right to indemnification under the 2016 Agreement. Notwithstanding the foregoing, this Section 9.6 shall not prevent or restrict (i) the right of any party to seek injunctive relief or specific performance from a court of competent jurisdiction or (ii) any claim against an Escrow Participant or the Holder Representative for Fraud. No Person shall have any right to assert any claims for indemnification or make a claim against the then-available portion of the Indemnification Escrow Fund pursuant to this ARTICLE IX with respect to any proceeding or Damages to the extent it is (i) primarily possible or potential Damages or a proceeding that such party believes may be asserted rather than Damages that have, in fact, been paid or incurred by such Person or a proceeding that has, in fact, been filed of record against such Person, or (ii) Damages or a proceeding with respect to which such Person has taken action (or caused action to be taken) to accelerate the time period in which such Damages are payable or such proceeding is initiated or prosecuted; provided that any Acquiror Indemnitee may submit a good faith bona fide claim for contingent or possible Damages with reasonable backup in order to make the claim before the end of the survival period of any underlying representation or warranty set out in Section 9.1, which claim shall be valid until such time as the Damage is no longer contingent and is incurred.

9.7 Claim Notification. Acquiror shall not be entitled to indemnification under this ARTICLE IX unless it has duly delivered a written notice to the Holder Representative (any such notice being referred to as a "Notice of Indemnification Claim", and the claim for indemnification described in such Notice of Indemnification Claim being referred to as an "indemnification claim"), setting forth: (i) the specific representation and warranty or covenant alleged to have been breached

by the Company or the Blocker Company; (ii) a detailed description of the facts and circumstances giving rise to the alleged breach of such representation and warranty or covenant; and (iii) to the extent known at the time, the itemized and specific nature and aggregate dollar amount of the Damages that have been incurred by Acquiror as a result of the breach referred to in such notice.

9.8 Escrow Arrangements.

(a) No later than two (2) Business Days after each Release Date or satisfaction of the escrow condition as set forth in the Escrow Agreement, as applicable, Acquiror and Holder Representative shall deliver a joint, written letter to the Escrow Agent instructing the Escrow Agent to pay to the Escrow Participants their Pro Rata Portion of the funds then subject to release from the Indemnification Escrow Fund and the Special Escrow Fund, as applicable, unless any bona fide good faith outstanding claim for indemnification is still pending or unresolved, in which case an amount of the Indemnification Escrow Fund and/or Special Escrow Fund, as applicable, representing a bona fide good faith quantification of the amount of indemnifiable Damages relating to any pending and unresolved claim for indemnification will be retained by the Escrow Agent (the "Retained Amount"), and the balance paid to the Paying Agent for distribution to the Escrow Participants in accordance with their Pro Rata Portions. Any Retained Amount shall remain in the Indemnity Escrow Fund or Special Escrow Fund, as applicable, until released to a the Acquiror Indemnitees in satisfaction of an outstanding claim or to Paying Agent for the benefit of the Escrow Participants pursuant to Section 9.8(b) below.

(b) Release of Retained Amount to Escrow Participants. If, following a Release Date, after final resolution and payment of each outstanding claim for indemnification, any Retained Amount remains with the Escrow Agent, no later than two (2) Business Days after the date of such final resolution and payment, the Escrow Agent shall pay to the Paying Agent (for distribution to the Escrow Participants as directed by the Holder Representative), all of the funds then remaining with the Escrow Agent minus any funds to be distributed to the Holder Representative pursuant to Section 9.8(c).

(c) Payment of Costs and Expenses of Holder Representative. Prior to the distribution of any Retained Amount held by the Escrow Agent to the Escrow Participants, the Holder Representative shall be permitted to be reimbursed out of such remaining funds to be distributed to the Escrow Participants for any and all reasonable costs and expenses of the Holder Representative not yet reimbursed by Escrow Participants pursuant to Section 11.2(b).

9.9 Consideration Adjustment. The parties agree that any amounts paid by the Escrow Participants in satisfaction of any claim pursuant to this ARTICLE IX, including any amount released to Acquiror from the Indemnification Escrow Fund, shall be treated as a reduction in the aggregate consideration paid in connection with the transaction contemplated hereunder for all purposes, including U.S. federal and applicable state and local, income tax purposes.

ARTICLE X.

TERMINATION

10.1 Termination. This Agreement may only be terminated and the transactions contemplated hereby abandoned prior to the Closing:

(a) at the election of the Company or Acquiror on or after the Outside Date, if the Merger and the purchase of the Shares shall not have occurred by the close of business on such date; provided that a party may not terminate this Agreement pursuant to this Section 10.1(a) if such party's failure to perform any material covenant, agreement or obligation hereunder has been the principal cause of the failure of the Closing to occur on or before such Outside Date;

(b) by mutual written consent of the Company and Acquiror;

(c) by the Company or Acquiror if there shall be in effect a final nonappealable Governmental Order or Law prohibiting the consummation of the transactions contemplated hereby;

(d) by Acquiror if it is not in material breach of any of its representations, warranties, covenants, agreements or obligations hereunder and either the Company, any of the Blocker Seller or the Blocker Company is in breach of any of their respective representations, warranties, covenants, agreements, or obligations hereunder that renders any of the conditions set forth in Section 8.2 incapable of being satisfied prior to the Outside Date, and such breach is either (A) not capable of being cured prior to the Outside Date or (B) if curable, is not cured or waived by Acquiror (in its sole and absolute discretion) in writing pursuant to the terms of this Agreement by the earlier of (1) one (1) Business Day before the Outside Date or (2) thirty (30) days after the giving of written notice by Acquiror to the Company;

(e) by the Company if it is not in material breach of any of its representations, warranties, covenants, agreements or obligations hereunder and either Acquiror or Merger Sub is in breach of any of its representations, warranties, covenants, agreements or obligations under this Agreement that renders any of the conditions set forth in Section 8.3 incapable of being satisfied by the Outside Date and, such breach is either (A) not capable of being cured prior to the Outside Date or (B) if curable, is not cured or waived by the Company (in its sole and absolute discretion) in writing pursuant to the terms of this Agreement by the earlier of (1) one (1) Business Day before the Outside Date or (2) thirty (30) days after the giving of written notice by the Company to Acquiror.

10.2 Procedure Upon Termination. In the event of termination and abandonment by Acquiror or the Company, or both, pursuant to Section 10.1 hereof, written notice thereof shall forthwith be given to the other party or parties, and this Agreement shall terminate, and the Merger and the purchase of the Shares shall be abandoned, without further action by Acquiror or the Company.

10.3 Effect of Termination. In the event that this Agreement is validly terminated in accordance with Section 10.1, then each of the parties shall be relieved of their duties and obligations arising under this Agreement after the date of such termination and such termination shall be without liability to Acquiror, Merger Sub, the Blocker Company, each of the Blocker Seller or the Company; provided, however, that (i) no such termination shall relieve any party hereto from liability for any Fraud or, subject to Section 11.2, for breach of this Agreement occurring prior to such termination or under this Section 10.3, and (ii) the provisions of this Section 10.3, Section 5.8 (Holder

Confidentiality) and Section 7.1 (Confidentiality), and ARTICLE XII (Miscellaneous) shall remain in full force and effect and survive any termination of this Agreement in accordance with its terms.

ARTICLE XI.

HOLDER REPRESENTATIVE

11.1 Acknowledgement. By virtue of the approval of the Merger by the holders of Units in accordance with the Existing LLC Agreement and effective as of the Effective Time, and without further action of any such holders, each holder of Units, and by its execution and delivery of this Agreement, each Blocker Seller, and by execution of the Unit Acknowledgment and Releases, each holder of Phantom Units, shall be deemed to have irrevocably constituted or appointed the Holder Representative as its, his or her representative, and by execution of this Agreement, the Holder Representative hereby accepts such appointment, to act on behalf of holders of the Phantom Units, Units and each Blocker Seller as their exclusive agent and attorney in-fact, with full power of substitution, to act in their name, place and stead in connection with the transactions contemplated by this Agreement, the Transaction Documents and the Holder Representative Engagement Agreement. The power of attorney granted in this Section 11.1 by each holder of Phantom Units, Units and each Blocker Seller and the powers, immunities and rights to indemnification granted to the Holder Representative Group hereunder: (i) are coupled with an interest and shall be irrevocable, may be delegated by the Holder Representative and shall survive the death or incapacity of any holder of Phantom Units, Units or any Blocker Seller, and (ii) shall survive the delivery of an assignment by any holder of Phantom Units, Units or Blocker Seller of the whole or any fraction of his, her or its interest in the Escrow Fund. The Holder Representative may resign at any time or and may be removed or replaced by the vote of the holders of Phantom Units, Units and the Blocker Sellers with a majority of the Pro Rata Portion. No bond shall be required of the Holder Representative. Acquiror, Merger Sub, and following the Effective Time, the Surviving Entity, is entitled to rely on the actions of the Holder Representative taken on behalf of the holders of the Phantom Units, Units and each Blocker Seller.

11.2 Authority and Rights of the Holder Representative; Limitations on Liability.

(a) Certain Holders have entered into the Holder Representative Engagement Agreement with the Holder Representative to provide direction to the Holder Representative in connection with its services under this Agreement, the Escrow Agreement and the Holder Representative Engagement Agreement (such Holders, including their individual representatives, collectively hereinafter referred to as the "Advisory Group"). The Holder Representative shall have such powers and authority as are necessary to carry out the functions assigned to it under this Agreement; provided, however, that the Holder Representative shall have no obligation to act on behalf of the holders of Phantom Units, Units and the Blocker Seller, except as expressly provided herein, and for purposes of clarity, there are no obligations of the Holder Representative in any ancillary agreement, schedule, exhibit or the Company Disclosure Schedule. Neither the Holder Representative nor its members, managers, directors, officers, contractors, agents and employees nor any member of the Advisory Group (collectively, the "Holder Representative Group") shall have any liability to Acquiror, the Company or the holders of Phantom Units, Units and each Blocker Seller with respect to actions taken or omitted to be taken in its capacity as the Holder Representative,

except resulting from the Holder Representative's gross negligence or willful misconduct. The Holder Representative shall be under no obligation to take any action in its capacity as the Holder Representative, unless the Holder Representative is holding funds delivered to it under this Section 11.2 and/or has been provided with other funds, security or indemnities which, in the sole determination of the Holder Representative, are sufficient to protect the Holder Representative against the costs, expenses and liabilities which may be incurred by the Holder Representative in taking such action. The Holder Representative shall be entitled to engage such counsel, experts and other agents and consultants as it shall deem necessary in connection with exercising its powers and performing its function hereunder, under the Escrow Agreement and under the Holder Representative Engagement Agreement and (in the absence of bad faith on the part of the Holder Representative) shall be entitled to conclusively rely on the opinions and advice of such Persons. The Holder Representative shall be entitled to reimbursement from each holder of Phantom Units, Units and each Blocker Seller, severally and not jointly, for all reasonable expenses, disbursements and advances (including fees and disbursements of its counsel, experts and other agents and consultants) incurred by the Holder Representative in such capacity, and the Holder Representative Group shall be entitled to indemnification from each holder of Phantom Units, Units and each Blocker Seller, severally and not jointly, against any loss, liability, claim, damage, fee, fine, cost, judgment, amount paid in settlement or expenses arising out of actions taken or omitted to be taken in its capacity as the Holder Representative (except for those arising out of the Holder Representative's gross negligence or willful misconduct), including the costs and expenses of investigation, costs of counsel and other skilled professionals, defense of claims and in connection with seeking recovery from insurers (collectively, the "Holder Representative Expenses"). The immunities and rights to indemnification shall survive the resignation or removal of the Holder Representative or any member of the Advisory Group and the Closing and/or any termination of this Agreement and the Escrow Agreement. Such Holder Representative Expenses may be recovered first, from the Holder Representative Expense Fund, second, from any distribution of the Escrow Fund otherwise distributable to the Holders at the time of distribution, and third, directly from the Holders. All decisions, actions, consents and instructions of the Holder Representative shall be final and binding upon all the Holders and holders of Phantom Units and their respective successors, and no Holder or holder of Phantom Units shall have any right to object, dissent, protest or otherwise contest the same, except for fraud or willful misconduct.

(b) At the Effective Time, Acquiror shall deliver cash to the Holder Representative in an amount equal to three hundred thousand dollars ($300,000) (the "Holder Representative Expense Fund") to be held in trust to cover and reimburse the fees and Representative Expenses incurred by the Holder Representative for its obligations in connection with this Agreement and the transactions contemplated hereby. The Holder Representative is not providing any investment supervision, recommendations or advice and shall have no responsibility or liability for any loss of principal of the Holder Representative Expense Fund other than as a result of its gross negligence or willful misconduct. The Holder Representative is not acting as a withholding agent or in any similar capacity in connection with the Holder Representative Expense Fund, and has no tax reporting or income distribution obligations. The Escrow Participants will not receive any interest on the Holder Representative Expense Fund and assign to the Holder Representative any such interest. Subject to Advisory Group approval, the Holder Representative may contribute funds to the Holder Representative Expense Fund from any consideration otherwise distributable

to the Escrow Participants. The Holder Representative shall disperse to the Paying Agent for further distribution to the Escrow Participants and the Bonus Payment Recipient the remaining balance of the Holder Representative Expense Fund in accordance with the Distribution Waterfall, as and when determined by the Holder Representative in its sole discretion.

11.3 Reliance on Holder Representative. Notwithstanding anything contained in this Agreement to the contrary, the Acquiror and/or the Surviving Entity shall be entitled to deal exclusively with the Holder Representative on behalf of any and all Holders and holders of Phantom Units and Blocker Seller with respect to all matters relating to this Agreement and the other Transaction Documents, and to rely on any notice, demand, communication, agreement, declaration, receipt, waiver, consent or other document purporting to be delivered by the Holder Representative on behalf of any Holder or holder of Phantom Units, and Acquiror and the Surviving Entity shall not have any obligation to enquire as to the veracity, accuracy or adequacy thereof and each of Acquiror and the Surviving Entity shall be entitled to disregard any notice, demand or claim to the contrary not sent by the Holder Representative.

11.4 Without limiting the generality of the foregoing, the Holder Representative, without the consent of any other Holder, holder of Phantom Units and Blocker Seller, is hereby authorized by each of the Holders, holders of Phantom Units and Blocker Seller to, on behalf of each of them, to (i) take any and all actions required to be taken by any Holder, any holder of Phantom Units and Blocker Seller under this Agreement and the other Transaction Documents without any further consent or approval from any Holder, holder of Phantom Units, Blocker Seller or other Person, (ii) supervise, defend, coordinate and negotiate all disputes arising hereunder and all claims for indemnification under Article IX (including settlements thereof), (iii) effect payments to Holders, holders of Phantom Units and Blocker Seller hereunder, (iv) receive or give notices hereunder, (v) receive or make payments hereunder, (vi) execute waivers or amendments thereof, and/or (vii) execute and deliver documents, releases and/or receipts hereunder. The Holder Representative shall be entitled to: (i) rely upon the Distribution Waterfall, (ii) rely upon any signature believed by it to be genuine, and (iii) reasonably assume that a signatory has proper authorization to sign on behalf of the applicable Holder, holder of Phantom Units, Blocker Seller or other party.

ARTICLE XII.

MISCELLANEOUS

12.1 Remedies.

(a) The parties hereto hereby agree that irreparable damage would occur in the event that any provision of this Agreement was not performed in accordance with its specific terms or was otherwise breached, and that money damages or other legal remedies would not be an adequate remedy for any such damages. Accordingly, the parties hereto acknowledge and hereby agree that in the event of any breach or threatened breach by the Company, each of the Blocker Seller or the Blocker Company, on the one hand, or Acquiror and Merger Sub, on the other hand, of any of their respective covenants or obligations set forth in this Agreement, subject to the provisions and limitations of this Section 12.1, the Company, each of the Blocker Seller or the Blocker Company, on the one hand, and Acquiror and Merger Sub, on the other hand, shall be entitled, in addition to

all other remedies available under Law or equity, to an injunction or injunctions to prevent or restrain breaches or threatened breaches of this Agreement by the other (as applicable) under this Agreement, and to specifically enforce the terms and provisions of this Agreement to prevent breaches of or threatened breaches of, or to enforce compliance with, the covenants and obligations of the other (as applicable) under this Agreement.

(b) Each of the Company, each of the Blocker Seller or the Blocker Company, on the one hand, and Acquiror and Merger Sub, on the other hand, hereby agrees not to raise any objections to the availability, of the equitable remedy of specific performance to prevent or restrain breaches or threatened breaches of this Agreement by the Company, each of the Blocker Seller, the Blocker Company, Acquiror or Merger Sub, as applicable, and to specifically enforce the terms and provisions of this Agreement to prevent breaches or threatened breaches of, or to enforce compliance with, the covenants and obligations of the Company, each of the Blocker Seller, the Blocker Company, Acquiror and Merger Sub, as applicable, under this Agreement, in each case, in accordance with its terms, conditions and limitations.

(c) In the event that any party institutes any legal suit, action or proceeding against the other party to enforce the performance of any provision of this Agreement pursuant to Section 12.1 or to seek monetary damages, the prevailing party in the suit, action or proceeding shall be entitled to receive in addition to all other relief and damages to which it may be entitled, the costs incurred by such party in conducting such suit, action or proceeding, including attorneys' fees and expenses and court costs.

12.2 Waiver. Any party to this Agreement may, at any time prior to the Closing, by action taken by its Board of Directors or Board of Managers (or other governing body), as applicable, or officers thereunto duly authorized, waive on its own behalf any of the terms or conditions of this Agreement or agree on its own behalf to an amendment or modification to this Agreement by an agreement in writing executed by such party. The waiver by a party hereto of any breach of any provision of this Agreement shall not constitute or operate as a waiver of any other breach of such provision or of any other provision hereof, nor shall any failure to enforce any provision hereof operate as a waiver of such provision or of any other provision hereof.

12.3 Notices. All notices and other communications among the parties shall be in writing and shall be deemed to have been duly given (i) when received if delivered in person, (ii) three days after posting in the United States mail having been sent registered or certified mail return receipt requested, (iii) if sent domestically by a nationally recognized overnight delivery service, the first day following the date given to such overnight delivery service (specified for overnight delivery), and if sent internationally by an internationally recognized overnight delivery service, the second day following the date given to such overnight delivery service (specified for overnight delivery); (iv) on the date of transmission if sent by means of electronic transmission, including electronic mail (receipt confirmed) if sent prior to 5:00 pm Pacific Time, and the next Business Day if sent after such time, in each case (where applicable), with postage prepaid, addressed as follows:

(a) If to Acquiror or Merger Sub to:

Celestica (USA) Inc.

5325 Hellyer Avenue
San Jose, CA, 95138

Attention: Chief Legal Officer
Email: rellis@celestica.com

with copies to:

Blake, Cassels & Graydon LLP
199 Bay Street
Suite 4000, Commerce Court West
Toronto ON M5L 1A9

Attention: Justin Drake
E-mail: justin.drake@blakes.com

(b) If to the Company, to:

Impakt Holdings, LLC
Attention: Daniel Rubin
490 Gianni Street
Santa Clara, CA 95054
Email: dan.rubin@impaktholdings.com

with copies to:

Cooley LLP
3715 Hanover Street
Palo Alto, CA 94304-1130
Attention: John McKenna
Email: jmckenna@cooley.com

(c) If to the Holder Representative, to:

Fortis Advisors LLC

Attention: Notice Department

Telecopy No.: (858) 408-1843
Email: notices@fortisrep.com

with copies to:

Cooley LLP
3715 Hanover Street

Palo Alto, CA 94304-1130
Attention: John McKenna
Email: jmckenna@cooley.com

or to such other address or addresses as the parties may from time to time designate to the others in writing.

12.4 Assignment. No party hereto shall assign this Agreement or any part hereof without the prior written consent of the other parties, except that (a) each of Acquiror and Merger Sub may assign all of its respective rights, duties and obligations hereunder to any of its Affiliates, or in connection with any disposition or transfer of all or substantially all membership interests of the Surviving Entity acquired by Acquiror in connection herewith, without the prior written consent of any other party hereto, and (b) each of Acquiror and Merger Sub may and, as of and following the Closing, any of the Surviving Entity, Acquiror, and their respective Subsidiaries may, (i) pledge, transfer or assign its respective rights hereunder to their financing sources as collateral security, without the prior written consent of any other party hereto and (ii) pledge, assign or transfer its rights hereunder (in whole or in part) in connection with any direct or indirect disposition, pledge, assignment or transfer of any substantial portion of the equity or assets of the Surviving Entity or its Subsidiaries; provided that, in each case, that Acquiror remains liable for the obligations so assigned. Any purported assignment of this Agreement in contravention of this Section shall be null and void and of no force or effect. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective permitted successors and assigns.

12.5 Rights of Third Parties. Except as contemplated by Section 6.1 and Section 9.2, nothing expressed or implied in this Agreement is intended or shall be construed to confer upon or give any Person, other than the parties hereto, any right or remedies under or by reason of this Agreement.

12.6 Attorney-Client Privilege. Each of the parties hereto agree that any attorney-client privilege, attorney work-product protection, and the expectation of client confidence attaching as a result of counsel's (whether external or internal) representation of each member of the Company Group in connection with the transactions contemplated by this Agreement, including the Merger, and all information and documents covered by such privilege or protection (the "Covered Materials") shall belong to and be controlled by the Holder Representative, and not by the Surviving Entity, following the Closing, and may be waived only by the Holder Representative, and not the Surviving Entity, and shall not pass to or be claimed or used by Acquiror or the Surviving Entity. Absent the consent of the Holder Representative, neither Acquiror nor the Surviving Entity shall have a right to access the Covered Materials following the Closing and, in the event Acquiror or the Surviving Entity access Covered Materials in violation of this sentence, such access will not waive or otherwise affect the rights of the Holder Representative with respect to the related privilege or protection. Notwithstanding the foregoing, if a dispute arises between Acquiror or the Surviving Entity, on the one hand, and a third party other than (and unaffiliated with) any member of the Company Group, any holder of Units, any Blocker Seller and the Holder Representative, on the other hand, after the Closing, (i) where any of such items are relevant, the Holder Representative shall provide copies

of such items to the Acquiror and the Surviving Entity as either of them may request; and (ii) the Surviving Entity may assert such attorney-client privilege to prevent disclosure to such Covered Materials; and provided, further, that Acquiror and the Surviving Entity may not waive such privilege without the prior written consent of the Holder Representative.

12.7 Conflict of Interest. If the Holder Representative so desires, acting on behalf of any unitholder of the Company or any Blocker Seller (collectively the "Transferors") and without the need for any consent or waiver by the Company or Acquiror, Cooley LLP ("Cooley") shall be permitted to represent the Transferors after the Closing in connection with any matter, including without limitation, anything related to the transactions contemplated by this Agreement, any other agreements referenced herein or any disagreement or dispute relating thereto. Without limiting the generality of the foregoing, after the Closing, Cooley shall be permitted to represent the Transferors, any of their agents and Affiliates, or any one or more of them, in connection with any negotiation, transaction or dispute (including any litigation, arbitration or other adversary proceeding) with Acquiror, any Transferor or any of their agents or Affiliates under or relating to this Agreement, any transaction contemplated by this Agreement, and any related matter, such as claims or disputes arising under other agreements entered into in connection with this Agreement. Upon and after the Closing, the Company shall cease to have any attorney-client relationship with Cooley, except as contemplated by Section 12.6 or unless and to the extent Cooley is specifically engaged in writing by the Company to represent the Company after the Closing and either such engagement involves no conflict of interest with respect to the Transferors or the Holder Representative consents in writing at the time to such engagement. Any such representation of the Company by Cooley after the Closing shall not affect the foregoing provisions hereof.

12.8 Expenses. Each party hereto shall bear its own expenses incurred in connection with this Agreement and the transactions herein contemplated whether or not such transactions shall be consummated, including all fees of its legal counsel, financial advisers and accountants, except as contemplated by Section 7.2(a).

12.9 Governing Law. This Agreement shall be construed and enforced in accordance with the laws of the State of Delaware, without regard to the conflict of law principles that would result in the application of any law other than the law of the State of Delaware.

12.10 Captions; Counterparts. The captions in this Agreement are for convenience only and shall not be considered a part of or affect the construction or interpretation of any provision of this Agreement. This Agreement may be executed in two or more counterparts, including by facsimile transmission, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

12.11 Schedules and Annexes. The Schedules and Annexes are a part of this Agreement as if fully set forth herein. All references herein to articles, sections, paragraphs, Schedules and Annexes shall be deemed references to such parts of this Agreement unless the context shall otherwise require. The Company Disclosure Schedule has been arranged, for purposes of convenience only, as separate Parts corresponding to the subsections of ARTICLE III of this Agreement. The representations and warranties contained in ARTICLE III of this Agreement are subject to (a) the exceptions and disclosures set forth in the part of the Company Disclosure Schedule

corresponding to the particular subsection of ARTICLE III in which such representation and warranty appears; (b) any exceptions or disclosures explicitly cross-referenced in such part of the Company Disclosure Schedule by reference to another part of the Company Disclosure Schedule; and (c) any exception or disclosure set forth in any other part of the Company Disclosure Schedule to the extent it is reasonably apparent that such exception or disclosure is intended to qualify such representation and warranty. No reference to or disclosure of any item or other matter in the Company Disclosure Schedule shall be construed as an admission or indication that such item or other matter is material (nor shall it establish a standard of materiality for any purpose whatsoever) or that such item or other matter is required to be referred to or disclosed in the Company Disclosure Schedule. The information set forth in the Company Disclosure Schedule is disclosed solely for the purposes of this Agreement, and no information set forth therein shall be deemed to be an admission by any party hereto to any third party of any matter whatsoever, including of any violation of Law or breach of any agreement. The Company Disclosure Schedule and the information and disclosures contained therein are intended only to qualify and limit the representations, warranties and covenants of the Company, the Blocker Company and the Blocker Seller contained in this Agreement. Nothing in the Company Disclosure Schedule is intended to broaden the scope of any representation or warranty contained in the Agreement or create any covenant. Matters reflected in the Company Disclosure Schedule are not necessarily limited to matters required by the Agreement to be reflected in the Company Disclosure Schedule. Such additional matters are set forth for informational purposes and do not necessarily include other matters of a similar nature.

12.12 Construction.

(a) Unless the context of this Agreement otherwise requires (i) words of any gender include each other gender; (ii) words using the singular or plural number also include the plural or singular number, respectively; (iii) the terms "hereof," "herein," "hereby" and derivative or similar words refer to this entire Agreement; (iv) the terms "Article" or "Section" refer to the specified Article or Section of this Agreement; (v) the word "including" shall mean "including, without limitation" and (vi) the word "or" shall be disjunctive but not exclusive.

(b) References to agreements and other documents shall be deemed to include all subsequent amendments and other modifications thereto prior to the date hereof (unless otherwise specified or indicated by the context, and only to the extent such amendments and/or other modifications have been provided to the Acquiror).

(c) References to statutes shall include all regulations promulgated thereunder and references to statutes or regulations shall be construed as including all statutory and regulatory provisions consolidating, amending or replacing the statute or regulation.

(d) The language used in this Agreement shall be deemed to be the language chosen by the parties to express their mutual intent and no rule of strict construction shall be applied against any party.

(e) Whenever this Agreement refers to a number of days, such number shall refer to calendar days unless Business Days are specified.

(f) All accounting terms used herein and not expressly defined herein shall have the meanings given to them under GAAP; provided, however, that to the extent that a definition of a term in this Agreement is inconsistent with the meaning of such term under GAAP, the definition set forth in this Agreement shall control.

(g) Any reference to "Dollars" or "$" shall refer to U.S. Dollars.

(h) Any document uploaded to the online data room utilized for the transactions contemplated by this Agreement on or prior to the date of this Agreement shall be considered "made available", "furnished", "delivered" or "provided" for purposes of this Agreement.

12.13 Entire Agreement. This Agreement (together with the Schedules (including the Company Disclosure Schedule) and Annexes to this Agreement) and the other Transaction Documents (only the extent that such party is a party to such other Transaction Document) constitute the entire agreement among the parties and supersede any other agreements, whether written or oral, that may have been made or entered into by or among any of the parties hereto or any of their respective Subsidiaries relating to the transactions contemplated hereby (other than that certain Confidentiality Agreement dated as of August 19, 2018 between Acquiror and the Company (the "Confidentiality Agreement")); provided, for greater certainty, that nothing in this Agreement shall in any way limit the Company's right or, following closing, the Surviving Entity's right to indemnification under the 2016 Agreement.

12.14 Amendments. This Agreement may be amended or modified in whole or in part by a duly authorized agreement in writing executed by the Acquiror, Blocker Seller and the Company, provided that Article XI may only be amended with the written consent of the Holder Representative.

12.15 Publicity. Except as may be required to comply with the requirements of any applicable Law, in each case in the reasonable advice of counsel to such party, and except to the extent the Acquiror reasonably determines disclosure is required in order to meet continuous disclosure obligations under applicable securities Laws or good practice investor relations, the requirements of any stock exchange or similar body, any press release or other public communications of any nature whatsoever relating to the transactions contemplated by this Agreement, and the method of the release for publication thereof, shall be subject to the prior mutual approval of Acquiror, the Holder Representative and the Company which approval shall not be unreasonably withheld, conditioned or delayed by any party.

12.16 Severability. If any provision of this Agreement is held invalid or unenforceable by any court of competent jurisdiction, the other provisions of this Agreement shall remain in full force and effect. The parties further agree that if any provision contained herein is, to any extent, held invalid or unenforceable in any respect under the laws governing this Agreement, they shall, to the extent necessary, amend or otherwise modify this Agreement to replace any provision contained herein that is held invalid or unenforceable with a valid and enforceable provision giving effect to the intent of the parties.

12.17 Non-Recourse. This Agreement may only be enforced against, and any claim or suit based upon, arising out of, or related to this Agreement, or the negotiation, execution or performance

of this Agreement, may only be brought against the named parties to this Agreement and the Holders and then only with respect to the specific obligations set forth herein with respect to the named parties to this Agreement and the Holders. Other than as set forth in ARTICLE IX, no Person who is not a named party to this Agreement other than the Holders and the holders of Phantom Units, including any past, present or future manager, officer, employee, incorporator, partner, agent, attorney or representative of any member of the Company Group, any of the Blocker Seller, or of their respective Affiliates, will have or be subject to any liability or indemnification obligation (whether in contract or in tort) to Acquiror, Merger Sub or any other Person resulting from (nor will Acquiror or Merger have any claim with respect to) (a) the distribution of any Evaluation Material, or (b) any claim based on, in respect of, or by reason of, the sale and purchase of the Company or the Blocker Company, including any alleged non-disclosure or misrepresentations made by any such Persons, in each case, regardless of the legal theory under which such liability may be sought to be imposed, whether sounding in contract or tort, or whether at law or in equity, or otherwise; and each party waives and releases all such liabilities against any such Persons.

12.18 Disputes; Waiver of Jury Trial.

(a) Disputes. Notice of a Dispute must be delivered by the party making the claim to the party who is the subject of the claim in accordance with the notice provisions of this Agreement (the "Notice of Dispute"). Within twenty (20) days after delivery of a Notice of Dispute, the receiving party shall deliver a response ("Response") to the first party. The Notice of Dispute and Response shall include a statement of that party's position and a summary of the arguments supporting that position. As soon as reasonably possible after the Response has been delivered, representatives of the parties shall meet at mutually acceptable times and places as often as they consider necessary to make efforts in good faith to resolve the Dispute by amicable negotiations (the "Negotiation Period") after the Response was delivered. The negotiations shall be construed as settlement discussions, shall be confidential and shall be conducted on a "without prejudice" basis. Notwithstanding the foregoing, at any time following the delivery of the Response, either party may refer the Dispute immediately to arbitration under Section 12.18(b). No party shall be required to participate in the negotiations specified by this Section 12.18(a) if a limitation period relating to a right of such party which is the subject matter of or is related to the Dispute, would expire during the Negotiation Period or within thirty (30) days thereafter.

(b) Arbitration. Any Dispute between the parties to this agreement shall be finally determined, with no right of appeal even on any question of Law, by arbitration administered by the American Arbitration Association in accordance with its Commercial Arbitration Rules and judgment on the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The number of arbitrators shall be, unless otherwise agreed in writing, three. The legal place of arbitration shall be the City of New York, in the state of New York, and the Law of the arbitration shall be the Laws of Delaware. The language of the arbitration shall be English. The award of the arbitrators shall be accompanied by a reasoned opinion. Except as may be required by law, neither a party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties.

(c) EACH PARTY HERETO HEREBY WAIVES ANY RIGHT TO TRIAL BY JURY WITH RESPECT TO ANY ACTION RELATED TO OR ARISING OUT OF THIS AGREEMENT, ANY OTHER TRANSACTION DOCUMENT, OR ANY TRANSACTION CONTEMPLATED HEREBY OR THEREBY.

12.19 Counterparts. This Agreement may be executed simultaneously in two or more counterparts, each of which will be deemed an original, but all of which when taken together will constitute one agreement. Execution and delivery of this Agreement by exchange of electronically transmitted counterparts bearing the signature of a party will be equally as effective as delivery of a manually executed counterpart of such party.

[Signature pages to follow]

IN WITNESS WHEREOF the parties have hereunto caused this Agreement to be duly executed as of the date first above written.

IMPAKT HOLDINGS, LLC

By: /s/ Duke Punhong
Name: Duke Punhong
Title: Managing Director

GRAYCLIFF PRIVATE EQUITY PARTNERS III PARALLEL (A-1 BLOCKER) LLC

By: /s/Duke Punhong
Name: Duke Punhong
Title: Managing Director

GRAYCLIFF PRIVATE EQUITY PARTNERS III PARALLEL LP

By: /s/ Duke Punhong
Name: Duke Punhong
Title: Managing Director

IN WITNESS WHEREOF the parties have hereunto caused this Agreement to be duly executed as of the date first above written.

IRON MAN ACQUISITION INC.

By: /s/ Rob Mionis
Name: Rob Mionis
Title: President

IRON MAN MERGER SUB, LLC

By: /s/ Rob Mionis
Name: Rob Mionis
Title: Authorized Signatory

CELESTICA (USA) INC.

By: /s/ Rob Mionis
Name: Rob Mionis
Title: President

IN WITNESS WHEREOF the parties have hereunto caused this Agreement to be duly executed as of the date first above written.

Fortis Advisors LLC, solely in its capacity as the Holder Representative hereunder

By: /s/ Adam Lezack
Name: Adam Lezack
Title: Managing Director

Exhibit 4.32

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS DOCUMENT. THE CONFIDENTIAL PORTIONS HAVE BEEN REDACTED AND ARE DENOTED BY ASTERISKS IN BRACKETS [**]. THE CONFIDENTIAL PORTIONS HAVE BEEN SEPARATELY FILED WITH THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION.

FIRST AMENDMENT TO THE SECURITIES PURCHASE AND MERGER AGREEMENT

THIS AMENDMENT is made as of November 9, 2018 by and among Graycliff Private Equity Partners III Parallel LP (the "Blocker Seller"), Iron Man Acquisition Inc. ("Acquiror"), and Impakt Holdings, LLC (the "Company").

RECITALS:

A. The Company, the Blocker Company, the Blocker Seller, Celestica USA, Acquiror, Merger Sub and the Holder Representative entered into an Securities Purchase and Merger Agreement dated as of October 9, 2018 (the "Merger Agreement").

B. Pursuant to Section 12.14 of the Merger Agreement, this Amendment will be effective with the signatures of the Company, the Blocker Seller and the Acquiror.

C. Initially capitalized terms used but not defined herein shall have the respective meanings given to them in the Merger Agreement.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereby agree that the Merger Agreement is amended as follows:

1. The definitions of Special Escrow Amount, Special Escrow Fund, Special Escrow Tax Losses in Section 1.1 are deleted in their entirety and replaced with the following:

   "Special Escrow Amount" means a cash amount equal to $[**].

   "Special Escrow Fund" means an account in which the Special Escrow Amount will be deposited in four sub-accounts, consisting of separate sub-accounts of $[**] for Special Escrow Tax Losses, $[**] for any Damages in connection with the deductibility of the Bonus Agreement Payment (the "Tax Deductibility Escrow Account"), $[**] for Unsatisfied Current Income Taxes and unsatisfied Current Blocker Tax Liabilities, and $[**] for [**] Investigation Losses, to be held in trust with the Escrow Agent in accordance with this Agreement and the Escrow Agreement.

   "Special Escrow Tax Losses" means the Damages attributable to the Indemnified Taxes, if any, arising out of or resulting from: (i) income Taxes imposed by South Korea in respect of the transfer pricing of the Company and its Subsidiaries in Pre-Closing Tax Periods, (ii) income Taxes imposed by South Korea in respect of the sale and lease of the Songdo land

and buildings between A-1 Engineering Korea, Inc. and YKS Investments, LLC, (iii) income Taxes imposed by the United States in respect of compensation deductions claimed by A-1 Manufacturing, Inc., on its income Tax Returns for 2009-2015 Tax years, (iv) income Taxes imposed by the United States under Section 965 of the Code; (v) income Taxes imposed by the United States in respect of any failure to reconcile book income and Tax income of A-1 Machine Manufacturing, Inc., for the 2016 Tax year; and (vi) (A) the deduction for the Bonus Agreement Payment taken on the income Tax Return of A-1 Manufacturing, Inc., for its Tax year that includes Closing Date (as prepared and filed in accordance with Section 7.5(a) and Section 7.5(l)) being lower than the deduction utilized in the calculation of Closing Date Net Working Capital, as finally determined, and (B) any additional income Taxes imposed as a result of the disallowance of all or any part of the compensation deduction for the portion of the Bonus Agreement Payment that is payable upon the Closing and taken on the income Tax Return of A-1 Manufacturing, Inc., for its Tax year that includes the Closing Date.

2. Section 2.5(b)(vii) shall be deleted in its entirety and a new Section 2.5(b)(vii) and Section 2.5(b)(viii) are added as follows:

   (vii) the amount equal to the Closing Consideration, minus the amount of the Phantom Unit Cash Payment, minus the portion of the Bonus Agreement Payment that is payable upon Closing, and minus the portion of the Closing Consideration attributable to the Blocker Seller (as calculated pursuant to Section 2.4(c)), to the Paying Agent; and

   (viii) the amount equal to the portion of the Closing Consideration attributable to the Blocker Seller (as calculated pursuant to Section 2.4(c)), to the Blocker Seller at the account designated in writing by the Holder Representative.

3. Section 2.5(c)(ii) of the Merger Agreement is deleted in its entirety and replaced with the words “Intentionally deleted”.

4. Section 9.3(b) of the Merger Agreement is amended by adding the following words after the words “(i) under Section 9.2(a)(iv) and Section 3.16 in respect of Special Escrow Tax Losses shall not exceed the amount contained in the sub-account of the Special Escrow Fund for Special Escrow Tax Losses”:

   “other than Damages pursuant to part (vi) of the definition of Special Escrow Tax Losses, in which case such aggregate liability shall not exceed the amount contained in the sub-account of the Special Escrow Fund for Special Escrow Tax Losses plus the amount contained in the sub-account of the Special Escrow Fund for Damages in connection with the deductibility of the Bonus Agreement Payment”

5. Section 9.3(b) of the Merger Agreement is further amended by adding the following words after the words: “(x) Special Escrow Tax Losses shall be the sub-account of the Special Escrow Fund for Special Tax Losses”:

", other than with respect to Damages pursuant to part (vi) of the definition of Special Escrow Tax Losses, which shall be the sub-account of the Special Escrow Fund for Special Escrow Tax Losses plus the sub-account of the Special Escrow Fund for Damages in connection with the deductibility of the Bonus Agreement Payment"

6. Section 9.3(b) of the Merger Agreement is further amended by adding the following words after the words: "(y) Unsatisfied Current Income Taxes shall be the sub-account of the Special Escrow Fund for Unsatisfied Current Income Taxes":

", other than with respect to Damages pursuant to part (vi)(A) of the definition of Special Escrow Tax Losses, which shall be the sub-account of the Special Escrow Fund for Special Escrow Tax Losses plus the sub-account of the Special Escrow Fund for Losses in connection with the deductibility of the Bonus Agreement Payment"

7. Section 7.5(l) of the Merger Agreement is deleted in its entirety and replaced with the following:

> "Notwithstanding anything to the contrary, A-1 Machine Manufacturing, Inc. shall claim a deduction for the portion of the Bonus Agreement Payment payable upon Closing on its income Tax Returns for its Tax year that includes the Closing Date."

8. Annex M – Other Adjustment Items is amended to delete the following text:

Amount, if any, of VAT refund receivable for time periods up to Closing not already identified as a Special Receivable	$66,149

9. Annex N – Special Receivable Amounts is amended to replace the text of the second bullet point with the following wording: "Value Added Tax refunds received by A-1 Engineering Korea, Inc. with respect to sales made prior to Closing".

10. In Section 2.7(d), the words "(ii) if the Adjustment Amount is a negative number, (A) Acquiror and the Holder Representative shall execute joint written instructions to the Escrow Agent instructing the Escrow Agent to pay to Acquiror out of the Adjustment Escrow Fund an amount equal to the absolute value of the Adjustment Amount (as finally determined) (not to exceed the amount in the Adjustment Escrow Fund), together with the interest earned thereon earned" are deleted and replaced with:

"(ii) if the Adjustment Amount is a negative number, (A) Acquiror and the Holder Representative shall execute joint written instructions to the Escrow Agent instructing the Escrow Agent to pay to Acquiror out of the Adjustment Escrow Fund or, in respect amounts related to Tax Liabilities in connection with the Phantom Unit Cash Payments, the Tax Deductibility Escrow Account, together with the interest earned thereon, an amount equal to the absolute value of the Adjustment Amount (as finally determined), which amount shall not exceed the amount in the Adjustment Escrow Fund except to the extent that the amount relates to Tax Liabilities in connection with the Phantom Unit Cash Payments, in which case

the amount shall not exceed the amount in the Adjustment Escrow Fund plus the amount in the Tax Deductibility Escrow Account"

11. Except as provided in this Amendment, this Amendment shall not amend or modify any other provision of the Merger Agreement

12. This Agreement shall be governed by and construed and enforced in accordance with the internal laws (both substantive and procedural), and not the laws of conflicts, of the State of Delaware.

13. This Amendment shall be binding upon and shall enure to the benefit of and be enforceable by each of the parties hereto and each of their successors and permitted assigns.

14. This Amendment may be executed in one or more counterparts (including by facsimile or other electronic means), all of which shall be considered one and the same agreement and shall become effective when one or more such counterparts have been signed by each of the parties hereto and delivered to the other parties hereto.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties have caused this Amendment to be signed as of the date first above written.

IMPAKT HOLDINGS, LLC

By: /s/ Kirk Johnson
Name: Kirk Johnson
Title: CFO

IRON MAN ACQUISITION, INC.

By: /s/ Rob Mionis
Name: Rob Mionis
Title: President

GRAYCLIFF PRIVATE EQUITY PARTNERS III PARALLEL LP

By: /s/ Duke Punhong
Name: Duke Punhong
Title: Managing Director

Exhibit 8.1

Subsidiaries of Registrant

Celestica Cayman Holdings 1 Limited, a Cayman Islands corporation;

Celestica Cayman Holdings 9 Limited, a Cayman Islands corporation;

Celestica (Dongguan-SSL) Technology Limited, a China corporation;

Celestica Holdings Pte Limited, a Singapore corporation;

Celestica Hong Kong Limited, a Hong Kong corporation;

Celestica LLC, a Delaware, U.S. limited liability company;

Celestica (Suzhou) Technology Co. Ltd, a China corporation;

Celestica (Thailand) Limited, a Thailand corporation;

Celestica (USA) Inc., a Delaware, U.S. corporation;

Impakt Holdings LLC, a Delaware, U.S. limited liability company; and

2480333 Ontario Inc., an Ontario, Canada corporation.

Exhibit 12.1

CERTIFICATION

I, Robert A. Mionis, certify that:

1. I have reviewed this annual report on Form 20-F of Celestica Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: March 11, 2019

/s/ Robert A. Mionis

Robert A. Mionis

Chief Executive Officer

Exhibit 12.2

CERTIFICATION

I, Mandeep Chawla, certify that:

1. I have reviewed this annual report on Form 20-F of Celestica Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: March 11, 2019

/s/ Mandeep Chawla

Mandeep Chawla

Chief Financial Officer

Exhibit 13.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report of Celestica Inc. (the "Company") on Form 20-F for the period ended December 31, 2018, as furnished to the Securities and Exchange Commission on the date hereof (the "Report"), each of Robert A. Mionis, as Chief Executive Officer of the Company, and Mandeep Chawla, as Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

March 11, 2019

/s/ Robert A. Mionis

Robert A. Mionis

Chief Executive Officer

March 11, 2019

/s/ Mandeep Chawla

Mandeep Chawla

Chief Financial Officer

A signed original of this written statement has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 15.1

KPMG LLP
Bay Adelaide Centre
Suite 4600
333 Bay Street
Toronto, ON M5H 2S5
Tel 416-777-8500
Fax 416-777-3913
www.kpmg.ca

Consent of Independent Registered Public Accounting Firm

The Board of Directors

Celestica Inc.

We consent to the incorporation by reference in the registration statements on *Form S-8 (No. 333-113591, 333-88210, 333-71126, 333-66726, 333-63112 and 333-9500)* and on *Form F-3ASR (No. 333-221144)* of Celestica Inc. of our reports dated March 7, 2019, with respect to the consolidated balance sheets of Celestica Inc. as of December 31, 2018 and December 31, 2017, and the related consolidated statements of operations, comprehensive income, changes in equity and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the "consolidated financial statements"), and the effectiveness of internal control over financial reporting as of December 31, 2018, which reports appear in the annual report on Form 20-F of Celestica Inc. for the fiscal year ended December 31, 2018.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants
March 11, 2019
Toronto, Canada