CANADIAN PACIFIC RAILWAY LTD/CN
Form 10-K
February 16, 2017
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K
(Mark one)

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES AND EXCHANGE ACT OF 1934

For fiscal year ended December 31, 2016
OR

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to
Commission File Number 001-01342
Canadian Pacific Railway Limited
(Exact name of registrant as specified in its charter)

Canada	98-0355078
(State or Other Jurisdiction of Incorporation or Organization)	(IRS Employer Identification No.)

7550 Ogden Dale Road S.E., Calgary, Alberta, Canada	T2C 4X9
(Address of Principal Executive Offices)	(Zip Code)

Registrant's Telephone Number, Including Area Code: (403) 319-7000
Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on which Registered
Common Shares, without par value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
Yes þ No o
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.
Yes o No þ

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
Yes þ No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer þ Accelerated filer o Non-accelerated filer o Smaller reporting company o
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes o No þ

As of June 30, 2016 the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the voting stock held by non-affiliates of the registrant, in U.S. dollars, was $17,823,874,921, based on the closing sales price per share as reported by the New York Stock Exchange on such date.

As of the close of business on February 14, 2017, there were 146,366,093 shares of the registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE
Portions of the definitive proxy statement relating to registrant’s 2016 annual and special meeting of shareholders (the “Proxy Statement”) are incorporated by reference in Part III hereof.

CANADIAN PACIFIC RAILWAY LIMITED
FORM 10-K
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PART I

ITEM 1. BUSINESS

Company Overview

Canadian Pacific Railway Limited (“CPRL”), together with its subsidiaries (“CP” or the “Company”), owns and operates a transcontinental freight railway in Canada and the United States (“U.S.”). CP's diverse business mix includes bulk commodities, merchandise freight and intermodal traffic over a network of approximately 12,400 miles, serving the principal business centres of Canada from Montreal, Quebec, to Vancouver, British Columbia ("B.C."), and the U.S. Northeast and Midwest regions. For additional information regarding CP's network and geographical locations, refer to Item 2. Properties.

CPRL was incorporated on June 22, 2001, under the Canada Business Corporations Act and controls and owns all of the Common Shares of Canadian Pacific Railway Company (“CPRC”), which was incorporated in 1881 by Letters Patent pursuant to an Act of the Parliament of Canada. The Company’s registered, executive and corporate head office is located at 7550 Ogden Dale Road S.E., Calgary, Alberta T2C 4X9. CP's Common Shares are listed on the Toronto Stock Exchange (“TSX”) and the New York Stock Exchange (“NYSE”) under the symbol “CP”.

For purposes of this report, all references herein to “CP,” “the Company,” “we,” “our” and “us” refer to CPRL, CPRL and its subsidiaries, CPRL and one or more of its subsidiaries, or one or more of CPRL's subsidiaries, as the context may require. All references to currency amounts included in this annual report, including the Consolidated Financial Statements, are in Canadian dollars unless specifically noted otherwise.

Strategy

CP is driving change as it moves through its transformational journey to become the best railroad in North America while creating long-term value for shareholders. The Company is focused on providing customers with industry-leading rail service; driving sustainable, profitable growth; optimizing its assets; and reducing costs while remaining a leader in rail safety. Looking forward, CP continues to execute its strategic plan, focusing on turning productivity into service, and service into revenue growth.

CP’s strategic plan is centred on five key foundations, which are the Company’s performance drivers.

Provide Service: Providing efficient and consistent transportation solutions for the Company’s customers. “Doing what we say we are going to do” is what drives CP in providing a reliable product with a lower cost operating model. Centralized planning aligned with local execution is bringing the Company closer to the customer and accelerating decision-making.
Control Costs: Controlling and removing unnecessary costs from the organization, eliminating bureaucracy and continuing to identify productivity enhancements are the keys to success.
Optimize Assets: Through longer sidings, improved asset utilization and increased train lengths, the Company is moving increased volumes with fewer locomotives and cars while unlocking capacity for future growth potential.
Operate Safely: Each year, CP safely moves millions of carloads of freight across North America while ensuring the safety of our people and the communities through which we operate. Safety is never to be compromised. Continuous research and development in state-of-the-art safety technology and highly focused employees ensure our trains are built for safe, efficient operations across our network.

Develop People: CP recognizes that none of the other foundations can be achieved without its people. Every CP employee is a railroader and the Company is shaping a new culture focused on a passion for service with integrity in everything it does. Coaching and mentoring managers into becoming leaders will help drive CP forward.

Business Developments

During the third quarter of 2016, the Company and Pershing Square Capital Management L.P. ("Pershing Square") completed a public offering of 9,840,890 of CP Common Shares held by certain funds managed by Pershing Square. CP did not sell any common shares in the offering and did not receive any of the proceeds from the offering of common shares by the funds managed by Pershing Square. After the closing of the sale, funds managed by Pershing Square no longer own any common shares of CP.

During the fourth quarter of 2015, CP proposed a business combination with Norfolk Southern Corporation (“NS”). While CP was firmly of the view that a business combination would deliver improved levels of service to customers and communities while enhancing competition and creating significant shareholder value, NS rejected CP’s proposal. On February 9, 2016, CP notified NS of its intent to submit a resolution to NS shareholders to ask their Board of Directors to engage in good faith discussions with CP regarding a business combination transaction involving CP and NS that would create a true end-to-end transcontinental railroad that would enhance competition, benefit the public and drive economic growth. However, on April 11, 2016, CP announced that it had terminated

efforts to merge with NS, including the withdrawal of a resolution asking NS shareholders to vote in favour of good-faith negotiations between the two companies. No further financial offers or overtures to meet with the NS board of directors are planned at this time.

Change in Executive Officers

On February 14, 2017, the Company appointed Mr. John Brooks as Chief Marketing Officer ("CMO").

On January 27, 2017, Mr. Mark Wallace began a leave of absence from the Company and no longer serves as Vice-President, Corporate Affairs and Chief of Staff of the Company.

On January 18, 2017, the Company announced Mr. Keith Creel as President and Chief Executive Officer ("CEO") of the Company, effective January 31, 2017, following the decision of Mr. E. Hunter Harrison to retire from CP.

On September 8, 2016, the Company announced the resignation of Mr. Mark J. Erceg from his position as Chief Financial Officer ("CFO") effective September 9, 2016. The Company appointed Mr. Nadeem Velani as Vice-President and interim CFO. Mr. Velani joined CP in March 2013 and most recently served as Vice-President, Investor Relations. On October 18, 2016, Mr. Velani was appointed Vice-President and CFO.

On April 20, 2016, the Company appointed Mr. Robert Johnson as Executive Vice-President, Operations.

Change in Board of Directors

As at January 31, 2017, Mr. E. Hunter Harrison resigned as a member of the Company’s Board of Directors.

On December 23, 2016, the Company announced the appointment of Mr. Gordon Trafton to CP's Board of Directors.

On December 14, 2016, the Company announced the appointment of Ms. Jane L. Peverett to CP's Board of Directors.

On September 6, 2016, the Company announced the appointment of Ms. Jill Denham and Mr. William R. Fatt to CP's Board of Directors. The Company also announced Mr. William Ackman's resignation from the Board of Directors.

On July 19, 2016, Dr. Anthony R. Melman resigned as a member of the Company’s Board of Directors.

On January 26, 2016, Mr. Paul C. Hilal resigned from the Board of Directors. Mr. Matthew H. Paull was appointed to the Company's Board of Directors on January 26, 2016 and is currently the Chair of the Audit Committee.

Operations

The Company operates in only one operating segment: rail transportation. Although the Company provides a breakdown of revenue by business line, the overall financial and operational performance of the Company is analyzed as one segment due to the integrated nature of the rail network. Additional information regarding the Company's business and operations, including revenue and financial information, and information by geographic location is presented in Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, and Item 8. Financial Statements and Supplementary Data, Note 25 Segmented and geographic information.

Lines of Business

The Company transports bulk commodities, merchandise freight and intermodal traffic. Bulk commodities include grain, coal, potash, fertilizers and sulphur. Merchandise freight consists of finished vehicles and machinery, as well as forest and industrial and consumer products. Intermodal traffic consists largely of retail goods in overseas containers that can be transported by train, ship and truck and in domestic containers and trailers that can be moved by train and truck.

The Company’s revenues are primarily derived from transporting freight. The following chart shows the Company's freight revenue by each line of business in 2016:
In 2016, the Company generated freight revenues totalling $6,060 million ($6,552 million in 2015 and $6,464 million in 2014). The following charts compare the percentage of the Company’s total freight revenues derived from each of the three major business lines in 2016, 2015 and 2014:

BULK

The Company’s Bulk business represented approximately 44% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Bulk freight revenues by commodity business in 2016, 2015 and 2014:

Canadian Grain

The Company’s Canadian grain business represented approximately 36% of Bulk revenues, which is 16% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Canadian grain freight revenues generated from regulated grain and non-regulated grain transportation in 2016, 2015 and 2014:

Canadian grain transported by CP consists of both whole grains, such as wheat, corn, soybeans and canola, and processed products such as meals, oils and flour. This business is centred in the Canadian Prairies (Alberta, Saskatchewan and Manitoba), with grain shipped primarily west to the Port of Vancouver in British Columbia (B.C.), and east to the Port of Thunder Bay in Ontario for export. Grain is also shipped to the U.S., to Mexico, and to eastern Canada for domestic consumption.

Canadian grain includes a division of business that is regulated by the Canadian government through the Canada Transportation Act (“CTA”). This regulated business is subject to a maximum revenue entitlement (“MRE”). Under this regulation, railroads can set their own rates for individual movements. However, the MRE governs aggregate revenue earned by the railroad based on a formula that factors in the total volumes, length of haul, average revenue per ton and inflationary adjustments. The regulation applies to western Canadian export grain shipments to the ports of Vancouver and Thunder Bay.

U.S. Grain

The Company’s U.S. grain business represented approximately 19% of Bulk revenues, which is 8% of total freight revenues in 2016.

The following charts compare the percentage of the Company's U.S. grain freight revenues generated from wheat, soybeans, corn, durum, and other processed products in 2016, 2015 and 2014:

U.S. grain transported by CP consists of both whole grains, such as wheat, soybeans, corn, durum, and processed products such as meals, oils and flour. This business is centred in the states of North Dakota, South Dakota, Minnesota and Iowa. Export grain traffic from this producing region is shipped to ports at Duluth and Superior in Minnesota. In partnership with other railroads, CP also moves grain to export terminals in the U.S. Pacific Northwest and the Gulf of Mexico. Grain destined for domestic consumption

moves east via Chicago, Illinois, to the U.S. Northeast or is interchanged with other carriers to the U.S. Southeast, Pacific Northwest and Californian markets.

Coal

The Company’s Coal business represented approximately 22% of Bulk revenues, which is 10% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Coal freight revenues generated from Canadian and U.S. shipments in 2016, 2015 and 2014:

CP handles mostly metallurgical coal destined for export for use in the steelmaking process. CP’s Canadian coal traffic originates mainly from Teck Resource Limited’s mines in southeastern B.C. CP moves coal west from these mines to port terminals for export to world markets (Pacific Rim, Europe and South America), and east for the U.S. Midwest markets.

In the U.S., CP moves primarily thermal coal from connecting railways, serving the thermal coal fields in the Powder River Basin in Montana and Wyoming, which is delivered to power-generating facilities in the U.S. Midwest. CP also serves petroleum coke operations in Canada and the U.S., where the product is used for power generation and aluminum production.

Potash

The Company's Potash business represented approximately 12% of Bulk revenues, which is 6% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Potash freight revenues generated from domestic and export potash shipments in 2016, 2015 and 2014:

The Company’s Potash traffic moves mainly from Saskatchewan to offshore markets through the ports of Vancouver, Thunder Bay and Portland, Oregon, and to markets in the U.S. All potash shipments for export beyond Canada and the U.S. are marketed by Canpotex Limited, a joint venture among Saskatchewan’s potash producers. Independently, these producers move domestic potash with CP primarily to the U.S. Midwest for local application.

Fertilizers and Sulphur

The Company's Fertilizers and sulphur business represented approximately 11% of Bulk revenues, which is 4% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Fertilizers and sulphur freight revenues generated from wet fertilizers, dry fertilizers, and sulphur transportation in 2016, 2015 and 2014:

Dry fertilizers include: urea, nitrogen solutions, phosphate rock, phosphate fertilizers, ammonium nitrate and ammonium sulphate; wet fertilizers are primarily anhydrous ammonia. Nitrogen fertilizers (dry and wet) are produced at major facilities in Western Canada and shipped within Western Canada and to U.S. Midwest destinations. Phosphate fertilizers are produced in Western Canada or transported from the U.S.

Most sulphur is produced in Alberta as a byproduct of processing sour natural gas, refining crude oil and upgrading bitumen produced in the Alberta oil sands. Sulphur is a raw material used primarily in the manufacturing of sulphuric acid, which is used most extensively in the production of phosphate fertilizers. Sulphuric acid is also a key ingredient in industrial processes ranging from smelting and nickel leaching to paper production.

MERCHANDISE

The Company’s Merchandise business represented approximately 34% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Merchandise freight revenue by commodity business in 2016, 2015 and 2014:

Merchandise products move in trains of mixed freight and in a variety of car types. Service involves delivering products to many different customers and destinations. In addition to traditional rail service, CP moves merchandise traffic through a network of truck-rail transload facilities, expanding the reach of CP's network to non-rail served facilities.

Forest Products

The Company’s Forest products business represented approximately 13% of Merchandise revenues, which is 5% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Forest products freight revenues generated from pulp and paper (wood pulp, paper, paperboard, newsprint), lumber and panel, and other shipments in 2016, 2015 and 2014:

Forest products traffic includes pulp and paper, and lumber and panel shipped from key producing areas in B.C., northern Alberta, northern Saskatchewan, Ontario and Quebec to destinations throughout North America.

Chemicals and Plastics

The Company’s Chemicals and plastics business represented approximately 35% of Merchandise revenues, which is 12% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Chemicals and plastics freight revenues generated from energy, biofuels, and chemicals and plastics shipments in 2016, 2015 and 2014:

Energy consists of commodities such as ethanol, liquefied petroleum gas (“LPG”), gasoline, diesel, condensate, asphalt, and lubricant oils. The majority of the Company’s western Canadian energy traffic originates in Saskatchewan and in the Alberta Industrial Heartland, Canada’s largest hydrocarbon processing region. The Bakken formation region in Saskatchewan and North Dakota is another source of condensate, LPG and natural gas liquids. Interchange with several rail interline partners gives the Company access to refineries and export facilities in the Pacific Northwest, Northeast U.S. and the Gulf Coast, as well as the Texas and Louisiana petrochemical corridor and port connections.

CP's biofuels traffic originates mainly from facilities in the U.S. Midwest, shipping to destinations in the northeastern U.S.

The Company’s chemical traffic includes products such as ethylene glycol, styrene, sulphuric acid, methanol, sodium chlorate, caustic soda and soda ash. These shipments originate from eastern Canada, Alberta, the U.S. Midwest and the Gulf of Mexico and move to end markets in Canada, the U.S. and overseas.

The most commonly shipped plastics products are polyethylene and polypropylene. Almost half of the Company’s plastics originate in central and northern Alberta and move to various North American destinations.

Crude

The Company's Crude business represented approximately 7% of Merchandise revenues, which is 2% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Crude freight revenues generated from Canadian and U.S. shipments in 2016, 2015 and 2014:

Crude moves from production facilities throughout Alberta, Saskatchewan and North Dakota. CP has connections to these production facilities as well as access to pipeline terminals. CP’s main crude destinations include terminals and refineries in the U.S. East Coast, Gulf Coast and West Coast on CP’s network and through established interline partnerships.

Metals, Minerals and Consumer Products

The Company’s Metals, minerals and consumer products business represented approximately 28% of Merchandise revenues, which is 9% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Metals, minerals and consumer products freight revenues generated from aggregates (sand and stone, and other aggregates), steel, food and consumer products and non-ferrous metals transportation in 2016, 2015 and 2014:

Sand and stone, and cement are the dominant aggregates. Frac sand, within sand and stone, originates at mines located along the Company's network in Wisconsin and moves to a diverse set of shale formations across North America. The majority of the Company's cement traffic is shipped directly from production facilities in Alberta, Iowa and Ontario to energy and construction projects in North Dakota, Alberta, Manitoba and the U.S. Midwest.

CP transports steel in various forms from mills in Ontario, Saskatchewan and Iowa to a variety of industrial users. The Company carries base metals such as copper, lead, zinc and aluminum. CP also moves ores from mines to smelters and refineries for processing, and the processed metal to automobile and consumer products manufacturers.

Consumer products traffic consists of a diverse mix of goods, including food products, building materials, packaging products and waste products.

Automotive

The Company's Automotive business represented approximately 17% of Merchandise revenues, which is 6% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Automotive freight revenues generated by movements of finished vehicles from Canadian, U.S., Mexican, and overseas origins, machinery, and parts and other in 2016, 2015 and 2014:

CP's Automotive portfolio consists of four finished vehicle traffic components: Canadian-produced vehicles that ship to the U.S. from Ontario production facilities; U.S.-produced vehicles that ship within the U.S. as well as cross border shipments to Canadian markets; vehicles from overseas that move through the Port of Vancouver to eastern Canadian markets; and Mexican-produced vehicles that ship to the U.S. and Canada. In addition to finished vehicles, CP ships machinery, pre-owned vehicles, and automotive parts. A comprehensive network of automotive compounds is utilized to facilitate final delivery of vehicles to dealers throughout Canada and in the U.S.

INTERMODAL

The Company’s Intermodal business represented approximately 22% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Intermodal freight revenues generated from domestic and international intermodal transportation in 2016, 2015 and 2014:

Domestic intermodal freight consists primarily of manufactured consumer products moved in 53-foot containers within North America. International intermodal freight moves in marine containers to and from ports and North American inland markets.

Domestic Intermodal

The Company’s Domestic intermodal business represented approximately 55% of Intermodal revenues, which is 12% of total freight revenues in 2016.

The following charts compare the percentage of the Company's Domestic intermodal freight revenues generated from Canada, U.S., and cross border transportation in 2016, 2015 and 2014:

CP’s Domestic intermodal business moves goods from a broad spectrum of industries including food, retail, less-than truckload, trucking and forest products as well as various other consumer-related products. Key service factors in Domestic intermodal include consistent on-time delivery, the ability to provide door-to-door service and the availability of value-added services. The majority of the Company’s Domestic intermodal business originates in Canada, where CP markets its services directly to retailers and manufacturers, providing complete door-to-door service and maintaining direct relationships with its customers. In the U.S., the Company’s service is delivered mainly through wholesalers.

International Intermodal

The Company’s International intermodal business represented approximately 45% of Intermodal revenues, which is 10% of total freight revenues in 2016.

The following charts compare the percentage of the Company's International intermodal freight revenues generated from the Port of Vancouver, the Port of Montreal and other ports in 2016, 2015 and 2014:

CP’s International intermodal business consists primarily of containerized traffic moving between the ports of Vancouver, Montreal and New York and inland points across Canada and the U.S. Import traffic from the Port of Vancouver is mainly long-haul business destined for eastern Canada and the U.S. Midwest and Northeast. CP works closely with the Port of Montreal, a major year-round East Coast gateway to Europe, to serve markets primarily in Canada and the U.S. Midwest. The Company’s U.S. Northeast service connects eastern Canada with the Port of New York, offering a competitive alternative to trucks.

Fuel Cost Adjustment Program

The short-term volatility in fuel prices may adversely or positively impact revenues. CP employs a fuel cost adjustment program designed to respond to fluctuations in fuel prices and help reduce volatility to changing fuel prices. Fuel surcharge revenues are earned on individual shipments and are based primarily on the price of On Highway Diesel; as such, fuel surcharge revenue is a function of freight volumes and fuel prices. Fuel surcharge revenues accounted for approximately 2% of the Company's total freight revenues in 2016.

Non-freight Revenues

Non-freight revenues accounted for approximately 3% of the Company’s total revenues in 2016. Non-freight revenues are generated from leasing certain assets, switching fees, and other arrangements, including logistical services and contracts with passenger service operators.

Significant Customers

For each of the years ended December 31, 2016, 2015 and 2014, no customer comprised more than 10% of total revenues or accounts receivable.

Competition

The Company is subject to competition from other railways, motor carriers, ship and barge operators, and pipelines. Price is only one factor of importance as shippers and receivers choose a transportation service provider. Service is another factor and requirements, both in terms of transit time and reliability, vary by shipper and commodity. As a result, the Company’s primary competition varies by commodity, geographic location and mode of available transportation. CP’s primary rail competitors are Canadian National Railway Company (“CN”), which operates throughout much of the Company’s territory in Canada, and Burlington Northern Santa Fe, LLC, including its primary subsidiary BNSF Railway Company (“BNSF”), which operates throughout much of the Company’s territory in the U.S. Midwest. Other railways also operate in parts of the Company’s territory. Depending on the specific market, competing railroads and deregulated motor carriers may exert pressure on price and service levels.

Seasonality

Volumes and revenues from certain goods are stronger during different periods of the year. First-quarter revenues are typically lower mainly due to winter weather conditions, closure of the Great Lakes ports and reduced transportation of retail goods. Second and third quarter revenues generally improve over the first quarter, as fertilizer volumes are

typically highest during the second quarter and demand for construction-related goods is generally highest in the third quarter. Revenues are typically strongest in the fourth quarter, primarily as a result of the transportation of grain after the harvest, fall fertilizer programs and increased demand for

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retail goods moved by rail. Operating income is also affected by seasonal fluctuations. Operating income is typically lowest in the first quarter, due to lower freight revenue and higher operating costs associated with winter conditions. Net income is also influenced by seasonal fluctuations in customer demand and weather-related issues.

Regulations

Government Regulation

The Company’s railway operations are subject to extensive federal laws, regulations and rules in both Canada and the U.S., which directly affect how operations and business activities are managed.

Operations are subject to economic and safety regulation in Canada primarily by the Canadian Transportation Agency (“the Agency”), Transport Canada, the CTA and the Railway Safety Act (“RSA”). The CTA provides shipper rate and service remedies, including final offer arbitration, competitive line rates and compulsory inter-switching in Canada. The Agency regulates the MRE for the movement of export grain, commuter and passenger access, charges for ancillary services, and noise-related disputes. Transport Canada regulates safety-related aspects of railway operations in Canada.

The Company’s U.S. operations are subject to economic and safety regulation by the Surface Transportation Board (“STB”) and the Federal Railroad Administration (“FRA”). The STB is an economic regulatory body with jurisdiction over railroad rate and service issues and reviewing proposed railroad mergers and other transactions. The FRA regulates safety-related aspects of the Company’s railway operations in the U.S. under the Federal Railroad Safety Act, as well as rail portions of other safety statutes.

Various other regulators directly and indirectly affect the Company’s operations in areas such as health, safety, security, environmental and other matters.

Regulatory Change

On May 29, 2014, the Government of Canada enacted the Fair Rail for Grain Farmers Act (the “Fair Rail Act”). This legislation authorizes the federal cabinet to require the Company and CN to move a minimum amount of grain, which amount is determined by and may be adjusted by the federal cabinet. There is currently no minimum grain volume required by the federal cabinet. In addition, the Fair Rail Act expands the terms and conditions associated with the inter-switching provisions of the CTA in the provinces of Alberta, Saskatchewan and Manitoba, provides that the Agency make regulations specifying what constitutes operational terms that may be subject to service agreement arbitration, and gives the Agency the power to order a railway to compensate any person who has incurred expenses because of a failure to meet obligations under Sections 113 and 114 of the CTA, or does not meet its obligations under the terms of a confidential contract that includes a compensation clause. Further, the Fair Rail Act amends the Canada Grain Act to permit the regulation of contracts relating to grain and the arbitration of disputes respecting the provisions of those contracts.

After the tragic accident in Lac-Mégantic, Quebec, in July of 2013 involving a non-related short-line railroad, the Government of Canada implemented several measures pursuant to the Rail Safety Act (Canada) and the Transportation of Dangerous Goods Act (Canada). These modifications implemented changes with respect to rules associated with securing unattended trains; the classification of crude being imported, handled, offered for transport or transported; and the provision of information to municipalities through which dangerous goods are transported by rail. The U.S. federal government has taken similar actions. These changes did not have a material impact on CP’s

operating practices.

On February 20, 2015, the Government of Canada introduced Bill C-52 “An Act to amend the Canada Transportation Act and the Railway Safety Act”, which received Royal Assent on June 18, 2015, and is now in force. Bill C-52 sets out new minimum insurance requirements for federally regulated railways based on: amounts of crude and toxic inhalation hazards/poisonous inhalation hazards moved; imposes strict liability; limits railway liability to the minimum insurance level; mandates the creation of a fund of $250 million paid for by a levy on crude shipments, to be utilized for damages beyond $1 billion (in respect of CP); allows railways and insurers to have existing rights to pursue other parties (subrogation); and prevents shifting liability to shippers from railways except through written agreement. It is too soon for the Company to determine the impact that these amendments to the CTA and the RSA will have on the Company’s financial condition and results from operations.

On May 1, 2015, the U.S. Transportation Secretary announced the final rule for a new rail tank car standard for flammable liquids and the retrofitting schedule for older tank cars used to transport flammable liquids. The development of the new tank car standard was done in coordination between Transport Canada, the U.S. Pipeline and Hazardous Materials Safety Administration (“PHMSA”) and the FRA. This announcement was followed by publishing the new tank car standard in Canada on May 20, 2015. The new tank car standards require new tanks used to move flammable liquids to have: top-fitting protection; thermal protection including a jacket; the use of 9/16 inch normalized steel for the tank car; full head shield; and improved bottom outlet valves. In the U.S., the new standards also included new operational protocols for trains transporting large volumes of flammable liquids such as the use of electronically controlled pneumatic (“ECP”) brakes for trains carrying 70 or more cars of flammable liquids, routing requirements, speed restrictions, and information for local government agencies. The U.S. rule also provides new sampling and testing requirements for the classification of energy products placed into transport. In Canada, operational protocols such as speed restrictions to 40 miles per hour in census metropolitan areas, crude sampling and testing requirements, and sharing information with municipal first

responders, had previously been implemented. CP does not own any tank cars used for commercial transportation of hazardous commodities.

On October 29, 2015, the Surface Transportation Extension Act of 2015 was signed into law. The law extends, by three years, the deadline for the U.S. rail industry to implement Positive Train Control ("PTC"), a set of highly advanced technologies designed to prevent train-to-train collisions, speed-related derailments, and other accidents caused by human error by determining the precise location, direction and speed of trains, warning train operators of potential problems, and taking immediate action if an operator does not respond. Legislation passed by the U.S. Congress in 2008 mandated that PTC systems be put into service by the end of 2015 on rail lines used to transport passengers or toxic-by-inhalation materials. The Surface Transportation Extension Act of 2015 extended the deadline to install and activate PTC to December 31, 2018, or, December 31, 2020 under certain circumstances, allowing the Company additional time to ensure safe and effective implementation of PTC on its rail network.

For further details on the capital expenditures associated with compliance with the PTC regulatory mandate, refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources.

On December 4, 2015, the Fixing America's Surface Transportation ("FAST") Act was signed into law, representing the first long-term transportation legislation enacted in the U.S. in over a decade. The FAST Act contains key provisions on safety enhancements for tank cars moving flammable liquids in the U.S. and ECP train braking. Among those key provisions, the FAST Act requires new tank cars to be equipped with thermal blankets, requires all legacy DOT-111 tank cars moving flammable liquids to be upgraded to new retrofit standards (regardless of how many cars may be in a train), and sets minimum requirements for protection of certain valves. While the law preserves PHMSA's May 2015 final rule mandating ECP brakes on certain trains, it requires an independent evaluation of this braking technology and a real-world derailment test. The FAST Act further calls for the U.S. Secretary of Transportation to re-evaluate its ECP final rule within the next year using the results of this evaluation to determine whether ECP braking system requirements are justified.

Finally, the STB Reauthorization Act of 2015 was signed into law on December 18, 2015. The law requires numerous changes to the structure and composition of the STB, removing it from under the Department of Transportation and establishing the STB as an independent U.S. agency, as well as increasing STB Board membership from three to five members. Notably, the law vests in the STB certain limited enforcement powers, by authorizing it to investigate rail carrier violations on the STB Board's own initiative. The law also requires the STB to establish a voluntary binding arbitration process to resolve rail rate and practice disputes. It is too soon for the Company to anticipate the impact that these changes and new investigative authorities might have on CP, since no arbitrations or, to CP's knowledge, investigations have been initiated under recently adopted rules implementing these laws.

Environmental Laws and Regulations

The Company's operations and real estate assets are subject to extensive federal, provincial, state and local environmental laws and regulations governing emissions to the air, discharges to waters and the handling, storage, transportation and disposal of waste and other materials. If the Company is found to have violated such laws or regulations, it could have a material adverse effect on the Company's business or operating results. In addition, in operating a railway, it is possible that releases of hazardous materials during derailments or other accidents may occur that could cause harm to human health or to the environment. Costs of remediation, damages and changes in regulations could materially affect the Company's operating results and reputation.

The Company has implemented an Environmental Management System to facilitate the reduction of environmental risk. CP's Annual Corporate Operations Environmental Plan states the current environmental goals, objectives and strategies.

Specific environmental programs are in place to address areas such as air emissions, wastewater, management of vegetation, chemicals and waste, storage tanks and fueling facilities. CP has also undertaken environmental impact assessments and risk assessments to identify, prevent and mitigate environmental risks. There is continued focus on preventing spills and other incidents that have a negative impact on the environment. There is an established Strategic Emergency Response Contractor network, and spill equipment kits are located across Canada and the U.S. to ensure a rapid and efficient response in the event of an environmental incident. In addition, emergency preparedness and response plans are regularly updated and tested.

The Company has developed an environmental audit program that comprehensively, systematically and regularly assesses the Company’s facilities for compliance with legal requirements and the Company’s policies for conformance to accepted industry standards. Included in this is a corrective action follow-up process and semi-annual review by senior management.

CP focuses on key strategies, identifying tactics and actions to support commitments to the community. The Company's strategies include:

- protecting the environment;
- ensuring compliance with applicable environmental laws and regulations;
- promoting awareness and training;
- managing emergencies through preparedness; and
- encouraging involvement, consultation and dialogue with communities along the Company's lines.

Security

CP is subject to statutory and regulatory directives in Canada and the U.S. that address security concerns. CP plays a critical role in the North American transportation system. Rail lines, facilities and equipment, including railcars carrying hazardous materials, could be direct targets or indirect casualties of terrorist attacks. Regulations by the Department of Transportation and the Department of Homeland Security in the U.S. include speed restrictions, chain of custody and security measures, which can impact service and increase costs for the transportation of hazardous materials, especially toxic inhalation hazard ("TIH") materials. Legislative changes in Canada to the Transportation of Dangerous Goods Act are expected to add new security regulatory requirements similar to those in the U.S. In addition, insurance premiums for some or all of the Company's current coverage could increase significantly, or certain coverage may not be available to the Company in the future. While CP will continue to work closely with Canadian and U.S. government agencies, future decisions by these agencies on security matters or decisions by the industry in response to security threats to the North American rail network could have a material adverse effect on the Company's business or operating results.

CP takes the following security measures:

- CP employs its own police service that works closely with communities and other law enforcement and government agencies to promote railway safety and infrastructure security. As a railway law enforcement agency, CP Police Services are headquartered in Calgary, Alberta, with police officers assigned to over 25 field offices responsible for railway police operations in six Canadian provinces and 14 U.S. states. CP Police Services operate on the CP rail network as well as in areas where CP has non-railway operations.

- CP's Police Communication Centre ("PCC") operates 24 hours a day. The PCC receives reports of emergencies, dangerous or potentially dangerous conditions, and other safety and security issues from our employees, the public, and law enforcement and other government officials, and ensures that proper emergency responders are notified as well as governing bodies.

- CP's Security Management Plan is a comprehensive, risk-based plan modelled on and developed in conjunction with the security plan prepared by the Association of American Railroads post-September 11, 2001. Under this plan, CP routinely examines and prioritizes railroad assets, physical and cyber vulnerabilities, and threats, as well as tests and revises measures to provide essential railroad security. To address cyber security risks, CP implements mitigation programs that evolve with the changing technology threat environment. The Company has also worked diligently to establish backup sites to ensure a seamless transition in the event that the Company's operating systems are the target of a cyber-attack. By doing so, CP is able maintain network fluidity.

- CP security efforts consist of a wide variety of measures including employee training, engagement with our customers and training of emergency responders.

Available Information

CP makes available on or through its website www.cpr.ca free of charge, its annual reports on Form 10-K, quarterly reports, current reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such reports are filed with or furnished to the Securities and Exchange Commission ("SEC"). Also, filings made pursuant to Section 16 of the Securities Exchange Act of 1934 ("Exchange Act") with the SEC by our executive officers, directors and other reporting persons with respect to the Company's Common Shares are made available free of charge, through our website. Our website also contains charters for each of the committees of our Board of Directors, our corporate governance guidelines and our Code of Business Ethics. This Form 10-K and other SEC filings made by CP are also accessible through the SEC's website at www.sec.gov.

The Company has included the CEO and CFO certifications regarding the Company's public disclosure required by Section 302 of the Sarbanes-Oxley Act of 2002 as an Exhibit to this report.

ITEM 1A. RISK FACTORS

The risks set forth in the following risk factors could have a materially adverse effect on the Company's financial condition, results of operations, and liquidity, and could cause those results to differ materially from those expressed or implied in the Company's forward-looking statements.

The information set forth in this Item 1A. Risk Factors should be read in conjunction with the rest of the information included in this report, including Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations and Item 8. Financial Statements and Supplementary Data.

As a common carrier, the Company is required by law to transport dangerous goods and hazardous materials, which could expose the Company to significant costs and claims. Railways, including CP, are legally required to transport dangerous goods and hazardous materials as part of their common carrier obligations regardless of risk or potential exposure to loss. CP transports dangerous goods and hazardous materials, including but not limited to crude oil, ethanol and TIH materials such as chlorine gas and anhydrous ammonia. A train accident involving hazardous materials could result in significant claims against CP arising from personal injury and property or natural resource damage, environmental penalties and remediation obligations. Such claims, if insured, could exceed the existing insurance coverage commercially available to CP, which could have a material adverse effect on CP’s financial condition and liquidity. CP is also required to comply with rules and regulations regarding the handling of dangerous goods and hazardous materials in Canada and the U.S. Noncompliance with these rules and regulations can subject the Company to significant penalties and could factor in litigation arising out of a train accident. Changes to these rules and regulations could also increase operating costs, reduce operating efficiencies and impact service delivery.

The Company is subject to significant governmental legislation and regulation over commercial, operating and environmental matters. The Company's railway operations are subject to extensive federal laws, regulations and rules in both Canada and the U.S. Operations are subject to economic and safety regulations in Canada primarily by the Agency and Transport Canada. The Company's U.S. operations are subject to economic and safety regulation by the STB and the FRA. Various other regulators directly and indirectly affect the Company's operations in areas such as health, safety, security, environmental and other matters. Additional economic regulation of the rail industry by these regulators or the Canadian and U.S. legislatures, whether under new or existing laws, could have a significant negative impact on the Company's ability to determine prices for rail services and result in a material adverse effect in the future on the Company's financial position, results of operations, and liquidity in a particular year or quarter. This potential material adverse effect could also result in reduced capital spending on the Company's rail network or in abandonment of lines.

The Company's compliance with safety and security regulations may result in increased capital expenditures and operating costs. For example, compliance with the Rail Safety Improvement Act of 2008 will result in additional capital expenditures associated with the statutorily mandated implementation of PTC. In addition to increased capital expenditures, implementation of such regulations may result in reduced operational efficiency and service levels, as well as increased operating expenses.

The Company's operations are subject to extensive federal, state, provincial and local environmental laws concerning, among other matters, emissions to the air, land and water and the handling of hazardous materials and wastes. Violation of these laws and regulations can result in significant fines and penalties as well as other potential impacts on CP's operations. These laws can impose strict, and in some circumstances, joint and several liability on both current and former owners and on operators of facilities. Such environmental liabilities may also be raised by adjacent landowners or third parties. In addition, in operating a railway, it is possible that releases of hazardous materials

during derailments or other accidents may occur that could cause harm to human health or to the environment. Costs of remediation, damages and changes in regulations could materially affect the Company's operating results and reputation. The Company has been, and may in the future be, subject to allegations or findings to the effect that it has violated, or is strictly liable under, environmental laws or regulations. The Company currently has obligations at existing sites for investigation, remediation and monitoring, and will likely have obligations at other sites in the future. The actual costs associated with both current and long-term liabilities may vary from the Company's estimates due to a number of factors including, but not limited to, changes in: the content or interpretation of environmental laws and regulations; required remedial actions; technology associated with site investigation or remediation; and the involvement and financial viability of other parties that may be responsible for portions of those liabilities.

Global economic conditions could negatively affect demand for commodities and other freight transported by the Company. A decline or disruption in domestic or global economic conditions that affect the supply or demand for the commodities that CP transports may decrease CP’s freight volumes and may result in a material adverse effect on CP’s financial or operating results and liquidity. Economic conditions resulting in bankruptcies of one or more large customers could have a significant impact on CP's financial position, results of operations, and liquidity in a particular year or quarter.

The Company faces competition from other transportation providers, and failure to compete effectively could adversely affect results of operations, financial condition and liquidity. The Company faces significant competition for freight transportation in Canada and the U.S., including competition from other railways, pipelines, trucking and barge companies. Competition is based mainly on quality of service, freight rates and access to markets. Other transportation modes generally use public rights-of-way that are built and maintained by government entities, while CP and other railroads must use internal resources to build and maintain their rail networks. Competition with the trucking industry is generally based on freight rates, flexibility of service and transit time

performance. Any future improvements or expenditures materially increasing the quality or reducing the cost of alternative modes of transportation, or legislation that eliminates or significantly reduces the burden of the size or weight limitations currently applicable to trucking carriers, could have a material adverse effect on CP's results of operations, financial condition, and liquidity.

The operations of carriers with which the Company interchanges may adversely affect operations. The Company's ability to provide rail services to customers in Canada and the U.S. also depends upon its ability to maintain cooperative relationships with connecting carriers with respect to, among other matters, revenue division, car supply and locomotive availability, data exchange and communications, reciprocal switching, interchange, and trackage rights. Deterioration in the operations or services provided by connecting carriers, or in the Company's relationship with those connecting carriers, could result in CP's inability to meet customers' demands or require the Company to use alternate train routes, which could result in significant additional costs and network inefficiencies.

The availability of qualified personnel could adversely affect the Company's operations. Changes in employee demographics, training requirements, and the availability of qualified personnel, particularly locomotive engineers and trainpersons, could negatively impact the Company’s ability to meet demand for rail services. Unpredictable increases in the demand for rail services may increase the risk of having insufficient numbers of trained personnel, which could have a material adverse effect on the Company’s results of operations, financial condition, and liquidity. In addition, changes in operations and other technology improvements may significantly impact the number of employees required to meet the demand for rail services.

Strikes or work stoppages could adversely affect the Company's operations. Class I railroads are party to collective bargaining agreements with various labour unions. The majority of CP's employees belong to labour unions and are subject to these agreements. Disputes with regard to the terms of these agreements or the Company's potential inability to negotiate acceptable contracts with these unions could result in, among other things, strikes, work stoppages, slowdowns or lockouts, which could cause a significant disruption of the Company's operations and have a material adverse effect on the Company's results of operations, financial condition, and liquidity. Additionally, future national labour agreements, or provisions of labour agreements related to health care, could significantly increase the Company's costs for health and welfare benefits, which could have a material adverse impact on its financial condition and liquidity.

The Company may be subject to various claims and lawsuits that could result in significant expenditures. The Company by the nature of its operation is exposed to the potential for a variety of litigations, lawsuits and other claims, including personal injury claims, labour and employment, commercial and contract disputes, environmental liability, freight claims and property damage claims. In respect of workers' claims in Canada related to occupational health and safety, the Workers' Compensation Act (Canada) covers those matters. In the U.S., the Federal Employers' Liability Act ("FELA") is applicable to railroad employees. A provision for lawsuits or other claims will be accrued according to applicable accounting standards, reflecting the assessment of the actual damages incurred based upon the facts and circumstances known at the time. Any material changes to litigation trends, a catastrophic rail accident or series of accidents involving freight loss, property damage, personal injury, environmental liability or other significant matters could have a material adverse effect on the Company's results of operations, financial position, and liquidity, in each case, to the extent not covered by insurance.

The Company may be affected by acts of terrorism, war, risk of war, or regulatory changes to combat the risk of terrorism or war. CP plays a critical role in the North American transportation system, and therefore could become the target for acts of terrorism or war. CP is also involved in the transportation of hazardous materials, which could result in CP equipment or infrastructure being direct targets or indirect casualties of terrorist attacks. Acts of terrorism, or

other similar events, any government response thereto, and war or risk of war could cause significant business interruption losses to CP and may adversely affect the Company’s results of operations, financial condition, and liquidity.

Severe weather or natural disasters could result in significant business interruptions and costs to the Company. CP is exposed to severe weather conditions and natural disasters including earthquakes, floods, fires, avalanches, mudslides, extreme temperatures and significant precipitation that may cause business interruptions that can adversely affect the Company’s entire rail network and result in increased costs, increased liabilities and decreased revenues, which could have a material adverse effect on the Company’s results of operations, financial condition, and liquidity. Insurance maintained by the Company to protect against loss of business and other related consequences resulting from these natural occurrences is subject to coverage limitations, depending on the nature of the risk insured. This insurance may not be sufficient to cover all of the Company's damages or damages to others, and this insurance may not continue to be available at commercially reasonable rates. Even with insurance, if any natural occurrence leads to a catastrophic interruption of services, the Company may not be able to restore services without a significant interruption in operations.

The Company relies on technology and technological improvements to operate its business. Information technology is critical to all aspects of CP’s business. If the Company were to experience a significant disruption or failure of one or more of the information technology or communications systems (either a result of an intentional cyber or malicious act, or an unintentional error) it could result in service interruptions or other failures, misappropriation of confidential information and deficiencies, which could have a material adverse effect on the Company's results of operations, financial condition, and liquidity. If CP is unable to acquire or implement new technology, the Company may suffer a competitive disadvantage, which could also have an adverse effect on its results of operations, financial condition, and liquidity.

The state of capital markets could adversely affect the Company's liquidity. Weakness in the capital and credit markets could negatively impact the Company's access to capital. From time to time, the Company relies on the capital markets to provide some of its capital requirements, including the issuance of long-term debt instruments and commercial paper. Significant instability or disruptions of the capital markets and the credit markets, or deterioration of the Company's financial condition due to internal or external factors could restrict or eliminate the Company's access to, and/or significantly increase the cost of, various financing sources, including bank credit facilities and issuance of corporate bonds. Instability or disruptions of the capital markets and deterioration of the Company's financial condition, alone or in combination, could also result in a reduction in the Company's credit rating to below investment grade, which could also further prohibit or restrict the Company from accessing external sources of short and long-term debt financing, and/or significantly increase the associated costs.

Disruptions within the supply chain could negatively affect the Company's operational efficiencies and increase costs. The North American transportation system is integrated. CP's operations and service may be negatively impacted by service disruptions of other transportation links, such as ports, handling facilities, customer facilities, and other railways. A prolonged service disruption at one of these entities could have a material adverse effect on the Company's results of operations, financial condition, and liquidity.

The Company may be affected by fluctuating fuel prices. Fuel expense constitutes a significant portion of the Company's operating costs. Fuel prices can be subject to dramatic fluctuations, and significant price increases could have a material adverse effect on the Company's results of operations. The Company currently employs a fuel cost adjustment program to help reduce volatility in changing fuel prices, but the Company cannot be certain that it will always be able to mitigate rising or elevated fuel costs through this program. Factors affecting fuel prices include: worldwide oil demand, international politics, weather, refinery capacity, supplier and upstream outages, unplanned infrastructure failures, and labour and political instability.

The Company is dependent on certain key suppliers of core railway equipment and materials that could result in increased price volatility or significant shortages of materials, which could adversely affect results of operations, financial condition, and liquidity. Due to the complexity and specialized nature of core railway equipment and infrastructure (including rolling stock equipment, locomotives, rail and ties), there can be a limited number of suppliers of rail equipment and materials available. Should these specialized suppliers cease production or experience capacity or supply shortages, this concentration of suppliers could result in CP experiencing cost increases or difficulty in obtaining rail equipment and materials, which could have a material adverse effect on the Company's results of operations, financial condition, and liquidity. Additionally, CP's operations are dependent on the availability of diesel fuel. A significant fuel supply shortage arising from production decreases, increased demand in existing or emerging foreign markets, disruption of oil imports, disruption of domestic refinery production, damage to refinery or pipeline infrastructure, political unrest, war or other factors could have a material adverse effect on the Company's results of operations, financial position, and liquidity in a particular year or quarter.

The Company may be directly and indirectly affected by the impacts of global climate change. The impacts of global climate change may affect the Company both directly and indirectly. There is potential for significant impacts on CP's infrastructure due to changes in temperature and precipitation as well as increases in extreme weather events such as flooding and storms. These changes may result in substantial costs to respond during the event, to recover from the event, and possibly to modify existing or future infrastructure requirements to prevent recurrence. Government action to address climate change may involve both economic instruments such as carbon taxation as well as restrictions on economic sectors such as cap and trade. The Company is currently subject to carbon taxation systems in some of the jurisdictions in which it operates and there is a possibility that carbon taxation systems will be implemented within other jurisdictions in which CP operates in the future. As a significant consumer of diesel fuel, these carbon taxes increase the Company's business costs. While the Company is not currently subject to a cap on emissions, there is also

a possibility in the future. Cap and trade programs or other government restrictions on certain market sectors can also impact current and potential customers including thermal coal and petroleum crude oil.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

CP provides rail and intermodal freight transportation services over a 12,400-mile track network, serving the principal business centres of Canada, from Montreal to Vancouver and the U.S. Midwest and Northeast regions. The Company's railway feeds directly into the U.S. heartland from the east and west coasts. Agreements with other carriers extend the Company's market reach east of Montreal in Canada, through the U.S. and into Mexico.

Network Geography

The Company’s network extends from the Port of Vancouver on Canada’s Pacific Coast to the Port of Montreal in eastern Canada, and to the U.S. industrial centres of Chicago; Detroit, Michigan; Buffalo and Albany, New York; Kansas City, Missouri; and Minneapolis.

The Company’s network is composed of three primary corridors: Western, Central and Eastern.

The Western Corridor: Vancouver to Thunder Bay

Overview – The Western Corridor links Vancouver with Thunder Bay, which is the Western Canadian terminus of the Company’s Eastern Corridor. With service through Calgary, the Western Corridor is an important part of the Company’s routes between Vancouver and the U.S. Midwest, and between Vancouver and eastern Canada. The Western Corridor provides access to the Port of Thunder Bay, Canada’s primary Great Lakes bulk terminal.

Products – The Western Corridor is the Company’s primary route for bulk and resource products traffic from western Canada to the Port of Vancouver for export. CP also handles significant volumes of international intermodal containers and domestic general merchandise traffic.

Feeder Lines – CP supports its Western Corridor with four significant feeder lines: the “Coal Route”, which links southeastern B.C. coal deposits to the Western Corridor and to coal terminals at the Port of Vancouver; the “Edmonton-Calgary Route”, which provides rail access to Alberta’s Industrial Heartland (north of Edmonton, Alberta) in addition to the petrochemical facilities in central Alberta; the “Pacific CanAm Route”, which connects Calgary and Medicine Hat in Alberta with Pacific Northwest rail routes at Kingsgate, B.C. via the Crowsnest Pass in Alberta; and the “North Main Line Route” that provides rail service to customers between Portage la Prairie, Manitoba and Wetaskiwin, Alberta, including intermediate points Yorkton and Saskatoon in Saskatchewan. This line is an important collector of Canadian grain and fertilizer, serving the potash mines located east and west of Saskatoon and many high-throughput grain elevators and processing facilities. In addition, this line provides direct access to refining and upgrading facilities at Lloydminster, Alberta and western Canada’s largest pipeline terminal at Hardisty, Alberta.

Connections – The Company’s Western Corridor connects with the Union Pacific Railroad (“UP”) at Kingsgate and with BNSF at Coutts, Alberta, and at New Westminster and Huntingdon in B.C. This corridor also connects with CN at many locations including Thunder Bay, Winnipeg, Manitoba, Regina and Saskatoon in Saskatchewan, Red Deer, Camrose, Calgary and Edmonton in Alberta, Kamloops and several locations in the Greater Vancouver area in B.C.

Yards and Repair Facilities – CP supports rail operations on the Western Corridor with main rail yards at Vancouver, Calgary and Edmonton, Moose Jaw in Saskatchewan, Winnipeg and Thunder Bay. The Company has locomotive and railcar repair facilities at Golden, Vancouver, Calgary, Moose Jaw and Winnipeg. CP also has major intermodal terminals at Vancouver, Calgary, Edmonton, Regina and Winnipeg.

The Central Corridor: Moose Jaw and Winnipeg to Chicago and Kansas City

Overview – The Central Corridor connects with the Western Corridor at Moose Jaw and Winnipeg. By running south to Chicago and Kansas City, through the Twin Cities of Minneapolis and St. Paul, Minnesota, and through Milwaukee, Wisconsin, CP provides a direct, single-carrier route between western Canada and the U.S. Midwest, providing access to Great Lakes and Mississippi River ports. From La Crosse, Wisconsin, the Central Corridor continues south towards Kansas City via the Quad Cities (Davenport and Bettendorf in Iowa, and Rock Island and Moline in Illinois), providing an efficient route for traffic destined for southern U.S. and Mexican markets. CP’s Kansas City line also has a direct connection into Chicago and by extension to points east on CP’s network such as Toronto, Ontario and the Port of Montreal in Quebec.

Products – Traffic transported on the Central Corridor includes intermodal containers from the Port of Vancouver, fertilizers, chemicals, crude, automotive, grain and other agricultural products.

Feeder Lines – The Company has operating rights over BNSF between Minneapolis and the twin ports of Duluth, Minnesota and Superior, Wisconsin. CP maintains its own yard facilities that provide an outlet for grain from the U.S. Midwest to the grain terminals at these ports; it is a strategic entry point for large dimensional shipments that can be routed via CP's network to locations such as Alberta's Industrial Heartland to serve the needs of the oil sands and energy industry. CP's route from Winona, Minnesota to Tracy, Minnesota provides access to key agricultural and industrial commodities. CP’s feeder line between Drake and Newtown in North Dakota is geographically situated in a highly strategic region for Bakken oil production. CP also owns two significant feeder lines in North Dakota and western Minnesota operated by the Dakota Missouri Valley and Western Railroad, and the Northern Plains Railroad respectively. Both of these short lines are also active in providing service to agricultural and Bakken-oil related customers.

Connections – The Company’s Central Corridor connects with all major railways at Chicago. Outside of Chicago, CP has major connections with BNSF at Minneapolis and at Minot, North Dakota, and with UP at St. Paul and Mankato, Minnesota. CP connects with CN at Milwaukee and Chicago. At Kansas City, CP connects with Kansas City Southern (“KCS”), BNSF, Norfolk Southern Railway ("NS") and UP. CP’s Central Corridor also links to several short-line railways that primarily serve grain and coal producing areas in the U.S., and extend CP’s market reach in the rich agricultural areas of the U.S. Midwest.

Yards and Repair Facilities – The Company supports rail operations on the Central Corridor with main rail yards in Chicago, Milwaukee, St. Paul and Glenwood in Minnesota, and Mason City and Davenport (Nahant yard) in Iowa. In addition, CP has major locomotive repair facility at St. Paul and car repair facilities at St. Paul and Chicago. CP shares a yard with KCS in Kansas City. CP owns 49% of the Indiana Harbor Belt Railroad, a switching railway serving Greater Chicago and northwest Indiana. CP is also part owner of the Belt Railway Company of Chicago, which is the largest intermediate switching terminal railroad in the U.S. CP has major intermodal terminals in Minneapolis and Chicago as well as a DDG transload facility that complements the service offering in Chicago.

The Eastern Corridor: Thunder Bay to Montreal, Detroit and Albany

Overview – The Eastern Corridor extends from Thunder Bay through to its eastern terminus at Montreal and from Toronto to Chicago via Windsor, Ontario or Detroit. The Company's Eastern Corridor provides shippers direct rail service from Toronto and Montreal to Calgary and Vancouver via the Company's Western Corridor and to the U.S. via the Central Corridor. This is a key element of the Company's transcontinental intermodal service. Other services include truck trailers moving in drive-on/drive-off Expressway service between Montreal and Toronto. The corridor also supports the Company's market position at the Port of Montreal by providing one of the shortest rail routes for European cargo destined to the U.S. Midwest, using the CP-owned route between Montreal and Detroit, coupled with a trackage rights arrangement on NS tracks between Detroit and Chicago.

Products – Major traffic categories transported in the Eastern Corridor include forest, chemicals and plastics, crude, ethanol, metals, minerals and consumer products, intermodal containers, automotive products and general merchandise.

Feeder Lines – A major feeder line that serves the steel industry at Hamilton, Ontario provides connections and both CSX Corporation ("CSX") and NS at Buffalo. The Delaware & Hudson Railway Company, Inc. ("D&H") feeder line extends from Montreal to Albany.

Connections – The Eastern Corridor connects with a number of short-line railways including routes from Montreal to Quebec City, Quebec and Montreal to St. John, New Brunswick and Searsport, Maine. Connections are also made with PanAm Southern at Mechanicville, New York for service to the Boston area and New England, and the Vermont Railway at Whitehall, New York. Through haulage arrangements, CP has service to Fresh Pond, New York to connect with New York & Atlantic Railway as well as direct access to the Bronx and Queens. CP can also access Philadelphia as well as a number of short-lines in Pennsylvania. Connections are also made with CN at a number of locations, including Sudbury, North Bay, Windsor, London, Hamilton and Toronto in Ontario, and Montreal in Quebec. CP connects in New York with NS and CSX at Buffalo, NS at Schenectady and CSX at Albany.

Yards and Repair Facilities – CP supports its rail operations in the Eastern Corridor with major rail yards at Sudbury, Toronto, London and Montreal. The Company has locomotive repair facilities at Montreal and Toronto and car repair facilities at Thunder Bay, Toronto and Montreal. The Company’s largest intermodal facility is located in the northern Toronto suburb of Vaughan and serves the Greater Toronto and southwestern Ontario areas. CP also operates intermodal terminals at Montreal and Detroit. Terminals for the Company’s Expressway service are located in Montreal and at Milton, Ontario, in the Greater Toronto area. CP also has transload facilities in Agincourt and Hamilton, Ontario to meet a variety of commodity needs in the area.

Right-of-Way

The Company’s rail network is standard gauge, which is used by all major railways in Canada, the U.S. and Mexico. Continuous welded rail is used on the core main line network.

CP uses different train control systems on portions of the Company’s owned track, depending on the volume of rail traffic. Remotely controlled centralized traffic control signals are used to authorize the movement of trains. CP is currently rolling out its PTC strategy for portions of its U.S. network.

In other corridors, train movements are directed by written instructions transmitted electronically and by radio from rail traffic controllers to train crews. In some specific areas of intermediate traffic density, CP uses an automatic block signalling system in conjunction with written instructions from rail traffic controllers.

Track and Infrastructure

CP operates on a network of approximately 12,400 miles of track, of which CP owns 10,800 miles and has access to 1,600 miles under trackage rights and lease agreements. The Company's owned track miles includes leases with wholly-owned subsidiaries where the term of the lease exceeds 99 years. CP also owns 1,100 miles of track operated by independent short-line railways. CP's track network represents the size of the Company's operations that connects markets, customers and other railroads. Of the total mileage operated, approximately 5,600 miles are located in western Canada, 2,000 miles in eastern Canada, 4,400 miles in the U.S. Midwest and 400 miles in the U.S. Northeast. CP’s network accesses the U.S. markets directly through three wholly owned subsidiaries: Soo Line Railroad Company (“Soo Line”), a Class I railway operating in the U.S. Midwest; the Dakota, Minnesota and Eastern Railroad ("DM&E"), a wholly owned subsidiary of the Soo Line, which operates in the U.S. Midwest; and the D&H, which operates between eastern Canada and the U.S. Northeast.

At December 31, 2016, the breakdown of CP operated track miles is as follows:

	Total
First main track	12,423
Second and other main track	1,199
Passing sidings and yard track	4,289
Industrial and way track	792
Total track miles	18,703

Rail Facilities

CP operates numerous facilities including: terminals for intermodal and other freight; classification rail yards for train-building and switching, storage-in-transit and other activities; offices to administer and manage operations; dispatch centres to direct traffic on the rail network; crew quarters to house train crews along the rail line; shops and

other facilities for fueling; maintenance and repairs of locomotives; and facilities for maintenance of freight cars and other equipment. Typically in all of our major yards, CP Police Services have offices to ensure the safety and security of the yards and operations.

The following table includes our major yards and terminals on CP's network:

Major Classification Yards	Major Intermodal Terminals
Vancouver, British Columbia	Vancouver, British Columbia
Calgary, Alberta	Calgary, Alberta
Edmonton, Alberta	Edmonton, Alberta
Moose Jaw, Saskatchewan	Regina, Saskatchewan
Winnipeg, Manitoba	Winnipeg, Manitoba
Toronto, Ontario	Vaughan, Ontario
Montreal, Quebec	Montreal, Quebec
Chicago, Illinois	Chicago, Illinois
St. Paul, Minnesota	St. Paul, Minnesota

Equipment

CP's equipment includes: owned and leased locomotives and railcars; heavy maintenance equipment and machinery; other equipment and tools in our shops, offices and facilities; and vehicles for maintenance, transportation of crews, and other activities.

The Company’s locomotive fleet is composed of largely high-adhesion alternating current locomotives that are more fuel-efficient and reliable and have superior hauling capacity, compared with standard direct current locomotives. As of December 31, 2016, the Company had 523 locomotives in storage; as a result, the Company does not foresee the need to acquire new locomotives for the next several years. As of December 31, 2016, CP owned or leased the following locomotive units:

Locomotives	Owned	Leased	Total	Average Age (in years)
Road freight				
High-adhesion alternating current	784	43	827	13
Standard direct current	297	—	297	30
Road switcher	344	—	344	23
Yard switcher	22	—	22	36
Total locomotives	1,447	43	1,490	19

CP owns and leases a fleet of 37,429 freight cars. Owned freight cars include units acquired by CP, equipment leased to third parties, and held under capital leases. Leased freight cars include all units under a short-term or long-term operating lease or financed equipment. As of December 31, 2016, CP owned and leased the following units of freight cars:

Freight cars	Owned	Leased	Total	Average Age (in years)
Box car	2,402	542	2,944	32
Covered hopper	6,071	13,081	19,152	28
Flat car	1,556	693	2,249	24
Gondola	3,421	1,862	5,283	21
Intermodal	1,331	—	1,331	14
Multi-level autorack	2,879	641	3,520	29
Company service car	2,200	172	2,372	46

Open top hopper	344	32	376	31
Tank car	11	191	202	13
Total freight cars	20,215	17,214	37,429	28

As of December 31, 2016, CP owned and leased the following units of intermodal equipment:

Intermodal equipment	Owned	Leased	Total	Average Age (in years)
Containers	6,869	950	7,819	9
Chassis	5,026	794	5,820	13
Total intermodal equipment	11,895	1,744	13,639	11

Headquarters Office Building

CP owns and operates a multi-building campus in Calgary, encompassing the head office building, a data centre, training facility, and other office and operational buildings.

The Company's main dispatch centre is located in Calgary, and is the primary dispatching facility in Canada. Rail traffic controllers coordinate and dispatch crews, and manage the day-to-day locomotive management along the network, 24 hours a day, and seven days a week. The operations centre has a complete backup system in the event of any power disruption.

In addition to fully operational redundant systems, CP has a fully integrated Business Continuity Centre, should CP's operations centre be affected by any natural disaster, fire, cyber-attack, or hostile threat.

CP also maintains a secondary dispatch centre located in Minneapolis, where a facility similar to the one in Calgary exists. It services the dispatching needs of locomotives and train crews working out of the U.S.

Capital Expenditures

The Company incurs expenditures to expand and enhance its rail network, rolling stock and other infrastructure. These expenditures are aimed at improving efficiency and safety of our operations. Such investments are also an integral part of the Company's multi-year capital program and support growth initiatives. For further details, refer to Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources.

Encumbrances

Refer to Item 8. Financial Statements and Supplementary Data, Note 16 Debt, for information on the Company's capital lease obligations and assets held as collateral under these agreements.

ITEM 3. LEGAL PROCEEDINGS

For further details, refer to Item 8. Financial Statements and Supplementary Data, Note 23 Commitments and Contingencies.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

EXECUTIVE OFFICERS OF THE REGISTRANT

Our executive officers generally are elected and designated annually by the Board of Directors at its first meeting held after the annual meeting of shareholders, and they hold office until their successors are elected. Executive officers also may be elected and designated throughout the year as the Board of Directors considers appropriate. There are no family relationships among our officers, nor any arrangement or understanding between any officer and any other person pursuant to which the officer was selected. As of the date of this filing, the executive officers' names, ages and business experience are:

Name, Age and Position	Business Experience
Keith Creel, 48 President and Chief Executive Officer	Mr. Creel became President and CEO of CP on January 31, 2017. Previously he was President and Chief Operating Officer ("COO") from February 5, 2013 to January 30, 2017. Prior to joining CP, Mr. Creel was Executive Vice-President and COO at CN from January 2010 to February 2013. During his time at CN, Mr. Creel held various positions including Executive Vice-President, Operations, Senior Vice-President Eastern Region, Senior Vice-President Western Region, and Vice-President of the Prairie Division. Mr. Creel began his railroad career at Burlington Northern Railway in 1992 as an intermodal ramp manager in Birmingham, Alabama. He also spent part of his career at Grand Trunk Western Railroad as a superintendent and general manager, and at Illinois Central Railroad as a trainmaster and director of corridor operations, prior to its merger with CN in 1999.
Robert A. Johnson, 55 Executive Vice-President, Operations	Mr. Johnson has been Executive Vice-President, Operations of CP since April 20, 2016. Previous to this appointment, Mr. Johnson was CP's Senior Vice-President Operations, Southern Region from June 2013 to April 2016. Prior to joining CP, Mr. Johnson's railroad career spanned 32 years with BNSF, where he held roles that progressively added to his responsibilities in operations, transportation, and service excellence. His most recent position at BNSF was General Manager, Northwest Division, overseeing day-to-day operations for that region.
Nadeem Velani, 44 Vice-President and Chief Financial Officer	Mr. Velani has been Vice-President and CFO of CP since October 19, 2016 and was the Vice-President, Investor Relations from October 28, 2015 and Assistant Vice-President, Investor Relations from March 11, 2013. Prior to joining CP, Mr. Velani spent 15 years at CN where he worked in a variety of positions in Strategic and Financial Planning, Investor Relations, Sales and Marketing, and the Office of the President and CEO. Mr. Velani holds an undergraduate degree in Economics from Western University and an MBA in Finance/International Business from McGill University.
John Brooks, 46 Senior Vice-President and Chief Marketing Officer	Mr. Brooks has been CP's Vice-President and CMO since February 14, 2017. He has worked in senior marketing roles at CP since he joined the company in 2007, most recently as Vice-President, Marketing - Bulk and Intermodal.

	Mr. Brooks began his railroading career with UP and later helped start I&M Rail Link, LLC, which was purchased by DM&E in 2002. Mr. Brooks was Vice-President, Marketing at DM&E prior to it being acquired by CP in 2007. With more than 20 years in the railroading business, Mr. Brooks brings a breadth of experience to the CMO role that will be pivotal to CP's continued and future success.
James Clements, 47 Vice-President, Strategic Planning and Transportation Services	Mr. Clements has been CP's Vice-President, Strategic Planning and Transportation Services since 2015. Mr. Clements has responsibilities that include strategic network issues, joint facilities agreements, Network Service Centre operations, revenue planning and commercial policy. In addition, he has responsibility for CP Logistics and Transload Services. Mr. Clements has been at CP for 22 years and his previous experience covers a wide range areas of CP’s business including car management, finance, logistics, grain marketing and sales in both Canada and the U.S., as well as Marketing and Sales responsibility for various lines of business at CP. He has an MBA in International business and finance from McGill University and a B.Sc in Computer Science and Mathematics from McMaster University.

John E. Derry, 49 Vice-President, Human Resources	Mr. Derry has been Vice-President, Human Resources ("HR") of CP since October 2016, and was the Assistant Vice-President, HR from October 2014 to October 2016. Prior to joining CP, Mr. Derry has had a long history in the transportation industry, previously working with YRC Freight as Vice-President, Organizational Development and, prior to that, at KCS, where he served as Senior Vice-President, HR and Labour Relations. Mr. Derry holds an undergraduate degree in Leadership Management from Judson University in Elgin, Illinois, a master's in Organizational Development from Bowling Green State University in Bowling Green, Ohio and completed the Negotiation and Dispute Resolution program at Creighton University in Omaha, Nebraska.
Peter J. Edwards, 56 Vice-President, People	Mr. Edwards has been Vice-President, People at CP since October 2016. Prior to that he was the Vice-President, HR and Labour Relations from June 5, 2013 and was the Vice-President, HR and Industrial Relations from May 2010 to June 2013. Before joining CP, Mr. Edwards held senior human resources related positions at Labatt Breweries/Interbrew and CN. He has also co-authored two books on managing a changing railway (How We Work and Why and Change, Leadership, Mud and Why). Mr. Edwards also co-authored "SwitchPoints: Culture Change on the Fast Track to Business Success". Mr. Edwards holds a bachelor's and master's degree in Industrial Relations from Queen's University in Ontario.
Jeffrey J. Ellis, 49 Chief Legal Officer and Corporate Secretary	Mr. Ellis has been the Chief Legal Officer and Corporate Secretary of CP since November 23, 2015. Prior to joining CP, Mr. Ellis held various roles at BMO Financial Group, including Executive Vice-President and U.S. General Counsel from April 2013 to November 2015, Senior Vice-President, Deputy General Counsel and Assistant Corporate Secretary, Personal & Commercial U.S. from November 2011 to April 2013, and Vice-President, Deputy General Counsel and Assistant Corporate Secretary, Personal & Commercial Canada. Mr. Ellis has a JD and LLM from Osgoode Hall Law School, an MBA from the Richard Ivey School of Business at the University of Western Ontario and a BA and MA from the University of Toronto. Prior to joining BMO Financial Group, Mr. Ellis practiced corporate and commercial law at Borden Ladner Gervais LLP.
Mike Foran, 43 Vice-President, Market Strategy and Asset Management	Mr. Foran has been CP's Vice-President, Market Strategy and Asset Management since February 14, 2017. His prior roles with CP include Vice-President Network Transportation from 2014 to 2017, Assistant Vice-President Network Transportation from 2013 to 2014, and General Manager - Asset Management from 2012 to 2013. In 19-plus years at CP, Mr. Foran has worked in operations, business development, marketing and general management. Mr. Foran holds an executive MBA from the Ivey School of Business at Western University and a bachelor of Commerce from the University of Calgary.
Michael J. Redeker, 56 Vice-President and Chief Information Officer	Mr. Redeker has been Vice-President and Chief Information Officer ("CIO") of CP since October 15, 2012. Prior to joining CP, Mr. Redeker was Vice-President and CIO of Alberta Treasury Branch from May 2007 to September 2012. He also spent 11 years at IBM Canada, where he focused on delivering quality information technology services within the financial services industry.
Laird J. Pitz, 72	

Vice-President and Chief Risk Officer	Mr. Pitz has been Vice-President and Chief Risk Officer of CP since October 29, 2014 and was the Vice-President, Security and Risk Management of CP from April 2014 to October 2014. Prior to joining CP, Mr. Pitz was retired from March 2012 to April 2014, and Vice-President, Risk Mitigation of CN from September 2003 to March 2012. Mr. Pitz, a Vietnam War veteran and former Federal Bureau of Investigation special agent, is a 40-year career professional who has directed strategic and operational risk mitigation, security and crisis management functions for companies operating in a wide range of fields including defense, logistics and transportation.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED SHAREHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Share Price and Dividend Information

CP's Common Shares are listed on the TSX and on the NYSE under the symbol "CP". The tables below present, for the quarters indicated, information on the dividends declared and the high and low share price of CP's Common Shares. The decision to declare any future cash dividend, including the amount of any such dividend and the establishment of record and payment dates, will be determined, in each quarter, by the Company's Board of Directors, in its sole discretion.

The following table indicates share data of CP's Common Shares listed on the TSX (in Canadian dollars):

		Q1	Q2	Q3	Q4	YTD
2016	Dividends	$0.3500	$0.5000	$0.5000	$0.5000	$1.8500
	Common Share Price					
	High	$178.83	$193.88	$203.29	$209.12	$209.12
	Low	$140.02	$156.01	$165.65	$186.21	$140.02
2015	Dividends	$0.3500	$0.3500	$0.3500	$0.3500	$1.4000
	Common Share Price					
	High	$245.05	$241.73	$212.06	$204.40	$245.05
	Low	$205.95	$195.69	$172.01	$168.12	$168.12

The following table indicates share data of CP's Common Shares listed on the NYSE (in U.S. dollars):

		Q1	Q2	Q3	Q4	YTD
2016	Dividends	$0.2670	$0.3900	$0.3790	$0.3680	$1.4040
	Common Share Price					
	High	$135.77	$151.38	$157.34	$156.71	$157.34
	Low	$97.09	$119.50	$127.02	$139.29	$97.09
2015	Dividends	$0.2800	$0.2840	$0.2640	$0.2520	$1.0800
	Common Share Price					
	High	$194.66	$198.44	$163.39	$157.82	$198.44
	Low	$173.69	$158.04	$129.83	$122.27	$122.27

Share Capital

At February 14, 2017, the latest practicable date, there were 146,366,093 Common Shares and no preferred shares issued and outstanding, which consists of 14,931 holders of record of the Company's Common Shares. In addition, CP has a Management Stock Option Incentive Plan (“MSOIP”), under which key officers and employees are granted options to purchase CP Common Shares. Each option granted can be exercised for one Common Share. At February 14, 2017, 2.0 million options were outstanding under the Company’s MSOIP and stand-alone option agreements entered into with Mr. Keith Creel and former CEO, Mr. E. Hunter Harrison. There are 1.5 million options available to be issued by the Company’s MSOIP in the future.

CP has a Director's Stock Option Plan (“DSOP”), under which directors are granted options to purchase CP Common Shares. There are no outstanding options under the DSOP, which has 0.3 million options available to be issued in the future.

Securities Authorized for Issuance Under Equity Compensation Plans

For further details, refer to Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters for information about securities authorized for issuance under our equity compensation plan.

Stock Performance Graph

The following graph provides an indicator of cumulative total shareholder return on the Company's Common Shares, of an assumed investment of $100, as compared to the TSX 60 Index ("TSX 60"), the Standard & Poor's 500 Stock Index ("S&P 500"), and the peer group index (comprising CN, KCS, UP, NS and CSX) on December 31 for each of the years indicated. The values for the assumed investments depicted on the graph and in the table have been calculated assuming that any dividends are reinvested.

Issuer Purchase of Equity Securities

During 2016, CP repurchased 6.9 million Common Shares for $1,210 million at an average price of $175.08. There were no Common Shares repurchased during each of the months for the fourth quarter of 2016.

For further details, refer to the Share repurchase section in Item 8. Financial Statements and Supplementary Data, Note 19 Shareholders' Equity.

ITEM 6. SELECTED FINANCIAL DATA

The following table presents as of, and for the years ended, December 31, selected financial data related to the Company's financial results for the last five fiscal years. The selected financial data should be read in conjunction with Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 8. Financial Statements and Supplementary Data.

(in millions, except per share data, percentage and ratios)	2016	2015	2014	2013	2012
Financial Performance					
Revenues	$6,232	$6,712	$6,620	$6,133	$5,695
Operating income	2,578	2,688	2,339	1,420	949
Adjusted operating income[1]	2,578	2,620	2,335	1,844	1,309
Net income	1,599	1,352	1,476	875	484
Adjusted income[1]	1,549	1,625	1,482	1,132	753
Basic earnings per share ("EPS")	10.69	8.47	8.54	5.00	2.82
Diluted EPS	10.63	8.40	8.46	4.96	2.79
Adjusted diluted EPS[1]	10.29	10.10	8.50	6.42	4.34
Dividends declared per share	1.8500	1.4000	1.4000	1.4000	1.3500
Financial Position					
Total assets	$19,221	$19,637	$16,550	$16,680	$14,433
Total long-term obligations[2]	8,737	9,012	5,712	4,747	4,696
Shareholders' equity	4,626	4,796	5,610	7,097	5,097
Cash provided by operating activities	2,089	2,459	2,123	1,950	1,328
Free cash[1]	1,007	1,381	969	774	316
Financial Ratios					
Return on invested capital ("ROIC")[1]	14.4 %	12.9 %	14.4 %	10.1 %	7.3 %
Adjusted ROIC[1]	14.0 %	15.2 %	14.5 %	12.3 %	10.0 %
Operating ratio[3]	58.6 %	60.0 %	64.7 %	76.8 %	83.3 %
Adjusted operating ratio[1]	58.6 %	61.0 %	64.7 %	69.9 %	77.0 %

(1) These measures have no standardized meanings prescribed by accounting principles generally accepted in the United States of America ("GAAP") and, therefore may not be comparable to similar measures presented by other companies. These measures are defined and reconciled in Non-GAAP Measures in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

(2) Excludes deferred income taxes of $3,571 million, $3,391 million, $2,717 million, $2,559 million and $1,838 million, and other non-financial deferred liabilities of $940 million, $991 million, $1,100 million, $898 million and $1,574 million at December 31, 2016, 2015, 2014, 2013 and 2012 respectively.

(3) Operating ratio is defined as operating expenses divided by revenues.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

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The following discussion and analysis should be read in conjunction with the Company's Consolidated Financial Statements and the related notes in Item 8. Financial Statements and Supplementary Data, and other information in this report. Except where otherwise indicated, all financial information reflected herein is expressed in Canadian dollars.

Executive Summary

2016 Results

- Financial performance – In 2016, CP reported Diluted EPS of $10.63 while Adjusted diluted EPS climbed to a record $10.29, a 2% improvement compared to the Adjusted diluted EPS of $10.10 in 2015. CP's commitment to operational efficiency produced a best-ever full-year operating ratio of 58.6%, beating the previous record set in 2015, despite a 7% decrease in revenue associated with challenging economic conditions. Adjusted diluted EPS is defined and reconciled in Non-GAAP Measures and discussed further in Results of Operations of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

- Free cash – In 2016, CP generated Free cash of $1.0 billion, a decrease of 27% over the prior year. The decrease was primarily driven by lower cash from operations and proceeds from the sale of D&H South in 2015, partially offset by lower capital expenditures. Free cash is defined and reconciled in Non-GAAP Measures and discussed further in Liquidity and Capital Resources of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

- Operating performance – CP's continued focus on asset utilization and productivity gains resulted in significant improvements to CP's key operating metrics. In 2016, CP's network train speed increased by 10% to 23.5 miles per hour, terminal dwell improved by 7% to 6.7 hours, and fuel efficiency improved by 2% to 0.980 U.S. gallons of locomotive fuel consumed per 1,000 gross ton-miles ("GTMs"). These metrics are discussed further in Performance Indicators of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

- Safety – The Company does not compromise safety for the sake of productivity gains. This relentless commitment to safety is demonstrated by CP's safety statistics filed with the FRA. For 2016, CP's FRA personal injuries frequency improved 11% and FRA train accidents per million train-miles frequency improved 27%, a new record for the Company.

2017 Outlook

For the full year 2017, CP expects Adjusted diluted EPS growth to be in the high single-digit percentages from full-year 2016 Adjusted diluted EPS of $10.29, excluding the impacts of any share repurchases or CEO transition cost recoveries in 2017. CP assumes that, in 2017, the Canadian-to-U.S. dollar exchange rate will be in the range of $1.30 to $1.35 and the average price of West Texas Intermediate ("WTI") crude oil will be approximately U.S. $45 to $55 per barrel. The Company expects a normalized income tax rate of approximately 26.50% for 2017. To further enhance safety and fluidity of the network, CP also plans to invest approximately $1.25 billion in capital programs in 2017, an increase of 6% over the $1.18 billion spent in 2016. Capital programs is defined and discussed further in Liquidity and Capital Resources of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Adjusted diluted EPS is defined and discussed further in Non-GAAP Measures and in Forward-Looking Information of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations. Although CP

has provided a forward-looking non-GAAP measure, it is not practicable to provide a reconciliation to a forward-looking reported diluted EPS, the most comparable GAAP measure, due to unknown variables and uncertainty related to future results. However, any such variability in reported diluted EPS may be excluded when determining Adjusted diluted EPS. Please see Forward-Looking Information of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations for further discussion.

Performance Indicators

The following table lists the key measures of the Company's operating performance:

For the year ended December 31	2016	2015[1]	2014[1]	% Change 2016 vs. 2015	% Change 2015 vs. 2014
Operations Performance					
Gross ton-miles ("GTMs") (millions)	242,694	263,344	272,862	(8)	(3)
Train miles (thousands)	30,373	34,064	36,252	(11)	(6)
Average train weight – excluding local traffic (tons)	8,614	8,314	8,076	4	3
Average train length – excluding local traffic (feet)	7,217	6,935	6,682	4	4
Average terminal dwell (hours)	6.7	7.2	8.7	(7)	(17)
Average train speed (miles per hour, or "mph")	23.5	21.4	18.0	10	19
Fuel efficiency (U.S. gallons of locomotive fuel consumed /1,000 GTMs)	0.980	0.999	1.035	(2)	(3)
Total employees (average)	12,082	13,858	14,604	(13)	(5)
Total employees (end of period)	11,653	12,817	14,255	(9)	(10)
Workforce (end of period)	11,698	12,899	14,385	(9)	(10)
Safety Indicators					
FRA personal injuries per 200,000 employee-hours	1.64	1.84	1.67	(11)	10
FRA train accidents per million train-miles	0.97	1.33	1.26	(27)	6

[1] Certain figures have been updated to reflect new information or have been revised to conform with current presentation.

Operations Performance

A GTM is the movement of one ton of train weight over one mile. GTMs are calculated by multiplying total train weight by the distance the train moved. Total train weight comprises of the weight of the freight cars, their contents, and any inactive locomotives. An increase in GTMs indicates additional workload. GTMs for 2016 were 242,694 million, an 8% decrease compared with 263,344 million in 2015. This decrease was primarily driven by a drop in volume in the Crude, Potash, and Canadian Grain lines of business.

GTMs in 2015 decreased by 3% compared with 272,862 million in 2014. This decline was primarily due to a drop in volumes in the Intermodal, Crude and Metals, minerals and consumer products lines of business.

Train miles are defined as the sum of the distance moved by all trains operated on the network. Train miles for 2016 decreased by 11% compared with 2015 and in 2015 decreased by 6% compared with 2014, reflecting continuous improvements in operating efficiency from longer, heavier trains.

Average train weight is defined as the average gross weight of CP trains, both loaded and empty. This excludes trains in short-haul service, work trains used to move CP's track equipment and materials, and the haulage of other railways' trains on CP's network. Average train weight of 8,614 tons in 2016 increased by 300 tons, or 4%, from 2015.

The average train length is the sum of each car multiplied by the distance travelled, divided by train miles. Local trains are excluded from this measure. Average train length of 7,217 feet in 2016 increased by 282 feet, or 4%, from 2015.

Average train weight increased in 2015 by 238 tons, or 3%, from 2014. Average train length increased in 2015 by 253 feet, or 4%, from 2014.

Both average train weight and length in 2016 and 2015 benefited from improvements in operating plan efficiency and increased bulk traffic being conveyed in longer, heavier trains.

The average terminal dwell is defined as the average time a freight car resides within terminal boundaries expressed in hours. The timing starts with a train arriving in the terminal, a customer releasing the car to the Company, or a car arriving at interchange from another railway. The timing ends when the train leaves, a customer receives the car from CP, or the freight car is transferred to another railway. Freight cars are excluded if they are being stored at the terminal or used in track repairs. Average terminal dwell decreased by 7% in 2016 from 7.2 hours in 2015 to 6.7 hours in 2016. Average terminal dwell also decreased by 17% in 2015 to 7.2 hours from 8.7 hours in 2014. These favourable decreases were primarily due to continued improvements in yard operating performance.

The average train speed is defined as a measure of the line-haul movement from origin to destination including terminal dwell hours. It is calculated by dividing the total train miles travelled by the total train hours operated. This calculation excludes delay time related to customer or foreign railways, and also excludes the time and distance travelled by: i) trains used in or around CP's yards; ii) passenger trains; and iii) trains used for repairing track. Average train speed was 23.5 mph in 2016, an increase of 10%, from 21.4 mph in 2015. Average train speed in 2015 increased by 19%, from 18.0 mph in 2014. These favourable increases were primarily due to improved train design and operating plan execution.

Fuel efficiency improved by 2% in 2016 compared to 2015 and by 3% in 2015 compared to 2014. Improvements in fuel efficiency were a result of increased locomotive productivity, operational fluidity, and execution of the Company's fuel conservation strategies.

Total Employees and Workforce

An employee is defined by the Company as an individual currently engaged in full-time, part-time or seasonal employment with CP. The average number of total employees for 2016 decreased by 1,776, or 13%, compared with 2015. The total number of employees as at December 31, 2016 was 11,653, a decrease of 1,164, or 9%, compared with 12,817 in 2015. These decreases were primarily due to strong operational performance, natural attrition and efficient resource management planning.

The average number of total employees for 2015 decreased by 746, or 5%, compared with 2014. The total number of employees as at December 31, 2015 was 12,817, a decrease of 1,438, or 10%, compared with 14,255 in 2014. These improvements were primarily due to job reductions as a result of continuing strong operational performance and natural attrition.

The workforce is defined as total employees plus contractors and consultants. The workforce as at December 31, 2016 decreased by 1,201, or 9%, compared with December 31, 2015. The workforce as at December 31, 2015 also decreased by 1,486, or 10%, compared with December 31, 2014. These improvements were primarily due to strong operational performance, natural attrition and efficient resource management planning.

Safety Indicators

Safety is a key priority and core strategy for CP's management, employees and Board of Directors. The Company's two main safety indicators – personal injuries and train accidents – follow strict U.S. FRA reporting guidelines.

The FRA personal injuries per 200,000 employee-hours frequency is the number of personal injuries, multiplied by 200,000 and divided by total employee hours. Personal injuries are defined as injuries that require employees to lose time away from work, modify their normal duties or obtain medical treatment beyond minor first aid. FRA employee-hours are the total hours worked, excluding vacation and sick time, by all employees, excluding contractors. The FRA personal injuries per 200,000 employee-hours frequency for CP was 1.64 in 2016, 1.84 in 2015 and 1.67 in 2014.

The FRA train accidents per million train-miles frequency is the number of train accidents, multiplied by 1,000,000 and divided by total train miles. Train accidents included in this metric meet or exceed the FRA reporting threshold of U.S. $10,500 in damage. The FRA train accidents per million train-miles for CP in 2016 was 0.97, compared with 1.33 in 2015 and 1.26 in 2014.

Results of Operations

Income

Operating income was $2,578 million in 2016, a decrease of $110 million, or 4%, from $2,688 million in 2015. This decrease was primarily due to:

- lower traffic volumes;
- the unfavourable impacts of fluctuations in fuel price;
- a $68 million gain on sale of D&H South in 2015;
- higher depreciation and amortization; and
- higher wage and benefit inflation.

This decrease was partially offset by:

- efficiencies generated from improved operating performance and asset utilization;
- a change of $122 million in defined benefit pension plan from an expense of $32 million in 2015 to $90 million in income in 2016;
- the favourable impact of the change in foreign exchange (“FX”) of $69 million; and
- higher land sales.

Operating income was $2,688 million in 2015, an increase of $349 million, or 15%, from $2,339 million in 2014. This increase was primarily due to:

- the favourable impact of the change in FX of $247 million;
- efficiencies generated from improved operating performance and asset utilization;
- the gain on sale of D&H South of $68 million;
- lower share-based compensation primarily driven by the change in share price and lower incentive-based compensation;
- lower fuel price; and
- higher land sales.

This increase was partially offset by:

- lower traffic volume;
- a change of $84 million in defined benefit pension plan from $52 million in income in 2014 to an expense of $32 million in 2015;
- higher wage and benefit inflation; and
- higher casualty expenses as a result of more costly incidents.

Adjusted operating income, defined and reconciled in Non-GAAP Measures of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, was $2,578 million in 2016, a decrease of $42 million, or 2%, from $2,620 million in 2015. This decrease was primarily due to the same factors discussed above for the decrease in Operating income, except that Adjusted operating income excluded the gain on sale of D&H South in 2015.

Adjusted operating income was $2,620 million in 2015, an increase of $285 million, or 12%, from $2,335 million in 2014. This increase was due to the same factors discussed above for the increase in Operating income except that Adjusted operating income excludes the gain on sale of D&H South in 2015.

Net income was $1,599 million in 2016, an increase of $247 million, or 18%, from $1,352 million in 2015. This increase was primarily due to the favourable impact of FX translation on U.S. dollar-denominated debt and a decrease in income tax expense due to the lower effective tax rate compared to 2015. This increase was partially offset by lower operating income and higher interest expense on new debt issued in 2015.

Net income was $1,352 million in 2015, a decrease of $124 million, or 8%, from $1,476 million in 2014. This decrease was primarily due to the unfavourable impact of FX translation on U.S. dollar-denominated debt and higher interest expense on new debt issued in 2015, partially offset by higher operating income.

Adjusted income, defined and reconciled in Non-GAAP Measures of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, was $1,549 million in 2016, a decrease of $76 million, or 5%, from $1,625 million in 2015. This decrease was primarily due to a decrease in Adjusted operating income and higher interest expense on new debt issued in 2015, partially offset by a decrease in income tax expense due to the lower effective tax rate excluding significant items compared to 2015.

Adjusted income was $1,625 million in 2015, an increase of $143 million, or 10%, from $1,482 million in 2014. This increase was primarily due to an increase in Adjusted operating income, partially offset by higher interest expense on new debt issued in 2015 and increased income tax expense.

Diluted Earnings per Share

Diluted EPS was $10.63 in 2016, an increase of $2.23, or 27%, from $8.40 in 2015. This increase was primarily due to higher Net income and the lower average number of outstanding shares due to the Company's share repurchase program.

Diluted EPS was $8.40 in 2015, a decrease of $0.06, or 1%, from $8.46 in 2014. This decrease was primarily due to lower Net income, partially offset by the lower average number of outstanding shares due to the Company's share repurchase program.

Adjusted diluted EPS, defined and reconciled in Non-GAAP Measures of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations, was $10.29 in 2016, an increase of $0.19, or 2%, from $10.10 in 2015. This increase was primarily due to the lower average number of outstanding shares due to the Company’s share repurchase program, partially offset by lower Adjusted income.

Adjusted diluted EPS was $10.10 in 2015, an increase of $1.60, or 19%, from $8.50 in 2014. This increase was primarily due to higher Adjusted income and the lower average number of outstanding shares due to the Company’s share repurchase program.

Operating Ratio

The Operating ratio provides the percentage of revenues used to operate the railway. A lower percentage normally indicates higher efficiency in the operation of the railway. The Company's Operating ratio was 58.6% in 2016, a 140 basis point improvement from 60.0% in 2015. This improvement was primarily due to:

- efficiencies generated from improved operating performance and asset utilization;
- a change of $122 million in defined benefit pension plan from an expense of $32 million in 2015 to $90 million in income in 2016;
- higher land sales of $32 million; and
- the favourable impact of the change in FX of $69 million.

This improvement was partially offset by:

- lower traffic volumes;
- a $68 million gain on disposition of D&H South in 2015;
- higher depreciation and amortization; and
- higher wage and benefit inflation.

The Company's Operating ratio was 60.0% in 2015, a 470 basis point improvement from 64.7% in 2014. This improvement was primarily due to:

- the favourable impact of the change in FX of $247 million;
- efficiencies generated from improved operating performance and asset utilization;
- the gain on sale of D&H South;
- lower share-based compensation primarily driven by the change in share price and lower incentive-based compensation;
- lower fuel price; and
- higher land sales.

This improvement was partially offset by:

- lower traffic volume;
- a change of $84 million in defined benefit pension plan from $52 million in income in 2014 to an expense of $32 million in 2015;
- higher wage and benefit inflation; and
- higher casualty expenses as a result of more costly incidents.

Adjusted operating ratio, defined and reconciled in Non-GAAP Measures of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, was 58.6% in 2016, a 240 basis point improvement from 61.0% in 2015. The improvement in Adjusted operating ratio reflects the same factors discussed above for the improvement in Operating ratio except that Adjusted operating ratio excludes the gain on sale of D&H South in 2015.

Adjusted operating ratio was 61.0% in 2015, a 370 basis point improvement from 64.7% in 2014. This improvement in Adjusted operating ratio reflects the same factors discussed above except that Adjusted operating ratio excludes the gain on sale of D&H South in 2015.

Return on Invested Capital

ROIC is a measure of how productively the Company uses its long-term capital investments, representing critical indicators of good operating and investment decisions made by management, and is an important performance criteria in determining certain elements of the Company's long-term incentive plan. ROIC was 14.4% in 2016, a 150 basis point increase compared to 12.9% in 2015 due to higher income and the reduction in total Shareholders' equity, primarily due to the Company's share repurchase program, partially offset by the issuance of long-term debt in 2015. ROIC was 12.9% in 2015, a 150 basis point decrease compared to 14.4% in 2014 due to the issuance of long-term debt in 2015, partially offset by the reduction in total Shareholders' equity, primarily due to the Company's share repurchase program.

Adjusted ROIC was 14.0% at December 31, 2016, a 120 basis point decrease compared to 15.2% in 2015 due to lower Adjusted income and the issuance of long-term debt in 2015, partially offset by the reductions in total Shareholders' equity as discussed above. Adjusted ROIC was 15.2% in 2015, a 70 basis point increase compared to 14.5% in 2014 due to higher Adjusted income and the reductions in total Shareholders' equity as discussed above, partially offset by the issuance of long-term debt in 2015. ROIC and Adjusted ROIC are defined and reconciled in Non-GAAP Measures of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Impact of Foreign Exchange on Earnings

Fluctuations in FX affect the Company's results because U.S. dollar-denominated revenues and expenses are translated into Canadian dollars. U.S. dollar-denominated revenues and expenses increase (decrease) when the Canadian dollar weakens

(strengthens) in relation to the U.S. dollar. In 2016, the impact of a stronger U.S. dollar resulted in an increase in total revenues of $146 million, an increase in total operating expenses of $77 million and an increase in interest expense of $10 million.

Average exchange rates (Canadian to U.S. dollar)	2016	2015	2014
For the year ended – December 31	$1.33	$1.28	$1.10
For the three months ended – December 31	$1.33	$1.34	$1.13

Exchange rates (Canadian to U.S. dollar)	2016	2015	2014
Beginning of year – January 1	$1.38	$1.16	$1.06
Beginning of quarter – April 1	$1.30	$1.27	$1.11
Beginning of quarter – July 1	$1.29	$1.25	$1.07
Beginning of quarter – October 1	$1.31	$1.33	$1.12
End of quarter – December 31	$1.34	$1.38	$1.16

In 2017, CP expects that for every $0.01 the U.S. dollar appreciates (depreciates) relative to the Canadian dollar, it will increase (decrease) revenues by $25 million, operating expenses by $13 million and interest expense by $3 million on an annualized basis.

Impact of Fuel Price on Earnings

Fluctuations in fuel prices affect the Company’s results because fuel expense constitutes a significant portion of CP's operating costs. As fuel prices fluctuate, there will be a timing impact on earnings, as discussed further in Item 1. Business, Operations, Fuel Cost Adjustment Program and Item 1A. Risk Factors, Fuel Cost Volatility. In 2016, the impact of lower fuel prices resulted in a decrease in total revenues of $178 million and a decrease in total operating expenses of $100 million. The wildfires in northern Alberta negatively impacted fuel input costs by an estimated $9 million without triggering a commensurate offsetting impact on benchmark fuel recovery prices during the second quarter of 2016.

Average Fuel Price (U.S. dollars per U.S. gallon)	2016	2015	2014
For the year ended – December 31	$1.80	$2.13	$3.41
For the three months ended – December 31	$2.01	$1.91	$3.11

Impact of Share Price on Earnings

Fluctuations in the Common Share price affect the Company's operating expenses because share-based liabilities are measured at fair value. The following tables indicate the opening and closing CP Common Share Price on the TSX and the NYSE for the year ended December 31, 2016, 2015 and 2014.

Toronto Stock Exchange (in Canadian dollars)	2016	2015	2014
Opening Common Share price, as at January 1	$176.73	$223.75	$160.65
Ending Common Share price, as at March 31	$172.55	$231.90	$165.65
Ending Common Share price, as at June 30	$166.33	$200.02	$193.31
Ending Common Share price, as at September 30	$200.19	$191.54	$232.43
Ending Common Share price, as at December 31	$191.56	$176.73	$223.75
Change in Common Share price for the year ended December 31	$14.83	$(47.02)	$63.10

New York Stock Exchange (in U.S. dollars)	2016	2015	2014
Opening Common Share price, as at January 1	$127.60	$192.69	$151.32
Ending Common Share price, as at March 31	$132.69	$182.70	$150.43
Ending Common Share price, as at June 30	$128.79	$160.23	$181.14
Ending Common Share price, as at September 30	$152.70	$143.57	$207.47

Ending Common Share price, as at December 31	$142.77	$127.60	$192.69
Change in Common Share price for the year ended December 31	$15.17	$(65.09)	$41.37

In 2016, the impact of the change in Common Share price resulted in an increase in stock-based compensation expense of $9 million compared to a decrease of $36 million in 2015, and an increase of $46 million in 2014.

The impact of share price on stock-based compensation is discussed further in Item 7A. Quantitative and Qualitative Disclosures About Market Risk, Share Price Impact on Stock-Based Compensation.

Operating Revenues

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted % Change[2]	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted % Change[2]
Freight revenues (in millions)[1]	$ 6,060	$ 6,552	$ 6,464	$ (492)	(8)	(10)	$ 88	1	(7)
Non-freight revenues (in millions)	172	160	156	12	8	7	4	3	—
Total revenues (in millions)	$ 6,232	$ 6,712	$ 6,620	$ (480)	(7)	(9)	$ 92	1	(6)
Carloads (in thousands)	2,525	2,628	2,684	(103)	(4)	N/A	(56)	(2)	N/A
Revenue ton-miles (in millions)	135,952	145,257	149,849	(9,305)	(6)	N/A	(4,592)	(3)	N/A
Freight revenue per carload (dollars)	$ 2,400	$ 2,493	$ 2,408	$ (93)	(4)	N/A	$ 85	4	N/A
Freight revenue per revenue ton-miles (cents)	4.46	4.51	4.31	(0.05)	(1)	N/A	0.20	5	N/A

[1] Freight revenues include fuel surcharge revenues of $117 million in 2016, $293 million in 2015 and $637 million in 2014.

[2] FX Adjusted % Change does not have any standardized meaning prescribed by GAAP and, therefore is unlikely to be comparable to similar measures presented by other companies. FX adjusted variance is defined and reconciled in Non-GAAP Measures of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The Company’s revenues are primarily derived from transporting freight. Changes in freight volumes generally contribute to corresponding changes in freight revenues and certain variable expenses, such as fuel, equipment rents and crew costs. Non-freight revenue is generated from leasing of certain assets, switching fees, contracts with passenger service operators, and logistical management services.

Freight Revenues

Freight revenues were $6,060 million in 2016, a decrease of $492 million, or 8%, from $6,552 million in 2015. This decrease was primarily due to lower volumes, as measured by RTMs, in Crude, Canadian grain, Potash, and Metals, minerals, and consumer products and the impact of lower fuel prices on fuel surcharge revenue.

This decrease was partially offset by higher volumes in International intermodal, Chemicals and plastics, and Forest products and the favourable impact of the change in FX of $146 million.

Freight revenues were $6,552 million in 2015, an increase of $88 million, or 1%, from $6,464 million in 2014. This increase was primarily due to the favourable impact of the change in FX of $549 million and an increase in Canadian grain revenue due to increased exports. This increase was partially offset by the impact of lower fuel prices on fuel surcharge revenue of $334 million, and lower volumes of Metals, mineral and consumer products and Crude.

RTMs

RTMs are defined as the movement of one revenue-producing ton of freight over a distance of one mile. RTMs measure the relative weight and distance of rail freight moved by the Company. RTMs for 2016 were 135,952 million,

a decrease of 9,305 million, or 6%, compared with 145,257 million in 2015. This decrease was mainly attributable to decreased shipments of Crude, Canadian grain, Potash, and Metals, minerals and consumer products. This decrease was partially offset by increased shipments of International intermodal, Chemicals and Plastics, Forest products and U.S. grain.

RTMs for 2015 were 145,257 million, a decrease of 3% compared with 149,849 million in 2014. This decrease was primarily due to lower volumes of Crude, Metals, minerals and consumer products, and U.S. Grain. This decrease was partially offset by increased shipments of Potash, Canadian Grain, and Forest products.

Non-freight Revenues

Non-freight revenues were $172 million in 2016, an increase of $12 million, or 8%, from $160 million in 2015. This increase was primarily due to higher transload, leasing, and logistics services revenues.

Non-freight revenues were $160 million in 2015, an increase of $4 million, or 3%, from $156 million in 2014. This increase was primarily due to the favourable impact of the change in FX.

Lines of Business

Canadian Grain

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	% Change	FX Adjusted % Change	2015 vs. 2014 Total Change	% Change	FX Adjusted % Change
Freight revenues (in millions)	$962	$1,068	$988	$(106)	(10)	(11)	$80	8	4
Carloads (in thousands)	270	285	291	(15)	(5)	N/A	(6)	(2)	N/A
Revenue ton-miles (in millions)	25,994	27,442	26,691	(1,448)	(5)	N/A	751	3	N/A
Freight revenue per carload (dollars)	$3,559	$3,750	$3,391	$(191)	(5)	N/A	$359	11	N/A
Freight revenue per revenue ton-mile (cents)	3.70	3.89	3.70	(0.19)	(5)	N/A	0.19	5	N/A

Canadian grain revenue was $962 million in 2016, a decrease of $106 million, or 10%, from $1,068 million in 2015. This decrease was primarily due to a decline in volumes due to lower carryover from prior year and a weather delayed fall harvest, and lower freight rates that reflect the change in the MRE for Canadian regulated grain in the crop year 2015/2016. This decrease was partially offset by the favourable impact of the change in FX, and an increase in volumes due to a larger 2016/2017 crop.

Canadian grain revenue was $1,068 million in 2015, an increase of $80 million, or 8%, from $988 million in 2014. This increase was primarily due to higher freight rates, the favourable impact of the change in FX, and strong export volumes through the Port of Vancouver, partially offset by lower fuel surcharge revenue.

U.S. Grain

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	% Change	FX Adjusted % Change	2015 vs. 2014 Total Change	% Change	FX Adjusted % Change
Freight revenues (in millions)	$518	$522	$503	$(4)	(1)	(5)	$19	4	(12)
Carloads (in thousands)	162	157	173	5	3	N/A	(16)	(9)	N/A
Revenue ton-miles (in millions)	10,898	10,625	11,724	273	3	N/A	(1,099)	(9)	N/A
Freight revenue per carload (dollars)	$3,202	$3,326	$2,909	$(124)	(4)	N/A	$417	14	N/A
Freight revenue per revenue ton-mile (cents)	4.75	4.91	4.29	(0.16)	(3)	N/A	0.62	14	N/A

U.S. grain revenue was $518 million in 2016, a decrease of $4 million, or 1%, from $522 million in 2015. The decrease was primarily due to the decrease in average freight revenue per revenue ton-mile, and lower fuel surcharge revenue as a result of lower fuel prices. The decrease was partially offset by the favourable impact of the change in FX, and increased volumes. The decrease in average freight revenue per revenue ton-mile was primarily due to a change in the mix of commodities being shipped.

U.S. grain revenue was $522 million in 2015, an increase of $19 million, or 4%, from $503 million in 2014. The increase was primarily due to the favourable impact of the change in FX, partially offset by a decrease in volumes of 9% primarily due to the reduction in export volumes, and lower fuel surcharge revenue.

Coal

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted % Change	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted % Change
Freight revenues (in millions)	$606	$639	$621	$(33)	(5)	(6)	$18	3	1
Carloads (in thousands)	305	323	313	(18)	(6)	N/A	10	3	N/A
Revenue ton-miles (in millions)	22,171	22,164	22,443	7	—	N/A	(279)	(1)	N/A
Freight revenue per carload (dollars)	$1,984	$1,978	$1,985	$6	—	N/A	$(7)	—	N/A
Freight revenue per revenue ton-mile (cents)	2.73	2.88	2.77	(0.15)	(5)	N/A	0.11	4	N/A

Coal revenue was $606 million in 2016, a decrease of $33 million, or 5%, from $639 million in 2015. This decrease was primarily due to the decline in U.S. thermal coal shipments, and lower fuel surcharge revenue as a result of lower fuel prices, partially offset by increased shipments of metallurgical coal, and the favourable impact of the change in FX. The decrease in freight revenue per revenue ton-mile is primarily due to the decrease in U.S. thermal coal, which has a shorter length of haul versus export metallurgical coal.

Coal revenue was $639 million in 2015, an increase of $18 million, or 3%, from $621 million in 2014. This increase was primarily due to the favourable impact of the change in FX and higher freight rates and volumes of U.S. originated thermal coal, partially offset by lower fuel surcharge revenue and a decline in volume in Canadian coal business.

Potash

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted % Change	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted % Change
Freight revenues (in millions)	$338	$359	$347	$(21)	(6)	(8)	$12	3	(4)
Carloads (in thousands)	116	124	118	(8)	(6)	N/A	6	5	N/A
Revenue ton-miles (in millions)	14,175	15,117	14,099	(942)	(6)	N/A	1,018	7	N/A
Freight revenue per carload (dollars)	$2,904	$2,887	$2,941	$17	1	N/A	$(54)	(2)	N/A
Freight revenue per revenue ton-mile (cents)	2.38	2.37	2.46	0.01	—	N/A	(0.09)	(4)	N/A

Potash revenue was $338 million in 2016, a decrease of $21 million, or 6%, from $359 million in 2015. This decrease was primarily due to a decline in export potash volumes, and lower fuel surcharge revenue as a result of lower fuel prices. Favourable impact of the change in FX, and an adjustment to freight rates for one customer for prior periods partially offset this decrease. The freight revenue per revenue ton-mile is essentially flat due to the adjustment to freight rates for one customer for prior periods, offset by decreases in export traffic revenue ton-miles.

Potash revenue was $359 million in 2015, an increase of $12 million, or 3%, from $347 million in 2014. This increase was primarily due to the favourable impact of the change in FX and an increase in volumes where growth in export Potash, which has a lower freight revenue per revenue ton-mile, outpaced domestic Potash growth.

Fertilizers and Sulphur

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted % Change	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted % Change
Freight revenues (in millions)	$284	$272	$234	$12	4	2	$38	16	6
Carloads (in thousands)	60	62	61	(2)	(3)	N/A	1	2	N/A
Revenue ton-miles (in millions)	4,140	4,044	4,180	96	2	N/A	(136)	(3)	N/A
Freight revenue per carload (dollars)	$4,769	$4,410	$3,801	$359	8	N/A	$609	16	N/A
Freight revenue per revenue ton-mile (cents)	6.87	6.71	5.59	0.16	2	N/A	1.12	20	N/A

Fertilizers and sulphur revenue was $284 million in 2016, an increase of $12 million, or 4%, from $272 million in 2015. This increase was primarily due to increased freight revenue per carload and the favourable impact of the change in FX, partially offset by lower fuel surcharge revenue as a result of lower fuel prices, and lower carloads. The increase in freight revenue per carload is primarily due to the increase in average length of haul for fertilizers.

Fertilizers and sulphur revenue was $272 million in 2015, an increase of $38 million, or 16%, from $234 million in 2014. This increase was primarily due to the favourable impact of the change in FX, higher freight rates and a shift in mix of traffic to fertilizers, which generally has higher freight rates than sulphur.

Forest Products

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted % Change	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted % Change
Freight revenues (in millions)	$275	$249	$206	$26	10	7	$43	21	8
Carloads (in thousands)	66	62	59	4	6	N/A	3	5	N/A
Revenue ton-miles (in millions)	4,691	4,201	3,956	490	12	N/A	245	6	N/A
Freight revenue per carload (dollars)	$4,157	$4,026	$3,493	$131	3	N/A	$533	15	N/A
Freight revenue per revenue ton-mile (cents)	5.86	5.92	5.20	(0.06)	(1)	N/A	0.72	14	N/A

Forest products revenue was $275 million in 2016, an increase of $26 million, or 10%, from $249 million in 2015. This increase was primarily due to higher volumes, particularly of lumber and panel products, which have a longer length of haul than other forest products, and the favourable impact of the change in FX. Lower fuel surcharge revenue as a result of lower fuel prices partially offset this increase.

Forest products revenue was $249 million in 2015, an increase of $43 million, or 21%, from $206 million in 2014. This increase was primarily due to the favourable impact of the change in FX, improved pricing and a change in traffic mix to lumber and panel products, which generally have higher freight rates than pulp and paper.

Chemicals and Plastics

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted

						% Change			% Change
Freight revenues (in millions)	$714	$709	$637	$5	1	(3)	$72	11	(2)
Carloads (in thousands)	212	203	198	9	4	N/A	5	3	N/A
Revenue ton-miles (in millions)	14,294	13,611	13,635	683	5	N/A	(24)	—	N/A
Freight revenue per carload (dollars)	$3,368	$3,483	$3,214	$(115)	(3)	N/A	$269	8	N/A
Freight revenue per revenue ton-mile (cents)	4.99	5.21	4.67	(0.22)	(4)	N/A	0.54	12	N/A

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Chemicals and plastics revenue was $714 million in 2016, an increase of $5 million, or 1%, from $709 million in 2015. This increase was primarily due to an increase in volumes, and the favourable impact of the change in FX. Lower fuel surcharge revenue as a result of lower fuel prices, and lower average freight revenue per revenue ton-mile due to fewer liquefied petroleum gas product shipments, partially offset this increase.

Chemicals and plastics revenue was $709 million in 2015, an increase of $72 million, or 11%, from $637 million in 2014. This increase was primarily due to the favourable impact of the change in FX, partially offset by lower fuel surcharge revenue.

Crude

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	% Change	FX Adjusted % Change	2015 vs. 2014 Total Change	% Change	FX Adjusted % Change
Freight revenues (in millions)	$138	$393	$484	$(255)	(65)	(66)	$(91)	(19)	(29)
Carloads (in thousands)	38	91	110	(53)	(58)	N/A	(19)	(17)	N/A
Revenue ton-miles (in millions)	4,727	13,280	16,312	(8,553)	(64)	N/A	(3,032)	(19)	N/A
Freight revenue per carload (dollars)	$3,646	$4,309	$4,419	$(663)	(15)	N/A	$(110)	(2)	N/A
Freight revenue per revenue ton-mile (cents)	2.93	2.96	2.97	(0.03)	(1)	N/A	(0.01)	—	N/A

Crude revenue was $138 million in 2016, a decrease of $255 million, or 65%, from $393 million in 2015. This decrease was primarily due to a decline in volumes as a result of the fall in crude oil prices and an increase in available pipeline capacity, as well as lower fuel surcharge revenue as a result of lower fuel prices. The favourable impact of the change in FX partially offset this decrease.

Crude revenue was $393 million in 2015, a decrease of $91 million, or 19%, from $484 million in 2014. This decrease was primarily due to a decline in volume as a result of the fall in crude oil prices and lower fuel surcharge revenue, partially offset by the favourable impact of the change in FX.

Metals, Minerals and Consumer Products

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	% Change	FX Adjusted % Change	2015 vs. 2014 Total Change	% Change	FX Adjusted % Change
Freight revenues (in millions)	$564	$643	$712	$(79)	(12)	(15)	$(69)	(10)	(20)
Carloads (in thousands)	196	217	253	(21)	(10)	N/A	(36)	(14)	N/A
Revenue ton-miles (in millions)	8,338	9,020	11,266	(682)	(8)	N/A	(2,246)	(20)	N/A
Freight revenue per carload (dollars)	$2,888	$2,963	$2,814	$(75)	(3)	N/A	$149	5	N/A
Freight revenue per revenue ton-mile (cents)	6.77	7.13	6.32	(0.36)	(5)	N/A	0.81	13	N/A

Metals, minerals and consumer products revenue was $564 million in 2016, a decrease of $79 million, or 12%, from $643 million in 2015. This decrease was primarily due to declines in the volume of aggregate products, steel, and waste products, and lower fuel surcharge revenue as a result of lower fuel prices, partially offset by the favourable impact of the change in FX. The decrease in average freight revenue per revenue ton-mile is primarily due to a change in mix of commodities.

Metals, minerals and consumer products revenue was $643 million in 2015, a decrease of $69 million, or 10%, from $712 million in 2014. This decrease was primarily due to declines in the volume of frac sand, steel and other aggregates traffic, partially offset by the favourable impact of the change in FX.

Automotive

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted % Change	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted % Change
Freight revenues (in millions)	$350	$349	$357	$1	—	(3)	$(8)	(2)	(11)
Carloads (in thousands)	124	131	134	(7)	(5)	N/A	(3)	(2)	N/A
Revenue ton-miles (in millions)	1,667	1,750	1,953	(83)	(5)	N/A	(203)	(10)	N/A
Freight revenue per carload (dollars)	$2,825	$2,659	$2,670	$166	6	N/A	$(11)	—	N/A
Freight revenue per revenue ton-mile (cents)	21.02	19.97	18.26	1.05	5	N/A	1.71	9	N/A

Automotive revenue was $350 million in 2016, a slight increase of $1 million from $349 million in 2015. The increase in average freight rates and the favourable impact of the change in FX were offset by declines in volume, and lower fuel surcharge revenue as a result of lower fuel prices.

Automotive revenue was $349 million in 2015, a decrease of $8 million, or 2%, from $357 million in 2014. This decrease was primarily due to lower fuel surcharge revenue and lower volumes driven by weaker traffic to Western Canada, partially offset by the favourable impact of the change in FX.

Domestic Intermodal

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted % Change	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted % Change
Freight revenues (in millions)	$721	$757	$787	$(36)	(5)	(5)	$(30)	(4)	(6)
Carloads (in thousands)	427	414	428	13	3	N/A	(14)	(3)	N/A
Revenue ton-miles (in millions)	11,992	12,072	11,867	(80)	(1)	N/A	205	2	N/A
Freight revenue per carload (dollars)	$1,688	$1,831	$1,837	$(143)	(8)	N/A	$(6)	—	N/A
Freight revenue per revenue ton-mile (cents)	6.01	6.27	6.63	(0.26)	(4)	N/A	(0.36)	(5)	N/A

Domestic intermodal revenue was $721 million in 2016, a decrease of $36 million, or 5%, from $757 million in 2015. This decrease was primarily due to lower fuel surcharge revenue as a result of lower fuel prices, and lower average freight revenue per revenue ton-mile as a result of fewer shipments using temperature controlled equipment. The favourable impact of the change in FX partially offset this decrease.

Domestic intermodal revenue was $757 million in 2015, a decrease of $30 million, or 4%, from $787 million in 2014. This decrease was primarily due to lower fuel surcharge revenue, partially offset by the favourable impact of the change in FX, and increased transcontinental traffic.

International Intermodal

For the year ended December 31	2016	2015	2014	2016 vs. 2015 Total Change	2016 vs. 2015 % Change	2016 vs. 2015 FX Adjusted % Change	2015 vs. 2014 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 FX Adjusted % Change

Freight revenues (in millions)	$590	$592	$588	$(2)	—	(2)	$4	1	(5)
Carloads (in thousands)	549	559	546	(10)	(2)	N/A	13	2	N/A
Revenue ton-miles (in millions)	12,865	11,931	11,723	934	8	N/A	208	2	N/A
Freight revenue per carload (dollars)	$1,074	$1,061	$1,077	$13	1	N/A	$(16)	(1)	N/A
Freight revenue per revenue ton-mile (cents)	4.59	4.96	5.02	(0.37)	(7)	N/A	(0.06)	(1)	N/A

International intermodal revenue was $590 million in 2016, a slight decrease of $2 million from $592 million in 2015. The decrease was primarily due to a decrease in freight revenue per revenue ton-mile due to fewer revenue generating moves of empty customer containers, and lower fuel surcharge revenue as a result of lower fuel prices. This decrease was offset by an increase in revenue ton-miles, as a result of longer haul shipments through the Port of Vancouver, and the favourable impact of the change in FX.

International intermodal revenue was $592 million in 2015, an increase of $4 million, or 1%, from $588 million in 2014. This increase was primarily due to the favourable impact of the change in FX, partially offset by lower fuel surcharge revenue.

Operating Expenses

[1] Purchased services and other includes a $68 million gain on sale of D&H South in 2015.

For the year ended December 31 (in millions)	2016	2015	2014	2016 vs. 2015 Total Change	% Change	FX Adjusted % Change[1]	2015 vs. 2014 Total Change	% Change	FX Adjusted % Change[1]
Compensation and benefits	$1,189	$1,371	$1,348	$(182)	(13)	(14)	$23	2	(3)
Fuel	567	708	1,048	(141)	(20)	(23)	(340)	(32)	(41)
Materials	180	184	193	(4)	(2)	(3)	(9)	(5)	(7)
Equipment rents	173	174	155	(1)	(1)	(3)	19	12	1
Depreciation and amortization	640	595	552	45	8	7	43	8	4
Purchased services and other	905	1,060	985	(155)	(15)	(16)	75	8	1
Gain on sale of D&H South	—	(68)	—	68	(100)	(100)	(68)	100	100
Total operating expenses	$3,654	$4,024	$4,281	$(370)	(9)	(11)	$(257)	(6)	(12)

[1] FX Adjusted % Change does not have any standardized meaning prescribed by GAAP and, therefore is unlikely to be comparable to similar measures presented by other companies. FX adjusted variance is defined and reconciled in Non-GAAP Measures of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Operating expenses were $3,654 million in 2016, a decrease of $370 million, or 9%, from $4,024 million in 2015. This decrease was primarily due to:

- efficiencies generated from improved operating performance and asset utilization;
- lower volume variable expenses;
- change of $122 million in defined benefit pension plan from an expense of $32 million in 2015 to $90 million in income in 2016;
- the favourable impact of $100 million from lower fuel prices; and
- a $32 million increase in land sales.

This decrease was partially offset by:

- the unfavourable impact of the change in FX of $77 million;
- the gain on sale of D&H South of $68 million in 2015;
- higher depreciation and amortization due to a higher asset base; and
- the impact of wage and benefit inflation of approximately 3%.

Operating expenses were $4,024 million in 2015, a decrease of $257 million, or 6%, from $4,281 million in 2014. This decrease was primarily due to:

- the favourable impact of $403 million from lower fuel prices;
- efficiencies generated from improved operating performance and asset utilization;
- the favourable impact of $87 million from lower stock-based compensation primarily driven by the change in stock price and lower incentive-based compensation;
- the $68 million favourable gain on sale of D&H South;
- lower volume variable expenses; and
- a $42 million increase in land sales.

This decrease was partially offset by:

- the unfavourable impact of the change in FX of $306 million;
- a change of $84 million in defined benefit pension plan from $52 million in income in 2014 to an expense of $32 million in 2015;
- the impact of wage and benefit inflation of approximately 3%; and
- higher casualty expenses as a result of more costly incidents of $37 million.

Compensation and Benefits

Compensation and benefits expense includes employee wages, salaries, fringe benefits and stock-based compensation. Compensation and benefits expense was $1,189 million in 2016, a decrease of $182 million, or 13%, from $1,371 million in 2015. This decrease was primarily due to:

- change of $122 million in defined benefit pension plan from an expense of $32 million in 2015 to $90 million in income in 2016;
- lower costs achieved through job reductions;
- lower volume variable expenses as a result of a decrease in workload as measured by GTMs;
- road and yard efficiencies as a result of continuing strong operational performance; and
- the favourable impact of $20 million from lower stock-based compensation and incentive-based compensation.

This decrease was partially offset by the impact of wage and benefit inflation of approximately 3% and the unfavourable impact of the change in FX of $18 million.

Compensation and benefits expense was $1,371 million in 2015, an increase of $23 million, or 2%, from $1,348 million in 2014. This increase was primarily due to:

- a change of $84 million in defined benefit pension plan from $52 million in income in 2014 to an expense of $32 million in 2015;
- the unfavourable impact of the change in FX of $62 million; and
- the impact of wage and benefit inflation of approximately 3%.

This increase was partially offset by:

- the favourable impact of $87 million from lower stock-based compensation primarily driven by the change in stock price and lower incentive-based compensation;
- lower costs achieved through job reductions;
- road and yard efficiencies as a result of continuing strong operational performance; and
- lower volume variable expenses as a result of a decrease in workload as measured by GTMs.

Fuel

Fuel expense consists mainly of fuel used by locomotives and includes provincial, state and federal fuel taxes. Fuel expense was $567 million in 2016, a decrease of $141 million, or 20%, from $708 million in 2015. This decrease was primarily due to:

- lower fuel prices with a favourable impact of $100 million;
- a reduction in workload, as measured by GTMs; and
- improvements in fuel efficiency of approximately 2% as a result of increased locomotive productivity, operational fluidity and the advancement of the Company's fuel conservation strategies.

This decrease was partially offset by the unfavourable impact of the change in FX of $25 million.

Fuel expense was $708 million in 2015, a decrease of $340 million, or 32%, from $1,048 million in 2014. This decrease was primarily due to:

- lower fuel prices with a favourable impact of $403 million;
- a reduction in workload, as measured by GTMs; and
- improvements in fuel efficiency of approximately 3% as a result of increased locomotive productivity, operational fluidity and the advancement of the Company's fuel conservation strategies.

This decrease was partially offset by the unfavourable impact of the change in FX of $143 million.

Materials

Materials expense includes the cost of material used for track, locomotive, freight car, building maintenance and software sustainment. Materials expense was $180 million in 2016, a decrease of $4 million, or 2%, from $184 million in 2015. This decrease was primarily due to lower car repair and locomotive maintenance costs.

Materials expense was $184 million in 2015, a decrease of $9 million, or 5%, from $193 million in 2014. This decrease was primarily due to lower locomotive units maintained.

Equipment Rents

Equipment rents expense includes the cost associated with using other companies' freight cars, intermodal equipment, and locomotives, net of rental income received from other railways for the use of CP's equipment. Equipment rents expense was $173 million in 2016, a decrease of $1 million, or 1%, from $174 million in 2015. This decrease was primarily due to the purchase or return of leased freight cars reducing rental expenses by $12 million. This decrease was partially offset by the return of subleased locomotives and freight cars reducing rental income by $6 million and the unfavourable impact of the change in FX of $5 million.

Equipment rents expense was $174 million in 2015, an increase of $19 million, or 12%, from $155 million in 2014. This increase was primarily due to the unfavourable impact of the change in FX of $18 million, a return of subleased locomotives reducing rental income by $15 million, and a decrease in car hire expense resulting from the lower use of CP's equipment by other railroads. This increase was largely offset by the purchase of previously leased freight cars reducing rental expenses by $21 million and lower use of foreign equipment.

Depreciation and Amortization

Depreciation and amortization expense represents the charge associated with the use of track and roadway, buildings, rolling stock, information systems and other depreciable assets. Depreciation and amortization expense was $640 million for 2016, an increase of $45 million, or 8%, from $595 million in 2015. This increase was primarily due to a higher depreciable asset base and the unfavourable impact of the change in FX of $5 million.

Depreciation and amortization expense was $595 million for 2015, an increase of $43 million, or 8%, from $552 million in 2014. This increase was primarily due to a higher depreciable asset base and the unfavourable impact of the change in FX of $18 million.

Purchased Services and Other

For the year ended December 31 (in millions)	2016[1]	2015	2014	2016 vs. 2015 % Change	2016 vs. 2015 Total Change	2015 vs. 2014 % Change	2015 vs. 2014 Total Change
Support and facilities	$ 271	$ 298	$ 297	(9)	$ (27)	—	$ 1
Track and operations	238	266	243	(11)	(28)	9	23
Intermodal	180	184	176	(2)	(4)	5	8
Equipment	165	196	166	(16)	(31)	18	30
Casualty	68	74	35	(8)	(6)	111	39
Property taxes	116	103	94	13	13	10	9

Other	(27)	13	6	(308)	(40)	117	7
Land sales	(106)	(74)	(32)	43	(32)	131	(42)
Total Purchased services and other	$ 905	$ 1,060	$ 985	(15)	$ (155)	8	$ 75

(1) Certain prior quarters' figures have been revised to conform with current presentation.

Purchased services and other expense encompasses a wide range of third-party costs, including contractor and consulting fees, locomotive and freight car repairs performed by third parties, property and other taxes, intermodal pickup and delivery services, casualty expense, expenses for joint facilities, and gains on land sales. Purchased services and other expense was $905 million in 2016, a decrease of $155 million, or 15%, from $1,060 million in 2015. This decrease was primarily due to:

- lower third party service costs, reported in Track and operations and Support and facilities;
- a $17 million gain on sale of surplus freight cars, and a reduction in accrued discontinuance costs for certain branch lines, reported in Other;
- higher land sales of $32 million resulting from optimization of the Company's assets, as discussed further below;
- lower crew travel and accommodations costs, reported in Track and operations;
- lower third-party freight car and locomotive maintenance costs, reported in Equipment; and
- lower casualty expenses of $8 million (excluding FX) as a result of lower third party claims and incident related environmental costs due to effective incident response and case management. This is partially offset by higher personal injury costs.

This decrease was partially offset by the unfavourable impact of the change in FX of $21 million and higher property taxes of $12 million (excluding FX).

Purchased services and other expense was $1,060 million in 2015, an increase of $75 million, or 8%, from $985 million in 2014. This increase was primarily due to:

- the unfavourable impact of the change in FX of $60 million;
- higher casualty expenses as a result of more costly incidents, reported in Casualty;
- higher intermodal expenses related to pickup and delivery service, reported in Intermodal;
- increased locomotive overhauls, reported in Equipment; and
- higher legal fees and support costs, reported in Support and facilities.

This increase was partially offset by higher land sales of $42 million and efficiencies generated from the insourcing of certain IT activities, included in Support and facilities.

As part of optimizing its assets, the Company may identify and dispose of property used or formerly used in operating activities. The Company includes as part of operating expenses the gains and losses that arise on disposal of such long-lived assets. The following disposals have impacted Purchased services and other during the current and comparative periods:

- in the fourth quarter of 2016, the Company completed the sale of CP's Obico rail yard for gross proceeds of $38 million and a gain on sale of $37 million;
- in the second quarter of 2016, the Company disposed of 1,000 surplus freight cars that had reached or were nearing the end of their useful life, in a non-monetary exchange for new freight cars. The Company recognized a gain on sale of $17 million from the transaction and the sale did not impact cash from investing activities;
- in the first quarter of 2016, the Company completed the sale of CP’s Arbutus Corridor to the City of Vancouver for gross proceeds of $55 million and a gain on sale of $50 million. The agreement allows the Company to share in future proceeds on the eventual development and/or sale of certain parcels of the Arbutus Corridor; and
- in the first quarter of 2015, the Company recorded gains on land sales totalling $60 million, including a gain of $31 million following the sale of a building after resolution of legal proceedings, and various sections of land in eastern Canada for transit purposes.

Gain on Sale of D&H South

On November 17, 2014, the Company announced a proposed agreement with NS for the sale of approximately 283 miles of the Delaware and Hudson Railway Company, Inc.'s line between Sunbury, Pennsylvania, and Schenectady, New York, ("D&H South").

During the first quarter of 2015, the Company finalized the sales agreement with NS for D&H South. The sale, which received approval by the STB on May 15, 2015, was completed on September 18, 2015 for proceeds of $281 million (U.S. $214 million). The Company recorded a gain on sale of $68 million ($42 million after tax) from the transaction during the third quarter of 2015.

Other Income Statement Items

Other Income and Charges

Other income and charges consists of gains and losses from the change in FX on long-term debt, working capital, various costs related to financing, shareholder costs, equity income and other non-operating expenditures. Other income and charges was a gain of $45 million in 2016, compared to an expense of $335 million in 2015, a change of $380 million, or 113%. This was primarily due to the favourable impact of FX translation of $79 million on U.S. dollar-denominated debt in 2016 compared to the unfavourable impact of FX translation of $297 million on U.S. dollar-denominated debt in 2015 and a $47 million premium charged upon early redemption of notes in the third quarter of 2015. This was partially offset by a legal settlement charge of $25 million in the third quarter of 2016. This is discussed further in Non-GAAP Measures of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Other income and charges was an expense of $335 million in 2015, compared with an expense of $19 million in 2014, a change of $316 million, or 1,663%. This increase was primarily due to the unfavourable impact of FX translation of $297 million on U.S. dollar-denominated debt and the loss of $47 million on early redemption of notes. The increase was partially offset by $24 million of other FX gains and losses.

Net Interest Expense

Net interest expense includes interest on long-term debt and capital leases. Net interest expense was $471 million in 2016, an increase of $77 million, or 20%, from $394 million in 2015. This increase was primarily due to interest on new debt issued during the third quarter in 2015 and the unfavourable impact of the change in FX of $11 million, partially offset by higher capitalized interest.

Net interest expense was $394 million in 2015, an increase of $112 million, or 40%, from $282 million in 2014. This increase was primarily due to the unfavourable impact of the change in FX of $37 million and interest on new debt issued during the third quarter in 2015.

Income Tax Expense

Income tax expense was $553 million in 2016. This represents a decrease of $54 million, or 9%, from $607 million in 2015. The decrease is due primarily to a lower effective income tax rate in 2016, partially offset by higher taxable earnings in 2016.

Income tax expense was $607 million in 2015. This represents an increase of $45 million, or 8%, from $562 million in 2014. The increase was due to a higher effective income tax rate, partially offset by lower taxable earnings in 2015.

The effective income tax rate for 2016 was 25.68% on reported income and 26.15% on Adjusted income. Adjusted income is a Non-GAAP measure, which is discussed further in Non-GAAP Measures of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

The effective income tax rate for 2015 was 30.95% on reported income and 27.25% on Adjusted income, compared with 27.59% on reported income and 27.58% on Adjusted income for 2014.

The Company expects a normalized 2017 income tax rate of approximately 26.50%. The Company’s 2017 outlook for its normalized income tax rate is based on certain assumptions about events and developments that may or may not materialize, or that may be offset entirely or partially by new events and developments. This is discussed further in Item 1A. Risk Factors.

Liquidity and Capital Resources

The Company believes adequate amounts of Cash and cash equivalents are available in the normal course of business to provide for ongoing operations, including the obligations identified in the tables in Contractual Commitments of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations. The Company is not aware of any trends or expected fluctuations in the Company's liquidity that would create any deficiencies. The Company's primary sources of liquidity include its Cash and cash equivalents, its bilateral letter of credit facilities, and its revolving credit facility.

As at December 31, 2016, the Company had $164 million of Cash and cash equivalents, U.S. $2.0 billion available under its revolving credit facilities and up to $280 million available under its letters of credit (December 31, 2015 – $650 million of Cash and cash equivalents, U.S. $2.0 billion available under revolving credit facilities and up to $225 million available under its letters of credit).

As at December 31, 2016, the Company's U.S. $2.0 billion revolving credit facility, which includes a U.S. $1.0 billion five-year portion and U.S. $1.0 billion one-year plus one-year term-out portion, was undrawn (December 31, 2015 – undrawn). On June 28, 2016, the maturity date on the U.S. $1.0 billion one-year plus one-year term-out portion was extended to June 28, 2018, and the maturity date on the U.S. $1.0 billion five year portion was extended to June 28, 2021. The Company did not draw significant amounts from its revolving credit facility during the year ended December 31, 2016 (December 31, 2015 – $nil). The revolving credit facility agreement requires the Company not to exceed a maximum debt to earnings before interest, tax, depreciation, and amortization ratio. As at December 31, 2016, the Company was in compliance with the threshold stipulated in this financial covenant.

The Company has a commercial paper program that enables it to issue commercial paper up to a maximum aggregate principal amount of U.S. $1.0 billion in the form of unsecured promissory notes. The commercial paper is backed by the U.S. $1.0 billion one-year plus one-year term-out portion of the revolving credit facility. During the year ended December 31, 2016, the maximum amount borrowed under the commercial paper program was $308 million. These borrowings were issued on a short-term basis to finance the Company's share repurchase program. The Company used cash from operations to repay the amounts borrowed during the year, such that there were no commercial paper borrowings outstanding as at December 31, 2016 (December 31, 2015 – $nil).

As at December 31, 2016, under its bilateral letter of credit facilities, the Company had letters of credit drawn of $320 million from a total available amount of $600 million. This compares to letters of credit drawn of $375 million from a total available amount of $600 million as at December 31, 2015. Under the bilateral letter of credit facilities, the Company has the option to post collateral in the form of Cash or cash equivalents, equal at least to the face value of the letters of credit issued. Collateral provided may include

highly liquid investments purchased three months or less from maturity and is stated at cost, which approximates market value. As at December 31, 2016, the Company had posted $nil in collateral on the bilateral letter of credit facilities (December 31, 2015 – $nil).

The following discussion of operating, investing and financing activities describes the Company's indicators of liquidity and capital resources.

Operating Activities

Cash provided by operating activities was $2,089 million in 2016 compared to $2,459 million in 2015, a decrease of $370 million. The decrease in cash provided by operating activities is primarily due to lower cash generating income and an unfavourable change in working capital primarily as a result of higher income taxes paid in 2016 and an increase in interest payments resulting from debt issued in the third quarter of 2015.

Cash provided by operating activities was $2,459 million in 2015, an increase of $336 million from $2,123 million in 2014. This increase was primarily due to higher cash generating earnings, and improvements in working capital as a result of a decrease in Accounts receivable attributable to higher collection rates and lower income taxes paid, partially offset by an increase in interest payments resulting from debt issued in the third quarter of 2015.

Investing Activities

Cash used in investing activities was $1,069 million in 2016, a decrease of $54 million from $1,123 million in 2015. This decrease was largely due to lower additions to properties ("capital programs") during 2016 partially offset by the proceeds from the sale of D&H South that occurred in 2015.
Cash used in investing activities was $1,123 million in 2015, a decrease of $38 million from $1,161 million in 2014. This decrease was primarily due to higher proceeds from line sales, including $281 million for D&H South in 2015 compared to $236 million for DM&E West in 2014, and the sale of other assets for higher proceeds of $114 million in 2015 compared to $52 million in 2014. This increase was partially offset by higher additions to properties in 2015.

Additions to properties were $1,182 million in 2016, a decrease of $340 million from $1,522 million in 2015. The decrease, primarily in track and roadway investments, is reflective of the track upgrade programs completed in 2015.

Additions to properties were $1,522 million in 2015, an increase of $73 million from $1,449 million in 2014. The increase, primarily in track and roadway investments, reflects CP's strategy of reinvesting in the plant, enhancing throughput and capacity, and optimizing existing assets.

Capital Programs

For the year ended December 31 (in millions, except for track miles and crossties)	2016	2015	2014
Additions to capital			
Track and roadway	$904	$1,119	$1,011
Rolling stock	105	158	219
Information systems[1]	88	79	96
Buildings and other	108	180	150
Total – accrued additions to capital	1,205	1,536	1,476
Less:			
Non-cash transactions	23	14	27

Cash invested in additions to properties (per Consolidated Statements of Cash Flows)	$1,182	$1,522	$1,449
Track installation capital programs			
Track miles of rail laid (miles)	252	468	492
Track miles of rail capacity expansion (miles)	2	22	21
Crossties installed (thousands)	1,008	1,009	1,040

(1) Information systems include hardware and software.

Track and roadway expenditures include the replacement and enhancement of the Company's track infrastructure. Of the $904 million additions in 2016, approximately $721 million was invested in the renewal of depleted assets, namely rail, ties, ballast, signals, and bridges. Approximately $33 million was spent on PTC compliance requirements and $150 million was invested in network improvements, which increased productivity and capacity.

Rolling stock investments encompass locomotives and freight cars. In 2016, expenditures on locomotives were approximately $51 million and were focused on the remanufacture of older six-axle units. Freight car investments of approximately $54 million were largely focused on the acquisition of existing units previously held under operating leases.

In 2016, CP invested approximately $88 million in information systems primarily focused on rationalizing and enhancing business systems, providing real-time data, and modernizing core hardware and applications. Investments in buildings and other items were $108 million, and include items such as facility upgrades and renovations, vehicles, containers, and shop equipment.

For 2017, CP expects to invest approximately $1.25 billion in its capital programs, which will be financed with cash generated from operations and leverages the considerable network upgrade and improvement investments that have been made over the last several years. Approximately 70% of planned capital programs are for track and roadway, including approximately $48 million for PTC. Approximately 10% to 15% is expected to be allocated to rolling stock assets, including locomotive improvements and the continued acquisition of freight cars previously held under operating leases. Between 5% and 10% is expected to be allocated to information services, and 10% is expected to be allocated to buildings and other.

Financing Activities

Cash used in financing activities was $1,493 million in 2016, an increase of $536 million from $957 million in 2015. This increase in cash used in financing activities was primarily due to issuance of long-term debt in 2015. This increase was partially offset by higher payments to buy back shares under the Company's share repurchase program and the net repayment of commercial paper and long-term debt in 2015.

Cash used in financing activities was $957 million in 2015, as compared to $1,630 million in 2014. This decrease was largely due to the issuance of long-term debt in 2015 and was partially offset by higher payments to buy back shares under the Company's share repurchase program and the net repayment of commercial paper compared to net issuances in 2014, and the early redemption of notes.

Interest Coverage Ratio

At December 31, 2016, the Company’s interest coverage ratio was 5.6, compared with 6.0 at December 31, 2015. This decrease was primarily due to an increase in Net interest expense of $77 million compared to the prior year, partially offset by a year over year improvement in Earnings before interest and taxes ("EBIT"). In 2016, EBIT was negatively impacted by a legal settlement charge and positively impacted by FX translation on U.S. dollar-denominated debt, while in 2015 EBIT was negatively impacted by FX translation on U.S. dollar-denominated debt and the early redemption premium on notes, and positively impacted by the gain on sale of D&H South.

Excluding these significant items from EBIT, Adjusted interest coverage ratio was 5.5 at December 31, 2016, compared with 6.7 at December 31, 2015. This decrease was primarily due to an increase in Net interest expense, as well as a year over year decrease in Adjusted EBIT. Interest coverage ratio, Adjusted interest coverage ratio, EBIT, Adjusted EBIT, and significant items are defined and reconciled in Non-GAAP Measures of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Credit Measures

Credit ratings provide information relating to the Company’s financing costs, liquidity and operations and affect the Company’s ability to obtain short-term and long-term financing and/or the cost of such financing.

A mid-investment grade credit rating is an important measure in assessing the Company’s ability to maintain access to public financing and to minimize the cost of capital. It also affects the ability of the Company to engage in certain collateralized business activities on a cost-effective basis.

Credit ratings and outlooks are based on the rating agencies’ methodologies and can change from time to time to reflect their views of CP. Their views are affected by numerous factors including, but not limited to, the Company’s financial position and liquidity along with external factors beyond the Company’s control.

As at December 31, 2016, CP's credit rating from Standard & Poor's Rating Services ("Standard & Poor's") and Moody's Investor Service ("Moody's") remains unchanged from December 31, 2015. During the second quarter of 2016, Moody's changed the outlook on CP's Senior unsecured debt to negative from stable, and Dominion Bond Rating Service Limited ("DBRS") changed the outlook on CP's Unsecured debentures and Medium-term notes from BBB (high) stable outlook to BBB (high) negative outlook. Subsequently, on August 2, 2016, DBRS downgraded the Company's credit rating from BBB (high) negative outlook to BBB with a stable outlook for unsecured debentures and medium-term notes and from R-2 (high) to R-2 (middle) for the $1 billion Commercial paper program. Standard & Poor's affirmed a stable rating on CP's Long-term corporate credit, Senior secured debt and Senior unsecured debt.

Credit ratings as at December 31, 2016[1]		
Long-term debt		Outlook
Standard & Poor's		
Long-term corporate credit	BBB+	stable
Senior secured debt	A	stable
Senior unsecured debt	BBB+	stable
Moody's		
Senior unsecured debt	Baa1	negative
DBRS		
Unsecured debentures	BBB	stable
Medium-term notes	BBB	stable
$1 billion Commercial paper program		
Standard & Poor's	A-2	N/A
Moody's	P-2	N/A
DBRS	R-2 (middle)	N/A

[1] Credit ratings are not recommendations to purchase, hold or sell securities and do not address the market price or suitability of a specific security for a particular investor. Credit ratings are based on the rating agencies' methodologies and may be subject to revision or withdrawal at any time by the rating agencies.

The Adjusted net debt to Adjusted earnings before interest, tax, depreciation and amortization (“EBITDA”) ratio for the years ended December 31, 2016, 2015, and 2014 was 2.9, 2.8 and 2.2, respectively. The increase between 2016 and 2015 was primarily due to a lower ending cash balance as at December 31, 2016 compared to December 31, 2015, as well as a decrease in Adjusted EBITDA for 2016. The increase between 2015 and 2014 was due to additional debt issued during the 2015 fiscal year, partially offset by the improved Adjusted income for the year ended December 31, 2015. Adjusted net debt to Adjusted EBITDA ratio and the Adjusted income are defined and reconciled in Non-GAAP Measures of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Free Cash

CP generated positive Free cash of $1,007 million in 2016, a decrease of $374 million from $1,381 million in 2015. The decrease was primarily due to lower cash provided by operating activities and proceeds from the sale of D&H South in the third quarter of 2015, partially offset by lower additions to properties in 2016. Free cash is affected by seasonal fluctuations and by other factors including the size of the Company's capital programs. The 2016 capital programs are discussed further above in Investing Activities. Free cash is defined and reconciled in the Non-GAAP Measures of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Share Capital

At February 14, 2017, the latest practicable date, there were 146,366,093 Common Shares and no preferred shares issued and outstanding, which consists of 14,931 holders of record of the Company's Common Shares. In addition, CP has a Management Stock Option Incentive Plan (“MSOIP”), under which key officers and employees are granted

options to purchase CP Common Shares. Each option granted can be exercised for one Common Share. At February 14, 2017, 2.0 million options were outstanding under the Company's MSOIP and stand-alone option agreements entered into with Mr. Keith Creel and former CEO, Mr. E. Hunter Harrison. There are 1.5 million options available to be issued by the Company's MSOIP in the future.

CP has a Director's Stock Option Plan ("DSOP"), under which directors are granted options to purchase CP Common Shares. There are no outstanding options under the DSOP, which has 0.3 million options available to be issued in the future.

Non-GAAP Measures

The Company presents non-GAAP measures and cash flow information to provide a basis for evaluating underlying earnings and liquidity trends in the Company's business that can be compared with the results of operations in prior periods. In addition, these non-GAAP measures facilitate a multi-period assessment of long-term profitability, allowing management and other external users of the Company's consolidated financial information to compare profitability on a long-term basis, including assessing future profitability, with that of the Company's peers.

These non-GAAP measures have no standardized meaning and are not defined by GAAP and, therefore may not be comparable to similar measures presented by other companies. The presentation of these non-GAAP measures is not intended to be considered in isolation from, as a substitute for, or as superior to the financial information presented in accordance with GAAP.

Adjusted Performance Measures

The Company uses Adjusted income, Adjusted diluted earnings per share, Adjusted operating income, and Adjusted operating ratio to evaluate the Company's operating performance and for planning and forecasting future business operations and future profitability. These non-GAAP measures are presented in Item 6. Selected Financial Data and discussed further in other sections of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations. These non-GAAP measures provide meaningful supplemental information regarding operating results because they exclude certain significant items that are not considered indicative of future financial trends either by nature or amount. As a result, these items are excluded for management assessment of operational performance, allocation of resources and preparation of annual budgets. These significant items may include, but are not limited to, restructuring and asset impairment charges, individually significant gains and losses from sales of assets, and certain items outside the control of management. These items may not be non-recurring. However, excluding these significant items from GAAP results allows for a consistent understanding of the Company's consolidated financial performance when performing a multi-period assessment including assessing the likelihood of future results. Accordingly, these non-GAAP financial measures may provide insight to investors and other external users of the Company's consolidated financial information.

In 2016, there were two significant items included in Net income as follows:

- in the third quarter, a $25 million expense ($18 million after current tax) related to a legal settlement that unfavourably impacted Diluted EPS by 12 cents; and
- during the course of the year, a net non-cash gain of $79 million ($68 million after deferred tax) due to FX translation of the Company's U.S. dollar-denominated debt as follows:
- in the fourth quarter, a $74 million loss ($64 million after deferred tax) that unfavourably impacted Diluted EPS by 43 cents;
- in the third quarter, a $46 million loss ($40 million after deferred tax) that unfavourably impacted Diluted EPS by 27 cents;
- in the second quarter, a $18 million gain ($16 million after deferred tax) that favourably impacted Diluted EPS by 10 cents; and
- in the first quarter, a $181 million gain ($156 million after deferred tax) that favourably impacted Diluted EPS by $1.01.

In 2015, there were four significant items included in Net income as follows:

- in the third quarter, a $68 million gain ($42 million after current tax) related to the sale of D&H South that favourably impacted Diluted EPS by 26 cents;
- in the third quarter, a $47 million charge ($35 million after deferred tax) related to the early redemption premium on notes that unfavourably impacted Diluted EPS by 22 cents;
- in the second quarter, a deferred income tax expense of $23 million as a result of the change in the Alberta provincial corporate income tax rate that unfavourably impacted Diluted EPS by 14 cents; and
- during the course of the year, a net non-cash loss of $297 million ($257 million after deferred tax) due to FX translation of the Company's U.S. dollar-denominated debt as follows:
- in the fourth quarter, a $115 million loss ($100 million after deferred tax) that unfavourably impacted Diluted EPS by 64 cents;

- in the third quarter, a $128 million loss ($111 million after deferred tax) that unfavourably impacted Diluted EPS by 69 cents;
- in the second quarter, a $10 million gain ($9 million after deferred tax) that favourably impacted Diluted EPS by 5 cents; and
- in the first quarter, a $64 million loss ($55 million after deferred tax) that unfavourably impacted Diluted EPS by 34 cents.

In 2014, there were two significant items included in Net income as follows:

- in the fourth quarter, a net non-cash loss of $12 million ($9 million after deferred tax) due to FX translation on the Company’s U.S. dollar-denominated debt that unfavourably impacted Diluted EPS by 5 cents; and
- in the first quarter, a recovery of $4 million ($3 million after current tax) was recorded for the Company's 2012 labour restructuring initiative due to favourable experience gains, recorded in Compensation and benefits that favourably impacted Diluted EPS by 1 cent.

In 2013, there were five significant items included in Net income as follows:

- in the fourth quarter, an asset impairment charge and accruals for future costs totalling $435 million ($257 million after deferred tax) relating to the sale of DM&E West, which closed in the second quarter of 2014 and unfavourably impacted Diluted EPS by $1.46;
- in the fourth quarter, management transition costs related to the retirement of the Company's CFO and the appointment of the new CFO of $5 million ($4 million after current tax) that unfavourably impacted Diluted EPS by 2 cents;
- in the fourth quarter, a recovery of $7 million ($5 million after current tax) of the Company's 2012 labour restructuring initiative due to favourable experience gains that favourably impacted Diluted EPS by 3 cents;
- in the third quarter, a deferred income tax expense of $7 million as a result of the change in the province of British Columbia's corporate income tax rate that unfavourably impacted Diluted EPS by 4 cents; and
- in the first quarter, a recovery of U.S. $9 million (U.S. $6 million after current tax) related to settlement of certain management transition amounts, which had been subject to legal proceedings, that favourably impacted Diluted EPS by 3 cents.

In 2012, there were six significant items included in Net income as follows:

- in the fourth quarter, an asset impairment charge of $185 million ($111 million after deferred tax) with respect to the option to build into the Powder River Basin and another investment that unfavourably impacted Diluted EPS by 64 cents;
- in the fourth quarter, an asset impairment charge of $80 million ($59 million after deferred tax) related to a certain series of locomotives that unfavourably impacted Diluted EPS by 34 cents;
- in the fourth quarter, a labour restructuring charge of $53 million ($39 million after current tax) as part of a restructuring initiative that unfavourably impacted Diluted EPS by 22 cents;
- in the second quarter, a charge of $42 million ($29 million after current tax) with respect to compensation and other management transition costs that unfavourably impacted Diluted EPS by 17 cents;
- in the first and second quarters, advisory fees of $27 million ($20 million after current tax) related to shareholder matters that unfavourably impacted Diluted EPS by 12 cents; and
- in the second quarter, a deferred income tax expense of $11 million as a result of the change in the province of Ontario's corporate income tax rate that unfavourably impacted Diluted EPS by 6 cents.

Reconciliation of Non-GAAP Performance Measures to GAAP Performance Measures

The following tables reconcile non-GAAP measures presented in Item 6. Selected Financial Data and discussed further in other sections of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations to the most directly comparable measures presented in accordance with GAAP for the years ended December 31, 2016, 2015, 2014, 2013 and 2012:

Adjusted income is calculated as Net income reported on a GAAP basis less significant items.

Net income	For the year ended December 31				
(in millions)	2016	2015	2014	2013	2012
Adjusted income	$1,549	$1,625	$1,482	$1,132	$753
Add significant items (pretax):					
Legal settlement charge	(25)	—	—	—	—
Gain on sale of D&H South	—	68	—	—	—
Labour restructuring	—	—	4	7	(53)
Asset impairments	—	—	—	(435)	(265)
Management transition costs	—	—	—	4	(42)

Advisory fees related to shareholder matters	—	—	—	—	(27)
Impact of FX translation on U.S. dollar-denominated debt	79	(297)	(12)	—	—
Early redemption premium on notes	—	(47)	—	—	—
Income tax rate change	—	(23)	—	(7)	(11)
Tax effect of adjustments[1]	(4)	26	2	174	129
Net income as reported	$1,599	$1,352	$1,476	$875	$484

[1] Tax effect of adjustments was calculated as the pretax effect of the adjustments multiplied by the effective tax rate for each of the above items for the periods presented.

Adjusted diluted earnings per share is calculated using Adjusted income, as defined above, divided by the weighted-average diluted shares outstanding during the period as determined in accordance with GAAP.

Diluted earnings per share	For the year ended December 31				
	2016	2015	2014	2013	2012
Adjusted diluted earnings per share	$10.29	$10.10	$8.50	$6.42	$4.34
Add significant items (pretax):					
Legal settlement charge	(0.17)	—	—	—	—
Gain on sale of D&H South	—	0.42	—	—	—
Labour restructuring	—	—	0.02	0.04	(0.31)
Asset impairments	—	—	—	(2.47)	(1.53)
Management transition costs	—	—	—	0.02	(0.24)
Advisory fees related to shareholder matters	—	—	—	—	(0.16)
Impact of FX translation on U.S. dollar-denominated debt	0.53	(1.84)	(0.07)	—	—
Early redemption premium on notes	—	(0.30)	—	—	—
Income tax rate change	—	(0.14)	—	(0.04)	(0.06)
Tax effect of adjustments[1]	(0.02)	0.16	0.01	0.99	0.75
Diluted earnings per share as reported	$10.63	$8.40	$8.46	$4.96	$2.79

[1] Tax effect of adjustments was calculated as the pretax effect of the adjustments multiplied by the effective tax rate for each of the above items for the periods presented.

Adjusted operating income is calculated as Operating income reported on a GAAP basis less significant items.

Operating income (in millions)	For the year ended December 31				
	2016	2015	2014	2013	2012
Adjusted Operating income	$2,578	$2,620	$2,335	$1,844	$1,309
Add significant items:					
Gain on sale of D&H South	—	68	—	—	—
Labour restructuring	—	—	4	7	(53)
Asset impairments	—	—	—	(435)	(265)
Management transition costs	—	—	—	4	(42)
Operating income as reported	$2,578	$2,688	$2,339	$1,420	$949

Adjusted operating ratio excludes those significant items that are reported within Operating income.

Operating ratio	For the year ended December 31				
	2016	2015	2014	2013	2012
Adjusted operating ratio	58.6%	61.0%	64.7%	69.9%	77.0%
Add significant items:					
Gain on sale of D&H South	—%	(1.0)%	—%	—%	—%
Labour restructuring	—%	—%	—%	(0.1)%	0.9%
Asset impairments	—%	—%	—%	7.1%	4.7%
Management transition costs	—%	—%	—%	(0.1)%	0.7%
Operating ratio as reported	58.6%	60.0%	64.7%	76.8%	83.3%

ROIC and Adjusted ROIC

ROIC is calculated as Operating income less Other income and charges, tax effected at the Company's annualized effective tax rate, on a rolling twelve-month basis, divided by the sum of Total shareholders' equity, Long-term debt,

Long-term debt maturing within one year and Short-term borrowing, as presented in the Company's Consolidated Financial Statements, averaged between the beginning and ending balance over a rolling twelve-month period. Adjusted ROIC excludes significant items reported in Operating income and Other income and charges in the Company's Consolidated Financial Statements, as these significant items are not considered indicative of future financial trends either by nature or amount. ROIC and Adjusted ROIC are all-encompassing performance measures that measure how productively the Company uses its long-term capital investments, representing critical indicators of good operating and investment decisions made by management and are important performance criteria in determining certain elements of the Company's long-term incentive plan. ROIC and Adjusted ROIC are presented in Item 6. Selected Financial

Data and discussed further in Results of Operations of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Calculation of ROIC and Adjusted ROIC

(in millions, except for percentages)	2016	2015	2014	2013	2012
Operating income for the year ended December 31	$2,578	$2,688	$2,339	$1,420	$949
Less:					
Other income and charges	(45)	335	19	17	37
Tax[1]	675	728	640	312	218
	$1,948	$1,625	$1,680	$1,091	$694
Average for the twelve months of total shareholders' equity, long-term debt, long-term debt maturing within one year and short-term borrowing	$13,532	$12,561	$11,653	$10,842	$9,564
ROIC	14.4 %	12.9 %	14.4 %	10.1 %	7.3 %

[1] Tax was calculated at the annualized effective tax rate of 25.72%, 30.95%, 27.59%, 22.21%, 23.95% for each of the above items for the years presented, respectively.

(in millions, except for percentages)	2016	2015	2014	2013	2012
Adjusted operating income for the year ended December 31	2,578	2,620	2,335	1,844	1,309
Less:					
Other income and charges	(45)	335	19	17	37
Add significant items (pretax):					
Legal settlement charge	25	—	—	—	—
Advisory fees related to shareholder matters	—	—	—	—	27
Impact of FX translation on U.S. dollar-denominated debt	(79)	297	12	—	—
Early redemption premium on notes	—	47	—	—	—
Less: tax[1]	673	716	642	491	344
	$1,896	$1,913	$1,686	$1,336	$955
Average for the twelve months of total shareholders' equity, long-term debt, long-term debt maturing within one year and short-term borrowing	$13,532	$12,561	$11,653	$10,842	$9,564
Adjusted ROIC	14.0 %	15.2 %	14.5 %	12.3 %	10.0 %

[1] Tax was calculated at the adjusted annualized effective tax rate of 26.20%, 27.25%, 27.58%, 26.88%, 26.49% for each of the above items for the years presented, respectively.

Free Cash

Free cash is calculated as Cash provided by operating activities, less Cash used in investing activities, adjusted for changes in cash and cash equivalents balances resulting from FX fluctuations. Free cash is a measure that management considers to be an indicator of liquidity. Free cash is useful to investors and other external users of the consolidated financial statements as it assists with the evaluation of the Company's ability to generate cash from its operations without incurring additional external financing. Positive Free cash indicates the amount of cash available for reinvestment in the business, or cash that can be returned to investors through dividends, stock repurchase programs, debt retirements or a combination of these. Conversely, negative Free cash indicates the amount of cash that must be raised from investors through new debt or equity issues, reduction in available cash balances or a combination of these. Free cash should be considered in addition to, rather than as a substitute for, Cash provided by operating activities. Free cash is presented in Item 6. Selected Financial Data and discussed further in Liquidity and

Capital Resources of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Reconciliation of Cash Provided by Operating Activities to Free Cash

(in millions)	For the year ended December 31 2016	2015	2014	2013	2012
Cash provided by operating activities	$2,089	$2,459	$2,123	$1,950	$1,328
Cash used in investing activities[1]	(1,069)	(1,123)	(1,161)	(1,186)	(1,011)
Effect of foreign currency fluctuations on U.S. dollar-denominated cash and cash equivalents	(13)	45	7	10	(1)
Free cash[2]	$1,007	$1,381	$969	$774	$316

[1] 2013 and 2014 comparative figures have been restated by $411 million and ($411) million, respectively, due to the early adoption of Accounting Standards Update ("ASU") 2016-18. See further discussion in Item 8. Financial Statements and Supplemental Data, Note 2 Accounting changes. As a result of the change, the offsetting adjustments for changes in restricted cash were also removed from this calculation in both years, resulting in no net change to Free cash.
[2] The definition of Free cash has been revised to exclude the deduction of dividends paid. As a result of this change, Free cash was increased by $226 million in 2015, $244 million in 2014, $244 million in 2013, and $223 million in 2012.

Foreign Exchange Adjusted Variance

FX adjusted variance allows certain financial results to be viewed without the impact of fluctuations in foreign currency exchange rates, thereby facilitating period-to-period comparisons in the analysis of trends in business performance. Financial result variances at constant currency are obtained by translating the comparable period of the prior year results denominated in U.S. dollars at the foreign exchange rates of the current period. FX adjusted variances are discussed in Operating Revenues and Operating Expenses of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

				2016 vs. 2015			2015 vs. 2014		
(in millions)	Reported 2016	Reported 2015	Reported 2014	Variance due to FX	FX Adjusted 2015	FX Adj. %	Variance due to FX	FX Adjusted 2014	FX Adj. %
Freight revenues	$ 6,060	$ 6,552	$ 6,464	$ 145	$ 6,697	(10)	$ 549	$ 7,013	(7)
Non-freight revenues	172	160	156	1	161	7	4	160	—
Total revenues	6,232	6,712	6,620	146	6,858	(9)	553	7,173	(6)
Compensation and benefits	1,189	1,371	1,348	18	1,389	(14)	62	1,410	(3)
Fuel	567	708	1,048	25	733	(23)	143	1,191	(41)
Materials	180	184	193	2	186	(3)	5	198	(7)
Equipment rents	173	174	155	5	179	(3)	18	173	1
Depreciation and amortization	640	595	552	5	600	7	18	570	4
Purchased services and other	905	1,060	985	21	1,081	(16)	60	1,045	1
Gain on sale of D&H South	—	(68)	—	1	(67)	(100)	—	—	100
Total operating expenses	3,654	4,024	4,281	77	4,101	(11)	306	4,587	(12)
Operating income	$ 2,578	$ 2,688	$ 2,339	$ 69	$ 2,757	(6)	$ 247	$ 2,586	4

Interest Coverage Ratio

Interest coverage ratio is measured, on a rolling twelve-month basis, as EBIT divided by Net interest expense. This ratio provides investors, analysts, and lenders with useful information on how the Company's debt servicing

capabilities have changed, period over period and in comparison to the Company’s peers. Interest coverage ratio is discussed further in Liquidity and Capital Resources of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Adjusted interest coverage ratio is calculated as Adjusted EBIT divided by Net interest expense. By excluding significant items which affect EBIT, Adjusted interest coverage ratio assists management in comparing the Company's performance over various reporting periods on a consistent basis. Adjusted interest coverage ratio is discussed further in Liquidity and Capital Resources of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Calculation of Interest Coverage Ratio and Adjusted Interest Coverage Ratio

(in millions, except for ratios)	2016	2015	2014
EBIT	$2,623	$2,353	$2,320
Adjusted EBIT	2,569	2,629	2,328
Net interest expense	471	394	282
Interest coverage ratio	5.6	6.0	8.2
Adjusted interest coverage ratio	5.5	6.7	8.3

Reconciliation of Adjusted earnings before interest, tax, depreciation and amortization and Earnings before interest and tax

Adjusted EBITDA is calculated as Adjusted EBIT plus Depreciation and amortization, net periodic pension and other benefit cost other than current service costs, and operating lease expense. EBIT is calculated as Operating income, less Other income and charges. Adjusted EBIT excludes significant items reported in Operating income and Other income and charges.

	For the year ended December 31				
(in millions)	2016	2015	2014	2013	2012
Adjusted EBITDA	$3,153	$3,281	$2,864	$2,464	$1,957
Add:					
Net periodic pension and other benefit cost other than current service costs	167	70	137	82	63
Operating lease expense	(111)	(127)	(121)	(154)	(182)
Depreciation and amortization	(640)	(595)	(552)	(565)	(539)
Adjusted EBIT	2,569	2,629	2,328	1,827	1,299
Add Significant items (pretax):					
Legal settlement charge	(25)	—	—	—	—
Gain on sale of D&H South	—	68	—	—	—
Labour restructuring	—	—	4	7	(53)
Asset impairments	—	—	—	(435)	(265)
Management transition	—	—	—	4	(42)
Advisory costs related to shareholder matters	—	—	—	—	(27)
Impact of FX translation on U.S. dollar-denominated debt	79	(297)	(12)	—	—
Early redemption premium on notes	—	(47)	—	—	—
EBIT	2,623	2,353	2,320	1,403	912
Less:					
Net interest expense	471	394	282	278	276
Income tax expense	553	607	562	250	152
Net income as reported	$1,599	$1,352	$1,476	$875	$484

Adjusted Net Debt to Adjusted EBITDA Ratio

Adjusted net debt is defined as Long-term debt, Long-term debt maturing within one year and Short-term borrowing as reported on the Company's Consolidated Balance Sheets adjusted for pension plans deficit, the net present value of operating leases, which is discounted by the Company's effective interest rate for each of the years presented, and Cash and cash equivalents. Adjusted net debt to adjusted EBITDA ratio is calculated as Adjusted net debt divided by Adjusted EBITDA.

The Adjusted net debt to adjusted EBITDA ratio is one of the key metrics used by credit rating agencies in assessing the Company's financial capacities and constraints and determining the credit rating of the Company. By excluding the impact of certain items that are not considered by management in developing a minimum threshold, Adjusted net debt to Adjusted EBITDA ratio provides a metric that management uses to evaluate the Company's financial discipline with respect to capital markets credit sensitivities from management's perspective and communicates it publicly with investors, analysts and credit rating agencies. Adjusted net debt to Adjusted EBITDA ratio is discussed further in Liquidity and Capital Resources of this Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Calculation of Adjusted Net Debt to Adjusted EBITDA Ratio

(in millions, except for ratios)	2016	2015	2014
Adjusted net debt as at December 31	$9,154	$9,041	$6,268
Adjusted EBITDA for the year ended December 31	3,153	3,281	2,864
Adjusted net debt to Adjusted EBITDA ratio	2.9	2.8	2.2

Reconciliation of Adjusted Net Debt to Long-term Debt

(in millions)	2016	2015	2014
Adjusted net debt as at December 31	$9,154	$9,041	$6,268
Add:			
Pension plans deficit	(273)	(295)	(288)
Net present value of operating leases[1]	(361)	(439)	(447)
Cash and cash equivalents	164	650	226
Long-term debt including long-term debt maturing within one year as at December 31	$8,684	$8,957	$5,759

[1] Operating leases were discounted at the Company's effective interest rate for each of the years presented.

Off-Balance Sheet Arrangements

Guarantees

At December 31, 2016, the Company had residual value guarantees on operating lease commitments of $19 million, compared to $28 million at December 31, 2015. The maximum amount that could be payable under these and all of the Company's other guarantees cannot be reasonably estimated due to the nature of certain guarantees. All or a portion of amounts paid under certain guarantees could be recoverable from other parties or through insurance. As at December 31, 2016, the fair value of these guarantees recognized as a liability was $5 million, compared to $4 million at December 31, 2015.

Contractual Commitments

The accompanying table indicates the Company's obligations and commitments to make future payments for contracts, such as debt, capital lease and commercial arrangements as at December 31, 2016

Payments due by period (in millions)	Total	2017	2018 & 2019	2020 & 2021	2022 & beyond
Contractual commitments					
Interest on long-term debt and capital lease	$12,526	$491	$889	$803	$10,343
Long-term debt	8,614	20	1,259	443	6,892
Capital leases	166	4	10	11	141
Operating lease[1]	450	97	118	84	151
Supplier purchase	2,476	609	1,083	177	607
Other long-term liabilities[2]	519	72	108	103	236
Total contractual commitments	$24,751	$1,293	$3,467	$1,621	$18,370

[1] Residual value guarantees on certain leased equipment with a maximum exposure of $19 million are not included in the minimum payments shown above, as management believes that CP will not be required to make payments under these residual guarantees.

(2) Includes expected cash payments for restructuring, environmental remediation, asset retirement obligations, post-retirement benefits, workers' compensation benefits, long-term disability benefits, pension benefit payments for the Company's non-registered supplemental pension plan and certain other long-term liabilities. Projected payments for post-retirement benefits, workers' compensation benefits and long-term disability benefits include the anticipated payments for years 2017 to 2026. Pension contributions for the Company's registered pension plans are not included due to the volatility in calculating them. Pension payments are discussed further in Critical Accounting Estimates of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Certain Other Financial Commitments

In addition to the financial commitments mentioned previously in Off-Balance Sheet Arrangements and Contractual Commitments of this Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, the Company is party to certain other financial commitments discussed below.

Letters of Credit

Letters of credit are obtained mainly to provide security to third parties under the terms of various agreements, including the supplemental pension plan. CP is liable for these contractual amounts in the case of non-performance under these agreements. Letters of credit are accommodated through a revolving credit facility and the Company's bilateral letter of credit facilities.

Capital Commitments

The Company remains committed to maintaining the current high level of plant quality and renewing the franchise. As part of this commitment, CP has entered into contracts with suppliers to make various capital purchases related to track programs. Payments for these commitments are due in 2017 through 2020. These expenditures are expected to be financed by cash generated from operations or by issuing new debt.

The accompanying table indicates the Company's commitments to make future payments for letters of credit and capital expenditures as at December 31, 2016

Payments due by period (in millions)	Total	2017	2018 & 2019	2020 & 2021	2022 & beyond
Certain other financial commitments					
Letters of credit	$320	$320	$ —	$ —	$ —
Capital commitments	186	129	53	4	—
Total certain other financial commitments	$506	$449	$ 53	$ 4	$ —

Critical Accounting Estimates

To prepare consolidated financial statements that conform with GAAP, the Company is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reported periods. Using the most current information available, the Company reviews estimates on an ongoing basis, including those related to environmental liabilities, pensions and other benefits, property, plant and equipment, deferred income taxes, and legal and personal injury liabilities.

The development, selection and disclosure of these estimates, and this MD&A, have been reviewed by the Board of Directors' Audit Committee, which is composed entirely of independent directors.

Environmental Liabilities

CP estimates the probable cost to be incurred in the remediation of property contaminated by past railway use. The Company screens and classifies sites according to typical activities and scale of operations conducted, and develops remediation strategies for each property based on the nature and extent of the contamination, as well as the location of the property and surrounding areas that may be adversely affected by the presence of contaminants. CP also considers available technologies, treatment and disposal facilities and the acceptability of site-specific plans based on the local regulatory environment. Site-specific plans range from containment and risk management of the contaminants through to the removal and treatment of the contaminants and affected soils and groundwater. The details of the estimates reflect the environmental liability at each property. The Company is committed to fully meeting regulatory and legal obligations with respect to environmental matters.

Liabilities for environmental remediation may change from time to time as new information about previously untested sites becomes known. The net liability may also vary as the courts decide legal proceedings against outside parties responsible for contamination. These potential charges, which cannot be quantified at this time, are not expected to be material to the Company’s financial position, but may materially affect income in the period in which a charge is recognized. Material increases to costs would be reflected as increases to "Other long-term liabilities" and "Accounts payable and accrued liabilities" on the Company’s Consolidated Balance Sheets and to "Purchased services and other" within Operating expenses on the Company's Consolidated Statements of Income.

At December 31, 2016 and 2015, the accrual for environmental remediation on the Company’s Consolidated Balance Sheets amounted to $85 million and $93 million respectively, of which the long-term portion amounting to $76 million in 2016 and $80 million in 2015 was included in "Other long-term liabilities" and the short-term portion amounting to $9 million in 2016 and $13 million in 2015 was included in "Accounts payable and accrued liabilities". Cash payments related to the Company’s environmental remediation program totalled $12 million in 2016, compared with $18 million in 2015. The U.S. dollar-denominated portion of the liability was affected by the change in FX, resulting in a decrease in environmental liabilities of $2 million in 2016 and an increase $12 million in 2015.

Cash payments for environmental initiatives are estimated to be approximately $9 million in 2017, $10 million in 2018, $11 million in 2019 and a total of approximately $55 million over the remaining years through 2026, which will be paid in decreasing amounts. All payments will be funded from general operations.

CP continues to be responsible for remediation work on portions of a property in the state of Minnesota and continues to retain liability accruals for remaining future expected costs. The costs are expected to be incurred over approximately 10 years. The state regulators will oversee the work to ensure it is completed in accordance with applicable standards.

Pensions and Other Benefits

CP has defined benefit and defined contribution pension plans. Other benefits include post-retirement medical and life insurance for pensioners, and some post-employment workers' compensation and long-term disability benefits in Canada. Workers' compensation and long-term disability benefits are discussed in the Legal and Personal Injury Liabilities section below. Pension and post-retirement benefits liabilities are subject to various external influences and uncertainties.

Information concerning the measurement of costs for pensions and other benefits is discussed in Item 8. Financial Statements and Supplementary Data, Note 1 Summary of significant accounting policies.

Pension Liabilities and Pension Assets

As at December 31, 2016, the Company included on its Consolidated Balance Sheet:

- pension benefit liabilities of $263 million ($285 million in 2015) in "Pension and other benefit liabilities" and $10 million ($10 million in 2015) in "Accounts payable and accrued liabilities";
- post-retirement benefits liabilities of $383 million ($387 million in 2015) in "Pension and other benefit liabilities" and $21 million ($21 million in 2015) in "Accounts payable and accrued liabilities";
- accruals for self-insured workers' compensation and long-term disability benefit plans, including $88 million ($86 million in 2015) in "Pension and other benefit liabilities", which are discussed in the Legal and Personal Injury Liabilities section below; and
- pension benefit assets of $1,070 million ($1,401 million in 2015) in "Pension assets".

Net Periodic Benefit Costs

Net periodic benefit costs for pensions and post-retirement benefits were included in "Compensation and benefits" on the Company's Consolidated Statements of Income. Combined net periodic benefit credits for pensions and post-retirement benefits (excluding self-insured workers' compensation and long-term disability benefits) were $55 million in 2016, compared with net periodic benefit costs of $66 million in 2015.

Net periodic benefit credits for pensions were $81 million in 2016, compared with net periodic benefit costs of $41 million in 2015. The benefit credit portion related to defined benefit pensions was $90 million in 2016, compared with the benefit cost portion of $32 million in 2015. The benefit cost portion related to defined contribution pensions (equal to contributions) was $9 million in 2016, compared with $9 million for 2015. Net periodic benefit costs for post-retirement benefits were $26 million in 2016, compared with $25 million in 2015.

CP estimates net periodic benefit credits for defined benefit pensions to be approximately $190 million in 2017, and net periodic benefit costs for defined contribution pensions to be approximately $8 million in 2017. Net periodic benefit costs for post-retirement benefits in 2017 are not expected to differ materially from the 2016 costs.

Pension Plan Contributions

The Company made contributions of $48 million to the defined benefit pension plans in 2016, compared with $81 million in 2015. The Company's main Canadian defined benefit pension plan accounts for 96% of CP's pension obligation and can produce significant volatility in pension funding requirements, given the pension fund's size, the many factors that drive the pension plan's funded status, and Canadian statutory pension funding requirements. The Company made voluntary prepayments of $600 million in 2011, $650 million in 2010 and $500 million in 2009 to the Company's main Canadian defined benefit pension plan. CP has applied $1,281 million of these voluntary prepayments to reduce its pension funding requirements in 2012–2016, leaving $469 million of the voluntary prepayments still available at December 31, 2016 to reduce CP's pension funding requirements in 2017 and future years. CP continues to have significant flexibility with respect to the rate at which the remaining voluntary prepayments are applied to reduce future years' pension contribution requirements, which allows CP to manage the volatility of future pension funding requirements. At this time, CP estimates it will apply $50 million of the remaining voluntary prepayments against its 2017 pension funding requirements.

CP estimates its aggregate pension contributions, including its defined benefit and defined contribution plans, to be in the range of $50 million to $60 million in 2017, and in the range of $50 million to $100 million per year from 2018 to 2020. These estimates reflect the Company's current intentions with respect to the rate at which CP will apply the remaining voluntary prepayments against contribution requirements in the next few years.

Future pension contributions will be highly dependent on the Company's actual experience with such variables as investment returns, interest rate fluctuations and demographic changes, on the rate at which previous years' voluntary prepayments are applied against

pension contribution requirements, and on any changes in the regulatory environment. CP will continue to make contributions to the pension plans that, at a minimum, meet pension legislative requirements.

Pension Plan Risks

Fluctuations in the liability and net periodic benefit costs for pensions result from favourable or unfavourable investment returns and changes in long-term interest rates. The impact of favourable or unfavourable investment returns is moderated by the use of a market-related asset value for the main Canadian defined benefit pension plan's public equity securities and absolute return strategies. The impact of changes in long-term rates on pension obligations is partially offset by their impact on the pension funds' investments in fixed income assets.

The plans' investment policy provides a target allocation of approximately 46% of the plans' assets to be invested in public equity securities. As a result, stock market performance is a key driver in determining the pension funds' asset performance. If the rate of investment return on the plans' public equity securities in 2016 had been 10 percentage points higher (or lower) than the actual 2016 rate of investment return on such securities, 2017 net periodic benefit costs for pensions would be lower (or higher) by approximately $25 million.

Changes in bond yields can result in changes to discount rates and to changes in the value of fixed income assets. If the discount rate as at December 31, 2016 had been higher (or lower) by 0.1% with no related changes in the value of the pension funds' investment in fixed income assets, 2017 net periodic benefit costs for pensions would be lower (or higher) by approximately $13 million. However, a change in bond yields would also lead to a change in the value of the pension funds' investment in fixed income assets, and this change would partially offset the impact on net periodic benefit costs noted above.

The Company estimates that an increase in the discount rate of 0.1% would decrease the defined benefit pension plans' projected benefit obligations by approximately $155 million, and estimates that a decrease in the discount rate of 0.1% would increase the defined benefit pension plans' projected benefit obligations by approximately $157 million. Similarly, for every 0.1% the actual return on assets varies above (or below) the estimated return for the year, the value of the defined benefit pension plans' assets would increase (or decrease) by approximately $12 million.

Adverse experience with respect to these factors could eventually increase funding and pension expense significantly, while favourable experience with respect to these factors could eventually decrease funding and pension expense significantly.

Fluctuations in the post-retirement benefit obligation also can result from changes in the discount rate used. A 0.1% increase (decrease) in the discount rate would decrease (increase) the obligation by approximately $5 million.

CP reviews its pensioner mortality experience to ensure that the mortality assumption continues to be appropriate, or to determine what changes to the assumption is needed.

Property, Plant and Equipment

The Company follows the group depreciation method under which a single depreciation rate is applied to the total cost in a particular class of property, despite differences in the service life or salvage value of individual properties within the same class. CP performs depreciation studies of each property group approximately every three years to update depreciation rates. The depreciation studies are based on statistical analysis of historical retirements of properties in the group and incorporate engineering estimates of changes in current operations and of technological advances. CP

depreciates the cost of properties, net of salvage, on a straight-line basis over the estimated useful life of the property group. The estimates of economic lives are uncertain and can vary due to technological changes or in the rate of wear. Additionally, the depreciation rates are updated to reflect the change in residual values of the assets in the class. Under the group depreciation method, retirements or disposals of properties in the normal course of business are accounted for by charging the cost of the property less any net salvage to accumulated depreciation. For the sale or retirement of larger groups of depreciable assets that are unusual that were not predicted in the Company's depreciation studies, CP records a gain or loss for the difference between net proceeds and net book value of the assets sold or retired.

Due to the capital intensive nature of the railway industry, depreciation represents a significant part of operating expenses. The estimated useful lives of properties have a direct impact on the amount of depreciation recorded as a component of Properties on the Company's Consolidated Balance Sheets. At December 31, 2016 and 2015, accumulated depreciation was $7,125 million and $6,952 million, respectively.

Revisions to the estimated useful lives and net salvage projections for properties constitute a change in accounting estimate and are addressed prospectively by amending depreciation rates. It is anticipated that there will be changes in the estimates of weighted average useful lives and net salvage for each property group as assets are acquired, used and retired. Substantial changes in either the useful lives of properties or the salvage assumptions could result in significant changes to depreciation expense. For example, if the estimated average life of road locomotives, the largest asset group, increased (or decreased) by 5%, annual depreciation expense would decrease (or increase) by approximately $3 million.

The Company reviews the carrying amounts of properties when circumstances indicate that such carrying amounts may not be recoverable based on future undiscounted cash flows. When such properties are determined to be impaired, recorded asset values are revised to their fair values and an impairment loss is recognized.

Deferred Income Taxes

CP accounts for deferred income taxes based on the liability method. This method focuses on the Company's balance sheet and the temporary differences otherwise calculated from the comparison of book versus tax values. It is assumed that such temporary differences will be settled in the deferred income tax assets and liabilities at the balance sheet date.

In determining deferred income taxes, the Company makes estimates and assumptions regarding deferred tax matters, including estimating the timing of the realization and settlement of deferred income tax assets (including the benefit of tax losses) and liabilities. Deferred income taxes are calculated using enacted federal, provincial, and state future income tax rates, which may differ in future periods.

A deferred income tax expense of $320 million was included in "Income tax expense" for 2016 and $234 million in 2015 on the Company's Consolidated Statements of Income. The increase in deferred income tax expense in 2016 was primarily due to the 2015 reclassification of deferred tax expense to current tax expense related to the D&H South sale. In addition, the Company recorded deferred income tax expense related to FX translation on U.S. dollar-denominated debt, whereas this was a recovery in 2015. At December 31, 2016 and 2015, deferred income tax liabilities of $3,571 million and $3,391 million, respectively, were recorded as a long-term liability and are composed largely of temporary differences related to accounting for properties.

Legal and Personal Injury Liabilities

The Company is involved in litigation related to CP's business in Canada and the U.S. Management is required to establish estimates of the potential liability arising from incidents, claims and pending litigation, including personal injury claims by employees and third parties, and certain occupation-related claims and property damage claims.

Accruals for incidents, claims and litigation, including workers' compensation benefit accruals, totalled $130 million, net of insurance recoveries, at December 31, 2016 and $133 million at December 31, 2015. At December 31, 2016 and 2015 respectively, the total accrual included $88 million and $86 million in "Pension and other benefit liabilities", $18 million and $18 million in "Other long-term liabilities" and $26 million and $30 million in "Accounts payable and accrued liabilities", partially offset by $2 million and $1 million in "Other assets" on the Company's Consolidated Balance Sheets. An expense totalling $67 million in 2016 and $62 million in 2015 was included in "Purchased services and other" on the Company's Consolidated Statements of Income.

These estimates are determined on a case-by-case basis with input from defense counsel and are based on an assessment of the actual damages incurred and current legal advice with respect to settlements in other similar cases. CP employs experienced claims adjusters and experts who investigate and assess the validity of individual claims made against CP and estimate the damages incurred.

A provision for lawsuits or other claims will be accrued according to applicable accounting standards, reflecting the assessment of the actual damages incurred based upon the facts and circumstances known at the time. CP accrues for likely claims when the facts of an incident become known and investigation results provide a reasonable basis for estimating the liability. The lower end of the range is accrued if the facts and circumstances permit only a range of

reasonable estimates and no single amount in that range is a better estimate than any other. Additionally, for administrative expediency, a general provision for lesser value injury cases is kept. Facts and circumstances related to asserted claims can change, and a process is in place to monitor accruals for changes in accounting estimates.

In the Canadian provinces of Quebec, Ontario, Manitoba and B.C., occupational-injury claims are administered through the Workers' Compensation Board ("WCB") and are actuarially determined. In the provinces of Saskatchewan and Alberta, the Company is assessed an annual WCB contribution on a premium basis and this amount is not subject to estimation by management.

U.S. railway employees are covered by federal law under the FELA rather than workers compensation programs. Accruals are set for individual cases based on facts, legal opinion and statistical analysis. U.S. accruals are also set and include alleged occupational exposure or injury.

Forward-Looking Information

This MD&A and Annual Report on Form 10-K contains certain forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and other relevant securities legislation. These forward-looking statements include, but are not limited to, statements concerning the Company’s defined benefit pension expectations for 2017 and through 2020, our expectations for 2017 which includes: adjusted diluted EPS growth to be in the high single-digit percentages from full-year 2016 Adjusted diluted EPS of $10.29, capital expenditures of $1.25 billion, an increase of 6% over the $1.18 billion spent in 2016, assumptions regarding the Canadian-to-U.S. dollar exchange rate being in the range of $1.30 to $1.35, the average price of WTI being approximately U.S. $45 to $55 per barrel, as well as statements concerning the Company’s operations, anticipated financial

performance, business prospects and strategies, including statements concerning the anticipation that cash flow from operations and various sources of financing will be sufficient to meet debt repayments and obligations in the foreseeable future and concerning anticipated capital programs, statements regarding future payments including income taxes and pension contributions, and capital expenditures. Forward-looking information typically contains statements with words such as “financial expectations”, “key assumptions”, “anticipate”, “believe”, “expect”, “plan”, “will”, “c “should” or similar words suggesting future outcomes. To the extent that CP has provided guidance using non-GAAP financial measures, the Company may not be able to provide a reconciliation to a GAAP measure, due to unknown variables and uncertainty related to future results.

Readers are cautioned not to place undue reliance on forward-looking information because it is possible that CP will not achieve predictions, forecasts, projections and other forms of forward-looking information. Current economic conditions render assumptions, although reasonable when made, subject to greater uncertainty. In addition, except as required by law, CP undertakes no obligation to update publicly or otherwise revise any forward-looking information, whether as a result of new information, future events or otherwise.

By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, including but not limited to the following factors: changes in business strategies; general North American and global economic, credit and business conditions; risks in agricultural production such as weather conditions and insect populations; the availability and price of energy commodities; the effects of competition and pricing pressures; industry capacity; shifts in market demand; inflation; changes in laws and regulations, including regulation of rates; changes in taxes and tax rates; potential increases in maintenance and operating costs; uncertainties of investigations, proceedings or other types of claims and litigation; labour disputes; risks and liabilities arising from derailments; transportation of dangerous goods; timing of completion of capital and maintenance projects; currency and interest rate fluctuations; effects of changes in market conditions on the financial position of pension plans and investments; and various events that could disrupt operations, including severe weather, droughts, floods, avalanches and earthquakes as well as security threats and the governmental response to them, and technological changes.

There are more specific factors that could cause actual results to differ materially from those described in the forward-looking statements contained in this MD&A. These more specific factors are identified and discussed in Item 1A. Risk Factors. Other risks are detailed from time to time in reports filed by CP with securities regulators in Canada and the United States.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Exchange Risk

Although CP conducts business primarily in Canada, a significant portion of its revenues, expenses, assets and liabilities including debt are denominated in U.S. dollars. The value of the Canadian dollar is affected by a number of domestic and international factors, including, without limitation, economic performance, and Canadian, U.S. and international monetary policies. Consequently, the Company's results are affected by fluctuations in the exchange rate between these currencies. On an annualized basis, a $0.01 weakening (or strengthening) of the Canadian dollar positively (or negatively) impacts freight revenues by approximately $25 million and negatively (or positively) impacts operating expenses by approximately $13 million.

CP uses U.S. denominated debt to hedge its net investment in U.S. operations. As at December 31, 2016, the net investment in U.S. operations is less than the total U.S. denominated debt. Consequently, FX translation on the Company's undesignated U.S. dollar-denominated long-term debt causes additional impacts on earnings in Other income and charges.

To manage this exposure to fluctuations in exchange rates between Canadian and U.S. dollars, CP may sell or purchase U.S. dollar forwards at fixed rates in future periods. In addition, changes in the exchange rate between the Canadian dollar and other currencies (including the U.S. dollar) make the goods transported by the Company more or less competitive in the world marketplace and may in turn positively or negatively affect revenues.

Share Price Impact on Stock-Based Compensation

Based on information available at December 31, 2016 and expectations for 2017 grants, for every $1.00 change in share price, stock-based compensation expense has a corresponding change of approximately $0.4 million to $0.6 million. This excludes the impact of changes in share price relative to the S&P/TSX 60 index and relative to Class I railways, which may trigger different performance share unit payouts. Share based compensation may also be impacted by non-market performance conditions.

Additional information concerning stock based compensation is included in Item 8. Financial Statements and Supplementary Data, Note 21 Stock-based compensation.

Interest Rate Risk

In order to meet the Company's capital structure requirements, CP may enter into long-term debt agreements. These debt agreements expose CP to increased interest costs on future fixed debt instruments and existing variable rate debt instruments, should market rates increase. In addition, the present value of the Company's assets and liabilities will also vary with interest rate changes. To manage interest rate exposure, CP may enter into forward rate agreements such as treasury rate locks or bond forwards that lock in rates for a future date, thereby protecting against interest rate increases. CP may also enter into swap agreements whereby one party agrees to pay a fixed rate of interest while the other party pays a floating rate. Contingent on the direction of interest rates, the Company may incur higher costs depending on the contracted rate.

As at December 31, 2016 and 2015, the Company had forward starting floating-to-fixed interest rate swap agreements totalling a notional U.S. $700 million to fix the benchmark rate on cash flows associated with highly probable forecasted issuances of long-term notes.

Information concerning market risks is supplemented in Item 8. Financial Statements and Supplementary Data, Note 17 Financial Instruments.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and the Shareholders of Canadian Pacific Railway Limited:

We have audited the accompanying consolidated balance sheets of Canadian Pacific Railway Limited and subsidiaries (the "Company") as of December 31, 2016 and 2015 and the related consolidated statements of income, comprehensive income, cash flows and changes in shareholders' equity for each of the three years in the period ended December 31, 2016. Our audits also included the financial statement schedule listed in the index at Item 15. These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Canadian Pacific Railway Limited and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, present fairly, in all material respects, the information set forth therein.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on the criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 16, 2017 expressed an unqualified opinion on the Company’s internal control over financial reporting.

/s/ Deloitte LLP

Chartered Professional Accountants
February 16, 2017
Calgary, Canada

CONSOLIDATED STATEMENTS OF INCOME

Year ended December 31 (in millions of Canadian dollars, except per share data)	2016	2015	2014
Revenues			
Freight	$6,060	$6,552	$6,464
Non-freight	172	160	156
Total revenues	6,232	6,712	6,620
Operating expenses			
Compensation and benefits	1,189	1,371	1,348
Fuel	567	708	1,048
Materials	180	184	193
Equipment rents	173	174	155
Depreciation and amortization	640	595	552
Purchased services and other (Note 10)	905	1,060	985
Gain on sale of Delaware & Hudson South (Note 10)	—	(68)	—
Total operating expenses	3,654	4,024	4,281
Operating income	2,578	2,688	2,339
Less:			
Other income and charges (Note 3)	(45)	335	19
Net interest expense (Note 4)	471	394	282
Income before income tax expense	2,152	1,959	2,038
Income tax expense (Note 5)	553	607	562
Net income	$1,599	$1,352	$1,476
Earnings per share (Note 6)			
Basic earnings per share	$10.69	$8.47	$8.54
Diluted earnings per share	$10.63	$8.40	$8.46
Weighted-average number of shares (millions) (Note 6)			
Basic	149.6	159.7	172.8
Diluted	150.5	161.0	174.4

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Year ended December 31 (in millions of Canadian dollars)	2016	2015	2014
Net income	$1,599	$1,352	$1,476
Net gain (loss) in foreign currency translation adjustments, net of hedging activities	18	(86)	(32)
Change in derivatives designated as cash flow hedges	(2)	(69)	(49)
Change in pension and post-retirement defined benefit plans	(434)	1,059	(941)
Other comprehensive (loss) income before income taxes (Note 7)	(418)	904	(1,022)
Income tax recovery (expense) on above items (Note 7)	96	(162)	306
Other comprehensive (loss) income (Note 7)	(322)	742	(716)
Comprehensive income	$1,277	$2,094	$760

See Notes to Consolidated Financial Statements.

CONSOLIDATED BALANCE SHEETS

As at December 31 (in millions of Canadian dollars, except Common Shares)	2016	2015
Assets		
Current assets		
Cash and cash equivalents	$164	$650
Accounts receivable, net (Note 9)	591	645
Materials and supplies	184	188
Other current assets	70	54
	1,009	1,537
Investments (Note 11)	194	152
Properties (Note 12)	16,689	16,273
Goodwill and intangible assets (Note 13)	202	211
Pension asset (Note 20)	1,070	1,401
Other assets (Note 14)	57	63
Total assets	$19,221	$19,637
Liabilities and shareholders' equity		
Current liabilities		
Accounts payable and accrued liabilities (Note 15)	$1,322	$1,417
Long-term debt maturing within one year (Note 16)	25	30
	1,347	1,447
Pension and other benefit liabilities (Note 20)	734	758
Other long-term liabilities (Note 18)	284	318
Long-term debt (Note 16)	8,659	8,927
Deferred income taxes (Note 5)	3,571	3,391
Total liabilities	14,595	14,841
Shareholders' equity		
Share capital (Note 19)		
Authorized unlimited Common Shares without par value. Issued and outstanding are 146.3 million and 153.0 million at December 31, 2016 and 2015, respectively.	2,002	2,058
Authorized unlimited number of first and second preferred shares; none outstanding.		
Additional paid-in capital	52	43
Accumulated other comprehensive loss (Note 7)	(1,799)	(1,477)
Retained earnings	4,371	4,172
	4,626	4,796
Total liabilities and shareholders' equity	$19,221	$19,637

Commitments and contingencies (Note 23).

Subsequent event (Note 27).

See Notes to Consolidated Financial Statements.

Approved on behalf of the Board:

/s/ Andrew F. Reardon	/s/ Matthew H. Paull
Andrew F. Reardon, Director,	Matthew H. Paull, Director,
Chair of the Board	Chair of the Audit Committee

CONSOLIDATED STATEMENTS OF CASH FLOWS

Year ended December 31 (in millions of Canadian dollars)	2016	2015	2014
Operating activities			
Net income	$1,599	$1,352	$1,476
Reconciliation of net income to cash provided by operating activities:			
Depreciation and amortization	640	595	552
Deferred income taxes (Note 5)	320	234	354
Pension funding in excess of expense (Note 20)	(138)	(49)	(132)
Foreign exchange (gain) loss on long-term debt (Note 3)	(79)	297	11
Other operating activities, net	(198)	(245)	(14)
Change in non-cash working capital balances related to operations (Note 8)	(55)	275	(124)
Cash provided by operating activities	2,089	2,459	2,123
Investing activities			
Additions to properties	(1,182)	(1,522)	(1,449)
Proceeds from the sale of west end of Dakota, Minnesota and Eastern Railroad (Note 10)	—	—	236
Proceeds from the sale of Delaware & Hudson South (Note 10)	—	281	—
Proceeds from sale of properties and other assets (Note 10)	116	114	52
Other	(3)	4	—
Cash used in investing activities[1]	(1,069)	(1,123)	(1,161)
Financing activities			
Dividends paid	(255)	(226)	(244)
Issuance of CP Common Shares (Note 19)	21	43	62
Purchase of CP Common shares (Note 19)	(1,210)	(2,787)	(2,050)
Issuance of long-term debt, excluding commercial paper (Note 16)	—	3,411	—
Repayment of long-term debt, excluding commercial paper (Note 16)	(38)	(505)	(183)
Net (repayment) issuance of commercial paper (Note 16)	(8)	(893)	771
Settlement of foreign exchange forward on long-term debt	—	—	17
Other	(3)	—	(3)
Cash used in financing activities	(1,493)	(957)	(1,630)
Effect of foreign currency fluctuations on U.S. dollar-denominated cash and cash equivalents	(13)	45	7
Cash position			
(Decrease) increase in cash, cash equivalents, and restricted cash[1]	(486)	424	(661)
Cash, cash equivalents, and restricted cash at beginning of year[1]	650	226	887
Cash, cash equivalents, and restricted cash at end of year[1]	$164	$650	$226

Supplemental disclosures of cash flow information:			
Income taxes paid	$322	$176	$226
Interest paid	$488	$336	$309

[1]Certain figures have been reclassified due to a retrospective change in accounting policy (Note 2).

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(in millions of Canadian dollars except per share data)	Share capital	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
Balance at December 31, 2013	$2,240	$ 34	$ (1,503)	$ 6,326	$ 7,097
Net income	—	—	—	1,476	1,476
Other comprehensive loss (Note 7)	—	—	(716)	—	(716)
Dividends declared ($1.4000 per share)	—	—	—	(241)	(241)
Effect of stock-based compensation expense	—	19	—	—	19
CP Common Shares repurchased (Note 19)	(136)	—	—	(1,953)	(2,089)
Shares issued under stock option plan (Note 19)	81	(17)	—	—	64
Balance at December 31, 2014	2,185	36	(2,219)	5,608	5,610
Net income	—	—	—	1,352	1,352
Other comprehensive income (Note 7)	—	—	742	—	742
Dividends declared ($1.4000 per share)	—	—	—	(221)	(221)
Effect of stock-based compensation expense	—	17	—	—	17
CP Common Shares repurchased (Note 19)	(181)	—	—	(2,567)	(2,748)
Shares issued under stock option plan (Note 19)	54	(10)	—	—	44
Balance at December 31, 2015	2,058	43	(1,477)	4,172	4,796
Net income	—	—	—	1,599	1,599
Other comprehensive loss (Note 7)	—	—	(322)	—	(322)
Dividends declared ($1.8500 per share)	—	—	—	(274)	(274)
Effect of stock-based compensation expense	—	14	—	—	14
CP Common Shares repurchased (Note 19)	(84)	—	—	(1,126)	(1,210)
Shares issued under stock option plan (Note 19)	28	(5)	—	—	23
Balance at December 31, 2016	$2,002	$ 52	$ (1,799)	$ 4,371	$ 4,626

See Notes to Consolidated Financial Statements.

CANADIAN PACIFIC RAILWAY LIMITED
Notes to Consolidated Financial Statements
December 31, 2016

Canadian Pacific Railway Limited ("CPRL"), through its subsidiaries (collectively referred to as "CP" or "the Company"), operates a transcontinental railway in Canada and the United States. CP provides rail and intermodal transportation services over a network of approximately 12,400 miles, serving the principal business centres of Canada from Montreal, Quebec, to Vancouver, British Columbia, and the U.S. Northeast and Midwest regions. CP's railway network feeds directly into the U.S. heartland from the East and West coasts. Agreements with other carriers extend the Company's market reach east of Montreal in Canada, throughout the U.S. and into Mexico. CP transports bulk commodities, merchandise freight and intermodal traffic. Bulk commodities include grain, coal, fertilizers and sulphur. Merchandise freight consists of finished vehicles and automotive parts, as well as forest, industrial and consumer products. Intermodal traffic consists largely of retail goods in overseas containers that can be transported by train, ship and truck, and in domestic containers and trailers that can be moved by train and truck.

1 Summary of significant accounting policies

Accounting principles generally accepted in the United States of America ("GAAP")

These consolidated financial statements are expressed in Canadian dollars and have been prepared in accordance with GAAP.

Principles of consolidation

These consolidated financial statements include the accounts of CP and all its subsidiaries. The Company's investments in which it has significant influence are accounted for using the equity method. All intercompany accounts and transactions have been eliminated.

Use of estimates

The preparation of these consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of revenues and expenses during the year, the reported amounts of assets and liabilities, and the disclosure of contingent assets and liabilities at the date of the financial statements. Management regularly reviews its estimates, including those related to environmental liabilities, pensions and other benefits, depreciable lives of properties, deferred income tax assets and liabilities, as well as legal and personal injury liabilities based upon currently available information. Actual results could differ from these estimates.

Principal subsidiaries

The following list sets out CPRL's principal railway operating subsidiaries, including the jurisdiction of incorporation. All of these subsidiaries are wholly owned, directly or indirectly, by CPRL as at December 31, 2016.

Principal subsidiary	Incorporated under the laws of
Canadian Pacific Railway Company	Canada
Soo Line Railroad Company ("Soo Line")	Minnesota
Delaware and Hudson Railway Company, Inc. ("D&H")	Delaware
Dakota, Minnesota & Eastern Railroad Corporation ("DM&E")	Delaware

Mount Stephen Properties Inc. (“MSP”)	Canada

Revenue recognition

Railway freight revenues are recognized based on the percentage of completed service method. The allocation of revenue between reporting periods is based on the relative transit time in each reporting period with expenses recognized as incurred. Volume rebates to customers are accrued as a reduction of freight revenues based on estimated volume and contract terms as freight service is provided. Other revenues, including passenger revenue, revenue from leasing certain assets, switching fees, and revenue from logistics services, are recognized as service is performed or contractual obligations are met. Revenues are presented net of taxes collected from customers and remitted to government authorities.

Cash and cash equivalents

Cash and cash equivalents include highly liquid short-term investments that are readily convertible to cash with original maturities of three months or less, but exclude cash and cash equivalents subject to restrictions.

Restricted cash and cash equivalents

Cash and cash equivalents that are restricted as to withdrawal or usage, in accordance with specific agreements, are presented as restricted cash and cash equivalents on the balance sheets when applicable.

Foreign currency translation

Assets and liabilities denominated in foreign currencies, other than those held through foreign subsidiaries, are translated into Canadian dollars at the year-end exchange rate for monetary items and at the historical exchange rates for non-monetary items. Foreign currency revenues and expenses are translated at the exchange rates in effect on the dates of the related transactions. Foreign exchange ("FX") gains and losses, other than those arising from the translation of the Company's net investment in foreign subsidiaries, are included in income.

The accounts of the Company's foreign subsidiaries are translated into Canadian dollars using the year-end exchange rate for assets and liabilities and the average exchange rates during the year for revenues, expenses, gains and losses. FX gains and losses arising from the translation of the foreign subsidiaries' assets and liabilities are included in "Other comprehensive income (loss)". A portion of U.S. dollar-denominated long-term debt has been designated as a hedge of the net investment in foreign subsidiaries. As a result, unrealized FX gains and losses on U.S. dollar-denominated long-term debt, designated as a hedge, are offset against FX gains and losses arising from the translation of foreign subsidiaries' accounts in "Other comprehensive income (loss)".

Pensions and other benefits

Pension costs are actuarially determined using the projected-benefit method pro-rated over the credited service periods of employees. This method incorporates management's best estimates of expected plan investment performance, salary escalation and retirement ages of employees. The expected return on fund assets is calculated using market-related asset values developed from a five-year average of market values for the fund's public equity securities and absolute return strategies (with each prior year's market value adjusted to the current date for assumed investment income during the intervening period) plus the market value of the fund's fixed income, real estate and infrastructure securities, subject to the market-related asset value not being greater than 120% of the market value nor being less than 80% of the market value. The discount rate used to determine the projected-benefit obligation is based on blended market interest rates on high-quality corporate debt instruments with matching cash flows. Unrecognized actuarial gains and losses in excess of 10% of the greater of the benefit obligation and the market-related value of plan assets are amortized over the expected average remaining service period of active employees expected to receive benefits under the plan (approximately 11 years). Prior service costs arising from collectively bargained amendments to pension plan benefit provisions are amortized over the term of the applicable union agreement. Prior service costs arising from all other sources are amortized over the expected average remaining service period of active employees who are expected to receive benefits under the plan at the date of amendment.

Costs for post-retirement and post-employment benefits other than pensions, including post-retirement health care and life insurance and some workers' compensation and long-term disability benefits in Canada, are actuarially determined on a basis similar to pension costs.

The over or under funded status of defined benefit pension and other post-retirement benefit plans are measured as the difference between the fair value of the plan assets and the benefit obligation, and are recognized on the balance sheets. In addition, any unrecognized actuarial gains and losses and prior service costs and credits that arise during the period are recognized as a component of "Other comprehensive income (loss)", net of tax.

Gains and losses on post-employment benefits that do not vest or accumulate, including some workers' compensation and long-term disability benefits in Canada, are included immediately in income as "Compensation and benefits".

Materials and supplies

Materials and supplies are carried at the lower of average cost or market value and consist primarily of fuel and parts used in the repair and maintenance of track structures, equipment, locomotives and freight cars.

Properties

Fixed asset additions and major renewals are recorded at cost, including direct costs, attributable indirect costs and carrying costs, less accumulated depreciation and any impairment. When there is a legal obligation associated with the retirement of property, a liability is initially recognized at its fair value and a corresponding asset retirement cost is added to the gross book value of the related asset and amortized to expense over the estimated term to retirement. The Company reviews the carrying amounts of its properties whenever changes in circumstances indicate that such carrying amounts may not be recoverable based on future undiscounted cash flows. When such properties are determined to be impaired, recorded asset values are revised to their fair value.

The Company recognizes expenditures as additions to properties or operating expenses based on whether the expenditures increase the output or service capacity, lower the associated operating costs or extend the useful life of the properties and whether the expenditures exceed minimum physical and financial thresholds.

Much of the additions to properties, both new and replacement properties, are self-constructed. These are initially recorded at cost, including direct costs and attributable indirect costs, overheads and carrying costs. Direct costs include, among other things, labour costs, purchased services, equipment costs and material costs. Attributable indirect costs and overheads include incremental long-term variable costs resulting from the execution of capital projects. Indirect costs mainly include work trains, material distribution, highway vehicles and work equipment. Overheads primarily include a portion of the engineering department's costs, which plans, designs and administers these capital projects. These costs are allocated to projects by applying a measure consistent with the nature of the cost, based on cost studies. For replacement properties, the project costs are allocated to dismantling and installation based on cost studies. Dismantling work is performed concurrently with the installation.

Ballast programs including undercutting, shoulder ballasting and renewal programs that form part of the annual track program are capitalized as this work, and the related added ballast material, significantly improves drainage, which in turn extends the life of ties and other track materials. These costs are tracked separately from the underlying assets and depreciated over the period to the next estimated similar ballast program. Spot replacement of ballast is considered a repair which is expensed as incurred.

The costs of large refurbishments are capitalized and locomotive overhauls are expensed as incurred, except where overhauls represent a betterment of the locomotive in which case costs are capitalized.

The Company capitalizes development costs for major new computer systems.

The Company follows group depreciation which groups assets which are similar in nature and have similar economic lives. The property groups are depreciated on a straight-line basis reflecting their expected economic lives determined by studies of historical retirements of properties in the group and engineering estimates of changes in current operations and of technological advances. Actual use and retirement of assets may vary from current estimates, which would impact the amount of depreciation expense recognized in future periods. Rail and other track material in the U.S. are depreciated based directly on usage.

When depreciable property is retired or otherwise disposed of in the normal course of business, the book value, less net salvage proceeds, is charged to accumulated depreciation and if different than the assumptions under the depreciation study could potentially result in adjusted depreciation expense over a period of years. However, when removal costs exceed the salvage value on assets and the Company has no legal obligation to remove the assets, the removal costs incurred are charged to income in the period in which the assets are removed and are not charged to accumulated depreciation.

For the sale or retirement of larger groups of depreciable assets that are unusual and were not considered in depreciation studies, CP records a gain or loss for the difference between net proceeds and net book value of the assets sold or retired.

Equipment under capital lease is included in Properties and depreciated over the period of expected use.

Assets held for sale

Assets to be disposed that meet the held for sale criteria are reported at the lower of their carrying amount and fair value, less costs to sell, and are no longer depreciated.

Goodwill and intangible assets

Goodwill represents the excess of the purchase price over the fair value of identifiable net assets upon acquisition of a business. Goodwill is assigned to the reporting units that are expected to benefit from the business acquisition which, after integration of operations with the railway network, may be different than the acquired business.

The carrying value of goodwill, which is not amortized, is assessed for impairment annually in the fourth quarter of each year as at October 1st, or more frequently as economic events dictate. The Company has the option of performing an assessment of certain qualitative factors (“Step 0”) to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying value or proceeding directly to a quantitative impairment test (“Step 1”). Qualitative factors include but are not limited to, economic, market and industry conditions, cost factors and overall financial performance of the reporting unit. If Step 0 indicates that the carrying value is less than the fair value, then performing the two-step impairment test is unnecessary. Under Step 1, the fair value of the reporting unit is compared to its carrying value, including goodwill. If the fair value of the reporting unit is less than its carrying value, goodwill is potentially impaired. The impairment charge that would be recognized is the excess of the carrying value of the goodwill over the fair value of the goodwill, determined in the same manner as in a business combination.

Intangible assets with finite lives are amortized on a straight-line basis over the estimated useful lives of the respective assets. Favourable leases, customer relationships and interline contracts have amortization periods ranging from 15 to 20 years. When there is a change in the estimated useful life of an intangible asset with a finite life, amortization is adjusted prospectively.

Financial instruments

Financial instruments are contracts that give rise to a financial asset of one party and a financial liability or equity instrument of another party.

Financial instruments are recognized initially at fair value, which is the amount of consideration that would be agreed upon in an arm's-length transaction between willing parties.

Subsequent measurement depends on how the financial instruments have been classified. Accounts receivable and investments, classified as loans and receivables, are measured at amortized cost, using the effective interest method. Cash and cash equivalents and derivatives are classified as held for trading and are measured at fair value. Accounts payable, accrued liabilities, short-term borrowings, dividends payable, other long-term liabilities and long-term debt, classified as other liabilities, are also measured at amortized cost.

Derivative financial instruments

Derivative financial and commodity instruments may be used from time to time by the Company to manage its exposure to risks relating to foreign currency exchange rates, stock-based compensation, interest rates and fuel prices. When CP utilizes derivative instruments in hedging relationships, CP identifies, designates and documents those hedging transactions and regularly tests the transactions to demonstrate effectiveness in order to continue hedge accounting.

All derivative instruments are classified as held for trading and recorded at fair value. Any change in the fair value of derivatives not designated as hedges is recognized in the period in which the change occurs in the Consolidated Statements of Income in the line item to which the derivative instrument is related. On the Consolidated Balance Sheets they are classified in "Other assets", "Other long-term liabilities", "Other current assets" or "Accounts payable and accrued liabilities" as applicable. Gains and losses arising from derivative instruments may affect the following lines on the Consolidated Statements of Income: "Revenues", "Compensation and benefits", "Fuel", "Other income and charges", and "Net interest expense".

For fair value hedges, the periodic changes in values are recognized in income, on the same line as the changes in values of the hedged items are also recorded. For a cash flow hedge, the change in value of the effective portion is recognized in "Other comprehensive income (loss)". Any ineffectiveness within an effective cash flow hedge is recognized in income as it arises in the same income account as the hedged item. Should a cash flow hedging relationship become ineffective, previously unrealized gains and losses remain within "Accumulated other comprehensive loss" until the hedged item is settled and, prospectively, future changes in value of the derivative are recognized in income. The change in value of the effective portion of a cash flow hedge remains in "Accumulated other comprehensive loss" until the related hedged item settles, at which time amounts recognized in "Accumulated other comprehensive loss" are reclassified to the same income or balance sheet account that records the hedged item.

In the Consolidated Statements of Cash Flows, cash flows relating to derivative instruments designated as hedges are included in the same line as the related hedged items.

Environmental remediation

Environmental remediation accruals, recorded on an undiscounted basis unless a reliably determinable estimate as to amount and timing of costs can be established, cover site-specific remediation programs. The accruals are recorded

when the costs to remediate are probable and reasonably estimable. Certain future costs to monitor sites are discounted at an adjusted risk free rate. Provisions for environmental remediation costs are recorded in “Other long-term liabilities”, except for the current portion, which is recorded in “Accounts payable and accrued liabilities”.

Income taxes

The Company follows the liability method of accounting for income taxes. Deferred income tax assets and liabilities are determined based on differences between the financial reporting and tax bases of assets and liabilities using enacted tax rates and laws that will be in effect when the differences are expected to reverse.

The effect of a change in income tax rates on deferred income tax assets and liabilities is recognized in income in the period during which the change occurs.

When appropriate, the Company records a valuation allowance against deferred tax assets to reflect that these tax assets may not be realized. In determining whether a valuation allowance is appropriate, CP considers whether it is more likely than not that all or some portion of CP’s deferred tax assets will not be realized, based on management’s judgment using available evidence about future events.

At times, tax benefit claims may be challenged by a tax authority. Tax benefits are recognized only for tax positions that are more likely than not sustainable upon examination by tax authorities. The amount recognized is measured as the largest amount of benefit

that is greater than 50% likely to be realized upon settlement. A liability for “unrecognized tax benefits” is recorded for any tax benefits claimed in CP’s tax returns that do not meet these recognition and measurement standards.

Investment and other similar tax credits are deferred on the Consolidated Balance Sheets and amortized to “Income tax expense” as the related asset is recognized in income.

Earnings per share

Basic earnings per share are calculated using the weighted average number of common shares outstanding during the year. Diluted earnings per share are calculated using the treasury stock method for determining the dilutive effect of options.

Stock-based compensation

CP follows the fair value based approach to account for stock options. Compensation expense and an increase in “Additional paid-in capital” are recognized for stock options over their vesting period, or over the period from the grant date to the date employees become eligible to retire when this is shorter than the vesting period, based on their estimated fair values on the grant date, as determined using the Black-Scholes option-pricing model.

Any consideration paid by employees on exercise of stock options is credited to “Share capital” when the option is exercised and the recorded fair value of the option is removed from “Additional paid-in capital“ and credited to “Share capital”.

Compensation expense is also recognized for deferred share units (“DSUs”), performance share units (“PSUs”) and restricted share units (“RSUs”) using the fair value method. Compensation expense is recognized over the vesting period, or for PSUs and DSUs only, over the period from the grant date to the date employees become eligible to retire when this is shorter than the vesting period. Forfeitures of DSUs, PSUs and RSUs are estimated at issuance and subsequently at the balance sheet date.

The employee share purchase plan (“ESPP”) gives rise to compensation expense that is recognized using the issue price by amortizing the cost over the vesting period or over the period from the grant date to the date employees become eligible to retire when this is shorter than the vesting period.

2 Accounting changes

Implemented in 2016

Early Adoption of Restricted Cash

In November 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update (“ASU”) 2016-18, Restricted Cash a consensus of the FASB Emerging Issues Task Force under FASB Accounting Standards Codification ("ASC")Topic 230 Statement of Cash Flows. The amendments required the statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash and restricted cash equivalents. Restricted cash will therefore be included in beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The updated standard does not provide a definition of restricted cash and restricted cash equivalents. This ASU is effective retrospectively for public entities for fiscal years and interim periods within those years, beginning on or after December 15, 2017. Early adoption of this ASU is

permitted. The Company adopted the provisions of this ASU during the fourth quarter of 2016. As a result of the adoption of ASU 2016-18, the 2014 comparative Statement of Cash Flows has been restated to reflect $411 million in restricted cash and cash equivalents used to collateralize letters of credit in the beginning-of-period total cash and cash equivalents, with the corresponding change in restricted cash and cash equivalents of the year removed from investing activities. There was no restricted cash balance remaining at the end of both comparative periods.

Amendments to the Consolidation Analysis

In February 2015, the FASB issued ASU 2015-02, Amendments to the Consolidation Analysis under FASB ASC Topic 810 Consolidation. The amendments required reporting entities to evaluate whether they should consolidate certain legal entities under the revised consolidation model. Specifically, the amendments modify the evaluation of whether limited partnerships and similar legal entities are variable interest entities (“VIEs”) or voting interest entities, eliminated the presumption that a general partner should consolidate a limited partnership and affected the consolidation analysis of reporting entities involved with VIEs, particularly those that have fee arrangements and related party relationships. This ASU was effective for public entities for fiscal years, and interim periods within those years, beginning on or after December 15, 2015. Entities had the option of using either a full retrospective or a modified retrospective approach to adopt this ASU. The Company evaluated all existing VIEs and all arrangements that might give rise to a VIE; no changes to consolidation, disclosure or financial statement presentation were required as a result of this evaluation.

Future changes

Simplifying the Subsequent Measurement of Inventory

In July 2015, the FASB issued ASU 2015-11, Simplifying the Measurement of Inventory under FASB ASC Topic 330 Inventory. The amendments require reporting entities to measure inventory at the lower of cost and net realizable value. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation. The amendments apply to inventory that is measured using the first-in, first-out or average cost basis. This ASU will be effective for public entities for fiscal years, and interim periods within those years, beginning after December 15, 2016, and will be applied prospectively. The Company does not anticipate that the adoption of this ASU will have an impact on the consolidated financial statements.

Leases

In February 2016, the FASB issued ASU 2016-02, Leases. The new FASB ASC Topic 842 Leases supersedes the lease recognition and measurement requirements in Topic 840 Leases. This new standard requires recognition of right-of-use assets and lease liabilities by lessees for those leases classified as finance and operating leases with a maximum term exceeding 12 months. This ASU will be effective for public entities for fiscal years, and interim periods within those years, beginning on or after December 15, 2018. Entities are required to use a modified retrospective approach to adopt this ASU. The Company is assessing contractual arrangements through a cross functional team and assessing potential system changes required to deliver required accounting changes. There will be a material increase to right of use assets and lease liabilities on the Consolidated balance sheet, but the Company does not anticipate a material impact on the Consolidated statement of income.

Revenue from Contracts with Customers

In March 2016, the FASB issued ASU 2016-08, Revenue from Contracts with Customers: Principal versus Agent Considerations under FASB ASC Topic 606. The amendments clarify the principal versus agent guidance in determining whether to recognize revenue on a gross or net basis. The amendments are effective for public entities for annual reporting periods beginning on or after December 15, 2017, including interim periods within that reporting period. Entities have the option of using either a full retrospective or a modified retrospective approach to adopt this ASU. CP is currently assessing the transition methods for adoption in the first quarter of 2018. CP expects to continue to recognize freight revenue, which represents greater than 95% of CP's annual revenues, over time and is currently reviewing agreements to determine the impact of the new standard on non-freight revenue.

Compensation – Stock Compensation

In March 2016, the FASB issued ASU 2016-09, Compensation – Stock Compensation, under ASC Topic 718. The amendments clarify the guidance relating to treatment of excess tax benefits and deficiencies, acceptable forfeiture rate policies, and treatment of cash paid by an employer when directly withholding shares for tax-withholding purposes and the requirement to treat such cash flows as a financing activity. This ASU will be effective for public entities for fiscal years, and interim periods within those years, beginning on or after December 15, 2016. Early adoption is permitted. The Company does not anticipate the adoption of this ASU will have an impact on the consolidated financial statements.

3 Other income and charges

(in millions of Canadian dollars)	2016	2015	2014

Foreign exchange (gain) loss on long-term debt	$(79)	$297	$ 11
Other foreign exchange gains	(5)	(24)	—
Early redemption premium on notes (Note 16)	—	47	—
Legal settlement	25	—	—
Other	14	15	8
Total other income and charges	$(45)	$335	$ 19

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4 Net interest expense

(in millions of Canadian dollars)	2016	2015	2014
Interest cost	$497	$409	$301
Interest capitalized to Properties	(25)	(14)	(15)
Interest expense	472	395	286
Interest income	(1)	(1)	(4)
Net interest expense	$471	$394	$282

Interest expense includes interest on capital leases of $11 million for the year ended December 31, 2016 (2015 – $11 million; 2014 – $12 million).

5 Income taxes

The following is a summary of the major components of the Company's income tax expense:

(in millions of Canadian dollars)	2016	2015	2014
Current income tax expense	$233	$373	$208
Deferred income tax expense			
Origination and reversal of temporary differences	336	105	317
Effect of tax rate increases	—	23	—
Effect of hedge of net investment in foreign subsidiaries	(20)	100	42
Other	4	6	(5)
Total deferred income tax expense	320	234	354
Total income taxes	$553	$607	$562
Income before income tax expense			
Canada	$1,513	$1,099	$1,269
Foreign	639	860	769
Total income before income tax expense	$2,152	$1,959	$2,038
Income tax expense			
Current			
Canada	$165	$173	$50
Foreign	68	200	158
Total current income tax expense	233	373	208
Deferred			
Canada	207	163	292
Foreign	113	71	62
Total deferred income tax expense	320	234	354
Total income taxes	$553	$607	$562

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The provision for deferred income taxes arises from temporary differences in the carrying values of assets and liabilities for financial statement and income tax purposes and the effect of loss carry forwards. The items comprising the deferred income tax assets and liabilities are as follows:

(in millions of Canadian dollars)	2016	2015
Deferred income tax assets		
Amount related to tax losses carried forward	$18	$16
Liabilities carrying value in excess of tax basis	149	89
Future environmental remediation costs	30	33
Tax credits carried forward including minimum tax	—	—
Other	58	72
Total deferred income tax assets	255	210
Deferred income tax liabilities		
Properties carrying value in excess of tax basis	3,796	3,553
Other	30	48
Total deferred income tax liabilities	3,826	3,601
Total net deferred income tax liabilities	$3,571	$3,391

The Company’s consolidated effective income tax rate differs from the expected Canadian statutory tax rates. Expected income tax expense at statutory rates is reconciled to income tax expense as follows:

(in millions of Canadian dollars, except percentage)	2016	2015	2014
Statutory federal and provincial income tax rate (Canada)	26.65%	26.47%	26.31%
Expected income tax expense at Canadian enacted statutory tax rates	$573	$519	$536
Increase (decrease) in taxes resulting from:			
(Gains) losses not subject to tax	(23)	28	(5)
Canadian tax rate differentials	—	1	(1)
Foreign tax rate differentials	—	39	36
Effect of tax rate increases	—	23	—
Other	3	(3)	(4)
Income tax expense	$553	$607	$562

The Company has no unrecognized tax benefits from capital losses at December 31, 2016 and 2015.

The Company has not provided a deferred liability for the income taxes, if any, which might become payable on any temporary difference associated with its foreign investments because the Company intends to indefinitely reinvest in its foreign investments and has no intention to realize this difference by a sale of its interest in foreign investments. It is not practical to calculate the amount of the deferred tax liability.

During the second quarter of 2015, legislation was enacted to increase the province of Alberta's corporate income tax rate. As a result, the Company recalculated its deferred income taxes as at January 1, 2015 based on this change and recorded an income tax expense of $23 million in the second quarter of 2015.

At December 31, 2016, the Company had income tax operating losses carried forward of $48 million, which have been recognized as a deferred tax asset. Certain of these losses carried forward will begin to expire in 2027, with the majority expiring between 2029 and 2035. The Company also has minimum tax credits of approximately $1 million that are carried forward indefinitely without expiration. The Company did not have any investment tax credits carried forward.

It is more likely than not that the Company will realize the majority of its deferred income tax assets from the generation of future taxable income, as the payments for provisions, reserves and accruals are made and losses and tax credits carried forward are utilized.

The following table provides a reconciliation of uncertain tax positions in relation to unrecognized tax benefits for Canada and the United States for the year ended December 31, 2016:

(in millions of Canadian dollars)	2016	2015	2014
Unrecognized tax benefits at January 1	$15	$17	$16
Increase in unrecognized:			
Tax benefits related to the current year	—	4	2
Dispositions:			
Gross uncertain tax benefits related to prior years	(2)	(6)	(1)
Unrecognized tax benefits at December 31	$13	$15	$17

If these uncertain tax positions were recognized, all of the amount of unrecognized tax positions as at December 31, 2016 would impact the Company's effective tax rate.

The Company recognizes accrued interest and penalties related to unrecognized tax benefits as a component of income tax expense in the Company's Consolidated Statements of Income. The total amount of accrued interest and penalties in 2016 was $1 million (2015 – $4 million; 2014 – $1 million). The total amount of accrued interest and penalties associated with the unrecognized tax benefit at December 31, 2016 was $10 million (2015 – $9 million; 2014 – $5 million).

The Company and its subsidiaries are subject to either Canadian federal and provincial income tax, U.S. federal, state and local income tax, or the relevant income tax in other international jurisdictions. The Company has substantially concluded all Canadian federal and provincial income tax matters for the years through 2012. The federal and provincial income tax returns filed for 2013 and subsequent years remain subject to examination by the Canadian taxation authorities. The Internal Revenue Service ("IRS") of the United States has completed their examinations and issued notices of deficiency for the tax years 2012 and 2013. The Company disagrees with many of their proposed adjustments, and is at the IRS Appeals for those years. The income tax returns for 2014 and subsequent years continue to remain subject to examination by the IRS. Additionally, various U.S. state tax authorities are examining the Company's state income tax returns for the years 2011 through 2015. The Company believes that it has recorded sufficient income tax reserves at December 31, 2016 with respect to these income tax examinations.

The Company does not anticipate any material changes to the unrecognized tax benefits previously disclosed within the next twelve months as at December 31, 2016.

6 Earnings per share

Basic earnings per share have been calculated using net income for the year divided by the weighted average number of shares outstanding during the year.

Diluted earnings per share have been calculated using the treasury stock method which assumes that any proceeds received from the exercise of in-the-money options would be used to purchase CP Common Shares at the average market price for the period. For purposes of this calculation, at December 31, 2016, there were 2.2 million dilutive options outstanding (2015 – 2.5 million; 2014 – 3.1 million).

The number of shares used and the earnings per share calculations are reconciled as follows:

(in millions of Canadian dollars, except per share data)	2016	2015	2014
Net income	$1,599	$1,352	$1,476
Weighted average basic shares outstanding (millions)	149.6	159.7	172.8

Dilutive effect of weighted average number of stock options (millions)	0.9	1.3	1.6
Weighted average diluted shares outstanding (millions)	150.5	161.0	174.4
Earnings per share – basic	$10.69	$8.47	$8.54
Earnings per share – diluted	$10.63	$8.40	$8.46

In 2016, the number of options excluded from the computation of diluted earnings per share because their effect was not dilutive was 0.4 million (2015 – 0.2 million; 2014 – 0.1 million).

7 Other comprehensive income (loss) and accumulated other comprehensive loss

The components of "Accumulated other comprehensive loss", net of tax, are as follows:

(in millions of Canadian dollars)	2016	2015
Unrealized foreign exchange gain on translation of the net investment in U.S. subsidiaries	$738	$870
Unrealized foreign exchange loss on translation of the U.S. dollar-denominated long-term debt designated as a hedge of the net investment in U.S. subsidiaries	(611)	(741)
Deferred losses on settled hedge instruments	(3)	(11)
Unrealized effective losses on cash flow hedges	(99)	(89)
Amounts for defined benefit pension and other post-retirement plans not recognized in income (Note 20)	(1,822)	(1,504)
Equity accounted investments	(2)	(2)
Accumulated other comprehensive loss	$(1,799)	$(1,477)

The components of Other comprehensive (loss) income and the related tax effects are as follows:

(in millions of Canadian dollars)	Before tax amount	Income tax recovery (expense)	Net of tax amount
For the year ended December 31, 2016			
Unrealized foreign exchange gain (loss) on:			
Translation of the net investment in U.S. subsidiaries	$ (132)	$ —	$ (132)
Translation of the U.S. dollar-denominated long-term debt designated as a hedge of the net investment in U.S. subsidiaries (Note 17)	150	(20)	130
Change in derivatives designated as cash flow hedges:			
Realized loss on cash flow hedges recognized in income	10	(2)	8
Unrealized loss on cash flow hedges	(12)	2	(10)
Change in pension and other benefits actuarial gains and losses	(422)	113	(309)
Change in prior service pension and other benefit costs	(12)	3	(9)
Other comprehensive loss	$ (418)	$ 96	$ (322)
For the year ended December 31, 2015			
Unrealized foreign exchange gain (loss) on:			
Translation of the net investment in U.S. subsidiaries	$ 671	$ —	$ 671
Translation of the U.S. dollar-denominated long-term debt designated as a hedge of the net investment in U.S. subsidiaries (Note 17)	(757)	100	(657)
Change in derivatives designated as cash flow hedges:			
Realized loss on cash flow hedges recognized in income	7	(2)	5
Unrealized loss on cash flow hedges	(76)	21	(55)
Change in pension and other benefits actuarial gains and losses	1,058	(281)	777
Change in prior service pension and other benefit costs	1	—	1
Other comprehensive income	$ 904	$ (162)	$ 742
For the year ended December 31, 2014			
Unrealized foreign exchange gain (loss) on:			
Translation of the net investment in U.S. subsidiaries	$ 287	$ —	$ 287
Translation of the U.S. dollar-denominated long-term debt designated as a hedge of the net investment in U.S. subsidiaries (Note 17)	(319)	42	(277)
Change in derivatives designated as cash flow hedges:			
Realized gain on cash flow hedges recognized in income	(3)	—	(3)

Unrealized loss on cash flow hedges	(46)	12	(34)
Change in pension and other benefits actuarial gains and losses	(873)	234	(639)
Change in prior service pension and other benefit costs	(68)	18	(50)
Other comprehensive loss	$ (1,022)	$ 306	$ (716)

Changes in accumulated other comprehensive loss by component:

(in millions of Canadian dollars)	Foreign currency net of hedging activities[1]	Derivatives and other[1]	Pension and post-retirement defined benefit plans[1]	Total[1]
Opening balance, 2016	$ 129	$ (102)	$ (1,504)	$(1,477)
Other comprehensive (loss) income before reclassifications	(2)	(10)	(456)	(468)
Amounts reclassified from accumulated other comprehensive loss	—	8	138	146
Net current-period other comprehensive income (loss)	(2)	(2)	(318)	(322)
Closing balance, 2016	$ 127	$ (104)	$ (1,822)	$(1,799)
Opening balance, 2015	$ 115	$ (52)	$ (2,282)	$(2,219)
Other comprehensive income (loss) before reclassifications	14	(55)	585	544
Amounts reclassified from accumulated other comprehensive loss	—	5	193	198
Net current-period other comprehensive income (loss)	14	(50)	778	742
Closing balance, 2015	$ 129	$ (102)	$ (1,504)	$(1,477)

[1] Amounts are presented net of tax.

Amounts in Pension and post-retirement defined benefit plans reclassified from Accumulated other comprehensive loss

	2016	2015
Amortization of prior service costs[1]	$(6)	$(5)
Recognition of net actuarial loss[1]	194	269
Total before income tax	$188	$264
Income tax recovery	(50)	(71)
Net of income tax	$138	$193

[1] Impacts Compensation and benefits on the Consolidated Statements of Income.

8 Change in non-cash working capital balances related to operations

(in millions of Canadian dollars)	2016	2015	2014
Source (use) of cash:			
Accounts receivable, net	$44	$80	$(112)
Materials and supplies	14	15	7
Other current assets	(18)	55	(75)
Accounts payable and accrued liabilities	(95)	125	56
Change in non-cash working capital	$(55)	$275	$(124)

9 Accounts receivable, net

(in millions of Canadian dollars)	2016	2015
Freight	$461	$491
Non-freight	162	185
	623	676
Allowance for doubtful accounts	(32)	(31)
Total accounts receivable, net	$591	$645

The Company maintains an allowance for doubtful accounts based on expected collectability of accounts receivable. Credit losses are based on specific identification of uncollectable accounts, the application of historical percentages by aging category and an assessment of the current economic environment. At December 31, 2016, allowances of $32 million (2015 – $31 million) were recorded in "Accounts receivable, net". During 2016, provisions of $7 million of

accounts receivable (2015 – $7 million; 2014 – $2 million) were recorded within “Purchased services and other”.

10 Dispositions of properties

Gain on sale of Obico

During the fourth quarter of 2016, the Company completed the sale of its Obico rail yard, for gross proceeds of $38 million. The Company recorded a gain on sale of $37 million ($33 million after tax) within "Purchased services and other" from the transaction.

Gain on sale of Arbutus Corridor

In March 2016, the Company completed the sale of CP's Arbutus Corridor (the "Arbutus Corridor") to the City of Vancouver for gross proceeds of $55 million. The agreement allows the Company to share in future proceeds on the eventual development and/or sale of certain parcels of the Arbutus Corridor. The Company recorded a gain on sale of $50 million ($43 million after tax) within "Purchased services and other" from the transaction during the first quarter of 2016.

Gain on sale of Delaware & Hudson South

During the first quarter of 2015, the Company finalized a sales agreement with Norfolk Southern Corporation ("NS") for approximately 283 miles of the Delaware and Hudson Railway Company, Inc.'s line between Sunbury, Pennsylvania, and Schenectady, New York ("D&H South"). The sale, which received approval by the U.S. Surface Transportation Board ("STB") on May 15, 2015, was completed on September 18, 2015 for proceeds of $281 million (U.S. $214 million). The Company recorded a gain on sale of $68 million ($42 million after tax) from the transaction during the third quarter of 2015.

Gain on settlement of legal proceedings related to the purchase and sale of a building

In 2013, CP provided an interest free loan pursuant to a court order to a corporation owned by a court appointed trustee ("the judicial trustee") to facilitate the acquisition of a building. The building was held in trust during the legal proceedings with regard to CP's entitlement to an exercised purchase option of the building ("purchase option"). As at December 31, 2014, the loan of $20 million and the purchase option with a carrying value of $8 million, were recorded as "Other assets" in the Company's Consolidated Balance Sheets.

In the first quarter of 2015, CP reached a settlement with a third party that, following the sale of the building to an arm's-length third party, resulted in resolution of legal proceedings. CP received $59 million for the sale of the building which included repayment of the aforementioned loan to the judicial trustee. A gain of $31 million ($27 million after tax) was recorded as a credit within "Purchased services and other".

Dakota, Minnesota & Eastern Railroad – West

On January 2, 2014, the Company executed an agreement with Genesee & Wyoming Inc. ("G&W") for the sale of a portion of CP's DM&E line between Tracy, Minnesota; Rapid City, South Dakota; Colony, Wyoming; and Crawford, Nebraska to connecting branch lines ("DM&E West"). The sale was subject to regulatory approval by the STB.

On May 30, 2014, the Company completed the sale of DM&E West to G&W for net proceeds of $236 million (U.S. $218 million). As the assets of DM&E West had previously been written down to the estimated transaction amount in 2013, the transaction did not give rise to a significant earnings impact in 2014.

11 Investments

(in millions of Canadian dollars)	2016	2015
Rail investments accounted for on an equity basis	$136	$115
Other investments	58	37
Total investments	$194	$152

12 Properties

(in millions of Canadian dollars except percentages)	2016		2016			2015		
	Average annual depreciation rate		Cost	Accumulated depreciation	Net book value	Cost	Accumulated depreciation	Net book value
Track and roadway	2.8	%	$16,817	$ 4,573	$12,244	$16,303	$ 4,427	$11,876
Buildings	3.0	%	662	178	484	642	165	477
Rolling stock	2.8	%	4,060	1,524	2,536	4,041	1,524	2,517
Information systems[(1)]	11.7	%	584	299	285	599	291	308
Other	5.3	%	1,691	551	1,140	1,640	545	1,095
Total			$23,814	$ 7,125	$16,689	$23,225	$ 6,952	$16,273

[(1)] During 2016, CP capitalized costs attributable to the design and development of internal-use software in the amount of $46 million (2015 – $42 million; 2014 – $69 million). Current year depreciation expense related to internal use software was $63 million (2015 – $69 million; 2014 – $70 million).

Capital leases included in properties

(in millions of Canadian dollars)	2016			2015		
	Cost	Accumulated depreciation	Net book value	Cost	Accumulated depreciation	Net book value
Buildings	$1	$ 1	$ —	$1	$ 1	$ —
Rolling stock	311	105	206	311	96	215
Total assets held under capital lease	$312	$ 106	$ 206	$312	$ 97	$ 215

13 Goodwill and intangible assets

(in millions of Canadian dollars)	Goodwill	Intangible assets Cost	Accumulated amortization	Net carrying amount	Total goodwill and intangible assets
Balance at December 31, 2014	$ 164	$22	$ (10)	$ 12	$ 176
Amortization	—	—	(1)	(1)	(1)
Foreign exchange impact	31	—	2	2	33
Additions	3	—	—	—	3
Balance at December 31, 2015	$ 198	$22	$ (9)	$ 13	$ 211
Amortization	—	—	(1)	(1)	(1)
Foreign exchange impact	(7)	—	(1)	(1)	(8)
Balance at December 31, 2016	$ 191	$22	$ (11)	$ 11	$ 202

14 Other assets

(in millions of Canadian dollars)	2016	2015
Long-term materials	$ 22	$ 20
Prepaid leases	6	9
Unamortized fees on credit facility	7	6
Contracted customer incentives	2	5
Long-term receivables	2	2
Other	18	21

Total other assets	$ 57	$ 63

Fees on credit facility and contracted customer incentives are amortized to income over the term of the related facility and over the term of the related revenue contract, respectively.

15 Accounts payable and accrued liabilities

(in millions of Canadian dollars)	2016	2015
Trade payables	$352	$339
Accrued charges	282	293
Income and other taxes payable	146	218
Accrued interest	137	147
Financial derivative liability (Note 17)	69	60
Payroll-related accruals	73	88
Accrued vacation	65	69
Dividends payable	73	53
Personal injury and other claims provision	26	30
Provision for environmental remediation (Note 18)	9	13
Stock-based compensation liabilities	40	48
Other	50	59
Total accounts payable and accrued liabilities	$1,322	$1,417

16 Debt

(in millions of Canadian dollars)		Maturity	Currency in which payable	2016	2015
6.500%	10-year Notes (A)	2018-05	U.S.$	$369	$380
6.250%	10-year Medium Term Notes (A)	2018-06	CDN$	375	374
7.250%	10-year Notes (A)	2019-05	U.S.$	469	484
9.450%	30-year Debentures (A)	2021-08	U.S.$	336	346
5.100%	10-year Medium Term Notes (A)	2022-01	CDN$	125	125
4.500%	10-year Notes (A)	2022-01	U.S.$	333	343
4.450%	12.5-year Notes (A)	2023-03	U.S.$	469	483
7.125%	30-year Debentures (A)	2031-10	U.S.$	470	484
5.750%	30-year Debentures (A)	2033-03	U.S.$	328	339
5.950%	30-year Notes (A)	2037-05	U.S.$	597	615
6.450%	30-year Notes (A)	2039-11	CDN$	400	400
5.750%	30-year Notes (A)	2042-01	U.S.$	330	340
2.900%	10-year Notes (A)	2025-02	U.S.$	940	968
3.700%	10.5-year Notes (A)	2026-02	U.S.$	335	345
4.800%	30-year Notes (A)	2045-08	U.S.$	736	759
4.800%	20-year Notes (A)	2035-09	U.S.$	401	413
6.125%	100-year Notes (A)	2115-09	U.S.$	1,208	1,246
5.41%	Senior Secured Notes (B)	2024-03	U.S.$	126	138
6.91%	Secured Equipment Notes (C)	2024-10	CDN$	133	145
7.49%	Equipment Trust Certificates (D)	2021-01	U.S.$	56	64
Other long-term loans (nil% – 5.50%)		2016 – 2025	U.S.$/CDN$	—	10
Obligations under capital leases					
	(6.313% – 6.99%) (E)	2022 – 2026	U.S.$	163	172
	(12.77%) (E)	2031-01	CDN$	3	3
				8,702	8,976
Perpetual 4% Consolidated Debenture Stock (F)			U.S.$	41	42
Perpetual 4% Consolidated Debenture Stock (F)			G.B.£	6	7
				8,749	9,025
Less: Unamortized fees on long-term debt				65	68
				8,684	8,957
Less: Long-term debt maturing within one year				25	30
				$8,659	$8,927

At December 31, 2016, the gross amount of long-term debt denominated in U.S. dollars was U.S. $5,763 million (2015 – U.S. $5,788 million).

Annual maturities and principal repayment requirements, excluding those pertaining to capital leases, for each of the five years following 2016 are (in millions): 2017 – $21; 2018 – $766; 2019 – $493; 2020 – $66; 2021 – $377.

Fees on long-term debt are amortized to income over the term of the related debt.

During the year ended December 31, 2015, the Company repaid Senior Secured Notes in advance of their maturities for a total of U.S. $285 million ($379 million). The repayments were inclusive of the remaining principal of the notes, totalling U.S. $247 million ($329 million), early redemption premiums of U.S. $34 million ($45 million), and accrued interest of U.S. $4 million ($5 million). The early redemption premiums and accrued interest are included in “Other income and charges” and “Net interest expense” on the Company's Consolidated Statements of Income, respectively. The Company also expensed the unamortized financing fees of $2 million to “Other income and charges” upon payments of the notes.

A. These debentures and notes pay interest semi-annually and are unsecured, but carry a negative pledge.

During the first quarter of 2015, the Company issued U.S. $700 million 2.900% 10-year Notes due February 1, 2025 for net proceeds of U.S. $694 million ($873 million). In addition, the Company settled a notional U.S. $700 million of forward starting floating-to-fixed interest rate swap agreements (“forward starting swaps”) for a payment of U.S. $50 million ($63 million) cash (see Note 17). This payment was included in the same line item as the related hedged item on the Company's Consolidated Statements of Cash Flows. Inclusive of the settlement of the forward starting swap, the annualized effective yield at issuance was 3.61%.

During the third quarter of 2015, the Company issued U.S. $550 million 4.800% 30-year Notes due August 1, 2045 and U.S. $250 million 3.700% 10.5-year notes due February 1, 2026 for a total of U.S. $800 million with net proceeds of U.S. $789 million ($1,032 million).

During the third quarter of 2015, the Company also issued U.S. $900 million 6.125% 100-year Notes due September 15, 2115 and U.S. $300 million 4.800% 20-year Notes due September 15, 2035 for a total of U.S. $1,200 million with net proceeds of U.S. $1,186 million ($1,569 million). At the time of the debt issuance the Company de-designated the hedging relationship for U.S. $700 million of the existing forward starting swaps. The Company did not cash settle these swaps and therefore recorded a non-cash loss of U.S. $36 million ($47 million) in “Accumulated other comprehensive loss” (see Note 17). Subsequently, the Company re-designated U.S. $700 million forward starting swaps as a hedging relationship to fix the benchmark rate on cash flows associated with a highly probable forecasted issuance of long-term notes.

B. The 5.41% Senior Secured Notes are collateralized by specific locomotive units with a carrying value of $124 million at December 31, 2016. The Company pays equal blended semi-annual payments of principal and interest. Final repayment of the remaining principal of U.S. $44 million is due in March 2024.

C. The 6.91% Secured Equipment Notes are full recourse obligations of the Company collateralized by a first charge on specific locomotive units with a carrying value of $115 million at December 31, 2016. The Company pays equal blended semi-annual payments of principal and interest. Final repayment of the remaining principal of $11 million is due in October 2024.

D. The 7.49% Equipment Trust Certificates are secured by specific locomotive units with a carrying value of $117 million at December 31, 2016. The Company makes semi-annual payments that vary in amount and are interest-only payments or blended principal and interest payments. Final repayment of the remaining principal of U.S. $11 million is due in January 2021.

E. At December 31, 2016, capital lease obligations included in long-term debt were as follows:

(in millions of Canadian dollars)	Year	Capital leases	
Minimum lease payments in:			
	2017	$ 16	
	2018	16	
	2019	16	
	2020	16	
	2021	16	
	Thereafter	152	
Total minimum lease payments		232	
Less: Imputed interest		(66	)
Present value of minimum lease payments		166	
Less: Current portion		(4	)

Long-term portion of capital lease obligations	$	162

During 2016, the Company had no additions to property, plant and equipment under capital lease obligations (2015 – $nil; 2014 – $nil).

The carrying value of the assets collateralizing the capital lease obligations was $206 million at December 31, 2016.

F. The Consolidated Debenture Stock, authorized by an Act of Parliament of 1889, constitutes a first charge upon and over the whole of the undertaking, railways, works, rolling stock, plant, property and effects of the Company, with certain exceptions.

Credit facility

CP has a revolving credit facility (the “facility”) agreement with 15 highly rated financial institutions for a commitment amount of U.S. $2 billion. The facility includes a U.S. $1 billion one-year plus one-year term-out portion and a U.S. $1 billion five-year portion. The facility can accommodate draws of cash and/or letters of credit at market competitive pricing. The agreement requires the Company not to exceed a maximum debt to earnings before interest, tax, depreciation, and amortization ratio.

Effective June 28, 2016, the Company extended the maturity date by one year on its credit facility. The maturity date on the first U.S. $1 billion tranche was extended to June 28, 2018; the maturity date on the second U.S. $1 billion tranche was extended to June 28, 2021. As at December 31, 2016 and 2015, the Company was in compliance with all terms and conditions of the credit facility arrangements and satisfied the threshold stipulated in the amended financial covenant. As at December 31, 2016 and 2015, the facility was undrawn.

The amount available under the terms of the credit facility was U.S. $2 billion at December 31, 2016 (December 31, 2015 – U.S. $2 billion).
The Company has also established a commercial paper program which enables it to issue commercial paper up to a maximum aggregate principal amount of U.S. $1 billion in the form of unsecured promissory notes. The commercial paper program is backed by the U.S. $1 billion committed, revolving credit facility tranche which matures on June 28, 2018. The Company had no commercial paper borrowings as at December 31, 2016 (December 31, 2015 – $nil).

CP has bilateral letter of credit facilities with 6 highly rated financial institutions to support its requirement to post letters of credit in the ordinary course of business. Under these agreements, the Company has the option to post collateral in the form of cash or cash equivalents, equal at least to the face value of the letter of credit issued. These agreements permit CP to withdraw amounts posted as collateral at any time; therefore, the amounts posted as collateral are presented as “Cash and cash equivalents” on the Company’s Consolidated Balance Sheets.

At December 31, 2016, under its bilateral facilities the Company had letters of credit drawn of $320 million (December 31, 2015 – $375 million) from a total available amount of $600 million (December 31, 2015 – $600 million). At December 31, 2016, under the terms of the bilateral letter of credit facilities, no cash and cash equivalents was recorded as “Restricted cash and cash equivalents” (December 31, 2015 – $nil).

17 Financial instruments

A. Fair values of financial instruments

The Company categorizes its financial assets and liabilities measured at fair value into a three-level hierarchy established by GAAP that prioritizes those inputs to valuation techniques used to measure fair value based on the degree to which they are observable. The three levels of the fair value hierarchy are as follows: Level 1 inputs are quoted prices in active markets for identical assets and liabilities; Level 2 inputs, other than quoted prices included within Level 1, are observable for the asset or liability either directly or indirectly; and Level 3 inputs are not observable in the market.

When possible, the estimated fair value is based on quoted market prices and, if not available, estimates from third-party brokers. For non-exchange traded derivatives classified in Level 2, the Company uses standard valuation techniques to calculate fair value. Primary inputs to these techniques include observable market prices (interest, FX and commodity) and volatility, depending on the type of derivative and nature of the underlying risk. The Company uses inputs and data used by willing market participants when valuing derivatives and considers its own credit default swap spread as well as those of its counterparties in its determination of fair value.

The carrying values of financial instruments equal or approximate their fair values with the exception of long-term debt which has a fair value of approximately $9,981 million at December 31, 2016 (December 31, 2015 – $9,750 million) and a carrying value of $8,684 million (December 31, 2015 – $8,957 million). The estimated fair value of current and long-term borrowings has been determined based on market information where available, or by discounting future payments of interest and principal at estimated interest rates expected to be available to the

Company at period end. All derivatives and long-term debt are classified as Level 2.

As at December 31, 2016 and 2015, the Company did not have any deposits in the form of short-term investments with financial institutions.

B. Financial risk management

Derivative financial instruments

Derivative financial instruments may be used to selectively reduce volatility associated with fluctuations in interest rates, FX rates, the price of fuel and stock-based compensation expense. Where derivatives are designated as hedging instruments, the relationship between the hedging instruments and their associated hedged items is documented, as well as the risk management objective and strategy for the use of the hedging instruments. This documentation includes linking the derivatives that are designated as fair value or cash flow hedges to specific assets or liabilities on the Consolidated Balance Sheets, commitments or forecasted transactions. At the time a derivative contract is entered into and at least quarterly thereafter, an assessment is made as to whether the derivative item is effective in offsetting the changes in fair value or cash flows of the hedged items. The derivative qualifies for hedge accounting treatment if it is effective in substantially mitigating the risk it was designed to address.

It is not the Company's intent to use financial derivatives or commodity instruments for trading or speculative purposes.

Credit risk management

Credit risk refers to the possibility that a customer or counterparty will fail to fulfill its obligations under a contract and as a result create a financial loss for the Company.

The railway industry predominantly serves financially established customers and the Company has experienced limited financial losses with respect to credit risk. The credit worthiness of customers is assessed using credit scores supplied by a third party, and through direct monitoring of their financial well-being on a continual basis. The Company establishes guidelines for customer credit limits and should thresholds in these areas be reached, appropriate precautions are taken to improve collectability.

Counterparties to financial instruments expose the Company to credit losses in the event of non-performance. Counterparties for derivative and cash transactions are limited to high credit quality financial institutions, which are monitored on an ongoing basis. Counterparty credit assessments are based on the financial health of the institutions and their credit ratings from external agencies. The Company does not anticipate non-performance that would materially impact the Company's financial statements. In addition, the Company believes there are no significant concentrations of credit risk.

FX management

The Company conducts business transactions and owns assets in both Canada and the United States. As a result, the Company is exposed to fluctuations in value of financial commitments, assets, liabilities, income or cash flows due to changes in FX rates. The Company may enter into FX risk management transactions primarily to manage fluctuations in the exchange rate between Canadian and U.S. currencies. FX exposure is primarily mitigated through natural offsets created by revenues, expenditures and balance sheet positions incurred in the same currency. Where appropriate, the Company may negotiate with customers and suppliers to reduce the net exposure.

Occasionally the Company will enter into short-term FX forward contracts as part of its cash management strategy.

Net investment hedge

The FX gains and losses on long-term debt are mainly unrealized and can only be realized when U.S. dollar-denominated long-term debt matures or is settled. The Company also has long-term FX exposure on its investment in U.S. affiliates. The majority of the Company's U.S. dollar-denominated long-term debt has been designated as a hedge of the net investment in foreign subsidiaries. This designation has the effect of mitigating volatility on net income by offsetting long-term FX gains and losses on U.S. dollar-denominated long-term debt and gains and losses on its net investment. The effective portion recognized in "Other comprehensive income" in 2016 was an FX gain of $150 million, the majority of which was unrealized (2015 – loss of $757 million, the majority of which was unrealized; 2014 – unrealized loss of $319 million) (see Note 7). There was no ineffectiveness during 2016 (2015 – $nil; 2014 – $nil).

FX forward contracts

The Company may enter into FX forward contracts to lock-in the amount of Canadian dollars it has to pay on U.S. dollar-denominated debt maturities.

At December 31, 2016, the Company had net unamortized gains related to FX forward contracts to fix the exchange rate on U.S. dollar-denominated debt maturities settled in previous years totalling $1 million (December 31, 2015 – $2 million). During 2016, $1 million of pretax gain related to these previously settled derivatives has been amortized from "Accumulated other comprehensive loss" to “Other income and charges” (December 31, 2015 – $1 million). At December 31, 2016, the Company expected that, during the next 12 months, a $1 million pretax gain will be reclassified to “Other income and charges”.

At December 31, 2016 and 2015, the Company had no remaining FX forward contracts to fix the exchange rate on U.S. dollar-denominated debt maturities.

Interest rate management

The Company is exposed to interest rate risk, which is the risk that the fair value or future cash flows of a financial instrument will vary as a result of changes in market interest rates. In order to manage funding needs or capital structure goals, the Company enters into debt or capital lease agreements that are subject to either fixed market interest rates set at the time of issue or floating rates determined by ongoing market conditions. Debt subject to variable interest rates exposes the Company to variability in interest expense, while debt subject to fixed interest rates exposes the Company to variability in the fair value of debt.

To manage interest rate exposure, the Company accesses diverse sources of financing and manages borrowings in line with a targeted range of capital structure, debt ratings, liquidity needs, maturity schedule, and currency and interest rate profiles. In anticipation of future debt issuances, the Company may enter into forward rate agreements, that are designated as cash flow hedges, to substantially lock in all or a portion of the effective future interest expense. The Company may also enter into swap agreements, designated as fair value hedges, to manage the mix of fixed and floating rate debt.

Forward starting swaps

As at December 31, 2016 and 2015, the Company had forward starting floating-to-fixed interest rate swap agreements ("forward starting swaps") totalling a notional U.S. $700 million to fix the benchmark rate on cash flows associated with highly probable forecasted issuances of long-term notes. The effective portion of changes in fair value on the forward starting swaps is recorded in "Accumulated other comprehensive loss", net of tax, as cash flow hedges until the highly probable forecasted notes are issued. Subsequent to the notes issuance, amounts in "Accumulated other comprehensive loss" are reclassified to "Net interest expense".

During the first quarter of 2015, the Company settled a notional U.S. $700 million of forward starting swaps related to the U.S. $700 million 2.900% 10-year notes issued in the same period.

During the third quarter of 2015, the Company de-designated the hedging relationship for U.S. $700 million of forward starting swaps related to a portion of the U.S. $900 million 6.125% 100-year notes issued. The Company did not cash settle these swaps and concurrently re-designated the forward starting swaps totalling U.S. $700 million to fix the benchmark rate on cash flows associated with a highly probable forecasted issuance of long-term notes.

During the second quarter of 2016, the Company rolled the notional U.S. $700 million forward starting swaps. The Company de-designated the hedging relationship for U.S. $700 million of forward starting swaps. The Company did not cash settle these swaps. There was no ineffectiveness to record upon de-designation.

Concurrently the Company re-designated the forward starting swaps totalling U.S. $700 million to fix the benchmark rate on cash flows associated with a highly probable forecasted debt issuance of long-term notes.

As at December 31, 2016, the total fair value loss of $69 million (December 31, 2015 – fair value loss of $60 million) derived from the forward starting swaps was included in "Accounts payable and accrued liabilities". Changes in fair value from the forward starting swaps for the year ended December 31, 2016 was a loss of $9 million (2015 – a loss of $77 million). The effective portion for the year ended December 31, 2016 was a loss of $12 million (2015 – loss of $75 million) and was recorded in "Other comprehensive income". For the year ended December 31, 2016, the ineffective portion was a $3 million gain (2015 – $2 million loss) and is recorded to "Net interest expense" on the Consolidated Statements of Income.

For the year ended December 31, 2016, a loss of $11 million related to previous forward starting swap hedges has been amortized to "Net interest expense" (2015 – a loss of $6 million). The Company expects that during the next 12 months $11 million of losses will be amortized to "Net interest expense".

Treasury rate locks

At December 31, 2016, the Company had net unamortized losses related to interest rate locks, which are accounted for as cash flow hedges, settled in previous years totalling $21 million (December 31, 2015 – $21 million). This amount is composed of various unamortized gains and losses related to specific debts which are reflected in "Accumulated other comprehensive loss" and are amortized to "Net interest expense" in the period that interest on the related debt is charged. The amortization of these gains and losses resulted in a negligible increase to "Net interest expense" and "Other comprehensive income" in 2016 (2015 – negligible; 2014 – negligible). At December 31, 2016, the Company expected that, during the next 12 months, a negligible amount of loss related to these previously settled derivatives would be reclassified to "Net interest expense".

Fuel price management

The Company is exposed to commodity risk related to purchases of diesel fuel and the potential reduction in net income due to increases in the price of diesel. Fuel expense constitutes a large portion of the Company's operating costs and volatility in diesel fuel prices can have a significant impact on the Company's income. Items affecting volatility in diesel prices include, but are not limited to, fluctuations in world markets for crude oil and distillate fuels, which can be affected by supply disruptions and geopolitical events.

The impact of variable fuel expense is mitigated substantially through fuel cost adjustment programs, which apportion incremental changes in fuel prices to shippers through price indices, tariffs, and by contract, within agreed-upon guidelines. While these programs provide effective and meaningful coverage, residual exposure remains as the fuel expense risk may not be completely recovered from shippers due to timing and volatility in the market.

18 Other long-term liabilities

(in millions of Canadian dollars)	2016	2015
Provision for environmental remediation, net of current portion[1]	$76	$80
Stock-based compensation liabilities, net of current portion	72	73
Deferred revenue on rights-of-way licence agreements, net of current portion	29	33
Deferred retirement compensation	29	28
Deferred gains on sale leaseback transactions	19	22
Other, net of current portion	59	82
Total other long-term liabilities	$284	$318

[1] As at December 31, 2016, the aggregate provision for environmental remediation, including the current portion was $85 million (2015 – $93 million).

The deferred revenue on rights-of-way licence agreements, and deferred gains on sale leaseback transactions are being amortized to income on a straight-line basis over the related lease terms.

Environmental remediation accruals

Environmental remediation accruals cover site-specific remediation programs. The estimate of the probable costs to be incurred in the remediation of properties contaminated by past railway use reflects the nature of contamination at individual sites according to typical activities and scale of operations conducted. CP has developed remediation strategies for each property based on the nature and extent of the contamination, as well as the location of the property and surrounding areas that may be adversely affected by the presence of contaminants, considering available technologies, treatment and disposal facilities and the acceptability of site-specific plans based on the local regulatory environment. Site-specific plans range from containment and risk management of the contaminants through to the removal and treatment of the contaminants and affected soils and groundwater. The details of the estimates reflect the environmental liability at each property. Provisions for environmental remediation costs are recorded in “Other long-term liabilities”, except for the current portion which is recorded in “Accounts payable and accrued liabilities” (see Note 15). Payments are expected to be made over 10 years to 2026.

The accruals for environmental remediation represent CP’s best estimate of its probable future obligation and include both asserted and unasserted claims, without reduction for anticipated recoveries from third parties. Although the recorded accruals include CP’s best estimate of all probable costs, CP’s total environmental remediation costs cannot be predicted with certainty. Accruals for environmental remediation may change from time to time as new information about previously untested sites becomes known, environmental laws and regulations evolve and advances are made in environmental remediation technology. The accruals may also vary as the courts decide legal proceedings against outside parties responsible for contamination. These potential charges, which cannot be quantified at this time, may materially affect income in the particular period in which a charge is recognized. Costs related to existing, but as yet unknown, or future contamination will be accrued in the period in which they become probable and reasonably estimable. Changes to costs are reflected as changes to “Other long-term liabilities” or “Accounts payable and accrued liabilities” on the Company's Consolidated Balance Sheets and to “Purchased services and other” within operating expenses on the Company's Consolidated Statements of Income. The amount charged to income in 2016 was $6 million (2015 – $7 million; 2014 – $4 million).

19 Shareholders’ equity

Authorized and issued share capital

The Company is authorized to issue an unlimited number of Common Shares, an unlimited number of First Preferred Shares and unlimited number of Second Preferred Shares. At December 31, 2016, no First or Second Preferred Shares had been issued.

An analysis of Common Share balances is as follows:

(number of shares in millions)	2016	2015	2014
Share capital, January 1	153.0	166.1	175.4
CP Common Shares repurchased	(6.9)	(13.7)	(10.3)
Shares issued under stock option plan	0.2	0.6	1.0
Share capital, December 31	146.3	153.0	166.1

The change in the “Share capital” balances includes $1 million (2015 – $2 million; 2014 – $3 million) related to the cancellation of the tandem share appreciation rights liability on exercise of tandem stock options, and $5 million (2015 – $10 million; 2014 – $17 million) of stock-based compensation transferred from “Additional paid-in capital”.

Share repurchase

On March 11, 2014, the Company announced a new share repurchase program to implement a normal course issuer bid (“NCIB”) to purchase, for cancellation, up to 5.3 million Common Shares before March 16, 2015. On September 29, 2014, the Company announced the amendment of the bid to increase the maximum number of its Common Shares that may be purchased from 5.3 million to 12.7 million of its outstanding Common Shares. The Company completed the purchase of 10.5 million Common Shares in 2014. An additional 2.2 million Common Shares were purchased for $490 million in the first quarter of 2015 prior to the March 16, 2015 expiry date of the program.

On March 16, 2015, the Company announced the renewal of its NCIB, commencing March 18, 2015, to purchase up to 9.1 million of its outstanding Common Shares for cancellation before March 17, 2016. On August 31, 2015, the Company amended the NCIB to increase the maximum number of its Common Shares that may be purchased from 9.1 million to 11.9 million of its outstanding Common Shares. As at December 31, 2015, the Company had purchased 11.3 million Common Shares for $2,258 million under this NCIB program.

On April 20, 2016, the Company announced a new NCIB, commencing May 2, 2016 to May 1, 2017, to purchase up to 6.9 million of its outstanding Common Shares for cancellation. The Company completed this NCIB on September 28, 2016.

All purchases are made in accordance with the respective NCIB at prevalent market prices plus brokerage fees, or such other prices that may be permitted by the Toronto Stock Exchange, with consideration allocated to share capital up to the average carrying amount of the shares, and any excess allocated to "Retained earnings". The following table provides the activities under the share repurchase programs:

	2016	2015	2014
Number of Common Shares repurchased(1)	6,910,000	13,549,977	10,476,074
Weighted-average price per share(2)	$ 175.08	$ 202.79	$ 199.42
Amount of repurchase (in millions)(2)	$ 1,210	$ 2,748	$ 2,089

(1) Excludes shares repurchased and not yet cancelled in the prior year.
(2) Includes brokerage fees.

20 Pensions and other benefits

The Company has both defined benefit (“DB”) and defined contribution (“DC”) pension plans. At December 31, 2016, the Canadian pension plans represent approximately 99% of total combined pension plan assets and approximately 98% of total combined pension plan obligations.

The DB plans provide for pensions based principally on years of service and compensation rates near retirement. Pensions for Canadian pensioners are partially indexed to inflation. Annual employer contributions to the DB plans, which are actuarially determined, are made on the basis of being not less than the minimum amounts required by federal pension supervisory authorities.

The Company has other benefit plans including post-retirement health and life insurance for pensioners, and post-employment long-term disability and workers’ compensation benefits, which are based on Company-specific claims. At December 31, 2016, the Canadian other benefits plans represent approximately 96% of total combined other plan obligations.

The Finance Committee of the Board of Directors has approved an investment policy that establishes long-term asset mix targets which take into account the Company's expected risk tolerances. Pension plan assets are managed by a suite of independent investment managers, with the allocation by manager reflecting these asset mix targets. Most of the assets are actively managed with the objective of outperforming applicable benchmarks. In accordance with the investment policy, derivative instruments may be used to hedge or adjust existing or anticipated exposures.

To develop the expected long-term rate of return assumption used in the calculation of net periodic benefit cost applicable to the market-related value of assets, the Company considers the expected composition of the plans' assets, past experience and future estimates of long-term investment returns. Future estimates of investment returns reflect the expected annual yield on applicable fixed income capital market indices, and the long-term return expectation for public equity, real estate, infrastructure and absolute return investments and the expected added value (relative to applicable benchmark indices) from active management of pension fund assets.

The Company has elected to use a market-related value of assets for the purpose of calculating net periodic benefit cost, developed from a five-year average of market values for the plans' public equity and absolute return investments (with each prior year's market value adjusted to the current date for assumed investment income during the intervening period) plus the market value of the plans' fixed income, real estate and infrastructure securities.

The benefit obligation is discounted using a discount rate that is a blended yield to maturity for a hypothetical portfolio of high-quality corporate debt instruments with cash flows matching project benefit payments. The discount rate is determined by management.

Net periodic benefit cost

The elements of net periodic benefit cost for DB pension plans and other benefits recognized in the year include the following components:

(in millions of Canadian dollars)	Pensions 2016	2015	2014	Other benefits 2016	2015	2014
Current service cost (benefits earned by employees in the year)	$106	$126	$106	$11	$12	$14
Interest cost on benefit obligation	467	463	477	21	21	23
Expected return on fund assets	(846)	(816)	(757)	—	—	—
Recognized net actuarial loss (gain)	190	265	190	7	2	(2)
Amortization of prior service costs	(7)	(6)	(68)	1	1	—
Net periodic benefit (recovery) cost	$(90)	$32	$(52)	$40	$36	$35

Projected benefit obligation, fund assets, and funded status

Information about the Company's DB pension plans and other benefits, in aggregate, is as follows:

(in millions of Canadian dollars)	Pensions 2016	2015	Other benefits 2016	2015
Change in projected benefit obligation:				
Benefit obligation at January 1	$11,194	$11,360	$513	$517
Current service cost	106	126	11	12
Interest cost	467	463	21	21
Employee contributions	40	43	1	1
Benefits paid	(645)	(608)	(31)	(34)
Foreign currency changes	(7)	42	—	4
Plan amendments and other	6	(6)	—	—
Actuarial loss (gain)	238	(226)	(5)	(8)
Projected benefit obligation at December 31	$11,399	$11,194	$510	$513

(in millions of Canadian dollars)	Pensions 2016	2015	Other benefits 2016	2015
Change in fund assets:				
Fair value of fund assets at January 1	$12,300	$11,376	$6	$7
Actual return on fund assets	461	1,374	(1)	(1)
Employer contributions	48	81	30	33
Employee contributions	40	43	1	1
Benefits paid	(645)	(608)	(31)	(34)
Foreign currency changes	(8)	34	—	—
Fair value of fund assets at December 31	$12,196	$12,300	$5	$6
Funded status – plan surplus (deficit)	$797	$1,106	$(505)	$(507)

(in millions of Canadian dollars)	2016 Pension plans in surplus	2016 Pension plans in deficit	2015 Pension plans in surplus	2015 Pension plans in deficit
Projected benefit obligation at December 31	$(10,902)	$(497)	$(10,681)	$(513)
Fair value of fund assets at December 31	11,972	224	12,082	218

Funded Status	$1,070	$ (273)	$1,401	$ (295)

All Other benefits plans were in a deficit position at December 31, 2016 and 2015.

Pension asset and liabilities in the Company's Consolidated Balance Sheets

Amounts recognized in the Company's Consolidated Balance Sheets are as follows:

	Pensions		Other benefits	
(in millions of Canadian dollars)	2016	2015	2016	2015
Pension asset	$1,070	$1,401	$—	$—
Accounts payable and accrued liabilities	(10)	(10)	(34)	(34)
Pension and other benefit liabilities	(263)	(285)	(471)	(473)
Total amount recognized	$797	$1,106	$(505)	$(507)

The defined benefit pension plans' accumulated benefit obligation as at December 31, 2016 was $11,143 million (2015 – $10,893 million). The accumulated benefit obligation is calculated on a basis similar to the projected benefit obligation, except no future salary increases are assumed in the projection of future benefits.

The measurement date used to determine the plan assets and the accrued benefit obligation is December 31. The most recent actuarial valuation for pension funding purposes for the Company's main Canadian pension plan was performed as at January 1, 2016. During 2017, the Company expects to file a new valuation with the pension regulator.

Accumulated other comprehensive losses

Amounts recognized in accumulated other comprehensive losses are as follows:

	Pensions		Other benefits	
(in millions of Canadian dollars)	2016	2015	2016	2015
Net actuarial loss:				
Other than deferred investment gains	$2,842	$3,144	$ 66	$ 77
Deferred investment gains	(366)	(1,101)	—	—
Prior service cost	(7)	(20)	3	4
Deferred income tax	(699)	(580)	(17)	(20)
Total (Note 7)	$1,770	$1,443	$ 52	$ 61

The unamortized actuarial loss and the unamortized prior service cost included in "Accumulated other comprehensive loss" that are expected to be recognized in net periodic benefit cost during 2017 are $153 million and a recovery of $5 million, respectively, for pensions and $2 million and $1 million, respectively, for other post-retirement benefits.

Actuarial assumptions

Weighted-average actuarial assumptions used were approximately:

(percentages)	2016	2015	2014
Benefit obligation at December 31:			
Discount rate	4.02	4.22	4.09
Projected future salary increases	2.75	3.00	3.00
Health care cost trend rate	7.00 (1)	7.00 (2)	7.00 (2)
Benefit cost for year ended December 31:			
Discount rate	4.22	4.09	4.90
Expected rate of return on fund assets	7.75	7.75	7.75
Projected future salary increases	3.00	3.00	3.00
Health care cost trend rate	7.00 (2)	7.00 (2)	7.50 (3)

(1) The health care cost trend rate is assumed to be 7.00% in 2017 and 2018, and then decreasing by 0.50% per year to an ultimate rate of 5.00% per year in 2022 and thereafter.
(2) The health care cost trend rate was previously assumed to be 6.50% in 2017 (7.00% in 2016 and 2015), and then decreasing by 0.50% per year to an ultimate rate of 5.00% per year in 2020 and thereafter.
(3) For the 2014 benefit cost, the health care cost trend rate was assumed to be 6.00% in 2017 (6.50% in 2016, 7.00% in 2015, 7.50% in 2014), and then decreasing by 0.50% per year to an ultimate rate of 5.00% per year in 2019 and thereafter.

Assumed health care cost trend rates affect the amounts reported for the health care plans. A one-percentage-point increase in the assumed health care cost trend rate would increase the post-retirement benefit obligation by $6 million, and a one-percentage-

point decrease in the assumed health care cost trend rate would decrease the post-retirement benefit obligation by $5 million. A one-percentage-point increase or decrease in the assumed health care cost trend rate would have no material effect on the total of service and interest costs.

In 2014, the Canadian Institute of Actuaries and the Society of Actuaries each published updated mortality tables based on broad pension plan experience in Canada and the U.S., respectively. At December 31, 2014, the Company changed the basis for its obligations for defined benefit pension and post-retirement benefit plans to these new mortality tables, with adjustments to reflect actual plan mortality experience to the extent that credible experience data were available. The changes to the new mortality tables increased the obligations for pensions and post-retirement benefits at that date by approximately $225 million. The Company's obligations for defined benefit pension and post-retirement benefit plans continue to be based on the new mortality tables at December 31, 2016.

Plan assets

Plan assets are recorded at fair value. The major asset categories are public equity securities, fixed income securities, real estate, infrastructure and absolute return investments. The fair values of the public equity and fixed income securities are primarily based on quoted market prices. Real estate values are based on annual valuations performed by external parties, taking into account current market conditions and recent sales transactions where practical and appropriate. Infrastructure values are based on the fair value of each fund’s assets as calculated by the fund manager, generally using a discounted cash flow analysis that takes into account current market conditions and recent sales transactions where practical and appropriate. Absolute return investments are a portfolio of units of externally managed hedge funds and are valued by the fund administrators.

The Company’s pension plan asset allocation, the current weighted average asset allocation targets and the current weighted average policy range for each major asset class, were as follows:

Asset allocation (percentage)	Current asset allocation target	Current policy range	Percentage of plan assets at December 31	
			2016	2015
Cash and cash equivalents	0.5	0 – 5	1.1	1.1
Fixed income	29.5	20 – 40	21.4	21.0
Public equity	46.0	35 – 55	53.8	54.5
Real estate and infrastructure	12.0	4 – 20	7.5	5.8
Absolute return	12.0	0 – 18	16.2	17.6
Total	100.0		100.0	100.0

Summary of the assets of the Company’s DB pension plans at fair values

The following is a summary of the assets of the Company’s DB pension plans at fair values at December 31, 2016 and 2015:

(in millions of Canadian dollars)	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Investments measured at NAV[1]	Total
December 31, 2016					
Cash and cash equivalents	$ 121	$ 11	$ —	$ —	$132
Fixed income					
• Government bonds[2]	—	1,357	—	—	1,357
• Corporate bonds[2]	—	1,186	—	—	1,186
• Mortgages[3]	—	71	—	—	71
Public equities					
• Canada	1,480	57	—	—	1,537
• U.S. and international	4,985	36	—	—	5,021
Real estate[4]	—	—	437	188	625
Derivative assets[5]	—	7	—	—	7
Absolute return[6]					
• Funds of hedge funds	—	—	—	668	668
• Multi-strategy funds	—	—	—	502	502
• Credit funds	—	—	—	505	505
• Equity funds	—	—	—	300	300
Infrastructure[7]	—	—	—	285	285
	$ 6,586	$ 2,725	$ 437	$ 2,448	$12,196
December 31, 2015					
Cash and cash equivalents	$ 129	$ 11	$ —	$ —	$140
Fixed income					
• Government bonds[2]	—	1,276	—	—	1,276
• Corporate bonds[2]	—	1,228	—	—	1,228
• Mortgages[3]	—	81	—	—	81
Public equities					
• Canada	1,449	46	—	—	1,495
• U.S. and international	5,169	34	—	—	5,203
Real estate[4]	—	—	451	—	451
Derivative assets[5]	—	—	—	—	—
Absolute return[6]					
• Funds of hedge funds	—	—	—	781	781
• Multi-strategy funds	—	—	—	517	517
• Credit funds	—	—	—	555	555
• Equity funds	—	—	—	311	311
Infrastructure[7]	—	—	—	262	262
	$ 6,747	$ 2,676	$ 451	$ 2,426	$12,300

[1] Investments measured at net asset value ("NAV"):
Amounts are comprised of certain investments measured at fair value using NAV (or its equivalent) as a practical expedient. These investments have not been classified in the fair value hierarchy.

[2] Government & Corporate Bonds:
Fair values for bonds are based on market prices supplied by independent sources as of the last trading day.

[3] Mortgages:
The fair value of mortgages of $71 million (2015 – $81 million) is based on current market yields of financial instruments of similar maturity, coupon and risk factors.

[4] Real estate:
The fair value of real estate investments of $437 million (2015 – $451 million) is based on property appraisals which use a number of approaches that typically include a discounted cash flow analysis, a direct capitalization income method and/or a direct comparison approach. Appraisals of real estate investments are generally performed semi-annually by qualified external accredited appraisers. There are $81 million of unfunded commitments for real estate investments as at December 31, 2016 (2015 – $278 million).

[5] Derivatives:
The Company's pension funds may utilize the following derivative instruments: equity futures to replicate equity index returns (Level 2); currency forwards to partially hedge foreign currency exposures (Level 2); bond forwards to reduce asset/liability interest rate risk exposures (Level 2); interest rate swaps to manage duration and interest rate risk (Level 2); credit default swaps to manage credit risk (Level 2); and options to manage interest rate risk and volatility (Level 2). There are currency forwards with a notional value of $937 million and a fair value of $7 million as at December 31, 2016 with maturities varying from three to fifteen months. These currency forwards reduce the funds' exposure to the U.S. dollar.

[6] Absolute return:
The fair value of absolute return fund investments of $1,975 million (2015 – $2,164 million) is based on the NAV reported by the fund administrators. The funds have different redemption policies and periods. There are no unfunded commitments for absolute return investments as at December 31, 2016 (2015 – $nil).

- Funds of hedge funds invest in a portfolio of hedge funds that allocate capital across a broad array of funds and/or investment managers, with monthly redemptions upon 95 days' notice.
- Multi-strategy funds include funds that invest in broadly diversified portfolios of equity, fixed income and derivative instruments with quarterly redemptions upon 60 days' notice.
- Credit funds invest in an array of fixed income securities with quarterly redemptions upon 60 days' notice.
- Equity funds invest primarily in U.S. and global equity securities. Redemptions range from quarterly upon 60 days' notice to triennially upon 45 days' notice.

[7] Infrastructure:
Infrastructure fund values of $285 million (2015 – $262 million) are based on the NAV of the funds that invest directly in infrastructure investments. The fair values of the investments have been estimated using the capital accounts representing the plans ownership interest in the funds. The investment in each fund is not subject to redemption and is normally returned through distributions as a result of the liquidation of the underlying infrastructure investments. It was estimated that the investments in these funds will be liquidated over the weighted-average period of approximately two years. As at December 31, 2016, unfunded commitments for infrastructure investments were $nil (2015 - $nil).

Portion of the assets of the Company's DB pension plans measured at fair value using unobservable inputs (Level 3)

During 2015 and 2016 the portion of the assets of the Company's DB pension plans measured at fair value using unobservable inputs (Level 3) changed as follows:

(in millions of Canadian dollars)	Real Estate
As at January 1, 2015	$ 654
Disbursements	(223)
Net realized gains	64
Decrease in net unrealized gains	(44)
As at December 31, 2015	$ 451

Disbursements	(36)
Net realized gains	24
Decrease in net unrealized gains	(2)
As at December 31, 2016	$ 437

Additional plan assets information

The Company's expected long-term target return is 7.75%, net of all fees and expenses. In identifying the asset allocation ranges, consideration was given to the long-term nature of the underlying plan liabilities, the solvency and going-concern financial position of the plan, long-term return expectations and the risks associated with key asset classes as well as the relationships of returns on key asset classes with each other, inflation and interest rates. When advantageous and with due consideration, derivative instruments may be utilized, provided the total value of the underlying assets represented by financial derivatives, excluding currency forwards, is limited to 30% of the market value of the fund.

When investing in foreign securities, the plans are exposed to foreign currency risk; the effect of which is included in the valuation of the foreign securities. CP has entered into currency forward contracts to partially offset pension plan exposure to the U.S. dollar. At December 31, 2016 the plans were 34% exposed to the U.S. dollar net of the currency forwards (42% excluding the currency forwards), 14% exposed to European currencies, and 5% exposed to various other currencies.

At December 31, 2016, fund assets consisted primarily of listed stocks and bonds, including 109,630 of the Company's Common Shares (2015 –188,276) at a market value of $21 million (2015 – $33 million) and Unsecured Notes issued by the Company at a par value of $3 million (2015 – $3 million) and a market value of $3 million (2015 – $3 million).

Cash flows

In 2016, the Company contributed $57 million to its pension plans (2015 – $90 million; 2014 – $88 million), including $9 million to the DC plans (2015 – $9 million; 2014 – $8 million), $36 million to the Canadian registered and U.S. qualified DB pension plans (2015 – $69 million; 2014 – $67 million), and $12 million to the Canadian non-registered supplemental pension plan (2015 – $12 million; 2014 – $13 million). In addition, the Company made payments directly to employees, their beneficiaries or estates or to third-party benefit administrators of $30 million in 2016 (2015 – $33 million; 2014 – $26 million) with respect to other benefits.

Estimated future benefit payments

The estimated future defined benefit pension and other benefit payments to be paid by the plans for each of the next five years and the subsequent five-year period are as follows:

(in millions of Canadian dollars)	Pensions	Other benefits
2017	$ 616	$ 33
2018	626	32
2019	634	32
2020	641	31
2021	649	31
2022 – 2026	3,315	147

The benefit payments from the Canadian registered and U.S. qualified DB pension plans are payable from their respective pension funds. Benefit payments from the supplemental pension plan and from the other benefits plans are payable directly from the Company.

Defined contribution plan

Canadian non-unionized employees hired prior to July 1, 2010 had the option to participate in the Canadian DC plan. All Canadian non-unionized employees hired after such date must participate in this plan. Employee contributions are based on a percentage of salary. The Company matches employee contributions to a maximum percentage each year.

Effective July 1, 2010, a new U.S. DC plan was established. All U.S. non-unionized employees hired after such date must participate in this plan. Employees do not contribute to the plan. The Company annually contributes a percentage of salary.

The DC plans provide a pension based on total employee and employer contributions plus investment income earned on those contributions.

In 2016, the net cost of the DC plans, which generally equals the employer's required contribution, was $9 million (2015 – $9 million; 2014 – $8 million).

Contributions to multi-employer plans

Some of the Company's unionized employees in the U.S. are members of a U.S. national multi-employer benefit plan. Contributions made by the Company to this plan in 2016 in respect of post-retirement medical benefits were $4 million (2015 – $4 million; 2014 – $4 million).

21 Stock-based compensation

At December 31, 2016, the Company had several stock-based compensation plans, including a stock option plan, various cash settled liability plans and an employee stock savings plan. These plans resulted in an expense in 2016 of $51 million (2015 – $66 million; 2014 – $110 million). The information in this note excludes the effects of the subsequent event described in Note 27.

A. Stock Option Plan

Summary of stock options

The following table summarizes the Company's stock option plan as at December 31, 2016:

	Options outstanding		Nonvested options	
	Number of options	Weighted average exercise price	Number of options	Weighted average grant date fair value
Outstanding, January 1, 2016	2,407,973	$ 113.01	984,979	$ 41.88
New options granted	403,740	161.06	403,740	39.01
Exercised	(269,491)	74.99	—	—
Vested	—	—	(449,712)	33.70
Forfeited	(90,340)	186.95	(88,840)	42.42
Expired	(1,800)	60.84	—	—
Outstanding, December 31, 2016	2,450,082	$ 121.95	850,167	$ 44.49
Vested or expected to vest at December 31, 2016[(1)]	2,437,475	$ 121.62	N/A	N/A
Exercisable, December 31, 2016	1,599,915	$ 93.79	N/A	N/A

[(1)] As at December 31, 2016, the weighted average remaining term of vested or expected to vest options was 6.9 years with an aggregate intrinsic value of $181 million.

The following table provides the number of stock options outstanding and exercisable as at December 31, 2016 by range of exercise price and their related intrinsic aggregate value, and for options outstanding, the weighted-average years to expiration. The table also provides the aggregate intrinsic value for in-the-money stock options, which represents the amount that would have been received by option holders had they exercised their options on December 31, 2016 at the Company's closing stock price of $191.56.

	Options outstanding				Options exercisable		
Range of exercise prices	Number of options	Weighted average years to expiration	Weighted average exercise price	Aggregate intrinsic value (millions)	Number of options	Weighted average exercise price	Aggregate intrinsic value (millions)
$36.29 – $72.54	304,025	2.3	$ 60.59	$ 40	304,025	$ 60.59	$ 40
$72.55 – $86.71	747,445	5.4	73.69	88	747,445	73.69	88
$86.72 – $161.38	678,416	7.0	127.62	44	347,061	111.34	28
$161.39 – $236.50	720,196	8.5	192.56	(1)	201,384	188.23	—
Total[(1)]	2,450,082	6.2	$ 121.94	$ 171	1,599,915	$ 93.79	$ 156

[(1)] As at December 31, 2016, the total number of in-the-money stock options outstanding was 2,140,692 with a weighted-average exercise price of