Item 5. Operating and Financial Review and Prospects

CELESTICA INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

FOR THE YEAR ENDED DECEMBER 31, 2016

The following Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) should be read in conjunction with our 2016 audited consolidated financial statements, which we prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB). Unless otherwise noted, all dollar amounts are expressed in U.S. dollars. The information in this discussion is provided as of February 15, 2017 unless we indicate otherwise.

Certain statements contained in this MD&A constitute forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933, as amended, and Section 21E of the U.S. Securities Exchange Act of 1934, as amended (U.S. Exchange Act), and contain forward-looking information within the meaning of Canadian securities laws. Such forward-looking information includes, without limitation, statements related to: our future growth; trends in the electronics manufacturing services (EMS) industry; our anticipated financial and/or operational results; the impact of acquisitions and program wins or losses on our financial results and working capital requirements; anticipated expenses, restructuring actions and charges, and capital expenditures, including the anticipated timing thereof, and our ability to fund and the method of funding these costs, capital expenditures and other anticipated working capital requirements; the anticipated repatriation of undistributed earnings from foreign subsidiaries; the impact of tax and litigation outcomes; our cash flows, financial targets and priorities; changes in our mix of revenue by end market; our ability to diversify and grow our customer base and develop new capabilities; the effect of the pace of technological changes, customer outsourcing and program transfers, and the global economic environment on customer demand; the possibility of future impairments of property, plant and equipment, goodwill or intangible assets; the timing and extent of the expected recovery of cash advances made to the Solar Supplier (defined below); the anticipated termination and settlement of our solar equipment leases; changes in the composition of our end markets commencing with the period ending March 31, 2017, the impact of the Term Loan (defined below) on our liquidity, future operations and financial condition; the timing and terms of the sale of our real property in Toronto and related transactions, including the expected lease of our corporate head office (collectively, the "Toronto Real Property Transactions"); if the Toronto Real Property Transactions are completed, our ability to secure on commercially acceptable terms an alternate site for our existing Toronto manufacturing operations and the transition costs for such expected relocation; the impact of the June 2016 referendum by British voters advising for the exit of the United Kingdom from the European Union (Brexit) and the results of the recent U.S. presidential election on the economy, financial markets, currency exchange rates and potentially our business; the expected impact of the loss of a consumer end-market customer; the timing of an anticipated program transfer to us; expected prolonged adverse market conditions in the solar industry; and the impact of the acquisition of the assets of Karel (defined below). Such forward-looking statements may, without limitation, be preceded by, followed by, or include words such as "believes", "expects", "anticipates", "estimates", "intends", "plans", "continues", "project", "potential", "possible", "contemplate", "seek", or similar expressions, or may employ such future or conditional verbs as "may", "might", "will", "could", "should" or "would", or may otherwise be indicated as forward-looking statements by grammatical construction, phrasing or context. For those statements, we claim the protection of the safe harbor for forward-looking statements contained in the U.S. Private Securities Litigation Reform Act of 1995 and applicable Canadian securities laws.

Forward-looking statements are provided for the purpose of assisting readers in understanding management's current expectations and plans relating to the future. Readers are cautioned that such information may not be appropriate for other purposes. Forward-looking statements are not guarantees of future performance and are subject to risks that could cause actual results to differ materially from conclusions, forecasts or projections expressed in such statements, including, among others, risks related to: our customers' ability to compete and succeed in the marketplace with the services we provide and the products we manufacture; changes in our mix of customers and/or the types of products or services we provide; price and other competitive factors generally affecting, and the highly competitive nature of, the EMS industry; managing our operations and our working capital performance during *uncertain market and economic conditions; responding to changes in demand, rapidly evolving and changing technologies, and changes in our customers' business and outsourcing strategies, including the insourcing of programs; customer concentration and the challenges of diversifying our customer base and replacing revenue from completed or lost programs, or customer disengagements; customer, competitor and/or supplier consolidation; changing commodity, material and component costs, as well as labor costs and conditions; disruptions to our operations, or those of our customers, component suppliers and/or logistics partners, including as a result of global or local events outside our control, including as a result of Brexit and/or significant developments stemming from the recent U.S. presidential election; retaining or expanding our business due to execution issues relating to the ramping of new or existing programs or new offerings; the incurrence of future impairment charges; recruiting or retaining skilled talent; transitions associated with our Global Business Services (GBS) initiative, our Organizational Design (OD) initiative, and/or other changes to our company's operating model; current or future litigation, governmental actions and/or changes in legislation; the operating performance and financial results of our semiconductor business; the timing and extent of recoveries from the sale of inventory and manufacturing equipment relating to our exit from the solar panel manufacturing business, and our ability to recover amounts outstanding from the Solar Supplier; delays in the delivery and availability of components, services and materials, including from suppliers upon which we are dependent for certain components; non-performance by counterparties; our financial exposure to foreign currency volatility, including fluctuations that may result from Brexit and/or the recent U.S. presidential election; our dependence on industries affected by rapid technological change; the variability of revenue and operating results; managing our global operations and supply chain; increasing income taxes, tax audits, and challenges of defending our tax positions, and obtaining, renewing or meeting the conditions of tax incentives and credits; completing restructuring actions, including achieving the anticipated benefits therefrom, and integrating any acquisitions; defects or deficiencies in our products, services or designs; computer viruses, malware, hacking attempts or outages that may disrupt our operations; any failure to adequately protect our intellectual property or the intellectual property of others; compliance with applicable laws, regulations and social responsibility initiatives; our having sufficient financial resources and working capital to fund currently anticipated financial obligations and to pursue desirable business opportunities; the potential that conditions to closing the Toronto Real Property Transactions may not be satisfied on a timely basis or at all; and if the Toronto Real Property Transactions are completed, our ability to secure on commercially acceptable terms an alternate site for our existing Toronto manufacturing operations, and the costs, timing and/or execution of such relocation proving to be other than anticipated. The foregoing and other material risks and uncertainties are discussed in our public filings at www.sedar.com and www.sec.gov, including in this MD&A, and our Annual Report on Form 20-F filed with, and subsequent reports on Form 6-K furnished to, the U.S. Securities and Exchange Commission (SEC), and as applicable, the Canadian Securities Administrators.*

Our forward-looking statements are based on various assumptions, many of which involve factors that are beyond our control. Our material assumptions include those related to the following: production schedules from our customers, which generally range from 30 days to 90 days and can fluctuate significantly in terms of volume and mix of products or services; the timing and execution of, and investments associated with, ramping new business; the success in the marketplace of our customers' products; the pace of change in our traditional end markets and our ability to retain programs and customers; the stability of general economic and market conditions, currency exchange rates, and interest rates; our pricing, the competitive environment and contract terms and conditions; supplier performance, pricing and terms; compliance by third parties with their contractual obligations, the accuracy of their representations and warranties, and the performance of their covenants; the costs and availability of components, materials, services, plant and capital equipment, labor, energy and transportation; operational and financial matters including the extent, timing and costs of replacing revenue from completed or lost programs, or customer disengagements; technological developments; the timing and extent of recoveries from the sale of inventory and manufacturing equipment related to our exit from the solar panel manufacturing business and our ability to recover amounts outstanding from the Solar Supplier; the timing, execution, and effect of restructuring actions; our having sufficient financial resources and working capital to fund currently anticipated financial obligations and to pursue desirable business opportunities; and our ability to diversify our customer base and develop new capabilities. While management believes these assumptions to be reasonable under the current circumstances, they may prove to be inaccurate. Forward-looking statements speak only as of the date on which they are made, and we disclaim any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

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

Overview

What Celestica does:

We deliver innovative supply chain solutions globally to customers in the Communications (comprised of enterprise communications and telecommunications), Consumer, Diversified (comprised of aerospace and defense, industrial, healthcare, smart energy, and semiconductor equipment), Servers, and Storage end markets. Commencing with the quarter ending March 31, 2017, we will combine our Servers and Storage end markets into a single "Enterprise" end market and add our Consumer business to our Diversified end market for reporting purposes. See "Operating Results — Revenue" below for further details. We believe our services and solutions create value for our customers by accelerating their time-to-market, and by providing higher quality, lower cost and reduced cycle times in our customers' supply chains, resulting in lower total cost of ownership, greater flexibility, higher return on invested capital and improved competitive advantage for our customers in their respective markets.

Our global headquarters is located in Toronto, Canada. We operate a network of sites in various geographies with specialized end-to-end supply chain capabilities tailored to meet specific market and customer product lifecycle requirements. In an effort to drive speed, quality and flexibility for our customers, we execute our business in centers of excellence strategically located in North America, Europe and Asia. We strive to align our preferred suppliers in close proximity to these centers of excellence to increase the speed and flexibility of our supply chain, deliver higher quality products, and reduce time to market.

We offer a range of services to our customers, including design and development (such as our Joint Design and Manufacturing (JDM) offering, which consists of developing design solutions in collaboration with customers, as well as managing aspects of the supply chain and manufacturing), engineering services, supply chain management, new product introduction, component sourcing, electronics manufacturing, assembly and test, complex mechanical assembly, systems integration, precision machining, order fulfillment, logistics and after-market repair and return services.

Although we supply products and services to over 100 customers, we depend upon a small number of customers for a substantial portion of our revenue. In the aggregate, our top 10 customers represented 68% of revenue for 2016 (2015 — 67%).

The products and services we provide serve a wide variety of applications, including: servers; networking and telecommunications equipment; storage systems; optical equipment; aerospace and defense electronics; healthcare products and applications; semiconductor equipment; and a range of industrial and alternative energy products.

In order to increase the value we deliver to our customers, we continue to make investments in people, value-added service offerings, new capabilities, capacity, technology, IT systems, software and tools. We continuously work to improve our productivity, quality, delivery performance and flexibility in our efforts to be recognized as one of the leading companies in the EMS industry. In connection therewith, we have commenced implementation of a Global Business Services (GBS) initiative and an Organizational Design (OD) initiative. Our GBS initiative focuses on integrating, standardizing and optimizing end-to-end business processes. Our OD initiative involves redesigning our organizational structure, with the goal of increasing the overall effectiveness of our organization by improving internal alignment, reducing complexity and increasing our speed to outcome. Further to these goals, we continued to make investments during 2016 in automation and the connected factory in order to streamline our processes and reduce costs.

Our current priorities include (i) evolving and diversifying our customer and product portfolios in order to drive consistent revenue growth and strong operating margins, (ii) improving the overall profitability of our diversified end market businesses, while continuing to make investments therein, (iii) continuing to generate strong annual free cash flow and adjusted return on invested capital ("adjusted ROIC") and (iv) continuing to improve our execution by driving increased productivity and simplification throughout our organization. We believe that continued investments in these areas support our long-term growth strategy, and will strengthen our competitive position, enhance customer satisfaction, and increase long-term shareholder value. We will continue to focus on expanding our revenue base in higher-value-added services, such as design and development, engineering, and after-market services, and growing our business with new and existing customers. We intend to continue to focus on expanding our business beyond our traditional end markets, which today still account for a substantial portion of our revenue, including by growing our diversified business and adding new capabilities, organically and/or potentially through strategic acquisitions.

Operating margin, adjusted ROIC and free cash flow are non-IFRS measures without standardized meanings and may not be comparable to similar measures presented by other companies. See "Non-IFRS measures" below for a discussion of the non-IFRS measures included herein, and a reconciliation of our non-IFRS measures to comparable IFRS measures.

Our financial results vary from period to period, and are impacted by factors such as changing demand for our customers' products in various end markets, our revenue and customer mix, changes in our customers' supply chain strategies, the size and timing of customer program wins by end market, the costs, terms, timing and execution of ramping new business, program completions, losses or customer disengagements, the margins achieved and capital deployed for the services we provide to customers, and other factors discussed below.

Overview of business environment:

The EMS industry is highly competitive, with multiple global EMS providers competing for customers and programs. Although the industry is characterized by a large revenue base and new business opportunities, demand can be volatile from period to period, and aggressive pricing is a common business dynamic. Capacity utilization, customer mix and the types of products and services we provide are important factors affecting our financial performance. The number and location of qualified personnel, manufacturing capacity, and the mix of business through that capacity are vital considerations for EMS providers. The EMS industry is also working capital intensive. As a result, we believe that adjusted ROIC (discussed in "Non-IFRS measures" below), which is primarily based on non-IFRS operating earnings and investments in working capital and equipment, is an important metric for measuring an EMS provider's financial performance.

EMS companies provide a range of services to a variety of customers and end markets. Demand patterns are volatile, making customer revenue and mix, and revenue by end market difficult to forecast. Product lifecycles in the markets we serve, production lead times required by our customers, rapid shifts in technology, model obsolescence, commoditization of certain products, the emergence of new business models, shifting patterns of demand, such as the shift from traditional network infrastructures to highly virtualized and cloud-based environments, as well as the proliferation of software-defined networks and software-defined storage, increased competition, oversupply of products and pricing pressures, and the volatility of the economy, are all contributing factors. The global economy and financial markets may negatively impact end market demand and the operations of EMS providers, including Celestica. Uncertainty in the global economy may impact current and future demand for our customers' products and services. We continue to monitor the dynamics and impacts of the global economic environment and work to manage our priorities, costs and resources to anticipate and prepare for any required changes.

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

We have significant suppliers that are important to our sourcing activities. If a key supplier (or any company within our supply chain) experiences financial difficulties, this may affect its ability to supply us with materials, components or services, which could halt or delay the production of a customer's product, and/or have a material adverse impact on our operations, financial results and customer relationships, and in the case of the Solar Supplier (defined below), to pay amounts owing to us. In addition, our ability to collect our accounts receivable and future sales depends, in part, on the financial strength of our customers. If any of our customers have insufficient liquidity, we could encounter significant delays or defaults in payments owed to us by such customers, or we may extend our payment terms, which could adversely impact our short-term cash flows, financial condition and/or operating results. In addition, customer financial difficulties may result in order cancellations and higher than expected levels of inventory, which could in turn have a material adverse impact on our operating results and working capital performance. We may not be able to return or re-sell this inventory, or we may be required to hold the inventory for a period of time, any of which may result in our having to record additional reserves for the inventory if it becomes aged (see "Solar business" below). We also may be unable to recover all of the amounts owed to us by a customer, including amounts to cover unused inventory or capital investments we incurred to support that customer's business. Furthermore, if a customer bankruptcy occurs (which has recently occurred in the solar industry), our profitability may be adversely impacted by our failure to collect our accounts receivable in excess of our estimated allowance for uncollectible accounts or amounts insured. Additionally, our future revenues could be reduced by the loss of a customer due to bankruptcy. Our failure to collect accounts receivable and/or the loss of one or more major customers could have an adverse effect on our operating results, financial position and cash flows. We cannot reliably determine if and to what extent customers or suppliers may have financial difficulties, whether we will be required to adjust our prices or the amount we pay for materials and components, or face collection issues with customers, or if customer or supplier bankruptcies will occur.

Our business is also affected by customers who may shift production between EMS providers for a number of reasons, including pricing concessions, more favorable terms and conditions, their preference or need to consolidate their supply chain capacity or the number of supply chain partners, or consolidation among customers. Customers may also choose to increase the amount of business they outsource, insource previously outsourced business, or change the concentration or location of their EMS suppliers to better manage their supply continuity risk. These customer decisions may impact, among other items, our revenue and margins, the need for future restructuring, the level of capital expenditures and our cash flows.

Demand can be volatile across our end markets. Our revenue and margins are impacted by overall end market demand, our mix of programs, the timing, extent and pricing of new or follow-on business, including the costs, terms, timing and execution of ramping new business, and program completions, losses, or customer disengagements. Despite a dynamic demand environment, we remain committed to making the investments we believe are required to support our long-term objectives and to create shareholder value. These efforts include evolving and diversifying our customer and product portfolios to address changing needs, and broadening our businesses, including expanding our smart energy (including energy conversion, energy controls, storage and monitoring), aerospace and defense, healthcare, and industrial offerings, as well as expanding the breadth of our JDM offerings in the areas of storage, network switching and converged storage and servers. The costs of these investments and ramping activities may be significant and could negatively impact our margins in the short and medium term. Simultaneously, we intend to continue to manage our costs and resources to maximize our efficiency and productivity.

As we expand our business and open new sites, we may encounter difficulties that result in higher than expected costs associated with such activities. Potential difficulties related to such activities include our ability: to manage growth effectively; to maintain existing business relationships during periods of transition; to anticipate disruptions in our operations that may impact our ability to deliver to customers on time, produce quality products and ensure overall customer satisfaction; and to respond rapidly to changes in customer demand or volumes. We may also encounter difficulties in ramping and executing new programs. We may require significant investments to support these new programs, including increased working capital requirements, and may generate lower margins or losses during and/or following the ramp period. There can be no assurance that our increased investments will benefit us or result in business growth. As we pursue opportunities in new markets or technologies, we may encounter challenges due to our limited knowledge or experience in these areas. In addition, the success of new business models or programs depends on a number of factors including: understanding the new business or markets; timely and successful product development; market acceptance; the effective management of purchase commitments and inventory levels in line with anticipated demand; the development or acquisition of appropriate intellectual property and capital investments, to the extent required; the availability of materials in adequate quantities and at appropriate costs to meet anticipated demand; and the risk that new offerings may have quality or other defects in the early stages of introduction. Any of these factors could prevent us from realizing the anticipated benefits of growth in new markets or technologies, which could materially adversely affect our business and operating results. For example, the recent global oversupply of solar panels in the marketplace resulted in, among other things, unprecedented declines in the market pricing for solar panels and a slowdown in demand. These factors negatively impacted our solar panel manufacturing business commencing in the third quarter of 2016. As we expected the downturn in the solar panel market to be prolonged, and would continue to impact the future profitability of our solar panel manufacturing business, we made a decision in the fourth quarter of 2016 to exit this business. See "Solar business" below.

The June 2016 referendum by British voters (Brexit), advising for the exit of the United Kingdom (U.K.) from the European Union (EU), led to, among other things, volatility in currency exchange rates that resulted in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. Given the lack of comparable precedent, it is unclear what financial, trade and legal implications the withdrawal of the U.K. from the EU would have (if it occurs) and how such withdrawal would affect us, our customers and their demand for our services. We cannot predict changes in currency exchange rates, the impact of exchange rate changes on our operating results, nor the degree to which we will be able to manage the impact of currency exchange rate changes, and any of these effects of Brexit, among others, could materially adversely affect our business, results of operations and financial condition.

The outcome of the recent U.S. presidential election, as well as the Republican Party maintaining control of both the House of Representatives and Senate of the United States, has created uncertainty with respect to, among other things, existing and proposed trade agreements, free trade generally, and potential significant increases on tariffs on goods imported into the U.S., particularly from Mexico, Canada and China. We currently ship a significant portion of our worldwide production into the U.S. from other countries. Changes to U.S. laws or policies (as described above or otherwise) may impact the supply chain strategies of, as well as the pace of outsourcing by, U.S. customers in the future, including the possibility of such customers insourcing programs that were previously outsourced (including to companies like ours). It is unknown at this time to what extent new laws will be passed or pending or new regulatory proposals will be adopted, if any, or the effect that such passage or adoption may have on the economy and/or our business. However, changes in U.S. social, political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, clean energy, the healthcare industry, development and investment in the jurisdictions in which we, and/or our customers or suppliers operate, could materially adversely affect our business, results of operations and financial condition.

Recent developments:

Resolution of tax matters with the Canadian tax authorities

In the second half of 2016, the Canadian tax authorities withdrew their position related to certain transfer pricing matters involving one of our Canadian subsidiaries and reversed their adjustments for the years 2001 through 2004. In connection therewith, in the second half of 2016, we recorded aggregate income tax recoveries of $45 million Canadian dollars (approximately $34 million at the exchange rates at the time of recording) to reverse provisions previously recorded for tax uncertainties related to transfer pricing, as well as aggregate refund interest income of approximately $19 million Canadian dollars (approximately $14 million at the exchange rates at the time of recording) for cash held on account with the tax authorities in connection with such matters.

As previously disclosed, Canadian tax authorities had also taken an unfavorable position relating to the deductibility of certain Canadian interest amounts, which we appealed. In the fourth quarter of 2016, the Canadian tax authorities issued revised reassessments. As the net impact of the revised reassessments was nominal, we accepted them and the matter was closed in the fourth quarter of 2016.

As a result of the resolution of the above tax matters, we received $70 million Canadian dollars (approximately $52 million at year-end exchange rates) during the fourth quarter of 2016, representing the refund of cash previously deposited on account with the Canadian tax authorities and refund interest income as described above. We also received $6 million Canadian dollars (approximately $4 million at year-end exchange rates) in January 2017. The aggregate amount of cash refunds received represents the return of all deposits and refund interest in respect of the Canadian tax matters. See further discussions in "Operating Results — Income taxes" below.

Updates on diversified end markets

Solar business

Revenue from our solar panel business for 2016 represented 3% of our total revenue (2015 — 2%). To support new programs and anticipated growth in global demand for solar energy, we invested in plant and equipment, and expanded our solar panel manufacturing into Asia during 2015, including transitioning a portion of our solar operations from North America and executing five-year lease agreements, pursuant to which we leased $19.3 million of manufacturing equipment for our solar operations in Asia. We also made cash advances to an Asia-based solar cell supplier (Solar Supplier) as part of an agreement we executed in the first quarter of 2015 to help secure our solar cell supply. As of December 31, 2016, advances of $12.5 million remain recoverable from this supplier.

As a result of the transition of a portion of our solar panel manufacturing to Asia, our revenue from this business was not significant in 2015. In addition, we incurred higher than expected costs in this business in 2015, primarily due to ramping delays and operational inefficiencies at our new solar site in Asia. Although we had since completed the transition and resolved these operational challenges, and revenue from our solar panel manufacturing business during the first half of 2016 increased compared to the prior year period, recent negative market factors impacted both demand and pricing in the solar panel market, which in turn negatively impacted our solar panel manufacturing business. Specifically, a global oversupply of solar panels and the related slowing of demand adversely impacted the market price of solar panels. In connection therewith, we experienced unprecedented decreases in the market price for our solar panels commencing in the third quarter of 2016, with the price of panels declining by more than 25% between July and September of 2016. Given this market instability and price volatility, certain of our solar customers deferred or cancelled orders. As a result of this pricing pressure and lower demand, our operating results for this business were negatively impacted in the third quarter of 2016, including as a result of the provisions we recorded, primarily to write down our solar panel inventory to the lower market prices. See “Summary of 2016” and “Operating Results — Gross profit” below. We continued to experience pricing and demand pressures into the fourth quarter of 2016, and expected these pressures to be prolonged. Because sustained market price decreases, continued demand softness, and/or failure to realize future revenue at an appropriate profit margin would negatively impact our operating results, we made a decision in the fourth quarter of 2016 to exit the solar panel manufacturing business. In connection therewith, we recorded restructuring charges totaling approximately $21 million in the fourth quarter of 2016 to close our solar panel manufacturing operations at our two locations, including $19 million in impairment charges to write down the carrying value of our solar panel manufacturing equipment to recoverable amounts. A substantial portion of our solar panel manufacturing equipment is subject to finance leases, pursuant to which we had outstanding obligations of $15.3 million as of December 31, 2016. We intend to terminate these leases upon disposition of the equipment thereunder and settle the remaining lease obligations in 2017. See “Other charges” below. In addition, although the agreement with the Solar Supplier was also terminated, this termination is not anticipated to impact the recoverability of our outstanding cash advances to this Solar Supplier, which are anticipated to be repaid during 2017.

Although we are exiting the solar panel manufacturing business, we remain committed to growing the other areas within our smart energy market portfolio, which includes power inverters, energy storage products, smart meters and other electronic componentry.

Semiconductor business

Revenue from our semiconductor business for 2016 represented 6% (2015 — 6%) of our total revenue. The semiconductor market has historically been cyclical and impacted by, among other things, significant and often rapid changes in product demand, changes in customer requirements for new manufacturing capacity and technology transitions, significant expenditures for capital equipment and product development, and general economic conditions. Our semiconductor business has previously been negatively impacted by volatility in customer demand, the cost of our investments, operational inefficiencies, commercial challenges associated with a particular customer, and the costs, terms, timing and challenges of ramping new sites and programs, resulting in operating losses, impairment losses and restructuring charges. Although our revenue and operating results in our semiconductor business in 2016 have improved as compared to 2015, demand volatility in this market, as well as the challenges of ramping new programs, may in future periods adversely impact the revenue and profitability of this business, as well as our financial position and cash flows. Any failure to realize future revenues at an appropriate profit margin could result in additional restructuring actions and/or impairment losses in future periods for this business.

Asset purchase agreement

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 million. 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. This acquisition is intended to support our strategy to accelerate our growth in the aerospace and defense market through the addition of value-add capabilities and services. This acquisition is not expected to significantly impact our liquidity, results of operations or financial condition in the near term.

Program Transfer

From time-to-time, customers transfer programs between EMS providers or outsource their operations. In the fourth quarter of 2016, we entered into a long-term agreement with a customer pursuant to which certain of its manufacturing operations will be outsourced to us. Pursuant to this agreement, we will manage their operations from the customer's location and assume the workforce assigned thereto. In connection therewith, we also made a commitment to purchase approximately $30 million of inventory. This program transfer is currently anticipated to occur in the third quarter of 2017. See "Program transfer purchase obligation" in the contractual obligations table below.

Summary of 2016

Our consolidated financial statements have been prepared in accordance with IFRS as issued by the IASB and accounting policies we adopted in accordance with IFRS. These consolidated financial statements reflect all adjustments that are, in the opinion of management, necessary to present fairly our financial position as at December 31, 2016 and the financial performance, comprehensive income and cash flows for the year ended December 31, 2016. See "Critical Accounting Policies and Estimates" below.

The following table sets forth certain key operating results and financial information for the periods indicated (in millions, except per share amounts):

	Year ended December 31		
	2014	2015	2016
Revenue	$5,631.3	$5,639.2	$6,016.5
Gross profit	405.4	391.1	427.6
Selling, general and administrative expenses (SG&A)	210.3	207.5	211.1
Other charges	37.1	35.8	25.5
Net earnings	$ 108.2	$ 66.9	$ 136.3
Diluted earnings per share	$ 0.60	$ 0.42	$ 0.95

	December 31 2015	December 31 2016
Cash and cash equivalents	$ 545.3	$ 557.2
Borrowings under credit facility	262.5	227.5
Total assets	2,612.0	2,822.3

Revenue of $6.0 billion for 2016 increased 7% compared to 2015. Compared to 2015, revenue dollars in 2016 from our communications end market increased 12%, primarily driven by demand strength and new programs wins, revenue dollars from our diversified end market increased 11%, primarily due to new program ramps in our smart energy business (including new solar programs), and a program outsourced to us from one of our aerospace and defense customers in April 2015, and revenue dollars from our storage end market increased

2%, primarily driven by new programs from one customer, offset in part by softer demand in some of our legacy storage programs. Revenue dollars from our consumer end market (representing 2% of our total revenue for 2016) decreased 16% from the prior year, reflecting the previously disclosed completion of programs with one of our largest customers in that end market. Revenue dollars from our servers end market for 2016 decreased 11% compared to the prior year, primarily due to customer demand softness. Communications and diversified continued to be our largest end markets, representing 42% and 30%, respectively, of total revenue for 2016. Also see "Overview — Recent developments" above).

Gross profit of $427.6 million (7.1% of total revenue) for 2016 increased 9% compared to $391.1 million (6.9% of total revenue) for 2015, primarily driven by higher revenue levels and margin improvements in our diversified end market, including in each of our semiconductor and solar businesses, partially offset by changes in program mix as some of our new programs contributed lower gross profit than past programs. Our solar margins improved compared to the prior year despite the higher provisions (accounting for approximately 15 basis points), primarily to write down the value of our solar panel inventory in the second half of 2016 to current market prices. SG&A for 2016 of $211.1 million increased compared to $207.5 million in 2015. Net earnings for 2016 of $136.3 million were $69.4 million higher compared to 2015, primarily due to higher gross profit, lower other charges (driven by $12 million of recoveries of damages related to a legal settlement in 2016) and a net benefit of approximately $32 million related to income taxes, comprised primarily of income tax recoveries and related refund interest income attributable to the resolution of certain previously disputed tax matters in Canada, offset in part by withholding taxes and income tax expense related to taxable foreign exchange. See "Operating Results — Income taxes" below for further details.

As a result of the recent volatility in the solar panel market, we made a decision in the fourth quarter of 2016 to exit the solar panel manufacturing business. In connection therewith, we recorded restructuring charges in the fourth quarter of 2016 to close our solar panel manufacturing operations at our two locations, including impairment charges to write down the carrying value of our solar panel manufacturing equipment to recoverable amounts. See "Operating Results — Other charges" below for further details). We also recorded inventory provisions, primarily in the third quarter of 2016, to write down our solar inventory to recoverable amounts as a charge through cost of sales. See "Overview — Recent developments" above.

Our cash and cash equivalents at December 31, 2016 were $557.2 million (December 31, 2015 — $545.3 million). Our cash provided by operating activities was $173.3 million for 2016 compared to $196.3 million for 2015, primarily due to higher working capital requirements in 2016 (discussed below) offset in part by the increase in net earnings for 2016 described above and the cash income tax refund of $52 million we received during the fourth quarter of 2016, representing the refund of cash previously deposited on account with the Canadian tax authorities and related interest income upon resolution of previously disputed tax matters. See "Operating Results — Income taxes" below for further details. At December 31, 2016, we had an aggregate of $227.5 million outstanding under our credit facility, including $212.5 million outstanding under the term loan thereunder (Term Loan) (December 31, 2015 — an aggregate of $262.5 million outstanding under our credit facility, including $237.5 million outstanding under the Term Loan), and $50.0 million of accounts receivable (A/R) were sold under our $250.0 million A/R sales facility and de-recognized from our accounts receivable balance (December 31, 2015 — $50.0 million of A/R sold). As of December 31, 2016, we also sold $51.4 million of A/R to a third-party bank (also de-recognized from our accounts receivable balance) under a customer's supplier financing program that we joined in the fourth quarter of 2016, to substantially offset the effect of extended payment terms required by such customer on our working capital for that period. See "Capital Requirements" below.

We have repurchased subordinate voting shares in the open market and otherwise for cancellation in recent years pursuant to normal course issuer bids (NCIBs), which allow us to repurchase a limited number of subordinate voting shares during a specified period, and from time to time pursuant to substantial issuer bids (SIBs). As part of the NCIB process, we have entered into Automatic Share Purchase Plans (ASPPs) with brokers, which allow such brokers to purchase our subordinate voting shares in the open market on our behalf, for cancellation under our NCIBs (including during any applicable trading blackout periods). In addition, we have entered into program share repurchases (PSRs) as part of the NCIB process, 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 determined based on a discount to the volume weighted-average market price of our subordinate voting shares during the term of the PSR, subject to certain terms and conditions. The subordinate voting shares repurchased under any PSR are cancelled upon completion of each PSR under the NCIB.

On February 22, 2016, the Toronto Stock Exchange ("TSX") accepted our notice to launch a new NCIB (2016 NCIB) which was amended in March 2016 to permit PSRs. The 2016 NCIB allowed us to repurchase, at our discretion, until the earlier of February 23, 2017 or the completion of purchases thereunder, up to approximately 10.5 million subordinate voting shares (representing approximately 7.3% of our total outstanding subordinate voting and multiple voting shares at the time of launch) in the open market or as otherwise permitted, subject to the normal terms and limitations of such bids. During 2016, we paid an aggregate of $34.3 million (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 at a weighted average price of $10.69 per share under a $30.0 million PSR funded in March 2016. In total, we repurchased and cancelled an aggregate of 3.2 million subordinate voting shares under the 2016 NCIB prior to its expiry in February 2017. The maximum number of subordinate voting shares we were permitted to repurchase for cancellation under the 2016 NCIB was reduced by 1.6 million subordinate voting shares we purchased in the open market during 2016 to satisfy obligations under our stock-based compensation plans.

As of December 31, 2015, we had $25.0 million outstanding under the revolving portion of our credit facility (Revolving Facility) and $237.5 million outstanding under the Term Loan. During the first quarter of 2016, we borrowed an additional $40.0 million under the Revolving Facility, partly to fund the PSR described above. During 2016, we repaid $50.0 million of the amount outstanding under the Revolving Facility and made four scheduled quarterly principal repayments totaling $25.0 million under the Term Loan. See "Liquidity and Capital Resources — Liquidity — Cash requirements" below.

Summary of 2015

Revenue of $5.6 billion for 2015 was flat compared to 2014. Compared to revenue from our end markets in 2014, revenue dollars from our storage end market in 2015 increased 5%, primarily due to new program wins, in part driven by our JDM offering, and revenue dollars from our diversified end market in 2015 increased 4%, primarily driven by new program wins, including the aerospace and defense program outsourced to us in April 2015, and improved demand in our semiconductor business. Revenue dollars from our consumer end market (representing 3% of our total revenue for 2015) decreased 33% compared to 2014, primarily due to program completions in the second half of 2014, as we continued to de-emphasize certain lower-margin business in our consumer portfolio. Revenue dollars from our communications end market and servers end market in 2015 were relatively flat compared to 2014. Communications and diversified were our largest end markets, representing 40% and 29%, respectively, of total revenue for 2015.

Gross profit of $391.1 million (6.9% of total revenue) for 2015 decreased 4% compared to $405.4 million (7.2% of total revenue) for 2014, primarily due to higher than expected costs of ramping new programs, particularly the ramping of our new solar panel manufacturing business in Asia (discussed above). This, combined with the impact of changes in program mix and losses at our sites in Japan and Spain (see "Operating Results — Other charges" below), more than offset the gross profit improvements we made in our semiconductor business during 2015. SG&A for 2015 of $207.5 million decreased slightly compared to $210.3 million for 2014. Other charges of $35.8 million for 2015 were comprised primarily of $23.9 million in restructuring charges and $12.2 million in non-cash impairment charges on property, plant and equipment pertaining to our sites in Japan and Spain (see "Other charges" below). Other charges of $37.1 million for 2014 were comprised primarily of our non-cash goodwill impairment charges related to our semiconductor business. Net earnings for 2015 of $66.9 million were $41.3 million lower compared to 2014, primarily due to higher income tax expense in 2015, in part due to higher taxable foreign exchange impacts in 2015 (see "Operating Results — Income taxes" below), and increased stock-based compensation expense (see "Operating Results — Stock-based compensation" below).

Our cash and cash equivalents at December 31, 2015 were $545.3 million (December 31, 2014 — $565.0 million). Our cash provided by operating activities for 2015 decreased to $196.3 million compared to $241.5 million for 2014, primarily due to an increase in inventory purchases to support new programs, as well as higher cash restructuring charges in 2015. We also advanced $26.5 million in cash to the Solar Supplier during 2015 (see "Liquidity and Capital Resources — Liquidity" below). At December 31, 2015, we had an aggregate of $262.5 million outstanding (December 31, 2014 — no amounts outstanding) under our credit facility (including the Term Loan), and $50.0 million of accounts receivable (A/R) were sold under our A/R sales facility and de-recognized from our accounts receivable balance (December 31, 2014 — $50.0 million of A/R).

On September 9, 2014, the TSX accepted our notice to launch an NCIB (the 2014 NCIB), which allowed us to repurchase, at our discretion, until the earlier of September 10, 2015 or the completion of purchases thereunder, up to approximately 10.3 million subordinate voting shares (representing approximately 5.8% of our total multiple voting shares and subordinate voting shares outstanding at the time of launch) in the open market or as otherwise permitted, subject to the normal terms and limitations of such bids. On January 28, 2015, we completed a $50.0 million PSR (which we funded in December 2014), pursuant to which we repurchased and canceled 4.4 million subordinate voting shares at a weighted average price of $11.38 per share. Subsequent to the completion of this PSR, we paid $19.8 million (including transaction fees) to repurchase and cancel an additional 1.7 million subordinate voting shares under the 2014 NCIB (prior to its expiry in September 2015) at a weighted average price of $11.66 per share. We repurchased and cancelled an aggregate of 9.0 million subordinate voting shares during the term of the 2014 NCIB. The maximum number of subordinate voting shares we were permitted to repurchase for cancellation under the 2014 NCIB was reduced by 0.5 million subordinate voting shares we purchased in the open market during the term of the 2014 NCIB to satisfy obligations under our stock-based compensation plans.

In the second quarter of 2015, we launched and completed a $350.0 million SIB, pursuant to which we repurchased and cancelled approximately 26.3 million subordinate voting shares at a price of $13.30 per share, representing approximately 15.5% of our total multiple voting shares and subordinate voting shares issued and outstanding prior to its completion. We funded the share repurchases in June 2015 using the proceeds of the $250.0 million Term Loan, $25.0 million drawn on our revolving credit facility, and $75.0 million of cash on hand. We made two scheduled quarterly principal repayments totaling $12.5 million under the Term Loan during the second half of 2015. See "Liquidity and Capital Resources — Liquidity — Cash requirements" below.

Other performance indicators:

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

	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16	3Q16	4Q16
Cash cycle days:								
Days in A/R	47	42	43	40	45	43	43	42
Days in inventory	56	54	58	53	60	59	58	55
Days in A/P	(56)	(54)	(55)	(51)	(58)	(55)	(55)	(53)
Cash cycle days	47	42	46	42	47	47	46	44
Inventory turns	6.6x	6.7x	6.3x	6.9x	6.1x	6.2x	6.3x	6.6x

	2015				2016			
	March 31	June 30	September 30	December 31	March 31	June 30	September 30	December 31[(i)]
Amount of A/R sold (in millions)	$50.0	$55.0	$50.0	$50.0	$60.0	$60.0	$50.0	$101.4

(i) Includes $51.4 million of A/R sold to a third party bank in connection with a customer's supplier financing program that we joined in the fourth quarter of 2016. The successor company in an August 2016 acquisition of one of our significant customers (Successor Customer) has required longer than historical payment terms commencing with orders after October 1, 2016. In connection therewith, we registered for the Successor Customer's supplier financing program pursuant to which participating suppliers may sell A/R from the Successor Customer to a third-party bank on an uncommitted basis in order to receive earlier payment. We utilized this program to substantially offset the effect of the extended payment terms on our working capital for the period.

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

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

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

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities, revenue and expenses, and the related disclosures of contingent assets and liabilities. Actual results could differ materially from these estimates and assumptions. We review our estimates and underlying assumptions on an ongoing basis and make revisions as determined necessary by management. Revisions are recognized in the period in which the estimates are revised and may impact future periods as well. Significant accounting policies and methods used in the preparation of our consolidated financial statements are described in note 2 to our 2016 audited consolidated financial statements. The following is a discussion of those accounting policies which management considers to be "critical," defined as accounting policies that management believes are both most important to the portrayal of our financial condition and results and require application of management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effects of matters that are inherently uncertain.

Key sources of estimation uncertainty and judgment: We have applied significant estimates and assumptions in the following areas which we believe could have a significant impact on our reported results and financial position: our 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 (CGUs, as defined below), which includes estimating future growth, profitability, and discount 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 define a CGU as the smallest identifiable group of assets that cannot be tested individually and that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. CGUs can be comprised of a single site, a group of sites, or a line of business.

We have also applied significant judgment in the following areas: the determination of our CGUs and whether events or changes in circumstances during the relevant period are indicators that a review for impairment should be conducted, and the timing of the recognition of charges or recoveries associated with our restructuring actions. The near-term economic environment could also impact certain estimates necessary to prepare our consolidated financial statements, in particular, the estimates related to the recoverable amounts used in our impairment testing of our non-financial assets (see note 16(b) to our 2016 audited consolidated financial statements), and the discount rates applied to our net pension and non-pension post-employment benefit assets or liabilities (see note 19 to our 2016 audited consolidated financial statements). Other than our decision in the fourth quarter of 2016 to exit the solar panel manufacturing business, we did not identify any triggering event during the course of 2016 that would indicate the carrying amount of our assets or CGUs may not be recoverable. In connection with such exit, we recorded an impairment loss (as restructuring charges) on our solar panel manufacturing equipment in the fourth quarter of 2016. See "Operating Results — Other charges" below for further details.

Inventory valuation:

We procure inventory and manufacture based on specific customer orders and forecasts and value our inventory on a first-in, first-out basis at the lower of cost and net realizable value. The cost of our finished goods and work-in-progress includes direct materials, labor and overhead. We may require valuation adjustments if actual market conditions or demand for our customers' products 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. See "Operating Results — Gross margin" below for a discussion of the write down in the value of our solar panel inventory during 2016.

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

Income taxes:

We record income tax expense or recovery based on taxable income earned or loss incurred in each tax jurisdiction where we operate at the enacted or substantively enacted tax rate applicable to that income or loss. In the ordinary course of business, there are many transactions for which the ultimate tax outcome is uncertain and estimates are required for exposures related to examinations by taxation authorities. We review these transactions and exposures and record tax liabilities for open years based on our assessment of many factors, including past experience and interpretations of tax law applied to the facts of each matter. The determination of tax liabilities is subjective and generally involves a significant amount of judgment. We believe that our income tax liability reflects the probable outcome of our income tax obligations based on known facts and circumstances; however, the final income tax outcome may be different from our estimates. A change to these estimates could impact our income tax provision.

We recognize deferred income tax assets to the extent we believe it is probable that the amount will be realized. We consider factors such as the reversal of taxable temporary differences, projected future taxable income, the character of the income tax asset, tax planning strategies, changes in tax laws and other factors. A change to these factors could impact the amount of deferred income tax assets we recognize.

Goodwill, intangible assets and property, plant and equipment:

We estimate the useful lives of intangible assets and property, plant and equipment based on the nature of the asset, historical experience, the projected period of expected future economic benefits to be provided by the assets, the terms of any related customer contract, and expected changes in technology. We review the carrying amounts of goodwill, intangible assets and property, plant and equipment for impairment on an annual basis and whenever events or changes in circumstances (triggering events) indicate that the carrying amount of an asset or CGU may not be recoverable. If any such indication exists, we test the carrying amount of an asset or a CGU for impairment. In addition to an assessment of triggering events during the year, we conduct an annual 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 prior to the annual assessment.

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 value-in-use and its fair value less costs to sell. The process of determining the recoverable amount is subjective and requires management to exercise significant judgment in estimating future growth, profitability and discount rate, and in projecting future cash flows, among other factors. The process of determining fair value less costs to sell 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(b) to our 2016 audited consolidated financial statements for a description of impairment charges for 2015 and 2016.

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. 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.

Restructuring charges:

We incur restructuring charges relating to workforce reductions, site consolidations, and costs associated with businesses we are exiting. Our restructuring charges include employee severance and benefit 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 plans. Our major assumptions include the number of employees to be terminated and the timing of such terminations, the measurement of termination costs, the timing and amount of lease obligations and any anticipated sublease recoveries from exited sites, and the timing of disposition and estimated fair values less costs to sell of 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 fair value less costs to sell, with fair value estimated based on market prices for similar assets. We may engage independent third parties to determine the estimated fair values less costs to sell 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 the 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 in future periods. See note 16(a) to our 2016 audited consolidated financial statements for a discussion of restructuring charges recorded in 2016.

Legal:

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. We recognize a provision for 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 filing of a suit or formal assertion of a claim does not automatically trigger a requirement to record a provision. The ultimate outcome, including the amount and timing of any payments required, may vary significantly from our original estimates. Potential material legal obligations that have not been recognized as provisions, as the outcome is remote or not probable, or the amount cannot be reliably estimated, are disclosed as contingent liabilities.

Warranty:

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

Financial assets and financial liabilities:

We review financial assets at each reporting date and these 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 been negatively impacted. 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.

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 and forward exchange rates. Changes in these inputs can cause significant volatility in the fair value of our financial instruments in the short-term.

We enter into forward exchange and option 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 apply hedge accounting to those hedge transactions that are considered effective. Management assesses the effectiveness of hedges by comparing actual outcomes against these estimates on a regular basis. Subsequent revisions in estimates of future cash flow forecasts, if significant, may result in the discontinuation of hedge accounting for that hedge.

Pension and non-pension post-employment benefits:

We have pension and non-pension post-employment benefit costs and liabilities that are determined from actuarial valuations. Actuarial valuations require management to make certain judgments and estimates relating to salary escalation, compensation levels at the time of retirement, retirement ages, the discount rate used in measuring the net interest on the net defined benefit asset or liability, and expected healthcare costs (as applicable). These actuarial assumptions could change from period-to-period and actual results could differ materially from the estimates originally made by management. The fair values of our pension assets were based on a measurement date of December 31, 2016. 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 pension plan valuations and our future pension expense and required funding.

Employee stock-based compensation:

The cost we record for restricted share units (RSUs) and 40% of performance share units (PSUs) granted annually is based on the market value of our subordinate voting shares at the time of grant. The cost we record 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, is 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 during the last 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 RSUs and these PSUs to compensation expense in our consolidated statement of operations, with a corresponding charge to contributed surplus in our consolidated balance sheet, over the vesting period.

We determine the cost we record for 60% of PSUs granted annually 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.

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. Potential obligations for contingent consideration and contingencies are also recorded at fair value as of the acquisition date. We generally record subsequent changes in the fair value of such contingent liabilities from the date of acquisition to the settlement date in our consolidated statement of operations.

We use judgment to determine the purchase price allocation and estimates to value identifiable net assets and the fair value of contingent consideration, if applicable, at the acquisition date. We may engage independent third parties to determine the fair value of 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.

Operating Results

Our annual and quarterly operating results, including working capital performance, vary from period-to-period as a result of the level and timing of customer orders, mix of revenue, and fluctuations in materials and other costs and expenses. The level and timing of customer orders vary due to changes in demand for their products, general economic conditions, their attempts to balance their inventory, availability of components and materials, and changes in their supply chain strategies or suppliers. Our annual and quarterly operating results are specifically affected by, among other factors: our mix of customers and the types of products or services we provide; the rate at which, the costs associated with, and the execution of, new program ramps; volumes and the seasonality of our business; price competition; the mix of manufacturing or service value-add; capacity utilization; manufacturing efficiency; the degree of automation used in the assembly process; the availability of components or labor; the timing of receiving components and materials; costs and inefficiencies of transferring programs between sites; program completions or losses, or customer disengagements and the timing and the margin of any replacement business; the impact of foreign exchange fluctuations; the performance of third-party providers; our ability to manage inventory, production location and equipment effectively; our ability to manage changing labor, component, energy and transportation costs effectively; fluctuations in variable compensation costs; the timing of our expenditures in anticipation of forecasted sales levels; and the timing of any acquisitions and related integration costs. Our operations may also be affected by natural disasters or other local risks present in the jurisdictions in which we, our suppliers, logistics partners, and/or our customers operate. These events could lead to higher costs or supply shortages or may disrupt the delivery of components to us or our ability to provide finished products or services to our customers, any of which could adversely affect our operating results.

In the EMS industry, customers award new programs or shift programs to other EMS providers for a number of reasons, including changes in demand for the customers' products, pricing benefits offered by other EMS providers, execution or quality issues, preference for consolidation or a change in their supplier base, re-balancing the concentration or location of their EMS providers, consolidation among customers, and decisions to adjust the volume of business being outsourced. Customer or program transfers between EMS providers are part of the competitive nature of our industry. Some customers use more than one EMS provider to manufacture a product and/or may have the same EMS provider support them from more than one geographic location. Customers may choose to change the allocation of demand among their EMS providers and/or may shift programs from one region to another region within an EMS provider's global network. Customers may also decide to insource production they had previously outsourced to utilize their internal capacity or for other reasons. Our operating results for each period include the impacts associated with new program wins, follow-on business, program completions or losses, as well as any acquisitions. The volume, profitability and the location of new business awards will vary from period-to-period and from program-to-program. Significant period-to-period variations can also result from the timing of new programs reaching full production or programs reaching end-of-life, the timing of follow-on or next generation programs and/or the timing of existing programs being fully or partially transferred internally or to a competitor.

Operating results expressed as a percentage of revenue:

	Year ended December 31		
	2014	**2015**	**2016**
Revenue	100.0%	100.0%	100.0%
Cost of sales	92.8	93.1	92.9
Gross profit	7.2	6.9	7.1
SG&A	3.7	3.7	3.5
Research and development costs	0.3	0.4	0.4
Amortization of intangible assets	0.2	0.2	0.1
Other charges	0.7	0.6	0.4
Finance costs, net of refund interest income	0.1	0.1	—
Earnings before income tax	2.2	1.9	2.7
Income tax expense	0.3	0.7	0.4
Net earnings	1.9%	1.2%	2.3%

Revenue:

Revenue of $6.0 billion for 2016 increased 7% from 2015. Compared to revenue from our end markets in 2015, revenue dollars from our communications end market increased 12%, revenue dollars from our diversified end market increased 11%, revenue dollars from our storage end market increased 2%, revenue dollars from our servers end market decreased 11%, and revenue dollars from our consumer end market decreased 16%, due primarily to the factors discussed in "Summary of 2016" above and the discussions below. Communications and diversified continued to be our largest end markets, representing 42% and 30%, respectively, of total revenue for 2016.

Revenue of $5.6 billion for 2015 was flat compared to 2014. Compared to revenue from our end markets in 2014, revenue dollars from our storage end market increased 5%, revenue dollars from our diversified end market increased 4%, and revenue dollars from our consumer end market (representing 3% of our total revenue for 2015) decreased 33%, primarily due to the factors discussed in "Summary of 2015" above and the discussions below. Revenue dollars from our communications end market and servers end market in 2015 were relatively flat compared to 2014. Communications and diversified were our largest end markets, representing 40% and 29%, respectively, of total revenue for 2015.

The following table sets forth revenue from our end markets as a percentage of our total revenue for the periods indicated:

	2014	2015	2016
Communications	40%	40%	42%
Consumer	5%	3%	2%
Diversified	28%	29%	30%
Servers	9%	10%	8%
Storage	18%	18%	18%
Revenue (in billions)	$5.63	$5.64	$6.02

Due to the converging technologies of our Storage and Servers end markets, we have decided to combine these end markets into a single "Enterprise" end market for reporting purposes, commencing with the quarter ending March 31, 2017. In addition, due to the decreasing size of our Consumer business, we will add it to our Diversified end market commencing with the quarter ending March 31, 2017 for reporting purposes.

Our product and service volumes, revenue and operating results vary from period-to-period depending on various factors, including the success in the marketplace of our customers' products, changes in demand from our customers for the products we manufacture, the mix and complexity of the products or services we provide, the timing of receiving components and materials, the extent, timing and rate of new program wins, follow-on business, program completions or losses, the transfer of programs among our sites at our customers' request, the costs, terms, timing and execution of new program ramps, and the impact of seasonality on various end markets. We are dependent on a limited number of customers for a substantial portion of our revenue. We also expect that the pace of technological change, the frequency of customers' transferring business among EMS competitors or customers changing the volumes they outsource, and the dynamics of the global economy will continue to impact our business from period-to-period. See "Overview" above.

From time to time we experience some level of seasonality in our quarterly revenue patterns across some of the end markets we serve. However, the numerous factors described above that affect our period-to-period results make it difficult to isolate the impact of seasonality and other external factors on our business. In the past, revenue from our storage end market has increased in the fourth quarter of the year compared to the third quarter, and then decreased in the first quarter of the following year, reflecting the increase in customer demand we typically experience in this end market in the fourth quarter. In addition, we typically experience our lowest overall revenue levels during the first quarter of each year. There is no assurance that these patterns will continue.

To reduce our reliance on any one customer or end market, we continue to target new customers and services, including through our efforts to expand our diversified end market business (including our smart energy, aerospace and defense, healthcare, and industrial businesses). See "Overview — Recent developments" above. Notwithstanding these expansion efforts, we remain dependent on our traditional end markets for a substantial portion of our revenue. We continue to experience slower growth rates and increased pricing pressures in our traditional markets.

Our communications end market represented 42% of total revenue for 2016, compared to 40% of total revenue for both 2015 and 2014. Revenue dollars from this end market in 2016 increased 12% compared to 2015, primarily driven by demand strength from certain customer programs and new program wins. Revenue dollars from this end market in 2015 were relatively flat compared to 2014, with growth from new program wins offsetting the lower revenue due to program completions during 2014.

Our diversified end market represented 30% of total revenue for 2016, up from 29% in 2015 and 28% in 2014. Revenue dollars from our diversified end market for 2016 increased 11% compared to 2015, primarily driven by new programs in our smart energy business (including new solar programs prior to the downturn in that business in the third quarter of 2016), and a program outsourced to us from one of our aerospace and defense customers in April 2015. Revenue dollars increased 4% in 2015 compared to 2014, primarily driven by new program wins, including the aerospace and defense program outsourced to us in April 2015, and improved demand in our semiconductor business. Revenue from our solar business in 2015 was slightly lower than in 2014 as we were transitioning and ramping our solar panel manufacturing operations in Asia, as discussed above in "Overview — Recent developments".

Our storage end market represented 18% of total revenue for 2016, 2015 and 2014. In 2016, revenue dollars from our storage end market increased 2% compared to 2015, primarily driven by new programs from one customer, offset in part by softer demand in some of our legacy programs. In 2015, revenue dollars from our storage end market increased 5% compared to 2014, primarily due to new program wins, in part driven by our JDM offering.

Our servers end market represented 8% of total revenue for 2016, compared to 10% of total revenue for 2015, and 9% of total revenue in 2014. Revenue dollars from our servers end market for 2016 decreased 11% compared to 2015, primarily due to customer demand softness. Revenue dollars from this end market in 2015 were relatively flat compared to 2014.

Our consumer end market represented 2% of total revenue for 2016, compared to 3% of total revenue for 2015 and 5% of total revenue for 2014. Revenue dollars from our consumer end market for 2016 decreased 16% compared to 2015 primarily as a result of the completion of programs with one of our largest customers in this end market during the third quarter of 2016. As a result of this completion, we expect our revenue and earnings in this end market to decrease in future quarters, contributing to our decision to combine this end market with our diversified end market commencing with the quarter ending March 31, 2017. In 2015, revenue dollars from our consumer end market decreased 33% compared to 2014, primarily due to program completions as we de-emphasized certain lower-margin business in our consumer portfolio.

For 2016, we had two customers (Cisco Systems and Juniper Networks) that individually represented more than 10% of total revenue (both 2015 and 2014 — three customers (Cisco Systems, IBM, and Juniper Networks)). Cisco Systems and Juniper Networks accounted for 19% and 11%, respectively, of our total revenue for 2016.

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

In the aggregate, our top 10 customers represented 68% of total revenue for 2016 (2015 — 67%; 2014 — 65%). We are dependent to a significant degree upon continued revenue from our largest customers. We generally enter into master supply agreements with our customers that provide the framework for our overall relationship. These agreements typically do not guarantee a particular level of business or fixed pricing. Instead, we bid on a program-by-program basis and typically receive customer purchase orders for specific quantities and timing of products. There can be no assurance that revenue from any of our major customers will continue at historical levels or will not decrease in absolute terms or as a percentage of total revenue. A significant revenue decrease or pricing pressures from these or other customers, or a loss of a major customer or program, could have a material adverse impact on our business, our operating results and our financial position. Some of our customer agreements require us to provide specific price reductions to our customers over the term of the contracts. To the extent we cannot offset such reductions, by lowering our costs, through operational efficiencies or otherwise, these price reduction terms may negatively impact our margins and our operating results. From time to time, customers seek longer-term supply agreements to lock in their supply, terms and pricing.

In the EMS industry, customers may cancel contracts and volume levels can be changed or delayed. Customers may also shift business to a competitor or bring programs in-house to improve their own utilization or to adjust the concentration of their supplier base to manage supply continuity risk. We cannot assure the replacement of completed, delayed, cancelled or reduced orders with new business. In addition, we cannot assure that any of our current customers will continue to utilize our services. Order cancellations and changes or delays in production could have a material adverse impact on our results of operations and working capital performance, including requiring us to carry higher than expected levels of inventory. See "Overview — Recent developments" above for a discussion of our decision to exit the solar panel manufacturing business. Order cancellations and delays could also lower our asset utilization, resulting in lower margins. Significant period-to-period changes in margins can also result if new program wins or follow-on business are more competitively priced than past programs.

We believe that profitable revenue growth depends to a significant extent on increasing sales to existing customers for their current and future product generations and expanding the range of services we provide to these customers. We also continue to pursue new customers and acquisition opportunities to expand our end market penetration, to diversify our end market mix, and to enhance and add new technologies and capabilities to our offerings.

Gross profit:

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

	Year ended December 31		
	2014	**2015**	**2016**
Gross profit (in millions)	$405.4	$391.1	$427.6
Gross margin	7.2%	6.9%	7.1%

Compared to 2015, gross profit for 2016 increased 9%, primarily driven by higher revenue levels and margin improvements in our diversified end market, including in each of our semiconductor and solar businesses, partially offset by changes in program mix as some of our new programs contributed lower gross profit than past programs. Our solar margins improved compared to the prior year despite the higher provisions (accounting for approximately 15 basis points), primarily to write down the value of our solar panel inventory in the second half of 2016 to current market prices. See further discussions in “Overview — Recent developments” and “Summary of 2016” above. Additionally, we made margin improvements in our semiconductor business during 2016 as compared to the prior year period reflecting improvements in cost productivity and the restructuring actions we implemented in 2015.

Compared to 2014, gross profit decreased 4% in 2015, primarily due to higher than expected costs of ramping new programs, particularly our new solar panel business in Asia. We expanded our solar panel manufacturing into Asia in 2015 and incurred higher costs as a result of delayed ramping, operational inefficiencies and supplier performance issues. This, combined with the impact of changes in program mix and losses at our sites in Japan and Spain (see “Other charges” below), more than offset the gross margin improvements we made in our semiconductor business during 2015.

In general, in addition to fluctuations in revenue, multiple factors cause gross margin to fluctuate including, among others: volume and mix of products or services; higher/lower revenue concentration in lower gross margin products and end markets; pricing pressures; contract terms and conditions; production efficiencies; utilization of manufacturing capacity; changing material and labor costs, including variable labor costs associated with direct manufacturing employees; manufacturing and transportation costs; start-up and ramp-up activities; new product introductions; disruption in production at individual sites, including as a result of program transfers; cost structures at individual sites; foreign exchange volatility; and the availability of components and materials.

Our gross profit and SG&A (discussed below) are also impacted by the level of variable compensation expense we record in each period. Variable compensation expense includes expense related to awards under our team incentive plans available to eligible employees, our sales incentive plans, and our stock-based compensation plans, including stock options, PSUs and RSUs. See “Stock-based compensation” below. The amount of variable compensation expense related to performance-based compensation varies each period depending on the level of achievement of pre-determined performance goals and financial targets.

Selling, general and administrative expenses:

SG&A for 2016 of $211.1 million (3.5% of total revenue) increased compared to $207.5 million (3.7% of total revenue) for 2015, primarily due to higher foreign exchange losses and costs associated with our organizational redesign initiatives, offset in part by $3.3 million lower stock-based compensation expense in 2016 (discussed below). The decrease in SG&A as a percentage of revenue for 2016 compared to 2015 reflects the higher revenue levels in 2016.

SG&A for 2015 of $207.5 million (3.7% of total revenue) decreased slightly compared to $210.3 million (3.7% of total revenue) for 2014, primarily due to overall spending reductions in 2015, which more than offset the higher stock-based compensation expense in 2015 (discussed below).

Stock-based compensation:

Our employee stock-based compensation expense, which excludes DSU expense, varies each period, and includes mark-to-market adjustments for any awards we settle in cash and any plan amendments. The portion of our expense that relates to performance-based compensation generally varies depending on our level of achievement of pre-determined performance goals and financial targets. In 2016, we recorded $15.0 million and $18.0 million of employee stock-based compensation expense in cost of sales and SG&A, respectively; in 2015, we recorded $16.3 million and $21.3 million of employee stock-based compensation expense in cost of sales and SG&A, respectively; and in 2014, we recorded $13.4 million and $15.0 million of employee stock-based compensation expense in cost of sales and SG&A, respectively.

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

	Year ended December 31		
	2014	**2015**	**2016**
Employee stock-based compensation (in millions)	$28.4	$37.6	$33.0

Compared to 2015, our employee stock-based compensation expense for 2016 decreased by $4.6 million, primarily due to lower amounts recorded in 2016 in connection with the accelerated recognition of stock-based compensation expense for employees eligible for retirement.

In 2015, our employee stock-based compensation expense increased by $9.2 million compared to 2014, primarily due to an adjustment recorded in 2015 to reflect the estimated level of achievement related to our performance-based compensation, as well as the cost of new awards granted in 2015 in connection with our CEO transition. Our 2014 employee stock-based compensation expense was reduced by expense reversals we recorded with respect to forfeited awards for terminated employees.

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

In 2016, we also recorded DSU expense of $2.1 million (2015 — $1.9 million; 2014 — $1.9 million) through SG&A.

Other charges:

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

	Year ended December 31		
	2014	**2015**	**2016**
Restructuring charges (recoveries)	$(2.1)	$23.9	$31.9

We perform ongoing evaluations of our business, operational efficiency and cost structure, and implement restructuring actions as we deem necessary. In connection therewith, we recorded restructuring charges of $31.9 million in 2016 consisting of employee termination costs resulting from changes to our operating model, and charges (including employee termination costs) related to our decision to exit the solar panel manufacturing business, as well as the consolidation of certain of our sites. Our restructuring charges for 2016 consisted of cash charges of $10.7 million, primarily for employee termination costs relating to our Global Business Services and Organizational Design initiatives, and the closure of our solar panel manufacturing operations and other exited operations, and non-cash charges of $21.2 million, to write down certain plant assets and equipment to recoverable amounts, including $19.0 million related to our solar panel manufacturing equipment at our two locations. A substantial portion of our solar panel manufacturing equipment is subject to finance leases, pursuant to which we had outstanding obligations of $15.3 million as of December 31, 2016. We intend to terminate these leases upon disposition of the equipment thereunder and settle the remaining lease obligations in 2017. As we intend to sell the solar equipment, the recoverable amounts were based on their estimated fair values less costs to sell. We estimated these values based on external inputs, including recent market transactions and third-party estimates. We reduced the carrying value of our solar panel manufacturing equipment to these estimated fair values less costs to sell at the end of 2016. However, the recoverable amounts are subject to adjustment based on the actual results of our sales process. Our restructuring provision at December 31, 2016 was $6.6 million (December 31, 2015 — $10.7 million) comprised primarily of employee termination costs which we currently expect to pay during the first half of 2017. All cash outlays have been, and the balance is expected to be, funded with cash on hand.

During 2015, we recorded restructuring charges of $23.9 million. Our restructuring charges for 2015 consisted of cash charges of $19.5 million, primarily for employee termination costs at various sites, including headcount reductions in certain under-utilized manufacturing sites in higher cost locations, and non-cash charges of $4.4 million, primarily to write down certain equipment to recoverable amounts. These 2015 charges also included costs associated with the consolidation of two of our semiconductor sites in the second quarter of 2015, to reduce the cost structure and improve the margin performance of that business. In 2014, we recorded a net reversal of previous restructuring charges of $2.1 million primarily to adjust for reduced payments in relation to a site that was part of a previous restructuring action.

In order to further streamline our business and improve margin performance, we expect to continue to implement restructuring actions in 2017. However, notwithstanding the larger-than-anticipated restructuring costs we incurred in the fourth quarter of 2016 in connection with our exit from the solar panel manufacturing business, we currently do not expect the related restructuring charges to be material in 2017.

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

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

	Year ended December 31		
	2014	**2015**	**2016**
Asset Impairment	$40.8	$12.2	$—

We conduct our annual impairment assessment of goodwill, intangible assets and property, plant and equipment in the fourth quarter of each year (which corresponds to our annual planning cycle), and whenever events or changes in circumstances indicate that the carrying amount of an asset, CGU or a group of CGUs may not be recoverable (triggering events). We recognize an impairment loss when the carrying amount of an asset, CGU or a group of CGUs exceeds its recoverable amount, which is measured as the greater of its value-in-use and its fair value less costs to sell. Prior to conducting our 2016 annual impairment assessment, we did not identify any triggering event during the course of 2016 indicating that the carrying amount of our assets or CGUs may not be recoverable, other than our decision in the fourth quarter of 2016 to exit the solar panel manufacturing business. In connection therewith, we recorded an impairment loss (as restructuring charges) on our solar panel manufacturing equipment in the fourth quarter of 2016. We reduced the carrying value of our solar panel manufacturing equipment to its estimated fair value less costs to sell.

For our 2016 annual impairment assessment of goodwill, intangible assets and property, plant and equipment, other than the impairment described above, we used cash flow projections based primarily on our plan for 2017 and, to a lesser extent, on our three-year strategic plan and other financial projections. Our plan for 2017 is primarily based on financial projections submitted by our subsidiaries in the fourth quarter of 2016, together with inputs from our customer teams, and is subjected to in-depth reviews performed by various levels of management as part of our annual planning cycle. The plan for 2017 was approved by management and presented to our Board of Directors in December 2016.

In the fourth quarter of 2016, we performed our annual impairment assessment of goodwill, intangible assets and property, plant and equipment and determined that, other than the write down of our solar panel manufacturing equipment discussed above, there was no impairment as the recoverable amount of our assets and CGUs exceeded their respective carrying values.

In the fourth quarter of 2015, we performed our annual impairment assessment of goodwill, intangible assets and property, plant and equipment. We recorded non-cash impairment charges totaling $12.2 million, comprised of $6.5 million and $5.7 million, against the property, plant and equipment of our CGUs in Japan and Spain, respectively. Such charges were primarily due to the reduction of our long-term cash flows projections for these CGUs as a result of reduced customer demand and challenging market conditions that we were experiencing in these CGUs at that time, and our assessment of the continued negative impact of these factors on the future profitability of these two CGUs. After recording the 2015 impairment charges, the carrying value of the property, plant and equipment held by each such CGU was reduced to approximate the fair value of its real property at the end of 2015.

In the fourth quarter of 2014, we performed our annual impairment assessment of goodwill, intangible assets and property, plant and equipment. We recorded non-cash impairment charges of $40.8 million against the goodwill of our semiconductor business, primarily due to the reduction at the time of our long-term cash flow projections for this CGU as a result of volatility in customer demand, operational inefficiencies and commercial challenges associated with a particular customer, and the costs, terms, timing and challenges of ramping new sites and programs.

We determined the recoverable amount of our CGUs as the greater of its expected value-in-use and its fair value less costs to sell. 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 rates, among other factors. The assumptions used in our 2016 annual impairment assessment were determined based on past experiences adjusted for expected changes in future conditions. Where applicable, we engaged independent brokers to obtain market prices to estimate our real property and other asset values. For our 2016 assessment, we used cash flow projections ranging from 1 to 7 years (2015 — 3 to 10 years; 2014 — 2 to 9 years) for our CGUs, in line with the remaining useful lives of the CGUs' essential assets. We generally used our weighted-average cost of capital of approximately 10% (2015 — approximately 8%; 2014 — approximately 10%) to discount our cash flows. For our semiconductor CGU, however, we applied a discount rate of 17% to our cash flow projections for this CGU in 2014 through 2016 reflecting the higher risk and continued volatilities inherent with these cash flows, despite the new business awarded to this CGU in the past few years.

As part of our annual impairment assessment of goodwill, we also perform sensitivity analyses for the relevant CGUs in order to identify the impact of changes in key assumptions, including projected growth rates, profitability, and discount rates. Our goodwill balance at December 31, 2016 of $23.2 million was comprised of $19.5 million attributable to our semiconductor CGU and $3.7 million attributable to our Karel acquisition. For purposes of our 2016 impairment assessment of our semiconductor CGU, we assumed future revenue growth at an average compound annual growth rate of 7% over a 7-year period (2015 — 9% over an 8-year period), representing the remaining life of the CGU's most significant customer contract. We believe that this growth rate is supported by the level of new business awarded in recent years, the expectation of future new business awards, and anticipated overall demand improvement in the semiconductor market based on certain market trend analyses published by external sources. We also assumed that the average annual margins for this CGU over the projection period will be slightly above our overall margin performance for the Company in 2016, consistent with the average annual margins we assumed for our 2015 impairment analysis. For our 2016 annual impairment analysis, we did not identify any key assumptions where a reasonably possible change would result in material impairments to our semiconductor CGU.

Impairment assessments inherently involve judgment as to assumptions about expected future cash flows and the impact of market conditions on those assumptions. Future events and changing market conditions may impact our assumptions as to prices, costs or other factors that may result in changes in our estimates of future cash flows. Failure to realize the assumed revenues at an appropriate profit margin or failure to improve the financial results of a CGU could result in impairment losses in such CGU in future periods.

(iii) In August 2014, we liquidated the asset portfolio for the defined benefit component of the pension plan for certain Canadian employees, following which substantially all of the proceeds were used to purchase annuities from insurance companies for plan participants. The purchase of the annuities resulted in the insurance companies assuming responsibility for payment of the defined benefit component under the plan, and the employer substantially eliminating financial risk in respect of these obligations. The purchase of the annuities resulted in a non-cash settlement loss of $6.4 million which we recorded in other charges in our consolidated statement of operations in 2014.

(iv) In 2016, we received recoveries of damages of $12.0 million (2015 — nil; 2014 — $8.0 million) in connection with the settlement of class action lawsuits in which we were a plaintiff, related to certain purchases we made in prior periods. The recoveries in 2016 were offset in part by the cost to settle an unrelated legal matter. During the fourth quarter of 2016, we recorded integration and transaction costs totaling $1.4 million related to the acquisition of Karel.

Refund interest income:

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

Income taxes:

For 2016, we had a net income tax expense of $24.7 million on earnings before tax of $161.0 million, compared to a net income tax expense of $42.2 million on earnings before tax of $109.1 million for 2015 and a net income tax expense of $16.4 million on earnings before tax of $124.6 million for 2014.

Our current income tax expense for 2016 of $14.2 million was favorably impacted by the reversal of provisions previously recorded for tax uncertainties related to the final reassessments and settlement of tax accounts in connection with the resolution of a transfer pricing matter for one of our Canadian subsidiaries. In connection therewith, we recorded aggregate income tax recoveries of $45 million Canadian dollars (approximately $34 million at the exchange rates at the time of recording), as well as aggregate refund interest income of approximately $14.3 million (see below). Our net current income tax expense for 2016 also included tax expense in jurisdictions with current taxes payable, as well as withholding taxes of $1.5 million pertaining to the repatriation of $50.0 million from a U.S. subsidiary. Our deferred income tax expense for 2016 of $10.5 million consisted of net deferred income tax for changes in temporary differences in various jurisdictions, as well as a deferred income tax expense of $8.0 million related to taxable temporary differences associated with the anticipated repatriation of undistributed earnings from certain of our Chinese subsidiaries. We currently expect to repatriate cash from these Chinese subsidiaries in the near future and have recorded a deferred tax liability in connection therewith. Upon repatriating the cash, we will reverse this deferred tax liability and record a current income tax expense for withholding taxes. There was no tax impact associated with the $21.2 million in non-cash impairment charges (through restructuring) we recorded in the fourth quarter of 2016 (discussed above).

Our net income tax expense of $24.7 million for 2016 was also negatively impacted by taxable foreign exchange impacts of $7.3 million resulting from the weakening of the Malaysian ringgit and Chinese renminbi relative to the U.S. dollar (Currency Tax Expense). Our functional and reporting currency is the U.S. dollar; however, our income tax expense is based primarily on taxable income determined in the currency of the country of origin. As a result, foreign currency translation differences impact our income tax expense from period to period.

Current income taxes for 2015 consisted primarily of tax expense recorded in jurisdictions with current taxes payable. Deferred income taxes for 2015 consisted primarily of net deferred income tax for changes in temporary differences in various jurisdictions. Our net income tax expense of $42.2 million for 2015 was negatively impacted by a Currency Tax Expense of $12.2 million. There was no net tax impact associated with the $12.2 million non-cash impairment charge we recorded in the fourth quarter of 2015 (discussed above).

Current income taxes for 2014 consisted primarily of tax expense recorded in jurisdictions with current taxes payable, offset in part by an income tax benefit of $14.1 million relating to the recognition of previously unrecognized tax incentives in Malaysia in the first quarter of 2014. Deferred income taxes for 2014 consisted primarily of net deferred income tax expense for changes in temporary differences in various jurisdictions. In 2014, we completed an internal loan reorganization whereby certain inter-company loans were forgiven. There was no net impact to our consolidated deferred tax provisions related to this internal loan reorganization. There was no tax impact associated with the $40.8 million non-cash goodwill impairment charge we recorded in the fourth quarter of 2014 (discussed above).

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

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

During the first quarter of 2014, Malaysian investment authorities approved our request to revise certain required conditions related to income tax incentives for one of our Malaysian subsidiaries. The benefits of these tax incentives were not previously recognized, as prior to this revision we had not anticipated meeting the required conditions. As a result of this approval, we recognized an income tax benefit of $14.1 million in the first quarter of 2014 relating to years 2010 through 2013. Our Malaysian income tax incentives expired as of the end of 2014. 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 in 2015 and 2016. 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 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. Upon full expiry of each of the incentives, taxable profits associated with such expired tax incentives become fully taxable. During the third quarter of 2015, one of our Thailand income tax incentives transitioned to the 50% income tax exemption phase. Two of our remaining four Thailand tax incentives expire between 2019 and 2020, while the other two incentives will transition to the 50% exemption in 2022 and 2023, and expire in 2027 and 2028.

In certain jurisdictions, primarily in the Americas and Europe, we currently have significant net operating losses and other deductible temporary differences, which we expect will be used to reduce taxable income in these jurisdictions in future periods.

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

Certain of our subsidiaries provide financing, or products and services to, and may from time-to-time undertake certain significant transactions with other subsidiaries in different jurisdictions. Moreover, several jurisdictions in which we operate have tax laws with detailed transfer pricing rules which require that all transactions with non-resident related parties be priced using arm's-length pricing principles, and that contemporaneous documentation must exist to support such pricing.

As previously disclosed, Canadian tax authorities had taken the position that the income reported by one of our Canadian subsidiaries should have been materially higher in 2001 and 2002 and materially lower in 2003 and 2004 as a result of certain inter-company transactions (Transfer Pricing Matters). In connection therewith, such authorities reassessed tax amounts owed by us, and also imposed limitations on benefits associated with favorable adjustments (Benefits Limitation). We had appealed this decision and sought resolution of the Transfer Pricing Matters from the relevant Competent Authorities under applicable treaty principles. In the third quarter of 2016, the Canadian and U.S. tax authorities informed us that a mutual conclusion had been reached with respect to the Transfer Pricing Matters, and the Canadian tax authorities withdrew their position, reversing the adjustments for the years 2001 through 2004. The Canadian tax authorities also reversed the adverse adjustments related to the Benefits Limitation. In connection therewith, in the second half of 2016, we recorded aggregate current income tax recoveries of $45 million Canadian dollars (approximately $34 million 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 million at the exchange rates at the time of recording) for cash held on account with the tax authorities in connection with the Benefits Limitation and Transfer Pricing Matters.

Canadian tax authorities had also taken the position that certain interest amounts deducted by one of our Canadian entities in 2002 through 2004 on historical debt instruments should be re-characterized as capital losses (Canadian Interest Matter), a position which we had previously appealed. In the fourth quarter of 2016, the Canadian tax authorities issued revised reassessments, which primarily had the effect of reducing unrecognized gross deferred tax assets and virtually eliminating the net income tax expense. As the net impact of the revised reassessments was nominal, we accepted them and the matter was closed in the fourth quarter of 2016.

As a result of the resolution of the Transfer Pricing Matters, Benefits Limitation and the Canadian Interest Matter, we received $70 million Canadian dollars (approximately $52 million at year-end 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 million at year-end exchange rates) in January 2017. The aggregate amount of cash refunds received represents the return of all deposits and refund interest in respect of the Canadian tax matters.

In 2015, we de-recognized the future benefit of certain Brazilian tax losses, which were previously recognized on the basis that these tax losses could be fully utilized to offset unrealized foreign exchange gains on inter-company debts that would become realized in the fiscal period ending on the date of dissolution of our Brazilian subsidiary. Due to the weakening of the Brazilian real against the U.S. Dollar, the unrealized foreign exchange gains had diminished to the point where the tax cost to settle such inter-company debt was significantly reduced. Accordingly, our Brazilian inter-company debts were settled on April 7, 2015 triggering a tax liability of $1 million and the relevant tax costs related to the foreign exchange gains were accrued as at December 31, 2015.

The successful pursuit of the 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.

Acquisitions:

We may, at any time, be engaged in ongoing discussions with respect to possible acquisitions that could expand our service offerings, increase our penetration in various industries, establish strategic relationships with new or existing customers and/or enhance our global supply chain network. In November 2016, we acquired the business assets of Karel for a cash purchase price of $14.9 million. See "Overview — Recent developments — Asset purchase agreement" above.

In order to enhance our competitiveness and expand our revenue base or the services we offer our customers, we may also look to grow our services or capabilities beyond our traditional areas of EMS expertise. There can be no assurance that any of these discussions will result in a definitive purchase agreement and, if they do, what the terms or timing of any such agreement would be. There can also be no assurance that an acquisition will be successfully integrated or will generate the returns we expect.

Liquidity and Capital Resources

Liquidity

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

	December 31		
	2014	2015	2016
Cash and cash equivalents	$565.0	$545.3	$557.2
Borrowings under credit facility	—	262.5	227.5

	Year ended December 31		
	2014	2015	2016
Cash provided by operating activities	$ 241.5	$ 196.3	$ 173.3
Cash used in investing activities	(59.9)	(75.3)	(64.0)
Cash used in financing activities	(160.9)	(140.7)	(97.4)
Changes in non-cash working capital items (included in operating activities above):			
A/R	$ (39.4)	$ 12.5	$(104.6)
Inventories	98.2	(75.6)	(89.5)
Other current assets	(18.9)	38.2	(5.3)
A/P, accrued and other current liabilities and provisions	(31.6)	28.8	75.4
Working capital changes	$ 8.3	$ 3.9	$(124.0)

Cash provided by operating activities:

In 2016, we generated $173.3 million of cash from operating activities compared to $196.3 million in 2015. The decrease in cash provided by operating activities as compared to 2015 was primarily due to $127.9 million in higher working capital requirements in 2016 to support our growth, offset in part by the increase in net earnings in 2016 and the cash income tax refund of $52 million we received in the fourth quarter of 2016 related to the resolution of certain income tax matters, including related interest income. See "Operating results — Income taxes" above. Higher inventory levels were required in 2016 primarily to support new customer programs and increased demand from certain customers, and the increase in accounts receivable reflected the higher revenue levels in 2016 and the timing of revenue in the fourth quarter of 2016.

From time to time, we extend payment terms applicable to certain customers. If this becomes our practice, it could adversely impact our working capital requirements, and increase our financial exposure and credit risk. During the fourth quarter of 2016, the payment terms of one of our significant customers was extended. In connection therewith, we registered for that customer's supplier financing program pursuant to which participating suppliers may sell A/R from such customer to a third-party bank on an uncommitted basis in order to receive earlier payment. At December 31, 2016, we sold $51.4 million of A/R under this program (December 31, 2015 — nil). We utilized this program to substantially offset the effect of the extended payment terms on our working capital for the period. We pay interest with respect to this arrangement, which we record in finance costs in our consolidated statement of operations.

In 2015, we generated $196.3 million in cash from operating activities compared to $241.5 million in 2014. The decrease as compared to 2014 was primarily due to an increase in inventory purchases to support new programs, including $27.6 million of inventory we purchased in connection with a program transfer in our aerospace and defense business, as well as higher cash restructuring charges in 2015.

Free cash flow (non-IFRS):

Our non-IFRS free cash flow of $110.2 million for 2016 decreased $3.0 million compared to 2015, primarily due to higher use of cash for operating activities in 2016 (as discussed above) compared to 2015, offset in part by the repayment of $14 million in cash advances by the Solar Supplier in 2016.

Our non-IFRS free cash flow of $113.2 million for 2015 decreased $64.2 million compared to 2014, primarily due to a reduction in cash provided by operating activities in 2015 (discussed above), and $26.5 million in net cash advances we made to the Solar Supplier in 2015.

Non-IFRS free cash flow is defined as cash provided by or used in operations after the purchase of property, plant and equipment (net of proceeds from the sale of certain surplus equipment and property), deposits received on the anticipated sale of our Toronto real property (for 2015), finance lease payments, advances to (or repayments from) the Solar Supplier, and finance costs paid. Note, however, that non-IFRS free cash flow does not represent residual cash flow available to Celestica for discretionary expenditures. Management uses non-IFRS free cash flow as a measure, in addition to IFRS cash provided by or used in operations, to assess our operational cash flow performance. We believe non-IFRS free cash flow provides another level of transparency to our liquidity. A reconciliation of this measure to cash provided by operating activities measured under IFRS is set forth below:

	Year ended December 31		
	2014	2015	2016
IFRS cash provided by operations	$241.5	$196.3	$173.3
Purchase of property, plant and equipment, net of sales proceeds	(59.9)	(60.0)	(63.1)
Deposit on anticipated sale of real property	—	11.2	—
Finance lease payments	—	—	(4.5)
Repayments from (advances to) Solar Supplier	—	(26.5)	14.0
Finance costs paid	(4.2)	(7.8)	(9.5)
Non-IFRS free cash flow	$177.4	$113.2	$110.2

Cash used in investing activities:

Our capital expenditures for 2016 were $64.1 million (2015 — $62.8 million; 2014 — $61.3 million). The capital expenditures were incurred primarily to enhance our manufacturing capabilities in various geographies and to support new customer programs. We funded these capital expenditures from cash on hand. From time-to-time, we receive cash proceeds from the sale of surplus equipment and property.

In November 2016, we completed the acquisition of Karel. The purchase price of $14.9 million was financed with cash on hand. See "Overview — Recent developments — Asset purchase agreement" above. In 2015, we entered into a supply agreement with the Solar Supplier that included a commitment by us to provide cash advances to help secure our solar cell supply. See "Overview" above. We advanced $26.5 million under this agreement in 2015 (net of repayments in 2015) and received cash repayments of $14.0 million from the Solar Supplier in 2016.

In 2015, we received a cash deposit of $11.2 million related to the anticipated sale of our real property in Toronto. See "Cash Requirements" below for a description of the Property Sale Agreement.

Cash used in financing activities:

Share repurchases for cancellation:

During 2016, we paid $34.3 million (including transaction fees) to repurchase and cancel 3.2 million subordinate voting shares under our 2016 NCIB at a weighted average price of $10.69 per share, including 2.8 million subordinate voting shares repurchased at a weighted average price of $10.69 per share under a $30.0 million PSR we funded in March 2016.

In addition to the completion of a $350.0 million SIB in 2015, pursuant to which we repurchased and cancelled approximately 26.3 million subordinate voting shares, we also paid $19.8 million (including transaction fees) in 2015 to repurchase and cancel 1.7 million subordinate voting shares under our 2014 NCIB at a weighted average price of $11.66 per share.

The SIB was funded with the proceeds of a $250.0 million Term Loan, $25.0 million drawn on the Revolving Facility and $75.0 million of cash. See "Capital Resources" below for a description of the Term Loan and Revolving Facility. We borrowed an additional $40.0 million under the Revolving Facility in 2016 to fund a portion of the share repurchases under our 2016 NCIB (described above), including under the $30.0 million PSR. During 2016, we made scheduled quarterly principal repayments of $25.0 million (2015 — $12.5 million) under the Term Loan and a $50.0 million repayment under the Revolving Facility.

During 2014, pursuant to the NCIBs then in effect, we paid an aggregate of $90.6 million (including transaction fees) to repurchase and cancel a total of 8.5 million subordinate voting shares at a weighted average price of $10.72 per share. In December 2014, we also paid $50.0 million to a broker under a PSR for the right to receive a variable number of our subordinate voting shares upon such PSR's completion. We completed this PSR on January 28, 2015 pursuant to which we repurchased and canceled 4.4 million subordinate voting shares at a weighted average price of $11.38 per share.

Finance costs:

During 2016, we paid finance costs of $9.5 million (2015 — $7.8 million; 2014 — $4.2 million) (see "Cash requirements" below). Finance costs in 2015 also included $2.1 million of debt issuance costs in connection with the amendment of the credit facility in May 2015. Commencing in June 2015, finance costs include interest on the Term Loan.

Treasury share repurchases:

During 2016, we paid $18.2 million (including transaction fees) for a broker's purchase under the 2016 NCIB of 1.6 million subordinate voting shares in the open market for our stock-based compensation plans (2015 — $28.9 million paid to purchase 2.5 million subordinate voting shares; 2014 — $23.9 million paid to purchase 2.2 million subordinate voting shares).

Finance lease payments:

During 2016, we paid $4.5 million under our finance lease agreements (see "Cash Requirements" below). The payments under these leases reduced our non-IFRS free cash flow for the year. At December 31, 2016, $15.3 million of our finance lease obligations relate to manufacturing equipment for our solar panel business. As discussed above, we intend to terminate these leases upon disposition of the solar equipment thereunder and settle the remaining lease obligations in 2017. See "Overview — Recent developments" above.

Cash requirements:

We maintain a revolving credit facility, uncommitted bank overdraft facilities, and an A/R sales program, and participate in a customer's supplier financing program, to provide short-term liquidity and to have funds available for working capital and other investments to support our strategic priorities. Our working capital requirements can vary significantly from month-to-month due to a range of business factors, including the ramping of new programs, expansion of our services and business operations, timing of purchases, higher levels of inventory for new programs and anticipated customer demand, timing of payments and A/R collections, and customer forecasting variations. The international scope of our operations may also create working capital requirements in certain countries while other countries generate cash in excess of working capital needs. Moving cash between countries on a short-term basis to fund working capital is not always expedient due to local currency regulations, tax considerations, and other factors. To meet our working capital requirements and to provide short-term liquidity, we may draw on our Revolving Facility or sell A/R through our A/R sales program or participate in a customer's supplier financing program, while available. The timing and the amounts we borrow or repay under these facilities can vary significantly from month-to-month depending upon our cash requirements. In addition, since our A/R sales program and the supplier financing program are both on an uncommitted basis, there can be no assurance that any participant bank will purchase the accounts receivable we wish to sell to them under these programs. See "Capital Resources" below.

We believe the Term Loan was a more cost-effective method of financing a portion of the 2015 SIB than pursuing the use of the accordion feature of our Revolving Facility to increase its maximum limit, as the principal repayments under the Term Loan do not result in unused line fees. We do not believe that such indebtedness, or the aggregate costs of the SIB, have had or will have a material adverse impact on our liquidity, our results of operations or financial condition. We are required to make quarterly principal payments on the Term Loan of $6.25 million. We anticipate that interest on the Term Loan, based on current interest rates, will be approximately $2 million per quarter. Any increase in prevailing interest rates or margins could cause this amount to increase. See "Capital Resources — Financial risks — Interest rate risk" below. We believe that cash flow from operating activities, together with cash on hand, remaining availability under our Revolving Facility and intra-day and overnight bank overdraft facilities, and cash from the sale of A/R, will be sufficient to fund our currently anticipated working capital needs and planned capital spending (including the commitments described elsewhere herein).

We may issue debt, convertible debt or equity securities in the future to fund operations or make acquisitions. Equity or convertible debt securities could dilute current shareholders' positions; debt or convertible debt securities could have rights and privileges senior to those of equity holders and the terms of these debt securities could impose restrictions on our operations. The pricing of any such securities would be subject to market conditions at the time of issuance.

As at December 31, 2016, a significant portion of our cash and cash equivalents was held by foreign subsidiaries outside of Canada. Most of these amounts, however, are subject to withholding taxes upon repatriation under current tax laws. Cash and cash equivalents held by subsidiaries related to undistributed earnings that are considered indefinitely reinvested outside of Canada (which we do not intend to repatriate in the foreseeable future) are not subject to these withholding taxes. During 2016, we repatriated $50 million from one of our U.S. subsidiaries and remitted and recorded the required withholding taxes in current income taxes. We also currently expect to repatriate approximately $80 million from our Chinese subsidiaries in the near term and have recorded the anticipated future withholding taxes as deferred income tax liabilities. While some of our subsidiaries are subject to local governmental restrictions on the flow of capital into and out of their jurisdictions (including in the form of cash dividends, loans or advances to us), which is required or desirable from time to time to meet our international working capital needs and other business objectives (as described above), these restrictions have not had a material impact on our ability to meet our cash obligations. At December 31, 2016, we had approximately $340 million (December 31, 2015 — $405 million) of cash and cash equivalents that are held by foreign subsidiaries outside of Canada that we do not intend to repatriate in the foreseeable future.

As at December 31, 2016, we had known contractual obligations that require future payments as follows (in millions):

	Total	2017	2018	2019	2020	2021	Thereafter
Borrowings under credit facility[(i)]	$227.5	$ 25.0	$25.0	$25.0	$152.5	$—	$—
Operating leases	70.4	25.5	18.8	12.0	5.8	2.0	6.3
Finance leases[(ii)]	19.6	5.6	5.6	5.6	2.8	—	—
Pension plan contributions[(iii)]	12.4	12.4	—	—	—	—	—
Non-pension post-employment plan payments	33.0	3.4	2.2	3.2	3.0	2.8	18.4
Program transfer purchase obligation[(iv)]	30.0	30.0	—	—	—	—	—
Purchase obligations under IT support agreements[(v)]	22.2	8.2	8.0	6.0	—	—	—
Total[(vi)]	$415.1	$110.1	$59.6	$51.8	$164.1	$4.8	$24.7

(i) Represents our borrowings under the Revolving Facility and the Term Loan (based on amounts outstanding as of December 31, 2016), which mature concurrently on May 29, 2020, and excludes related interest and fees. The Term Loan requires mandatory quarterly principal repayments until its maturity and borrowings under the Revolving Facility are due upon maturity. We recorded the $15.0 million outstanding under the Revolving Facility at December 31, 2016 as current liabilities in our 2016 audited consolidated financial statements, as we anticipated the repayment of such amounts during 2017. Borrowings under the Revolving Facility bear interest for the period of the draw at various base rates selected by us consisting of LIBOR, Prime, Base Rate Canada, and Base Rate (each as defined in the amended credit agreement), plus a margin. Outstanding amounts under the Term Loan bear interest at LIBOR plus a margin ranging from 2.0% to 3.0% based on a financial ratio based on indebtedness. Based on the rates and the principal amount outstanding under the Term Loan ($212.5 million) and the Revolving Facility ($15 .0 million) as of December 31, 2016, interest and fees are estimated to be an aggregate of approximately $6 million to $8 million per year. Actual amounts could differ materially from these estimates. Payment defaults under the credit facility will incur interest on unpaid amounts at an annual rate equal to the sum of (i) 2%, plus (ii) the Prime Rate, in the case of overdue amounts payable in Canadian dollars, or the Base Rate Canada, in the case of overdue amounts payable in U.S. dollars. If an event of default occurs and is continuing, the administrative agent may declare all advances on the facility to be immediately due and payable, and may cancel the lenders' commitments to make further advances thereunder. See "Capital Resources" below and note 12 to our 2016 audited consolidated financial statements for a description of our credit facility, including amounts outstanding thereunder, repayment dates and interest obligations.

(ii) Represents contractual obligations under finance leases, including $15.3 million in outstanding equipment lease obligations related to our solar panel business. As a result of our decision in the fourth quarter of 2016 to exit the solar panel manufacturing business, we intend to terminate these leases upon disposition of the solar equipment and settle the remaining lease obligations in 2017. We have recorded all remaining payments thereunder as current liabilities in our 2016 audited consolidated financial statements.

(iii) Based on our latest actuarial valuations, we estimate our minimum funding requirement for 2017 to be $12.4 million (2016 — $19.4 million; 2015 — $25.3 million). In mid 2016, we provided a parental guarantee to the trustees of our U.K. pension plan, and since the plan is considered sufficiently funded, no further contributions to this plan were required. See further details in note 19 to our 2016 audited consolidated financial statements. A significant deterioration in the asset values or asset returns could lead to higher than expected future contributions. Risks and uncertainties associated with actuarial valuation measurements may also result in higher future cash contributions. We fund our pension contributions from cash on hand. Although we have defined benefit plans that are currently in a net unfunded position, we do not expect our pension obligations will have a material adverse impact on our future results of operations, cash flows or liquidity.

(iv) Represents the expected amount of inventory we have committed to purchase in connection with a program transfer currently anticipated to occur in the third quarter of 2017.

(v) Represents the minimum obligation related to IT support agreements.

(vi) This table excludes $34.8 million of long-term deferred income tax liabilities and $28.3 million of provisions and other non-current liabilities primarily pertaining to warranties and asset retirement obligations, as we are unable to reliably estimate the timing of any future payments related thereto. However, long-term liabilities included in our consolidated balance sheet include these items.

As at December 31, 2016, we had additional commitments that expire as follows (in millions):

	Total	2017	2018	2019	2020	2021	Thereafter
Foreign currency contracts[i]	$696.4	$696.4	$—	$—	$—	$—	$—
Letters of credit, letters of guarantee and surety bonds[ii]	37.8	12.9	1.2	—	21.9	0.2	1.6
Capital expenditures[iii]	35.4	35.4	—	—	—	—	—
Total	$769.6	$744.7	$1.2	$—	$21.9	$0.2	$1.6

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

(ii) Includes $25.8 million in letters of credit that we issued under our Revolving Facility.

(iii) Our capital spending varies each period based on the timing of new business wins and forecasted sales levels. Based on our current operating plans, we anticipate capital spending for 2017 to be approximately 1.0% to 1.5% of revenue, and expect to fund these expenditures from cash on hand and through the financing agreements described below. As at December 31, 2016, we had committed $35.4 million for capital expenditures, principally for machinery and equipment to support new customer programs.

In addition to the commitments set forth in the tables above, we also have outstanding purchase orders with suppliers for the purchase of inventory. These purchase orders are generally short-term in nature. As of December 31, 2016, our binding purchase obligations amounted to approximately $800 million. A substantial portion of these purchase orders are for standard inventory items which we have procured for specific customers based on their purchase orders or forecasts under which such customers have contractually assumed liability for such material.

Customer or program transfers between EMS providers are part of the competitive nature of our industry. From time-to-time, we make commitments to purchase assets, primarily inventory, or fund certain costs, as part of transitioning programs from a customer or a competitor. In April 2015, we purchased $27.6 million of inventory and assumed the relevant workforce in connection with a program transferred to us from one of our aerospace and defense customers. In the fourth quarter of 2016, we made a commitment to one of our customers to purchase approximately $30 million of inventory and assume the relevant workforce in connection with a program that is currently anticipated to transfer to us in the third quarter of 2017, however the final amount will be determined at the time of the program transfer. See "Program transfer purchase obligation" in the contractual obligations table above.

We have entered into financing agreements for the lease of machinery and equipment. For leases where the risks and rewards of ownership have substantially transferred to us, we capitalize the leased asset and record a corresponding liability on our consolidated balance sheet. In relation to our global solar expansion plan described in "Overview" above, we entered into five-year lease agreements in April 2015, pursuant to which we leased $19.3 million of manufacturing equipment for our solar operations in Asia. At December 31, 2016, our remaining solar equipment lease obligations totaled $15.3 million, which we have recorded as current liabilities as we intend to terminate and settle these leases in 2017. See "Finance leases" in the contractual obligations table above.

On July 23, 2015, we entered into the 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. Subject to completion of the transaction, the purchase price is approximately $137 million Canadian dollars (approximately $101 million at year-end exchange rates), exclusive of applicable taxes and subject to certain adjustments. Upon execution of the Property Sale Agreement, the Property Purchaser paid us a cash deposit of $15 million Canadian dollars ($11.2 million at the then-prevailing exchange rate), which is non-refundable except in limited circumstances. Upon closing, which is subject to various conditions, including municipal approvals and is currently anticipated to occur within approximately two years from the execution date of the Property Sale Agreement (*i.e.* the latter half of 2017), the Property Purchaser is to pay us an additional $53.5 million Canadian dollars in cash (approximately $40 million at year-end exchange rates). The balance of the purchase price is to be satisfied upon closing by an interest-free, first-ranking mortgage in the amount of $68.5 million Canadian dollars (approximately $51 million at year-end exchange rates) to be registered on title to the property and having a term of two years from the closing date. There can be no assurance that this transaction will be completed within the expected time period, or at all. As part of the transaction, we have agreed, upon closing, to enter into an interim lease for our existing corporate head office and manufacturing premises on a portion of the real estate for an initial two-year term on a rent-free basis (subject to certain payments including taxes and utilities), which is to be followed by a longer-term lease for our new corporate headquarters, on commercially reasonable arm's-length terms. Should the transaction close, we expect to be able to find a replacement site on commercially acceptable terms for our Toronto manufacturing operations, but there can be no assurance that this will be the case. Should the transaction close, we expect to incur significant transition costs to transfer the manufacturing operations to an alternate location and to prepare and customize the new site to meet our manufacturing needs. The costs, timing, and execution of this relocation could have a material adverse impact on our business, our operating results and our financial position.

We have granted share unit awards to employees under our stock-based compensation plans. Under one such plan, 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, although we currently expect to satisfy these awards with subordinate voting shares purchased in the open market. Under our other stock-based compensation plan, we may (at the time of grant) authorize the grantee to elect to settle awards in either cash or subordinate voting shares. Absent such permitted election, grants will be settled in subordinate voting shares, which may be purchased in the open market or issued from treasury, subject to certain limits. The timing of, and the amounts paid for, these purchases can vary from period to period. We have funded, and expect to continue to fund, share repurchases for this purpose from cash on hand. During 2016, we paid \$18.2 million (2015 — \$28.9 million; 2014 — \$23.9 million) to purchase subordinate voting shares in the open market through a broker for this purpose.

We have and intend to continue to fund share repurchases under our NCIBs and our SIBs from cash on hand, borrowings under our credit facility, or a combination thereof. During 2016, we paid \$34.3 million (2015 — \$370.4 million; 2014 — \$140.6 million) to repurchase subordinate voting shares in the open market for cancellation.

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

Litigation and contingencies:

In the normal course of our operations, we may be subject to lawsuits, investigations and other claims, including environmental, labor, product, customer disputes and other matters. Management believes that adequate provisions have been recorded in the accounts 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.

In 2007, securities class action proceedings were initiated against us and our former Chief Executive and Chief Financial Officers in the Ontario Superior Court of Justice. The proceedings were finally dismissed on January 16, 2017 with no payments by the defendants.

See "Operating Results — Income taxes" above for a description of the status of certain income tax settlements and contingencies.

Capital Resources

Our capital resources consist of cash, short-term investments, access to a revolving credit facility, intraday and overnight bank overdraft facilities, an A/R sales program, a customer's supplier financing program and capital stock. We regularly review our borrowing capacity and make adjustments, as permitted, for changes in economic conditions and changes in our requirements. We centrally manage our funding and treasury activities in accordance with corporate policies, the main objectives of which are to ensure appropriate levels of liquidity, to have funds available for working capital or other investments we determine are required to grow our business, to comply with debt covenants, to maintain adequate levels of insurance, and to balance our exposures to market risks.

At December 31, 2016, we had cash and cash equivalents of $557.2 million (December 31, 2015 — $545.3 million), of which approximately 83% was cash and 17% was cash equivalents, consisting of bank deposits. The majority of our cash and cash equivalents was denominated in U.S. dollars, and the remainder was held primarily in Canadian dollars and Chinese renminbi. We also held cash and cash equivalents in the following currencies: British pound sterling, Brazilian real, Czech koruna, Euro, Hong Kong dollar, Indian rupee, Japanese yen, Lao kip, Malaysian ringgit, Mexican peso, Philippines peso, Romanian leu, Singapore dollar, Swiss franc, Taiwan dollar and Thai baht.

The majority of our cash and cash equivalents is held with financial institutions each of which had at December 31, 2016 a Standard and Poor's short-term rating of A-1 or above. Our cash and cash equivalents are subject to intra-quarter swings, generally related to the timing of A/R collections, inventory purchases and payments, and other capital uses.

We amended our $300.0 million Revolving Facility in 2015 to extend its maturity to May 2020, and to add a $250.0 million non-revolving Term Loan to the facility. In June 2015, we funded a portion of our share repurchases under the SIB with the proceeds of the $250.0 million Term Loan, $25.0 million drawn on the Revolving Facility and $75.0 million in cash. The Revolving Facility has an accordion feature that allows us to increase the $300.0 million limit by an additional $150.0 million on an uncommitted basis upon satisfaction of certain terms and conditions. The Revolving Facility also includes a $25.0 million swing line, subject to the overall revolving credit limit, that provides for short-term borrowings up to a maximum of seven days. The Revolving Facility permits us and certain designated subsidiaries to borrow funds for general corporate purposes, including acquisitions. Borrowings under the Revolving Facility bear interest for the period of the draw at various base rates selected by us consisting of LIBOR, Prime, Base Rate Canada, and Base Rate (each as defined in the amended credit agreement), plus a margin. The margin for borrowings under the Revolving Facility ranges from 0.6% to 1.4% (except in the case of the LIBOR base rate, in which case, the margin ranges from 1.6% to 2.4%), based on a specified financial ratio based on indebtedness. Outstanding amounts under the Revolving Facility are due at maturity (but are permitted to be repaid prior thereto, and are required to be repaid under specified circumstances). The Term Loan bears interest at LIBOR plus a margin ranging from 2.0% to 3.0% based on the same financial ratio. The Term Loan requires quarterly principal repayments of $6.25 million, with the remainder due at maturity. We are permitted to make voluntary prepayments of the Term Loan, subject to certain terms and conditions. Prepayments on the Term Loan are also required under certain circumstances. Repaid amounts on the Term Loan may not be re-borrowed. During 2016, we borrowed $40.0 million under the Revolving Facility to fund share repurchases under our 2016 NCIB, including the $30.0 million PSR thereunder. In 2016, we repaid a total of $50.0 million under the Revolving Facility and $25.0 million under the Term Loan. During 2016, we incurred $7.3 million in interest expense under our credit facility (2015 — $3.9 million; 2014 — no amounts incurred).

We are required to comply with certain restrictive covenants under the credit facility, including those relating to the incurrence of senior ranking indebtedness, the sale of assets, a change of control, and certain financial covenants related to indebtedness and interest coverage. Certain of our assets are pledged as security for borrowings under this facility. If an event of default occurs and is continuing, the administrative agent may declare all advances on the facility to be immediately due and payable and may cancel the lenders' commitments to make further advances thereunder. At December 31, 2016, there was $227.5 million outstanding under our credit facility (December 31, 2015 — $262.5 million outstanding), and we were in compliance with all restrictive and financial covenants thereunder. The amended facility is scheduled to mature in May 2020.

At December 31, 2016, we had $25.8 million (December 31, 2015 — $27.2 million) outstanding in letters of credit under the Revolving Facility. We also arrange letters of credit and surety bonds outside of the Revolving Facility. At December 31, 2016, we had $12.0 million (December 31, 2015 — $8.5 million) of such letters of credit and surety bonds outstanding.

At December 31, 2016, we had $259.2 million available under the Revolving Facility for future borrowings. We also have a total of $70.0 million of uncommitted bank overdraft facilities available for intraday and overnight operating requirements. There were no amounts outstanding under these overdraft facilities at December 31, 2016 or December 31, 2015.

We have an accounts receivable sales agreement to sell up to $250.0 million at any one time in accounts receivable on an uncommitted basis (subject to pre-determined limits by customer) to two third-party banks. Each of these banks 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, 2016. The term of this agreement has been annually extended in recent years for additional one-year periods (and is currently extendable to November 2018 under specified circumstances), but may be terminated earlier as provided in the agreement. At December 31, 2016, $50.0 million (December 31, 2015 — $50.0 million) of A/R were sold under this facility, and de-recognized from our accounts receivable balance. As our A/R sales program is on an uncommitted basis, there can be no assurance that any of the banks will purchase the A/R we intend to sell to them under this program.

We have entered into an agreement with a third-party bank as part of a customer's supplier financing program. The successor company in an August 2016 acquisition of one of our significant customers (Successor Customer) has required longer than historical payment terms commencing with orders after October 1, 2016. In connection therewith, we registered for the Successor Customer's supplier financing program pursuant to which participating suppliers may sell accounts receivable from the Successor Customer to a third-party bank on an uncommitted basis in order to receive earlier payment. At December 31, 2016, we sold $51.4 million of accounts receivable under this program (December 31, 2015 — nil). We utilized this program to substantially offset the effect of the extended payment terms on our working capital for the period. As the supplier financing program is on an uncommitted basis, there can be no assurance that the bank will purchase the A/R we intend to sell to them thereunder.

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

Standard and Poor's assigns a corporate credit rating to Celestica. This rating is not a recommendation to buy, sell or hold securities, inasmuch as it does not comment as to market price or suitability for a particular investor. This rating may be subject to revision or withdrawal at any time by the rating organization. At December 31, 2016, our Standard and Poor's corporate credit rating was BB, with a stable outlook. A reduction in our credit rating or change in outlook could adversely impact our future cost of borrowing.

Our strategy on capital risk management has not changed significantly since the end of 2015. Other than the restrictive and financial covenants associated with our credit facility noted above, we are not subject to any contractual or regulatory capital requirements. While some of our international operations are subject to government restrictions on the flow of capital into and out of their jurisdictions, these restrictions have not had a material impact on our operations or cash flows.

Financial instruments:

Our short-term investment objectives are to preserve principal and to maximize yields without significantly increasing risk, while at the same time not materially restricting our short-term access to cash. To achieve these objectives, we maintain a portfolio consisting of a variety of securities, including bank deposits and certain money market funds that primarily hold U.S. government securities, as applicable.

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

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

At December 31, 2016, we had forward exchange contracts to trade U.S. dollars in exchange for the following currencies:

Currency	Contract amount in U.S. dollars (in millions)	Weighted average exchange rate of U.S. dollars	Maximum period in months	Fair value gain (loss) (in millions)
Canadian dollar	$232.5	$0.75	12	$(3.1)
Thai baht	95.6	0.03	12	(1.9)
Malaysian ringgit	46.8	0.24	11	(2.9)
Mexican peso	23.7	0.05	12	(1.3)
British pound	119.4	1.26	4	2.7
Chinese renminbi	77.8	0.15	12	(1.9)
Euro	52.7	1.09	12	0.9
Romanian leu	18.5	0.25	12	(1.1)
Singapore dollar	24.3	0.72	12	(1.0)
Other	5.1			—
Total	$696.4			$(9.6)

These contracts, which generally extend for periods of up to 12 months, will expire by the end of the fourth quarter of 2017. The fair value of the outstanding contracts at December 31, 2016 was a net unrealized loss of $9.6 million (December 31, 2015 — net unrealized loss of $24.0 million). The unrealized gains or losses are a result of fluctuations in foreign exchange rates between the date the currency forward contracts were entered into and the valuation date at period end.

Financial risks:

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

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

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

Interest rate risk: Borrowings under our credit facility bear interest at specified rates, plus specified margins (as described above). Our borrowings under this facility, which at December 31, 2016 totaled $227.5 million, expose us to interest rate risk due to potential increases to the specified rates and margins. A one-percentage point increase in these rates would increase interest expense, based on outstanding borrowings of $227.5 million at December 31, 2016, by approximately $2.3 million annually.

Credit risk: Credit risk refers to the risk that a counterparty may default on its contractual obligations resulting in a financial loss to us. We believe our credit risk of counterparty non-performance is relatively low, however, if a key supplier (or any company within our supply chain) or customer experiences financial difficulties or fails to comply with their contractual obligations, this could result in a financial loss to us. See "Overview — Overview of business environment" above. 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 exchange contracts, our contracts are held by counterparty financial institutions, each of which had at December 31, 2016 a Standard and Poor's rating of A-2 or above. In addition, we maintain cash and short-term investments in highly rated investments or on deposit with major financial institutions. Each financial institution with which we have our A/R sales program and the supplier financing program 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, 2016. Each financial institution from which annuities have been purchased for the defined benefit component of a pension plan had an A.M. Best or Standard and Poor's long-term rating of A or above at December 31, 2016. We also provide unsecured credit to our customers in the normal course of business. From time to time, we extend the payment terms applicable to certain customers. If this becomes our practice, it could adversely impact our working capital requirements, and increase our financial exposure and credit risk. We attempt to mitigate customer credit risk by monitoring our customers' financial condition and performing ongoing credit evaluations as appropriate. In certain instances, we may obtain letters of credit or other forms of security from our customers. We may also purchase credit insurance from a financial institution to reduce our credit exposure to certain customers. We consider credit risk in determining our allowance for doubtful accounts and we believe our allowances are adequate.

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 believe that cash flow from operating activities, together with cash on hand, cash from the sale of A/R, and borrowings available under our Revolving Facility and intraday and overnight bank overdraft facilities are sufficient to fund our currently anticipated financial obligations.

See note 21 to our 2016 audited consolidated financial statements for further details.

Related Party Transactions

Onex Corporation (Onex) beneficially owns or controls, directly or indirectly, all of our outstanding multiple voting shares. Accordingly, Onex has the ability to exercise significant influence over our business and affairs and generally has the power to determine all matters submitted to a vote of our shareholders where the subordinate voting shares and multiple voting shares vote together as a single class. Mr. Gerald Schwartz, the Chairman of the Board, President and Chief Executive Officer of Onex, was also one of our directors (until December 31, 2016), and holds, directly or indirectly, 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 as a director of Celestica, pursuant to which Onex received compensation for such services. The initial term of this agreement was one year and it automatically renews for successive one-year terms unless either party provides a notice of intent not to renew. In connection with the retirement of Mr. Schwartz from our Board of Directors as of December 31, 2016, and the appointment of Mr. Tawfiq Popatia (also an officer of Onex) as his replacement effective January 1, 2017, the Services Agreement was amended as of such date to replace all references to Mr. Schwartz therein with references to Mr. Popatia, and to increase the annual fee payable to Onex thereunder from $200,000 per year to $235,000 per year (to be consistent with current annual Board retainer fees), payable in DSUs in equal quarterly installments in arrears. The Services Agreement terminates automatically and the rights of Onex to receive compensation (other than accrued and unpaid compensation) will terminate (a) 30 days after the first day on which Onex ceases to hold at least one MVS of Celestica or any successor company or (b) the date Mr. Popatia ceases to be a director of Celestica for any reason.

Also see discussion in "Cash requirements" above for a description of the Property Sale Agreement (and expected lease arrangements) with respect to our real property located in Toronto, Ontario (which includes our corporate headquarters and our Toronto manufacturing operations). Approximately 30% of the interests in the Property Purchaser are to be held by a privately-held company in which Mr. Schwartz has a material interest. Mr. Schwartz also has a non-voting interest in an entity which is to have an approximate 25% interest in the Property Purchaser.

Given the interest in the transaction by a related party, our board of directors formed a Special Committee, consisting solely of independent directors, which retained its own independent legal counsel, to review and supervise a competitive bidding process. The Special Committee, after considering, among other factors, that the purchase price for the property exceeded the valuation provided by an independent appraiser, determined that the Property Purchaser's transaction terms were in the best interests of Celestica. Our board of directors, at a meeting where Mr. Schwartz was not present, approved the transaction based on the unanimous recommendation of the Special Committee.

Outstanding Share Data

As of February 15, 2017, we had 124,104,258 outstanding subordinate voting shares and 18,946,368 outstanding multiple voting shares. As of such date, we also had 1,036,719 outstanding stock options, 3,878,999 outstanding RSUs, 5,821,434 outstanding PSUs (assuming a maximum payout), and 1,460,561 outstanding DSUs, each vested option or unit entitling the holder thereof to receive one subordinate voting share (or in certain cases, cash) pursuant to the terms thereof (subject to certain time or performance-based vesting conditions).

Controls and Procedures

Evaluation of disclosure controls and procedures:

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

Under the supervision of and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, we have evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of December 31, 2016. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2016, our disclosure controls and procedures are effective to meet the requirements of Rules 13a-15(e) and 15d-15(e) under the U.S. Exchange Act.

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

Changes in internal control over financial reporting:

We did not identify any change in our internal control over financial reporting in connection with our evaluation thereof, that occurred during the year ended December 31, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's report on internal control over financial reporting:

Reference is made to our Management's Report on page F-1 of our Annual Report on Form 20-F for the year ended December 31, 2016. Our auditors, KPMG LLP, an independent registered public accounting firm, have issued an audit report on our internal control over financial reporting as of December 31, 2016. This report appears on page F-2 of such Annual Report.

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

	2015				2016			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenue	$1,298.5	$1,417.3	$1,408.5	$1,514.9	$1,353.3	$1,485.5	$1,554.0	$1,623.7
Gross profit %	7.0%	6.9%	7.2%	6.7%	6.9%	7.5%	7.1%	6.9%
Net earnings	$ 19.7	$ 24.2	$ 10.9	$ 12.1	$ 25.6	$ 36.2	$ 53.6	$ 20.9
Weighted average # of basic shares	172.3	164.9	143.0	143.1	143.5	142.1	140.8	140.9
Weighted average # of diluted shares	174.3	166.9	145.3	145.2	145.2	144.1	143.0	143.4
# of shares outstanding	169.2	142.9	143.0	143.5	143.3	140.7	140.8	140.9
IFRS earnings per share:								
basic	$ 0.11	$ 0.15	$ 0.08	$ 0.08	$ 0.18	$ 0.25	$ 0.38	$ 0.15
diluted	$ 0.11	$ 0.14	$ 0.08	$ 0.08	$ 0.18	$ 0.25	$ 0.37	$ 0.15

Comparability quarter-to-quarter:

The quarterly data reflects the following: the fourth quarters of 2015 and 2016 include the results of our annual impairment testing of goodwill, intangible assets and property, plant and equipment; and all quarters commencing with the second quarter of 2015 have been impacted by our restructuring actions. The amounts attributable to these items vary from quarter-to-quarter.

Fourth quarter 2016 compared to fourth quarter 2015:

Revenue of $1.62 billion for the fourth quarter of 2016 increased 7% compared to the same period in 2015. Compared to the fourth quarter of 2015, revenue dollars in the fourth quarter of 2016 from our communications end markets increased 24%, primarily due to demand strength and new programs, and revenue dollars from our storage end market increased 6%, primarily due to new programs ramping, offset in part by softer demand in some of our legacy programs. These increases were offset by a 36% revenue decrease in our consumer end market compared to the same period in the prior year, reflecting the previously disclosed completion of programs with one of our largest customers in this end market, and revenue dollars from our servers end market decreased 19%, primarily due to customer demand softness. Revenue dollars from our diversified end market remained relatively flat in the fourth quarter of 2016 compared to the prior year period, as growth from our semiconductor business was offset by decreases in our solar panel business. Gross margin for the fourth quarter of 2016 increased to 6.9% of total revenue compared to 6.7% of total revenue for the same period in 2015, primarily due to higher revenue levels and margin improvements in our diversified end market, including in each of our semiconductor and solar panel businesses. Although revenue was higher in the fourth quarter of 2016, gross margin was negatively impacted by changes in program mix. In addition, during the fourth quarter of 2015, we incurred higher than expected costs as we were ramping our new solar panel business in Asia. Net earnings for the fourth quarter of 2016 of $20.9 million were $8.8 million higher compared to the same period in the prior year, primarily due to higher gross profit and a net benefit of approximately $10 million related to income taxes, comprised primarily of income tax recoveries and related refund interest income we recorded in the fourth quarter of 2016, offset in part by higher other charges of $11.5 million (comprised primarily of a $22.3 million increase in restructuring charges incurred in the fourth quarter of 2016 as compared to the prior year period, offset in part by $12.2 million lower impairment losses compared to the fourth quarter of 2015). See "Operating Results — Income taxes" and "Operating Results — Other charges" above for further details.

Fourth quarter 2016 compared to third quarter 2016:

Revenue of $1.62 billion for the fourth quarter of 2016 increased 4% compared to the third quarter of 2016. Compared to the previous quarter, revenue dollars from our storage and servers end markets increased 15% and 7%, respectively, primarily due to demand strength and revenue dollars from our communications end market increased 6%, primarily due to strong demand, including from new programs. These increases were offset in part by a 4% sequential revenue decrease in our diversified end market, primarily in our solar panel business, and a 17% sequential revenue decrease in our consumer end market, reflecting the completion of programs with one of our largest customers in this end market. Gross margin for the fourth quarter of 2016 decreased to 6.9% of total revenue compared to 7.1% of total revenue for the third quarter of 2016. Although revenue was higher in the fourth quarter of 2016, gross margin was negatively impacted by changes in program mix, notwithstanding the higher provisions we recorded in the third quarter of 2016 primarily to write down our solar panel inventory. Net earnings for the fourth quarter of 2016 of $20.9 million were $32.7 million lower compared to the previous quarter, primarily due to $23.4 million in higher restructuring charges and $8.6 million in higher income tax expense in the fourth quarter of 2016.

Fourth quarter 2016 actual compared to guidance:

IFRS earnings per share (EPS) for the fourth quarter of 2016 of $0.15 on a diluted basis were favorably impacted by a $0.07 per share net benefit related to income taxes, comprised of a $0.10 per share income tax recovery attributable to the resolution of certain previously disputed tax matters in Canada (including related refund interest income) and a $0.03 per share favorable deferred tax recovery, offset in part by a $0.06 per share income tax expense related to taxable foreign exchange. See "Operating Results — Income taxes" above. IFRS EPS for the fourth quarter of 2016 also reflected an aggregate charge of $0.25 (pre-tax) per share for employee stock-based compensation expense, amortization of intangible assets (excluding computer software) and restructuring charges, which was above the range we provided on October 20, 2016 of an aggregate charge of between $0.09 to $0.14 per share for these items, due to higher than anticipated restructuring charges recorded in the fourth quarter of 2016 related to our exit from the solar panel manufacturing business. We cannot predict changes in currency exchange rates, the impact of such changes on our operating results, or the degree to which we will be able to manage such impacts. IFRS earnings before income taxes as a percentage of revenue for the fourth quarter of 2016 was 1.8%.

On October 20, 2016, we provided the following guidance for the fourth quarter of 2016:

	Q4 2016	
	Guidance	Actual
IFRS revenue (in billions)	$1.5 to $1.6	$1.62
Non-IFRS operating margin	3.8% at the mid-point of expectations	3.8%
Non-IFRS adjusted earnings per share (diluted)	$0.29 to $0.35	$0.41

For the fourth quarter of 2016, revenue of $1.62 billion was above the high end of our guidance range primarily as a result of increased demand from our communications end market. Our non-IFRS operating margin of 3.8% for the fourth quarter of 2016 was consistent with the mid-point of our expectations. Our non-IFRS adjusted EPS of $0.41 per share for the fourth quarter of 2016 was above our guidance range, and was favorably impacted by the factors that impacted IFRS EPS (as discussed above). Non-IFRS adjusted EPS would have been towards the high end of our guidance range for the quarter without the net income tax benefits referred to above. None of these impacts were factored into our guidance for non-IFRS adjusted EPS for the fourth quarter of 2016.

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

Non-IFRS measures:

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

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

In addition to cash cycle days (including the components thereof) and inventory turns (each described under the caption "Other Performance Indicators" above), which have no defined meanings under IFRS, we use the following non-IFRS measures: adjusted gross profit, adjusted gross margin (adjusted gross profit as a percentage of revenue), adjusted SG&A, adjusted SG&A as a percentage of revenue, operating earnings (adjusted EBIAT), operating margin (operating earnings as a percentage of revenue), adjusted net earnings, adjusted EPS, adjusted ROIC, free cash flow and adjusted effective tax rate. Adjusted EBIAT, adjusted ROIC, free cash flow and adjusted effective tax rate are further described in the tables below. In calculating these non-IFRS financial measures, management excludes the following items, where applicable: employee stock-based compensation expense, amortization of intangible assets (excluding computer software), restructuring and other charges, net of recoveries (most significantly restructuring charges), the write-down of goodwill, intangible assets and property, plant and equipment, and gains or losses related to the repurchase of our securities, net of associated tax adjustments, and deferred tax write-offs or recoveries associated with restructuring actions or restructured sites.

Non-IFRS measures do not have any standardized meaning prescribed by IFRS and may not be comparable to similar measures presented by other companies. Non-IFRS measures are not measures of performance under IFRS and should not be considered in isolation or as a substitute for any standardized measure under IFRS. The most significant limitation to management's use of non-IFRS financial measures is that the charges or credits excluded from the non-IFRS measures are nonetheless charges or credits that are recognized under IFRS and that have an economic impact on us. Management compensates for these limitations primarily by issuing IFRS results to show a complete picture of our performance, and reconciling non-IFRS results back to IFRS results.

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

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

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

Restructuring and other charges, net of recoveries, include costs relating to employee severance, lease terminations, site closings and consolidations, write-downs of owned property and equipment which are no longer used and are available for sale, reductions in infrastructure, and acquisition-related transaction costs. We exclude restructuring and other charges, net of recoveries, because we believe that they are not directly related to ongoing operating results and do not reflect expected future operating expenses after completion of these activities. We believe these exclusions permit a better comparison of our core operating results with those of our competitors who also generally exclude these charges, net of recoveries, in assessing operating performance.

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

Gains or losses related to the repurchase of our securities are excluded, as we believe that these gains or losses do not reflect core operating performance and vary significantly among those of our competitors who also generally exclude these gains or losses in assessing operating performance.

Deferred tax write-offs or recoveries associated with restructuring actions or restructured sites are excluded, as we believe that these write-offs or recoveries do not reflect core operating performance and vary significantly among those of our competitors who also generally exclude these charges or recoveries in assessing operating performance.

The following table sets forth, for the periods indicated, the various non-IFRS measures discussed above, and a reconciliation of IFRS to non-IFRS measures (in millions, except percentages and per share amounts):

	Three months ended December 31				Year ended December 31			
	2015		2016		2015		2016	
		% of revenue		% of revenue		% of revenue		% of revenue
IFRS revenue	$1,514.9		$1,623.7		$5,639.2		$6,016.5	
IFRS gross profit	$ 101.3	6.7%	$ 111.9	6.9%	$ 391.1	6.9%	$ 427.6	7.1%
Employee stock-based compensation expense	4.3		4.6		16.3		15.0	
Non-IFRS adjusted gross profit	$ 105.6	7.0%	$ 116.5	7.2%	$ 407.4	7.2%	$ 442.6	7.4%
IFRS SG&A	$ 51.8	3.4%	$ 53.2	3.3%	$ 207.5	3.7%	$ 211.1	3.5%
Employee stock-based compensation expense	(6.5)		(5.8)		(21.3)		(18.0)	
Non-IFRS adjusted SG&A	$ 45.3	3.0%	$ 47.4	2.9%	$ 186.2	3.3%	$ 193.1	3.2%
IFRS earnings before income taxes	$ 23.8	1.6%	$ 29.3	1.8%	$ 109.1	1.9%	$ 161.0	2.7%
Finance costs	2.6		2.7		6.3		10.0	
Refund interest income	—		(8.3)		—		(14.3)	
Employee stock-based compensation expense	10.8		10.4		37.6		33.0	
Amortization of intangible assets (excluding computer software)	1.5		1.5		6.0		6.0	
Net restructuring, Impairment and other charges	14.3		25.8		35.8		25.5	
Non-IFRS operating earnings (adjusted EBIAT)(1)	$ 53.0	3.5%	$ 61.4	3.8%	$ 194.8	3.5%	$ 221.2	3.7%
IFRS net earnings	$ 12.1	0.8%	$ 20.9	1.3%	$ 66.9	1.2%	$ 136.3	2.3%
Employee stock-based compensation expense	10.8		10.4		37.6		33.0	
Amortization of intangible assets (excluding computer software)	1.5		1.5		6.0		6.0	
Net restructuring, Impairment and other charges	14.3		25.8		35.8		25.5	
Adjustments for taxes(2)	0.2		0.9		(1.3)		0.1	
Non-IFRS adjusted net earnings	$ 38.9		$ 59.5		$ 145.0		$ 200.9	
Diluted EPS								
Weighted average # of shares (in millions)*	145.2		143.4		157.9		143.9	
IFRS earnings per share	$ 0.08		$ 0.15		$ 0.42		$ 0.95	
Non-IFRS adjusted earnings per share	$ 0.27		$ 0.41		$ 0.92		$ 1.40	
# of shares outstanding at period end (in millions)	143.5		140.9		143.5		140.9	
IFRS cash provided by operations	$ 92.0		$ 87.5		$ 196.3		$ 173.3	
Purchase of property, plant and equipment, net of sales proceeds	(15.4)		(17.8)		(60.0)		(63.1)	
Deposit on anticipated sale of real property	—		—		11.2		—	
Finance lease payments	—		(1.0)		—		(4.5)	
Repayments from (advances to) Solar Supplier	1.8		3.0		(26.5)		14.0	
Finance costs paid	(2.4)		(2.4)		(7.8)		(9.5)	
Non-IFRS free cash flow(3)	$ 76.0		$ 69.3		$ 113.2		$ 110.2	
IFRS ROIC %(4)	9.6%		10.8%		11.1%		15.2%	
Non-IFRS Adjusted ROIC %(4)	21.4%		22.7%		19.8%		20.8%	

* The calculation of our weighted average number of shares (used to determine our IFRS EPS and non-IFRS adjusted EPS) for the year ended December 31, 2016 reflects the full impact of the reduction in outstanding subordinate voting shares as a result of our share repurchases and cancellations in 2015 pursuant to our $350.0 million substantial issuer bid and our NCIB then in effect. Accordingly, the positive effect of the reduced weighted average number of shares on our IFRS EPS and non-IFRS adjusted EPS for the year ended December 31, 2016 was greater as compared to the full year 2015.

(1) Management uses non-IFRS operating earnings (adjusted EBIAT) as a measure to assess our operational performance related to our core operations. Non-IFRS adjusted EBIAT is defined as earnings before finance costs (consisting of interest and fees related to our credit facility, our accounts receivable sales program, and a customer's supplier financing program), amortization of intangible assets (excluding computer software) and income taxes. Non-IFRS adjusted EBIAT also excludes, in periods where such charges have been recorded, employee stock-based compensation expense, restructuring and other charges, including acquisition-related transaction costs (net of recoveries), gains or losses related to the repurchase of our securities, impairment charges and refund interest income. Refund interest income represents the refund of interest on cash then held on account with tax authorities in connection with the resolution of

certain previously disputed tax matters in the second half of 2016 (see notes 20 and 24 to our 2016 audited consolidated financial statements).

(2) The adjustments for taxes, as applicable, represent the tax effects on the non-IFRS adjustments.

Our effective tax rate for the fourth quarter of 2016 was 29%. After excluding the tax effects of employee stock-based compensation expense of $10.4 million, amortization of intangible assets (excluding computer software) of $1.5 million, net restructuring, impairment and other charges of $25.8 million, and other tax charges related to restructured sites of $0.5 million, our non-IFRS adjusted effective tax rate for the fourth quarter of 2016 was 11%. Our effective tax rate for the full year 2016 was 15%. After excluding the tax effects of employee stock-based compensation expense of $33.0 million, amortization of intangible assets (excluding computer software) of $6.0 million, net restructuring, impairment and other charges of $25.5 million, and other tax charges related to restructured sites of $1.4 million, our non-IFRS adjusted effective tax rate for the full year 2016 was 11%.

Our effective tax rate for the fourth quarter of 2015 was 49%. After excluding the tax effects of employee stock-based compensation expense of $10.8 million, amortization of intangible assets (excluding computer software) of $1.5 million, and net restructuring, impairment and other charges of $14.3 million, our non-IFRS adjusted effective tax rate for the fourth quarter of 2015 was 23%. Our effective tax rate for the full year 2015 was 39%. After excluding the tax effects of employee stock-based compensation expense of $37.6 million, amortization of intangible assets (excluding computer software) of $6.0 million, net restructuring, impairment and other charges of $35.8 million, and other tax charges related to restructured sites of $1.2 million, our non-IFRS adjusted effective tax rate for the full year 2015 was 23%.

(3) Management uses non-IFRS free cash flow as a measure, in addition to IFRS cash flow provided by (used in) operations, to assess our operational cash flow performance. We believe non-IFRS free cash flow provides another level of transparency to our liquidity. Non-IFRS free cash flow is defined as cash provided by (used in) operations after the purchase of property, plant and equipment (net of proceeds from the sale of certain surplus equipment and property), deposits received on the anticipated sale of real property (see note 18 to our 2016 audited consolidated financial statements), finance lease payments, advances to (or repayments from) a solar supplier, and finance costs paid. Note that non-IFRS free cash flow, however, does not represent residual cash flow available to Celestica for discretionary expenditures.

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

The following table sets forth, for the periods indicated, our calculation of IFRS ROIC and non-IFRS adjusted ROIC % (in millions, except IFRS ROIC % and non-IFRS adjusted ROIC %):

	Three months ended December 31		Year ended December 31	
	2015	2016	2015	2016
IFRS earnings before income taxes	$ 23.8	$ 29.3	$ 109.1	$ 161.0
Multiplier	4	4	1	1
Annualized IFRS earnings before income taxes	$ 95.2	$ 117.2	$ 109.1	$ 161.0
Average net invested capital for the period	$992.5	$1,083.8	$ 984.0	$1,062.3
IFRS ROIC %(1)	9.6%	10.8%	11.1%	15.2%

	Three months ended December 31		Year ended December 31	
	2015	2016	2015	2016
Non-IFRS operating earnings (adjusted EBIAT)	$ 53.0	$ 61.4	$ 194.8	$ 221.2
Multiplier	4	4	1	1
Annualized non-IFRS adjusted EBIAT	$ 212.0	$ 245.6	$ 194.8	$ 221.2
Average net invested capital for the period	$ 992.5	$1,083.8	$ 984.0	$1,062.3
Non-IFRS adjusted ROIC %(1)	21.4%	22.7%	19.8%	20.8%

	December 31 2015	March 31 2016	June 30 2016	September 30 2016	December 31 2016
Net invested capital consists of:					
Total assets	$2,612.0	$2,621.9	$2,720.1	$2,813.7	$2,822.3
Less: cash	545.3	511.5	472.9	542.0	557.2
Less: accounts payable, accrued and other current liabilities, provisions and income taxes payable	1,104.3	1,053.8	1,122.5	1,179.4	1,189.7
Net invested capital at period end[(1)]	$ 962.4	$1,056.6	$1,124.7	$1,092.3	$1,075.4

	December 31 2014	March 31 2015	June 30 2015	September 30 2015	December 31 2015
Net invested capital consists of:					
Total assets	$2,583.6	$2,579.3	$2,624.7	$2,603.6	$2,612.0
Less: cash	565.0	569.2	496.8	495.7	545.3
Less: accounts payable, accrued and other current liabilities, provisions and income taxes payable	1,054.3	1,044.8	1,122.3	1,085.3	1,104.3
Net invested capital at period end[(1)]	$ 964.3	$ 965.3	$1,005.6	$1,022.6	$ 962.4

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

Recently issued accounting pronouncements:

IFRS 15, Revenue from Contracts with Customers:

In May 2014, the IASB issued this standard, which provides a single, principles-based five-step model for revenue recognition to be applied to all customer contracts, and requires enhanced disclosures. The new standard is effective January 1, 2018, and allows for early adoption. We have elected to adopt this standard in our consolidated financial statements for the year ending December 31, 2018 using the retrospective approach. Under this approach, we will restate each comparative reporting period presented and recognize the transitional adjustments through equity at the start of the first comparative reporting period presented (January 1, 2016). We have determined that the new standard will change the timing of revenue recognition for a significant portion of our business. Under the new standard, revenue for certain customer contracts will be recognized earlier than under the current recognition rules (which is generally upon delivery). We believe the adoption of the new standard could materially impact our consolidated financial statements. However, the extent of the financial impacts cannot be reasonably estimable until we complete our detailed analysis during 2017.

IFRS 9, Financial Instruments:

In July 2014, the IASB issued a final version of this standard, which replaces IAS 39, Financial Instruments: Recognition and Measurement, and is effective for annual periods beginning on or after January 1, 2018, with earlier adoption permitted. The standard introduces a new model for the classification and measurement of financial assets, a single expected credit loss 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. We do not intend to adopt this standard early and are currently evaluating the anticipated impact of adopting this standard on our consolidated financial statements.

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, with earlier adoption permitted. We do not intend to adopt this standard early and are currently evaluating the anticipated impact of adopting this standard on our consolidated financial statements.

Research and development, patents and licenses, etc.

The information required by this item is set forth above in Item 3(A) "Key Information — Selected Financial Data" in footnote 2, and in Item 4(B) "Information on the Company — Business Overview — Research and Technology Development."

Trend Information

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

Off-Balance Sheet Arrangements

Not applicable.