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.

Toronto, Canada
March 7, 2019

/s/ KPMG LLP
Chartered Professional Accountants,
Licensed Public Accountants

We have served as the Company's auditor since 1997.

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.

(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	—

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.

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

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

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

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

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

	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

$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

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.

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.

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).

(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.

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

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).

	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.

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.

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
Current income tax expense:	(restated)	(restated)	
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)

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).

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

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

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

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.

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.

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

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	

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%.

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.