

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

| | Page |
|--|------|
| Report of Independent Registered Public Accounting Firm | 2 |
| Consolidated Statements of Income For the Year Ended December 31, 2020, 2019, and 2018 | 5 |
| Consolidated Statements of Comprehensive Income For the Year Ended December 31, 2020, 2019, and 2018 | 6 |
| Consolidated Balance Sheets As at December 31, 2020 and 2019 | 7 |
| Consolidated Statements of Cash Flows For the Year Ended December 31, 2020, 2019, and 2018 | 8 |
| Consolidated Statements of Changes in Shareholders' Equity For the Year Ended December 31, 2020, 2019, and 2018 | 9 |
| Notes to Consolidated Financial Statements | 10 |

Report of Independent Registered Public Accounting Firm

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

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Canadian Pacific Railway Limited and subsidiaries (the "Company") as of December 31, 2020 and 2019, 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, 2020, and the related notes and the financial statement schedule listed in the Index at Item 8 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America ("US GAAP").

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 18, 2021, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Properties – Direct Costs that are Capitalized to Self-constructed Assets – Refer to Notes 1, 12 and 19 to the Financial Statements

Critical Audit Matter Description

The Company recognizes direct costs as capitalized additions to self-constructed assets, within properties, based on expenditures necessary to make an asset ready for its intended use. The capitalization of self-constructed assets requires management to make significant estimates and assumptions related to the capitalization of direct cost additions to self-constructed assets based on whether the expenditures meet capitalization criteria under US GAAP.

We identified the capitalization of direct cost additions to self-constructed assets as a critical audit matter because the judgments and assumptions management makes could have a significant impact on the capitalization of direct cost additions. As such auditing the capitalization of direct cost additions involves a high degree of auditor judgment.

How the Critical Audit Matter was Addressed in the Audit

Our audit procedures related to the capitalization of direct cost additions to self-constructed assets included the following, among others:

- Evaluated the effectiveness of controls over self-constructed assets, including those over the capitalization of direct cost additions to self-constructed assets.
- Selected a sample of direct costs and obtained evidence to support the capitalized additions to self-constructed assets and assessed whether these expenditures met the capitalization criteria under US GAAP.

Defined Benefit Pension – Refer to Notes 1 and 22 to the Financial Statements

Critical Audit Matter Description

The Company's accounting of its defined benefit pension plans involves the measurement of the projected benefit obligation and fair value of fund assets. The measurement of the projected-benefit obligation requires management to make significant estimates and assumptions in the determination of the discount rate, which is based on blended market interest rates of high-quality corporate debt instruments with matching cash flows. The measurement of the fair value of fund assets requires management to make significant estimates and assumptions in the determination of the expected return on fund assets, which is calculated using the market-related value of assets.

We identified the determination of the discount rate (for the projected benefit obligation), and the determination of the expected return on fund assets (for the determination of the net period benefit cost) as the critical audit matters because of the significant estimates and assumptions management makes could have a significant impact on the projected benefit obligation and the fair value of fund assets. As such auditing the determination of the discount rate and the expected return on fund assets involves a high degree of auditor judgment as the estimates and assumptions made by management contains significant measurement uncertainty and resulted in an increased extent of effort, which included the need to involve an actuarial specialist.

How the Critical Audit Matter was Addressed in the Audit

Our audit procedures related to the determination of the discount rate (for the projected benefit obligation), and the expected return on fund assets (for the determination of the fair value of fund assets) included the following, among others:

- Evaluated the effectiveness of controls over defined benefit pension plans, including those over the determination of the discount rate and the expected return on fund assets.
- With the assistance of an actuarial specialist, we evaluated the reasonableness of the discount rate by:
 - Assessing the methodology used in management's determination of the discount rate,
 - Testing the underlying source information, and
 - Developing a range of independent estimates and comparing those to the discount rate selected by management.
- With the assistance of an actuarial specialist, we evaluated the reasonableness of the expected return on fund assets by:
 - Assessing the methodology used in management's determination of the expected return on fund assets,
 - Testing the underlying source information, and
 - Comparing management's assumptions to historical data and available market trends.
- Evaluated management's ability to accurately forecast the discount rate and expected return on fund assets by comparing actual results to management's historical forecasts.

/s/ Deloitte LLP

Chartered Professional Accountants
Calgary, Canada
February 18, 2021

We have served as the Company's auditor since 2011.

Report of Independent Registered Public Accounting Firm

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

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Canadian Pacific Railway Limited and subsidiaries (the “Company”) as of December 31, 2020, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2020, of the Company and our report dated February 18, 2021, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte LLP

Chartered Professional Accountants
Calgary, Canada
February 18, 2021

CONSOLIDATED STATEMENTS OF INCOME

| Year ended December 31 (in millions of Canadian dollars, except share and per share data) | 2020 | 2019 | 2018 |
|---|-----------------|-----------------|-----------------|
| Revenues (Note 3) | | | |
| Freight | \$ 7,541 | \$ 7,613 | \$ 7,152 |
| Non-freight | 169 | 179 | 164 |
| Total revenues | 7,710 | 7,792 | 7,316 |
| Operating expenses | | | |
| Compensation and benefits (Note 22, 23) | 1,560 | 1,540 | 1,468 |
| Fuel | 652 | 882 | 918 |
| Materials | 216 | 210 | 201 |
| Equipment rents | 142 | 137 | 130 |
| Depreciation and amortization | 779 | 706 | 696 |
| Purchased services and other (Note 10) | 1,050 | 1,193 | 1,072 |
| Total operating expenses | 4,399 | 4,668 | 4,485 |
| Operating income | 3,311 | 3,124 | 2,831 |
| Less: | | | |
| Other (income) expense (Note 4) | (7) | (89) | 174 |
| Other components of net periodic benefit recovery (Note 22) | (342) | (381) | (384) |
| Net interest expense (Note 5) | 458 | 448 | 453 |
| Income before income tax expense | 3,202 | 3,146 | 2,588 |
| Income tax expense (Note 6) | 758 | 706 | 637 |
| Net income | \$ 2,444 | \$ 2,440 | \$ 1,951 |
| Earnings per share (Note 7) | | | |
| Basic earnings per share | \$ 18.05 | \$ 17.58 | \$ 13.65 |
| Diluted earnings per share | \$ 17.97 | \$ 17.52 | \$ 13.61 |
| Weighted-average number of shares (millions) (Note 7) | | | |
| Basic | 135.5 | 138.8 | 142.9 |
| Diluted | 136.0 | 139.3 | 143.3 |

See Notes to Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

| Year ended December 31 (in millions of Canadian dollars) | 2020 | | 2019 | | 2018 | |
|--|------|--------------|------|--------------|------|--------------|
| Net income | \$ | 2,444 | \$ | 2,440 | \$ | 1,951 |
| Net gain (loss) in foreign currency translation adjustments, net of hedging activities | | 18 | | 37 | | (60) |
| Change in derivatives designated as cash flow hedges | | 9 | | 10 | | 38 |
| Change in pension and post-retirement defined benefit plans | | (407) | | (661) | | (449) |
| Other comprehensive loss before income taxes | | (380) | | (614) | | (471) |
| Income tax recovery on above items | | 88 | | 135 | | 169 |
| Other comprehensive loss (Note 8) | | (292) | | (479) | | (302) |
| Comprehensive income | \$ | 2,152 | \$ | 1,961 | \$ | 1,649 |

See Notes to Consolidated Financial Statements.

CONSOLIDATED BALANCE SHEETS

| As at December 31 (in millions of Canadian dollars, except Common Shares) | 2020 | 2019 |
|--|------------------|------------------|
| Assets | | |
| Current assets | | |
| Cash and cash equivalents | \$ 147 | \$ 133 |
| Accounts receivable, net (Note 9) | 825 | 805 |
| Materials and supplies | 208 | 182 |
| Other current assets | 141 | 90 |
| | 1,321 | 1,210 |
| Investments (Note 11) | 199 | 341 |
| Properties (Note 12, 19) | 20,422 | 19,156 |
| Goodwill and intangible assets (Note 10, 13) | 366 | 206 |
| Pension asset (Note 22) | 894 | 1,003 |
| Other assets (Note 14, 19) | 438 | 451 |
| Total assets | \$ 23,640 | \$ 22,367 |
| Liabilities and shareholders' equity | | |
| Current liabilities | | |
| Accounts payable and accrued liabilities (Note 15, 19) | \$ 1,467 | \$ 1,693 |
| Long-term debt maturing within one year (Note 16, 17, 19) | 1,186 | 599 |
| | 2,653 | 2,292 |
| Pension and other benefit liabilities (Note 22) | 832 | 785 |
| Other long-term liabilities (Note 18, 19) | 585 | 562 |
| Long-term debt (Note 16, 17, 19) | 8,585 | 8,158 |
| Deferred income taxes (Note 6) | 3,666 | 3,501 |
| Total liabilities | 16,321 | 15,298 |
| Shareholders' equity | | |
| Share capital (Note 20) | | |
| Authorized unlimited Common Shares without par value. Issued and outstanding are 133.3 million and 137.0 million as at December 31, 2020 and 2019, respectively. | 1,983 | 1,993 |
| Authorized unlimited number of first and second preferred shares; none outstanding. | | |
| Additional paid-in capital | 55 | 48 |
| Accumulated other comprehensive loss (Note 8) | (2,814) | (2,522) |
| Retained earnings | 8,095 | 7,550 |
| | 7,319 | 7,069 |
| Total liabilities and shareholders' equity | \$ 23,640 | \$ 22,367 |

See Commitments and contingencies (Note 25).

See Notes to Consolidated Financial Statements.

Approved on behalf of the Board:

/s/ ISABELLE COURVILLE
 Isabelle Courville, Director,
 Chair of the Board

/s/ JANE L. PEVERETT
 Jane L. Peverett, Director,
 Chair of the Audit and Finance Committee

CONSOLIDATED STATEMENTS OF CASH FLOWS

| Year ended December 31 (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|--|----------------|----------------|----------------|
| Operating activities | | | |
| Net income | \$ 2,444 | \$ 2,440 | \$ 1,951 |
| Reconciliation of net income to cash provided by operating activities: | | | |
| Depreciation and amortization | 779 | 706 | 696 |
| Deferred income tax expense (Note 6) | 221 | 181 | 256 |
| Pension recovery and funding (Note 22) | (250) | (360) | (321) |
| Foreign exchange (gain) loss on debt and lease liabilities (Note 4) | (14) | (94) | 168 |
| Settlement of forward starting swaps on debt issuance (Note 17) | — | — | (24) |
| Other operating activities, net | 11 | 143 | (79) |
| Change in non-cash working capital balances related to operations (Note 21) | (389) | (26) | 65 |
| Cash provided by operating activities | 2,802 | 2,990 | 2,712 |
| Investing activities | | | |
| Additions to properties | (1,671) | (1,647) | (1,551) |
| Investment in Detroit River Tunnel Partnership (Note 10) | (398) | — | — |
| Investment in Central Maine & Québec Railway (Note 10) | 19 | (174) | — |
| Proceeds from sale of properties and other assets | 22 | 26 | 78 |
| Other | (2) | (8) | 15 |
| Cash used in investing activities | (2,030) | (1,803) | (1,458) |
| Financing activities | | | |
| Dividends paid | (467) | (412) | (348) |
| Issuance of CP Common Shares (Note 23) | 52 | 26 | 24 |
| Purchase of CP Common shares (Note 20) | (1,509) | (1,134) | (1,103) |
| Issuance of long-term debt, excluding commercial paper (Note 16) | 958 | 397 | 638 |
| Repayment of long-term debt, excluding commercial paper (Note 16) | (84) | (500) | (753) |
| Net issuance of commercial paper (Note 16) | 270 | 524 | — |
| Net increase in short-term borrowings (Note 16) | 5 | — | — |
| Other | 11 | (12) | — |
| Cash used in financing activities | (764) | (1,111) | (1,542) |
| Effect of foreign currency fluctuations on U.S. dollar-denominated cash and cash equivalents | 6 | (4) | 11 |
| Cash position | | | |
| Increase (decrease) in cash and cash equivalents | 14 | 72 | (277) |
| Cash and cash equivalents at beginning of year | 133 | 61 | 338 |
| Cash and cash equivalents at end of year | \$ 147 | \$ 133 | \$ 61 |
| Supplemental disclosures of cash flow information: | | | |
| Income taxes paid | \$ 582 | \$ 506 | \$ 318 |
| Interest paid | \$ 443 | \$ 444 | \$ 463 |

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, 2017 | \$ 2,032 | \$ 43 | \$ (1,741) | \$ 6,103 | \$ 6,437 |
| Net income | — | — | — | 1,951 | 1,951 |
| Other comprehensive loss (Note 8) | — | — | (302) | — | (302) |
| Dividends declared (\$2.5125 per share) | — | — | — | (358) | (358) |
| Effect of stock-based compensation expense | — | 11 | — | — | 11 |
| CP Common Shares repurchased (Note 20) | (66) | — | — | (1,061) | (1,127) |
| Shares issued under stock option plan (Note 20) | 36 | (12) | — | — | 24 |
| Balance at December 31, 2018 | 2,002 | 42 | (2,043) | 6,635 | 6,636 |
| Impact of accounting change | — | — | — | (5) | (5) |
| Balance at January 1, 2019, as restated | 2,002 | 42 | (2,043) | 6,630 | 6,631 |
| Net income | — | — | — | 2,440 | 2,440 |
| Other comprehensive loss (Note 8) | — | — | (479) | — | (479) |
| Dividends declared (\$3.1400 per share) | — | — | — | (434) | (434) |
| Effect of stock-based compensation expense | — | 15 | — | — | 15 |
| CP Common Shares repurchased (Note 20) | (54) | — | — | (1,086) | (1,140) |
| Shares issued under stock option plan (Note 20) | 45 | (9) | — | — | 36 |
| Balance at December 31, 2019 | 1,993 | 48 | (2,522) | 7,550 | 7,069 |
| Impact of accounting change (Note 2) | — | — | — | (1) | (1) |
| Balance at January 1, 2020, as restated | 1,993 | 48 | (2,522) | 7,549 | 7,068 |
| Net income | — | — | — | 2,444 | 2,444 |
| Other comprehensive loss (Note 8) | — | — | (292) | — | (292) |
| Dividends declared (\$3.5600 per share) | — | — | — | (479) | (479) |
| Effect of stock-based compensation expense | — | 17 | — | — | 17 |
| CP Common Shares repurchased (Note 20) | (58) | — | — | (1,419) | (1,477) |
| Shares issued under stock option plan (Note 20) | 48 | (10) | — | — | 38 |
| Balance at December 31, 2020 | \$ 1,983 | \$ 55 | \$ (2,814) | \$ 8,095 | \$ 7,319 |

See Notes to Consolidated Financial Statements.

CANADIAN PACIFIC RAILWAY LIMITED

Notes to Consolidated Financial Statements

December 31, 2020

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 ("U.S."). CP provides rail and intermodal transportation services over a network of approximately 13,000 miles, serving the principal business centres of Canada from Montréal, Québec, 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 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. Distributions received from equity method investees are classified using the nature of the distribution approach for cash flow presentation purposes, whereby distributions received are classified based on the nature of the activity or activities of the investee that generated the distribution as either a return on investment (classified as a cash inflow from operating activities) or a return of investment (classified as a cash inflow from investing activities). 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.

Revenue recognition

Revenue is recognized when obligations under the terms of a contract with a customer are satisfied. Revenue is measured as the amount of consideration the Company expects to receive in exchange for providing services. Government imposed taxes that the Company collects concurrent with revenue generating activities are excluded from revenue. In the normal course of business, the Company does not generate any material revenue through acting as an agent for other entities.

The Company provides rail freight transportation services to a wide variety of customers and transports bulk commodities, merchandise freight and intermodal traffic. The Company signs master service agreements with customers that dictate future services the Company is to perform for a customer at the time a bill of lading or service request is received. Each bill of lading or service request represents a separate distinct performance obligation that the Company is obligated to satisfy. The transaction price is generally in the form of a fixed fee determined at the inception of the bill of lading or service request. The Company allocates the transaction price to each distinct performance obligation based on the estimated standalone selling price for each performance obligation. As each bill of lading or service request represents a separate distinct performance obligation, the estimated standalone selling price is assessed at an observable price which is fair market value. Certain customer agreements include variable consideration in the form of rebates, discounts, or incentives. The expected value method is used to estimate variable consideration and is allocated to the applicable performance obligation and is recognized when the related performance obligation is satisfied. Additionally, the Company offers published rates for services through public tariff agreements in which a customer can request service, triggering a performance obligation the Company must satisfy. Railway freight revenues are recognized over time as services are provided based on the percentage of completed service method. Volume rebates to customers are accrued as a reduction of freight revenues based on estimated volumes and contract terms as freight service is provided. Freight revenues also include certain ancillary and other services provided in association with the performance of rail freight movements. Revenues from these activities are not material and therefore have been aggregated with the freight revenues from customer contracts with which they are associated.

Non-freight revenues, including revenues earned from passenger service operators, switching fees, and revenues from logistics services, are recognized at the point in time the services are provided or when the performance obligations are satisfied. Non-freight revenues also include leasing revenues.

Payment by customers is due upon satisfaction of performance obligations. Payment terms are such that amounts outstanding at the period end are expected to be collected within one reporting period. The Company invoices customers at the time the bill of lading or service request is processed and therefore the Company has no material unbilled receivables and no contract assets. All performance obligations not fully satisfied at period end are expected to be satisfied within the reporting period immediately following. Contracted customer incentives are amortized to income over the term of the related revenue contract.

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 Company's Consolidated Balance Sheets and amortized to "Income tax expense" as the related asset is recognized in income. Income tax recovery or expense on items in "Accumulated other comprehensive loss" are recognized in "Income tax expense" as the related item is recognized in income.

Earnings per share

Basic earnings per share are calculated using the weighted-average number of the Company's Common Shares ("Common Shares") outstanding during the year. Diluted earnings per share are calculated using the treasury stock method for determining the dilutive effect of options.

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 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 loss".

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 excludes cash and cash equivalents subject to restrictions.

Accounts receivable

Accounts receivable from customers are recognized initially at fair value and subsequently measured at amortized cost less allowance for expected credit losses. Losses on accounts receivable are estimated based on historical credit loss experience of receivables with similar risk characteristics. Historical loss experience is adjusted to reflect any management expectations that current or future conditions will differ from conditions that existed for the period over which historical information is evaluated.

To determine expected credit losses, receivables are disaggregated by credit characteristics, type of customer service, customer line of business, and receivable aging. Receivables are considered to be in default and are written off against the allowance for credit losses when it is probable that all remaining contractual payments due will not be collected in accordance with the terms of the customer contracts. Subsequent recoveries of amounts previously written off are credited to earnings in the period recovered.

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, when reliably estimable, 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 and an impairment loss is recognized.

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, which is expensed, 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 depreciation studies. Depreciation studies are regular reviews of asset service lives, salvage values, accumulated depreciation and other related factors. Depreciation rates are established through these studies. Actual use and retirement of assets may vary from current estimates, and would be identified in the next study. These changes in expected economic lives would impact the amount of depreciation expense recognized in future periods. All track assets are depreciated using a straight-line method which recognizes the value of the asset consumed as a percentage of the whole life of the asset.

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 certain asset classes, the historical cost of the asset is separately recorded in the Company's property records. This amount is retired from the property records upon retirement of the asset. For assets for which the historical cost cannot be separately identified the amount of the gross book value to be retired is estimated using either an indexation methodology, whereby the current replacement cost of the asset is indexed to the estimated year of installation for the asset, or a first-in, first-out approach, or statistical analysis is used to determine the age of the retired asset. CP uses indices that closely correlate to the principal costs of the assets.

There are a number of estimates inherent in the depreciation and retirement processes and as it is not possible to precisely estimate each of these variables until a group of property is completely retired, CP regularly monitors the estimated service lives of assets and the associated accumulated depreciation for each asset class to ensure depreciation rates are appropriate. If the recorded amounts of accumulated depreciation are greater or less than the amounts indicated by the depreciation studies, then the excess or deficit is amortized as a component of depreciation expense over the remaining service lives of the applicable asset classes.

For the sale or retirement of larger groups of depreciable assets that are unusual and were not considered 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. The accumulated depreciation to be retired includes asset-specific accumulated depreciation, when known, and an appropriate portion of the accumulated depreciation recorded for the relevant asset class as a whole, calculated using a cost-based allocation.

Revisions to the estimated useful lives and net salvage projections constitute a change in accounting estimate and are addressed prospectively by amending depreciation rates.

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

Leases

The Company has leases for rolling stock, buildings, vehicles, railway equipment, roadway machines, and information systems hardware. CP has entered into rolling stock and roadway machine leases that are fully variable or contain both fixed and variable components. Variable components are dependent on the hours and miles that the underlying equipment has been used. Fixed term, short-term, and variable operating lease costs are recorded in "Equipment rents" and "Purchased services and other" on the Company's Consolidated Statements of Income. Components of finance lease costs are recorded in "Depreciation and amortization" and "Net interest expense" on the Company's Consolidated Statements of Income.

The Company determines lease existence and classification at the lease inception date. Leases are identified when an agreement conveys the right to control identified property for a period of time in exchange for consideration. The Company recognizes both an operating lease liability and right-of-use ("ROU") asset for operating leases with fixed terms and in-substance fixed terms. ROU assets represent our right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. Operating and finance lease ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. Lease payments include fixed and variable payments that are based on an index or a rate. If the Company's leases do not provide a readily determinable implicit interest rate, the Company uses internal incremental secured borrowing rates for comparable tenor in the same currency at the commencement date in determining the present value of lease payments. Operating and finance lease ROU assets also include lease prepayments and initial direct costs, but are reduced by lease incentives. The lease term may include periods associated with options to extend or exclude periods associated with options to terminate the lease when it is reasonably certain that the Company will exercise these options.

The Company has short-term operating leases with terms of 12 months or less, some of which include options to purchase that the Company is not reasonably certain to exercise. The Company has elected to apply the recognition exemption and, as such, accounts for leases with a term of 12 months or less off-balance sheet. Therefore, lease payments on these short-term operating leases are not included in operating lease ROU assets and liabilities, but are recognized as an expense in the Company's Consolidated Statements of Income on a straight-line basis over the term of the lease. Further, the Company has elected to combine lease and non-lease components for all leases, except for leases of roadway machines and information systems hardware.

Assets held for sale

Assets to be disposed that meet the held for sale criteria are reported in "Other assets" 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 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. Qualitative factors include but are not limited to, economic, market and industry conditions, cost factors and overall financial performance of the reporting unit. If the assessment of qualitative factors indicates that the carrying value is less than the fair value, then performing the quantitative goodwill impairment test is unnecessary. The quantitative assessment compares the fair value of the reporting unit to its carrying value, including goodwill. If the fair value of the reporting unit is less than its carrying value, goodwill is impaired. The impairment charge that would be recognized is the excess of the carrying value over the fair value of the reporting unit, limited to the total amount of goodwill allocated to the reporting unit.

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.

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, infrastructure and private debt 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 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 12 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 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 on the Company's Consolidated Statements of Income as "Other components of net periodic benefit cost or recovery".

The current service cost component of net periodic benefit cost is reported in "Compensation and benefits" for pensions and post-retirement benefits, and in "Purchased services and other" for self-insured workers' compensation and long-term disability benefits on the Company's Consolidated Statements of Income. Other components of net periodic benefit cost or recovery are reported in "Other components of net periodic benefit cost or recovery" outside of Operating income on the Company's Consolidated Statements of Income.

Capitalization of pension costs, when applicable, is restricted to the current service cost component of net periodic benefit cost.

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 other 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, other long-term liabilities, and long-term debt 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 that are not designated as hedges is recognized in the period in which the change occurs in the Company's Consolidated Statements of Income in the line item to which the derivative instrument is related.

For fair value hedges, the periodic changes in value are recognized in income, on the same line as the changes in value of the hedged items are also recorded. For an effective cash flow hedge, the entire change in value of the hedging instrument is recognized in "Other comprehensive loss". The change in value of the effective 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.

Cash flows relating to derivative instruments designated as hedges are included in the same line as the related hedged items on the Company's Consolidated Statements of Cash Flows.

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".

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 fair values on the grant date as determined using the Black-Scholes option-pricing model. Forfeitures are estimated at issuance and monitored on a periodic basis. 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 performance share units ("PSUs"), performance deferred share units ("PDSUs"), deferred share units ("DSUs"), and restricted share units ("RSUs") that settle in cash using the fair value method. Compensation expense is recognized 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 where applicable. Forfeitures are estimated at issuance and monitored on a periodic basis.

The employee share purchase plan gives rise to compensation expense that is recognized using the issue price by amortizing the cost over the vesting period.

2. Accounting changes

Implemented in 2020

Financial Instruments - Credit Losses

On January 1, 2020, the Company adopted the new Accounting Standards Update ("ASU") 2016-13, issued by the Financial Accounting Standards Board ("FASB"), and all related amendments under FASB Accounting Standards Codification ("ASC") Topic 326, Financial Instruments - Credit Losses. Using a modified retrospective approach, the Company recognized a cumulative-effect adjustment to its opening retained earnings balance in the period of adoption. Accordingly, comparative financial information has not been restated and continues to be reported under the accounting standards in effect for those periods.

The impact of the adoption of ASC 326 as at January 1, 2020 was an increase in the allowance for credit losses of \$1 million, with the offsets to "Deferred income taxes" and "Retained earnings" on the Company's Consolidated Balance Sheet. See Note 9 for further discussion of the current period credit loss.

Simplification of Financial Disclosures about Guarantors

During the second quarter of 2020, the Company early adopted the Securities and Exchange Commission amendments to the financial disclosure requirements for guarantors and issuers of guaranteed securities, as specified in Rule 3-10 of Regulation S-X. The amendments simplify disclosure requirements by replacing condensed consolidating financial information ("CCFI") with summarized financial information and expanded qualitative non-financial disclosures about the guarantees, issuers, and guarantors. This disclosure can be found in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, Liquidity and Capital Resources.

3. Revenues

The following table disaggregates the Company's revenues from contracts with customers by major source:

| (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|--|----------|----------|----------|
| Freight | | | |
| Grain | \$ 1,829 | \$ 1,684 | \$ 1,566 |
| Coal | 566 | 682 | 673 |
| Potash | 493 | 462 | 486 |
| Fertilizers and sulphur | 290 | 250 | 243 |
| Forest products | 328 | 304 | 284 |
| Energy, chemicals and plastics | 1,519 | 1,534 | 1,243 |
| Metals, minerals and consumer products | 629 | 752 | 797 |
| Automotive | 324 | 352 | 322 |
| Intermodal | 1,563 | 1,593 | 1,538 |
| Total freight revenues | 7,541 | 7,613 | 7,152 |
| Non-freight excluding leasing revenues | 107 | 116 | 102 |
| Revenues from contracts with customers | 7,648 | 7,729 | 7,254 |
| Leasing revenues | 62 | 63 | 62 |
| Total revenues | \$ 7,710 | \$ 7,792 | \$ 7,316 |

Contract liabilities

Contract liabilities represent payments received for performance obligations not yet satisfied and relate to deferred revenue and are presented as components of "Accounts payable and accrued liabilities" and "Other long-term liabilities" on the Company's Consolidated Balance Sheets.

The following table summarizes the changes in contract liabilities for the years ended December 31, 2020 and 2019:

| (in millions of Canadian dollars) | 2020 | 2019 |
|---|--------|--------|
| Opening balance | \$ 146 | \$ 2 |
| Revenue recognized that was included in the contract liability balance at the beginning of the period | (100) | (2) |
| Increase due to consideration received, net of revenue recognized during the period | 15 | 146 |
| Closing balance | \$ 61 | \$ 146 |

4. Other (income) expense

| (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|--|---------|---------|--------|
| Foreign exchange (gain) loss on debt and lease liabilities | \$ (14) | \$ (94) | \$ 168 |
| Other foreign exchange (gains) losses | (1) | (4) | 3 |
| Other | 8 | 9 | 3 |
| Other (income) expense | \$ (7) | \$ (89) | \$ 174 |

5. Net interest expense

| (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|------------------------------------|--------|--------|--------|
| Interest cost | \$ 478 | \$ 471 | \$ 475 |
| Interest capitalized to Properties | (16) | (17) | (20) |
| Interest expense | 462 | 454 | 455 |
| Interest income | (4) | (6) | (2) |
| Net interest expense | \$ 458 | \$ 448 | \$ 453 |

Interest expense includes interest on finance leases of \$11 million for the year ended December 31, 2020 (2019 – \$11 million; 2018 – \$11 million).

6. Income taxes

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

| (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|---|----------|----------|----------|
| Current income tax expense | \$ 537 | \$ 525 | \$ 381 |
| Deferred income tax expense | | | |
| Origination and reversal of temporary differences | 277 | 316 | 214 |
| Effect of tax rate decrease | (32) | (95) | (21) |
| Effect of hedge of net investment in foreign subsidiaries | (18) | (38) | 64 |
| Other | (6) | (2) | (1) |
| Total deferred income tax expense | 221 | 181 | 256 |
| Total income taxes | \$ 758 | \$ 706 | \$ 637 |
| Income before income tax expense | | | |
| Canada | \$ 2,518 | \$ 2,392 | \$ 1,788 |
| Foreign | 684 | 754 | 800 |
| Total income before income tax expense | \$ 3,202 | \$ 3,146 | \$ 2,588 |
| Income tax expense | | | |
| Current | | | |
| Canada | \$ 412 | \$ 410 | \$ 336 |
| Foreign | 125 | 115 | 45 |
| Total current income tax expense | 537 | 525 | 381 |
| Deferred | | | |
| Canada | 231 | 141 | 174 |
| Foreign | (10) | 40 | 82 |
| Total deferred income tax expense | 221 | 181 | 256 |
| Total income taxes | \$ 758 | \$ 706 | \$ 637 |

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) | 2020 | 2019 |
|---|----------|----------|
| Deferred income tax assets | | |
| Amount related to tax losses carried forward | \$ 17 | \$ 6 |
| Liabilities carrying value in excess of tax basis | 131 | 139 |
| Unrealized foreign exchange losses | 4 | 26 |
| Environmental remediation costs | 22 | 22 |
| Other | 4 | 4 |
| Total net deferred income tax assets | 178 | 197 |
| Deferred income tax liabilities | | |
| Properties carrying value in excess of tax basis | 3,708 | 3,524 |
| Pensions carrying value in excess of tax basis | 43 | 83 |
| Other | 93 | 91 |
| Total deferred income tax liabilities | 3,844 | 3,698 |
| Total net deferred income tax liabilities | \$ 3,666 | \$ 3,501 |

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) | 2020 | 2019 | 2018 |
|---|---------|---------|---------|
| Statutory federal and provincial income tax rate (Canada) | 26.31 % | 26.77 % | 26.86 % |
| Expected income tax expense at Canadian enacted statutory tax rates | \$ 842 | \$ 842 | \$ 695 |
| (Decrease) increase in taxes resulting from: | | | |
| (Gains) losses not subject to tax | (23) | (19) | 8 |
| Canadian tax rate differentials | (3) | — | — |
| Foreign tax rate differentials | (32) | (33) | (55) |
| Effect of tax rate decrease | (32) | (95) | (21) |
| Valuation allowance | — | (5) | 5 |
| Unrecognized tax benefits | (7) | 33 | — |
| Other | 13 | (17) | 5 |
| Income tax expense | \$ 758 | \$ 706 | \$ 637 |

In 2020, the Company revalued its deferred income tax balances as a result of a tax filing election for the state of North Dakota resulting in a lower corporate income tax rate and a net recovery of \$29 million.

In 2019, the Company revalued its deferred income tax balances as a result of a corporate income tax rate decrease in the province of Alberta, resulting in a net recovery of \$88 million.

In 2018, the Company revalued its deferred income tax balances as a result of corporate income tax rate decreases in the states of Iowa and Missouri, resulting in a net recovery of \$21 million.

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.

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.

At December 31, 2020, the Company had tax effected operating losses carried forward of \$15 million (2019 – \$4 million), which have been recognized as a deferred tax asset. The losses carried forward will begin to expire in 2031. The Company expects to fully utilize these tax effected operating losses before their expiry. The Company did not have any minimum tax credits or investment tax credits carried forward.

At December 31, 2020, the Company had \$2 million (2019 – \$2 million) in tax effected capital losses carried forward recognized as a deferred tax asset. The Company has no unrecognized tax benefits from capital losses at December 31, 2020 and 2019.

The following table provides a reconciliation of uncertain tax positions in relation to unrecognized tax benefits for Canada and the U.S. for the year ended December 31:

| (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|---|-------|-------|-------|
| Unrecognized tax benefits at January 1 | \$ 52 | \$ 13 | \$ 13 |
| Increase in unrecognized: | | | |
| Tax benefits related to the current year | — | 9 | 1 |
| Tax benefits related to prior years | 10 | 34 | — |
| Dispositions: | | | |
| Gross uncertain tax benefits related to prior years | (9) | — | (1) |
| Settlements with taxing authorities | 2 | (4) | — |
| Unrecognized tax benefits at December 31 | \$ 55 | \$ 52 | \$ 13 |

If these uncertain tax positions were recognized, all of the amount of unrecognized tax positions as at December 31, 2020 would impact the Company's effective tax rate.

During the fourth quarter of 2019, a tax authority proposed an adjustment for a prior tax year without assessing taxes. Although the Company had commenced action to have the proposal removed, an increase in uncertain tax position was recorded on deferred income tax liability and expense in the amount of \$24 million. While the proposed adjustment was withdrawn during 2020, the ultimate resolution of this matter may give rise to further favourable or unfavourable adjustments to deferred tax, the timing and amount of which are not determinable at this time.

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 net amount of accrued interest and penalties in 2020 was a \$1 million recovery (2019 – \$1 million recovery; 2018 – \$nil). The total amount of accrued interest and penalties associated with unrecognized tax benefits at December 31, 2020 was \$9 million (2019 – \$10 million; 2018 – \$11 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 2014. The federal and provincial income tax returns filed for 2015 and subsequent years remain subject to examination by the Canadian taxation authorities. The Internal Revenue Service ("IRS") audit for 2012 and 2013 has been settled. The income tax returns for 2016 and subsequent years continue to remain subject to examination by the IRS and U.S. state tax jurisdictions. The Company believes that it has recorded sufficient income tax reserves at December 31, 2020 with respect to these income tax examinations.

7. Earnings per share

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

Diluted earnings per share has 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, 2020, there were 1.4 million dilutive options outstanding (2019 – 1.6 million; 2018 – 1.3 million).

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

| (in millions of Canadian dollars, except per share data) | 2020 | 2019 | 2018 |
|--|--------------------|----------|-------|
| Net income | \$ 2,444 \$ | 2,440 \$ | 1,951 |
| Weighted-average basic shares outstanding (millions) | 135.5 | 138.8 | 142.9 |
| Dilutive effect of stock options (millions) | 0.5 | 0.5 | 0.4 |
| Weighted-average diluted shares outstanding (millions) | 136.0 | 139.3 | 143.3 |
| Earnings per share – basic | \$ 18.05 \$ | 17.58 \$ | 13.65 |
| Earnings per share – diluted | \$ 17.97 \$ | 17.52 \$ | 13.61 |

In 2020, there were no options excluded from the computation of diluted earnings per share (2019 – nil; 2018 – 0.2 million).

8. Other comprehensive loss and accumulated other comprehensive loss

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

| (in millions of Canadian dollars) | Before tax amount | Income tax (expense) recovery | Net of tax amount |
|--|----------------------|-------------------------------------|----------------------|
| For the year ended December 31, 2020 | | | |
| Unrealized foreign exchange (loss) gain on: | | | |
| Translation of the net investment in U.S. subsidiaries | \$ (118) \$ | — \$ | (118) |
| Translation of the U.S. dollar-denominated long-term debt designated as a hedge of the net investment in U.S. subsidiaries (Note 17) | 136 | (18) | 118 |
| Realized loss on derivatives designated as cash flow hedges recognized in income | 9 | (3) | 6 |
| Change in pension and other benefits actuarial gains and losses | (403) | 108 | (295) |
| Change in prior service pension and other benefit costs | (4) | 1 | (3) |
| Other comprehensive loss | \$ (380) \$ | 88 \$ | (292) |
| For the year ended December 31, 2019 | | | |
| Unrealized foreign exchange (loss) gain on: | | | |
| Translation of the net investment in U.S. subsidiaries | \$ (251) \$ | — \$ | (251) |
| Translation of the U.S. dollar-denominated long-term debt designated as a hedge of the net investment in U.S. subsidiaries (Note 17) | 288 | (38) | 250 |
| Realized loss on derivatives designated as cash flow hedges recognized in income | 10 | (2) | 8 |
| Change in pension and other benefits actuarial gains and losses | (661) | 175 | (486) |
| Other comprehensive loss | \$ (614) \$ | 135 \$ | (479) |
| For the year ended December 31, 2018 | | | |
| Unrealized foreign exchange gain (loss) on: | | | |
| Translation of the net investment in U.S. subsidiaries | \$ 419 \$ | — \$ | 419 |
| Translation of the U.S. dollar-denominated long-term debt designated as a hedge of the net investment in U.S. subsidiaries (Note 17) | (479) | 64 | (415) |
| Change in derivatives designated as cash flow hedges: | | | |
| Realized loss on cash flow hedges recognized in income | 10 | (3) | 7 |
| Unrealized gain on cash flow hedges and other | 28 | (8) | 20 |
| Change in pension and other benefits actuarial gains and losses | (447) | 115 | (332) |
| Change in prior service pension and other benefit costs | (2) | 1 | (1) |
| Other comprehensive loss | \$ (471) \$ | 169 \$ | (302) |

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

| (in millions of Canadian dollars) | 2020 | 2019 |
|--|---------------|---------|
| Unrealized foreign exchange gain on translation of the net investment in U.S. subsidiaries | \$ 493 \$ | 611 |
| 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 | (381) | (499) |
| Net deferred losses on derivatives and other | (48) | (54) |
| Amounts for defined benefit pension and other post-retirement plans not recognized in income (Note 22) | (2,878) | (2,580) |
| Accumulated other comprehensive loss | \$ (2,814) \$ | (2,522) |

Changes in Accumulated other comprehensive loss by component are as follows:

| (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, January 1, 2020 | \$ 112 | \$ (54) | \$ (2,580) | \$ (2,522) |
| Other comprehensive loss before reclassifications | — | (2) | (430) | (432) |
| Amounts reclassified from accumulated other comprehensive loss | — | 8 | 132 | 140 |
| Net other comprehensive income (loss) | — | 6 | (298) | (292) |
| Closing balance, December 31, 2020 | \$ 112 | \$ (48) | \$ (2,878) | \$ (2,814) |
| Opening balance, January 1, 2019 | \$ 113 | \$ (62) | \$ (2,094) | \$ (2,043) |
| Other comprehensive loss before reclassifications | (1) | — | (550) | (551) |
| Amounts reclassified from accumulated other comprehensive loss | — | 8 | 64 | 72 |
| Net other comprehensive (loss) income | (1) | 8 | (486) | (479) |
| Closing balance, December 31, 2019 | \$ 112 | \$ (54) | \$ (2,580) | \$ (2,522) |

⁽¹⁾ Amounts are presented net of tax.

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

| (in millions of Canadian dollars) | 2020 | 2019 |
|--|--------|-------|
| Amortization of prior service costs ⁽¹⁾ | \$ (1) | — |
| Recognition of net actuarial loss ⁽¹⁾ | 180 | 84 |
| Total before income tax | 179 | 84 |
| Income tax recovery | (47) | (20) |
| Total net of income tax | \$ 132 | \$ 64 |

⁽¹⁾ Impacts "Other components of net periodic benefit recovery" on the Consolidated Statements of Income.

9. Accounts receivable, net

| (in millions of Canadian dollars) | As at December 31, 2020 | | | As at December 31, 2019 ⁽¹⁾ | | |
|-----------------------------------|-------------------------|-------------|--------|--|-------------|--------|
| | Freight | Non-Freight | Total | Freight | Non-Freight | Total |
| Total accounts receivable | \$ 662 | \$ 203 | \$ 865 | \$ 637 | \$ 210 | \$ 847 |
| Allowance for credit losses | (25) | (15) | (40) | (26) | (16) | (42) |
| Total accounts receivable, net | \$ 637 | \$ 188 | \$ 825 | \$ 611 | \$ 194 | \$ 805 |

⁽¹⁾ Prior year amounts have not been adjusted under the modified retrospective method (Note 2).

| (in millions of Canadian dollars) | For the twelve months ended December 31, 2020 | | |
|---|---|-------------|---------|
| | Freight | Non-Freight | Total |
| Allowance for credit losses, opening balance ⁽¹⁾ | \$ (27) | \$ (16) | \$ (43) |
| Current period credit loss provision, net | 2 | 1 | 3 |
| Allowance for credit losses, closing balance | \$ (25) | \$ (15) | \$ (40) |

⁽¹⁾ Opening balance at January 1, 2020 was restated as described in Note 2.

10. Business combinations

DRTP

On December 22, 2020, CP completed its acquisition of the 83.5% ownership of the Detroit River Tunnel Partnership ("DRTP") held by OMERS Infrastructure Management Inc. ("OMERS") for cash, net of cash acquired, of \$398 million. The purchase price is subject to customary closing adjustments, including any final adjustment for closing working capital and certain closing costs. With this acquisition CP obtained 100% ownership of DRTP. The acquisition of DRTP will reduce CP's operating costs related to movements through the tunnel which amounted to approximately \$34 million in 2020, and better integrate the eastern part of the network. DRTP owns a 1.6-mile rail tunnel linking Windsor, Ontario, and Detroit, Michigan and additional, separate lands in both cities. The acquisition was funded with cash from operations and CP's commercial paper program.

The acquisition of DRTP has been accounted for as a business combination under the acquisition method of accounting. The acquired assets and assumed liabilities are recorded at their estimated fair values at the date of acquisition. The fair values were estimated by applying an income approach using the discounted cash flow method of future cash flows, appraised land values reflecting a corridor enhancement factor where appropriate, and depreciated replacement cost for depreciable assets including the tunnel, track, signaling systems, and other railway related infrastructure assets.

Prior to the close of the transaction, CP owned a 16.5% interest in DRTP, which was accounted for as an equity method investment. The previously held equity investment was remeasured to fair value which was determined from the negotiated purchase price that reflected a market value established in a competitive bid process. As a result of the acquisition, the Company recognized a before-tax gain of \$68 million on the remeasurement to fair value of its equity interest within "Purchased services and other", calculated as the difference between the fair value of CP's 16.5% interest in DRTP of \$81 million and the book value of the interest of \$13 million.

The purchase price allocation was prepared on a preliminary basis and is subject to change as additional information becomes available concerning the fair value and tax bases of the net assets acquired. Any adjustments to the purchase price allocation will be made as soon as practicable but no later than one year from the date of acquisition.

The following summarizes the estimated fair values of the acquired assets and liabilities of DRTP:

| (in millions of Canadian dollars) | December 22, 2020 |
|--|-------------------|
| Fair value of net assets acquired: | |
| Accounts receivable, net | \$ 5 |
| Properties | 436 |
| Intangible assets (Note 13) | 4 |
| Accounts payable and accrued liabilities | (1) |
| Deferred taxes | (55) |
| Total identifiable assets and liabilities | \$ 389 |
| Goodwill (Note 13) | 90 |
| | \$ 479 |
| Consideration: | |
| Cash, net of cash acquired | \$ 398 |
| Fair value of previously held equity method investment | 81 |
| Total consideration | \$ 479 |

The goodwill of \$90 million relates primarily to the contract that DRTP has for CP's use of the tunnel and deferred taxes recognized as a result of the purchase price allocation. The goodwill recognized is not deductible for tax purposes.

Prior to the acquisition of DRTP, CP had pre-existing agreements to use the tunnel and to operate and manage the tunnel on behalf of DRTP. On acquisition, no gain or loss was recognized in respect of the effective settlement of these pre-existing relationships as they were determined to be at fair market value based on an assessment of current market conditions and market participants.

Acquired cash and cash equivalents of \$6 million is presented as a reduction of cash used in investing activities in the Company's Consolidated Statements of Cash Flows.

CP has not provided pro forma information relating to the pre-acquisition period as it is not material.

CMQ

On December 30, 2019, CP purchased 100% of Central Maine & Québec Railway Canada Inc. ("CMQ Canada") and Central Maine & Québec Railway U.S. Inc. ("CMQ U.S.") (together "CMQ") for cash consideration of \$174 million. CMQ owns 237 miles of rail lines in Québec and 244 miles of rail lines in Maine and Vermont.

CMQ U.S.

The acquisition of CMQ U.S. was subject to approval from the United States Surface Transportation Board ("STB"). From the December 30, 2019 date of purchase, all purchased shares of CMQ U.S. were held in an independent voting trust (the "Trust") pending the STB's approval of CP's application for control of CMQ U.S. Approval was granted with an effective date of June 3, 2020. Between December 30, 2019 and June 3, 2020, CP accounted for its acquisition of CMQ U.S. as an equity method investment. During this time, CP paid additional consideration for CMQ of \$3 million, representing changes from the finalization of previously estimated closing date working capital.

On June 3, 2020 the Trust was dissolved and CP assumed control of CMQ U.S. At this time, CP accounted for its acquisition in CMQ U.S. as a business combination using the acquisition method of accounting. Accordingly, the acquired tangible and intangible assets and assumed liabilities were recorded at their estimated fair values as at June 3, 2020 and results from operations and cash flows were consolidated prospectively. There was no material change in the acquisition-date fair value of the equity interest held by the Company in CMQ U.S. immediately before the acquisition date. Fair values were determined primarily through the use of an income approach.

After a measurement period adjustment of \$1 million to increase Other long-term liabilities and goodwill resulting from the finalization of acquisition date deferred tax, the final allocation of total consideration to the fair values of the acquired assets and liabilities of CMQ U.S. is summarized as follows:

| (in millions of Canadian dollars) | June 3, 2020 |
|--|---------------|
| Fair value of net assets acquired: | |
| Cash and cash equivalents | \$ 22 |
| Accounts receivable, net | 2 |
| Properties | 54 |
| Intangible assets (Note 13) | 27 |
| Accounts payable and accrued liabilities | (13) |
| Other long-term liabilities | (6) |
| Total identifiable assets and liabilities | \$ 86 |
| Goodwill (Note 13) | 52 |
| | \$ 138 |
| Consideration: | |
| Fair value of previously held equity method investment | \$ 138 |

Goodwill of \$52 million relates primarily to expected operating business synergies between the Company and CMQ U.S. The factors that contribute to the goodwill are revenue growth from customers which are currently not served by CP, access to new routes, and an assembled workforce. Goodwill recognized is not deductible for tax purposes.

Intangible assets of \$27 million reflect customer lists acquired in the purchase of CMQ U.S., and have amortization periods of 20 years.

Acquired cash and cash equivalents of \$22 million is presented as a reduction of cash used in investing activities on the Company's Consolidated Statement of Cash Flows, and is presented net of finalized closing working capital adjustments for CMQ of \$3 million as described above.

CP has not provided pro forma information relating to the pre-acquisition period as it is not material.

CMQ Canada

The acquisition of CMQ Canada was accounted for as a business combination under the acquisition method of accounting. The acquired tangible and intangible assets and assumed liabilities are recorded at their estimated fair values at the date of acquisition.

There have been no adjustments to the preliminary purchase price allocation. The final purchase price and allocation of the total consideration to the fair values of assets and liabilities acquired for CMQ Canada is summarized as follows:

| (in millions of Canadian dollars) | December 30, 2019 |
|---|-------------------|
| Fair value of net assets acquired: | |
| Accounts receivable, net | \$ 7 |
| Properties | 42 |
| Intangible assets (Note 13) | 5 |
| Accounts payable and accrued liabilities | (2) |
| Long-term debt maturing within one year (Note 16) | (11) |
| Other long-term liabilities | (4) |
| Total identifiable assets and liabilities | 37 |
| Goodwill (Note 13) | 10 |
| | \$ 47 |
| Consideration: | |
| Cash, net of cash acquired | \$ 47 |

The goodwill of \$10 million relates primarily to expected operating business synergies. The factors that contribute to the goodwill are revenue growth from customers which are currently not served by CP, access to new routes and an assembled workforce. The goodwill recognized is not deductible for tax purposes.

CP has not provided pro forma information relating to the pre-acquisition period as it is not material.

11. Investments

| (in millions of Canadian dollars) | 2020 | 2019 |
|---|--------|--------|
| Investment in CMQ U.S. accounted for on an equity basis (Note 10) | \$ — | \$ 127 |
| Other rail investments accounted for on an equity basis | 150 | 166 |
| Other investments | 49 | 48 |
| Total investments | \$ 199 | \$ 341 |

12. Properties

| (in millions of Canadian dollars except percentages) | 2020 | | | 2020 | | | 2019 | | |
|--|---|-----------|--------------------------|----------------|-----------|--------------------------|----------------|--|--|
| | Weighted-average annual depreciation rate | Cost | Accumulated depreciation | Net book value | Cost | Accumulated depreciation | Net book value | | |
| Track and roadway | 2.8 % | \$ 20,676 | \$ 5,859 | \$ 14,817 | \$ 19,299 | \$ 5,522 | \$ 13,777 | | |
| Buildings | 2.9 % | 937 | 259 | 678 | 833 | 237 | 596 | | |
| Rolling stock | 2.8 % | 4,702 | 1,498 | 3,204 | 4,529 | 1,445 | 3,084 | | |
| Information systems software ⁽¹⁾ | 9.3 % | 569 | 253 | 316 | 527 | 215 | 312 | | |
| Other | 5.2 % | 2,167 | 760 | 1,407 | 2,067 | 680 | 1,387 | | |
| Total | | \$ 29,051 | \$ 8,629 | \$ 20,422 | \$ 27,255 | \$ 8,099 | \$ 19,156 | | |

⁽¹⁾ During 2020, CP capitalized costs attributable to the design and development of internal-use software in the amount of \$45 million (2019 – \$55 million; 2018 – \$53 million). Current year depreciation expense related to internal use software was \$42 million (2019 – \$44 million; 2018 – \$49 million).

Finance leases included in properties

| (in millions of Canadian dollars) | 2020 | | | 2019 | | |
|---------------------------------------|--------|--------------------------|----------------|--------|--------------------------|----------------|
| | Cost | Accumulated depreciation | Net book value | Cost | Accumulated depreciation | Net book value |
| Rolling stock | 302 | 138 | 164 | 303 | 130 | 173 |
| Other | 8 | 1 | 7 | 4 | — | 4 |
| Total assets held under finance lease | \$ 310 | \$ 139 | \$ 171 | \$ 307 | \$ 130 | \$ 177 |

13. Goodwill and intangible assets

| (in millions of Canadian dollars) | Goodwill | | Intangible assets | | | Total goodwill and intangible assets |
|-------------------------------------|---------------------|--------------|-------------------|--------------------------|---------------------|--------------------------------------|
| | Net carrying amount | Cost | Cost | Accumulated amortization | Net carrying amount | |
| Balance at December 31, 2018 | \$ 194 | \$ 22 | \$ (14) | \$ 8 | \$ 202 | |
| Additions (Note 10) | 10 | 5 | — | 5 | 15 | |
| Amortization | — | — | (1) | (1) | (1) | |
| Foreign exchange impact | (10) | — | — | — | (10) | |
| Balance at December 31, 2019 | 194 | 27 | (15) | 12 | 206 | |
| Additions (Note 10) | 142 | 31 | — | 31 | 173 | |
| Amortization | — | — | (3) | (3) | (3) | |
| Foreign exchange impact | (7) | (3) | — | (3) | (10) | |
| Balance at December 31, 2020 | \$ 329 | \$ 55 | \$ (18) | \$ 37 | \$ 366 | |

14. Other assets

| (in millions of Canadian dollars) | 2020 | 2019 |
|--------------------------------------|--------|--------|
| Operating lease ROU assets (Note 19) | \$ 316 | \$ 358 |
| Contracted customer incentives | 60 | 32 |
| Long-term materials | 37 | 41 |
| Other | 25 | 20 |
| Total other assets | \$ 438 | \$ 451 |

15. Accounts payable and accrued liabilities

| (in millions of Canadian dollars) | 2020 | 2019 |
|---|-----------------|-----------------|
| Trade payables | \$ 401 | \$ 453 |
| Accrued charges | 294 | 348 |
| Accrued interest | 134 | 131 |
| Dividends payable | 127 | 114 |
| Stock-based compensation liabilities | 121 | 85 |
| Income and other taxes payable | 115 | 139 |
| Payroll-related accruals | 68 | 78 |
| Operating lease liabilities (Note 19) | 63 | 69 |
| Accrued vacation | 59 | 60 |
| Personal injury and other claims provision | 37 | 55 |
| Deferred revenue (Note 3) | 27 | 142 |
| Deferred real estate lease and license revenue ⁽¹⁾ | 11 | 10 |
| Provision for environmental remediation (Note 18) | 9 | 7 |
| Other ⁽¹⁾ | 1 | 2 |
| Total accounts payable and accrued liabilities | \$ 1,467 | \$ 1,693 |

⁽¹⁾ 2019 comparative figures have been reclassified to conform with current presentation.

16. Debt

Long-term debt includes debt instruments and finance lease obligations. The following table outlines the Company's outstanding long-term debt as at December 31, 2020:

| (in millions of Canadian dollars except percentages) | | | Maturity | Currency in which payable | 2020 | 2019 |
|--|------------------------------|-----|----------------|---------------------------|-----------------|----------|
| 9.450% | 30-year Debentures | (A) | Aug 2021 | U.S.\$ | 318 | 325 |
| 5.100% | 10-year Medium Term Notes | (A) | Jan 2022 | CDN\$ | 125 | 125 |
| 4.500% | 10-year Notes | (A) | Jan 2022 | U.S.\$ | 318 | 324 |
| 4.450% | 12.5-year Notes | (A) | Mar 2023 | U.S.\$ | 445 | 454 |
| 2.900% | 10-year Notes | (A) | Feb 2025 | U.S.\$ | 891 | 909 |
| 3.700% | 10.5-year Notes | (A) | Feb 2026 | U.S.\$ | 318 | 324 |
| 4.000% | 10-year Notes | (A) | Jun 2028 | U.S.\$ | 636 | 649 |
| 3.150% | 10-year Notes | (A) | Mar 2029 | CDN\$ | 399 | 399 |
| 2.050% | 10-year Notes | (A) | Mar 2030 | U.S.\$ | 636 | — |
| 7.125% | 30-year Debentures | (A) | Oct 2031 | U.S.\$ | 446 | 454 |
| 5.750% | 30-year Debentures | (A) | Mar 2033 | U.S.\$ | 312 | 318 |
| 4.800% | 20-year Notes | (A) | Sep 2035 | U.S.\$ | 381 | 388 |
| 5.950% | 30-year Notes | (A) | May 2037 | U.S.\$ | 567 | 578 |
| 6.450% | 30-year Notes | (A) | Nov 2039 | CDN\$ | 400 | 400 |
| 5.750% | 30-year Notes | (A) | Jan 2042 | U.S.\$ | 313 | 319 |
| 4.800% | 30-year Notes | (A) | Aug 2045 | U.S.\$ | 698 | 712 |
| 3.050% | 30-year Notes | (A) | Mar 2050 | CDN\$ | 298 | — |
| 6.125% | 100-year Notes | (A) | Sep 2115 | U.S.\$ | 1,146 | 1,169 |
| 8.000% | 5-year Promissory Notes | (B) | up to Jun 2020 | U.S.\$ | — | 11 |
| 5.41% | Senior Secured Notes | (C) | Mar 2024 | U.S.\$ | 89 | 100 |
| 6.91% | Secured Equipment Notes | (D) | Oct 2024 | CDN\$ | 75 | 91 |
| 7.49% | Equipment Trust Certificates | (E) | Jan 2021 | U.S.\$ | 14 | 55 |
| Obligations under finance leases | | | | | | |
| 1.99% -2.97% | | (F) | 2021 - 2023 | CDN\$/U.S.\$ | 4 | 3 |
| 6.99% | | (F) | Mar 2022 | U.S.\$ | 97 | 99 |
| 6.57% | | (F) | Dec 2026 | U.S.\$ | 38 | 45 |
| 12.77% | | (F) | Jan 2031 | CDN\$ | 4 | 4 |
| Commercial Paper | | | up to Feb 2021 | U.S.\$ | 820 | 516 |
| | | | | | 9,788 | 8,771 |
| Perpetual 4% Consolidated Debenture Stock | | | | U.S.\$ | 39 | 39 |
| Perpetual 4% Consolidated Debenture Stock | | | | G.B.£ | 6 | 6 |
| | | | | | 9,833 | 8,816 |
| Unamortized fees on long-term debt | | | | | (62) | (59) |
| | | | | | 9,771 | 8,757 |
| Less: Long-term debt maturing within one year | | | | | 1,186 | 599 |
| | | | | | \$ 8,585 | \$ 8,158 |

At December 31, 2020, the gross amount of long-term debt denominated in U.S. dollars was U.S. \$6,713 million (2019 – U.S. \$6,016 million).

Annual maturities and principal repayment requirements, excluding those pertaining to finance leases, for each of the five years following 2020 are (in millions): 2021 – \$1,178; 2022 – \$471; 2023 – \$475; 2024 – \$83; 2025 – \$891.

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

A. These debentures and notes are presented net of unamortized discounts, pay interest semi-annually, and are unsecured but carry a negative pledge.

In 2020, the Company issued U.S. \$500 million 2.050% 10-year Notes due March 5, 2030 for net proceeds of U.S. \$495 million (\$662 million) and \$300 million 3.050% 30-year Notes due March 9, 2050 for net proceeds of \$296 million.

In 2019, the Company repaid U.S. \$350 million 7.250% 10-year Notes at maturity for a total of U.S. \$350 million (\$471 million). The Company also issued \$400 million 3.150% 10-year Notes due March 13, 2029 for net proceeds of \$397 million.

B. On December 30, 2019, through its business combination with CMQ Canada, the Company assumed CMQ Canada's obligations under the 8.00% 5-year Promissory Notes totalling U.S. \$8 million (\$11 million) owing to CMQ U.S (see Note 10). In 2020, these notes were settled.

C. The 5.41% Senior Secured Notes are collateralized by specific locomotive units with a carrying value of \$97 million at December 31, 2020. 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.

D. 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 \$54 million at December 31, 2020. 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.

E. The 7.49% Equipment Trust Certificates are secured by specific locomotive units with a carrying value of \$91 million at December 31, 2020. 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.

F. The carrying value of the assets collateralizing finance lease obligations was \$171 million at December 31, 2020.

G. 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 14 highly rated financial institutions for a commitment amount of U.S. \$1.3 billion, which consists of a U.S. \$1.0 billion tranche maturing September 27, 2024 and a U.S. \$300 million tranche maturing September 27, 2021. The facility can accommodate draws of cash and/or letters of credit at market competitive pricing. The agreement requires the Company to maintain a financial covenant in conjunction with the facility. As at December 31, 2020 and 2019, the Company was in compliance with all terms and conditions of the credit facility arrangements and satisfied the financial covenant. During the year ended December 31, 2020, the Company drew and fully repaid U.S. \$100 million from the U.S. \$300 million tranche of its revolving credit facility. As at December 31, 2020 and 2019, the facility was undrawn.

The Company also 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. This commercial paper program is backed by the revolving credit facility. As at December 31, 2020, the Company had total commercial paper borrowings of U.S. \$644 million (\$820 million), included in "Long-term debt maturing within one year" on the Company's Consolidated Balance Sheets (December 31, 2019 – \$516 million). The weighted-average interest rate on these borrowings was 0.27% (December 31, 2019 - 2.03%). The Company presents issuances and repayments of commercial paper, all of which have a maturity of less than 90 days, in the Company's Consolidated Statements of Cash Flows on a net basis.

CP has bilateral letter of credit facilities with six 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. As at December 31, 2020 and 2019, the Company did not have any collateral posted on its bilateral letter of credit facilities but had letters of credit drawn of \$59 million (December 31, 2019 – \$80 million) from a total available amount of \$300 million (December 31, 2019 – \$300 million).

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.

The Company's short-term financial instruments include cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities, and short-term borrowings including commercial paper. The carrying value of short-term financial instruments approximate their fair values.

The carrying value of the Company's long-term debt does not approximate its fair value. The estimated fair value has been determined based on market information where available, or by discounting future payments of principal and interest at estimated interest rates expected to be available to the Company at period end. All measurements are classified as Level 2. The Company's long-term debt, including current maturities, with a carrying value of \$8,951 million at December 31, 2020 (December 31, 2019 - \$8,241 million), had a fair value of \$11,597 million (December 31, 2019 - \$10,149 million).

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 Company's 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 the 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 foreign subsidiaries with a U.S. dollar functional currency. The majority of the Company's U.S. dollar-denominated long-term debt has been designated as a hedge of the net investment in these 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 effect of the net investment hedge recognized in "Other comprehensive loss" in 2020 was an FX gain of \$136 million, the majority of which was unrealized (2019 – unrealized gain of \$288 million; 2018 – unrealized loss of \$479 million) (see Note 8).

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 finance 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

During the second quarter of 2018, the Company settled a notional amount of U.S. \$500 million of forward starting swaps related to the U.S. \$500 million 4.000% 10-year Notes issued in the same period. The fair value of these derivative instruments at the time of settlement was a loss of U.S. \$19 million (\$24 million). The Company no longer has any active forward starting swaps.

For the year ended December 31, 2020, a net loss of \$9 million related to previously settled forward starting swap hedges has been amortized to "Net interest expense" (2019 – loss of \$9 million; 2018 – loss of \$10 million). The Company expects that during the next 12 months, \$9 million of net losses will be amortized to "Net interest expense".

Treasury rate locks

At December 31, 2020, the Company had net unamortized losses related to interest rate locks, which are accounted for as cash flow hedges, settled in previous years totalling \$17 million (December 31, 2019 – \$18 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 \$1 million increase to "Net interest expense" and "Other comprehensive loss" in 2020 (2019 – \$1 million; 2018 – \$1 million). The Company expects that during the next 12 months, a net loss of \$1 million related to these previously settled derivatives will be reclassified to "Net interest expense".

18. Other long-term liabilities

| (in millions of Canadian dollars) | 2020 | 2019 |
|---|--------|--------|
| Operating lease liabilities, net of current portion (Note 19) | \$ 248 | \$ 285 |
| Stock-based compensation liabilities, net of current portion | 146 | 111 |
| Provision for environmental remediation, net of current portion ⁽¹⁾ | 71 | 70 |
| Deferred revenue, net of current portion (Note 3) ⁽²⁾ | 34 | 4 |
| Deferred real estate lease and license revenue, net of current portion ⁽³⁾ | 18 | 20 |
| Deferred gains on sale leaseback transactions ⁽³⁾ | 5 | 6 |
| Other, net of current portion ⁽²⁾ | 63 | 66 |
| Total other long-term liabilities | \$ 585 | \$ 562 |

⁽¹⁾ As at December 31, 2020, the aggregate provision for environmental remediation, including the current portion was \$80 million (2019 – \$77 million).

⁽²⁾ 2019 comparative figures have been reclassified to conform with current presentation.

⁽³⁾ The deferred real estate lease and license revenue 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 activities 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 2030.

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 2020 was \$10 million (2019 – \$6 million; 2018 – \$6 million).

19. Leases

The Company's leases have remaining terms of less than one year to 14 years, some include options to extend up to an additional 10 years, and some include options to terminate within one year.

Residual value guarantees are provided on certain vehicle operating leases. Cumulatively, these guarantees are limited to \$1 million and are not included in lease liabilities as it is not currently probable that any amounts will be owed.

Components of lease expense for the year ended December 31 are as follows:

| (in millions of Canadian dollars) | 2020 | 2019 |
|-------------------------------------|---------------|---------------|
| Operating lease cost | \$ 83 | \$ 89 |
| Short-term lease cost | 10 | 10 |
| Variable lease cost | 13 | 13 |
| Sublease income | (3) | (3) |
| Finance Lease Cost | | |
| Amortization of right-of-use assets | 9 | 9 |
| Interest on lease liabilities | 11 | 11 |
| Total lease costs | \$ 123 | \$ 129 |

Supplemental balance sheet information related to leases is as follows:

| (in millions of Canadian dollars) | Classification | 2020 | 2019 |
|-----------------------------------|--|--------|--------|
| Assets | | | |
| Operating | Other assets | \$ 316 | \$ 358 |
| Finance | Properties, net book value | 171 | 177 |
| Liabilities | | | |
| Current | | | |
| Operating | Accounts payable and accrued liabilities | 63 | 69 |
| Finance | Long-term debt maturing within one year | 8 | 7 |
| Long-term | | | |
| Operating | Other long-term liabilities | 248 | 285 |
| Finance | Long-term debt | 135 | 144 |

The following table provides the Company's weighted-average remaining lease terms and discount rates:

| | 2020 | 2019 |
|--|---------|---------|
| Weighted-Average Remaining Lease Term | | |
| Operating leases | 7 years | 7 years |
| Finance leases | 3 years | 4 years |
| Weighted-Average Discount Rate | | |
| Operating leases | 3.32 % | 3.45 % |
| Finance leases | 7.06 % | 7.07 % |

Supplemental information related to leases is as follows:

| (in millions of Canadian dollars) | 2020 | 2019 |
|---|-------|-------|
| Cash paid for amounts included in measurement of lease liabilities | | |
| Operating cash outflows from operating leases | \$ 74 | \$ 82 |
| Operating cash outflows from finance leases | 10 | 10 |
| Financing cash outflows from finance leases | 8 | 6 |
| Right-of-use assets obtained in exchange for lease liabilities | | |
| Operating leases | 34 | 38 |
| Finance leases | 4 | 4 |

The following table provides the maturities of lease liabilities for the next five years and thereafter as at December 31, 2020:

| (in millions of Canadian dollars) | Finance Leases | Operating Leases |
|--|----------------|------------------|
| 2021 | \$ 11 | \$ 71 |
| 2022 | 107 | 59 |
| 2023 | 9 | 53 |
| 2024 | 8 | 42 |
| 2025 | 8 | 34 |
| Thereafter | 12 | 88 |
| Total lease payments | 155 | 347 |
| Imputed interest | (12) | (36) |
| Present value of lease payments | \$ 143 | \$ 311 |

20. 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 an unlimited number of Second Preferred Shares. At December 31, 2020, no First or Second Preferred Shares had been issued.

The following table summarizes information related to Common Share balances as at December 31:

| (number of shares in millions) | 2020 | 2019 | 2018 |
|---------------------------------------|-------|-------|-------|
| Share capital, January 1 | 137.0 | 140.5 | 144.9 |
| CP Common Shares repurchased | (4.0) | (3.8) | (4.6) |
| Shares issued under stock option plan | 0.3 | 0.3 | 0.2 |
| Share capital, December 31 | 133.3 | 137.0 | 140.5 |

The change in the "Share capital" balance includes \$10 million of stock-based compensation transferred from "Additional paid-in capital" (2019 – \$7 million; 2018 – \$12 million).

Share repurchases

On December 17, 2019, the Company announced a normal course issuer bid ("NCIB"), commencing December 20, 2019, to purchase up to 4.80 million Common Shares in the open market for cancellation on or before December 19, 2020. Upon expiry of this NCIB, the Company had purchased 4.27 million Common Shares for \$1,577 million.

On October 19, 2018, the Company announced a NCIB, commencing October 24, 2018, to purchase up to 5.68 million Common Shares for cancellation on or before October 23, 2019. The Company completed this NCIB on October 23, 2019.

On May 10, 2017, the Company announced a NCIB, commencing May 15, 2017, to purchase up to 4.38 million Common Shares in the open market for cancellation on or before May 14, 2018. The Company completed this NCIB on May 10, 2018.

All purchases were made in accordance with the respective NCIB at prevailing market prices plus brokerage fees, or such other prices that were permitted by the Toronto Stock Exchange ("TSX"), 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 programs for each of the years ended December 31:

| | 2020 | 2019 | 2018 |
|--|-----------|-----------|-----------|
| Number of Common Shares repurchased ⁽¹⁾ | 3,973,076 | 3,794,149 | 4,683,162 |
| Weighted-average price per share ⁽²⁾ | \$ 371.74 | \$ 300.65 | \$ 240.68 |
| Amount of repurchase (in millions) ⁽²⁾ | \$ 1,477 | \$ 1,141 | \$ 1,127 |

⁽¹⁾ Includes shares repurchased but not yet cancelled at year end.

⁽²⁾ Includes brokerage fees.

On January 27, 2021, the Company announced that the TSX has accepted its notice to implement a new NCIB, commencing January 29, 2021, to purchase up to approximately 3.33 million Common Shares for cancellation on or before January 28, 2022.

21. Change in non-cash working capital balances related to operations

| (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|--|----------|---------|----------|
| (Use) source of cash: | | | |
| Accounts receivable, net | \$ (61) | \$ 27 | \$ (107) |
| Materials and supplies | (15) | (8) | (11) |
| Other current assets | (5) | (24) | 30 |
| Accounts payable and accrued liabilities | (308) | (21) | 153 |
| Change in non-cash working capital | \$ (389) | \$ (26) | \$ 65 |

22. Pensions and other benefits

The Company has both defined benefit ("DB") and defined contribution ("DC") pension plans. At December 31, 2020, the Canadian pension plans represent nearly all of total combined pension plan assets and nearly all 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, 2020, the Canadian other benefits plans represent nearly all of total combined other plan obligations.

The Audit and 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 by investment managers 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 plan 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 long-term return expectation for fixed income, public equity, real estate, infrastructure, private debt, 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, infrastructure, and private debt securities.

The benefit obligation is discounted using a discount rate that is a blended yield to maturity for a hypothetical portfolio of high-quality debt instruments with cash flows matching projected 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 | | | Other benefits | | |
|--|----------|----------|----------|----------------|-------|-------|
| | 2020 | 2019 | 2018 | 2020 | 2019 | 2018 |
| Current service cost (benefits earned by employees) | \$ 140 | \$ 107 | \$ 120 | \$ 12 | \$ 11 | \$ 12 |
| Other components of net periodic benefit cost (recovery): | | | | | | |
| Interest cost on benefit obligation | 406 | 450 | 438 | 17 | 20 | 19 |
| Expected return on fund assets | (945) | (947) | (955) | — | — | — |
| Recognized net actuarial loss | 177 | 84 | 114 | 4 | 12 | 2 |
| Amortization of prior service costs | (1) | (1) | (2) | — | 1 | — |
| Total other components of net periodic benefit (recovery) cost | (363) | (414) | (405) | 21 | 33 | 21 |
| Net periodic benefit (recovery) cost | \$ (223) | \$ (307) | \$ (285) | \$ 33 | \$ 44 | \$ 33 |

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 | | Other benefits | |
|---|-----------|-----------|----------------|--------|
| | 2020 | 2019 | 2020 | 2019 |
| Change in projected benefit obligation: | | | | |
| Benefit obligation at January 1 | \$ 12,610 | \$ 11,372 | \$ 541 | \$ 501 |
| Current service cost | 140 | 107 | 12 | 11 |
| Interest cost | 406 | 450 | 17 | 20 |
| Employee contributions | 42 | 41 | — | — |
| Benefits paid | (653) | (646) | (34) | (34) |
| Foreign currency changes | (5) | (10) | — | — |
| Plan amendments and other | 3 | — | — | — |
| Actuarial loss | 1,256 | 1,296 | 17 | 43 |
| Projected benefit obligation at December 31 | \$ 13,799 | \$ 12,610 | \$ 553 | \$ 541 |

The net actuarial losses for Pensions and Other benefits in 2020 were primarily due to the decrease in discount rate from 3.25% to 2.58%. The net actuarial losses for Pensions and Other benefits in 2019 were primarily due to the decrease in discount rate from 4.01% to 3.25%.

| (in millions of Canadian dollars) | Pensions | | Other benefits | |
|--|-----------|-----------|----------------|----------|
| | 2020 | 2019 | 2020 | 2019 |
| Change in fund assets: | | | | |
| Fair value of fund assets at January 1 | \$ 13,319 | \$ 12,349 | \$ 5 | \$ 4 |
| Actual return on fund assets | 1,634 | 1,528 | — | 1 |
| Employer contributions | 27 | 53 | 34 | 34 |
| Employee contributions | 42 | 41 | — | — |
| Benefits paid | (653) | (646) | (34) | (34) |
| Foreign currency changes | (4) | (6) | — | — |
| Fair value of fund assets at December 31 | \$ 14,365 | \$ 13,319 | \$ 5 | \$ 5 |
| Funded status – plan surplus (deficit) | \$ 566 | \$ 709 | \$ (548) | \$ (536) |

The table below shows the aggregate pension projected benefit obligation and aggregate fair value of plan assets for pension plans with fair value of plan assets in excess of projected benefit obligations (i.e. surplus), and for pension plans with projected benefit obligations in excess of fair value of plan assets (i.e. deficit):

| (in millions of Canadian dollars) | 2020 | | 2019 | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| | Pension plans in surplus | Pension plans in deficit | Pension plans in surplus | Pension plans in deficit |
| Projected benefit obligation at December 31 | \$ (13,220) | \$ (579) | \$ (12,076) | \$ (534) |
| Fair value of fund assets at December 31 | 14,114 | 251 | 13,079 | 240 |
| Funded Status | \$ 894 | \$ (328) | \$ 1,003 | \$ (294) |

The DB pension plans' accumulated benefit obligation as at December 31, 2020 was \$13,528 million (2019 – \$12,201 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. For pension plans with accumulated benefit obligations in excess of fair value of plan assets (i.e. deficit), the aggregate pension accumulated benefit obligation as at December 31, 2020 was \$443 million (2019 – \$419 million) and the aggregate fair value of plan assets as at December 31, 2020 was \$187 million (2019 – \$186 million).

All Other benefits plans were in a deficit position at December 31, 2020 and 2019.

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

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

| (in millions of Canadian dollars) | Pensions | | Other benefits | |
|--|----------|----------|----------------|----------|
| | 2020 | 2019 | 2020 | 2019 |
| Pension asset | \$ 894 | \$ 1,003 | \$ — | \$ — |
| Accounts payable and accrued liabilities | (11) | (11) | (33) | (34) |
| Pension and other benefit liabilities | (317) | (283) | (515) | (502) |
| Total amount recognized | \$ 566 | \$ 709 | \$ (548) | \$ (536) |

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, 2020. During 2021, the Company expects to file with the pension regulator a new valuation performed as at January 1, 2021.

Accumulated other comprehensive loss

Amounts recognized in accumulated other comprehensive loss are as follows:

| (in millions of Canadian dollars) | Pensions | | Other benefits | |
|--------------------------------------|----------|----------|----------------|-------|
| | 2020 | 2019 | 2020 | 2019 |
| Net actuarial loss: | | | | |
| Other than deferred investment gains | \$ 3,960 | \$ 3,434 | \$ 104 | \$ 91 |
| Deferred investment gains | (95) | 41 | — | — |
| Prior service cost | 5 | 1 | 1 | 1 |
| Deferred income tax | (1,070) | (964) | (27) | (24) |
| Total (Note 8) | \$ 2,800 | \$ 2,512 | \$ 78 | \$ 68 |

Actuarial assumptions

Weighted-average actuarial assumptions used were approximately:

| (percentages) | 2020 | 2019 | 2018 |
|---|---------------------|---------------------|---------------------|
| Benefit obligation at December 31: | | | |
| Discount rate | 2.58 | 3.25 | 4.01 |
| Projected future salary increases | 2.75 | 2.75 | 2.75 |
| Health care cost trend rate | 5.00 ⁽¹⁾ | 5.50 ⁽¹⁾ | 6.00 ⁽¹⁾ |
| Benefit cost for year ended December 31: | | | |
| Discount rate | 3.25 | 4.01 | 3.80 |
| Expected rate of return on fund assets ⁽³⁾ | 7.25 | 7.50 | 7.75 |
| Projected future salary increases | 2.75 | 2.75 | 2.75 |
| Health care cost trend rate | 5.50 ⁽¹⁾ | 6.00 ⁽¹⁾ | 7.00 ⁽²⁾ |

⁽¹⁾ The health care cost trend rate was assumed to be 6.00% in 2019 and 5.50% in 2020 and is assumed to be 5.00% per year in 2021 and thereafter.

⁽²⁾ The health care cost trend rate was previously assumed to be 7.00% in 2018, and then decreasing by 0.50% per year to an ultimate rate of 5.00% per year in 2022 and thereafter.

⁽³⁾ The expected rate of return on fund assets that will be used to compute the 2021 net periodic benefit credit is 6.90%.

Plan assets

Plan assets are recorded at fair value. The major asset categories are public equity securities, fixed income securities, real estate, infrastructure, absolute return investments, and private debt. The fair values of the public equity and fixed income securities are primarily based on quoted market prices. Real estate and infrastructure values are based on the value of each fund's assets as calculated by the fund manager, generally using third party appraisals or discounted cash flow analysis and taking into account current market conditions and recent sales transactions where practical and appropriate. Private debt values are

based on the value of each fund's assets as calculated by the fund manager taking into account current market conditions and reviewed annually by external parties. 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 weighted-average asset allocation targets, and the weighted average policy range for each major asset class at year end were as follows:

| Asset allocation (percentage) | Asset allocation target | Policy range | Percentage of plan assets at December 31 | |
|--------------------------------|-------------------------|--------------|--|-------|
| | | | 2020 | 2019 |
| Cash and cash equivalents | 1.2 | 0 – 10 | 2.0 | 0.9 |
| Fixed income | 24.1 | 20 – 40 | 28.1 | 24.6 |
| Public equity | 45.1 | 35 – 55 | 49.3 | 54.5 |
| Real estate and infrastructure | 9.8 | 4 – 13 | 6.3 | 6.8 |
| Private debt | 9.8 | 4 – 13 | 3.3 | 2.4 |
| Absolute return | 10.0 | 4 – 13 | 11.0 | 10.8 |
| Total | 100.0 | | 100.0 | 100.0 |

Summary of the assets of the Company's DB pension plans

The following is a summary of the assets of the Company's DB pension plans at December 31, 2020 and 2019. As of December 31, 2020 and 2019, there were no plan assets classified as Level 3 valued investments.

| (in millions of Canadian dollars) | Assets Measured at Fair Value | | | Total Plan Assets |
|---------------------------------------|--|---|--|-------------------|
| | Quoted prices in active markets for identical assets (Level 1) | Significant other observable inputs (Level 2) | Investments measured at NAV ⁽¹⁾ | |
| December 31, 2020 | | | | |
| Cash and cash equivalents | \$ 219 | \$ — | \$ — | 219 |
| Fixed income | | | | |
| Government bonds ⁽²⁾ | 284 | 1,699 | — | 1,983 |
| Corporate bonds ⁽²⁾ | 691 | 1,144 | — | 1,835 |
| Mortgages ⁽³⁾ | 220 | 5 | — | 225 |
| Public equities | | | | |
| Canada | 1,183 | — | — | 1,183 |
| U.S. and international | 5,871 | 28 | — | 5,899 |
| Real estate ⁽⁴⁾ | — | — | 704 | 704 |
| Infrastructure ⁽⁵⁾ | — | — | 199 | 199 |
| Private debt ⁽⁶⁾ | — | — | 465 | 465 |
| Derivative instruments ⁽⁷⁾ | — | 71 | — | 71 |
| Absolute return ⁽⁸⁾ | | | | |
| Funds of hedge funds | — | — | 1,560 | 1,560 |
| Multi-strategy funds | — | — | 22 | 22 |
| | \$ 8,468 | \$ 2,947 | \$ 2,950 | 14,365 |
| December 31, 2019 | | | | |
| Cash and cash equivalents | \$ 112 | \$ — | \$ — | 112 |
| Fixed income | | | | |
| Government bonds ⁽²⁾ | 233 | 1,857 | — | 2,090 |
| Corporate bonds ⁽²⁾ | 273 | 819 | — | 1,092 |
| Mortgages ⁽³⁾ | 159 | 5 | — | 164 |
| Public equities | | | | |
| Canada | 1,351 | — | — | 1,351 |
| U.S. and international | 5,883 | 22 | — | 5,905 |
| Real estate ⁽⁴⁾ | — | — | 724 | 724 |
| Infrastructure ⁽⁵⁾ | — | — | 187 | 187 |
| Private debt ⁽⁶⁾ | — | — | 313 | 313 |
| Derivative instruments ⁽⁷⁾ | — | (59) | — | (59) |
| Absolute return ⁽⁸⁾ | | | | |
| Funds of hedge funds | — | — | 1,418 | 1,418 |
| Multi-strategy funds | — | — | 22 | 22 |
| | \$ 8,011 | \$ 2,644 | \$ 2,664 | 13,319 |

⁽¹⁾ Investments measured at net asset value ("NAV"):

Amounts are comprised of certain investments measured 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 values of mortgages are based on current market yields of financial instruments of similar maturity, coupon and risk factors.

⁽⁴⁾ Real estate:

Real estate fund values are based on the NAV of the funds that invest directly in real estate investments. The values of the investments have been estimated using the capital accounts representing the plan's ownership interest in the funds. Of the total, \$580 million is subject to redemption frequencies ranging from monthly to annually and a redemption notice period of 90 days (2019 – \$606 million). The remaining \$124 million is not subject to redemption and is normally returned through distributions as a result of the liquidation of the underlying real estate investments (2019 – \$118 million). As at December 31, 2020, there are \$32 million of unfunded commitments for real estate investments (December 31, 2019 – \$35 million).

⁽⁵⁾ Infrastructure:

Infrastructure fund values are based on the NAV of the funds that invest directly in infrastructure investments. The values of the investments have been estimated using the capital accounts representing the plans' ownership interest in the funds. Of the total, \$112 million is subject to redemption frequencies ranging from monthly to annually and a redemption notice period of 90 days (2019 – \$119 million). The remaining \$87 million is not subject to redemption and is normally returned through distributions as a result of the liquidation of the underlying infrastructure investments (2019 – \$68 million). As at December 31, 2020, there are \$491 million of unfunded commitments for infrastructure investments (December 31, 2019 – \$286 million).

⁽⁶⁾ Private debt:

Private debt fund values are based on the NAV of the funds that invest directly in private debt investments. The values of the investments have been estimated using the capital accounts representing the plans' ownership interest in the funds. Of the total, \$154 million is subject to redemption frequencies ranging from monthly to annually and a redemption notice period of 90 days (2019 – \$154 million). The remaining \$311 million is not subject to redemption and is normally returned through distributions as a result of the repayment of the underlying loans (2019 - \$159 million). As at December 31, 2020, there are \$533 million of unfunded commitments for private debt investments (December 31, 2019 – \$392 million).

⁽⁷⁾ Derivatives:

The investment managers 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). The Company may utilize derivatives directly, but only for the purpose of hedging foreign currency exposures. As at December 31, 2020, there are currency forwards with a notional value of \$1,041 million (December 31, 2019 – \$334 million) and a fair value of \$73 million (December 31, 2019 – \$13 million). The fixed income investment manager utilizes a portfolio of bond forwards for the purpose of reducing asset/liability interest rate exposure. As at December 31, 2020, there are bond forwards with a notional value of \$3,540 million (December 31, 2019 – \$3,269 million) and a negative fair value of \$2 million (December 31, 2019 – \$(72) million).

⁽⁸⁾ Absolute return:

The value of absolute return fund investments is based on the NAV reported by the fund administrators. The funds have different redemption policies with redemption notice periods varying from 60 to 95 days and frequencies ranging from monthly to triennially.

Additional plan assets information

The Company's primary investment objective for pension plan assets is to achieve a long-term return, net of all fees and expenses, that is sufficient for the plan's assets to satisfy the current and future obligations to plan beneficiaries, while minimizing the financial impact on the Company. 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 by investment managers, provided the total value of the underlying assets represented by financial derivatives (excluding currency forwards, liability hedging derivatives in fixed income portfolios, and derivatives held by absolute return funds) is limited to 30% of the market value of the fund.

The funded status of the plans is exposed to fluctuations in interest rates, which affects the relative values of the plans' liabilities and assets. In order to mitigate interest rate risk, the Company's main Canadian defined benefit pension plan utilizes a liability driven investment strategy in its fixed income portfolio, which uses a combination of long duration bonds and derivatives to hedge interest rate risk, managed by the investment manager. At December 31, 2020, the plan's solvency funded position was 47% hedged against interest rate risk (2019 – 45%).

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. At December 31, 2020, the plans were 33% exposed to the U.S. dollar net of currency forwards (40% excluding the currency forwards), 6% exposed to the Euro, and 14% exposed to various other currencies. At December 31, 2019, the plans were 39% exposed to the U.S. dollar net of currency forwards (41% excluding the currency forwards), 6% exposed to the Euro, and 14% exposed to various other currencies.

At December 31, 2020, fund assets included 109,008 of the Common Shares of the Company (2019 – 119,758) at a market value of \$48 million (2019 – \$40 million).

Estimated future benefit payments

The estimated future DB 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 |
|-----------------------------------|----|----------|----------------|
| 2021 | \$ | 632 | \$ 33 |
| 2022 | | 629 | 31 |
| 2023 | | 631 | 31 |
| 2024 | | 633 | 30 |
| 2025 | | 635 | 30 |
| 2026-2030 | | 3,203 | 142 |

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, where appropriate, and employer contributions plus investment income earned on those contributions.

In 2020, the net cost of the DC plans, which generally equals the employer's required contribution, was \$12 million (2019 – \$11 million; 2018 – \$10 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 2020 in respect of post-retirement medical benefits were \$3 million (2019 – \$3 million; 2018 – \$3 million).

23. Stock-based compensation

At December 31, 2020, the Company had several stock-based compensation plans including stock option plans, various cash-settled liability plans, and an employee share purchase plan. These plans resulted in an expense of \$170 million in 2020 (2019 – \$133 million; 2018 – \$75 million).

A. Stock option plan

The following table summarizes the Company's stock option plan as at December 31, 2020:

| | Options outstanding | | Non-vested options | |
|--|---------------------|---------------------------------|--------------------|--|
| | Number of options | Weighted-average exercise price | Number of options | Weighted-average grant date fair value |
| Outstanding, January 1, 2020 | 1,416,346 | \$ 199.12 | 761,784 | \$ 53.54 |
| Granted | 217,240 | \$ 344.04 | 217,240 | \$ 69.00 |
| Exercised | (232,034) | \$ 162.87 | N/A | N/A |
| Vested | N/A | N/A | (188,108) | \$ 50.91 |
| Forfeited | (13,839) | \$ 271.75 | (13,839) | \$ 58.29 |
| Expired | (347) | \$ 168.84 | N/A | N/A |
| Outstanding, December 31, 2020 | 1,387,366 | \$ 225.20 | 777,077 | \$ 58.40 |
| Vested or expected to vest at December 31, 2020 ⁽¹⁾ | 1,366,649 | \$ 223.98 | N/A | N/A |
| Exercisable, December 31, 2020 | 610,289 | \$ 177.65 | N/A | N/A |

⁽¹⁾ As at December 31, 2020, the weighted-average remaining term of vested or expected to vest options was 4.5 years with an aggregate intrinsic value of \$297 million.

The following table provides the number of stock options outstanding and exercisable as at December 31, 2020 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, 2020 at the Company's closing stock price of \$441.53.

| Range of exercise prices | Options outstanding | | | | Options exercisable | | |
|--------------------------|---------------------|--------------------------------------|---------------------------------|--------------------------------------|---------------------|---------------------------------|--------------------------------------|
| | 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) |
| \$65.06 - \$188.78 | 342,773 | 3.4 | \$ 141.26 | \$ 103 | 342,773 | \$ 141.26 | \$ 103 |
| \$188.79 - \$214.58 | 327,811 | 3.1 | \$ 196.82 | \$ 80 | 109,375 | \$ 203.83 | \$ 26 |
| \$214.59 - \$261.88 | 394,953 | 4.4 | \$ 244.17 | \$ 78 | 134,845 | \$ 232.54 | \$ 28 |
| \$261.89 - \$411.37 | 321,829 | 5.8 | \$ 320.21 | \$ 39 | 23,296 | \$ 272.56 | \$ 4 |
| Total ⁽¹⁾ | 1,387,366 | 4.2 | \$ 225.20 | \$ 300 | 610,289 | \$ 177.65 | \$ 161 |

⁽¹⁾ As at December 31, 2020, the total number of in-the-money stock options outstanding was 1,387,366 with a weighted-average exercise price of \$225.20. The weighted-average years to expiration of exercisable stock options is 3.6 years.

Pursuant to the employee plan, options may be exercised upon vesting, which is between 12 months and 48 months after the grant date, and will expire after seven years. Certain stock options granted in 2019 and 2018 vest upon the achievement of specific performance criteria. Under the fair value method, the fair value of the stock options at grant date was approximately \$15 million for options issued in 2020 (2019 – \$14 million; 2018 – \$16 million). The weighted-average fair value assumptions were approximately:

| | 2020 | 2019 | 2018 |
|---|------------------|-----------|-----------|
| Expected option life (years) ⁽¹⁾ | 4.75 | 5.00 | 5.00 |
| Risk-free interest rate ⁽²⁾ | 1.28% | 2.22% | 2.22% |
| Expected stock price volatility ⁽³⁾ | 23.14% | 25.04% | 24.81% |
| Expected annual dividends per share ⁽⁴⁾ | \$ 3.3200 | \$ 2.6191 | \$ 2.3854 |
| Expected forfeiture rate ⁽⁵⁾ | 4.41% | 6.05% | 4.70% |
| Weighted-average grant date fair value of options granted during the year | \$ 69.00 | \$ 63.69 | \$ 55.63 |

⁽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 term commensurate with the expected term of the option.

⁽³⁾ Based on the historical volatility of the Company's stock price 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 July 21, 2020, the Company announced an increase in its quarterly dividend to \$0.9500 per share, representing \$3.8000 on an annual basis.

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

In 2020, the expense for stock options (regular and performance) was \$16 million (2019 – \$14 million; 2018 – \$10 million). At December 31, 2020, there was \$12 million of total unrecognized compensation related to stock options which is expected to be recognized over a weighted-average period of approximately 1.1 years.

The total fair value of shares vested for the stock option plan during 2020 was \$10 million (2019 – \$8 million; 2018 – \$11 million).

The following table provides information related to all options exercised in the stock option plan during the years ended December 31:

| (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|---|-------|-------|-------|
| Total intrinsic value | \$ 52 | \$ 63 | \$ 17 |
| Cash received by the Company upon exercise of options | 52 | 26 | 24 |

B. Other share-based plans

Performance share unit plans

During 2020, the Company issued 97,998 PSUs with a grant date fair value of approximately \$34 million and 10,029 PDSUs with a grant date fair value, including value of expected future matching units, of approximately \$4 million. PSUs and PDSUs attract dividend equivalents in the form of additional units, based on dividends paid on the Company's Common Shares, and vest approximately three years after the grant date contingent upon CP's performance ("performance factor"). The fair value of these PSUs and PDSUs is measured periodically until settlement using closing share price on the date of measurement. The fair value of units that are probable of vesting based on forecasted performance factors over the three-year performance period is recognized as expense in the Consolidated Statements of Income. Vested PSUs are settled in cash. Vested PDSUs are settled in cash pursuant to the DSU plan and are eligible for a 25% match if the holder has not exceeded their share ownership requirements, and are paid out only when the holder ceases their employment with CP.

The performance period for PSUs and PDSUs issued in 2020 is January 1, 2020 to December 31, 2022, and the performance factors are Return on Invested Capital ("ROIC"), Total Shareholder Return ("TSR") compared to the S&P/TSX 60 Index, and TSR compared to Class I railways.

The performance period for 133,681 PSUs issued in 2019 is January 1, 2019 to December 31, 2021, and the performance factors for these PSUs are ROIC, TSR compared to the S&P/TSX 60 Index, and TSR compared to Class I railways. The performance factors for the remaining 579 PSUs are annual revenue for the fiscal year 2020, diluted earnings per share for the fiscal year 2020, and share price appreciation.

The performance period for 125,280 PSUs issued in 2018 is January 1, 2018 to December 31, 2020, and the performance factors for these PSUs were ROIC, TSR compared to the S&P/TSX Capped Industrial Index, and TSR compared to the S&P 1500 Road and Rail Index. The resulting estimated payout on these awards was 200% on 113,769 total outstanding awards representing a total fair value of \$98 million at December 31, 2020, calculated using the Company's average share price of the last 30 trading days preceding December 31, 2020. The performance factors for the remaining 36,975 PSUs were annual revenue for the fiscal year 2020, diluted earnings per share for the fiscal year 2020, and share price appreciation.

The performance period for PSUs issued in 2017 was January 1, 2017 to December 31, 2019, and the performance factors for these PSUs were ROIC, TSR compared to the S&P/TSX Capped Industrial Index, and TSR compared to the S&P 1500 Road and Rail Index. The resulting payout was 193% of the outstanding units multiplied by the Company's average share price calculated using the last 30 trading days preceding December 31, 2019. In the first quarter of 2020, payouts occurred on the total outstanding awards, including dividends reinvested, totalling \$76 million on 121,225 outstanding awards.

The following table summarizes information related to the Company's PSUs and PDSUs as at December 31:

| | 2020 | 2019 |
|-----------------------------|------------------|-----------|
| Outstanding, January 1 | 403,136 | 395,048 |
| Granted | 108,027 | 134,260 |
| Units, in lieu of dividends | 3,843 | 4,032 |
| Settled | (121,225) | (117,228) |
| Forfeited | (11,912) | (12,976) |
| Outstanding, December 31 | 381,869 | 403,136 |

In 2020, the expense for PSUs and PDSUs was \$121 million (2019 – \$89 million; 2018 – \$54 million). At December 31, 2020, there was \$51 million of total unrecognized compensation related to these awards which is expected to be recognized over a weighted-average period of approximately 1.4 years.

Deferred share unit plan

The Company established the DSU plan as a means to compensate and assist in attaining share ownership targets set for certain key employees and Directors. A DSU entitles the holder to receive, upon redemption, a cash payment equivalent to the Company's average share price using the 10 trading days prior to redemption. DSUs vest over various periods of up to 36 months and are only redeemable for a specified period after employment is terminated.

Senior managers may elect to receive DSUs in lieu of annual bonus cash payments in the bonus deferral program. In addition, senior managers will be granted a 25% company match of DSUs when deferring cash to DSUs to meet ownership targets. The election to receive eligible payments in DSUs is no longer available to a participant when the value of the participant's DSUs is sufficient to meet the Company's stock ownership guidelines. Senior managers have five years to meet their ownership targets.

The expense for DSUs is recognized over the vesting period for both the initial subscription price and the change in value between reporting periods.

The following table summarizes information related to the DSUs as at December 31:

| | 2020 | 2019 |
|-----------------------------|-----------------|----------|
| Outstanding, January 1 | 161,219 | 152,760 |
| Granted | 19,041 | 19,912 |
| Units, in lieu of dividends | 1,511 | 1,608 |
| Settled | (26,788) | (12,110) |
| Forfeited | (172) | (951) |
| Outstanding, December 31 | 154,811 | 161,219 |

During 2020, the Company granted 19,041 DSUs with a grant date fair value of approximately \$7 million. In 2020, the expense for DSUs was \$21 million (2019 – \$20 million expense; 2018 – \$4 million expense). At December 31, 2020, there was \$1 million of total unrecognized compensation related to DSUs which is expected to be recognized over a weighted-average period of approximately 1.3 years.

Summary of share-based liabilities paid

The following table summarizes the total share-based liabilities paid for each of the years ended December 31:

| (in millions of Canadian dollars) | 2020 | 2019 | 2018 |
|-----------------------------------|--------------|-------|-------|
| Plan | | | |
| PSUs | \$ 76 | \$ 54 | \$ 30 |
| DSUs | 9 | 4 | 6 |
| Other | 1 | — | 1 |
| Total | \$ 86 | \$ 58 | \$ 37 |

C. Employee share purchase plan

The Company has an employee share purchase plan whereby both employee and the Company contributions are used to purchase shares on the open market for employees. The Company's contributions are expensed over the one year vesting period. Under the plan, the Company matches \$1 for every \$3 contributed by employees up to a maximum employee contribution of 6% of annual salary.

The total number of shares purchased in 2020 on behalf of participants, including the Company's contributions, was 115,344 (2019 – 137,942; 2018 – 118,865). In 2020, the Company's contributions totalled \$9 million (2019 – \$8 million; 2018 – \$6 million) and the related expense was \$7 million (2019 – \$6 million; 2018 – \$5 million).

24. Variable interest entities

The Company leases equipment from certain trusts, which have been determined to be variable interest entities financed by a combination of debt and equity provided by unrelated third parties. The lease agreements, which are classified as operating leases, have fixed price purchase options which create the Company's variable interests and result in the trusts being considered variable interest entities.

Maintaining and operating the leased assets according to specific contractual obligations outlined in the terms of the lease agreements and industry standards is the Company's responsibility. The rigour of the contractual terms of the lease agreements and industry standards are such that the Company has limited discretion over the maintenance activities associated with these assets. As such, the Company concluded these terms do not provide the Company with the power to direct the activities of the variable interest entities in a way that has a significant impact on the entities' economic performance.

The financial exposure to the Company as a result of its involvement with the variable interest entities is equal to the fixed lease payments due to the trusts. In 2020, lease payments after tax were \$14 million. Future minimum lease payments, before tax, of \$126 million will be payable over the next 10 years. The Company does not guarantee the residual value of the assets to the lessor; however, it must deliver to the lessor the assets in good operating condition, subject to normal wear and tear, at the end of the lease term.

As the Company's actions and decisions do not significantly affect the variable interest entities' performance, and the Company's fixed price purchase option is not considered to be potentially significant to the variable interest entities, the Company is not considered to be the primary beneficiary, and does not consolidate these variable interest entities.

25. Commitments and contingencies

In the normal course of its operations, the Company becomes involved in various legal actions, including claims relating to injuries and damage to property. The Company maintains provisions it considers to be adequate for such actions. While the final outcome with respect to actions outstanding or pending at December 31, 2020 cannot be predicted with certainty, it is the opinion of management that their resolution will not have a material adverse effect on the Company's business, financial position, or results of operations. However, an unexpected adverse resolution of one or more of these legal actions could have a material adverse effect on the Company's business, financial position, results of operations, or liquidity in a particular quarter or fiscal year.

Commitments

At December 31, 2020, the Company had committed to total future capital expenditures amounting to \$547 million and operating expenditures relating to supplier purchase obligations, such as bulk fuel purchase agreements, locomotive maintenance and overhaul agreements, as well as agreements to purchase other goods and services amounting to approximately \$1.7 billion for the years 2021–2032, of which CP estimates approximately \$1.6 billion will be incurred in the next five years.

Commitments related to leases, including minimum annual payments for the next five years and thereafter, are included in Note 19.

Legal proceedings related to Lac-Mégantic rail accident

On July 6, 2013, a train carrying petroleum crude oil operated by Montréal Maine and Atlantic Railway ("MMAR") or a subsidiary, Montréal Maine & Atlantic Canada Co. ("MMAC" and collectively the "MMA Group"), derailed in Lac-Mégantic, Québec. The derailment occurred on a section of railway owned and operated by the MMA Group and while the MMA Group exclusively controlled the train.

Following the derailment, MMAC sought court protection in Canada under the *Companies' Creditors Arrangement Act* and MMAR filed for bankruptcy in the U.S. Plans of arrangement were approved in both Canada and the U.S. (the "Plans"), providing for the distribution of approximately \$440 million amongst those claiming derailment damages.

A number of legal proceedings, set out below, were commenced in Canada and the U.S. against CP and others:

- (1) Québec's Minister of Sustainable Development, Environment, Wildlife and Parks ordered various parties, including CP, to remediate the derailment site (the "Cleanup Order") and served CP with a Notice of Claim for \$95 million for those costs. CP appealed the Cleanup Order and contested the Notice

of Claim with the Administrative Tribunal of Québec. These proceedings are stayed pending determination of the Attorney General of Québec ("AGQ") action (paragraph 2 below).

- (2) The AGQ sued CP in the Québec Superior Court claiming \$409 million in damages, which was amended and reduced to \$315 million (the "AGQ Action"). The AGQ Action alleges that: (i) CP was responsible for the petroleum crude oil from its point of origin until its delivery to Irving Oil Ltd.; and (ii) CP is vicariously liable for the acts and omissions of the MMA Group.
- (3) A class action in the Québec Superior Court on behalf of persons and entities residing in, owning or leasing property in, operating a business in, or physically present in Lac-Mégantic at the time of the derailment was certified against CP on May 8, 2015 (the "Class Action"). Other defendants including MMAC and Mr. Thomas Harding ("Harding") were added to the Class Action on January 25, 2017. The Class Action seeks unquantified damages, including for wrongful death, personal injury, property damage, and economic loss.
- (4) Eight subrogated insurers sued CP in the Québec Superior Court claiming approximately \$16 million in damages, which was amended and reduced to approximately \$15 million (the "Promutuel Action"), and two additional subrogated insurers sued CP claiming approximately \$3 million in damages (the "Royal Action"). Both actions contain similar allegations as the AGQ Action. The actions do not identify the subrogated parties. As such, the extent of any overlap between the damages claimed in these actions and under the Plans is unclear. The Royal Action is stayed pending determination of the consolidated proceedings described below.

On December 11, 2017, the AGQ Action, the Class Action and the Promutuel Action were consolidated. These consolidated claims are currently scheduled for a joint liability trial commencing on or around September 13, 2021, followed by a damages trial, if necessary.

- (5) Forty-eight plaintiffs (all individual claims joined in one action) sued CP, MMAC, and Harding in the Québec Superior Court claiming approximately \$5 million in damages for economic loss and pain and suffering, and asserting similar allegations as in the Class Action and the AGQ Action. The majority of the plaintiffs opted-out of the Class Action and all but two are also plaintiffs in litigation against CP, described in paragraph 7 below. This action is stayed pending determination of the consolidated claims described above.
- (6) The MMAR U.S. bankruptcy estate representative commenced an action against CP in November 2014 in the Maine Bankruptcy Court claiming that CP failed to abide by certain regulations and seeking approximately U.S. \$30 million in damages for MMAR's loss in business value according to a recent report. This action asserts that CP knew or ought to have known that the shipper misclassified the petroleum crude oil and therefore should have refused to transport it.
- (7) The class and mass tort action commenced against CP in June 2015 in Texas (on behalf of Lac-Mégantic residents and wrongful death representatives) and the wrongful death and personal injury actions commenced against CP in June 2015 in Illinois and Maine, were all transferred and consolidated in Federal District Court in Maine (the "Maine Actions"). The Maine Actions allege that CP negligently misclassified and improperly packaged the petroleum crude oil. On CP's motion, the Maine Actions were dismissed. The plaintiffs are appealing the dismissal decision, which is pending.
- (8) The trustee for the wrongful death trust commenced Carmack Amendment claims against CP in North Dakota Federal Court, seeking to recover approximately U.S. \$6 million for damaged rail cars and lost crude and reimbursement for the settlement paid by the consignor and the consignee under the Plans (alleged to be U.S. \$110 million and U.S. \$60 million, respectively). The Court issued an Order on August 6, 2020 granting and denying in parts the parties' summary judgment motions which has been reviewed and confirmed following motions by the parties for clarification and reconsideration. This action is scheduled for trial on September 21, 2021.

At this stage of the proceedings, any potential responsibility and the quantum of potential losses cannot be determined. Nevertheless, CP denies liability and is vigorously defending these proceedings.

26. Guarantees

In the normal course of operating the railway, the Company enters into contractual arrangements that involve providing certain guarantees, which extend over the term of the contracts. These guarantees include, but are not limited to:

- guarantees to pay other parties in the event of the occurrence of specified events, including damage to equipment, in relation to assets used in the operation of the railway through operating leases, rental agreements, easements, trackage, and interline agreements; and
- indemnifications of certain tax-related payments incurred by lessors and lenders.

The maximum amount that could be payable under these guarantees, excluding residual value guarantees, cannot be reasonably estimated due to the nature of certain of these guarantees. All or a portion of amounts paid under guarantees to other parties in the event of the occurrence of specified events could be recoverable from other parties or through insurance. The Company has accrued for all guarantees that it expects to pay. At December 31, 2020, these accruals amounted to \$18 million (2019 – \$10 million), and are recorded in "Accounts payable and accrued liabilities".

Indemnifications

Pursuant to a trust and custodial services agreement with the trustee of the Canadian Pacific Railway Company Pension Plan, the Company has undertaken to indemnify and save harmless the trustee, to the extent not paid by the fund, from any and all taxes, claims, liabilities, damages, costs, and expenses arising out of the performance of the trustee's obligations under the agreement, except as a result of misconduct by the trustee. The indemnity includes liabilities, costs, or expenses relating to any legal reporting or notification obligations of the trustee with respect to the defined benefit and defined contribution options of the pension plans, or otherwise with respect to the assets of the pension plans that are not part of the fund. The indemnity survives the termination or expiry of the agreement with respect to claims and liabilities arising prior to the termination or expiry. At December 31, 2020, the Company had not recorded a liability associated with this indemnification as it does not expect to make any payments pertaining to it.

27. Segmented and geographic information

Operating segment

The Company operates in only one operating segment: rail transportation. Operating results by geographic areas, railway corridors, or other lower-level components or units of operation are not reviewed by the Company's chief operating decision-maker to make decisions about the allocation of resources to, or the assessment of performance of, such geographic areas, corridors, components, or units of operation.

In the years ended December 31, 2020, 2019, and 2018, no one customer comprised more than 10% of total revenues and accounts receivable.

Geographic information

All of the company's revenue and long-lived assets excluding financial instruments are held within Canada and the United States.

| (in millions of Canadian dollars) | Canada | United States | Total |
|---|----------|---------------|----------|
| 2020 | | | |
| Revenues | \$ 5,829 | \$ 1,881 | \$ 7,710 |
| Long-term assets excluding financial instruments and pension assets | 14,258 | 7,165 | 21,423 |
| 2019 | | | |
| Revenues | 5,675 | 2,117 | 7,792 |
| Long-term assets excluding financial instruments and pension assets | 13,131 | 7,020 | 20,151 |
| 2018 | | | |
| Revenues | 5,232 | 2,084 | 7,316 |
| Long-term assets excluding financial instruments and pension assets | 12,133 | 6,759 | 18,892 |

28. Selected quarterly data (unaudited)

| For the quarter ended (in millions of Canadian dollars, except per share data) | 2020 | | | | 2019 | | | |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| | Dec. 31 | Sep. 30 | Jun. 30 | Mar. 31 | Dec. 31 | Sep. 30 | Jun. 30 | Mar. 31 |
| Total revenues | \$ 2,012 | \$ 1,863 | \$ 1,792 | \$ 2,043 | \$ 2,069 | \$ 1,979 | \$ 1,977 | \$ 1,767 |
| Operating income | 928 | 779 | 770 | 834 | 890 | 869 | 822 | 543 |
| Net income | 802 | 598 | 635 | 409 | 664 | 618 | 724 | 434 |
| Basic earnings per share ⁽¹⁾ | \$ 5.97 | \$ 4.42 | \$ 4.68 | \$ 2.99 | \$ 4.84 | \$ 4.47 | \$ 5.19 | \$ 3.10 |
| Diluted earnings per share ⁽¹⁾ | \$ 5.95 | \$ 4.41 | \$ 4.66 | \$ 2.98 | \$ 4.82 | \$ 4.46 | \$ 5.17 | \$ 3.09 |

⁽¹⁾ Earnings per share for the four quarters combined may not equal earnings per share for the year due to rounding.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULE

The following documents are filed as part of this annual report:

(a) Financial Statements

The financial statements filed as part of this filing are listed on the Index to Consolidated Financial Statements in Item 8. Financial Statements and Supplementary Data.

(b) Financial Statement Schedule

Schedule II – Valuation and Qualifying Accounts

| (in millions of Canadian dollars) | Beginning balance at January 1 | Additions charged to expenses | Payments and other reductions | Impact of FX | Ending balance at December 31 |
|--|-----------------------------------|----------------------------------|----------------------------------|---------------|-------------------------------------|
| Accruals for personal injury and other claims provision ⁽¹⁾ | | | | | |
| 2018 | \$ 118 | \$ 93 | \$ (60) | \$ 1 | 152 |
| 2019 | \$ 152 | \$ 142 | \$ (152) | \$ (1) | 141 |
| 2020 | \$ 141 | \$ 105 | \$ (119) | \$ (1) | 126 |
| Environmental liabilities | | | | | |
| 2018 | \$ 78 | \$ 6 | \$ (7) | \$ 5 | 82 |
| 2019 | \$ 82 | \$ 6 | \$ (8) | \$ (3) | 77 |
| 2020 | \$ 77 | \$ 10 | \$ (6) | \$ (1) | 80 |

⁽¹⁾ Includes WCB, FELA, occupational, damage, and other.