CANADIAN PACIFIC RAILWAY LTD/CN
Form 10-Q
July 20, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
(Mark one)
x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2017
OR
.. 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

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 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,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer þ	Accelerated filer o	Non-accelerated filer o	Smaller reporting company o	Emerging growth company o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. 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 the close of business on July 18, 2017, there were 146,084,032 of the registrant’s Common Shares issued and outstanding.

CANADIAN PACIFIC RAILWAY LIMITED
FORM 10-Q
TABLE OF CONTENTS

PART I

ITEM 1. FINANCIAL STATEMENTS

INTERIM CONSOLIDATED STATEMENTS OF INCOME
(unaudited)

	For the three months ended June 30		For the six months ended June 30	
(in millions of Canadian dollars, except share and per share data)	2017	2016	2017	2016
Revenues				
Freight	$1,598	$1,406	$3,161	$2,954
Non-freight	45	44	85	87
Total revenues	1,643	1,450	3,246	3,041
Operating expenses				
Compensation and benefits (Note 11)	277	284	510	613
Fuel	160	131	330	256
Materials	48	38	97	94
Equipment rents	37	44	73	89
Depreciation and amortization	165	161	331	323
Purchased services and other (Note 4)	277	241	555	462
Total operating expenses	964	899	1,896	1,837
Operating income	679	551	1,350	1,204
Less:				
Other income and charges (Note 5)	(61)	(9)	(89)	(190)
Net interest expense	122	115	242	239
Income before income tax expense	618	445	1,197	1,155
Income tax expense (Note 6)	138	117	286	287
Net income	$480	$328	$911	$868
Earnings per share (Note 7)				
Basic earnings per share	$3.28	$2.16	$6.22	$5.70
Diluted earnings per share	$3.27	$2.15	$6.20	$5.67
Weighted-average number of shares (millions) (Note 7)				
Basic	146.5	151.7	146.5	152.3
Diluted	146.9	152.6	147.0	153.2
Dividends declared per share	$0.5625	$0.5000	$1.0625	$0.8500

See Notes to Interim Consolidated Financial Statements.

INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(unaudited)

	For the three months ended June 30		For the six months ended June 30	
(in millions of Canadian dollars)	2017	2016	2017	2016
Net income	$480	$328	$911	$868
Net gain in foreign currency translation adjustments, net of hedging activities	14	3	19	40
Change in derivatives designated as cash flow hedges	4	(29)	9	(76)
Change in pension and post-retirement defined benefit plans	37	43	75	90
Other comprehensive income before income taxes	55	17	103	54
Income tax expense on above items	(26)	(7)	(44)	(48)
Other comprehensive income (Note 3)	29	10	59	6
Comprehensive income	$509	$338	$970	$874

See Notes to Interim Consolidated Financial Statements.

INTERIM CONSOLIDATED BALANCE SHEETS AS AT
(unaudited)

(in millions of Canadian dollars)	June 30 2017	December 31 2016
Assets		
Current assets		
Cash and cash equivalents	$238	$164
Accounts receivable, net	604	591
Materials and supplies	192	184
Other current assets	85	70
	1,119	1,009
Investments	186	194
Properties	16,703	16,689
Goodwill and intangible assets	195	202
Pension asset	1,261	1,070
Other assets	73	57
Total assets	$19,537	$19,221
Liabilities and shareholders' equity		
Current liabilities		
Accounts payable and accrued liabilities	$1,183	$1,322
Long-term debt maturing within one year (Note 8)	762	25
	1,945	1,347
Pension and other benefit liabilities	729	734
Other long-term liabilities	222	284
Long-term debt	7,660	8,659
Deferred income taxes	3,648	3,571
Total liabilities	14,204	14,595
Shareholders' equity		
Share capital	2,038	2,002
Additional paid-in capital	42	52
Accumulated other comprehensive loss (Note 3)	(1,740)	(1,799)
Retained earnings	4,993	4,371
	5,333	4,626
Total liabilities and shareholders' equity	$19,537	$19,221

Contingencies (Note 13)
See Notes to Interim Consolidated Financial Statements.

INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

	For the three months ended June 30		For the six months ended June 30	
(in millions of Canadian dollars)	2017	2016	2017	2016
Operating activities				
Net income	$480	$328	$911	$868
Reconciliation of net income to cash provided by operating activities:				
Depreciation and amortization	165	161	331	323
Deferred income taxes (Note 6)	24	90	91	183
Pension funding in excess of expense (Note 12)	(59)	(37)	(119)	(79)
Foreign exchange loss (gain) on long-term debt (Note 5)	(67)	(18)	(95)	(199)
Other operating activities, net	(2)	(47)	(87)	(113)
Change in non-cash working capital balances related to operations	70	35	(110)	(253)
Cash provided by operating activities	611	512	922	730
Investing activities				
Additions to properties	(346)	(330)	(576)	(608)
Proceeds from sale of properties and other assets (Note 4)	13	11	16	71
Other	—	(2)	5	(2)
Cash used in investing activities	(333)	(321)	(555)	(539)
Financing activities				
Dividends paid	(73)	(53)	(146)	(107)
Issuance of CP Common Shares	9	4	37	9
Purchase of CP Common Shares (Note 9)	(142)	(788)	(142)	(788)
Repayment of long-term debt, excluding commercial paper	(9)	(7)	(14)	(18)
Net issuance of commercial paper (Note 8)	—	176	—	176
Settlement of forward starting swaps (Note 10)	(22)	—	(22)	—
Other	—	(1)	—	(3)
Cash used in financing activities	(237)	(669)	(287)	(731)
Effect of foreign currency fluctuations on U.S. dollar-denominated cash and cash equivalents	(4)	(1)	(6)	(18)
Cash position				
Increase (decrease) in cash and cash equivalents	37	(479)	74	(558)
Cash and cash equivalents at beginning of period	201	571	164	650
Cash and cash equivalents at end of period	$238	$92	$238	$92
Supplemental disclosures of cash flow information:				
Income taxes paid	$116	$65	$286	$257
Interest paid	$95	$92	$245	$247

See Notes to Interim Consolidated Financial Statements.

6

INTERIM CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(unaudited)

(in millions of Canadian dollars, except common share amounts)	Common shares (in millions)	Share capital	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
Balance at January 1, 2017	146.3	$2,002	$ 52	$ (1,799)	$ 4,371	$ 4,626
Net income	—	—	—	—	911	911
Other comprehensive income (Note 3)	—	—	—	59	—	59
Dividends declared	—	—	—	—	(156)	(156)
CP Common Shares repurchased (Note 9)	(0.7)	(10)	—	—	(133)	(143)
Shares issued under stock option plan	0.5	46	(10)	—	—	36
Balance at June 30, 2017	146.1	$2,038	$ 42	$ (1,740)	$ 4,993	$ 5,333
Balance at January 1, 2016	153.0	$2,058	$ 43	$ (1,477)	$ 4,172	$ 4,796
Net income	—	—	—	—	868	868
Other comprehensive income (Note 3)	—	—	—	6	—	6
Dividends declared	—	—	—	—	(130)	(130)
Effect of stock-based compensation expense	—	—	8	—	—	8
CP Common Shares repurchased (Note 9)	(4.7)	(70)	—	—	(797)	(867)
Shares issued under stock option plan	0.1	12	(2)	—	—	10
Balance at June 30, 2016	148.4	$2,000	$ 49	$ (1,471)	$ 4,113	$ 4,691

See Notes to Interim Consolidated Financial Statements.

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS
June 30, 2017
(unaudited)

1 Basis of presentation

These unaudited interim consolidated financial statements of Canadian Pacific Railway Limited (“CP”, or “the Company”), expressed in Canadian dollars, reflect management’s estimates and assumptions that are necessary for their fair presentation in conformity with generally accepted accounting principles in the United States of America (“GAAP”). They do not include all disclosures required under GAAP for annual financial statements and should be read in conjunction with the 2016 annual consolidated financial statements and notes included in CP's 2016 Annual Report on Form 10-K. The accounting policies used are consistent with the accounting policies used in preparing the 2016 annual consolidated financial statements, except for the newly adopted accounting policies discussed in Note 2.

CP's operations can be affected by seasonal fluctuations such as changes in customer demand and weather-related issues. This seasonality could impact quarter-over-quarter comparisons.

In management’s opinion, the unaudited interim consolidated financial statements include all adjustments (consisting of normal and recurring adjustments) necessary to present fairly such information. Interim results are not necessarily indicative of the results expected for the fiscal year.

2 Accounting changes

Implemented in 2017

Compensation - Stock Compensation

In March 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update (“ASU”) 2016-09, Improvements to Employee Share-based Payment Accounting, under FASB Accounting Standards Codification ("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. As a result of this ASU, excess tax benefits are no longer recorded in additional paid-in capital and instead are applied against taxes payable or recognized in the interim consolidated statement of income. This ASU was effective for CP beginning on January 1, 2017. The Company has determined that there were no significant changes to disclosure or financial statement presentation and changes in accounting for excess tax benefits and deficiencies were not material as a result of adoption.

Simplifying the Measurement of Inventory

In July 2015, the FASB issued ASU 2015-11, Simplifying the Measurement of Inventory under FASB ASC Topic 330. The amendments require that reporting entities measure inventory at the lower of cost and net realizable value. Net realizable value is the estimated selling price 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 was effective for CP beginning on January 1, 2017 and was applied prospectively. The Company determined there were no changes to disclosure, financial statement presentation, or valuation of inventory as a result of adoption.

Future changes

Leases

In February 2016, the FASB issued ASU 2016-02, Leases under FASB ASC Topic 842 which will supersede 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. For CP this new standard will be effective for interim and annual periods commencing January 1, 2019. Entities are required to use a modified retrospective approach to adopt this new standard meaning there will be no impact to the consolidated statements of income, however, the comparative consolidated balance sheet will be adjusted to reflect the provisions of this standard. The Company has a detailed plan to implement the new standard and is assessing contractual arrangements, through a cross functional team, that may qualify as leases under the new standard. CP is also working with a vendor to implement a lease management system which will assist in delivering the required accounting changes. During the second quarter, CP's cross functional team aggregated requirements, necessary to account for the different leases CP is involved in, that will permit the vendor to design a lease system solution for CP. The impact of the new standard will be a material increase to right of use assets and lease liabilities on the consolidated balance sheet, primarily, as a result of operating leases currently not recognized on the balance sheet. The Company does not anticipate a material impact to the consolidated statement of income and is currently evaluating the impact adoption of this new standard will have on disclosure.

Revenue from Contracts with Customers

In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers under FASB ASC Topic 606. In March 2016, the FASB issued amendment ASU 2016-08, Revenue from Contracts with Customers: Principal versus Agent Considerations as an update 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 guidance in Topic 606, as amended, will be effective for CP for interim and annual periods commencing January 1, 2018, and CP has the option of adopting the new standard by using either a full retrospective or a modified retrospective approach. At this point in time, CP is inclined to adopt this new standard using a modified retrospective approach, however, a final decision has yet to be made. CP has analyzed contracts for a significant proportion of the Company’s annual rail freight revenue, which represents greater than 95% of CP’s annual revenues, and has concluded that recognizing these revenues over time as rail freight services are performed continues to be appropriate. Further detailed reviews are being performed of a variety of specific contractual terms. These include assessing potential additional performance obligations, certain arrangements in the context of the new guidance on principal versus agent, contract origination and fulfillment costs, variable compensation and an assessment of required new disclosures. At this time CP does not expect a material change to revenue recognition from adopting this standard.

Intangibles - Goodwill and Other

In January 2017, the FASB issued ASU 2017-04, Simplifying the Test for Goodwill Impairment under FASB ASC Topic 350. This is intended to simplify how an entity is required to test goodwill for impairment by eliminating Step 2 from the goodwill impairment test. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit’s goodwill with the carrying amount of that goodwill. The amendments are effective for CP beginning on January 1, 2020. Entities are required to apply the amendments in this update prospectively from the date of adoption. The Company does not anticipate that the adoption of this ASU will impact CP's financial statements as there is a sufficient excess between the fair value and carrying value of CP's goodwill. Furthermore CP expects to continue to apply the Step 0 qualitative assessment when testing for goodwill impairment.

Compensation - Retirement Benefits

In March 2017, the FASB issued ASU 2017-07, Improving the Presentation of Net Periodic Pension Cost and Net Periodic Post-retirement Benefit Cost under FASB ASC Topic 715. The amendments clarify presentation requirements for net periodic pension cost and net periodic post-retirement benefit cost and require that an employer report the current service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net periodic benefit cost are required to be presented in the consolidated statement of income separately from the current service cost component and outside a subtotal of income from operations if one is presented. The amendments also restrict capitalization to the current service cost component when applicable. The amendments are effective for CP beginning on January 1, 2018. The amendments related to presentation are required to be applied retrospectively and the restrictions on capitalization of the current service cost component are applicable prospectively on the date of adoption. The impacts of the reclassification are detailed as follows:

	For the three months ended June 30	For the six months ended June 30	Year ended December 31[1]

(in millions of Canadian dollars)	2017	2016	2017	2016	2017	2016
Decrease in operating income	68	43	135	86	272	167

(1) December 31, 2017 figure is an estimate.

There will be no change to net income or earnings per share as a result of adoption of this new standard. The new guidance restricting capitalization of pensions to the current service cost component of net periodic benefit cost will have no impact to operating income or amounts capitalized because the Company currently only capitalizes an appropriate portion of current service cost for self-constructed properties. CP is currently assessing the disclosure requirements of this ASU.

9

3 Changes in accumulated other comprehensive loss ("AOCL") by component

	For the three months ended June 30			
(in millions of Canadian dollars, net of tax)	Foreign currency net of hedging activities	Derivatives and other	Pension and post-retirement defined benefit plans	Total
Opening balance, April 1, 2017	$125	$ (100)	$ (1,794)	$(1,769)
Other comprehensive (loss) income before reclassifications	(1)	(9)	—	(10)
Amounts reclassified from accumulated other comprehensive loss	—	12	27	39
Net current-period other comprehensive (loss) income	(1)	3	27	29
Closing balance, June 30, 2017	$124	$ (97)	$ (1,767)	$(1,740)
Opening balance, April 1, 2016	$125	$ (136)	$ (1,470)	$(1,481)
Other comprehensive loss before reclassifications	(1)	(23)	(2)	(26)
Amounts reclassified from accumulated other comprehensive loss	—	2	34	36
Net current-period other comprehensive (loss) income	(1)	(21)	32	10
Closing balance, June 30, 2016	$124	$ (157)	$ (1,438)	$(1,471)

	For the six months ended June 30			
(in millions of Canadian dollars, net of tax)	Foreign currency net of hedging activities	Derivatives and other	Pension and post-retirement defined benefit plans	Total
Opening balance, January 1, 2017	$127	$ (104)	$ (1,822)	$(1,799)
Other comprehensive (loss) income before reclassifications	(3)	(7)	—	(10)
Amounts reclassified from accumulated other comprehensive loss	—	14	55	69
Net current-period other comprehensive (loss) income	(3)	7	55	59
Closing balance, June 30, 2017	$124	$ (97)	$ (1,767)	$(1,740)
Opening balance, January 1, 2016	$129	$ (102)	$ (1,504)	$(1,477)
Other comprehensive loss before reclassifications	(5)	(59)	(2)	(66)
Amounts reclassified from accumulated other comprehensive loss	—	4	68	72
Net current-period other comprehensive (loss) income	(5)	(55)	66	6
Closing balance, June 30, 2016	$124	$ (157)	$ (1,438)	$(1,471)

Amounts in Pension and post-retirement defined benefit plans reclassified from AOCL:

	For the three months ended June 30		For the six months ended June 30	
(in millions of Canadian dollars)	2017	2016	2017	2016
Amortization of prior service costs[1]	$(1)	$(1)	$(2)	$(3)
Recognition of net actuarial loss[1]	38	48	77	97
Total before income tax	37	47	75	94
Income tax recovery	(10)	(13)	(20)	(26)
Net of income tax	$27	$34	$55	$68

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

4 Disposition of properties

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.

5 Other income and charges

	For the three months ended June 30		For the six months ended June 30	
(in millions of Canadian dollars)	2017	2016	2017	2016
Foreign exchange gain on long-term debt	$(67)	$(18)	$(95)	$(199)
Other foreign exchange gains	—	—	(1)	(7)
Insurance recovery of legal settlement	(10)	—	(10)	—
Charge on hedge roll and de-designation (Note 10)	13	—	13	—
Other	3	9	4	16
Total other income and charges	$(61)	$(9)	$(89)	$(190)

6 Income taxes

	For the three months ended June 30		For the six months ended June 30	
(in millions of Canadian dollars)	2017	2016	2017	2016
Current income tax expense	$114	$27	$195	$104
Deferred income tax expense	24	90	91	183
Income tax expense	$138	$117	$286	$287

During the three months ended June 30, 2017, legislation was enacted to decrease the Saskatchewan provincial corporate income tax rate. As a result of this change, the Company recorded an income tax recovery of $17 million in the quarter related to the revaluation of its deferred income tax balances as at January 1, 2017.

The effective tax rates for the three and six months ended June 30, 2017, were 22.31% and 23.90%, respectively, compared to 26.40% and 24.86%, respectively, for the same periods in 2016.

The estimated 2017 annual effective tax rate for the three months ended June 30, 2017, excluding the foreign exchange gain of $67 million on the Company's U.S. dollar-denominated debt, an insurance recovery of $10 million on legal settlement, the $13 million charge associated with the hedge roll and de-designation, and the $17 million tax recovery described above, is 26.50%.

The estimated 2016 annual effective tax rate for the three months ended June 30, 2016, excluding the foreign exchange gain of $18 million on the Company's U.S. dollar-denominated debt, was 26.93%.

The estimated 2017 annual effective tax rate for the six months ended June 30, 2017, excluding the discrete items of the management transition recovery of $51 million related to the retirement of the Company's Chief Executive Officer, the foreign exchange gain of $95 million on the Company's U.S. dollar-denominated debt, an insurance recovery of $10 million on legal settlement, the $13 million charge associated with the hedge roll and de-designation, and the $17 million tax recovery described above, is 26.50%.

The estimated 2016 annual effective tax rate for the for the six months ended June 30, 2016, excluding the foreign exchange gain of $199 million on the Company's U.S. dollar-denominated debt, was 27.25%.

7 Earnings per share

At June 30, 2017, the number of shares outstanding was 146.1 million (June 30, 2016 - 148.4 million).

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

The number of shares used in earnings per share calculations is reconciled as follows:

	For the three months ended June 30		For the six months ended June 30	
(in millions)	2017	2016	2017	2016
Weighted-average basic shares outstanding	146.5	151.7	146.5	152.3
Dilutive effect of stock options	0.4	0.9	0.5	0.9
Weighted-average diluted shares outstanding	146.9	152.6	147.0	153.2

For the three and six months ended June 30, 2017, there were 269,855 options and 385,928 options, respectively, excluded from the computation of diluted earnings per share because their effects were not dilutive (three and six months ended June 30, 2016 - 440,009 and 443,000, respectively).

8 Debt

Revolving credit facility

Effective June 23, 2017, the Company extended the maturity date by one year on its existing revolving U.S. $2.0 billion 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. The maturity date on the U.S. $1.0 billion one-year plus one-year term-out portion has been extended to June 27, 2019; the maturity date on the U.S. $1.0 billion five-year portion was extended to June 28, 2022.

Commercial paper program

The Company has a commercial paper program which 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. As at June 30, 2017 and December 31, 2016, the Company had no commercial paper borrowings.

The Company presents issuances and repayments of commercial paper in the Interim Consolidated Statements of Cash Flows on a net basis, all of which have a maturity of less than 90 days.

9 Shareholders' equity

On May 10, 2017, the Company announced a new normal course issuer bid ("bid"), commencing May 15, 2017, to purchase up to 4.38 million Common Shares for cancellation before May 14, 2018.

All purchases are made in accordance with the bid 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 activities under the share repurchase program:

	For the three months ended June 30		For the six months ended June 30	
	2017	2016	2017	2016
Number of Common Shares repurchased[(1)]	682,900	5,127,800	682,900	5,127,800

Weighted-average price per share[2]	$208.75	$ 169.13	$208.75	$ 169.13
Amount of repurchase (in millions)[2]	$143	$ 867	$143	$ 867

[1] Includes shares repurchased but not yet canceled at quarter end.
[2] Includes brokerage fees.

10 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, foreign exchange (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 $9,925 million (December 31, 2016 - $9,981 million) and a carrying value of $8,422 million (December 31, 2016 - $8,684 million) at June 30, 2017. 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.

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 Interim 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.

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.

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” for the three and six months ended June 30, 2017 was an unrealized FX gain of $116 million and $162 million, respectively (three and six months ended June 30, 2016 - an unrealized FX gain of $24 million and $332 million, respectively). There was no ineffectiveness during the three and six months ended June 30, 2017 and June 30, 2016.

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 on-going 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 June 30, 2017, the Company had forward starting floating-to-fixed interest rate swap agreements (“forward starting swaps”) totaling a notional U.S. $500 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 second quarter of 2017, the Company de-designated the hedging relationship for U.S. $700 million of forward starting swaps. The Company settled a notional U.S. $200 million of forward starting swaps for a cash payment of U.S. $16 million ($22 million). The Company rolled the remaining notional U.S. $500 million of forward starting swaps and did not cash settle these swaps. The impact of the U.S. $200 million settlement and U.S. $500 million roll of the forward starting swaps was a charge of $13 million to "Other income and charges" on the Company's Interim Consolidated Statements of Income. Concurrently, the Company re-designated the forward starting swaps totaling U.S. $500 million to fix the benchmark rate on cash flows associated with highly probable forecasted issuances of long-term notes.

As at June 30, 2017, the total fair value loss of $59 million (December 31, 2016 - fair value loss of $69 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 three and six months ended June 30, 2017 was a loss of $14 million and $12 million, respectively (three and six months ended June 30, 2016 - a loss of $32 million and $84 million, respectively). The effective portion for the three and six months ended June 30, 2017 was a loss of $13 million and $11 million, respectively, (three and six months ended June 30, 2016 - a loss of $32 million and $82 million, respectively) and is recorded in “Other comprehensive income”. In addition to the charge on hedge roll and de-designation, for the three and six months ended June 30, 2017, an ineffectiveness loss of $1 million (three and six months ended June 30, 2016 - $nil and a loss of $2 million, respectively) is recorded to “Net interest expense”.

For the three and six months ended June 30, 2017, a loss of $2 million and $5 million, respectively, related to previous forward starting swap hedges have been amortized to “Net interest expense” (three and six months ended June 30, 2016 - a loss of $3 million and $5 million, respectively). The Company expects that during the next 12 months $11 million of losses will be amortized to “Net interest expense”.

11 Stock-based compensation

At June 30, 2017, the Company had several stock-based compensation plans, including stock option plans, various cash settled liability plans and an employee stock savings plan. These plans resulted in an expense for the three and six months ended June 30, 2017 of $17 million and $5 million, respectively (three and six months ended June 30, 2016 - expense of $1 million and $15 million, respectively).

Effective January 31, 2017, Mr. E. Hunter Harrison resigned from all positions held by him at the Company, including as the Company’s Chief Executive Officer and a member of the Board of Directors of the Company. In connection with Mr. Harrison’s resignation, the Company entered into a separation agreement with Mr. Harrison. Under the terms of the separation agreement, the Company has agreed to a limited waiver of Mr. Harrison’s non-competition and non-solicitation obligations.

Effective January 31, 2017, pursuant to the separation agreement, Mr. Harrison forfeited certain pension and post-retirement benefits and agreed to the surrender for cancellation of 22,514 performance share units ("PSU"), 68,612 deferred share units ("DSU"), and 752,145 stock options.

As a result of this agreement, the Company has recognized a recovery of $51 million in "Compensation and benefits" in the first quarter of 2017. Of this amount, $27 million relates to a recovery from cancellation of certain pension benefits.

Stock option plan

In the six months ended June 30, 2017, under CP's stock option plans, the Company issued 369,980 regular options at the weighted average price of $199.08 per share, based on the closing price on the grant date.

Pursuant to the employee plan, these regular options may be exercised upon vesting, which is between 12 months and 60 months after the grant date, and will expire after 7 years. Certain stock options granted in 2017 vest upon the achievement of specific performance criteria.

Under the fair value method, the fair value of the stock options at the grant date was approximately $17 million. The weighted average fair value assumptions were approximately:

	For the six months ended June 30, 2017
Grant price	$199.08
Expected option life (years)[(1)]	5.48
Risk-free interest rate[(2)]	1.85%
Expected stock price volatility[(3)]	26.94%
Expected annual dividends per share[(4)]	$2.0010
Expected forfeiture rate[(5)]	3.0%
Weighted-average grant date fair value per option granted during the period	$45.78

(1) Represents the period of time that awards are expected to be outstanding. Historical data on exercise behaviour, or when available, specific expectations regarding future exercise behaviour, were used to estimate the expected life of the option.

(2) Based on the implied yield available on zero-coupon government issues with an equivalent remaining term at the time of the grant.

(3) Based on the historical stock price volatility of the Company’s stock over a period commensurate with the expected term of the option.

(4) Determined by the current annual dividend at the time of grant. The Company does not employ different dividend yields throughout the contractual term of the option. On May 10, 2017, the Company announced an increase in its quarterly dividend to $0.5625 per share, representing $2.2500 on an annual basis.

(5) The Company estimated forfeitures based on past experience. This rate is monitored on a periodic basis.

Performance share unit plan

In the six months ended June 30, 2017, the Company issued 134,991 PSUs with a grant date fair value of approximately $27 million. These units attract dividend equivalents in the form of additional units based on the dividends paid on the Company’s Common Shares. PSUs vest and are settled in cash, or in CP Common Shares, approximately three years after the grant date, contingent upon CP’s performance ("performance factor"). Grant recipients who are eligible to retire and have provided six months of service during the performance period are entitled to the full award. The fair value of PSUs is measured periodically until settlement, using a lattice-based valuation model.

The performance period for PSUs issued in the six months ended June 30, 2017 is January 1, 2017 to December 31, 2019. The performance factors for these PSUs are Return on Invested Capital, Total Shareholder Return ("TSR") compared to the S&P/ TSX Capped Industrial Index, and TSR compared to S&P 1500 Road and Rail Index.

The performance period for the PSUs issued in 2014 was January 1, 2014 to December 31, 2016. The performance factors for these PSUs were Operating Ratio, Free cash flow, TSR compared to the S&P/TSX 60 index and TSR compared to Class I railways. The resulting payout was 118% of the Company's average share price that was calculated using the last 30 trading days preceding December 31, 2016. In the first quarter of 2017, payouts occurred on the total outstanding awards, including dividends reinvested, totaling $31 million on 133,728 outstanding awards.

Deferred share unit plan

In the six months ended June 30, 2017, the Company granted 17,110 DSUs with a grant date fair value of approximately $3 million. DSUs vest over various periods of up to 48 months and are only redeemable for a specified period after employment is terminated. An expense to income for DSUs is recognized over the vesting period for both the initial subscription price and the change in value between reporting periods.

12 Pension and other benefits

In the three and six months ended June 30, 2017, the Company made contributions of $12 million and $24 million, respectively (three and six months ended June 30, 2016 - $14 million and $34 million, respectively), to its defined benefit pension plans. The elements of net periodic benefit cost for defined benefit pension plans and other benefits recognized in the three and six months ended June 30, 2017 included the following components:

	For the three months ended June 30			
	Pensions		Other benefits	
(in millions of Canadian dollars)	2017	2016	2017	2016
Current service cost (benefits earned by employees in the period)	$26	$26	$ 3	$ 3
Interest cost on benefit obligation	113	116	5	5
Expected return on fund assets	(223)	(211)	—	—
Recognized net actuarial loss	38	47	—	1
Amortization of prior service costs	(1)	(1)	—	—
Net periodic benefit (recovery) cost	$(47)	$(23)	$ 8	$ 9

	For the six months ended June 30			
	Pensions		Other benefits	
(in millions of Canadian dollars)	2017	2016	2017	2016
Current service cost (benefits earned by employees in the period)	$51	$53	$ 6	$ 6
Interest cost on benefit obligation	226	233	10	10
Expected return on fund assets	(446)	(423)	—	—
Recognized net actuarial loss	76	95	1	2
Amortization of prior service costs	(2			