



TOGETHER



2023 QUARTERLY REVIEW **THIRD QUARTER**



CN Announces Third Quarter Results

Disciplined Scheduled Operation Continues to Deliver Solid Operating Performance

MONTREAL, October 24, 2023 – CN (TSX: CNR) (NYSE: CNI) today reported its financial and operating results for the third quarter ended September 30, 2023.

"Our 'Make the Plan, Run the Plan, Sell the Plan' approach continued to perform well, delivering strong customer service despite weak consumer demand as well as external challenges. As volumes continue to improve, we are well positioned to deliver incremental operating leverage. We remain confident in our ability to accelerate sustainable, profitable growth in 2024 through 2026."

– Tracy Robinson, President and Chief Executive Officer, CN

Financial results highlights

- Revenues of C\$3,987 million for the third quarter of 2023, a decrease of C\$526 million, or 12%, and C\$12,357 million for the first nine months of 2023, a decrease of C\$208 million, or 2%.
- Operating income of C\$1,517 million for the third quarter of 2023, a decrease of C\$415 million, or 21% and C\$4,779 million for the first nine months of 2023, a decrease of C\$149 million, or 3%.
- Operating ratio, defined as operating expenses as a percentage of revenues, of 62.0% for the third quarter of 2023, an increase of 4.8-points and 61.3% for the first nine months of 2023, an increase 0.5-points or an increase of 0.7-points on an adjusted basis.⁽¹⁾
- Diluted earnings per share (EPS) of C\$1.69 for the third quarter of 2023, a decrease of 21% and C\$5.27 for the first nine months of 2023, a decrease of 1% or a decrease of 2% on an adjusted basis.⁽¹⁾
- Free cash flow was C\$581 million for the third quarter of 2023, a decrease of C\$775 million, or 57% and C\$2,274 million for the first nine months of 2023, a decrease of C\$650 million, or 22%.⁽¹⁾

Operating performance

- Injury frequency rate of 1.07 (per 200,000 person hours) for the third quarter of 2023, a deterioration of 6% and 1.02 (per 200,000 person hours) for the first nine months of 2023, an improvement of 11%.⁽³⁾
- Accident rate of 1.86 (per million train miles) for the third quarter of 2023, a deterioration of 10% and 1.76 (per million train miles) for the first nine months of 2023, an improvement of 16%.⁽³⁾
- Through dwell of 7.1 (entire railroad, hours) for the third quarter of 2023, a deterioration of 1% and 7.0 (entire railroad hours) for the first nine months of 2023, an improvement of 10%.
- Car velocity of 209 (car miles per day) for the third quarter of 2023, a deterioration of 1% and 212 (car miles per day) for the first nine months of 2023, an improvement of 10%.
- Through network train speed of 19.7 (mph) for the third quarter of 2023, a deterioration of 2% and 19.9 (mph) for the first nine months of 2023, an improvement of 7%.
- Fuel efficiency of 0.832 (US gallons of locomotive fuel consumed per 1,000 gross ton miles (GTMs)) for the third quarter of 2023, an improvement of 1% and 0.874 (US gallons of locomotive fuel consumed per 1,000 gross ton miles (GTMs)) for the first nine months of 2023, less efficient by 2%.
- Train length of 7,927 (feet) for the third quarter of 2023, a decrease of 3% and 7,870 (feet) for the first nine months of 2023, a decrease of 5%.
- Revenue ton miles (RTMs) of 55,640 (millions) for the third quarter of 2023, a decrease of 5% and 171,478 (millions) for the first nine months of 2023, a decrease of 2%.

Outlooks and shareholder distributions

CN continues to expect flat to slightly negative year-over-year growth in adjusted diluted EPS in 2023. CN reiterates its longer-term financial perspective and continues to target compounded annual diluted EPS growth in the range of 10%-15% over the 2024-2026 period driven by growing volumes more than the economy, pricing above rail inflation and incrementally improving efficiency, all of which assumes a supportive economy. ⁽²⁾

In January 2023, CN announced the Board's approval for a new normal course issuer bid permitting CN to purchase for cancellation, over a 12-month period, up to 32 million common shares. The Board has now approved an additional C\$500 million, increasing the budget from approximately C\$4.0 billion to approximately C\$4.5 billion.

Third quarter 2023 revenues, traffic volumes and expenses

Revenues for the third quarter of 2023 were C\$3,987 million compared to C\$4,513 million for the same period in 2022. The decrease of C\$526 million, or 12%, was mainly due to lower fuel surcharge revenues as a result of lower fuel prices, lower volumes of intermodal, crude oil and forest products, primarily as a result of lower demand for freight services to move consumer goods and the negative impact of the pacific coast dock workers strike, unfavorable crude oil price spreads and weaker market conditions for lumber and panels as well as lower ancillary services including container storage; partly offset by freight rate increases, higher volumes of Canadian grain and potash and the positive translation impact of a weaker Canadian dollar.

Operating expenses for the third quarter of 2023 were C\$2,470 million compared to C\$2,581 million for the same period in 2022. The decrease of C\$111 million, or 4%, was mainly due to lower fuel prices; partly offset by the negative translation impact of a weaker Canadian dollar.

(1) Non-GAAP Measures

CN reports its financial results in accordance with United States generally accepted accounting principles (GAAP). CN uses non-GAAP measures in this news release that do not have any standardized meaning prescribed by GAAP, including adjusted net income, adjusted earnings per share (EPS), adjusted operating income and adjusted operating ratio (referred to as adjusted performance measures) and free cash flow. These non-GAAP measures may not be comparable to similar measures presented by other companies. For further details of these non-GAAP measures, including a reconciliation to the most directly comparable GAAP financial measures, refer to the attached supplementary schedule, Non-GAAP Measures.

CN's full-year adjusted diluted EPS outlook ⁽²⁾ excludes certain adjustments, which are expected to be comparable to adjustments made in prior years. However, management cannot individually quantify on a forward-looking basis the impact of these adjustments on its adjusted diluted EPS because these items, which could be significant, are difficult to predict and may be highly variable. As a result, CN does not provide a corresponding GAAP measure for, or reconciliation to, its adjusted diluted EPS outlook.

(2) Forward-Looking Statements

Certain statements included in this news release constitute "forward-looking statements" within the meaning of the *United States Private Securities Litigation Reform Act of 1995* and under Canadian securities laws, including statements based on management's assessment and assumptions and publicly available information with respect to CN. By their nature, forward-looking statements involve risks, uncertainties and assumptions. CN cautions that its assumptions may not materialize and that current economic conditions render such assumptions, although reasonable at the time they were made, subject to greater uncertainty. Forward-looking statements may be identified by the use of terminology such as "believes," "expects," "anticipates," "assumes," "outlook," "plans," "targets", or other similar words.

2023 key assumptions

CN has made a number of economic and market assumptions in preparing its 2023 outlook. The Company now assumes flat North American industrial production in 2023 (compared to the July 25, 2023 assumption of negative North American industrial production in 2023). The Company continues to assume that the 2023/2024 grain crop in Canada will be below its three-year average (also below when excluding the significantly lower 2021/2022 crop year) and the U.S. grain crop will be above its three-year average. CN continues to assume pricing above rail inflation upon contract renewals. CN also continues to assume that in 2023, the value of the Canadian dollar in U.S. currency will be approximately \$0.75, and now assumes the average price of crude oil (West Texas Intermediate) will be approximately US\$80 per barrel (compared to the July 25, 2023 assumption of being approximately US\$75 per barrel). Additionally, CN continues to assume that in 2023 there will be no further significant impact from Canadian wildfires.

2024-2026 key assumptions

CN has made a number of economic and market assumptions in preparing its three-year financial perspective. CN assumes that the North American industrial production will increase by at least two percent CAGR over the next three years. CN assumes continued pricing above rail inflation. CN assumes that the value of the Canadian dollar in U.S. currency will be approximately \$0.75 and that the average price of crude oil (West Texas Intermediate) will be approximately US\$80 per barrel during this period.

Forward-looking statements are not guarantees of future performance and involve risks, uncertainties and other factors which may cause actual results, performance or achievements of CN to be materially different from the outlook or any future results, performance or achievements implied by such statements. Accordingly, readers are advised not to place undue reliance on forward-looking statements. Important risk factors that could affect the forward-looking statements in this news release include, but are not limited to, general economic and business conditions, including factors impacting global supply chains such as pandemics and geopolitical conflicts and tensions; industry competition; inflation, currency and interest rate fluctuations; changes in fuel prices; legislative and/or regulatory developments; compliance with environmental laws and regulations; actions by regulators; increases in maintenance and operating costs; security threats; reliance on technology and related cybersecurity risk; trade restrictions or other changes to international trade arrangements; transportation of hazardous materials; various events which could disrupt operations, including illegal blockades of rail networks, and natural events such as severe weather, droughts, fires, floods and earthquakes; climate change; labor negotiations and disruptions; environmental claims; uncertainties of investigations, proceedings or other types of claims and litigation; risks and liabilities arising from derailments;

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timing and completion of capital programs; the availability of and cost competitiveness of renewable fuels and the development of new locomotive propulsion technology; and other risks detailed from time to time in reports filed by CN with securities regulators in Canada and the United States. Reference should also be made to Management's Discussion and Analysis (MD&A) in CN's annual and interim reports, Annual Information Form and Form 40-F, filed with Canadian and U.S. securities regulators and available on CN's website, for a description of major risk factors relating to CN.

Forward-looking statements reflect information as of the date on which they are made. CN assumes no obligation to update or revise forward-looking statements to reflect future events, changes in circumstances, or changes in beliefs, unless required by applicable securities laws. In the event CN does update any forward-looking statement, no inference should be made that CN will make additional updates with respect to that statement, related matters, or any other forward-looking statement. Information contained on, or accessible through, our website is not part of this news release.

(3) Based on Federal Railroad Administration (FRA) reporting criteria.

This earnings news release, as well as additional information, including the Financial Statements, Notes thereto and MD&A, is contained in CN's Quarterly Review available on the Company's website at www.cn.ca/financial-results and on SEDAR+ at www.sedarplus.com as well as on the U.S. Securities and Exchange Commission's website at www.sec.gov through EDGAR.

About CN

CN is a world-class transportation leader and trade-enabler. Essential to the economy, to the customers, and to the communities it serves, CN safely transports more than 300 million tons of natural resources, manufactured products, and finished goods throughout North America every year. CN's network connects Canada's Eastern and Western coasts with the U.S. South through a 18,600-mile rail network. CN and its affiliates have been contributing to community prosperity and sustainable trade since 1919. CN is committed to programs supporting social responsibility and environmental stewardship.

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SELECTED RAILROAD STATISTICS – UNAUDITED

	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Financial measures				
Key financial performance indicators ⁽¹⁾				
Total revenues (\$ millions)	3,987	4,513	12,357	12,565
Freight revenues (\$ millions)	3,820	4,366	11,933	12,169
Operating income (\$ millions)	1,517	1,932	4,779	4,928
Adjusted operating income (\$ millions) ⁽²⁾⁽³⁾	1,517	1,932	4,779	4,950
Net income (\$ millions)	1,108	1,455	3,495	3,698
Adjusted net income (\$ millions) ⁽²⁾⁽³⁾	1,108	1,455	3,495	3,714
Diluted earnings per share (\$)	1.69	2.13	5.27	5.34
Adjusted diluted earnings per share (\$) ⁽²⁾⁽³⁾	1.69	2.13	5.27	5.37
Free cash flow (\$ millions) ⁽²⁾⁽⁴⁾	581	1,356	2,274	2,924
Gross property additions (\$ millions)	934	744	2,270	1,830
Share repurchases (\$ millions)	1,196	1,178	3,438	3,644
Dividends per share (\$)	0.7900	0.7325	2.3700	2.1975
Financial ratio				
Operating ratio (%) ⁽⁵⁾	62.0	57.2	61.3	60.8
Adjusted operating ratio (%) ⁽²⁾⁽³⁾	62.0	57.2	61.3	60.6
Operational measures ⁽⁶⁾				
Statistical operating data				
Gross ton miles (GTMs) (millions)	108,221	115,585	333,356	347,393
Revenue ton miles (RTMs) (millions)	55,640	58,540	171,478	175,645
Carloads (thousands)	1,326	1,469	4,048	4,289
Route miles (includes Canada and the U.S.)	18,600	18,600	18,600	18,600
Employees (end of period)	25,101	23,828	25,101	23,828
Employees (average for the period)	25,168	23,729	24,859	23,195
Key operating measures				
Freight revenue per RTM (cents)	6.87	7.46	6.96	6.93
Freight revenue per carload (\$)	2,881	2,972	2,948	2,837
GTMs per average number of employees (thousands)	4,300	4,871	13,410	14,977
Operating expenses per GTM (cents)	2.28	2.23	2.27	2.20
Labor and fringe benefits expense per GTM (cents)	0.71	0.67	0.70	0.63
Diesel fuel consumed (US gallons in millions)	90.0	96.9	291.5	299.2
Average fuel price (\$ per US gallon)	4.66	5.70	4.56	5.31
Fuel efficiency (US gallons of locomotive fuel consumed per 1,000 GTMs)	0.832	0.838	0.874	0.861
Train weight (tons)	9,246	9,202	9,146	9,385
Train length (feet)	7,927	8,140	7,870	8,259
Car velocity (car miles per day)	209	212	212	193
Through dwell (entire railroad, hours)	7.1	7.0	7.0	7.8
Through network train speed (miles per hour)	19.7	20.1	19.9	18.6
Locomotive utilization (trailing GTMs per total horsepower)	189	202	191	197
Safety indicators ⁽⁷⁾				
Injury frequency rate (per 200,000 person hours)	1.07	1.01	1.02	1.15
Accident rate (per million train miles)	1.86	1.69	1.76	2.10

(1) Amounts expressed in Canadian dollars and prepared in accordance with United States generally accepted accounting principles (GAAP), unless otherwise noted.

(2) These non-GAAP measures do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

(3) See the supplementary schedule entitled *Non-GAAP Measures – Adjusted performance measures* for an explanation of these non-GAAP measures.

(4) See the supplementary schedule entitled *Non-GAAP Measures – Free cash flow* for an explanation of this non-GAAP measure.

(5) Operating ratio is defined as operating expenses as a percentage of revenues.

(6) Statistical operating data, key operating measures and safety indicators are unaudited and based on estimated data available at such time and are subject to change as more complete information becomes available. Definitions of gross ton miles, revenue ton miles, freight revenue per RTM, fuel efficiency, train weight, train length, car velocity, through dwell and through network train speed are included within the Company's Management's Discussion and Analysis. Definitions of all other indicators are provided on CN's website, www.cn.ca/glossary.

(7) Based on Federal Railroad Administration (FRA) reporting criteria.

SUPPLEMENTARY INFORMATION – UNAUDITED

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change Fav (Unfav)	% Change at constant currency ⁽¹⁾ Fav (Unfav)	2023	2022	% Change Fav (Unfav)	% Change at constant currency ⁽¹⁾ Fav (Unfav)
Revenues (\$ millions)⁽²⁾								
Petroleum and chemicals	758	850	(11%)	(12%)	2,334	2,435	(4%)	(7%)
Metals and minerals	515	539	(4%)	(6%)	1,541	1,411	9%	5%
Forest products	466	550	(15%)	(17%)	1,457	1,489	(2%)	(6%)
Coal	242	258	(6%)	(7%)	768	702	9%	8%
Grain and fertilizers	722	621	16%	15%	2,271	1,829	24%	21%
Intermodal	880	1,340	(34%)	(35%)	2,875	3,722	(23%)	(24%)
Automotive	237	208	14%	12%	687	581	18%	14%
Total freight revenues	3,820	4,366	(13%)	(14%)	11,933	12,169	(2%)	(5%)
Other revenues	167	147	14%	12%	424	396	7%	4%
Total revenues	3,987	4,513	(12%)	(13%)	12,357	12,565	(2%)	(4%)
Revenue ton miles (RTMs) (millions)⁽³⁾								
Petroleum and chemicals	10,470	11,715	(11%)	(11%)	31,915	35,604	(10%)	(10%)
Metals and minerals	7,630	7,441	3%	3%	21,458	20,853	3%	3%
Forest products	5,719	6,614	(14%)	(14%)	17,529	19,083	(8%)	(8%)
Coal	5,421	5,769	(6%)	(6%)	17,234	17,264	–%	–%
Grain and fertilizers	14,528	11,944	22%	22%	45,138	37,748	20%	20%
Intermodal	11,048	14,340	(23%)	(23%)	35,918	42,966	(16%)	(16%)
Automotive	824	717	15%	15%	2,286	2,127	7%	7%
Total RTMs	55,640	58,540	(5%)	(5%)	171,478	175,645	(2%)	(2%)
Freight revenue / RTM (cents)⁽²⁾⁽³⁾								
Petroleum and chemicals	7.24	7.26	–%	(2%)	7.31	6.84	7%	4%
Metals and minerals	6.75	7.24	(7%)	(9%)	7.18	6.77	6%	2%
Forest products	8.15	8.32	(2%)	(4%)	8.31	7.80	7%	3%
Coal	4.46	4.47	–%	(1%)	4.46	4.07	10%	8%
Grain and fertilizers	4.97	5.20	(4%)	(6%)	5.03	4.85	4%	1%
Intermodal	7.97	9.34	(15%)	(15%)	8.00	8.66	(8%)	(9%)
Automotive	28.76	29.01	(1%)	(3%)	30.05	27.32	10%	6%
Total freight revenue / RTM	6.87	7.46	(8%)	(9%)	6.96	6.93	–%	(2%)
Carloads (thousands)⁽³⁾								
Petroleum and chemicals	156	161	(3%)	(3%)	468	482	(3%)	(3%)
Metals and minerals	264	264	–%	–%	749	709	6%	6%
Forest products	76	86	(12%)	(12%)	234	250	(6%)	(6%)
Coal	124	130	(5%)	(5%)	386	377	2%	2%
Grain and fertilizers	153	135	13%	13%	483	422	14%	14%
Intermodal	494	641	(23%)	(23%)	1,556	1,894	(18%)	(18%)
Automotive	59	52	13%	13%	172	155	11%	11%
Total carloads	1,326	1,469	(10%)	(10%)	4,048	4,289	(6%)	(6%)
Freight revenue / carload (\$)⁽²⁾⁽³⁾								
Petroleum and chemicals	4,859	5,280	(8%)	(10%)	4,987	5,052	(1%)	(4%)
Metals and minerals	1,951	2,042	(4%)	(7%)	2,057	1,990	3%	(1%)
Forest products	6,132	6,395	(4%)	(6%)	6,226	5,956	5%	1%
Coal	1,952	1,985	(2%)	(3%)	1,990	1,862	7%	5%
Grain and fertilizers	4,719	4,600	3%	1%	4,702	4,334	8%	6%
Intermodal	1,781	2,090	(15%)	(15%)	1,848	1,965	(6%)	(7%)
Automotive	4,017	4,000	–%	(2%)	3,994	3,748	7%	3%
Total freight revenue / carload	2,881	2,972	(3%)	(5%)	2,948	2,837	4%	1%

(1) This non-GAAP measure does not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies. See the supplementary schedule entitled *Non-GAAP Measures – Constant currency* for an explanation of this non-GAAP measure.

(2) Amounts expressed in Canadian dollars.

(3) Statistical operating data and related key operating measures are unaudited and based on estimated data available at such time and are subject to change as more complete information becomes available.

NON-GAAP MEASURES – UNAUDITED

In this supplementary schedule, the "Company" or "CN" refers to Canadian National Railway Company, together with its wholly-owned subsidiaries. Financial information included in this schedule is expressed in Canadian dollars, unless otherwise noted.

CN reports its financial results in accordance with United States generally accepted accounting principles (GAAP). The Company also uses non-GAAP measures that do not have any standardized meaning prescribed by GAAP, including adjusted performance measures, free cash flow, constant currency and adjusted debt-to-adjusted EBITDA multiple. These non-GAAP measures may not be comparable to similar measures presented by other companies. From management's perspective, these non-GAAP measures are useful measures of performance and provide investors with supplementary information to assess the Company's results of operations and liquidity. These non-GAAP measures should not be considered in isolation or as a substitute for financial measures prepared in accordance with GAAP.

Adjusted performance measures

Adjusted net income, adjusted earnings per share, adjusted operating income, adjusted operating expenses and adjusted operating ratio are non-GAAP measures that are used to set performance goals and to measure CN's performance. Management believes that these adjusted performance measures provide additional insight to management and investors into the Company's operations and underlying business trends as well as facilitate period-to-period comparisons, as they exclude certain significant items that are not reflective of CN's underlying business operations and could distort the analysis of trends in business performance. These items may include:

- i. operating expense adjustments: workforce reduction program, depreciation expense on the deployment of replacement system, advisory fees related to shareholder matters, losses and recoveries from assets held for sale, business acquisition-related costs;
- ii. non-operating expense adjustments: business acquisition-related financing fees, merger termination income, gains and losses on disposal of property; and
- iii. the effect of tax law changes and rate enactments.

These non-GAAP measures do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

For the three and nine months ended September 30, 2023, the Company's net income was \$1,108 million, or \$1.69 per diluted share, and \$3,495 million, or \$5.27 per diluted share, respectively. There were no adjustments in the third quarter and the first nine months of 2023.

For the three and nine months ended September 30, 2022, the Company's adjusted net income was \$1,455 million, or \$2.13 per diluted share, and \$3,714 million, or \$5.37 per diluted share, respectively. The adjusted figures for the nine months ended September 30, 2022 exclude advisory fees related to shareholder matters of \$22 million, or \$16 million after-tax (\$0.03 per diluted share) recorded in Casualty and other within the Consolidated Statements of Income.

Adjusted net income is defined as Net income in accordance with GAAP adjusted for certain significant items. Adjusted diluted earnings per share is defined as adjusted net income divided by the weighted-average diluted shares outstanding. The following table provides a reconciliation of Net income and Earnings per share in accordance with GAAP, as reported for the three and nine months ended September 30, 2023 and 2022, to the non-GAAP adjusted performance measures presented herein:

<i>In millions, except per share data</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Net income	\$ 1,108	\$ 1,455	\$ 3,495	\$ 3,698
Adjustments:				
Advisory fees related to shareholder matters	—	—	—	22
Tax effect of adjustments ⁽¹⁾	—	—	—	(6)
Total adjustments	—	—	—	16
Adjusted net income	\$ 1,108	\$ 1,455	\$ 3,495	\$ 3,714
Diluted earnings per share	\$ 1.69	\$ 2.13	\$ 5.27	\$ 5.34
Impact of adjustments, per share	—	—	—	0.03
Adjusted diluted earnings per share	\$ 1.69	\$ 2.13	\$ 5.27	\$ 5.37

(1) The tax impact of adjustments is based on the nature of the item for tax purposes and related tax rates in the applicable jurisdiction.

NON-GAAP MEASURES – UNAUDITED

Adjusted operating income is defined as Operating income in accordance with GAAP adjusted for certain significant operating expense items. Adjusted operating expenses is defined as Operating expenses in accordance with GAAP adjusted for certain significant operating expense items. Adjusted operating ratio is defined as adjusted operating expenses as a percentage of revenues. The following table provides a reconciliation of Operating income, Operating expenses and operating ratio, as reported for the three and nine months ended September 30, 2023 and 2022, to the non-GAAP adjusted performance measures presented herein:

<i>In millions, except percentages</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Operating income	\$ 1,517	\$ 1,932	\$ 4,779	\$ 4,928
Adjustment:				
Advisory fees related to shareholder matters	–	–	–	22
Total adjustment	–	–	–	22
Adjusted operating income	\$ 1,517	\$ 1,932	\$ 4,779	\$ 4,950
Operating expenses	\$ 2,470	\$ 2,581	\$ 7,578	\$ 7,637
Total adjustment	–	–	–	(22)
Adjusted operating expenses	\$ 2,470	\$ 2,581	\$ 7,578	\$ 7,615
Operating ratio	62.0 %	57.2 %	61.3 %	60.8 %
Impact of adjustment	– %	– %	– %	(0.2)%
Adjusted operating ratio	62.0 %	57.2 %	61.3 %	60.6 %

Free cash flow

Free cash flow is a useful measure of liquidity as it demonstrates the Company's ability to generate cash for debt obligations and for discretionary uses such as payment of dividends, share repurchases, and strategic opportunities. The Company defines its free cash flow measure as the difference between net cash provided by operating activities and net cash used in investing activities, adjusted for the impact of (i) business acquisitions and (ii) merger transaction-related payments, cash receipts and cash income taxes, which are items that are not indicative of operating trends. Free cash flow does not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

The following table provides a reconciliation of Net cash provided by operating activities in accordance with GAAP, as reported for the three and nine months ended September 30, 2023 and 2022, to the non-GAAP free cash flow presented herein:

<i>In millions</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Net cash provided by operating activities	\$ 1,512	\$ 2,112	\$ 4,552	\$ 4,395
Net cash used in investing activities	(931)	(756)	(2,278)	(1,573)
Net cash provided before financing activities	581	1,356	2,274	2,822
Adjustment:				
Cash income taxes for merger transaction-related payments and cash receipts ⁽¹⁾	–	–	–	102
Free cash flow	\$ 581	\$ 1,356	\$ 2,274	\$ 2,924

(1) Relates to income tax payments of \$102 million for KCS merger transaction-related payments and cash receipts. See Note 4 – Acquisition to the Company's 2022 Annual Consolidated Financial Statements for additional information.

NON-GAAP MEASURES – UNAUDITED

Constant currency

Financial results at constant currency allow results to be viewed without the impact of fluctuations in foreign currency exchange rates, thereby facilitating period-to-period comparisons in the analysis of trends in business performance. Measures at constant currency are considered non-GAAP measures and do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies. Financial results at constant currency are obtained by translating the current period results denominated in US dollars at the weighted average foreign exchange rates used to translate transactions denominated in US dollars of the comparable period of the prior year.

The average foreign exchange rates were \$1.34 and \$1.35 per US\$1.00 for the three and nine months ended September 30, 2023, respectively, and \$1.31 and \$1.28 per US\$1.00 for the three and nine months ended September 30, 2022, respectively. On a constant currency basis, the Company's net income for the three and nine months ended September 30, 2023 would have been lower by \$18 million (\$0.03 per diluted share) and \$94 million (\$0.14 per diluted share), respectively.

The following table provides a reconciliation of the impact of constant currency and related percentage change at constant currency on the financial results, as reported for the three and nine months ended September 30, 2023:

<i>In millions, except per share data</i>	Three months ended September 30				Nine months ended September 30			
	2023	Constant currency impact	2022	% Change at constant currency Fav (Unfav)	2023	Constant currency impact	2022	% Change at constant currency Fav (Unfav)
Revenues								
Petroleum and chemicals	\$ 758	\$ (14)	\$ 850	(12%)	\$ 2,334	\$ (70)	\$ 2,435	(7%)
Metals and minerals	515	(11)	539	(6%)	1,541	(58)	1,411	5%
Forest products	466	(10)	550	(17%)	1,457	(53)	1,489	(6%)
Coal	242	(2)	258	(7%)	768	(13)	702	8%
Grain and fertilizers	722	(9)	621	15%	2,271	(55)	1,829	21%
Intermodal	880	(7)	1,340	(35%)	2,875	(45)	3,722	(24%)
Automotive	237	(5)	208	12%	687	(24)	581	14%
Total freight revenues	3,820	(58)	4,366	(14%)	11,933	(318)	12,169	(5%)
Other revenues	167	(3)	147	12%	424	(12)	396	4%
Total revenues	3,987	(61)	4,513	(13%)	12,357	(330)	12,565	(4%)
Operating expenses								
Labor and fringe benefits	773	(6)	770	—%	2,332	(39)	2,204	(4%)
Purchased services and material	534	(5)	520	(2%)	1,698	(28)	1,615	(3%)
Fuel	486	(13)	649	27%	1,528	(68)	1,846	21%
Depreciation and amortization	457	(5)	435	(4%)	1,354	(25)	1,278	(4%)
Equipment rents	89	(2)	72	(21%)	262	(10)	254	1%
Casualty and other	131	(2)	135	4%	404	(13)	440	11%
Total operating expenses	2,470	(33)	2,581	6%	7,578	(183)	7,637	3%
Operating income	1,517	(28)	1,932	(23%)	4,779	(147)	4,928	(6%)
Interest expense	(185)	4	(141)	(28%)	(523)	22	(395)	(27%)
Other components of net periodic benefit income	121	—	125	(3%)	360	—	374	(4%)
Other income (loss)	(2)	—	(1)	(100%)	—	—	(25)	100%
Income before income taxes	1,451	(24)	1,915	(25%)	4,616	(125)	4,882	(8%)
Income tax expense	(343)	6	(460)	27%	(1,121)	31	(1,184)	8%
Net income	\$ 1,108	\$ (18)	\$ 1,455	(25%)	\$ 3,495	\$ (94)	\$ 3,698	(8%)
Diluted earnings per share	\$ 1.69	\$ (0.03)	\$ 2.13	(22%)	\$ 5.27	\$ (0.14)	\$ 5.34	(4%)

NON-GAAP MEASURES – UNAUDITED

Adjusted debt-to-adjusted EBITDA multiple

Management believes that the adjusted debt-to-adjusted EBITDA multiple is a useful credit measure because it reflects the Company's ability to service its debt and other long-term obligations. The Company calculates the adjusted debt-to-adjusted EBITDA multiple as adjusted debt divided by the last twelve months of adjusted EBITDA. Adjusted debt is defined as the sum of Long-term debt and Current portion of long-term debt as reported on the Company's Consolidated Balance Sheets as well as Operating lease liabilities, including current portion and pension plans in deficiency recognized on the Company's Consolidated Balance Sheets due to the debt-like nature of their contractual and financial obligations. Adjusted EBITDA is calculated as Net income excluding Interest expense, Income tax expense, Depreciation and amortization, operating lease cost, Other components of net periodic benefit income, Other income (loss), and other significant items that are not reflective of CN's underlying business operations and which could distort the analysis of trends in business performance. Adjusted debt and adjusted EBITDA are non-GAAP measures used to compute the Adjusted debt-to-adjusted EBITDA multiple. These measures do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

The following table provides a reconciliation of debt and Net income in accordance with GAAP, reported as at and for the twelve months ended September 30, 2023 and 2022, to the adjusted measures presented herein, which have been used to calculate the non-GAAP adjusted debt-to-adjusted EBITDA multiple:

<i>In millions, unless otherwise indicated</i>	<i>As at and for the twelve months ended September 30,</i>		2023	2022
Debt	\$	18,382	\$	15,392
Adjustments:				
Operating lease liabilities, including current portion ⁽¹⁾		429		484
Pension plans in deficiency ⁽²⁾		351		444
Adjusted debt	\$	19,162	\$	16,320
Net income	\$	4,915	\$	4,899
Interest expense		676		520
Income tax expense		1,582		1,557
Depreciation and amortization		1,805		1,661
Operating lease cost ⁽³⁾		147		138
Other components of net periodic benefit income		(484)		(486)
Other loss		2		4
Adjustment:				
Advisory fees related to shareholder matters ⁽⁴⁾		–		35
Adjusted EBITDA	\$	8,643	\$	8,328
Adjusted debt-to-adjusted EBITDA multiple (times)		2.22		1.96

(1) Represents the present value of operating lease payments.

(2) Represents the total funded deficit of all defined benefit pension plans with a projected benefit obligation in excess of plan assets.

(3) Represents the operating lease costs recorded in Purchased services and material and Equipment rents within the Consolidated Statements of Income.

(4) Relates to advisory fees related to shareholder matters recorded in Casualty and other within the Consolidated Statements of Income. See the section entitled *Adjusted performance measures* of the Company's 2022 Annual MD&A for additional information.

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CONSOLIDATED STATEMENTS OF INCOME – UNAUDITED

<i>In millions, except per share data</i>	Three months ended		Nine months ended	
	September 30		September 30	
	2023	2022	2023	2022
Revenues (Note 3)	\$ 3,987	\$ 4,513	\$ 12,357	\$ 12,565
Operating expenses				
Labor and fringe benefits	773	770	2,332	2,204
Purchased services and material	534	520	1,698	1,615
Fuel	486	649	1,528	1,846
Depreciation and amortization	457	435	1,354	1,278
Equipment rents	89	72	262	254
Casualty and other	131	135	404	440
Total operating expenses	2,470	2,581	7,578	7,637
Operating income	1,517	1,932	4,779	4,928
Interest expense	(185)	(141)	(523)	(395)
Other components of net periodic benefit income (Note 4)	121	125	360	374
Other loss	(2)	(1)	–	(25)
Income before income taxes	1,451	1,915	4,616	4,882
Income tax expense	(343)	(460)	(1,121)	(1,184)
Net income	\$ 1,108	\$ 1,455	\$ 3,495	\$ 3,698
Earnings per share (Note 5)				
Basic	\$ 1.69	\$ 2.13	\$ 5.28	\$ 5.36
Diluted	\$ 1.69	\$ 2.13	\$ 5.27	\$ 5.34
Weighted-average number of shares (Note 5)				
Basic	654.3	682.3	661.4	690.2
Diluted	655.6	684.3	662.9	692.1
Dividends declared per share	\$ 0.7900	\$ 0.7325	\$ 2.3700	\$ 2.1975

See accompanying Notes to Interim Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME – UNAUDITED

<i>In millions</i>	Three months ended		Nine months ended	
	September 30		September 30	
	2023	2022	2023	2022
Net income	\$ 1,108	\$ 1,455	\$ 3,495	\$ 3,698
Other comprehensive income (loss) (Note 8)				
Net gain on foreign currency translation	89	366	2	467
Net change in pension and other postretirement benefit plans (Note 4)	–	40	(2)	149
Derivative instruments (Note 10)	59	(27)	77	(2)
Other comprehensive income before income taxes	148	379	77	614
Income tax recovery (expense)	21	94	(18)	81
Other comprehensive income	169	473	59	695
Comprehensive income	\$ 1,277	\$ 1,928	\$ 3,554	\$ 4,393

See accompanying Notes to Interim Consolidated Financial Statements.

CONSOLIDATED BALANCE SHEETS – UNAUDITED

<i>In millions</i>	<i>As at</i>	September 30	December 31
		2023	2022
Assets			
Current assets			
Cash and cash equivalents	\$	491	\$ 328
Restricted cash and cash equivalents (Note 6)		451	506
Accounts receivable		1,284	1,371
Material and supplies		761	692
Other current assets		384	320
Total current assets		3,371	3,217
Properties		44,525	43,537
Operating lease right-of-use assets		432	470
Pension asset		3,350	3,033
Intangible assets, goodwill and other		411	405
Total assets	\$	52,089	\$ 50,662
Liabilities and shareholders' equity			
Current liabilities			
Accounts payable and other	\$	2,360	\$ 2,785
Current portion of long-term debt		2,296	1,057
Total current liabilities		4,656	3,842
Deferred income taxes		10,134	9,796
Other liabilities and deferred credits		453	441
Pension and other postretirement benefits		480	486
Long-term debt		16,086	14,372
Operating lease liabilities		309	341
Total liabilities		32,118	29,278
Shareholders' equity			
Common shares		3,533	3,613
Common shares in Share Trusts		(143)	(170)
Additional paid-in capital		375	381
Accumulated other comprehensive loss (Note 8)		(1,910)	(1,969)
Retained earnings		18,116	19,529
Total shareholders' equity		19,971	21,384
Total liabilities and shareholders' equity	\$	52,089	\$ 50,662

See accompanying Notes to Interim Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY - UNAUDITED

<i>In millions</i>	Number of common shares		Common shares	Common shares in Share Trusts	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
	Outstanding	Share Trusts						
Balance at June 30, 2023	657.5	1.1	\$ 3,573	\$ (142)	\$ 369	\$ (2,079)	\$ 18,677	\$ 20,398
Net income							1,108	1,108
Stock options exercised	—		2		—			2
Settlement of equity settled awards	0.1	(0.1)		6	(8)		—	(2)
Stock-based compensation and other					14		—	14
Repurchase of common shares (Note 6)	(7.7)		(42)				(1,154)	(1,196)
Share purchases by Share Trusts	(0.1)	0.1		(7)				(7)
Other comprehensive income (Note 8)						169		169
Dividends							(515)	(515)
Balance at September 30, 2023	649.8	1.1	\$ 3,533	\$ (143)	\$ 375	\$ (1,910)	\$ 18,116	\$ 19,971

<i>In millions</i>	Number of common shares		Common shares	Common shares in Share Trusts	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
	Outstanding	Share Trusts						
Balance at December 31, 2022	671.0	1.4	\$ 3,613	\$ (170)	\$ 381	\$ (1,969)	\$ 19,529	\$ 21,384
Net income							3,495	3,495
Stock options exercised	0.3		38		(5)			33
Settlement of equity settled awards	0.4	(0.4)		48	(65)		(25)	(42)
Stock-based compensation and other					64		(1)	63
Repurchase of common shares (Note 6)	(21.8)		(118)				(3,320)	(3,438)
Share purchases by Share Trusts	(0.1)	0.1		(21)				(21)
Other comprehensive income (Note 8)						59		59
Dividends							(1,562)	(1,562)
Balance at September 30, 2023	649.8	1.1	\$ 3,533	\$ (143)	\$ 375	\$ (1,910)	\$ 18,116	\$ 19,971

See accompanying Notes to Interim Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY - UNAUDITED

<i>In millions</i>	Number of common shares		Common shares	Common shares in Share Trusts	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
	Outstanding	Share Trusts						
Balance at June 30, 2022	685.5	0.9	\$ 3,660	\$ (88)	\$ 374	\$ (2,019)	\$ 19,817	\$ 21,744
Net income							1,455	1,455
Stock options exercised	—		6		(1)			5
Settlement of equity settled awards	—	—		6	(11)		(5)	(10)
Stock-based compensation and other					16		(1)	15
Repurchase of common shares (Note 6)	(7.6)		(41)				(1,137)	(1,178)
Share purchases by Share Trusts	—	—		(6)				(6)
Other comprehensive income (Note 8)						473		473
Dividends							(498)	(498)
Balance at September 30, 2022	677.9	0.9	\$ 3,625	\$ (88)	\$ 378	\$ (1,546)	\$ 19,631	\$ 22,000

<i>In millions</i>	Number of common shares		Common shares	Common shares in Share Trusts	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
	Outstanding	Share Trusts						
Balance at December 31, 2021	700.9	1.1	\$ 3,704	\$ (103)	\$ 397	\$ (2,241)	\$ 20,987	\$ 22,744
Net income							3,698	3,698
Stock options exercised	0.4		47		(7)			40
Settlement of equity settled awards	0.3	(0.3)		33	(77)		(23)	(67)
Stock-based compensation and other					65		(2)	63
Repurchase of common shares (Note 6)	(23.6)		(126)				(3,518)	(3,644)
Share purchases by Share Trusts	(0.1)	0.1		(18)				(18)
Other comprehensive income (Note 8)						695		695
Dividends							(1,511)	(1,511)
Balance at September 30, 2022	677.9	0.9	\$ 3,625	\$ (88)	\$ 378	\$ (1,546)	\$ 19,631	\$ 22,000

See accompanying Notes to Interim Consolidated Financial Statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS – UNAUDITED

<i>In millions</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Operating activities				
Net income	\$ 1,108	\$ 1,455	\$ 3,495	\$ 3,698
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation and amortization	457	435	1,354	1,278
Pension income and funding	(104)	(91)	(314)	(295)
Deferred income taxes	124	108	303	216
Changes in operating assets and liabilities:				
Accounts receivable	(55)	(132)	89	(416)
Material and supplies	8	39	(62)	(93)
Accounts payable and other	(81)	140	(533)	(281)
Other current assets	(6)	58	15	40
Other operating activities, net	61	100	205	248
Net cash provided by operating activities	1,512	2,112	4,552	4,395
Investing activities				
Property additions	(917)	(744)	(2,253)	(1,830)
Proceeds from assets held for sale	–	–	–	273
Other investing activities, net	(14)	(12)	(25)	(16)
Net cash used in investing activities	(931)	(756)	(2,278)	(1,573)
Financing activities				
Issuance of debt (Note 6)	–	1,899	1,730	1,899
Repayment of debt	(11)	(10)	(238)	(39)
Change in commercial paper, net (Note 6)	1,073	(1,745)	1,312	(39)
Settlement of foreign exchange forward contracts on debt	23	49	21	61
Issuance of common shares for stock options exercised	2	5	33	40
Withholding taxes remitted on the net settlement of equity settled awards (Note 7)	(1)	(3)	(38)	(44)
Repurchase of common shares (Note 6)	(1,194)	(1,157)	(3,399)	(3,587)
Purchase of common shares for settlement of equity settled awards	(1)	(7)	(4)	(23)
Purchase of common shares by Share Trusts	(7)	(6)	(21)	(18)
Dividends paid	(515)	(498)	(1,562)	(1,511)
Net cash used in financing activities	(631)	(1,473)	(2,166)	(3,261)
Effect of foreign exchange fluctuations on cash, cash equivalents, restricted cash and restricted cash equivalents	2	3	–	4
Net increase (decrease) in cash, cash equivalents, restricted cash, and restricted cash equivalents	(48)	(114)	108	(435)
Cash, cash equivalents, restricted cash, and restricted cash equivalents, beginning of period	990	1,020	834	1,341
Cash, cash equivalents, restricted cash, and restricted cash equivalents, end of period	\$ 942	\$ 906	\$ 942	\$ 906
Cash and cash equivalents, end of period	\$ 491	\$ 403	\$ 491	\$ 403
Restricted cash and cash equivalents, end of period	451	503	451	503
Cash, cash equivalents, restricted cash, and restricted cash equivalents, end of period	\$ 942	\$ 906	\$ 942	\$ 906
Supplemental cash flow information				
Interest paid	\$ (256)	\$ (182)	\$ (622)	\$ (439)
Income taxes paid	\$ (279)	\$ (264)	\$ (987)	\$ (954)

See accompanying Notes to Interim Consolidated Financial Statements.

1 – Basis of presentation

In these notes, the "Company" or "CN" refers to Canadian National Railway Company, together with its wholly-owned subsidiaries. The accompanying unaudited Interim Consolidated Financial Statements ("Interim Consolidated Financial Statements"), expressed in Canadian dollars, have been prepared in accordance with United States generally accepted accounting principles (GAAP) for interim financial statements. Accordingly, they do not include all of the disclosures required by GAAP for complete financial statements. In management's opinion, all adjustments (consisting of normal recurring accruals) considered necessary for fair presentation have been included. Interim operating results are not necessarily indicative of the results that may be expected for the full year.

These Interim Consolidated Financial Statements have been prepared using accounting policies consistent with those used in preparing CN's 2022 Annual Consolidated Financial Statements and should be read in conjunction with such statements and Notes thereto.

2 – Recent accounting pronouncements

The following Accounting Standards Updates (ASU) issued by the Financial Accounting Standards Board (FASB) have been adopted by the Company:

ASU 2020-04 and ASU 2022-06 Reference rate reform (Topic 848): Facilitation of the effects of reference rate reform on financial reporting and related amendments

On March 31, 2023, the Company amended the non-revolving credit facility to transition to Secured Overnight Financing Rates (SOFR) succeeding London Interbank Offered Rates (LIBOR) (see *Note 6 – Financing activities*). The Company was eligible and has elected to use the optional expedient provided by the ASU which allowed the amendment to be accounted for as a non-substantial modification of an existing debt. As a result, the amendment did not have a significant impact to the Company's Interim Consolidated Financial Statements and related disclosures.

Additional information relating to the facilitation of the effects of reference rate reform on financial reporting and related amendments is provided in *Note 3 – Recent accounting pronouncements* to the Company's 2022 Annual Consolidated Financial Statements and the section entitled *Recent accounting pronouncements* of the Company's 2022 Annual MD&A.

Other recently issued ASUs required to be applied on or after September 30, 2023 have been evaluated by the Company and are not expected to have a significant impact on the Company's Consolidated Financial Statements.

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS - UNAUDITED

3 – Revenues

The following table provides disaggregated information for revenues for the three and nine months ended September 30, 2023 and 2022:

<i>In millions</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Freight revenues				
Petroleum and chemicals	\$ 758	\$ 850	\$ 2,334	\$ 2,435
Metals and minerals	515	539	1,541	1,411
Forest products	466	550	1,457	1,489
Coal	242	258	768	702
Grain and fertilizers	722	621	2,271	1,829
Intermodal	880	1,340	2,875	3,722
Automotive	237	208	687	581
Total freight revenues	3,820	4,366	11,933	12,169
Other revenues	167	147	424	396
Total revenues ⁽¹⁾	\$ 3,987	\$ 4,513	\$ 12,357	\$ 12,565
Revenues by geographic area				
Canada	\$ 2,728	\$ 3,078	\$ 8,450	\$ 8,524
United States (U.S.)	1,259	1,435	3,907	4,041
Total revenues ⁽¹⁾	\$ 3,987	\$ 4,513	\$ 12,357	\$ 12,565

(1) As at September 30, 2023, the Company had remaining performance obligations related to freight in-transit, for which revenues of \$89 million (\$115 million as at September 30, 2022) are expected to be recognized in the next period.

Contract liabilities

The following table provides a reconciliation of the beginning and ending balances of contract liabilities for the three and nine months ended September 30, 2023 and 2022:

<i>In millions</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Beginning balance	\$ 41	\$ 17	\$ 28	\$ 74
Revenue recognized included in the beginning balance	(11)	(14)	(12)	(74)
Increase due to consideration received, net of revenue recognized	18	11	32	14
Ending balance	\$ 48	\$ 14	\$ 48	\$ 14
Current portion - Ending balance	\$ 10	\$ 12	\$ 10	\$ 12

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS - UNAUDITED

4 – Pensions and other postretirement benefits

The Company has various retirement benefit plans under which substantially all of its employees are entitled to benefits at retirement age, generally based on compensation and length of service and/or contributions. Additional information relating to the retirement benefit plans is provided in *Note 18 – Pensions and other postretirement benefits* to the Company's 2022 Annual Consolidated Financial Statements.

The following table provides the components of net periodic benefit cost (income) for defined benefit pension and other postretirement benefit plans for the three and nine months ended September 30, 2023 and 2022:

In millions	Three months ended September 30				Nine months ended September 30			
	Pensions		Other postretirement benefits		Pensions		Other postretirement benefits	
	2023	2022	2023	2022	2023	2022	2023	2022
Current service cost	\$ 21	\$ 40	\$ 1	\$ –	\$ 62	\$ 119	\$ 1	\$ 1
Other components of net periodic benefit income:								
Interest cost	175	116	1	2	527	350	5	4
Expected return on plan assets	(297)	(283)	–	–	(890)	(849)	–	–
Amortization of prior service credit	–	–	(1)	(1)	–	–	(3)	(1)
Amortization of net actuarial loss (gain)	2	42	(1)	(1)	5	125	(4)	(3)
Total Other components of net periodic benefit income	(120)	(125)	(1)	–	(358)	(374)	(2)	–
Net periodic benefit cost (income) ⁽¹⁾	\$ (99)	\$ (85)	\$ –	\$ –	\$ (296)	\$ (255)	\$ (1)	\$ 1

(1) In the second quarters of 2023 and 2022, the Company revised its estimate of full year net periodic benefit cost (income) for pensions to reflect updated plan demographic information and the resulting impacts were not significant.

Pension contributions

Pension contributions for the nine months ended September 30, 2023 and 2022 were \$38 million and \$57 million, respectively. The contributions for the nine months ended September 30, 2022 primarily represent contributions to the CN Pension Plan for the current service cost as determined under the Company's applicable actuarial valuations for funding purposes. For the nine months ended September 30, 2023, based on the results of the December 31, 2022 funding valuations, the CN Pension Plan remained fully funded and at a level such that the Company continues to be prohibited from making contributions to the CN Pension Plan. For all of 2023, the Company expects to make total cash contributions of approximately \$50 million for all of the Company's pension plans.

5 – Earnings per share

The following table provides a reconciliation between basic and diluted earnings per share for the three and nine months ended September 30, 2023 and 2022:

In millions, except per share data	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Net income	\$ 1,108	\$ 1,455	\$ 3,495	\$ 3,698
Weighted-average basic shares outstanding	654.3	682.3	661.4	690.2
Dilutive effect of stock-based compensation	1.3	2.0	1.5	1.9
Weighted-average diluted shares outstanding	655.6	684.3	662.9	692.1
Basic earnings per share	\$ 1.69	\$ 2.13	\$ 5.28	\$ 5.36
Diluted earnings per share	\$ 1.69	\$ 2.13	\$ 5.27	\$ 5.34
Units excluded from the calculation as their inclusion would not have a dilutive effect				
Stock options	1.0	0.6	1.0	0.6
Performance share units	0.6	0.2	0.5	0.2

6 – Financing activities

For details on the Company's available financing sources, see *Note 16 – Debt* to the Company's 2022 Annual Consolidated Financial Statements. For the nine months ended September 30, 2023, the following changes occurred:

Shelf prospectus and registration statement

As at September 30, 2023, the remaining capacity of the shelf prospectus and registration statement, filed on May 4, 2022, was \$2.3 billion. Access to the Canadian and U.S. capital markets under the shelf prospectus and registration statement is dependent on market conditions.

Notes and debentures

For the nine months ended September 30, 2023, the Company issued and repaid the following:

- On May 10, 2023, issuance of \$550 million 4.15% Notes due 2030, \$400 million 4.40% Notes due 2033 and \$800 million 4.70% Notes due 2053 in the Canadian capital markets, which resulted in total net proceeds of \$1,730 million; and
- On May 15, 2023, repayment of US\$150 million (\$203 million) 7.63% Notes due 2023 upon maturity.

For the nine months ended September 30, 2022, the Company issued the following:

- On August 5, 2022, issuance of US\$800 million (\$1,028 million) 3.85% Notes due 2032 and US\$700 million (\$900 million) 4.40% Notes due 2052, in the U.S. capital markets, which resulted in total net proceeds of \$1,901 million.

Revolving credit facilities

On March 17, 2023, the Company's revolving credit facility agreements were amended to extend their respective tenors by one additional year each. The unsecured credit facility of \$2.5 billion consists of two tranches of \$1.25 billion now maturing on March 31, 2026 and March 31, 2028. The unsecured credit facility of \$1.0 billion is now maturing on March 17, 2025. The credit facilities were also amended to include fallback language that addresses the cessation of Canadian Dollar Offered Rate (CDOR) and adoption of Canadian Overnight Repo Rate Average (CORRA). Both revolving credit facility agreements have one financial covenant, which limits debt as a percentage of total capitalization. The Company is in compliance as of September 30, 2023.

As at September 30, 2023 and December 31, 2022, the Company had no outstanding borrowings under these revolving credit facilities and there were no draws during the nine months ended September 30, 2023.

Equipment loans

On March 31, 2023, the Company amended its non-revolving term loan facility to transition from LIBOR to SOFR. The facility will now bear interest at SOFR and CDOR plus a margin for U.S. dollar denominated and Canadian dollar denominated borrowings, respectively. The facility now includes fallback language that addresses the cessation of CDOR and adoption of CORRA.

As at September 30, 2023 and December 31, 2022, the Company had outstanding borrowings of US\$519 million (\$704 million) and US\$542 million (\$734 million), respectively, at a weighted-average interest rate of 6.10% and 5.22%, respectively. The Company repaid US\$23 million (\$31 million) on its equipment loans during the first nine months of 2023.

On March 31, 2023, the Company entered into new loan supplements to the existing agreement for an additional principal amount of US\$304 million, which is available to be drawn through March 31, 2024. Term loans made under these loan supplements have a tenor of 15 years, bear interest at SOFR and CDOR plus a margin, are repayable in equal quarterly installments and are secured by rolling stock. As at September 30, 2023, the Company had no outstanding borrowings under this loan supplement.

Commercial paper

As at September 30, 2023 and December 31, 2022, the Company had total commercial paper borrowings of US\$1,644 million (\$2,231 million) and US\$594 million (\$805 million), respectively, at a weighted-average interest rate of 5.51% and 4.27%, respectively, presented in Current portion of long-term debt on the Consolidated Balance Sheets.

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS - UNAUDITED

The following table provides a summary of cash flows associated with the issuance and repayment of commercial paper for the three and nine months ended September 30, 2023 and 2022:

<i>In millions</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Commercial paper with maturities less than 90 days				
Issuance	\$ 4,077	\$ 2,364	\$ 10,123	\$ 7,867
Repayment	(3,341)	(3,716)	(9,581)	(7,770)
Change in commercial paper with maturities less than 90 days, net	\$ 736	\$ (1,352)	\$ 542	\$ 97
Commercial paper with maturities of 90 days or greater				
Issuance	\$ 762	\$ 12	\$ 1,768	\$ 439
Repayment	(425)	(405)	(998)	(575)
Change in commercial paper with maturities of 90 days or greater, net	\$ 337	\$ (393)	\$ 770	\$ (136)
Change in commercial paper, net	\$ 1,073	\$ (1,745)	\$ 1,312	\$ (39)

Bilateral letter of credit facilities

On March 17, 2023, the Company extended the maturity date of its committed bilateral letter of credit facility agreements to April 28, 2026.

As at September 30, 2023, the Company had outstanding letters of credit of \$341 million (\$396 million as at December 31, 2022) under the committed facilities from a total available amount of \$363 million (\$470 million as at December 31, 2022) and \$152 million (\$100 million as at December 31, 2022) under the uncommitted facilities.

As at September 30, 2023, included in Restricted cash and cash equivalents was \$341 million (\$397 million as at December 31, 2022) and \$100 million (\$100 million as at December 31, 2022) which were pledged as collateral under the committed and uncommitted bilateral letter of credit facilities, respectively, and \$10 million held in escrow as at September 30, 2023 (\$9 million as at December 31, 2022).

Repurchase of common shares

The Company may repurchase its common shares pursuant to a Normal Course Issuer Bid (NCIB) at prevailing market prices plus brokerage fees, or such other prices as may be permitted by the Toronto Stock Exchange. Under its current NCIB, the Company may repurchase up to 32.0 million common shares between February 1, 2023 and January 31, 2024. As at September 30, 2023, the Company had repurchased 19.3 million common shares for \$3,029 million under its current NCIB.

The Company repurchased 31.9 million common shares under its previous NCIB effective between February 1, 2022 and January 31, 2023, which allowed for the repurchase of up to 42.0 million common shares.

The following table provides the information related to the share repurchases for the three and nine months ended September 30, 2023 and 2022:

<i>In millions, except per share data</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Number of common shares repurchased	7.7	7.6	21.8	23.6
Weighted-average price per share ⁽¹⁾	\$ 153.92	\$ 155.29	\$ 157.41	\$ 154.38
Amount of repurchase ⁽¹⁾⁽²⁾	\$ 1,196	\$ 1,178	\$ 3,438	\$ 3,644

(1) Includes brokerage fees.

(2) Includes settlements in subsequent periods.

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS - UNAUDITED

7 – Stock-based compensation

The Company has various stock-based compensation plans for eligible employees. A description of the major plans is provided in Note 20 – Stock-based compensation to the Company's 2022 Annual Consolidated Financial Statements.

The following table provides the Company's total stock-based compensation expense for awards under all employee plans, as well as the related tax benefit and excess tax benefit recognized in income, for the three and nine months ended September 30, 2023 and 2022:

<i>In millions</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Share Units Plan ⁽¹⁾	\$ 3	\$ 7	\$ 25	\$ 26
Voluntary Incentive Deferral Plan (VIDP) ⁽²⁾	–	1	–	1
Stock option awards	3	2	9	7
Employee Share Investment Plan (ESIP)	6	5	19	17
Total stock-based compensation expense	\$ 12	\$ 15	\$ 53	\$ 51
Income tax impacts of stock-based compensation				
Tax benefit recognized in income	\$ 3	\$ 4	\$ 13	\$ 13
Excess tax benefit recognized in income	\$ –	\$ 1	\$ 10	\$ 13

(1) Performance share unit (PSU) awards are granted under the Share Units Plan and are comprised of awards which are settled based on a level of attainment of a target return on invested capital (ROIC) and total shareholder return (TSR).

(2) Deferred share unit (DSU) awards are granted under the Voluntary Incentive Deferral Plan.

Share Units Plan

The following table provides a summary of the activity related to PSU awards for the nine months ended September 30, 2023:

	PSUs-ROIC ⁽¹⁾		PSUs-TSR ⁽²⁾	
	Weighted-average		Weighted-average	
	Units	grant date fair value	Units	grant date fair value
	<i>In millions</i>		<i>In millions</i>	
Outstanding at December 31, 2022	0.7	\$ 73.21	0.4	\$ 160.40
Granted	0.2	\$ 89.40	0.1	\$ 174.11
Settled ⁽³⁾	(0.2)	\$ 74.02	(0.1)	\$ 153.22
Forfeited	–	\$ 80.51	–	\$ 168.05
Outstanding at September 30, 2023	0.7	\$ 78.77	0.4	\$ 167.78

(1) The grant date fair value of equity settled PSUs-ROIC granted in 2023 of \$23 million is calculated using a lattice-based valuation model. As at September 30, 2023, total unrecognized compensation cost related to all outstanding awards was \$14 million and is expected to be recognized over a weighted-average period of 1.8 years.

(2) The grant date fair value of equity settled PSUs-TSR granted in 2023 of \$23 million is calculated using a Monte Carlo simulation model. As at September 30, 2023, total unrecognized compensation cost related to all outstanding awards was \$23 million and is expected to be recognized over a weighted-average period of 1.9 years.

(3) Equity settled PSUs-ROIC granted in 2020 met the minimum share price condition for settlement and attained a performance vesting factor of 120%. Equity settled PSUs-TSR granted in 2020 attained a performance vesting factor of 162%. In the first quarter of 2023, these awards were settled, net of the remittance of the participants' withholding tax obligation of \$35 million, by way of disbursement from the Share Trusts of 0.3 million common shares.

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS - UNAUDITED

Voluntary Incentive Deferral Plan

The following table provides a summary of the activity related to equity settled DSU awards for the nine months ended September 30, 2023:

	DSUs ⁽¹⁾	
	Units	Weighted-average grant date fair value
	<i>In millions</i>	
Outstanding at December 31, 2022	0.3	\$ 106.60
Granted	–	\$ 157.22
Settled ⁽²⁾	–	\$ 122.29
Outstanding at September 30, 2023 ⁽³⁾	0.3	\$ 112.19

(1) The grant date fair value of equity settled DSUs granted in 2023 of \$6 million is calculated using the Company's stock price on the grant date. As at September 30, 2023, the aggregate intrinsic value of all equity settled DSUs outstanding amounted to \$49 million.

(2) For the nine months ended September 30, 2023, the Company purchased common shares for the settlement of equity settled DSUs, net of the remittance of the participants' withholding tax obligation of \$3 million.

(3) The total fair value of equity settled DSU awards vested, the number of units outstanding that were nonvested, unrecognized compensation cost and the remaining recognition period have not been quantified as they relate to a minimal number of units.

As at September 30, 2023 the liability for cash settled DSUs was \$5 million based on a closing stock price of \$147.09 (\$7 million based on a closing stock price of \$160.84 as at December 31, 2022).

Stock option awards

The following table provides the activity of stock option awards for options outstanding and the weighted-average exercise price for the nine months ended September 30, 2023:

	Options outstanding	
	Number of options	Weighted-average exercise price
	<i>In millions</i>	
Outstanding at December 31, 2022 ⁽¹⁾	3.3	\$ 119.08
Granted ⁽²⁾	0.5	\$ 157.91
Exercised	(0.3)	\$ 100.00
Forfeited	–	\$ 149.52
Outstanding at September 30, 2023 ⁽¹⁾⁽²⁾⁽³⁾	3.5	\$ 127.23
Exercisable at September 30, 2023 ⁽¹⁾⁽³⁾	2.0	\$ 109.62

(1) Stock options with a US dollar exercise price have been translated into Canadian dollars using the foreign exchange rate in effect at the balance sheet date.

(2) The grant date fair value of options granted in 2023 of \$19 million (\$32.93 per option) is calculated using the Black-Scholes option-pricing model. As at September 30, 2023, total unrecognized compensation cost related to all outstanding awards was \$23 million and is expected to be recognized over a weighted-average period of 3.6 years.

(3) The weighted-average term to expiration of options outstanding was 6.3 years and the weighted-average term to expiration of exercisable stock options was 4.8 years. As at September 30, 2023, the aggregate intrinsic value of in-the-money stock options outstanding amounted to \$82 million and the aggregate intrinsic value of stock options exercisable amounted to \$75 million.

Employee Share Investment Plan

The following table provides a summary of the activity related to the ESIP for the nine months ended September 30, 2023:

	ESIP	
	Number of shares	Weighted-average share price
	<i>In millions</i>	
Unvested contributions at December 31, 2022	0.1	\$ 154.12
Company contributions	0.2	\$ 157.89
Forfeited	–	\$ 158.39
Vested ⁽¹⁾	(0.1)	\$ 154.05
Unvested contributions at September 30, 2023 ⁽²⁾	0.2	\$ 158.07

(1) As at September 30, 2023, total fair value of units purchased with Company contributions that vested in 2023 was \$17 million.

(2) As at September 30, 2023, total unrecognized compensation cost related to all outstanding awards was \$16 million and is expected to be recognized over the next twelve months.

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS - UNAUDITED

8 – Accumulated other comprehensive loss

The following tables present the changes in Accumulated other comprehensive loss by component for the three and nine months ended September 30, 2023 and 2022:

<i>In millions</i>	Foreign currency translation	Pension and other postretirement benefit plans	Derivative instruments	Total before tax	Income tax recovery (expense) ⁽¹⁾	Total net of tax
Balance at June 30, 2023	\$ (157)	\$ (2,671)	\$ 21	\$ (2,807)	\$ 728	\$ (2,079)
Other comprehensive income (loss) before reclassifications:						
Translation of net investment ⁽²⁾	364			364	–	364
Translation of US dollar debt ⁽³⁾	(275)			(275)	36	(239)
Derivative instruments ⁽⁴⁾			59	59	(15)	44
Amounts reclassified from Accumulated other comprehensive loss:						
Amortization of prior service credit ⁽⁵⁾		(1)		(1)	–	(1)
Amortization of net actuarial loss ⁽⁵⁾		1		1	–	1
Other comprehensive income	89	–	59	148	21	169
Balance at September 30, 2023	\$ (68)	\$ (2,671)	\$ 80	\$ (2,659)	\$ 749	\$ (1,910)

<i>In millions</i>	Foreign currency translation	Pension and other postretirement benefit plans	Derivative instruments	Total before tax	Income tax recovery (expense) ⁽¹⁾	Total net of tax
Balance at December 31, 2022	\$ (70)	\$ (2,669)	\$ 3	\$ (2,736)	\$ 767	\$ (1,969)
Other comprehensive income (loss) before reclassifications:						
Translation of net investment ⁽²⁾	17			17	–	17
Translation of US dollar debt ⁽³⁾	(15)			(15)	1	(14)
Derivative instruments ⁽⁴⁾			77	77	(19)	58
Amounts reclassified from Accumulated other comprehensive loss:						
Amortization of prior service credit ⁽⁵⁾		(3)		(3)	–	(3)
Amortization of net actuarial loss ⁽⁵⁾		1		1	–	1
Other comprehensive income (loss)	2	(2)	77	77	(18)	59
Balance at September 30, 2023	\$ (68)	\$ (2,671)	\$ 80	\$ (2,659)	\$ 749	\$ (1,910)

Footnotes to the tables follow on the next page.

NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS - UNAUDITED

<i>In millions</i>	Foreign currency translation	Pension and other postretirement benefit plans	Derivative instruments	Total before tax	Income tax recovery (expense) ⁽¹⁾	Total net of tax
Balance at June 30, 2022	\$ (335)	\$ (2,310)	\$ 30	\$ (2,615)	\$ 596	\$ (2,019)
Other comprehensive income (loss) before reclassifications:						
Translation of net investment ⁽²⁾	1,113			1,113	–	1,113
Translation of US dollar debt ⁽³⁾	(747)			(747)	98	(649)
Derivative Instruments ⁽⁴⁾			(27)	(27)	6	(21)
Amounts reclassified from Accumulated other comprehensive loss:						
Amortization of prior service credit ⁽⁵⁾		(1)		(1)	–	(1)
Amortization of net actuarial loss ⁽⁵⁾		41		41	(10)	31
Other comprehensive income (loss)	366	40	(27)	379	94	473
Balance at September 30, 2022	\$ 31	\$ (2,270)	\$ 3	\$ (2,236)	\$ 690	\$ (1,546)

<i>In millions</i>	Foreign currency translation	Pension and other postretirement benefit plans	Derivative instruments	Total before tax	Income tax recovery (expense) ⁽¹⁾	Total net of tax
Balance at December 31, 2021	\$ (436)	\$ (2,419)	\$ 5	\$ (2,850)	\$ 609	\$ (2,241)
Other comprehensive income (loss) before reclassifications:						
Translation of net investment ⁽²⁾	1,385			1,385	–	1,385
Translation of US dollar debt ⁽³⁾	(918)			(918)	120	(798)
Derivative Instruments ⁽⁴⁾			(2)	(2)	–	(2)
Actuarial gain arising during the period ⁽⁶⁾		7		7	(2)	5
Prior service credit arising during the period ⁽⁶⁾		21		21	(5)	16
Amounts reclassified from Accumulated other comprehensive loss:						
Amortization of prior service credit ⁽⁵⁾		(1)		(1)	–	(1)
Amortization of net actuarial loss ⁽⁵⁾		122		122	(32)	90
Other comprehensive income (loss)	467	149	(2)	614	81	695
Balance at September 30, 2022	\$ 31	\$ (2,270)	\$ 3	\$ (2,236)	\$ 690	\$ (1,546)

- (1) The Company releases stranded tax effects from Accumulated other comprehensive loss to Net income upon the liquidation or termination of the related item.
- (2) Foreign exchange gains or losses on translation of net investment in foreign operations.
- (3) Foreign exchange gains or losses on translation of US dollar-denominated debt designated as a hedge of the net investment in foreign operations. The Company designates US dollar-denominated debt of the parent company as a foreign currency hedge of its net investment in foreign operations. Accordingly, from the dates of designation, foreign exchange gains and losses on translation of the Company's US dollar-denominated debt are recorded in Accumulated other comprehensive loss, which minimizes the volatility of earnings resulting from the conversion of US dollar-denominated debt into Canadian dollars.
- (4) Treasury locks gains or losses on Derivative instruments. See Note 10 – Financial instruments for additional information.
- (5) Total before tax reclassified to Other components of net periodic benefit income in the Consolidated Statements of Income and included in net periodic benefit cost. See Note 4 – Pensions and other postretirement benefits for additional information.
- (6) Amendments to the postretirement medical benefits plans in the U.S. resulted in a prior service credit and an actuarial gain. See Note 18 - Pensions and other postretirement benefits to the Company's 2022 Annual Consolidated Financial Statements.

9 – Major commitments and contingencies

Purchase commitments

As at September 30, 2023, the Company had fixed and variable commitments to purchase locomotives, information technology services and licenses, engineering services, railroad cars, wheels, rail, rail ties as well as other equipment and services with a total estimated cost of \$2,473 million. Costs of variable commitments were estimated using forecasted prices and volumes.

Contingencies

In the normal course of business, the Company becomes involved in various legal actions seeking compensatory and occasionally punitive damages, including actions brought on behalf of various purported classes of claimants and claims relating to employee and third-party personal injuries, occupational disease and property damage, arising out of harm to individuals or property allegedly caused by, but not limited to, derailments or other accidents.

As at September 30, 2023, the Company had aggregate reserves for personal injury and other claims of \$297 million, of which \$43 million was recorded as a current liability (\$296 million as at December 31, 2022, of which \$45 million was recorded as a current liability).

Although the Company considers such provisions to be adequate for all its outstanding and pending claims, the final outcome with respect to actions outstanding or pending as at September 30, 2023, or with respect to future claims, cannot be reasonably determined. When establishing provisions for contingent liabilities the Company considers, where a probable loss estimate cannot be made with reasonable certainty, a range of potential probable losses for each such matter, and records the amount it considers the most reasonable estimate within the range. However, when no amount within the range is a better estimate than any other amount, the minimum amount in the range is accrued. For matters where a loss is reasonably possible but not probable, a range of potential losses cannot be estimated due to various factors which may include the limited availability of facts, the lack of demand for specific damages and the fact that proceedings were at an early stage. Based on information currently available, the Company believes that the eventual outcome of the actions against the Company will not, individually or in the aggregate, have a material adverse effect on the Company's financial position. However, due to the inherent inability to predict with certainty unforeseeable future developments, there can be no assurance that the ultimate resolution of these actions will not have a material adverse effect on the Company's results of operations, financial position or liquidity.

Environmental matters

The Company's provision for specific environmental sites is undiscounted and includes costs for remediation and restoration of sites, as well as monitoring costs. Costs related to any unknown existing or future contamination will be accrued in the period in which they become probable and reasonably estimable. Additional information relating to the Company's environmental matters is provided in *Note 22 – Major commitments and contingencies* to the Company's 2022 Annual Consolidated Financial Statements.

As at September 30, 2023, the Company had aggregate accruals for environmental costs of \$58 million, of which \$41 million was recorded as a current liability (\$59 million as at December 31, 2022, of which \$41 million was recorded as a current liability). The Company anticipates that the majority of the liability at September 30, 2023 will be paid out over the next five years. Based on the information currently available, the Company considers its accruals to be adequate.

Guarantees and indemnifications

A description of the Company's guarantees and indemnifications is provided in *Note 22 – Major commitments and contingencies* to the Company's 2022 Annual Consolidated Financial Statements.

As at September 30, 2023, the Company had outstanding letters of credit of \$341 million (\$396 million as at December 31, 2022) under the committed bilateral letter of credit facilities and \$152 million (\$100 million as at December 31, 2022) under the uncommitted bilateral letter of credit facilities, and surety and other bonds of \$163 million (\$171 million as at December 31, 2022), all issued by financial institutions with investment grade credit ratings to third parties to indemnify them in the event the Company does not perform its contractual obligations.

As at September 30, 2023, the maximum potential liability under these guarantee instruments was \$656 million (\$667 million as at December 31, 2022), of which \$611 million (\$625 million as at December 31, 2022) related to other employee benefit liabilities and workers' compensation and \$45 million (\$42 million as at December 31, 2022) related to other liabilities. The guarantee instruments expire at various dates between 2023 and 2025.

As at September 30, 2023, the Company had not recorded a liability with respect to guarantees and indemnifications as the Company did not expect to make any payments under its guarantees and indemnifications.

10 – Financial instruments

Derivative financial instruments

The Company uses derivative financial instruments from time to time in the management of its foreign currency and interest rate exposures. The Company has limited involvement with derivative financial instruments in the management of its risks and does not hold or issue them for trading or speculative purposes.

Foreign currency risk

As at September 30, 2023, the Company had outstanding foreign exchange forward contracts to purchase a notional value of US\$1,247 million (US\$1,311 million as at December 31, 2022). These outstanding contracts are at a weighted-average exchange rate of \$1.34 per US\$1.00 (\$1.33 per US\$1.00 as at December 31, 2022) with exchange rates ranging from \$1.31 to \$1.36 per US\$1.00 (\$1.29 to \$1.37 per US\$1.00 as at December 31, 2022). The weighted-average term of the contracts is 79 days (157 days as at December 31, 2022) with terms ranging from 27 days to 178 days (29 days to 300 days as at December 31, 2022). Changes in the fair value of foreign exchange forward contracts, resulting from changes in foreign exchange rates, are recognized in Other income (loss) in the Consolidated Statements of Income as they occur.

For the three and nine months ended September 30, 2023, the Company recorded gains of \$50 million and \$23 million, respectively, related to foreign exchange forward contracts compared to gains of \$137 million and \$173 million, respectively, for the same periods in 2022.

As at September 30, 2023, the fair value of outstanding foreign exchange forward contracts included in Other current assets and Accounts payable and other was \$20 million and \$1 million, respectively (\$33 million and \$4 million, respectively, as at December 31, 2022).

Interest rate risk

As at September 30, 2023, the aggregate notional amount of treasury lock agreements entered into was US\$450 million to hedge US Treasury benchmark rates related to an expected debt issuance in 2023. The treasury locks are designated as cash flow hedging instruments. The cumulative gains or losses of the treasury locks are recorded in Accumulated other comprehensive loss in derivative instruments. The treasury locks will be settled in 2023 upon the issuance of debt at which point the cumulative gains or losses recorded in Accumulated other comprehensive loss will be amortized in earnings as a reduction or increase of interest expense over the term of the corresponding debt.

As at September 30, 2023, the fair value of outstanding treasury lock agreements included in Other current assets and Accounts payable and other was \$77 million and \$nil, respectively (\$nil and \$nil, respectively, as at December 31, 2022).

In conjunction with the August 5, 2022 debt issuance, CN settled a notional US\$675 million (\$868 million) of treasury locks, resulting in a cumulative loss of \$2 million. This loss was recorded in Accumulated other comprehensive loss and is being amortized over the term of the corresponding debt and recognized as an adjustment to interest expense on the Consolidated Statements of Income.

Fair value of financial instruments

The financial instruments that the Company measures at fair value on a recurring basis in periods subsequent to initial recognition are categorized into the following levels of the fair value hierarchy based on the degree to which inputs are observable:

- Level 1: Inputs are quoted prices for identical instruments in active markets
- Level 2: Significant inputs (other than quoted prices included in Level 1) are observable
- Level 3: Significant inputs are unobservable

The carrying amounts of Cash and cash equivalents and Restricted cash and cash equivalents approximate fair value. These financial instruments include highly liquid investments purchased three months or less from maturity, for which the fair value is determined by reference to quoted prices in active markets.

The carrying amounts of Accounts receivable, Other current assets and Accounts payable and other approximate fair value due to their short maturity, unless otherwise specified. The fair value of derivative financial instruments, included in Other current assets and Accounts payable and other is classified as Level 2 and is used to manage the Company's exposure to foreign currency risk and interest rate risk. The fair value is measured by discounting future cash flows using a discount rate derived from market data for financial instruments subject to similar risks and maturities.

The carrying amount of the Company's debt does not approximate fair value. The fair value is estimated based on quoted market prices for the same or similar debt instruments, as well as discounted cash flows using current interest rates for debt with similar terms, company rating, and remaining maturity. The Company classifies debt as Level 2. As at September 30, 2023, the Company's debt, excluding finance leases, had a carrying amount of \$18,356 million (\$15,419 million as at December 31, 2022) and a fair value of \$16,400 million (\$14,137 million as at December 31, 2022). The carrying amount of debt excluding finance leases exceeded the fair value due to market rates being higher than the stated coupon rates.

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MANAGEMENT'S DISCUSSION AND ANALYSIS

Forward-looking statements

Certain statements included in this MD&A are "forward-looking statements" within the meaning of the *United States Private Securities Litigation Reform Act of 1995* and under Canadian securities laws, including statements based on management's assessment and assumptions and publicly available information with respect to CN. By their nature, forward-looking statements involve risks, uncertainties and assumptions. CN cautions that its assumptions may not materialize and that current economic conditions render such assumptions, although reasonable at the time they were made, subject to greater uncertainty. Forward-looking statements may be identified by the use of terminology such as "believes," "expects," "anticipates," "assumes," "outlook," "plans," "targets", or other similar words.

Forward-looking statements include, but are not limited to, those set forth in the table below, which also presents key assumptions used in determining the forward-looking statements. See also the section of this MD&A entitled *2023 Business outlook and assumptions*.

Forward-looking statements	Key assumptions
Statements relating to revenue growth opportunities, including those referring to general economic and business conditions	<ul style="list-style-type: none">• North American and global economic growth in the long term• Long-term growth opportunities being less affected by current economic conditions• No material disruption of CN's operations or of the economy's supply chains as a result of pandemics or geopolitical conflicts and tensions
Statements relating to the Company's ability to meet debt repayments and future obligations in the foreseeable future, including income tax payments, and capital spending	<ul style="list-style-type: none">• Adequate credit ratios• Investment-grade credit ratings• Access to capital markets• Adequate cash generated from operations and other sources of financing
Statements relating to pension contributions	<ul style="list-style-type: none">• Adequate cash generated from operations and other sources of financing• Adequate long-term return on investment on pension plan assets• Level of funding as determined by actuarial valuations, particularly influenced by discount rates for funding purposes

Forward-looking statements are not guarantees of future performance and involve risks, uncertainties and other factors which may cause actual results, performance or achievements of CN to be materially different from the outlook or any future results, performance or achievements implied by such statements. Accordingly, readers are advised not to place undue reliance on forward-looking statements. Important risk factors that could affect the forward-looking statements include, but are not limited to, general economic and business conditions, including factors impacting global supply chains such as pandemics and geopolitical conflicts and tensions; industry competition; inflation, currency and interest rate fluctuations; changes in fuel prices; legislative and/or regulatory developments; compliance with environmental laws and regulations; actions by regulators; increases in maintenance and operating costs; security threats; reliance on technology and related cybersecurity risk; trade restrictions or other changes to international trade arrangements; transportation of hazardous materials; various events which could disrupt operations, including illegal blockades of rail networks, and natural events such as severe weather, droughts, fires, floods and earthquakes; climate change; labor negotiations and disruptions; environmental claims; uncertainties of investigations, proceedings or other types of claims and litigation; risks and liabilities arising from derailments; timing and completion of capital programs; the availability of and cost competitiveness of renewable fuels and the development of new locomotive propulsion technology; and other risks detailed from time to time in reports filed by CN with securities regulators in Canada and the U.S., including its Annual Information Form and Form 40-F. See the section entitled *Business risks* of this MD&A and the Company's 2022 Annual MD&A for a description of major risk factors relating to CN.

Forward-looking statements reflect information as of the date on which they are made. CN assumes no obligation to update or revise forward-looking statements to reflect future events, changes in circumstances, or changes in beliefs, unless required by applicable securities laws. In the event CN does update any forward-looking statement, no inference should be made that CN will make additional updates with respect to that statement, related matters, or any other forward-looking statement. Information contained on, or accessible through, our website is not part of this MD&A.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Introduction

This Management's Discussion and Analysis (MD&A), dated October 24, 2023, relates to the consolidated financial position and results of operations of Canadian National Railway Company, together with its wholly-owned subsidiaries, collectively "CN" or the "Company," and should be read in conjunction with the Company's September 30, 2023 Interim Consolidated Financial Statements. It should also be read in conjunction with the Company's 2022 Annual Consolidated Financial Statements, and the 2022 Annual MD&A. All financial information reflected herein is expressed in Canadian dollars and prepared in accordance with United States generally accepted accounting principles (GAAP), unless otherwise noted.

CN's common shares are listed on the Toronto and New York stock exchanges. Additional information about CN filed with Canadian securities regulatory authorities and the United States Securities and Exchange Commission (SEC), including the Company's 2022 Annual Information Form and Form 40-F, may be found online on SEDAR+ at www.sedarplus.com, on the SEC's website at www.sec.gov through EDGAR, and on the Company's website at www.cn.ca in the Investors section. Printed copies of such documents may be obtained by contacting CN's Corporate Secretary's Office.

2023 Third quarter and first nine months highlights

Third quarter and first nine months of 2023 compared to third quarter and first nine months of 2022

Financial results

- Revenues of \$3,987 million for the third quarter of 2023, a decrease of \$526 million, or 12%, and \$12,357 million for the first nine months of 2023, a decrease of \$208 million, or 2%.
- Operating income of \$1,517 million for the third quarter of 2023, a decrease of \$415 million, or 21% and \$4,779 million for the first nine months of 2023, a decrease of \$149 million, or 3%.
- Operating ratio, defined as operating expenses as a percentage of revenues, of 62.0% for the third quarter of 2023, an increase of 4.8-points and 61.3% for the first nine months of 2023, an increase 0.5-points or an increase of 0.7-points on an adjusted basis. ⁽¹⁾⁽²⁾
- Diluted earnings per share (EPS) of \$1.69 for the third quarter of 2023, a decrease of 21% and \$5.27 for the first nine months of 2023, a decrease of 1% or a decrease of 2% on an adjusted basis. ⁽¹⁾⁽²⁾
- Free cash flow was \$581 million for the third quarter of 2023, a decrease of \$775 million, or 57% and \$2,274 million for the first nine months of 2023, a decrease of \$650 million, or 22%. ⁽¹⁾⁽³⁾

Operating performance

- Injury frequency rate of 1.07 (per 200,000 person hours) for the third quarter of 2023, a deterioration of 6% and 1.02 (per 200,000 person hours) for the first nine months of 2023, an improvement of 11%. ⁽⁴⁾
- Accident rate of 1.86 (per million train miles) for the third quarter of 2023, a deterioration of 10% and 1.76 (per million train miles) for the first nine months of 2023, an improvement of 16%. ⁽⁴⁾
- Through dwell of 7.1 (entire railroad, hours) for the third quarter of 2023, a deterioration of 1% and 7.0 (entire railroad hours) for the first nine months of 2023, an improvement of 10%.
- Car velocity of 209 (car miles per day) for the third quarter of 2023, a deterioration of 1% and 212 (car miles per day) for the first nine months of 2023, an improvement of 10%.
- Through network train speed of 19.7 (mph) for the third quarter of 2023, a deterioration of 2% and 19.9 (mph) for the first nine months of 2023, an improvement of 7%.
- Fuel efficiency of 0.832 (US gallons of locomotive fuel consumed per 1,000 gross ton miles (GTMs)) for the third quarter of 2023, an improvement of 1% and 0.874 (US gallons of locomotive fuel consumed per 1,000 gross ton miles (GTMs)) for the first nine months of 2023, less efficient by 2%.
- Train length of 7,927 (feet) for the third quarter of 2023, a decrease of 3% and 7,870 (feet) for the first nine months of 2023, a decrease of 5%.
- Revenue ton miles (RTMs) of 55,640 (millions) for the third quarter of 2023, a decrease of 5% and 171,478 (millions) for the first nine months of 2023, a decrease of 2%.

(1) These non-GAAP measures do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

(2) See the section of this MD&A entitled *Adjusted performance measures* for an explanation of these non-GAAP measures.

(3) See the section of this MD&A entitled *Liquidity and capital resources – Free cash flow* for an explanation and reconciliation of this non-GAAP measure.

(4) Based on Federal Railroad Administration (FRA) reporting criteria.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Canadian regulatory update

On June 22, 2023, Bill C-47 an Act to implement certain provisions of the budget tabled in Parliament on March 28, 2023, received Royal Assent and the proposed amendments to the Canada Transportation Act were adopted. These amendments provide for the extension of the interswitching limits located in the Prairie provinces from 30 kilometers to 160 kilometers. This extension will be in force for a trial period of 18 months. On September 18, 2023, the Canadian Transportation Agency (CTA) issued the 2023 regulated extended interswitching rates which apply to all commodities moving under interswitching rules from that date. No assurance can be given that these and any other current or future regulatory or legislative initiatives by the Canadian federal government and agencies will not materially adversely affect the Company's results of operations or its competitive and financial position.

U.S. regulatory update

On September 7, 2023, the U.S. Surface Transportation Board (STB) proposed new regulations for reciprocal switching for inadequate service. Under the STB's proposal, the new rule would allow customers to obtain reciprocal switching access to an alternate carrier in a terminal area if the incumbent railroad's service falls below one of three objective metrics (original estimated time of arrival, transit time, and first-mile/last-mile service) and if certain other conditions are met. The STB has proposed that if a reciprocal switch is granted for a facility in the United States, that switch would be available for a period between two to four years and could be renewed. Comments are due on November 7, 2023 and reply comments are due on December 6, 2023. In addition, the STB also closed consideration of a 2016 proposal to amend its existing regulations for reciprocal switching to increase competition, which was the subject of a public hearing in 2022. No assurance can be given that these and any other current or future regulatory or legislative initiatives by the U.S. federal government and agencies will not materially adversely affect the Company's results of operations or its competitive and financial position.

Labor workforce and negotiations

As at September 30, 2023, CN employed a total of 18,297 employees in Canada, of which 13,469, or 74%, were unionized employees, and 6,804 employees in the U.S., of which 5,760, or 85%, were unionized employees.

On May 1, 2023, the collective agreement with Unifor was ratified by its members, renewing the collective agreement for a two-year term expiring on December 31, 2024. Unifor represents approximately 3,400 employees in Canada working in various departments such as Mechanical, Intermodal, Facility Management, and in clerical positions.

On May 26, 2023, the collective agreement with Teamsters Canada Rail Conference (TCRC) was ratified by its members, renewing the collective agreement for a one-year term expiring on December 31, 2023. The next round of bargaining is set to begin at the end of November 2023. TCRC represents approximately 6,000 employees in Canada working as Locomotive Engineers, Yard Coordinators and Yard Conductors on our mainline, short lines and yards.

On September 6, 2023, the United Steel Workers Union (USW) served notice to commence bargaining for the renewal of the collective agreement with the Company, governing approximately 2,500 bridge and structures and work equipment employees in Canada, which expires on December 31, 2023. Bargaining is set to begin late October 2023.

On September 1, 2023, Unifor served notice to commence bargaining for the renewal of the collective agreement with Canadian National Transportation Limited (CNTL), a wholly owned subsidiary of the Company, governing approximately 800 owner-operator truck drivers in Canada, which expires on December 31, 2023. No date has yet been set for bargaining to commence.

Leadership changes

On October 18, 2023, CN announced that Patrick Whitehead was appointed as CN's Executive Vice-President and Chief Network Operating Officer and Derek Taylor was appointed as CN's Executive Vice-President and Chief Field Operating Officer effective November 15, 2023. Patrick and Derek will succeed Edmond (Ed) Harris who will take on a consultant role until March 31, 2024 to ensure a seamless transition.

MANAGEMENT'S DISCUSSION AND ANALYSIS

2023 Business outlook and assumptions

The Company now assumes flat North American industrial production in 2023 (compared to the July 25, 2023 assumption of negative North American industrial production in 2023). For the 2022/2023 crop year, the grain crop in Canada was above its three-year average (or in line when excluding the significantly lower 2021/2022 crop year) and the U.S. grain crop was in line with its three-year average. The Company continues to assume that the 2023/2024 grain crop in Canada will be below its three-year average (also below when excluding the significantly lower 2021/2022 crop year) and the U.S. grain crop will be above its three-year average. Additionally, CN continues to assume that in 2023 there will be no further significant impact from Canadian wildfires.

In 2023, the Company expects to continue investing in its capital program to improve the safety, efficiency and integrity of its network. These investments are intended to also enable and support the growth of the Company and will be financed with cash generated from operations or with cash from financing activities.

The forward-looking statements discussed in this *2023 Business outlook and assumptions* section are subject to risks and uncertainties that could cause actual results or performance to differ materially from those expressed or implied in such statements and are based on certain factors and assumptions which the Company considers reasonable, about events, developments, prospects and opportunities that may not materialize or that may be offset entirely or partially by other events and developments. In addition to the assumptions and expectations discussed in this section, reference should be made to the section of this MD&A entitled *Forward-looking statements* for assumptions and risk factors affecting such statements.

Financial highlights

The following table lists key measures of the Company's financial performance and liquidity for the three and nine months ended September 30, 2023 and 2022 and financial position measures as at September 30, 2023 and December 31, 2022:

<i>In millions, except percentages and per share data</i>	Three months ended September 30			Nine months ended September 30		
	2023	2022	% Change Fav (Unfav)	2023	2022	% Change Fav (Unfav)
Financial performance and liquidity						
Revenues	\$ 3,987	\$ 4,513	(12%)	\$ 12,357	\$ 12,565	(2%)
Operating income	\$ 1,517	\$ 1,932	(21%)	\$ 4,779	\$ 4,928	(3%)
Adjusted operating income ⁽¹⁾⁽²⁾	\$ 1,517	\$ 1,932	(21%)	\$ 4,779	\$ 4,950	(3%)
Net income	\$ 1,108	\$ 1,455	(24%)	\$ 3,495	\$ 3,698	(5%)
Adjusted net income ⁽¹⁾⁽²⁾	\$ 1,108	\$ 1,455	(24%)	\$ 3,495	\$ 3,714	(6%)
Basic earnings per share	\$ 1.69	\$ 2.13	(21%)	\$ 5.28	\$ 5.36	(1%)
Diluted earnings per share	\$ 1.69	\$ 2.13	(21%)	\$ 5.27	\$ 5.34	(1%)
Adjusted diluted earnings per share ⁽¹⁾⁽²⁾	\$ 1.69	\$ 2.13	(21%)	\$ 5.27	\$ 5.37	(2%)
Dividends per share	\$ 0.7900	\$ 0.7325	8%	\$ 2.3700	\$ 2.1975	8%
Operating ratio ⁽³⁾	62.0%	57.2%	(4.8) pts	61.3%	60.8%	(0.5) pts
Adjusted operating ratio ⁽¹⁾⁽²⁾	62.0%	57.2%	(4.8) pts	61.3%	60.6%	(0.7) pts
Net cash provided by operating activities	\$ 1,512	\$ 2,112	(28%)	\$ 4,552	\$ 4,395	4%
Net cash used in investing activities	\$ 931	\$ 756	(23%)	\$ 2,278	\$ 1,573	(45%)
Free cash flow ⁽¹⁾⁽⁴⁾	\$ 581	\$ 1,356	(57%)	\$ 2,274	\$ 2,924	(22%)
<i>In millions, except percentages</i>				As at September 30, 2023	As at December 31, 2022	% Change Fav (Unfav)
Financial position						
Total assets				\$ 52,089	\$ 50,662	3%
Total long-term liabilities ⁽⁵⁾				\$ 27,462	\$ 25,436	(8%)

(1) These non-GAAP measures do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

(2) See the section of this MD&A entitled *Adjusted performance measures* for an explanation of these non-GAAP measures.

(3) Operating ratio is defined as operating expenses as a percentage of revenues.

(4) See the section of this MD&A entitled *Liquidity and capital resources – Free cash flow* for an explanation of this non-GAAP measure.

(5) Total long-term liabilities is the difference between Total liabilities and Total current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Financial results

Third quarter and first nine months of 2023 compared to corresponding periods in 2022

Revenues for the third quarter of 2023 were \$3,987 million compared to \$4,513 million for the same period in 2022, a decrease of \$526 million, or 12%. The decrease in the third quarter was mainly due to lower fuel surcharge revenues as a result of lower fuel prices, lower volumes of intermodal, crude oil and forest products, primarily as a result of lower demand for freight services to move consumer goods and the negative impact of the pacific coast dock workers strike, unfavorable crude oil price spreads and weaker market conditions for lumber and panels as well as lower ancillary services including container storage; partly offset by freight rate increases, higher volumes of Canadian grain and potash and the positive translation impact of a weaker Canadian dollar.

Revenues for the first nine months of 2023 were \$12,357 million compared to \$12,565 million for the same period in 2022, a decrease of \$208 million, or 2%. The decrease in the first nine months was mainly due to lower volumes of intermodal, crude oil and forest products, primarily as a result of lower demand for freight services to move consumer goods and the negative impact of the pacific coast dock workers strike, unfavorable crude oil price spreads and weaker market conditions for lumber and panels, lower ancillary services including container storage as well as lower fuel surcharge revenues as a result of lower fuel prices; partly offset by freight rate increases, higher volumes of Canadian grain, potash, frac sand and finished vehicles and the positive translation impact of a weaker Canadian dollar.

Operating expenses for the third quarter of 2023 were \$2,470 million compared to \$2,581 million for the same period in 2022. Operating expenses for the first nine months of 2023 were \$7,578 million compared to \$7,637 million for the same period in 2022. The decreases of \$111 million, or 4%, in the third quarter and \$59 million, or 1%, in the first nine months of 2023 were mainly due to lower fuel prices; partly offset by the negative translation impact of a weaker Canadian dollar. In addition, the decrease, in the first nine months of 2023 was also partly offset by higher labor and fringe benefits expense mainly driven by higher average headcount and general wage increases.

Operating income for the third quarter of 2023 decreased by \$415 million, or 21%, to \$1,517 million when compared to the same period in 2022. Operating income for the first nine months of 2023 decreased by \$149 million, or 3%, to \$4,779 million when compared to the same period in 2022. The operating ratio, defined as operating expenses as a percentage of revenues, was 62.0% in the third quarter of 2023 compared to 57.2% in the third quarter of 2022, a 4.8-point increase. The operating ratio for the first nine months of 2023 was 61.3% compared to 60.8% in the first nine months of 2022, a 0.5-point increase.

Net income for the third quarter of 2023 was \$1,108 million, a decrease of \$347 million, or 24%, and diluted earnings per share decreased by 21% to \$1.69, when compared to the same period in 2022. Net income for the first nine months of 2023 was \$3,495 million, a decrease of \$203 million, or 5%, and diluted earnings per share decreased by 1% to \$5.27, when compared to the same period in 2022.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Operating highlights

The following table lists key measures of the Company's operating performance, for the purpose of measuring the efficiency and effectiveness of train operations, for the three and nine months ended September 30, 2023 and 2022:

	Three months ended September 30			Nine months ended September 30		
	2023	2022	% Change Fav (Unfav)	2023	2022	% Change Fav (Unfav)
Gross ton miles (GTMs) (millions) ⁽¹⁾	108,221	115,585	(6%)	333,356	347,393	(4%)
Train weight (tons) ⁽²⁾	9,246	9,202	—%	9,146	9,385	(3%)
Train length (feet) ⁽³⁾	7,927	8,140	(3%)	7,870	8,259	(5%)
Through network train speed (miles per hour) ⁽⁴⁾	19.7	20.1	(2%)	19.9	18.6	7%
Fuel efficiency (US gallons of locomotive fuel consumed per 1,000 GTMs) ⁽⁵⁾	0.832	0.838	1%	0.874	0.861	(2%)
Through dwell (entire railroad, hours) ⁽⁶⁾	7.1	7.0	(1%)	7.0	7.8	10%
Car velocity (car miles per day) ⁽⁷⁾	209	212	(1%)	212	193	10%

- (1) GTMs: The workload performed by system trains in hauling freight or equipment. GTMs are calculated by multiplying the trailing weight by the distance the train moved. A larger number is an indicator of more traffic (and thus more revenue) being moved.
- (2) Train weight: An efficiency measurement on how much tonnage each mainline train handles on average as it crosses the network. Calculated as the total of GTMs and divided by total train miles, this measure provides insight on how well each train was maximized in terms of its capacity to move traffic. This operating measure was formerly named Train productivity.
- (3) Train length: An efficiency measurement on average trailing length of each mainline train on the network. Calculated as the total of car foot miles (the sum of car length multiplied by miles travelled for each trailing car) divided by total train miles, this measure provides insight on how well each train was maximized in terms of its capacity to move traffic.
- (4) Through network train speed: A measure of the line-haul movement from origin to destination, including time at terminals. The average speed is calculated by dividing train miles by total hours operated, excluding yard and local trains, passenger trains, maintenance of way trains, and foreign trains. This measure represents the fluidity of trains on the network, with a higher value also indicating a more fluid network.
- (5) Fuel efficiency: This measure represents how efficient the Company is in the generation and utilization of locomotive horsepower in freight train operations, with a lower number indicating improved performance. Fuel efficiency is defined as US gallons of locomotive fuel consumed per 1,000 GTMs.
- (6) Through dwell: The average time a car resides within terminal boundaries expressed in hours. The measurement begins with a customer release, received interchange, or train arrival event and ends with a customer placement (actual or constructive), delivered or offered in interchange, or train departure event. This excludes stored, bad ordered, maintenance of way cars, or cars with dwell greater than 10 days. This measure represents the efficiency of handling cars within the terminal, with a lower value indicating higher performance.
- (7) Car velocity: The average miles per day traveled by loaded and empty cars (including all active cars whether private, foreign or CN owned) on company lines. This measure represents the fluidity of cars on the network, calculated by the sum of miles each car traveled divided by the sum of all of the cars' active time, with a higher value indicating a smoother and more fluid operation.

The Company's focus on scheduled railroading has resulted in year-over-year improvements in car velocity, train speed and through dwell for the first nine months of 2023, while there was a slight deterioration in the third quarter primarily due to operational disruptions related to Canadian wildfires and the pacific coast dock workers strike. GTMs were negatively impacted in the third quarter and first nine months of 2023 primarily due to lower demand for freight services to move consumer goods.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Non-GAAP measures

This MD&A makes reference to non-GAAP measures, including adjusted performance measures, constant currency, free cash flow and adjusted debt-to-adjusted EBITDA multiple that do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies. From management's perspective, these non-GAAP measures are useful measures of performance and provide investors with supplementary information to assess the Company's results of operations and liquidity. These non-GAAP measures should not be considered in isolation or as a substitute for financial measures prepared in accordance with GAAP.

For further details of these non-GAAP measures, including a reconciliation to the most directly comparable GAAP financial measures, refer to the sections of this MD&A entitled *Adjusted performance measures*, *Constant currency* and *Liquidity and capital resources*.

Adjusted performance measures

Adjusted net income, adjusted earnings per share, adjusted operating income, adjusted operating expenses and adjusted operating ratio are non-GAAP measures that are used to set performance goals and to measure CN's performance. Management believes that these adjusted performance measures provide additional insight to management and investors into the Company's operations and underlying business trends as well as facilitate period-to-period comparisons, as they exclude certain significant items that are not reflective of CN's underlying business operations and could distort the analysis of trends in business performance. These items may include:

- i. operating expense adjustments: workforce reduction program, depreciation expense on the deployment of replacement system, advisory fees related to shareholder matters, losses and recoveries from assets held for sale, business acquisition-related costs;
- ii. non-operating expense adjustments: business acquisition-related financing fees, merger termination income, gains and losses on disposal of property; and
- iii. the effect of tax law changes and rate enactments.

These non-GAAP measures do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

For the three and nine months ended September 30, 2023, the Company's net income was \$1,108 million, or \$1.69 per diluted share, and \$3,495 million, or \$5.27 per diluted share, respectively. There were no adjustments in the third quarter and the first nine months of 2023.

For the three and nine months ended September 30, 2022, the Company's adjusted net income was \$1,455 million, or \$2.13 per diluted share, and \$3,714 million, or \$5.37 per diluted share, respectively. The adjusted figures for the nine months ended September 30, 2022 exclude advisory fees related to shareholder matters of \$22 million, or \$16 million after-tax (\$0.03 per diluted share) recorded in Casualty and other within the Consolidated Statements of Income.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Adjusted net income is defined as Net income in accordance with GAAP adjusted for certain significant items. Adjusted diluted earnings per share is defined as adjusted net income divided by the weighted-average diluted shares outstanding. The following table provides a reconciliation of Net income and Earnings per share in accordance with GAAP, as reported for the three and nine months ended September 30, 2023 and 2022, to the non-GAAP adjusted performance measures presented herein:

<i>In millions, except per share data</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Net income	\$ 1,108	\$ 1,455	\$ 3,495	\$ 3,698
Adjustments:				
Advisory fees related to shareholder matters	—	—	—	22
Tax effect of adjustments ⁽¹⁾	—	—	—	(6)
Total adjustments	—	—	—	16
Adjusted net income	\$ 1,108	\$ 1,455	\$ 3,495	\$ 3,714
Diluted earnings per share	\$ 1.69	\$ 2.13	\$ 5.27	\$ 5.34
Impact of adjustments, per share	—	—	—	0.03
Adjusted diluted earnings per share	\$ 1.69	\$ 2.13	\$ 5.27	\$ 5.37

(1) The tax impact of adjustments is based on the nature of the item for tax purposes and related tax rates in the applicable jurisdiction.

Adjusted operating income is defined as Operating income in accordance with GAAP adjusted for certain significant operating expense items. Adjusted operating expenses is defined as Operating expenses in accordance with GAAP adjusted for certain significant operating expense items. Adjusted operating ratio is defined as adjusted operating expenses as a percentage of revenues. The following table provides a reconciliation of Operating income, Operating expenses and operating ratio, as reported for the three and nine months ended September 30, 2023 and 2022, to the non-GAAP adjusted performance measures presented herein:

<i>In millions, except percentages</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Operating income	\$ 1,517	\$ 1,932	\$ 4,779	\$ 4,928
Adjustment:				
Advisory fees related to shareholder matters	—	—	—	22
Total adjustment	—	—	—	22
Adjusted operating income	\$ 1,517	\$ 1,932	\$ 4,779	\$ 4,950
Operating expenses	\$ 2,470	\$ 2,581	\$ 7,578	\$ 7,637
Total adjustment	—	—	—	(22)
Adjusted operating expenses	\$ 2,470	\$ 2,581	\$ 7,578	\$ 7,615
Operating ratio	62.0 %	57.2 %	61.3 %	60.8 %
Impact of adjustment	— %	— %	— %	(0.2)%
Adjusted operating ratio	62.0 %	57.2 %	61.3 %	60.6 %

MANAGEMENT'S DISCUSSION AND ANALYSIS

Constant currency

Financial results at constant currency allow results to be viewed without the impact of fluctuations in foreign currency exchange rates, thereby facilitating period-to-period comparisons in the analysis of trends in business performance. Measures at constant currency are considered non-GAAP measures and do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies. Financial results at constant currency are obtained by translating the current period results denominated in US dollars at the weighted average foreign exchange rates used to translate transactions denominated in US dollars of the comparable period of the prior year.

The average foreign exchange rates were \$1.34 and \$1.35 per US\$1.00 for the three and nine months ended September 30, 2023, respectively, and \$1.31 and \$1.28 per US\$1.00 for the three and nine months ended September 30, 2022, respectively. On a constant currency basis, the Company's net income for the three and nine months ended September 30, 2023 would have been lower by \$18 million (\$0.03 per diluted share) and \$94 million (\$0.14 per diluted share), respectively.

The following table provides a reconciliation of the impact of constant currency and related percentage change at constant currency on the financial results, as reported for the three and nine months ended September 30, 2023:

<i>In millions, except per share data</i>	Three months ended September 30				Nine months ended September 30			
	2023	Constant currency impact	2022	% Change at constant currency Fav (Unfav)	2023	Constant currency impact	2022	% Change at constant currency Fav (Unfav)
Revenues								
Petroleum and chemicals	\$ 758	\$ (14)	\$ 850	(12%)	\$ 2,334	\$ (70)	\$ 2,435	(7%)
Metals and minerals	515	(11)	539	(6%)	1,541	(58)	1,411	5%
Forest products	466	(10)	550	(17%)	1,457	(53)	1,489	(6%)
Coal	242	(2)	258	(7%)	768	(13)	702	8%
Grain and fertilizers	722	(9)	621	15%	2,271	(55)	1,829	21%
Intermodal	880	(7)	1,340	(35%)	2,875	(45)	3,722	(24%)
Automotive	237	(5)	208	12%	687	(24)	581	14%
Total freight revenues	3,820	(58)	4,366	(14%)	11,933	(318)	12,169	(5%)
Other revenues	167	(3)	147	12%	424	(12)	396	4%
Total revenues	3,987	(61)	4,513	(13%)	12,357	(330)	12,565	(4%)
Operating expenses								
Labor and fringe benefits	773	(6)	770	—%	2,332	(39)	2,204	(4%)
Purchased services and material	534	(5)	520	(2%)	1,698	(28)	1,615	(3%)
Fuel	486	(13)	649	27%	1,528	(68)	1,846	21%
Depreciation and amortization	457	(5)	435	(4%)	1,354	(25)	1,278	(4%)
Equipment rents	89	(2)	72	(21%)	262	(10)	254	1%
Casualty and other	131	(2)	135	4%	404	(13)	440	11%
Total operating expenses	2,470	(33)	2,581	6%	7,578	(183)	7,637	3%
Operating income	1,517	(28)	1,932	(23%)	4,779	(147)	4,928	(6%)
Interest expense	(185)	4	(141)	(28%)	(523)	22	(395)	(27%)
Other components of net periodic benefit income	121	—	125	(3%)	360	—	374	(4%)
Other income (loss)	(2)	—	(1)	(100%)	—	—	(25)	100%
Income before income taxes	1,451	(24)	1,915	(25%)	4,616	(125)	4,882	(8%)
Income tax expense	(343)	6	(460)	27%	(1,121)	31	(1,184)	8%
Net income	\$ 1,108	\$ (18)	\$ 1,455	(25%)	\$ 3,495	\$ (94)	\$ 3,698	(8%)
Diluted earnings per share	\$ 1.69	\$ (0.03)	\$ 2.13	(22%)	\$ 5.27	\$ (0.14)	\$ 5.34	(4%)

MANAGEMENT'S DISCUSSION AND ANALYSIS

Revenues

The following table provides the components of total revenues and freight revenues, as well as other key operating measures, for the three and nine months ended September 30, 2023 and 2022:

<i>In millions, unless otherwise indicated</i>	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency ⁽¹⁾	2023	2022	% Change	% Change at constant currency ⁽¹⁾
Freight revenues	\$ 3,820	\$ 4,366	(13%)	(14%)	\$ 11,933	\$ 12,169	(2%)	(5%)
Other revenues	167	147	14%	12%	424	396	7%	4%
Total revenues	\$ 3,987	\$ 4,513	(12%)	(13%)	\$ 12,357	\$ 12,565	(2%)	(4%)
Freight revenues								
Petroleum and chemicals	\$ 758	\$ 850	(11%)	(12%)	\$ 2,334	\$ 2,435	(4%)	(7%)
Metals and minerals	515	539	(4%)	(6%)	1,541	1,411	9%	5%
Forest products	466	550	(15%)	(17%)	1,457	1,489	(2%)	(6%)
Coal	242	258	(6%)	(7%)	768	702	9%	8%
Grain and fertilizers	722	621	16%	15%	2,271	1,829	24%	21%
Intermodal	880	1,340	(34%)	(35%)	2,875	3,722	(23%)	(24%)
Automotive	237	208	14%	12%	687	581	18%	14%
Total freight revenues	\$ 3,820	\$ 4,366	(13%)	(14%)	\$ 11,933	\$ 12,169	(2%)	(5%)
Revenue ton miles (RTMs) (millions) ⁽²⁾	55,640	58,540	(5%)	(5%)	171,478	175,645	(2%)	(2%)
Freight revenue/RTM (cents) ⁽³⁾	6.87	7.46	(8%)	(9%)	6.96	6.93	—%	(2%)
Carloads (thousands)	1,326	1,469	(10%)	(10%)	4,048	4,289	(6%)	(6%)
Freight revenue/carload (\$)	2,881	2,972	(3%)	(5%)	2,948	2,837	4%	1%

(1) This non-GAAP measure does not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies. See the section of this MD&A entitled Constant currency for an explanation of this non-GAAP measure.

(2) RTMs is a measure of volumes and is calculated by multiplying the weight in tons of the shipment lading being transported by the number of miles that the shipment is transported on company lines.

(3) Freight revenue per RTM is an indicator of yield and represents revenue earned for transporting one ton of freight over a distance of one mile.

Revenues for the quarter ended September 30, 2023 were \$3,987 million compared to \$4,513 million for the same period in 2022, a decrease of \$526 million, or 12%, mainly due to:

- lower Freight revenue per RTM of 8% mainly due to lower fuel surcharge revenues as a result of lower fuel prices and lower ancillary services including container storage; partly offset by a decrease in the average length of haul primarily as a result of lower intermodal and forest products volumes, freight rate increases and the positive translation impact of a weaker Canadian dollar; and
- lower RTMs of 5% mainly due to lower volumes of intermodal, crude oil and forest products, primarily as a result of lower demand for freight services to move consumer goods and the negative impact of the pacific coast dock workers strike, unfavorable crude oil price spreads and weaker market conditions for lumber and panels; partly offset by higher volumes of Canadian grain and potash.

Revenues for the first nine months of 2023 were \$12,357 million compared to \$12,565 million for the same period in 2022, a decrease of \$208 million, or 2%, mainly due to:

- lower RTMs of 2% mainly due to lower volumes of intermodal, crude oil and forest products, primarily as a result of lower demand for freight services to move consumer goods and the negative impact of the pacific coast dock workers strike, unfavorable crude oil price spreads and weaker market conditions for lumber and panels; partly offset by higher volumes of Canadian grain, potash, frac sand and finished vehicles.
- Freight revenue per RTM remained flat due to a decrease in the average length of haul, freight rate increases and the positive translation impact of a weaker Canadian dollar; offset by lower ancillary services including container storage and lower fuel surcharge revenues as a result of lower fuel prices.

Fuel surcharge revenues decreased by \$373 million in the third quarter of 2023 and decreased by \$254 million in the first nine months of 2023 when compared to the same periods in 2022, mainly due to lower fuel prices and lower volumes; partly offset by the positive translation impact of a weaker Canadian dollar.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Petroleum and chemicals

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency	2023	2022	% Change	% Change at constant currency
Revenues (millions)	\$ 758	\$ 850	(11%)	(12%)	\$ 2,334	\$ 2,435	(4%)	(7%)
RTMs (millions)	10,470	11,715	(11%)	(11%)	31,915	35,604	(10%)	(10%)
Revenue/RTM (cents)	7.24	7.26	—%	(2%)	7.31	6.84	7%	4%
Carloads (thousands)	156	161	(3%)	(3%)	468	482	(3%)	(3%)

Petroleum and chemicals revenues decreased by \$92 million, or 11%, in the third quarter of 2023 when compared to the same period in 2022. The decrease was mainly due to:

- lower RTMs of 11%, mainly due to lower volumes of crude oil due to unfavorable crude oil price spreads and lower volumes of natural gas liquids as a result of reduced domestic demand for propane and butane.
- Revenue per RTM remained flat mainly due to lower fuel surcharge revenues; offset by a decrease in the average length of haul, freight rate increases and the positive translation impact of a weaker Canadian dollar.

Petroleum and chemicals revenues decreased by \$101 million, or 4%, in the first nine months of 2023 when compared to the same period in 2022. The decrease was mainly due to:

- lower RTMs of 10%, mainly due to lower volumes of crude oil due to unfavorable crude oil price spreads and lower volumes of refined petroleum products as a result of decreased demand for transporting by rail for jet fuel, gasoline and diesel fuel;
- partly offset by higher Revenue per RTM of 7%, mainly due to a decrease in the average length of haul, freight rate increases, the positive translation impact of a weaker Canadian dollar; partly offset by lower fuel surcharge revenues.

RTMs decreased more than Carloads in the third quarter and first nine months of 2023, when compared to the same periods in 2022, mainly due to lower shipments of crude oil, which has a longer length of haul.

Metals and minerals

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency	2023	2022	% Change	% Change at constant currency
Revenues (millions)	\$ 515	\$ 539	(4%)	(6%)	\$ 1,541	\$ 1,411	9%	5%
RTMs (millions)	7,630	7,441	3%	3%	21,458	20,853	3%	3%
Revenue/RTM (cents)	6.75	7.24	(7%)	(9%)	7.18	6.77	6%	2%
Carloads (thousands)	264	264	—%	—%	749	709	6%	6%

Metals and minerals revenues decreased by \$24 million, or 4%, in the third quarter of 2023 when compared to the same period in 2022. The decrease was mainly due to:

- lower Revenue per RTM of 7% mainly due to lower fuel surcharge revenues; partly offset by freight rate increases and the positive translation impact of a weaker Canadian dollar;
- partly offset by higher RTMs of 3% mainly due to higher volumes of frac sand; partly offset by lower export volumes of iron ore.

Metals and minerals revenues increased by \$130 million, or 9%, in the first nine months of 2023 when compared to the same period in 2022. The increase was mainly due to:

- higher Revenue per RTM of 6% mainly due to freight rate increases and the positive translation impact of a weaker Canadian dollar; partly offset by lower fuel surcharge revenues; and
- higher RTMs of 3% mainly due to higher volumes of frac sand and non-ferrous metals; partly offset by lower exports of iron ore.

RTMs increased while Carloads remained flat in the third quarter of 2023, when compared to the same period in 2022, mainly due to higher frac sand shipments, which has a higher length of haul. RTMs increased less than Carloads in the first nine months of 2023, when compared to the same period in 2022, mainly due to lower exports of iron ore which has a longer length of haul.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Forest products

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency	2023	2022	% Change	% Change at constant currency
Revenues (<i>millions</i>)	\$ 466	\$ 550	(15%)	(17%)	\$ 1,457	\$ 1,489	(2%)	(6%)
RTMs (<i>millions</i>)	5,719	6,614	(14%)	(14%)	17,529	19,083	(8%)	(8%)
Revenue/RTM (<i>cents</i>)	8.15	8.32	(2%)	(4%)	8.31	7.80	7%	3%
Carloads (<i>thousands</i>)	76	86	(12%)	(12%)	234	250	(6%)	(6%)

Forest products revenues decreased by \$84 million, or 15%, in the third quarter of 2023 when compared to the same period in 2022. The decrease was mainly due to:

- lower RTMs of 14% mainly due to lower demand for forest products, primarily lumber and panels; and
- lower Revenue per RTM of 2% mainly due to lower fuel surcharge revenues; partly offset by freight rate increase, the positive translation impact of a weaker Canadian dollar and a decrease in the average length of haul.

Forest products revenues decreased by \$32 million, or 2%, in the first nine months of 2023 when compared to the same period in 2022. The decrease was mainly due to:

- lower RTMs of 8% mainly due to lower demand for forest products, primarily lumber and panels and the negative impact of Canadian wildfires on customer supply chains;
- partly offset by higher Revenue per RTMs of 7% mainly due to freight rate increases, the positive translation impact of a weaker Canadian dollar and a decrease in the average length of haul; partly offset by lower fuel surcharge revenues.

Coal

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency	2023	2022	% Change	% Change at constant currency
Revenues (<i>millions</i>)	\$ 242	\$ 258	(6%)	(7%)	\$ 768	\$ 702	9%	8%
RTMs (<i>millions</i>)	5,421	5,769	(6%)	(6%)	17,234	17,264	—%	—%
Revenue/RTM (<i>cents</i>)	4.46	4.47	—%	(1%)	4.46	4.07	10%	8%
Carloads (<i>thousands</i>)	124	130	(5%)	(5%)	386	377	2%	2%

Coal revenues decreased by \$16 million, or 6%, in the third quarter of 2023 when compared to the same period in 2022. The decrease was mainly due to

- lower RTMs of 6% mainly due to lower shipments of Canadian and U.S. coal; partly offset by higher exports of U.S. petroleum coke.
- Revenue per RTM remained flat mainly due to lower fuel surcharge revenues; offset by freight rate increases.

Coal revenues increased by \$66 million, or 9% in the first nine months of 2023 when compared to the same period in 2022. The increase was mainly due to:

- higher Revenue per RTM of 10% mainly due to freight rate increases and the positive translation impact of a weaker Canadian dollar; partly offset by lower fuel surcharge revenues.
- RTMs remained flat mainly due to lower shipments of Canadian and U.S. coal; offset by higher exports of U.S. petroleum coke.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Grain and fertilizers

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency	2023	2022	% Change	% Change at constant currency
Revenues (<i>millions</i>)	\$ 722	\$ 621	16%	15%	\$ 2,271	\$ 1,829	24%	21%
RTMs (<i>millions</i>)	14,528	11,944	22%	22%	45,138	37,748	20%	20%
Revenue/RTM (<i>cents</i>)	4.97	5.20	(4%)	(6%)	5.03	4.85	4%	1%
Carloads (<i>thousands</i>)	153	135	13%	13%	483	422	14%	14%

Grain and fertilizers revenues increased by \$101 million, or 16%, in the third quarter of 2023 when compared to the same period in 2022. The increase was mainly due to:

- higher RTMs of 22% mainly due to higher volumes of Canadian grain and potash; partly offset by reduced U.S. grain shipments;
- partly offset by lower Revenue per RTM of 4% mainly due to an increase in the average length of haul and lower fuel surcharge revenues; partly offset by freight rate increases and the positive translation impact of a weaker Canadian dollar.

Grain and fertilizers revenues increased by \$442 million, or 24%, in the first nine months of 2023 when compared to the same period in 2022. The increase was mainly due to:

- higher RTMs of 20% mainly due to higher volumes of Canadian grain and potash, partly offset by reduced U.S. grain shipments; and
- higher Revenue per RTM of 4% mainly due to freight rate increases, the positive translation of a weaker Canadian dollar; partly offset by an increase in the average length of haul.

RTMs increased more than Carloads in the third quarter and first nine months of 2023, when compared to the same periods in 2022, mainly due to higher Canadian grain export shipments, which has a longer length of haul.

Intermodal

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency	2023	2022	% Change	% Change at constant currency
Revenues (<i>millions</i>)	\$ 880	\$ 1,340	(34%)	(35%)	\$ 2,875	\$ 3,722	(23%)	(24%)
RTMs (<i>millions</i>)	11,048	14,340	(23%)	(23%)	35,918	42,966	(16%)	(16%)
Revenue/RTM (<i>cents</i>)	7.97	9.34	(15%)	(15%)	8.00	8.66	(8%)	(9%)
Carloads (<i>thousands</i>)	494	641	(23%)	(23%)	1,556	1,894	(18%)	(18%)

Intermodal revenues decreased by \$460 million, or 34%, in the third quarter of 2023 when compared to the same period in 2022. The decrease was mainly due to:

- lower RTMs of 23% mainly due to decreased shipments in the international segment driven by lower imports of consumer goods and the negative impact of the pacific coast dock workers strike; and
- lower Revenue per RTM of 15% mainly due to lower ancillary services including container storage compared to significantly higher ancillary services in 2022 resulting from customer supply chain challenges, lower fuel surcharge revenues and reduced trucking services; partly offset by a decrease in the average length of haul and freight rate increases.

Intermodal revenues decreased by \$847 million, or 23%, in the first nine months of 2023 when compared to the same period in 2022. The decrease was mainly due to:

- lower RTMs of 16% mainly due to decreased shipments in the international segment driven by lower imports of consumer goods and the negative impact of the pacific coast dock workers strike; and
- lower Revenue per RTM of 8% mainly due to the lower ancillary services including container storage compared to significant higher ancillary services in 2022 resulting from customer supply chain challenges and reduced trucking services; partly offset by a decrease in the average length of haul and freight rate increases.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Automotive

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency	2023	2022	% Change	% Change at constant currency
Revenues (<i>millions</i>)	\$ 237	\$ 208	14%	12%	\$ 687	\$ 581	18%	14%
RTMs (<i>millions</i>)	824	717	15%	15%	2,286	2,127	7%	7%
Revenue/RTM (<i>cents</i>)	28.76	29.01	(1%)	(3%)	30.05	27.32	10%	6%
Carloads (<i>thousands</i>)	59	52	13%	13%	172	155	11%	11%

Automotive revenues increased by \$29 million, or 14%, in the third quarter of 2023 when compared to the same period in 2022. The increase was mainly due to:

- higher RTMs of 15% mainly due to higher volumes of finished vehicles;
- partly offset by lower Revenue per RTM of 1% mainly due to lower fuel surcharge revenues and an increase in the average length of haul; partly offset by freight rate increases and the positive translation impact of a weaker Canadian dollar.

Automotive revenues increased by \$106 million, or 18%, in the first nine months of 2023 when compared to the same period in 2022. The increase was mainly due to:

- higher Revenue per RTM of 10% mainly due to freight rate increases and the positive translation impact of a weaker Canadian dollar; partly offset by lower fuel surcharge revenues; and
- higher RTMs of 7% mainly due to higher volumes of finished vehicles.

RTMs increased less than Carloads in the first nine months of 2023, when compared to the same period in 2022, mainly due to more shipments of domestic finished vehicles, which have a shorter length of haul.

Other revenues

	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency	2023	2022	% Change	% Change at constant currency
Revenues (<i>millions</i>)	\$ 167	\$ 147	14%	12%	\$ 424	\$ 396	7%	4%

Other revenues increased by \$20 million, or 14%, in the third quarter and \$28 million, or 7%, in the first nine months of 2023 when compared to the same periods in 2022, mainly due to higher vessel and dock revenues from the iron ore supply chain, increased automotive logistics revenues and the positive impact of a weaker Canadian dollar; partly offset by lower freight forwarding revenues.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Operating expenses

Operating expenses for the third quarter of 2023 were \$2,470 million compared to \$2,581 million for the same period in 2022. Operating expenses for the first nine months of 2023 were \$7,578 million compared to \$7,637 million in the same period in 2022. The decreases of \$111 million, or 4%, in the third quarter and \$59 million, or 1%, in the first nine months of 2023 were mainly due to lower fuel prices; partly offset by the negative translation impact of a weaker Canadian dollar. In addition, the decrease in the first nine months of 2023 was also partly offset by higher labor and fringe benefits expense mainly driven by higher average headcount and general wage increases.

The following table provides the components of total operating expenses for the three and nine months ended September 30, 2023 and 2022:

<i>In millions, unless otherwise indicated</i>	Three months ended September 30				Nine months ended September 30			
	2023	2022	% Change	% Change at constant currency ⁽¹⁾	2023	2022	% Change	% Change at constant currency ⁽¹⁾
Labor and fringe benefits	\$ 773	\$ 770	—%	—%	\$ 2,332	\$ 2,204	(6%)	(4%)
Purchased services and material	534	520	(3%)	(2%)	1,698	1,615	(5%)	(3%)
Fuel	486	649	25%	27%	1,528	1,846	17%	21%
Depreciation and amortization	457	435	(5%)	(4%)	1,354	1,278	(6%)	(4%)
Equipment rents	89	72	(24%)	(21%)	262	254	(3%)	1%
Casualty and other	131	135	3%	4%	404	440	8%	11%
Total operating expenses	\$ 2,470	\$ 2,581	4%	6%	\$ 7,578	\$ 7,637	1%	3%

(1) This non-GAAP measure does not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies. See the section of this MD&A entitled *Constant currency* for an explanation of this non-GAAP measure.

Labor and fringe benefits

Labor and fringe benefits expense remained flat in the third quarter and increased by \$128 million, or 6%, in the first nine months of 2023 when compared to the same periods in 2022, mainly due to higher average headcount, general wage increases and the negative translation impact of a weaker Canadian dollar; partly offset by lower incentive compensation and the incremental wage accrual in 2022 for the agreements with the U.S. unions.

Purchased services and material

Purchased services and material expense increased by \$14 million, or 3%, in the third quarter and \$83 million, or 5%, in the first nine months of 2023 when compared to the same periods in 2022. The increase in the third quarter of 2023 was not significant. The increase in the first nine months of 2023 was mainly due to higher contracted services and material costs, the negative translation impact of a weaker Canadian dollar and higher repairs and maintenance costs; partly offset by lower freight forwarding expense.

Fuel

Fuel expense decreased by \$163 million, or 25%, in the third quarter and \$318 million, or 17%, in the first nine months of 2023 when compared to the same periods in 2022, mainly due to lower fuel prices and lower volumes; partly offset by the negative translation impact of a weaker Canadian dollar.

Depreciation and amortization

Depreciation and amortization expense increased by \$22 million, or 5% in the third quarter and \$76 million, or 6%, in the first nine months of 2023 when compared to the same periods in 2022, mainly due to a higher depreciable asset base and the negative translation impact of a weaker Canadian dollar.

Equipment rents

Equipment rents expense increased by \$17 million, or 24%, in the third quarter and \$8 million, or 3% in the first nine months of 2023 when compared to the same periods in 2022. The increase in the third quarter was mainly due to lower locomotive horsepower-hour income and the negative translation impact of a weaker Canadian dollar. The increase in the first nine months of 2023 was mainly due to the negative translation impact of a weaker Canadian dollar.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Casualty and other

Casualty and other expense decreased by \$4 million, or 3%, in the third quarter and \$36 million, or 8%, in the first nine months of 2023 when compared to the same periods in 2022. The decrease in the third quarter of 2023 was not significant. The decrease in the first nine months of 2023 was mainly due to advisory fees related to shareholder matters of \$22 million in 2022, lower incident costs and lower legal provisions; partly offset by the negative translation impact of a weaker Canadian dollar.

Other income and expenses

Interest expense

Interest expense was \$185 million and \$523 million for the three and nine months ended September 30, 2023 respectively, compared to \$141 million and \$395 million, respectively, for the same periods in 2022. The increase of \$44 million and \$128 million, respectively, were mainly due to the higher average level of debt, higher average interest rates and the negative translation impact of a weaker Canadian dollar.

Other components of net periodic benefit income

Other components of net periodic benefit income were \$121 million and \$360 million for the three and nine months ended September 30, 2023, respectively, compared to \$125 million and \$374 million, respectively, for the same periods in 2022. The decrease of \$4 million and \$14 million, respectively, were mainly due to higher interest cost; partly offset by lower amortization of net actuarial loss and higher expected return on assets. These effects primarily resulted from changes to discount rates, lower actual returns compared to expected returns, as well as an increase to the Company's expected long-term rate of return assumption in 2023.

Other loss

Other loss was \$2 million and \$nil for the three and nine months ended September 30, 2023, compared to Other loss of \$1 million and \$25 million, respectively, for the same periods in 2022. Other loss increased by \$1 million in the third quarter of 2023 and decreased by \$25 million for the first nine months of 2023, when compared to the same periods in 2022. The decrease in the first nine months of 2023 was mainly due to the reduction in the fair value of an equity investment in autonomous driving technology in 2022.

Income tax expense

Income tax expense was \$343 million and \$1,121 million for the three and nine months ended September 30, 2023, respectively, compared to \$460 million and \$1,184 million, respectively, for the same periods in 2022. The effective tax rates for the three and nine months ended September 30, 2023 were 23.6% and 24.3%, respectively compared to 24.0% and 24.3%, respectively, for the same periods in 2022.

Summary of quarterly financial data

	2023				2022			2021
	Quarters				Quarters			Quarter
<i>In millions, except per share data</i>	Third	Second	First	Fourth	Third	Second	First	Fourth
Revenues	\$ 3,987	\$ 4,057	\$ 4,313	\$ 4,542	\$ 4,513	\$ 4,344	\$ 3,708	\$ 3,753
Operating income ⁽¹⁾	\$ 1,517	\$ 1,600	\$ 1,662	\$ 1,912	\$ 1,932	\$ 1,769	\$ 1,227	\$ 1,566
Dividends per share	\$0.7900	\$0.7900	\$0.7900	\$0.7325	\$0.7325	\$0.7325	\$0.7325	\$0.6150
Financial measures impacted by change in accounting policy								
Net income ⁽¹⁾⁽²⁾	\$ 1,108	\$ 1,167	\$ 1,220	\$ 1,420	\$ 1,455	\$ 1,325	\$ 918	\$ 1,201
Net income as previously reported ⁽¹⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$ 1,199
Basic earnings per share ⁽²⁾	\$ 1.69	\$ 1.76	\$ 1.83	\$ 2.10	\$ 2.13	\$ 1.92	\$ 1.31	\$ 1.70
Basic earnings per share as previously reported	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$ 1.70
Diluted earnings per share ⁽¹⁾⁽²⁾	\$ 1.69	\$ 1.76	\$ 1.82	\$ 2.10	\$ 2.13	\$ 1.92	\$ 1.31	\$ 1.70
Diluted earnings per share as previously reported ⁽¹⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A	\$ 1.69

(1) Certain quarters include items that management believes do not necessarily arise as part of CN's normal day-to-day operations and can distort the analysis of trends in business performance. See the section of this MD&A entitled *Adjusted performance measures* as well as the Company's 2022 Annual MD&A for additional information on these items.

(2) See Note 2 – *Change in accounting policy* to the Company's 2022 Annual Consolidated Financial Statements for additional information.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Revenues generated by the Company during the year are influenced by seasonal weather conditions, general economic conditions, cyclical demand for rail transportation and competitive forces in the transportation marketplace (see the section entitled *Business risks* of the Company's 2022 Annual MD&A). Operating expenses reflect the impact of freight volumes, seasonal weather conditions, labor costs, fuel prices, and the Company's productivity initiatives. Fluctuations in the Canadian dollar relative to the US dollar have also affected the conversion of the Company's US dollar-denominated revenues and expenses and resulted in fluctuations in Net income in the rolling eight quarters presented above.

Liquidity and capital resources

An analysis of the Company's liquidity and capital resources is provided in the section entitled *Liquidity and capital resources* of the Company's 2022 Annual MD&A. There were no significant changes during the first nine months of 2023, except as noted below.

As at September 30, 2023 and December 31, 2022, the Company had Cash and cash equivalents of \$491 million and \$328 million, respectively; Restricted cash and cash equivalents of \$451 million and \$506 million, respectively; and a working capital deficit of \$1,285 million and \$625 million, respectively. ⁽¹⁾ There are currently no specific requirements relating to working capital other than in the normal course of business as discussed herein.

The Company expects cash from operations and its various sources of financing to be sufficient to meet its ongoing obligations.

(1) The Company defines working capital as current assets of \$3,371 million (December 31, 2022 - \$3,217 million) less current liabilities of \$4,656 million (December 31, 2022 - \$3,842 million).

Available financing sources

For details on the Company's available financing sources, see section entitled *Liquidity and capital resources* to the Company's 2022 Annual MD&A as well as *Note 6 – Financing activities* to the Company's September 30, 2023 Interim Consolidated Financial Statements.

Shelf prospectus and registration statement

As at September 30, 2023, the remaining capacity of the shelf prospectus and registration statement, filed on May 4, 2022, was \$2.3 billion. Access to the Canadian and U.S. capital markets under the shelf prospectus and registration statement is dependent on market conditions.

Revolving credit facilities

On March 17, 2023, the Company's revolving credit facility agreements were amended to extend their respective tenors by one additional year each. The unsecured credit facility of \$2.5 billion consists of two tranches of \$1.25 billion now maturing on March 31, 2026 and March 31, 2028. The unsecured credit facility of \$1.0 billion is now maturing on March 17, 2025. The credit facilities were also amended to include fallback language that addresses the cessation of Canadian Dollar Offered Rate (CDOR) and adoption of Canadian Overnight Repo Rate Average (CORRA).

As at September 30, 2023 and December 31, 2022, the Company had no outstanding borrowings under these revolving credit facilities.

Equipment loans

On March 31, 2023, the Company amended its non-revolving term loan facility to transition from London Interbank Offered Rates (LIBOR) to Secured Overnight Financing Rates (SOFR). The facility will now bear interest at SOFR and CDOR plus a margin for U.S. dollar denominated and Canadian dollar denominated borrowings, respectively. The facility now includes fallback language that addresses the cessation of CDOR and adoption of CORRA.

As at September 30, 2023 and December 31, 2022, the Company had outstanding borrowings of US\$519 million (\$704 million) and US\$542 million (\$734 million), respectively.

On March 31, 2023, the Company entered into new loan supplements to the existing agreement for an additional principal amount of US\$304 million, which is available to be drawn through March 31, 2024. Term loans made under these loan supplements have a tenor of 15 years, bear interest at SOFR and CDOR plus a margin, are repayable in equal quarterly installments and are secured by rolling stock. As at September 30, 2023, the Company had no outstanding borrowings under this loan supplement.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Commercial paper

As at September 30, 2023 and December 31, 2022, the Company had total commercial paper borrowings of US\$1,644 million (\$2,231 million) and US\$594 million (\$805 million), respectively, presented in Current portion of long-term debt on the Consolidated Balance Sheets.

Bilateral letter of credit facilities

On March 17, 2023, the Company extended the maturity date of its committed bilateral letter of credit facility agreements to April 28, 2026.

As at September 30, 2023, the Company had outstanding letters of credit of \$341 million (\$396 million as at December 31, 2022) under the committed facilities from a total available amount of \$363 million (\$470 million as at December 31, 2022) and \$152 million (\$100 million as at December 31, 2022) under the uncommitted facilities.

As at September 30, 2023, included in Restricted cash and cash equivalents was \$341 million (\$397 million as at December 31, 2022) and \$100 million (\$100 million as at December 31, 2022) which were pledged as collateral under the committed and uncommitted bilateral letter of credit facilities, respectively, and \$10 million held in escrow as at September 30, 2023 (\$9 million as at December 31, 2022).

Credit ratings

As at September 30, 2023, the Company's long-term debt and commercial paper credit ratings were unchanged from June 30, 2023.

Cash flows

The following table provides the cash flows for the three and nine months ended September 30, 2023 and 2022:

<i>In millions</i>	Three months ended September 30			Nine months ended September 30		
	2023	2022	Variance	2023	2022	Variance
Net cash provided by operating activities	\$ 1,512	\$ 2,112	\$ (600)	\$ 4,552	\$ 4,395	\$ 157
Net cash used in investing activities	(931)	(756)	(175)	(2,278)	(1,573)	(705)
Net cash used in financing activities	(631)	(1,473)	842	(2,166)	(3,261)	1,095
Effect of foreign exchange fluctuations on cash, cash equivalents, restricted cash, and restricted cash equivalents	2	3	(1)	—	4	(4)
Net increase (decrease) in cash, cash equivalents, restricted cash, and restricted cash equivalents	(48)	(114)	66	108	(435)	543
Cash, cash equivalents, restricted cash, and restricted cash equivalents, beginning of period	990	1,020	(30)	834	1,341	(507)
Cash, cash equivalents, restricted cash, and restricted cash equivalents, end of period	\$ 942	\$ 906	\$ 36	\$ 942	\$ 906	\$ 36

Free cash flow

Free cash flow is a useful measure of liquidity as it demonstrates the Company's ability to generate cash for debt obligations and for discretionary uses such as payment of dividends, share repurchases, and strategic opportunities. The Company defines its free cash flow measure as the difference between net cash provided by operating activities and net cash used in investing activities, adjusted for the impact of (i) business acquisitions and (ii) merger transaction-related payments, cash receipts and cash income taxes, which are items that are not indicative of operating trends. Free cash flow does not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following table provides a reconciliation of Net cash provided by operating activities in accordance with GAAP, as reported for the three and nine months ended September 30, 2023 and 2022, to the non-GAAP free cash flow presented herein:

<i>In millions</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Net cash provided by operating activities	\$ 1,512	\$ 2,112	\$ 4,552	\$ 4,395
Net cash used in investing activities	(931)	(756)	(2,278)	(1,573)
Net cash provided before financing activities	581	1,356	2,274	2,822
Adjustment:				
Cash income taxes for merger transaction-related payments and cash receipts ⁽¹⁾	—	—	—	102
Free cash flow	\$ 581	\$ 1,356	\$ 2,274	\$ 2,924

(1) Relates to income tax payments of \$102 million for KCS merger transaction-related payments and cash receipts. See Note 4 – Acquisition to the Company's 2022 Annual Consolidated Financial Statements for additional information.

Operating activities

Net cash provided by operating activities decreased by \$600 million in the third quarter of 2023 and increased by \$157 million in the first nine months of 2023 when compared to the same periods in 2022. The decrease in the third quarter of 2023 was mainly due to lower Net income and unfavorable changes in working capital items. The increase in the first nine months of 2023 was mainly due to favorable changes in working capital items; partly offset by lower Net income.

Pension contributions

The Company's contributions to its various defined benefit pension plans are made in accordance with the applicable legislation in Canada and the U.S. and such contributions follow minimum and maximum thresholds as determined by actuarial valuations.

Additional information relating to the pension plans is provided in Note 18 – Pensions and other postretirement benefits to the Company's 2022 Annual Consolidated Financial Statements and the section entitled *Liquidity and capital resources* of the Company's 2022 Annual MD&A.

The Company's most recently filed actuarial valuations for funding purposes for its Canadian registered defined benefit pension plans conducted as at December 31, 2022 indicated a funding excess on a going concern basis of approximately \$4.4 billion and a funding excess on a solvency basis of approximately \$1.6 billion calculated using the three-year average of the plans' hypothetical wind-up ratio.

Pension contributions for the nine months ended September 30, 2023 and 2022 were \$38 million and \$57 million, respectively. The contributions for the nine months ended September 30, 2022 primarily represent contributions to the CN Pension Plan for the current service cost as determined under the Company's applicable actuarial valuations for funding purposes. For the nine months ended September 30, 2023, based on the results of the December 31, 2022 funding valuations, the CN Pension Plan remained fully funded and at a level such that the Company continues to be prohibited from making contributions to the CN Pension Plan. For all of 2023, the Company expects to make total cash contributions of approximately \$50 million for all of the Company's pension plans.

Adverse changes to the assumptions used to calculate the Company's funding status, particularly the discount rate, as well as changes to existing federal pension legislation or regulator guidance could significantly impact the Company's future pension contributions.

Income tax payments

Net income tax payments for the nine months ended September 30, 2023 and 2022 were \$987 million and \$954 million, respectively. The increase was mainly due to higher required installment payments in Canada. For 2023, the Company's net income tax payments are now expected to be approximately \$1.3 billion.

Investing activities

Net cash used in investing activities increased by \$175 million in the third quarter of 2023 and by \$705 million in the first nine months of 2023 when compared to the same periods in 2022, mainly due to higher property additions. In addition, the increase in the first nine months of 2023 was also due to proceeds of \$273 million received in 2022 from the sale of non-core lines.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Property additions

The following table provides the property additions for the three and nine months ended September 30, 2023 and 2022:

<i>In millions</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Track and roadway	\$ 621	\$ 584	\$ 1,414	\$ 1,230
Rolling stock	157	47	465	287
Buildings	22	19	50	39
Information technology	86	75	218	206
Other	48	19	123	68
Gross property additions	934	744	2,270	1,830
Less: Finance leases	17	—	17	—
Property additions	\$ 917	\$ 744	\$ 2,253	\$ 1,830

2023 Capital expenditure program

In 2023, the Company expects to continue investing in its capital program to improve the safety, efficiency and integrity of its network. These investments are intended to also enable and support the growth of the Company and will be financed with cash generated from operations or with cash from financing activities.

Financing activities

Net cash used in financing activities decreased by \$842 million in the third quarter and by \$1,095 million in the first nine months of 2023 when compared to the same periods in 2022. The decrease in the third quarter was due to higher net issuance of debt including commercial paper partly offset by higher repurchases of common shares. The decrease in the first nine months was primarily driven by higher net issuance of debt including commercial paper and lower repurchases of common shares.

Debt financing activities

Debt financing activities in the first nine months of 2023 included the following:

- On May 10, 2023, issuance of \$550 million 4.15% Notes due 2030, \$400 million 4.40% Notes due 2033 and \$800 million 4.70% Notes due 2053 in the Canadian capital markets, which resulted in total net proceeds of \$1,730 million;
- On May 15, 2023, repayment of US\$150 million (\$203 million) 7.63% Notes due 2023 upon maturity; and
- Net issuance of commercial paper of \$1,073 million in the third quarter and net issuance of \$1,312 million in the first nine months.

Debt financing activities in the first nine months of 2022 included the following:

- On August 5, 2022, issuance of US\$800 million (\$1,028 million) 3.85% Notes due 2032 and US\$700 million (\$900 million) 4.40% Notes due 2052, in the U.S. capital markets, which resulted in total net proceeds of \$1,901 million.
- Net repayment of commercial paper of \$1,745 million in the third quarter and \$39 million in the first nine months.

Additional information relating to the Company's outstanding debt securities is provided in *Note 16 – Debt* to the Company's 2022 Annual Consolidated Financial Statements.

Repurchase of common shares

The Company may repurchase its common shares pursuant to a Normal Course Issuer Bid (NCIB) at prevailing market prices plus brokerage fees, or such other prices as may be permitted by the Toronto Stock Exchange. Under its current NCIB, the Company may repurchase up to 32.0 million common shares between February 1, 2023 and January 31, 2024. As at September 30, 2023, the Company had repurchased 19.3 million common shares for \$3,029 million under its current NCIB.

The Company repurchased 31.9 million common shares under its previous NCIB effective between February 1, 2022 and January 31, 2023, which allowed for the repurchase of up to 42.0 million common shares.

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following table provides the information related to the share repurchases for the three and nine months ended September 30, 2023 and 2022:

<i>In millions, except per share data</i>	Three months ended September 30		Nine months ended September 30	
	2023	2022	2023	2022
Number of common shares repurchased	7.7	7.6	21.8	23.6
Weighted-average price per share ⁽¹⁾	\$ 153.92	\$ 155.29	\$ 157.41	\$ 154.38
Amount of repurchase ⁽¹⁾⁽²⁾	\$ 1,196	\$ 1,178	\$ 3,438	\$ 3,644

(1) Includes brokerage fees.

(2) Includes settlements in subsequent periods.

Dividends paid

The Company paid quarterly dividends of \$0.7900 per share amounting to \$515 million and \$1,562 million in the third quarter and first nine months of 2023 compared to \$498 million and \$1,511 million, at the quarterly rate of \$0.7325 per share for the same periods in 2022.

Contractual obligations

In the normal course of business, the Company incurs contractual obligations. The following table sets forth the Company's contractual obligations for the following items as at September 30, 2023:

<i>In millions</i>	Total	2023	2024	2025	2026	2027	2028 & thereafter
Debt obligations ⁽¹⁾	\$ 18,356	\$ 2,242	\$ 509	\$ 385	\$ 715	\$ 37	\$ 14,468
Interest on debt obligations	12,199	122	703	689	664	652	9,369
Finance lease obligations	27	1	19	2	4	1	—
Operating lease obligations ⁽²⁾	464	36	126	106	69	43	84
Purchase obligations ⁽³⁾	2,473	1,476	533	153	62	44	205
Other long-term liabilities ⁽⁴⁾	543	18	54	44	27	24	376
Total contractual obligations	\$ 34,062	\$ 3,895	\$ 1,944	\$ 1,379	\$ 1,541	\$ 801	\$ 24,502

(1) Presented net of unamortized discounts and debt issuance costs and excludes finance lease obligations.

(2) Includes \$70 million related to renewal options reasonably certain to be exercised and \$35 million of imputed interest.

(3) Includes fixed and variable commitments for locomotives, information technology services and licenses, engineering services, railroad cars, wheels, rail, rail ties as well as other equipment and services. Costs of variable commitments were estimated using forecasted prices and volumes.

(4) Includes expected payments for workers' compensation, postretirement benefits other than pensions, net unrecognized tax benefits, environmental liabilities and pension obligations that have been classified as contractual settlement agreements.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Adjusted debt-to-adjusted EBITDA multiple

Management believes that the adjusted debt-to-adjusted EBITDA multiple is a useful credit measure because it reflects the Company's ability to service its debt and other long-term obligations. The Company calculates the adjusted debt-to-adjusted EBITDA multiple as adjusted debt divided by the last twelve months of adjusted EBITDA. Adjusted debt is defined as the sum of Long-term debt and Current portion of long-term debt as reported on the Company's Consolidated Balance Sheets as well as Operating lease liabilities, including current portion and pension plans in deficiency recognized on the Company's Consolidated Balance Sheets due to the debt-like nature of their contractual and financial obligations. Adjusted EBITDA is calculated as Net income excluding Interest expense, Income tax expense, Depreciation and amortization, operating lease cost, Other components of net periodic benefit income, Other income (loss), and other significant items that are not reflective of CN's underlying business operations and which could distort the analysis of trends in business performance. Adjusted debt and adjusted EBITDA are non-GAAP measures used to compute the Adjusted debt-to-adjusted EBITDA multiple. These measures do not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to similar measures presented by other companies.

The following table provides a reconciliation of debt and Net income in accordance with GAAP, reported as at and for the twelve months ended September 30, 2023 and 2022, to the adjusted measures presented herein, which have been used to calculate the non-GAAP adjusted debt-to-adjusted EBITDA multiple:

<i>In millions, unless otherwise indicated</i>	<i>As at and for the twelve months ended September 30,</i>		2023	2022
Debt		\$	18,382	\$ 15,392
Adjustments:				
Operating lease liabilities, including current portion ⁽¹⁾			429	484
Pension plans in deficiency ⁽²⁾			351	444
Adjusted debt		\$	19,162	\$ 16,320
Net income		\$	4,915	\$ 4,899
Interest expense			676	520
Income tax expense			1,582	1,557
Depreciation and amortization			1,805	1,661
Operating lease cost ⁽³⁾			147	138
Other components of net periodic benefit income			(484)	(486)
Other loss			2	4
Adjustment:				
Advisory fees related to shareholder matters ⁽⁴⁾			—	35
Adjusted EBITDA		\$	8,643	\$ 8,328
Adjusted debt-to-adjusted EBITDA multiple (times)			2.22	1.96

(1) Represents the present value of operating lease payments.

(2) Represents the total funded deficit of all defined benefit pension plans with a projected benefit obligation in excess of plan assets.

(3) Represents the operating lease costs recorded in Purchased services and material and Equipment rents within the Consolidated Statements of Income.

(4) Relates to advisory fees related to shareholder matters recorded in Casualty and other within the Consolidated Statements of Income. See the section entitled *Adjusted performance measures* of the Company's 2022 Annual MD&A for additional information.

All forward-looking statements discussed in this section are subject to risks and uncertainties and are based on assumptions about events and developments that may not materialize or that may be offset entirely or partially by other events and developments. See the section of this MD&A entitled *Forward-looking statements* for a discussion of assumptions and risk factors affecting such forward-looking statements.

Off balance sheet arrangements

Guarantees and indemnifications

In the normal course of business, the Company enters into agreements that may involve providing guarantees or indemnifications to third parties and others, which may extend beyond the term of the agreements. These include, but are not limited to, standby letters of credit, surety and other bonds, and indemnifications that are customary for the type of transaction or for the railway business. As at September 30, 2023, the Company has not recorded a liability with respect to guarantees and indemnifications. Additional information relating to guarantees and indemnifications is provided in *Note 9 – Major commitments and contingencies* to the Company's September 30, 2023 Interim Consolidated Financial Statements.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Outstanding share data

As at October 24, 2023, the Company had 647.7 million common shares and 3.5 million stock options outstanding.

Financial instruments

Risk management

In the normal course of business, the Company is exposed to various risks from its use of financial instruments, such as credit risk, liquidity risk, and market risks which include foreign currency risk, interest rate risk and commodity price risk. A description of these risks and how the Company manages them, is provided in the section entitled *Financial instruments* of the Company's 2022 Annual MD&A.

Derivative financial instruments

Foreign currency risk

As at September 30, 2023, the Company had outstanding foreign exchange forward contracts to purchase a notional value of US\$1,247 million (US\$1,311 million as at December 31, 2022). These outstanding contracts are at a weighted-average exchange rate of \$1.34 per US\$1.00 (\$1.33 per US\$1.00 as at December 31, 2022) with exchange rates ranging from \$1.31 to \$1.36 per US\$1.00 (\$1.29 to \$1.37 per US\$1.00 as at December 31, 2022). The weighted-average term of the contracts is 79 days (157 days as at December 31, 2022) with terms ranging from 27 days to 178 days (29 days to 300 days as at December 31, 2022). Changes in the fair value of foreign exchange forward contracts, resulting from changes in foreign exchange rates, are recognized in Other income (loss) in the Consolidated Statements of Income as they occur.

For the three and nine months ended September 30, 2023, the Company recorded gains of \$50 million and \$23 million, respectively, related to foreign exchange forward contracts compared to gains of \$137 million and \$173 million, respectively, for the same periods in 2022.

As at September 30, 2023, the fair value of outstanding foreign exchange forward contracts included in Other current assets and Accounts payable and other was \$20 million and \$1 million, respectively (\$33 million and \$4 million, respectively, as at December 31, 2022).

Interest rate risk

As at September 30, 2023, the aggregate notional amount of treasury lock agreements entered into was US\$450.00 million to hedge US Treasury benchmark rates related to an expected debt issuance in 2023. The treasury locks are designated as cash flow hedging instruments. The cumulative gains or losses of the treasury locks are recorded in Accumulated other comprehensive loss in derivative instruments. The treasury locks will be settled in 2023 upon the issuance of debt at which point the cumulative gains or losses recorded in Accumulated other comprehensive loss will be amortized in earnings as a reduction or increase of interest expense over the term of the corresponding debt.

As at September 30, 2023, the fair value of outstanding treasury lock agreements included in Other current assets and Accounts payable and other was \$77 million and \$nil respectively (\$nil and \$nil, respectively, as at December 31, 2022).

In conjunction with the August 5, 2022 debt issuance, CN settled a notional US\$675 million (\$868 million) of treasury locks, resulting in a cumulative loss of \$2 million. This loss was recorded in Accumulated other comprehensive loss and is being amortized over the term of the corresponding debt and recognized as an adjustment to interest expense on the Consolidated Statements of Income.

Fair value of financial instruments

As at September 30, 2023, the Company's debt, excluding finance leases, had a carrying amount of \$18,356 million (\$15,419 million as at December 31, 2022) and a fair value of \$16,400 million (\$14,137 million as at December 31, 2022). The carrying amount of debt excluding finance leases exceeded the fair value due to market rates being higher than the stated coupon rates.

Additional information relating to financial instruments is provided in *Note 10 – Financial instruments* to the Company's September 30, 2023 Interim Consolidated Financial Statements.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Recent accounting pronouncements

The following Accounting Standards Updates (ASU) issued by the Financial Accounting Standards Board (FASB) have been adopted by the Company:

ASU 2020-04 and ASU 2022-06 Reference rate reform (Topic 848): Facilitation of the effects of reference rate reform on financial reporting and related amendments

On March 31, 2023, the Company amended the non-revolving credit facility to transition to Secured Overnight Financing Rates (SOFR) succeeding London Interbank Offered Rates (LIBOR) (see *Note 6 – Financing activities* to the Company's September 30, 2023 Interim Consolidated Financial Statements). The Company was eligible and has elected to use the optional expedient provided by the ASU which allowed the amendment to be accounted for as a non substantial modification of an existing debt. As a result, the amendment did not have a significant impact to the Company's Interim Consolidated Financial Statements and related disclosures.

Additional information relating to the facilitation of the effects of reference rate reform on financial reporting and related amendments is provided in *Note 3 – Recent accounting pronouncements* to the Company's 2022 Annual Consolidated Financial Statements and the section entitled *Recent accounting pronouncements* of the Company's 2022 Annual MD&A.

Other recently issued ASUs required to be applied on or after September 30, 2023 have been evaluated by the Company and are not expected to have a significant impact on the Company's Consolidated Financial Statements.

Critical accounting estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates, judgments and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent assets and liabilities at the date of the financial statements. On an ongoing basis, management reviews its estimates based upon available information. Actual results could differ from these estimates. The Company's policies for income taxes, capital expenditures, depreciation, pensions and other postretirement benefits, personal injury and other claims, and environmental matters, require management's more significant judgments and estimates in the preparation of the Company's consolidated financial statements and, as such, are considered to be critical. Reference is made to the section entitled *Critical accounting estimates* of the Company's 2022 Annual MD&A for a detailed description of the Company's critical accounting estimates. There have not been any material changes to these estimates in the first nine months of 2023.

Management discusses the development and selection of the Company's critical accounting policies, including the underlying estimates and assumptions, with the Audit, Finance and Risk Committee of the Company's Board of Directors. The Audit, Finance and Risk Committee has reviewed the Company's related disclosures.

Business risks

In the normal course of business, the Company is exposed to various business risks and uncertainties that can have an effect on the Company's results of operations, financial position, or liquidity. While some exposures may be reduced by the Company's risk management strategies, many risks are driven by external factors beyond the Company's control or are of a nature which cannot be eliminated.

Reference is made to the section entitled *Business risks* of the Company's 2022 Annual MD&A for a detailed description of such key areas of business risks and uncertainties with respect to: Competition, Environmental matters, Personal injury and other legal claims, Labor negotiations, Regulation, Pandemic risk, Economic conditions, Pension funding volatility, Reliance on technology and related cybersecurity risk, Trade restrictions, Terrorism and international conflicts, Customer credit risk, Liquidity, Supplier concentration, Availability of qualified personnel, Fuel costs and supply disruptions, Foreign exchange, Interest rates, Transportation network disruptions, Severe weather and Climate change, which is incorporated herein by reference. Additional risks and uncertainties not currently known to management, or that may currently not be considered material by management, could nevertheless also have an adverse effect on the Company's business.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Controls and procedures

The Company's Chief Executive Officer and its Chief Financial Officer, after evaluating the effectiveness of the Company's disclosure controls and procedures (as defined in *Exchange Act* Rules 13a-15(e) and 15d-15(e)) as of September 30, 2023, have concluded that the Company's disclosure controls and procedures were effective.

During the third quarter ended September 30, 2023, there were no changes in the Company's internal control over financial reporting (as defined in *Exchange Act* Rules 13a-15(f) and 15d-15(f)) that materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.