POWERING **SUSTAINABLE** GROWTH

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2022 QUARTERLY REVIEW THIRD QUARTER

North America's Railroad

CN's Third Quarter Results Reflect Strong Top-Line Growth and Renewed Focus on Scheduled Operation

Railroad Now Expecting to Deliver Adjusted Diluted EPS Growth of Approximately 25% in 2022

MONTREAL, October 25, 2022 — CN (TSX: CNR) (NYSE: CNI) today reported its financial and operating results for the third quarter ended September 30, 2022. Diluted earnings per share (EPS) of C$2.13 increased by 40% on an adjusted basis, which represents a quarterly record. (1) Diluted EPS decreased by 10%, mainly due to a merger termination fee received in the same quarter of 2021. CN delivered strong top-line growth and yield, as operational advancements continued to drive improvements to key metrics, including car velocity, dwell, and train speed.

"Our back to basics approach continues to drive strong results. CN's team of railroaders is doing a great job in delivering service to our customers and value for our shareholders. We remain focused on disciplined execution of our integrated operating plan to maximize the effectiveness and efficiency of our incredible three-coast network. We have a busy fourth quarter, with a strong start in the Canadian grain crop, and we are resourced for the months ahead. We are pleased to be raising our 2022 outlook to reflect our performance."

— Tracy Robinson, President and Chief Executive Officer, CN

Financial results and operating highlights
Third-quarter 2022 compared to third-quarter 2021

- Record revenues of C$4,513 million, an increase of C$922 million or 26%, mainly due to higher fuel surcharge revenue driven by higher fuel prices, freight rate increases and the positive translation impact of a weaker Canadian dollar.
- Record operating income of C$1,932 million, an increase of 44%, or an increase of 31% on an adjusted basis. (1)
- Diluted EPS of C$2.13, a decrease of 10%, mainly due to a merger termination fee received in the third quarter of 2021.
- Diluted EPS increased by 40% on an adjusted basis, which represents a quarterly record. (1)
- Operating ratio, defined as operating expenses as a percentage of revenues, of 57.2%, an improvement of 5.5-points, or an improvement of 1.8-points on an adjusted basis. (1)
- Free cash flow for the first nine months of 2022 was C$2,924 million compared to C$2,034 million for the same period in 2021. (1)
- Injury frequency rate (3) decreased by 29% and the accident rate (4) decreased by 19%.
- Car velocity improved by 5% and dwell improved by 9%.
- Fuel efficiency improved by 1% to 0.838 US gallons of locomotive fuel consumed per 1,000 gross ton miles (GTMs).
- Origin train performance averaged 87%, an improvement of 12% compared to 78% for the same period in 2021. (5)

New 2022 financial outlook (2)

CN is now expecting to deliver approximately 25% of adjusted diluted EPS growth (compared to its April 26, 2022 target of 15-20%) and free cash flow of approximately C$4.2 billion in 2022 (compared to its April 26, 2022 target range of C$3.7 billion - C$4.0 billion). (1) CN continues to target an operating ratio below 60% and a ROIC of approximately 15% in 2022. (1)

Third-quarter 2022 revenues, traffic volumes and expenses

Revenues for the third quarter of 2022 were C$4,513 million, an increase of C$922 million, or 26%, when compared to the same period in 2021. The increase was mainly due to higher fuel surcharge revenue driven by higher fuel prices, freight rate increases, higher Canadian export volumes of coal via west coast ports, higher volumes of U.S. grain and the positive translation impact of a weaker Canadian dollar.

Revenue ton miles (RTMs), measuring the weight and distance of freight transported by CN, increased by 5% compared to the year-earlier period. Freight revenue per RTM increased by 22% compared to the year-earlier period, mainly driven by higher fuel surcharge revenue driven by higher fuel prices, freight rate increases and the positive translation impact of a weaker Canadian dollar.

Operating expenses for the third quarter of 2022 increased by 15% to C$2,581 million, mainly driven by higher fuel prices and the negative translation impact of a weaker Canadian dollar; partly offset by Transaction-related costs of $84 million recorded in the third quarter of 2021 resulting from the terminated CN Merger Agreement with Kansas City Southern ("KCS").

(1) Non-GAAP Measures
CN reports its financial results in accordance with United States generally accepted accounting principles (GAAP). CN may also use 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, 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), ROIC outlook (2) and free cash flow outlook (2) exclude 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, ROIC or free cash flow 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, its ROIC outlook or its free cash flow 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.

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; timing and completion of capital programs; 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.

(3) Per 200,000 person hours, based on Federal Railroad Administration (FRA) reporting criteria.

(4) Per million train miles, based on FRA reporting criteria.

(5) Origin train performance is defined as the percentage of manifest, automotive, and domestic intermodal trains departing origin within allowance of the scheduled time.

2022 key assumptions
CN has made a number of economic and market assumptions in preparing its 2022 outlook. The Company assumes that North American industrial production for the year will increase in the mid single-digit range and now assumes U.S. housing starts of approximately 1.6 million units and U.S. motor vehicle sales of approximately 14 million units (compared to its January 25, 2022 assumption of approximately 15.5 million units). For the 2021/2022 crop year, the grain crop in Canada was below its three-year average and the U.S. grain crop was in line with its three-year average. The Company assumes that the 2022/2023 grain crop in Canada will be above its three-year average (or in line when excluding the significantly lower 2021/2022 crop year) and that the 2022/2023 U.S. grain crop will be in line with its three-year average. CN assumes total RTMs in 2022 will increase in the low single-digit range versus 2021. CN assumes continued pricing above rail inflation upon contract renewals. CN now assumes that in 2022, the value of the Canadian dollar in U.S. currency will be approximately $0.77 (compared to its January 25, 2022 assumption of approximately $0.80) and now assumes that in 2022 the average price of crude oil (West Texas Intermediate) will be approximately US$95 per barrel (compared to its April 26, 2022 assumption of approximately US$90 - US$100 per barrel). In 2022, CN plans to invest approximately 17% of revenues in its capital program.

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.sedar.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. As the only railroad connecting 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	
	2022	2021	**2022**	2021
Financial measures				
Key financial performance indicators [1]				
Total revenues *($ millions)*	**4,513**	3,591	**12,565**	10,724
Freight revenues *($ millions)*	**4,366**	3,427	**12,169**	10,302
Operating income *($ millions)*	**1,932**	1,341	**4,928**	4,050
Adjusted operating income *($ millions)* [2][3]	**1,932**	1,471	**4,950**	4,043
Net income *($ millions)* [4]	**1,455**	1,686	**3,698**	3,698
Adjusted net income *($ millions)* [2][3][4]	**1,455**	1,080	**3,714**	3,014
Diluted earnings per share *($)* [4]	**2.13**	2.37	**5.34**	5.20
Adjusted diluted earnings per share *($)* [2][3][4]	**2.13**	1.52	**5.37**	4.24
Free cash flow *($ millions)* [2][5]	**1,356**	754	**2,924**	2,034
Gross property additions *($ millions)*	**744**	836	**1,830**	1,977
Share repurchases *($ millions)*	**1,178**	109	**3,644**	523
Dividends per share *($)*	**0.7325**	0.6150	**2.1975**	1.8450
Financial ratio				
Operating ratio *(%)* [6]	**57.2**	62.7	**60.8**	62.2
Adjusted operating ratio *(%)* [2][3]	**57.2**	59.0	**60.6**	62.3
Operational measures [7]				
Statistical operating data				
Gross ton miles (GTMs) *(millions)*	**115,585**	110,690	**347,393**	348,205
Revenue ton miles (RTMs) *(millions)*	**58,540**	55,875	**175,645**	176,575
Carloads *(thousands)*	**1,469**	1,427	**4,289**	4,327
Route miles *(includes Canada and the U.S.)*	**18,600**	19,500	**18,600**	19,500
Employees *(end of period)*	**23,828**	23,765	**23,828**	23,765
Employees *(average for the period)*	**23,729**	24,312	**23,195**	24,410
Key operating measures				
Freight revenue per RTM *(cents)*	**7.46**	6.13	**6.93**	5.83
Freight revenue per carload *($)*	**2,972**	2,402	**2,837**	2,381
GTMs per average number of employees *(thousands)*	**4,871**	4,553	**14,977**	14,265
Operating expenses per GTM *(cents)*	**2.23**	2.03	**2.20**	1.92
Labor and fringe benefits expense per GTM *(cents)*	**0.67**	0.66	**0.63**	0.63
Diesel fuel consumed *(US gallons in millions)*	**96.9**	93.9	**299.2**	306.8
Average fuel price *($ per US gallon)*	**5.70**	3.33	**5.31**	3.14
Fuel efficiency *(US gallons of locomotive fuel consumed per 1,000 GTMs)*	**0.838**	0.848	**0.861**	0.881
Train weight *(tons)*	**9,202**	9,729	**9,385**	9,656
Train length *(feet)*	**8,140**	8,677	**8,259**	8,581
Car velocity *(car miles per day)*	**212**	201	**193**	194
Through dwell *(entire railroad, hours)*	**7.0**	7.7	**7.8**	7.9
Through network train speed *(miles per hour)*	**20.1**	19.7	**18.6**	19.0
Locomotive utilization *(trailing GTMs per total horsepower)*	**202**	195	**197**	199
Safety indicators [8]				
Injury frequency rate *(per 200,000 person hours)*	**1.02**	1.44	**1.24**	1.34
Accident rate *(per million train miles)*	**1.73**	2.13	**1.97**	1.77

(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) *In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.*

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

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

(7) *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, 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.*

(8) *Based on Federal Railroad Administration (FRA) reporting criteria.*

Supplementary Information – unaudited

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change Fav (Unfav)	% Change at constant currency [1] Fav (Unfav)	**2022**	2021	% Change Fav (Unfav)	% Change at constant currency [1] Fav (Unfav)
Revenues *($ millions)* [2]								
Petroleum and chemicals	**850**	715	19%	16%	**2,435**	2,061	18%	16%
Metals and minerals	**539**	410	31%	28%	**1,411**	1,155	22%	20%
Forest products	**550**	425	29%	26%	**1,489**	1,305	14%	12%
Coal	**258**	169	53%	51%	**702**	453	55%	54%
Grain and fertilizers	**621**	510	22%	20%	**1,829**	1,832	—%	(1%)
Intermodal	**1,340**	1,061	26%	25%	**3,722**	3,066	21%	20%
Automotive	**208**	137	52%	48%	**581**	430	35%	33%
Total freight revenues	**4,366**	3,427	27%	25%	**12,169**	10,302	18%	17%
Other revenues	**147**	164	(10%)	(13%)	**396**	422	(6%)	(8%)
Total revenues	**4,513**	3,591	26%	23%	**12,565**	10,724	17%	16%
Revenue ton miles (RTMs) *(millions)* [3]								
Petroleum and chemicals	**11,715**	10,695	10%	10%	**35,604**	31,481	13%	13%
Metals and minerals	**7,441**	7,181	4%	4%	**20,853**	20,126	4%	4%
Forest products	**6,614**	6,234	6%	6%	**19,083**	19,861	(4%)	(4%)
Coal	**5,769**	5,189	11%	11%	**17,264**	13,863	25%	25%
Grain and fertilizers	**11,944**	11,774	1%	1%	**37,748**	44,537	(15%)	(15%)
Intermodal	**14,340**	14,241	1%	1%	**42,966**	44,883	(4%)	(4%)
Automotive	**717**	561	28%	28%	**2,127**	1,824	17%	17%
Total RTMs	**58,540**	55,875	5%	5%	**175,645**	176,575	(1%)	(1%)
Freight revenue / RTM *(cents)* [2][3]								
Petroleum and chemicals	**7.26**	6.69	9%	6%	**6.84**	6.55	4%	3%
Metals and minerals	**7.24**	5.71	27%	23%	**6.77**	5.74	18%	16%
Forest products	**8.32**	6.82	22%	19%	**7.80**	6.57	19%	17%
Coal	**4.47**	3.26	37%	36%	**4.07**	3.27	24%	23%
Grain and fertilizers	**5.20**	4.33	20%	18%	**4.85**	4.11	18%	16%
Intermodal	**9.34**	7.45	25%	24%	**8.66**	6.83	27%	26%
Automotive	**29.01**	24.42	19%	16%	**27.32**	23.57	16%	14%
Total freight revenue / RTM	**7.46**	6.13	22%	19%	**6.93**	5.83	19%	17%
Carloads *(thousands)* [3]								
Petroleum and chemicals	**161**	150	7%	7%	**482**	443	9%	9%
Metals and minerals	**264**	266	(1%)	(1%)	**709**	730	(3%)	(3%)
Forest products	**86**	82	5%	5%	**250**	258	(3%)	(3%)
Coal	**130**	109	19%	19%	**377**	278	36%	36%
Grain and fertilizers	**135**	131	3%	3%	**422**	469	(10%)	(10%)
Intermodal	**641**	649	(1%)	(1%)	**1,894**	2,016	(6%)	(6%)
Automotive	**52**	40	30%	30%	**155**	133	17%	17%
Total carloads	**1,469**	1,427	3%	3%	**4,289**	4,327	(1%)	(1%)
Freight revenue / carload *($)* [2][3]								
Petroleum and chemicals	**5,280**	4,767	11%	8%	**5,052**	4,652	9%	7%
Metals and minerals	**2,042**	1,541	33%	29%	**1,990**	1,582	26%	23%
Forest products	**6,395**	5,183	23%	20%	**5,956**	5,058	18%	16%
Coal	**1,985**	1,550	28%	27%	**1,862**	1,629	14%	13%
Grain and fertilizers	**4,600**	3,893	18%	16%	**4,334**	3,906	11%	9%
Intermodal	**2,090**	1,635	28%	27%	**1,965**	1,521	29%	28%
Automotive	**4,000**	3,425	17%	14%	**3,748**	3,233	16%	14%
Total freight revenue / carload	**2,972**	2,402	24%	21%	**2,837**	2,381	19%	18%

(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, constant currency, free cash flow 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, 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.

For the three and nine months ended September 30, 2021, the Company's adjusted net income was $1,080 million, or $1.52 per diluted share, and $3,014 million, or $4.24 per diluted share, respectively. (1) The adjusted figures exclude:

- employee termination benefits and severance costs related to a workforce reduction program of $39 million, or $29 million after-tax ($0.04 per diluted share) recorded in the third quarter in Labor and fringe benefits within the Consolidated Statements of Income;
- advisory fees related to shareholder matters of $7 million, or $5 million after-tax ($0.01 per diluted share) recorded in the third quarter in Casualty and other within the Consolidated Statements of Income;
- the recovery of $137 million, or $102 million after-tax ($0.14 per diluted share) recorded in the first quarter related to the loss on assets held for sale in the second quarter of 2020, to reflect an agreement for the sale of on-going rail operations, certain non-core rail lines in Wisconsin, Michigan and Ontario to a short line operator;
- transaction-related costs, consisting of an advance to Kansas City Southern ("KCS") and a related refund, net of transaction costs, of $84 million, or $70 million after-tax ($0.10 per diluted share), recorded in the third quarter resulting from the terminated CN Merger Agreement with KCS;
- amortization of bridge financing and other fees of $65 million, or $60 million after-tax ($0.08 per diluted share) recorded in the third quarter and $32 million, or $24 million after-tax ($0.03 per diluted share) recorded in the second quarter, resulting from the KCS transaction, recorded in Interest expense within the Consolidated Statements of Income; and
- merger termination fee paid by KCS to CN of $886 million, or $770 million after-tax ($1.08 per diluted share), recorded in the third quarter resulting from KCS' notice of termination of the CN Merger Agreement with KCS.

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

Non-GAAP Measures – unaudited

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, 2022 and 2021, to the non-GAAP adjusted performance measures presented herein:

	Three months ended September 30		Nine months ended September 30	
In millions, except per share data	**2022**	2021	**2022**	2021
Net income [(1)]	**$ 1,455**	$ 1,686	**$ 3,698**	$ 3,698
Adjustments:				
Operating expense adjustments:				
Workforce reduction program	**—**	39	**—**	39
Advisory fees related to shareholder matters	**—**	7	**22**	7
Recovery of loss on assets held for sale	**—**	—	**—**	(137)
Transaction-related costs	**—**	84	**—**	84
Non-operating expense adjustments:				
Amortization of bridge financing and other fees	**—**	65	**—**	97
Merger termination fee	**—**	(886)	**—**	(886)
Tax adjustments:				
Tax effect of adjustments [(2)]	**—**	85	**(6)**	112
Total adjustments	**—**	(606)	**16**	(684)
Adjusted net income [(1)]	**$ 1,455**	$ 1,080	**$ 3,714**	$ 3,014
Diluted earnings per share [(1)]	**$ 2.13**	$ 2.37	**$ 5.34**	$ 5.20
Impact of adjustments, per share	**—**	(0.85)	**0.03**	(0.96)
Adjusted diluted earnings per share [(1)]	**$ 2.13**	$ 1.52	**$ 5.37**	$ 4.24

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

(2) 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, 2022 and 2021, to the non-GAAP adjusted performance measures presented herein:

	Three months ended September 30		Nine months ended September 30	
In millions, except percentages	**2022**	2021	**2022**	2021
Operating income	**$ 1,932**	$ 1,341	**$ 4,928**	$ 4,050
Operating expense adjustments:				
Workforce reduction program	**—**	39	**—**	39
Advisory fees related to shareholder matters	**—**	7	**22**	7
Recovery of loss on assets held for sale	**—**	—	**—**	(137)
Transaction-related costs	**—**	84	**—**	84
Total operating expense adjustments	**—**	130	**22**	(7)
Adjusted operating income	**$ 1,932**	$ 1,471	**$ 4,950**	$ 4,043
Operating expenses	**$ 2,581**	$ 2,250	**$ 7,637**	$ 6,674
Total operating expense adjustments	**—**	(130)	**(22)**	7
Adjusted operating expenses	**$ 2,581**	$ 2,120	**$ 7,615**	$ 6,681
Operating ratio	**57.2 %**	62.7 %	**60.8 %**	62.2 %
Impact of adjustments	**— %**	(3.7 %)	**(0.2 %)**	0.1 %
Adjusted operating ratio	**57.2 %**	59.0 %	**60.6 %**	62.3 %

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 $1.31 and $1.28 per US$1.00 for the three and nine months ended September 30, 2022, respectively, and $1.26 and $1.25 per US$1.00 for the three and nine months ended September 30, 2021, respectively.

On a constant currency basis, the Company's net income for the three and nine months ended September 30, 2022 would have been lower by $21 million ($0.03 per diluted share) and $41 million ($0.06 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, 2022:

	Three months ended September 30				Nine months ended September 30			
In millions, except per share data	**2022**	Constant currency impact	2021	% Change at constant currency Fav (Unfav)	**2022**	Constant currency impact	2021	% Change at constant currency Fav (Unfav)
Revenues								
Petroleum and chemicals	**$ 850**	$ (18)	$ 715	16%	**$ 2,435**	$ (37)	$ 2,061	16%
Metals and minerals	**539**	(15)	410	28%	**1,411**	(28)	1,155	20%
Forest products	**550**	(14)	425	26%	**1,489**	(28)	1,305	12%
Coal	**258**	(3)	169	51%	**702**	(6)	453	54%
Grain and fertilizers	**621**	(11)	510	20%	**1,829**	(24)	1,832	(1%)
Intermodal	**1,340**	(14)	1,061	25%	**3,722**	(29)	3,066	20%
Automotive	**208**	(5)	137	48%	**581**	(11)	430	33%
Total freight revenues	**4,366**	(80)	3,427	25%	**12,169**	(163)	10,302	17%
Other revenues	**147**	(5)	164	(13%)	**396**	(8)	422	(8%)
Total revenues	**4,513**	(85)	3,591	23%	**12,565**	(171)	10,724	16%
Operating expenses								
Labor and fringe benefits	**770**	(13)	728	(4%)	**2,204**	(23)	2,205	1%
Purchased services and material	**520**	(9)	502	(2%)	**1,615**	(17)	1,578	(1%)
Fuel	**649**	(19)	350	(80%)	**1,846**	(42)	1,094	(65%)
Depreciation and amortization	**435**	(6)	405	(6%)	**1,278**	(12)	1,215	(4%)
Equipment rents	**72**	(2)	82	15%	**254**	(5)	254	2%
Casualty and other	**135**	(5)	99	(31%)	**440**	(10)	381	(13%)
Recovery of loss on assets held for sale	**—**	—	—	—%	**—**	—	(137)	(100%)
Transaction-related costs	**—**	—	84	100%	**—**	—	84	100 %
Total operating expenses	**2,581**	(54)	2,250	(12%)	**7,637**	(109)	6,674	(13%)
Operating income	**1,932**	(31)	1,341	42%	**4,928**	(62)	4,050	20%
Interest expense	**(141)**	3	(197)	30%	**(395)**	7	(485)	20%
Other components of net periodic benefit income (1)	**125**	—	98	28%	**374**	—	295	27%
Merger termination fee	**—**	—	886	(100%)	**—**	—	886	(100%)
Other income (loss)	**(1)**	—	(27)	96%	**(25)**	—	22	(214%)
Income before income taxes (1)	**1,915**	(28)	2,101	(10%)	**4,882**	(55)	4,768	1%
Income tax expense (1)	**(460)**	7	(415)	(9%)	**(1,184)**	14	(1,070)	(9%)
Net income (1)	**$ 1,455**	$ (21)	$ 1,686	(15%)	**$ 3,698**	$ (41)	$ 3,698	(1%)
Diluted earnings per share (1)	**$ 2.13**	$ (0.03)	$ 2.37	(11%)	**$ 5.34**	$ (0.06)	$ 5.20	2%

(1) *In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.*

Non-GAAP Measures – unaudited

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, 2022 and 2021, to the non-GAAP free cash flow presented herein:

	Three months ended September 30		Nine months ended September 30	
In millions	**2022**	2021	**2022**	2021
Net cash provided by operating activities	**$ 2,112**	$ 2,458	**$ 4,395**	$ 4,885
Net cash provided by (used in) investing activities	**(756)**	42	**(1,573)**	(2,013)
Net cash provided before financing activities	**1,356**	2,500	**2,822**	2,872
Adjustments:				
Cash income taxes for merger transaction-related payments and cash receipts (1)	**–**	–	**102**	–
Transaction-related costs (2)	**–**	26	**–**	89
Advance for acquisition (3)	**–**	–	**–**	845
Refund of advance for acquisition (3)	**–**	(886)	**–**	(886)
Merger termination fee (3)	**–**	(886)	**–**	(886)
Total adjustments	**–**	(1,746)	**102**	(838)
Free cash flow	**$ 1,356**	$ 754	**$ 2,924**	$ 2,034

(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 unaudited Interim Consolidated Financial Statements for further information.

(2) Relates to Transaction-related costs of $125 million, of which $63 million was paid in the second quarter and $26 million was paid in the third quarter. As at September 30, 2021, $36 million remained to be paid. See Note 4 - Acquisition to the Company's unaudited Interim Consolidated Financial Statements for further information.

(3) See Note 4 – Acquisition to the Company's unaudited Interim Consolidated Financial Statements for further information.

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, 2022 and 2021, to the adjusted measures presented herein, which have been used to calculate the non-GAAP adjusted debt-to-adjusted EBITDA multiple:

In millions, unless otherwise indicated *As at and for the twelve months ended September 30,*		**2022**		2021
Debt	**$**	**15,392**	$	13,556
Adjustments:				
Operating lease liabilities, including current portion (1)		**484**		430
Pension plans in deficiency (2)		**444**		545
Adjusted debt	**$**	**16,320**	$	14,531
Net income (3)	**$**	**4,899**	$	4,714
Interest expense		**520**		619
Income tax expense (3)		**1,557**		1,403
Depreciation and amortization		**1,661**		1,617
Operating lease cost (4)		**138**		130
Other components of net periodic benefit income (3)		**(486)**		(367)
Other loss (income)		**4**		(22)
Adjustments:				
Workforce reduction program (5)		**—**		39
Advisory fees related to shareholder matters (6)		**35**		7
Recovery of loss on assets held for sale (7)		**—**		(137)
Transaction-related costs (8)		**—**		84
Merger termination fee (9)		**—**		(886)
Adjusted EBITDA	**$**	**8,328**	$	7,201
Adjusted debt-to-adjusted EBITDA multiple *(times)*		**1.96**		2.02

(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) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

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

(5) Relates to employee termination benefits and severance costs related to a workforce reduction program, recorded in Labor and fringe benefits within the Consolidated Statements of Income.

(6) Relates to advisory fees related to shareholder matters recorded in Casualty and other within the Consolidated Statements of Income.

(7) Relates to the recovery of $137 million of the $486 million loss on assets held for sale recorded in the second quarter of 2020, resulting from the Company entering into an agreement for the sale of non-core lines. See Note 6 – Assets held for sale to the Company's unaudited Interim Consolidated Financial Statements for further information.

(8) Relates to transaction costs incurred as a result of the terminated CN Merger Agreement of $84 million, consisting of $125 million of transaction-related costs, partially offset by $41 million of income generated as a result of the applicable foreign exchange rates prevailing at the time of payment and related receipt of the US$700 million advance to KCS. See Note 4 –Acquisition to the Company's unaudited Interim Consolidated Financial Statements for further information.

(9) Relates to the termination fee resulting from KCS terminating the CN Merger Agreement and entering into a merger agreement with CP. See Note 4 –Acquisition to the Company's unaudited Interim Consolidated Financial Statements for further information.

Consolidated Statements of Income – unaudited

In millions, except per share data	Three months ended September 30 **2022**	Three months ended September 30 2021	Nine months ended September 30 **2022**	Nine months ended September 30 2021
Revenues *(Note 5)*	**$ 4,513**	$ 3,591	**$ 12,565**	$ 10,724
Operating expenses				
Labor and fringe benefits	**770**	728	**2,204**	2,205
Purchased services and material	**520**	502	**1,615**	1,578
Fuel	**649**	350	**1,846**	1,094
Depreciation and amortization	**435**	405	**1,278**	1,215
Equipment rents	**72**	82	**254**	254
Casualty and other	**135**	99	**440**	381
Recovery of loss on assets held for sale *(Note 6)*	**—**	—	**—**	(137)
Transaction-related costs (*Note 4)*	**—**	84	**—**	84
Total operating expenses	**2,581**	2,250	**7,637**	6,674
Operating income	**1,932**	1,341	**4,928**	4,050
Interest expense	**(141)**	(197)	**(395)**	(485)
Other components of net periodic benefit income *(Note 7)* (1)	**125**	98	**374**	295
Merger termination fee (*Note 4)*	**—**	886	**—**	886
Other income (loss)	**(1)**	(27)	**(25)**	22
Income before income taxes (1)	**1,915**	2,101	**4,882**	4,768
Income tax expense (1)	**(460)**	(415)	**(1,184)**	(1,070)
Net income (1)	**$ 1,455**	$ 1,686	**$ 3,698**	$ 3,698
Earnings per share *(Note 8)*				
Basic (1)	**$ 2.13**	$ 2.38	**$ 5.36**	$ 5.21
Diluted (1)	**$ 2.13**	$ 2.37	**$ 5.34**	$ 5.20
Weighted-average number of shares *(Note 8)*				
Basic	**682.3**	708.7	**690.2**	709.5
Diluted	**684.3**	710.4	**692.1**	711.3
Dividends declared per share	**$ 0.7325**	$ 0.6150	**$ 2.1975**	$ 1.8450

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy for additional information.

See accompanying notes to unaudited consolidated financial statements.

Consolidated Statements of Comprehensive Income – unaudited

In millions	Three months ended September 30 **2022**	Three months ended September 30 2021	Nine months ended September 30 **2022**	Nine months ended September 30 2021
Net income (1)	**$ 1,455**	$ 1,686	**$ 3,698**	$ 3,698
Other comprehensive income (loss) *(Note 12)*				
Net gain (loss) on foreign currency translation	**366**	104	**467**	(34)
Net change in pension and other postretirement benefit plans *(Note 7)* (1)	**40**	74	**149**	222
Derivative instruments (*Note 14*)	**(27)**	—	**(2)**	—
Other comprehensive income before income taxes (1)	**379**	178	**614**	188
Income tax recovery (expense) (1)	**94**	7	**81**	(58)
Other comprehensive income (1)	**473**	185	**695**	130
Comprehensive income (1)	**$ 1,928**	$ 1,871	**$ 4,393**	$ 3,828

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy for additional information.

See accompanying notes to unaudited consolidated financial statements.

Consolidated Balance Sheets – unaudited

In millions	**September 30 2022**	December 31 2021
Assets		
Current assets		
Cash and cash equivalents	**$ 403**	$ 838
Restricted cash and cash equivalents *(Note 9)*	**503**	503
Accounts receivable	**1,526**	1,074
Material and supplies	**706**	589
Other current assets *(Note 10)*	**251**	422
Total current assets	**3,389**	3,426
Properties	**43,450**	41,178
Operating lease right-of-use assets	**483**	445
Pension asset	**3,460**	3,050
Intangible assets, goodwill and other	**424**	439
Total assets	**$ 51,206**	$ 48,538
Liabilities and shareholders' equity		
Current liabilities		
Accounts payable and other	**$ 2,565**	$ 2,612
Current portion of long-term debt	**792**	508
Total current liabilities	**3,357**	3,120
Deferred income taxes	**9,841**	9,303
Other liabilities and deferred credits	**439**	427
Pension and other postretirement benefits	**612**	645
Long-term debt	**14,600**	11,977
Operating lease liabilities	**357**	322
Shareholders' equity		
Common shares	**3,625**	3,704
Common shares in Share Trusts	**(88)**	(103)
Additional paid-in capital	**378**	397
Accumulated other comprehensive loss *(Note 12)* [(1)]	**(1,546)**	(2,241)
Retained earnings [(1)]	**19,631**	20,987
Total shareholders' equity	**22,000**	22,744
Total liabilities and shareholders' equity	**$ 51,206**	$ 48,538

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy for additional information.

See accompanying notes to unaudited consolidated financial statements.

Consolidated Statements of Changes in Shareholders' Equity – unaudited

	Number of common shares							
In millions	Outstanding	Share Trusts	Common shares	Common shares in Share Trusts	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
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 expense and other					16		(1)	15
Repurchase of common shares *(Note 9)*	(7.6)		(41)				(1,137)	(1,178)
Share purchases by Share Trusts	—	—		(6)				(6)
Other comprehensive income *(Note 12)*						473		473
Dividends							(498)	(498)
Balance at September 30, 2022	**677.9**	**0.9**	**$ 3,625**	**$ (88)**	**$ 378**	**$ (1,546)**	**$ 19,631**	**$ 22,000**

	Number of common shares							
In millions	Outstanding	Share Trusts	Common shares	Common shares in Share Trusts	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
Balance at December 31, 2021 [(1)]	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 expense and other					65		(2)	63
Repurchase of common shares (Note 9)	(23.6)		(126)				(3,518)	(3,644)
Share purchases by Share Trusts	(0.1)	0.1		(18)				(18)
Other comprehensive income *(Note 12)*						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**

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy for additional information.

See accompanying notes to unaudited consolidated financial statements.

Consolidated Statements of Changes in Shareholders' Equity – unaudited

In millions	Number of common shares: Outstanding	Number of common shares: Share Trusts	Common shares	Common shares in Share Trusts	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
Balance at June 30, 2021 (1)	707.9	1.1	$ 3,709	$ (97)	$ 379	$ (3,766)	$ 20,119	$ 20,344
Net income (1)							1,686	1,686
Stock options exercised	0.2		22		(3)			19
Settlement of equity settled awards	—	—		—	(13)		(18)	(31)
Stock-based compensation expense and other					18		(1)	17
Repurchase of common shares *(Note 9)*	(0.8)		(4)				(105)	(109)
Share purchases by Share Trusts	—	—		(7)				(7)
Other comprehensive income *(Note 12)* (1)						185		185
Dividends							(435)	(435)
Balance at September 30, 2021 (1)	707.3	1.1	$ 3,727	$ (104)	$ 381	$ (3,581)	$ 21,246	$ 21,669

In millions	Number of common shares: Outstanding	Number of common shares: Share Trusts	Common shares	Common shares in Share Trusts	Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
Balance at December 31, 2020 (1)	710.3	1.3	$ 3,698	$ (115)	$ 379	$ (3,711)	$ 19,400	$ 19,651
Net income (1)							3,698	3,698
Stock options exercised	0.5		48		(7)			41
Settlement of equity settled awards	0.3	(0.3)		32	(51)		(39)	(58)
Stock-based compensation expense and other					60		(2)	58
Repurchase of common shares *(Note 9)*	(3.7)		(19)				(504)	(523)
Share purchases by Share Trusts	(0.1)	0.1		(21)				(21)
Other comprehensive income *(Note 12)* (1)						130		130
Dividends							(1,307)	(1,307)
Balance at September 30, 2021 (1)	707.3	1.1	$ 3,727	$ (104)	$ 381	$ (3,581)	$ 21,246	$ 21,669

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy for additional information.

See accompanying notes to unaudited consolidated financial statements.

Consolidated Statements of Cash Flows – unaudited

	Three months ended September 30		Nine months ended September 30	
In millions	**2022**	2021	**2022**	2021
Operating activities				
Net income [1]	**$ 1,455**	$ 1,686	**$ 3,698**	$ 3,698
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation and amortization	**435**	405	**1,278**	1,215
Pension income and funding [1]	**(91)**	(51)	**(295)**	(215)
Amortization of bridge financing and other fees (*Note 4*)	**—**	65	**—**	97
Deferred income taxes [1]	**108**	109	**216**	359
Recovery of loss on assets held for sale *(Note 6)*	**—**	—	**—**	(137)
Changes in operating assets and liabilities:				
Accounts receivable	**(132)**	21	**(416)**	(157)
Material and supplies	**39**	17	**(93)**	(37)
Accounts payable and other	**140**	82	**(281)**	(140)
Other current assets	**58**	40	**40**	59
Other operating activities, net	**100**	84	**248**	143
Net cash provided by operating activities	**2,112**	2,458	**4,395**	4,885
Investing activities				
Property additions	**(744)**	(836)	**(1,830)**	(1,977)
Advance for acquisition and other transaction-related costs (*Note 4*)	**—**	—	**—**	(908)
Refund of advance for acquisition (*Note 4*)	**—**	886	**—**	886
Proceeds from assets held for sale *(Note 6)*	**—**	—	**273**	—
Other investing activities, net	**(12)**	(8)	**(16)**	(14)
Net cash provided by (used in) investing activities	**(756)**	42	**(1,573)**	(2,013)
Financing activities				
Issuance of debt *(Note 9)*	**1,899**	—	**1,899**	403
Repayment of debt	**(10)**	(568)	**(39)**	(842)
Change in commercial paper, net *(Note 9)*	**(1,745)**	164	**(39)**	1,080
Bridge financing and other fees (*Note 4*)	**—**	(4)	**—**	(97)
Settlement of foreign exchange forward contracts on debt	**49**	25	**61**	1
Issuance of common shares for stock options exercised	**5**	19	**40**	41
Withholding taxes remitted on the net settlement of equity settled awards *(Note 11)*	**(3)**	(5)	**(44)**	(32)
Repurchase of common shares *(Note 9)*	**(1,157)**	(72)	**(3,587)**	(486)
Purchase of common shares for settlement of equity settled awards	**(7)**	(25)	**(23)**	(25)
Purchase of common shares by Share Trusts	**(6)**	(7)	**(18)**	(21)
Dividends paid	**(498)**	(435)	**(1,511)**	(1,307)
Net cash used in financing activities	**(1,473)**	(908)	**(3,261)**	(1,285)
Effect of foreign exchange fluctuations on cash, cash equivalents, restricted cash and restricted cash equivalents	**3**	1	**4**	—
Net increase (decrease) in cash, cash equivalents, restricted cash, and restricted cash equivalents	**(114)**	1,593	**(435)**	1,587
Cash, cash equivalents, restricted cash, and restricted cash equivalents, beginning of period	**1,020**	1,094	**1,341**	1,100
Cash, cash equivalents, restricted cash, and restricted cash equivalents, end of period	**$ 906**	$ 2,687	**$ 906**	$ 2,687
Cash and cash equivalents, end of period	**$ 403**	$ 2,194	**$ 403**	$ 2,194
Restricted cash and cash equivalents, end of period	**503**	493	**503**	493
Cash, cash equivalents, restricted cash, and restricted cash equivalents, end of period	**$ 906**	$ 2,687	**$ 906**	$ 2,687
Supplemental cash flow information				
Interest paid	**$ (182)**	$ (174)	**$ (439)**	$ (433)
Income taxes paid	**$ (264)**	$ (201)	**$ (954)**	$ (582)

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy for additional information.

See accompanying notes to unaudited 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, 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 unaudited Interim Consolidated Financial Statements have been prepared using accounting policies consistent with those used in preparing CN's 2021 Annual Consolidated Financial Statements, except as disclosed in *Note 2 – Change in accounting policy*, and should be read in conjunction with such statements and Notes thereto.

2 – Change in accounting policy

Change in accounting policy for determining net periodic pension cost (income)

Effective January 1, 2022, CN elected to change its accounting methodology for determining the market-related value of assets for the Company's defined benefit pension plans. The new accounting method changes the calculation of market-related value of pension plan assets used to determine net periodic benefit cost but has no impact on the annual funded status of the plans. The Company's previous methodology calculated market-related value for pensions whereby realized and unrealized gains/losses and appreciation/depreciation in the value of the investments were recognized over a period of five years. The Company's new methodology will apply a corridor approach so that the market-related value does not result in a value that deviates excessively from its fair value. Specifically, the market-related value will not exceed 110% or be less than 90% of the fair value. This change establishes a corridor approach whereby the amount causing the market-related value to be outside of the 10% corridor will be recognized immediately in the market-related value of assets and will not be subject to the five year period of recognition. There is no change in the recognition approach for investment income.

CN considers the use of a calculated value with a corridor approach preferable to the previous calculated value approach as it results in a more current reflection of impacts of changes in value of these plan assets in the determination of net periodic benefit cost. The new accounting method to calculate the market-related value for pensions also aligns with the prevailing guidance issued by the Office of the Superintendent of Financial Institutions (OSFI) for the preparation of actuarial valuations for funding purposes for all registered Canadian defined benefit pension plans, whereby the Company has adopted and applied the updated OSFI guidance starting with the December 31, 2021 funding valuations that were filed during the second quarter of 2022.

The change in accounting method was applied retrospectively to all periods presented within CN's financial statements. The change did not impact Operating income or Net cash provided by operating activities but did impact the previously reported portion of Other components of net periodic benefit cost (income) for defined benefit pension plans along with related consolidated income items such as Net income and Earnings per share. Other impacts included related changes to previously reported consolidated Other comprehensive income (loss), Retained earnings, Accumulated other comprehensive income (loss), and associated line items within the determination of Net cash provided (used) by operating activities.

The election of this change impacted previously reported amounts included herein as indicated in the tables below:

Consolidated Statements of Income

	Three months ended September 30, 2021		Nine months ended September 30, 2021	
In millions, except per share data	Under prior method	As restated	Under prior method	As restated
Other components of net periodic benefit income	$ 96	$ 98	$ 288	$ 295
Income before income taxes	$ 2,099	$ 2,101	$ 4,761	$ 4,768
Income tax expense	(414)	(415)	(1,068)	(1,070)
Net income	$ 1,685	$ 1,686	$ 3,693	$ 3,698
Earnings per share:				
Basic	$ 2.38	$ 2.38	$ 5.21	$ 5.21
Diluted	$ 2.37	$ 2.37	$ 5.19	$ 5.20

In millions, except per share data	Year ended December 31, 2021 Under prior method	Year ended December 31, 2021 As restated	Year ended December 31, 2020 Under prior method	Year ended December 31, 2020 As restated
Net income	$ 4,892	$ 4,899	$ 3,562	$ 3,545
Basic earnings per share	$ 6.90	$ 6.91	$ 5.01	$ 4.98
Diluted earnings per share	$ 6.89	$ 6.90	$ 5.00	$ 4.97

Consolidated Statements of Other Comprehensive Income

In millions	Three months ended September 30, 2021 Under prior method	Three months ended September 30, 2021 As restated	Nine months ended September 30, 2021 Under prior method	Nine months ended September 30, 2021 As restated
Net income	$ 1,685	$ 1,686	$ 3,693	$ 3,698
Net change in pension and other postretirement benefit plans	$ 72	$ 74	$ 217	$ 222
Other comprehensive income before income taxes	$ 176	$ 178	$ 183	$ 188
Income tax recovery (expense)	7	7	(57)	(58)
Other comprehensive income	$ 183	$ 185	$ 126	$ 130
Comprehensive income	$ 1,868	$ 1,871	$ 3,819	$ 3,828

Consolidated Balance Sheet

In millions	As at December 31, 2021 Under prior method	As at December 31, 2021 As restated
Accumulated other comprehensive loss	$ (1,995)	$ (2,241)
Retained earnings	$ 20,741	$ 20,987

Consolidated Statements of Changes in Shareholders' Equity

In millions	Under prior method: Accumulated other comprehensive loss	Under prior method: Retained earnings	Under prior method: Total shareholders' equity	As restated: Accumulated other comprehensive loss	As restated: Retained earnings	As restated: Total shareholders' equity
Balance at December 31, 2020 (1)	$ (3,472)	$ 19,161	$ 19,651	$ (3,711)	$ 19,400	$ 19,651
Net income		4,892	4,892		4,899	4,899
Other comprehensive income	1,477		1,477	1,470		1,470
Balance at December 31, 2021	$ (1,995)	$ 20,741	$ 22,744	$ (2,241)	$ 20,987	$ 22,744
Balance at June 30, 2021	$ (3,529)	$ 19,876	$ 20,338	$ (3,766)	$ 20,119	$ 20,344
Net income		1,685	1,685		1,686	1,686
Other comprehensive income	183		183	185		185
Balance at September 30, 2021	$ (3,346)	$ 21,002	$ 21,660	$ (3,581)	$ 21,246	$ 21,669
Balance at December 31, 2020 (1)	$ (3,472)	$ 19,161	$ 19,651	$ (3,711)	$ 19,400	$ 19,651
Net income		3,693	3,693		3,698	3,698
Other comprehensive income	126		126	130		130
Balance at September 30, 2021	$ (3,346)	$ 21,002	$ 21,660	$ (3,581)	$ 21,246	$ 21,669

(1) *The cumulative restatement as of December 31, 2020, the beginning of the earliest period presented in the consolidated financial statements included herein, was a $239 million increase to each of Retained earnings and Accumulated other comprehensive loss.*

Consolidated Statements of Cash Flows

In millions	Three months ended September 30, 2021 Under prior method	Three months ended September 30, 2021 As restated	Nine months ended September 30, 2021 Under prior method	Nine months ended September 30, 2021 As restated
Net income	$ 1,685	$ 1,686	$ 3,693	$ 3,698
Pension income and funding	$ (49)	$ (51)	$ (208)	$ (215)
Deferred income taxes	$ 108	$ 109	$ 357	$ 359

3 – Recent accounting pronouncements

The following recent Accounting Standards Update (ASU) issued by the Financial Accounting Standards Board (FASB) has an effective date after September 30, 2022 and has not been adopted by the Company:

ASU 2021-10 Disclosures by business entities about government assistance (Topic 832)
The ASU will increase the transparency of government assistance including the disclosure of types of assistance, an entity's accounting for the assistance, and the effect of the assistance on an entity's financial statements.

The ASU is effective for annual periods beginning after December 15, 2021. Early adoption is permitted.

The adoption of the ASU is not expected to have a significant impact on the Company's Consolidated Financial Statements, other than for new disclosure requirements. The Company will include the relevant disclosures within the 2022 Annual Consolidated Financial Statements.

The following recent ASU issued by the FASB came into effect in 2020, was amended in 2021 and has not been adopted by the Company:

ASU 2020-04 Reference rate reform (Topic 848): Facilitation of the effects of reference rate reform on financial reporting and related amendments
USD London Interbank Offered Rate (LIBOR) and Canadian Dollar Offered Rate (CDOR) are benchmark interest rates referenced in a variety of agreements. The administrators of LIBOR and CDOR have ceased the publication of certain LIBOR and CDOR rates in January 2022 and May 2021, respectively, and intend to discontinue the remaining LIBOR and CDOR rates on June 30, 2023 and June 30, 2024, respectively. The recommended alternative reference rates are the Secured Overnight Financing Rate (SOFR) and Canadian Overnight Repo Rate Average (CORRA), respectively.

The ASU provides optional expedients and exceptions for applying generally accepted accounting principles to transactions affected by reference rate reform if certain criteria are met. These transactions include contract modifications, hedging relationships, and sale or transfer of debt securities classified as held-to-maturity.

The ASU was effective starting on March 12, 2020, and is available to be adopted on a prospective basis no later than December 31, 2022. The Company has a non-revolving credit facility that references LIBOR and CDOR. As at September 30, 2022, the Company has equipment loans made under the non-revolving credit facility referencing LIBOR with outstanding borrowings of US$549 million. The equipment loans would be affected by the provisions of this ASU and were not impacted by the administrator of LIBOR ceasing publication of certain LIBOR rates. The Company also has revolving credit facilities that reference CDOR and an accounts receivable securitization program that references LIBOR and CDOR. The Company had no outstanding borrowing under these credit facilities or the accounts receivable securitization program as at September 30, 2022 (see *Note 9 - Financing activities*). Within all of these agreements, the Company has fallback language that allows for the succession of an alternative reference rate. The Company is evaluating the effects that the adoption of the ASU will have on its Consolidated Financial Statements and related disclosures, and whether it will elect to apply any of the optional expedients and exceptions provided in the ASU.

Other recently issued ASUs required to be applied on or after September 30, 2022 have been evaluated by the Company and are not expected to have a significant impact on the Company's Consolidated Financial Statements.

4 – Acquisition

2021

Terminated CN Kansas City Southern ("KCS") merger agreement

On September 15, 2021, KCS notified CN that it terminated the previously announced May 21, 2021 definitive merger agreement (the “CN Merger Agreement") under which CN would have acquired KCS.

On August 31, 2021, the Surface Transportation Board ("STB") rejected the joint motion by CN and KCS to approve a proposed voting trust agreement. On September 15, 2021, KCS and its Board of Directors announced that the revised acquisition proposal of September 12, 2021 from Canadian Pacific Railway Limited (“CP”) constituted a "Company Superior Proposal" as defined in the CN Merger Agreement. Consequently, KCS entered into a waiver letter agreement with CN under which KCS agreed to terminate the CN Merger Agreement in order to enter into a merger agreement with CP. As a result, CN received from KCS a merger termination fee of US$700 million ($886 million), recorded in Merger termination fee within the Company’s Consolidated Statements of Income and reflected in Operating activities within the Consolidated Statements of Cash Flows. In addition, KCS also refunded Brooklyn US Holdings, Inc. ("Holdco"), a wholly owned subsidiary of the Company, US$700 million ($886 million) that CN had previously paid as an advance to KCS of US$700 million ($845 million) in connection with KCS’s payment of the termination fee to CP under KCS’s original merger agreement with CP that was terminated on May 21, 2021. The refund received in the third quarter of 2021 was recorded in Transaction-related costs within the Consolidated Statements of Income and reflected in Investing activities within the Consolidated Statements of Cash flows. The US$700 million ($845 million) advance was recorded in Advance to KCS and other transaction costs within the Consolidated Balance Sheets in the second quarter of 2021 and was expensed to Transaction-related costs within the Consolidated Statements of Income in the third quarter of 2021. This advance, along with $63 million of transaction-related costs paid in the second quarter of 2021, was reflected in Investing activities within the Consolidated Statements of Cash flows.

The Company incurred $84 million of transaction-related costs for the nine months ended September 30, 2021 recorded in Transaction-related costs within the Consolidated Statements of Income. This included $125 million of transaction-related costs, consisting of a $76 million expense for costs previously capitalized to Advance to KCS and other transaction costs within the Consolidated Balance Sheets in the second quarter of 2021 in accordance with the expected application of equity method accounting and $49 million of additional transaction-related costs incurred in the third quarter of 2021; partially offset by $41 million of income generated as a result of the applicable foreign exchange rates prevailing at the time of payment of the US dollar denominated advance to KCS and receipt of the related refund.

The Company also paid $97 million of bridge financing and other fees (See Note 9 - Financing activities) of which $65 million and $97 million were recorded in Interest expense within the Consolidated Statements of Income for the three and nine months ended September 30, 2021, respectively.

For the nine months ended September 30, 2021, after accounting for all direct and incremental expenses as well as income generated from the merger termination fee, CN recorded additional income of $705 million ($616 million after-tax), as a result of its strategic decision to bid for KCS.

5 – Revenues

The following table provides disaggregated information for revenues for the three and nine months ended September 30, 2022 and 2021:

	Three months ended September 30		Nine months ended September 30	
In millions	**2022**	2021	**2022**	2021
Freight revenues				
Petroleum and chemicals	**$ 850**	$ 715	**$ 2,435**	$ 2,061
Metals and minerals	**539**	410	**1,411**	1,155
Forest products	**550**	425	**1,489**	1,305
Coal	**258**	169	**702**	453
Grain and fertilizers	**621**	510	**1,829**	1,832
Intermodal	**1,340**	1,061	**3,722**	3,066
Automotive	**208**	137	**581**	430
Total freight revenues	**4,366**	3,427	**12,169**	10,302
Other revenues	**147**	164	**396**	422
Total revenues (1)	**$ 4,513**	$ 3,591	**$ 12,565**	$ 10,724
Revenues by geographic area				
Canada	**$ 3,078**	$ 2,433	**$ 8,524**	$ 7,428
United States (U.S.)	**1,435**	1,158	**4,041**	3,296
Total revenues (1)	**$ 4,513**	$ 3,591	**$ 12,565**	$ 10,724

(1) As at September 30, 2022, the Company had remaining performance obligations related to freight in-transit, for which revenues of $115 million ($91 million as at September 30, 2021) 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, 2022 and 2021:

	Three months ended September 30		Nine months ended September 30	
In millions	**2022**	2021	**2022**	2021
Beginning balance	**$ 17**	$ 188	**$ 74**	$ 200
Revenue recognized included in the beginning balance	**(14)**	(72)	**(74)**	(150)
Increase due to consideration received, net of revenue recognized	**11**	3	**14**	69
Ending balance	**$ 14**	$ 119	**$ 14**	$ 119
Current portion - Ending balance	**$ 12**	$ 112	**$ 12**	$ 112

6 – Assets held for sale

In the first quarter of 2021, CN entered into an agreement with a short line operator, for the sale of non-core lines in Wisconsin, Michigan and Ontario representing 850 miles that were classified as assets held for sale plus an additional 50 miles of track and roadway assets, resulting in a $137 million recovery ($102 million after-tax) of the $486 million loss ($363 million after-tax) recorded in the second quarter of 2020 to adjust the carrying amount of the track and roadway assets to their then estimated net selling price.

As at December 31, 2021, the carrying amount of assets held for sale of $260 million was included in Other current assets in the Consolidated Balance Sheets.

In the fourth quarter of 2021, the Surface Transportation Board (STB) approved the Company's agreement with the short line operator without condition and the transaction closed on January 28, 2022 and January 31, 2022 for the U.S. and Canadian assets, respectively. The resulting difference between the net selling price and what was estimated was insignificant.

7 – 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 17 – Pensions and other postretirement benefits* to the Company's 2021 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, 2022 and 2021:

	Three months ended September 30				**Nine months ended September 30**			
	Pensions		**Other postretirement benefits**		**Pensions**		**Other postretirement benefits**	
In millions	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Current service cost	**$ 40**	$ 52	**$ —**	$ —	**$ 119**	$ 157	**$ 1**	$ 1
Other components of net periodic benefit income								
Interest cost	**116**	93	**2**	1	**350**	279	**4**	3
Expected return on plan assets (1)	**(283)**	(266)	**—**	—	**(849)**	(799)	**—**	—
Amortization of prior service credit	**—**	—	**(1)**	—	**—**	—	**(1)**	—
Amortization of net actuarial loss (gain) (1)	**42**	75	**(1)**	(1)	**125**	225	**(3)**	(3)
Total Other components of net periodic benefit income (1)	**(125)**	(98)	**—**	—	**(374)**	(295)	**—**	—
Net periodic benefit cost (income) (1)(2)	**$ (85)**	$ (46)	**$ —**	$ —	**$ (255)**	$ (138)	**$ 1**	$ 1

(1) *In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. Expected return on plan assets was restated by $4 million from $262 million under the prior method to $266 million in the third quarter of 2021 and by $12 million from $787 million under the prior method to $799 million for the nine months ended September 30, 2021. Amortization of net actuarial loss on pensions was restated by $2 million from $73 million under the prior method to $75 million in the third quarter of 2021 and by $5 million from $220 million under the prior method to $225 million for the nine months ended September 30, 2021 . See Note 2 – Change in accounting policy for additional information.*

(2) *In the second quarters of 2022 and 2021, the Company revised its estimate of full year net periodic benefit cost (income) for pensions to reflect updated plan demographic information.*

Pension contributions

Pension contributions for the nine months ended September 30, 2022 and 2021 of $57 million and $95 million, respectively, 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. Based on the results of the December 31, 2021 valuations, the CN Pension Plan is fully funded and at a level such that the Company was prohibited from making contributions to the CN Pension Plan as of April 2022 once the actuarial valuation report was filed. For 2022, the Company expects to make total cash contributions of approximately $70 million for all of the Company's pension plans.

Amendments to postretirement medical benefits plans in the U.S.

In June 2022, CN approved changes affecting members participating in the Company's postretirement medical benefits plans in the U.S. Beginning in 2023, Medicare-eligible retirees will be covered by a health reimbursement arrangement, which is an employer-funded account that can be used for reimbursement of eligible medical expenses. Non-Medicare eligible retirees will continue to be covered by the existing self-insured program. This change constitutes a plan amendment event resulting in a $28 million reduction to the affected plans' Accumulated projected benefit obligation, recorded in Other comprehensive income, and is composed of a prior service credit of $21 million and an actuarial gain of $7 million, substantially all due to lower expected future benefit payments and to the approximate 130 basis point increase in the end of period discount rates between the prior year end and May 31, 2022, respectively.

8 – 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, 2022 and 2021:

	Three months ended September 30		Nine months ended September 30	
In millions, except per share data	**2022**	2021	**2022**	2021
Net income [1]	**$ 1,455**	$ 1,686	**$ 3,698**	$ 3,698
Weighted-average basic shares outstanding	**682.3**	708.7	**690.2**	709.5
Dilutive effect of stock-based compensation	**2.0**	1.7	**1.9**	1.8
Weighted-average diluted shares outstanding	**684.3**	710.4	**692.1**	711.3
Basic earnings per share [1]	**$ 2.13**	$ 2.38	**$ 5.36**	$ 5.21
Diluted earnings per share [1]	**$ 2.13**	$ 2.37	**$ 5.34**	$ 5.20
Units excluded from the calculation as their inclusion would not have a dilutive effect				
Stock options	**0.6**	0.4	**0.6**	0.6
Performance share units	**0.2**	0.1	**0.2**	0.1

(1) *In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy for additional information.*

9 – Financing activities

Shelf prospectus and registration statement

On May 4, 2022, the Company filed a new shelf prospectus with Canadian securities regulators and a registration statement with the United States Securities and Exchange Commission (SEC), pursuant to which CN may issue up to $6.0 billion of debt securities in the Canadian and U.S. capital markets over a 25 month period following the filing date. This shelf prospectus and registration statement replaced CN's previous shelf prospectus and registration statement that expired on March 11, 2022. As at September 30, 2022, the remaining capacity of this shelf prospectus and registration statement was $4.1 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, 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. In conjunction with this 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 (see *Note 14 – Financial instruments* for additional information).

For the nine months ended September 30, 2021, the Company repaid the following:

- On September 15, 2021, early redemption of US$400 million ($506 million) 2.85% Notes due 2021; and
- On January 18, 2021, early redemption of $250 million 2.75% Notes due 2021.

Revolving credit facilities

The Company has an unsecured revolving credit facility with a consortium of lenders which is available for general corporate purposes including backstopping the Company's commercial paper programs. The revolving credit facility agreement adopts a sustainability linked loan structure whereby its applicable margins are adjusted upon achievement of certain sustainability targets, starting in 2022. The credit facility of $2.5 billion consists of a $1.25 billion tranche maturing on March 31, 2025 and a $1.25 billion tranche maturing on March 31, 2027. Subject to the consent of the individual lenders, the Company has the option to increase the facility by an additional $500 million during its term and to request an extension once a year to maintain the tenors of three year and five year of the respective tranches. The credit facility provides for borrowings at various benchmark interest rates, such as Secured Overnight Financing Rate (SOFR) and the CDOR, plus applicable margins, based on CN's credit ratings and sustainability targets.

As at September 30, 2022 and December 31, 2021, the Company had no outstanding borrowings under this revolving credit facility and there were no draws during the nine months ended September 30, 2022.

On March 18, 2022, the Company entered into a $1.0 billion two-year unsecured revolving credit facility agreement with a consortium of lenders. The credit facility is available for working capital and general corporate purposes and provides for borrowings at various benchmark interest rates, such as SOFR and CDOR, plus applicable margins, based on CN's credit ratings. As at September 30, 2022, the Company had no outstanding borrowings under this revolving credit facility and there were no draws during the nine months ended September 30, 2022.

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, 2022.

Equipment loans

The Company has a non-revolving term loan credit facility for financing or refinancing the purchase of equipment. The equipment loans made under the non-revolving credit facility have a tenor of 20 years, bear interest at variable rates such as LIBOR and CDOR plus a margin, are repayable in equal quarterly installments, are prepayable at any time without penalty, and are secured by rolling stock.

The Company repaid US$23 million ($30 million) on its equipment loans during the first nine months of 2022.

As at September 30, 2022, the Company had outstanding borrowings of US$549 million ($760 million), at a weighted-average interest rate of 3.86% and had no further amount available under this non-revolving term loan facility. As at December 31, 2021, the Company had outstanding borrowings of US$572 million ($723 million), at a weighted-average interest rate of 0.81% and had no further amount available under this non-revolving term loan facility.

Commercial paper

The Company has a commercial paper program in Canada and in the U.S. Both programs are backstopped by the Company's revolving credit facility. The maximum aggregate principal amount of commercial paper that can be issued is $2.5 billion, or the equivalent amount in US dollars.

As at September 30, 2022 and December 31, 2021, the Company had total commercial paper borrowings of US$138 million ($191 million) and US$111 million ($140 million), respectively, at a weighted-average interest rate of 2.56% and 0.18%, respectively, presented in Current portion of long-term debt on the Consolidated Balance Sheets.

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, 2022 and 2021:

	Three months ended September 30		Nine months ended September 30	
In millions	**2022**	2021	**2022**	2021
Commercial paper with maturities less than 90 days				
Issuance	**$ 2,364**	$ 1,688	**$ 7,867**	$ 4,983
Repayment	**(3,716)**	(1,618)	**(7,770)**	(4,104)
Change in commercial paper with maturities less than 90 days, net	**$ (1,352)**	$ 70	**$ 97**	$ 879
Commercial paper with maturities of 90 days or greater				
Issuance	**$ 12**	$ 215	**$ 439**	$ 353
Repayment	**(405)**	(121)	**(575)**	(152)
Change in commercial paper with maturities of 90 days or greater, net	**$ (393)**	$ 94	**$ (136)**	$ 201
Change in commercial paper, net	**$ (1,745)**	$ 164	**$ (39)**	$ 1,080

Accounts receivable securitization program

The Company has an agreement, expiring on February 1, 2024, to sell an undivided co-ownership interest in a revolving pool of accounts receivable to unrelated trusts for maximum cash proceeds of $450 million. The Company has retained the responsibility for servicing, administering and collecting the receivables sold. The average servicing period is approximately one month and the interest on borrowings under the Accounts receivable securitization program is renewed based on commercial paper, LIBOR or CDOR rates then in effect.

As at September 30, 2022, and December 31, 2021 the Company had no borrowings under the accounts receivable securitization program and there were no activities for the nine months ended September 30, 2022.

Bilateral letter of credit facilities

The Company has a series of committed and uncommitted bilateral letter of credit facility agreements. On March 31, 2022, the Company extended the maturity date of certain committed bilateral letter of credit facility agreements to April 28, 2025. The agreements are held with various banks to support the Company's requirements to post letters of credit in the ordinary course of business. Under these agreements, the Company has the option from time to time to pledge collateral in the form of cash or cash equivalents, for a minimum term of one month, equal to at least the face value of the letters of credit issued.

As at September 30, 2022, the Company had outstanding letters of credit of $398 million ($394 million as at December 31, 2021) under the committed facilities from a total available amount of $518 million ($518 million as at December 31, 2021) and $100 million ($158 million as at December 31, 2021) under the uncommitted facilities.

As at September 30, 2022, included in Restricted cash and cash equivalents was $394 million ($396 million as at December 31, 2021) and $100 million ($100 million as at December 31, 2021) which were pledged as collateral under the committed and uncommitted bilateral letter of credit facilities, respectively.

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 42.0 million common shares between February 1, 2022 and January 31, 2023. As at September 30, 2022, the Company had repurchased 22.8 million common shares for $3,526 million under its current NCIB.

The Company repurchased 11.1 million common shares under its previous NCIB effective between February 1, 2021 and January 31, 2022, which allowed for the repurchase of up to 14.0 million common shares.

The following table provides the information related to the share repurchases for the three and nine months ended September 30, 2022 and 2021:

	Three months ended September 30		Nine months ended September 30	
In millions, except per share data	**2022**	2021	**2022**	2021
Number of common shares repurchased	**7.6**	0.8	**23.6**	3.7
Weighted-average price per share [(1)]	**$ 155.29**	$ 147.46	**$ 154.38**	$ 142.79
Amount of repurchase [(1)(2)]	**$ 1,178**	$ 109	**$ 3,644**	$ 523

(1) Includes brokerage fees.

(2) Includes settlements in subsequent periods.

10 – Other current assets

The following table provides a breakdown of Other current assets as at September 30, 2022 and December 31, 2021:

In millions	**September 30 2022**	December 31 2021
Prepaid expenses	**$ 119**	$ 142
Derivative instruments *(Note 14)*	**103**	—
Assets held for sale *(Note 6)*	**—**	260
Other	**29**	20
Total other current assets	**$ 251**	$ 422

11 – Stock-based compensation

The Company has various stock-based compensation plans for eligible employees. A description of the major plans is provided in *Note 19 – Stock-based compensation* to the Company's 2021 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, 2022 and 2021:

	Three months ended September 30				Nine months ended September 30			
In millions		**2022**		2021		**2022**		2021
Share Units Plan [1]	**$**	**7**	$	8	**$**	**26**	$	29
Voluntary Incentive Deferral Plan (VIDP) [2]		**1**		1		**1**		1
Stock option awards		**2**		3		**7**		9
Employee Share Investment Plan (ESIP)		**5**		5		**17**		14
Total stock-based compensation expense	**$**	**15**	$	17	**$**	**51**	$	53
Income tax impacts of stock-based compensation								
Tax benefit recognized in income	**$**	**4**	$	4	**$**	**13**	$	12
Excess tax benefit recognized in income	**$**	**1**	$	—	**$**	**13**	$	9

(1) Performance share unit (PSU) awards are granted under the Share Units Plan.

(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, 2022:

	Equity settled					
	PSUs-ROIC [1]			PSUs-TSR [2]		
	Units	Weighted-average grant date fair value		Units	Weighted-average grant date fair value	
	In millions			*In millions*		
Outstanding at December 31, 2021	0.8	$	69.84	0.4	$	144.37
Granted	0.2	$	78.98	0.1	$	176.93
Settled [3]	(0.3)	$	70.79	(0.1)	$	128.22
Forfeited	—	$	73.11	—	$	160.85
Outstanding at September 30, 2022	**0.7**	**$**	**72.33**	**0.4**	**$**	**158.88**

(1) The grant date fair value of equity settled PSUs-ROIC granted in 2022 of $18 million is calculated using a lattice-based valuation model. As at September 30, 2022, total unrecognized compensation cost related to all outstanding awards was $20 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 2022 of $21 million is calculated using a Monte Carlo simulation model. As at September 30, 2022, total unrecognized compensation cost related to all outstanding awards was $19 million and is expected to be recognized over a weighted-average period of 2.0 years.

(3) Equity settled PSUs-ROIC granted in 2019 met the minimum share price condition for settlement and attained a performance vesting factor of 83%. Equity settled PSUs-TSR granted in 2019 attained a performance vesting factor of 72%. In the first quarter of 2022, these awards were settled, net of the remittance of the participants' withholding tax obligation of $23 million, by way of disbursement from the Share Trusts of 0.2 million common shares.

Voluntary Incentive Deferral Plan

The following table provides a summary of the activity related to DSU awards for the nine months ended September 30, 2022:

	Equity settled DSUs [1]		Cash settled DSUs [2]
	Units	Weighted-average grant date fair value	Units
	In millions		*In millions*
Outstanding at December 31, 2021	0.5	$ 87.24	0.1
Granted	0.1	$ 159.13	—
Settled [3]	(0.3)	$ 82.67	(0.1)
Outstanding at September 30, 2022 [4]	**0.3**	**$ 105.75**	**—**

(1) The grant date fair value of equity settled DSUs granted in 2022 of $8 million is calculated using the Company's stock price on the grant date. As at September 30, 2022, the aggregate intrinsic value of all equity settled DSUs outstanding amounted to $48 million.

(2) The fair value of cash settled DSUs as at September 30, 2022 is based on the intrinsic value. As at September 30, 2022, the liability for all cash settled DSUs was $6 million ($9 million as at December 31, 2021). The closing stock price used to determine the liability was $149.18.

(3) For the nine months ended September 30, 2022, the Company purchased 0.1 million common shares for the settlement of equity settled DSUs, net of the remittance of the participants' withholding tax obligation of $20 million.

(4) 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 for cash and equity settled DSUs have not been quantified as they relate to a minimal number of units.

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, 2022:

	Options outstanding	
	Number of options	Weighted-average exercise price
	In millions	
Outstanding at December 31, 2021 [1]	3.6	$ 105.32
Granted [2]	0.6	$ 152.77
Exercised	(0.4)	$ 90.11
Forfeited	(0.2)	$ 144.67
Outstanding at September 30, 2022 [1][2][3]	**3.6**	**$ 120.46**
Exercisable at September 30, 2022 [1][3]	**2.0**	**$ 103.05**

(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 2022 of $17 million ($26.93 per option) is calculated using the Black-Scholes option-pricing model. As at September 30, 2022, total unrecognized compensation cost related to all outstanding awards was $18 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 6.5 years and the weighted-average term to expiration of exercisable stock options was 5.1 years. As at September 30, 2022, the aggregate intrinsic value of in-the-money stock options outstanding amounted to $110 million and the aggregate intrinsic value of stock options exercisable amounted to $92 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, 2022:

	ESIP	
	Number of shares	Weighted-average share price
	In millions	
Unvested contributions at December 31, 2021	0.2	$ 142.80
Company contributions	0.1	$ 153.93
Forfeited	—	$ 151.95
Vested [1]	(0.1)	$ 138.31
Unvested contributions at September 30, 2022 [2]	**0.2**	**$ 154.68**

(1) As at September 30, 2022, total fair value of units purchased with Company contributions that vested in 2022 was $18 million.

(2) As at September 30, 2022, total unrecognized compensation cost related to all outstanding awards was $13 million and is expected to be recognized over the next twelve months.

12 – 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, 2022 and 2021:

In millions	Foreign currency translation adjustments [1]	Pension and other postretirement benefit plans	Derivative instruments [1]	Total before tax	Income tax recovery (expense) [2]	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 [3]	1,113			1,113	—	1,113
Translation of US dollar debt [4]	(747)			(747)	98	(649)
Derivative instruments [5]			(27)	(27)	6	(21)
Amounts reclassified from Accumulated other comprehensive loss:						
Amortization of net actuarial loss [7]		41		41	(10)	31
Amortization of prior service credit		(1)		(1)	—	(1)
Other comprehensive income (loss)	366	40	(27)	379	94	473
Balance at September 30, 2022	**$ 31**	**$ (2,270)**	**$ 3**	**$ (2,236)**	**$ 690**	**$ (1,546)**

In millions	Foreign currency translation adjustments [1]	Pension and other postretirement benefit plans	Derivative instruments [1]	Total before tax	Income tax recovery (expense) [2]	Total net of tax
Balance at December 31, 2021 [8]	$ (436)	$ (2,419)	$ 5	$ (2,850)	$ 609	$ (2,241)
Other comprehensive income (loss) before reclassifications:						
Translation of net investment [3]	1,385			1,385	—	1,385
Translation of US dollar debt [4]	(918)			(918)	120	(798)
Derivative instruments [5]			(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 net actuarial loss [7]		122		122	(32)	90
Amortization of prior service credit		(1)		(1)	—	(1)
Other comprehensive income (loss)	467	149	(2)	614	81	695
Balance at September 30, 2022	**$ 31**	**$ (2,270)**	**$ 3**	**$ (2,236)**	**$ 690**	**$ (1,546)**

Footnotes to the tables follow on the next page.

In millions	Foreign currency translation adjustments [1]	Pension and other postretirement benefit plans	Derivative instruments [1]	Total before tax	Income tax recovery (expense) [2]	Total net of tax
Balance at June 30, 2021 [8]	$ (522)	$ (4,337)	$ 5	$ (4,854)	$ 1,088	$ (3,766)
Other comprehensive income (loss) before reclassifications:						
Translation of net investment [3]	298			298	—	298
Translation of US dollar debt [4]	(194)			(194)	26	(168)
Amounts reclassified from Accumulated other comprehensive loss:						
Amortization of net actuarial loss [7][8]		74		74	(19)	55
Other comprehensive income	104	74	—	178	7	185
Balance at September 30, 2021 [8]	$ (418)	$ (4,263)	$ 5	$ (4,676)	$ 1,095	$ (3,581)

In millions	Foreign currency translation adjustments [1]	Pension and other postretirement benefit plans	Derivative instruments [1]	Total before tax	Income tax recovery (expense) [2]	Total net of tax
Balance at December 31, 2020 [8]	$ (384)	$ (4,485)	$ 5	$ (4,864)	$ 1,153	$ (3,711)
Other comprehensive income (loss) before reclassifications:						
Translation of net investment [3]	(39)			(39)	—	(39)
Translation of US dollar debt [4]	5			5	—	5
Amounts reclassified from Accumulated other comprehensive loss:						
Amortization of net actuarial loss [7][8]		222		222	(58)	164
Other comprehensive income (loss)	(34)	222	—	188	(58)	130
Balance at September 30, 2021 [8]	$ (418)	$ (4,263)	$ 5	$ (4,676)	$ 1,095	$ (3,581)

(1) Certain 2021 and 2020 balances have been reclassified to conform with 2022 presentation of Derivative instruments as part of a cash flow hedge.

(2) The Company releases stranded tax effects from Accumulated other comprehensive loss to Net income upon the liquidation or termination of the related item.

(3) Foreign exchange gain/(loss) on translation of net investment in foreign operations.

(4) Foreign exchange gain/(loss) 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.

(5) Cumulative gains or losses of the treasury locks are included in Derivative instruments. See Note 14 – Financial instruments for additional information.

(6) Prior service credit of $21 million and an actuarial gain of $7 million due to amendments to postretirement medical benefits plans in the U.S. See Note 7 – Pensions and other postretirement benefits for additional information.

(7) 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 7 – Pensions and other postretirement benefits for additional information.

(8) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. Amortization of net actuarial loss on pension and other postretirement benefit plans was restated by $2 million from $72 million under the prior method to $74 million in the third quarter of 2021 and by $5 million from $217 million under the prior method to $222 million for the nine months ended September 30, 2021. See Note 2 – Change in accounting policy for additional information.

13 – Major commitments and contingencies

Purchase commitments

As at September 30, 2022, the Company had fixed and variable commitments to purchase railroad cars, information technology services and licenses, locomotives, wheels, rail, engineering services, rail ties as well as other equipment and services with a total estimated cost of $2,266 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, 2022, the Company had aggregate reserves for personal injury and other claims of $326 million, of which $56 million was recorded as a current liability ($307 million as at December 31, 2021, of which $75 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, 2022, 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

A description of the Company's environmental matters is provided in *Note 21 – Major commitments and contingencies* to the Company's 2021 Annual Consolidated Financial Statements.

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.

As at September 30, 2022, the Company had aggregate accruals for environmental costs of $55 million, of which $41 million was recorded as a current liability ($56 million as at December 31, 2021, of which $38 million was recorded as a current liability).

The Company anticipates that the majority of the liability at September 30, 2022 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 21 – Major commitments and contingencies* to the Company's 2021 Annual Consolidated Financial Statements.

As at September 30, 2022, the Company had outstanding letters of credit of $398 million ($394 million as at December 31, 2021) under the committed bilateral letter of credit facilities and $100 million ($158 million as at December 31, 2021) under the uncommitted bilateral letter of credit facilities, and surety and other bonds of $176 million ($150 million as at December 31, 2021), 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, 2022, the maximum potential liability under these guarantee instruments was $674 million ($702 million as at December 31, 2021), of which $631 million ($659 million as at December 31, 2021) related to other employee benefit liabilities and workers' compensation and $43 million ($43 million as at December 31, 2021) related to other liabilities. The guarantee instruments expire at various dates between 2022 and 2025.

As at September 30, 2022, 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.

14 – 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, 2022, the Company had outstanding foreign exchange forward contracts with a notional value of US$1,135 million (US$910 million as at December 31, 2021) at a weighted-average exchange rate of $1.29 per US$1.00 ($1.27 per US$1.00 as at December 31, 2021) for a weighted-average term of 159 days (251 days as at December 31, 2021). Changes in the fair value of foreign exchange forward contracts, resulting from changes in foreign exchange rates, are recognized in Other income in the Consolidated Statements of Income as they occur. For the three and nine months ended September 30, 2022, the Company recorded gains of $137 million and $173 million, respectively, related to foreign exchange forward contracts compared to gains of $28 million and $2 million, respectively, for the same periods in 2021. These gains were largely offset by the re-measurement of US dollar-denominated monetary assets and liabilities recorded in Other income.

As at September 30, 2022, the fair value of outstanding foreign exchange forward contracts included in Other current assets and Accounts payable and other was $103 million and $nil, respectively ($nil and $2 million, respectively, as at December 31, 2021).

Interest rate risk

During the year, CN entered into treasury lock agreements to hedge US Treasury benchmark rates related to an expected debt issuance in 2022. The treasury locks were designated as cash flow hedging instruments with cumulative gains or losses recorded in Accumulated other comprehensive loss in derivative instruments. On August 5, 2022, CN settled a notional US$675 million ($868 million) of treasury locks in conjunction with the issuances of US$800 million ($1,028 million) Notes due 2032 and US$700 million ($900 million) Notes due 2052, 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.

As at September 30, 2022, there were no treasury locks outstanding.

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, 2022, the Company's debt, excluding finance leases, had a carrying amount of $15,389 million ($12,475 million as at December 31, 2021) and a fair value of $13,813 million ($14,424 million as at December 31, 2021).

Management's Discussion and Analysis

This Management's Discussion and Analysis (MD&A), dated October 25, 2022, 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 2022 unaudited Interim Consolidated Financial Statements and Notes thereto. It should also be read in conjunction with the Company's 2021 audited Annual Consolidated Financial Statements and Notes thereto, and the 2021 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 2021 Annual Information Form and Form 40-F, may be found online on SEDAR at www.sedar.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.

Strategy overview

A description of the Company's strategy is provided in the section entitled *Strategy overview* of the Company's 2021 Annual MD&A.

Third quarter 2022 compared to third quarter 2021

- The Company continues to drive value from its network with its focus on scheduled railroading, leading to sequential improvements in operating results as well as improvements in customer service levels.
- Record revenues of $4,513 million, an increase of $922 million or 26%, mainly due to higher fuel surcharge revenue driven by higher fuel prices, freight rate increases and the positive translation impact of a weaker Canadian dollar.
- Operating expenses of $2,581 million, an increase of $331 million or 15%, mainly due to higher fuel prices.
- Record operating income of $1,932 million, an increase of $591 million or 44%, or an increase of $461 million or 31% on an adjusted basis. (1)(2)
- Operating ratio, defined as operating expenses as a percentage of revenues, of 57.2%, an improvement of 5.5-points, or an improvement of 1.8-points on an adjusted basis. (1)(2)
- Net income of $1,455 million, a decrease of $231 million or 14%. On an adjusted basis, Net income increased by $375 million or 35%, which represents a quarterly record. (1)(2)(3)
- Diluted earnings per share (EPS) of $2.13, a decrease of 10%. On an adjusted basis, diluted EPS increased by 40%, which represents a quarterly record. (1)(2)(3)
- Free cash flow for the third quarter and first nine months of 2022 was $1,356 million and $2,924 million, respectively, an increase of $602 million and $890 million, respectively, compared to the same periods in 2021. (1)(4)
- Share repurchases for the third quarter and first nine months of 2022 were $1,178 million and $3,644 million, respectively, an increase of $1,069 million and $3,121 million, respectively, compared to the same periods in 2021.
- CN paid a quarterly dividend of $0.7325 per share, representing an increase of 19%, amounting to $498 million.

(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) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

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

Ratification process of tentative agreements with U.S. unions

On September 15, 2022, the Company along with other Class I freight railroads in the U.S. reached tentative agreements with the U.S. unions in order to avert a potential strike. As of October 25, 2022, of the 12 unions, six unions have ratified agreements, five unions have tentative agreements that remain subject to ratification in the coming weeks, and one union has failed the ratification process. For any agreements that fail the membership ratification process, the status quo provisions will remain in place for a time period after the announcement of the voting results. All of the new agreements increase wages by a compounded 24 percent over the five-year term of the contract, from 2020 through 2024, with a 14.1 percent wage increase effective immediately. The agreements also include five US$1,000 annual lump sum payments, adjustments to health care premiums, health benefit enhancements, and an additional personal leave day for all employees. This resulted in an incremental wage accrual of $47 million, or $35 million after-tax ($0.05 per diluted share), recorded in the third quarter of 2022 in Labor and fringe benefits within the Consolidated Statements of Income, to reflect the terms of the new agreement.

COVID-19 pandemic

The COVID-19 pandemic necessitated governments, institutions and communities to take actions that resulted in a partial economic shutdown beginning in March 2020. New variants of the virus led to the re-imposition of restrictive measures across North America and in other parts of the world in late 2021, however, in 2022, many North American jurisdictions have relaxed or eliminated pandemic-related restrictions and mandates. While certain parts of the world have experienced outbreaks of new variants of the virus, resulting in further pandemic-related lockdowns and restrictive measures, the future impact on North American jurisdictions is unknown.

The long-term implications of the COVID-19 pandemic, including the extent of the impact on the business, financial position, results of operations and liquidity of the Company, remain unknown and will depend on future developments, which are highly uncertain and cannot be predicted, including the occurrence, scope and duration of any outbreaks as well as additional actions taken by governmental authorities and other parties in response to the pandemic.

2022 Business outlook and assumptions

For 2022, the Company continues to expect volume growth, in terms of Revenue ton miles (RTMs) in the low single-digit range, across a range of commodities including Canadian coal exports, U.S grain exports, refined petroleum products, crude oil, plastics and chemicals, and frac sand. The Company continues to expect significantly lower volumes of Canadian grain, lower volumes of potash as well as lumber and panels, and now expects lower international intermodal traffic, for 2022 compared to 2021.

Underpinning the 2022 business outlook, the Company assumes that North American industrial production will increase in the mid single-digit range. For the 2021/2022 crop year, the grain crop in Canada was below its three-year average and the U.S. grain crop was in line with its three-year average. The Company assumes that the 2022/2023 grain crop in Canada will be above its three-year average (or in line when excluding the significantly lower 2021/2022 crop year) and that the 2022/2023 U.S. grain crop will be in line with its three-year average.

In 2022, the Company continues to expect to invest approximately 17% of revenues in its capital program.

The forward-looking statements discussed in this Strategy overview 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.

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 *Strategy overview - 2022 Business outlook and assumptions*.

Forward-looking statements	Key assumptions
Statements relating to revenue growth opportunities, including those referring to general economic and business conditions	• North American and global economic growth • 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
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	• 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	• 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; 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 2021 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.

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, 2022 and 2021 and financial position measures as at September 30, 2022 and December 31, 2021:

	Three months ended September 30			Nine months ended September 30		
In millions, except percentages and per share data	**2022**	2021	% Change Fav (Unfav)	**2022**	2021	% Change Fav (Unfav)
Financial performance and liquidity						
Revenues	**$ 4,513**	$ 3,591	26%	**$ 12,565**	$ 10,724	17%
Operating income	**$ 1,932**	$ 1,341	44%	**$ 4,928**	$ 4,050	22%
Adjusted operating income [(1)(2)]	**$ 1,932**	$ 1,471	31%	**$ 4,950**	$ 4,043	22%
Net income [(3)]	**$ 1,455**	$ 1,686	(14%)	**$ 3,698**	$ 3,698	—%
Adjusted net income [(1)(2)(3)]	**$ 1,455**	$ 1,080	35%	**$ 3,714**	$ 3,014	23%
Basic earnings per share [(3)]	**$ 2.13**	$ 2.38	(11%)	**$ 5.36**	$ 5.21	3%
Diluted earnings per share [(3)]	**$ 2.13**	$ 2.37	(10%)	**$ 5.34**	$ 5.20	3%
Adjusted diluted earnings per share [(1)(2)(3)]	**$ 2.13**	$ 1.52	40%	**$ 5.37**	$ 4.24	27%
Dividends per share	**$ 0.7325**	$ 0.6150	19%	**$ 2.1975**	$ 1.8450	19%
Operating ratio [(4)]	**57.2%**	62.7%	5.5 -pts	**60.8%**	62.2%	1.4 -pts
Adjusted operating ratio [(1)(2)]	**57.2%**	59.0%	1.8 -pts	**60.6%**	62.3%	1.7 -pts
Net cash provided by operating activities	**$ 2,112**	$ 2,458	(14%)	**$ 4,395**	$ 4,885	(10%)
Net cash used in (provided by) investing activities	**$ 756**	$ (42)	1,900%	**$ 1,573**	$ 2,013	22%
Free cash flow [(1)(5)]	**$ 1,356**	$ 754	80%	**$ 2,924**	$ 2,034	44%

In millions, except percentages	**As at September 30, 2022**	As at December 31, 2021	% Change Fav (Unfav)
Financial position			
Total assets	**$ 51,206**	$ 48,538	5%
Total long-term financial liabilities [(6)]	**$ 25,849**	$ 22,674	(14%)

(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) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

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

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

(6) Total long-term financial liabilities is the sum of deferred income taxes, other liabilities and deferred credits, pension and other postretirement benefits, long-term debt (excluding the current portion) and operating lease liabilities.

Financial results

Third quarter and first nine months of 2022 compared to corresponding periods in 2021

Revenues for the third quarter of 2022 were $4,513 million compared to $3,591 million for the same period in 2021, an increase of $922 million, or 26%. Revenues for the first nine months of 2022 were $12,565 million compared to $10,724 million for the same period in 2021, an increase of $1,841 million, or 17%. The increases in both periods were mainly due to higher fuel surcharge revenue driven by higher fuel prices, freight rate increases, higher Canadian export volumes of coal via west coast ports, higher volumes of U.S. grain and the positive translation impact of a weaker Canadian dollar. For the first nine months of 2022, this increase was partly offset by significantly lower export volumes of Canadian grain.

Operating expenses for the third quarter of 2022 were $2,581 million compared to $2,250 million for the same period in 2021, an increase of $331 million, or 15%. Operating expenses for the first nine months of 2022 were $7,637 million compared to $6,674 million for the same period in 2021, an increase of $963 million, or 14%. The increases in both periods were mainly driven by higher fuel prices and the negative translation impact of a weaker Canadian dollar; partly offset by Transaction-related costs of $84 million recorded in the third quarter of 2021 resulting from the terminated CN Merger Agreement with Kansas City Southern ("KCS"). In addition, the increase in the first nine months of 2022 was also due to the Recovery of the loss on assets held for sale of $137 million recorded in the first quarter of 2021 resulting from the Company entering into an agreement for the sale of non-core lines.

Operating income for the third quarter of 2022 increased by $591 million, or 44%, to $1,932 million when compared to the same period in 2021. Operating income for the first nine months of 2022 increased by $878 million, or 22%, to $4,928 million when compared to the same period in 2021.

The operating ratio, defined as operating expenses as a percentage of revenues, was 57.2% in the third quarter of 2022 compared to 62.7% in the third quarter of 2021, a 5.5-point improvement. The operating ratio for the first nine months of 2022 was 60.8% compared to 62.2% in 2021, a 1.4-point improvement.

Net income for the third quarter of 2022 was $1,455 million, a decrease of $231 million, or 14%, and diluted earnings per share decreased by 10% to $2.13, when compared to the same period in 2021. [(1)] Net income for the first nine months of 2022 remained flat at $3,698 million, and diluted earnings per share increased by 3% to $5.34, when compared to the same period in 2021. [(1)] The variance in both periods was mainly driven by a merger termination fee of $886 million ($770 million after-tax) received from KCS in the third quarter of 2021, mostly offset by higher operating income in 2022.

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

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, 2022 and 2021:

	Three months ended September 30			Nine months ended September 30		
	2022	2021	% Change Fav (Unfav)	**2022**	2021	% Change Fav (Unfav)
Gross ton miles (GTMs) *(millions)* (1)	**115,585**	110,690	4%	**347,393**	348,205	—%
Train weight *(tons)* (2)	**9,202**	9,729	(5%)	**9,385**	9,656	(3%)
Train length *(feet)* (3)	**8,140**	8,677	(6%)	**8,259**	8,581	(4%)
Through network train speed *(miles per hour)* (4)	**20.1**	19.7	2%	**18.6**	19.0	(2%)
Fuel efficiency *(US gallons of locomotive fuel consumed per 1,000 GTMs)* (5)	**0.838**	0.848	1%	**0.861**	0.881	2%
Through dwell *(entire railroad, hours)* (6)	**7.0**	7.7	9%	**7.8**	7.9	1%
Car velocity *(car miles per day)* (7)	**212**	201	5%	**193**	194	(1%)

(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. Quarterly fuel efficiency metrics for 2021 have been revised based on more complete information.

(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.

In 2022, the Company's focus on scheduled railroading has resulted in sequential improvements in car velocity, train speed, through dwell and fuel efficiency, as well as a decrease in train length and train weight. The third quarter continues the trend, albeit against a lower comparable period in 2021, due to wildfires that caused a prolonged disruption to CN's mainline to Vancouver. Car velocity, train speed and through dwell for the first nine months of 2022 are in line with 2021, since the improvements in the second and third quarter of 2022 have been offset by the harsh winter impacting the first quarter of 2022.

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, 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.

For the three and nine months ended September 30, 2021, the Company's adjusted net income was $1,080 million, or $1.52 per diluted share, and $3,014 million, or $4.24 per diluted share, respectively. [(1)] The adjusted figures exclude:

- employee termination benefits and severance costs related to a workforce reduction program of $39 million, or $29 million after-tax ($0.04 per diluted share) recorded in the third quarter in Labor and fringe benefits within the Consolidated Statements of Income;
- advisory fees related to shareholder matters of $7 million, or $5 million after-tax ($0.01 per diluted share) recorded in the third quarter in Casualty and other within the Consolidated Statements of Income;
- the recovery of $137 million, or $102 million after-tax ($0.14 per diluted share) recorded in the first quarter related to the loss on assets held for sale in the second quarter of 2020, to reflect an agreement for the sale of on-going rail operations, certain non-core rail lines in Wisconsin, Michigan and Ontario to a short line operator;
- transaction-related costs, consisting of an advance to KCS and a related refund, net of transaction costs, of $84 million, or $70 million after-tax ($0.10 per diluted share), recorded in the third quarter resulting from the terminated CN Merger Agreement with KCS;
- amortization of bridge financing and other fees of $65 million, or $60 million after-tax ($0.08 per diluted share) recorded in the third quarter and $32 million, or $24 million after-tax ($0.03 per diluted share) recorded in the second quarter, resulting from the KCS transaction, recorded in Interest expense within the Consolidated Statements of Income; and
- merger termination fee paid by KCS to CN of $886 million, or $770 million after-tax ($1.08 per diluted share), recorded in the third quarter resulting from KCS' notice of termination of the CN Merger Agreement with KCS.

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

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, 2022 and 2021, to the non-GAAP adjusted performance measures presented herein:

	Three months ended September 30		Nine months ended September 30	
In millions, except per share data	**2022**	2021	**2022**	2021
Net income [(1)]	**$ 1,455**	$ 1,686	**$ 3,698**	$ 3,698
Adjustments:				
Operating expense adjustments:				
Workforce reduction program	**—**	39	**—**	39
Advisory fees related to shareholder matters	**—**	7	**22**	7
Recovery of loss on assets held for sale	**—**	—	**—**	(137)
Transaction-related costs	**—**	84	**—**	84
Non-operating expense adjustments:				
Amortization of bridge financing and other fees	**—**	65	**—**	97
Merger termination fee	**—**	(886)	**—**	(886)
Tax adjustments:				
Tax effect of adjustments [(2)]	**—**	85	**(6)**	112
Total adjustments	**—**	(606)	**16**	(684)
Adjusted net income [(1)]	**$ 1,455**	$ 1,080	**$ 3,714**	$ 3,014
Diluted earnings per share [(1)]	**$ 2.13**	$ 2.37	**$ 5.34**	$ 5.20
Impact of adjustments, per share	**—**	(0.85)	**0.03**	(0.96)
Adjusted diluted earnings per share [(1)]	**$ 2.13**	$ 1.52	**$ 5.37**	$ 4.24

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

(2) 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, 2022 and 2021, to the non-GAAP adjusted performance measures presented herein:

	Three months ended September 30		Nine months ended September 30	
In millions, except percentages	**2022**	2021	**2022**	2021
Operating income	**$ 1,932**	$ 1,341	**$ 4,928**	$ 4,050
Operating expense adjustments:				
Workforce reduction program	**—**	39	**—**	39
Advisory fees related to shareholder matters	**—**	7	**22**	7
Recovery of loss on assets held for sale	**—**	—	**—**	(137)
Transaction-related costs	**—**	84	**—**	84
Total operating expense adjustments	**—**	130	**22**	(7)
Adjusted operating income	**$ 1,932**	$ 1,471	**$ 4,950**	$ 4,043
Operating expenses	**$ 2,581**	$ 2,250	**$ 7,637**	$ 6,674
Total operating expense adjustments	**—**	(130)	**(22)**	7
Adjusted operating expenses	**$ 2,581**	$ 2,120	**$ 7,615**	$ 6,681
Operating ratio	**57.2 %**	62.7 %	**60.8 %**	62.2 %
Impact of adjustments	**— %**	(3.7 %)	**(0.2 %)**	0.1 %
Adjusted operating ratio	**57.2 %**	59.0 %	**60.6 %**	62.3 %

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 $1.31 and $1.28 per US$1.00 for the three and nine months ended September 30, 2022, respectively, and $1.26 and $1.25 per US$1.00 for the three and nine months ended September 30, 2021, respectively.

On a constant currency basis, the Company's net income for the three and nine months ended September 30, 2022 would have been lower by $21 million ($0.03 per diluted share) and $41 million ($0.06 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, 2022:

	Three months ended September 30				Nine months ended September 30			
In millions, except per share data	**2022**	Constant currency impact	2021	% Change at constant currency Fav (Unfav)	**2022**	Constant currency impact	2021	% Change at constant currency Fav (Unfav)
Revenues								
Petroleum and chemicals	**$ 850**	$ (18)	$ 715	16%	**$ 2,435**	$ (37)	$ 2,061	16%
Metals and minerals	**539**	(15)	410	28%	**1,411**	(28)	1,155	20%
Forest products	**550**	(14)	425	26%	**1,489**	(28)	1,305	12%
Coal	**258**	(3)	169	51%	**702**	(6)	453	54%
Grain and fertilizers	**621**	(11)	510	20%	**1,829**	(24)	1,832	(1%)
Intermodal	**1,340**	(14)	1,061	25%	**3,722**	(29)	3,066	20%
Automotive	**208**	(5)	137	48%	**581**	(11)	430	33%
Total freight revenues	**4,366**	(80)	3,427	25%	**12,169**	(163)	10,302	17%
Other revenues	**147**	(5)	164	(13%)	**396**	(8)	422	(8%)
Total revenues	**4,513**	(85)	3,591	23%	**12,565**	(171)	10,724	16%
Operating expenses								
Labor and fringe benefits	**770**	(13)	728	(4%)	**2,204**	(23)	2,205	1%
Purchased services and material	**520**	(9)	502	(2%)	**1,615**	(17)	1,578	(1%)
Fuel	**649**	(19)	350	(80%)	**1,846**	(42)	1,094	(65%)
Depreciation and amortization	**435**	(6)	405	(6%)	**1,278**	(12)	1,215	(4%)
Equipment rents	**72**	(2)	82	15%	**254**	(5)	254	2%
Casualty and other	**135**	(5)	99	(31%)	**440**	(10)	381	(13%)
Recovery of loss on assets held for sale	**—**	—	—	—%	**—**	—	(137)	(100%)
Transaction-related costs	**—**	—	84	100%	**—**	—	84	100 %
Total operating expenses	**2,581**	(54)	2,250	(12%)	**7,637**	(109)	6,674	(13%)
Operating income	**1,932**	(31)	1,341	42%	**4,928**	(62)	4,050	20%
Interest expense	**(141)**	3	(197)	30%	**(395)**	7	(485)	20%
Other components of net periodic benefit income (1)	**125**	—	98	28%	**374**	—	295	27%
Merger termination fee	**—**	—	886	(100%)	**—**	—	886	(100%)
Other income (loss)	**(1)**	—	(27)	96%	**(25)**	—	22	(214%)
Income before income taxes (1)	**1,915**	(28)	2,101	(10%)	**4,882**	(55)	4,768	1%
Income tax expense (1)	**(460)**	7	(415)	(9%)	**(1,184)**	14	(1,070)	(9%)
Net income (1)	**$ 1,455**	$ (21)	$ 1,686	(15%)	**$ 3,698**	$ (41)	$ 3,698	(1%)
Diluted earnings per share (1)	**$ 2.13**	$ (0.03)	$ 2.37	(11%)	**$ 5.34**	$ (0.06)	$ 5.20	2%

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

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, 2022 and 2021:

	Three months ended September 30				Nine months ended September 30			
In millions, unless otherwise indicated	**2022**	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Freight revenues	**$ 4,366**	$ 3,427	27%	25%	**$ 12,169**	$ 10,302	18%	17%
Other revenues	**147**	164	(10%)	(13%)	**396**	422	(6%)	(8%)
Total revenues	**$ 4,513**	$ 3,591	26%	23%	**$ 12,565**	$ 10,724	17%	16%
Freight revenues								
Petroleum and chemicals	**$ 850**	$ 715	19%	16%	**$ 2,435**	$ 2,061	18%	16%
Metals and minerals	**539**	410	31%	28%	**1,411**	1,155	22%	20%
Forest products	**550**	425	29%	26%	**1,489**	1,305	14%	12%
Coal	**258**	169	53%	51%	**702**	453	55%	54%
Grain and fertilizers	**621**	510	22%	20%	**1,829**	1,832	—%	(1%)
Intermodal	**1,340**	1,061	26%	25%	**3,722**	3,066	21%	20%
Automotive	**208**	137	52%	48%	**581**	430	35%	33%
Total freight revenues	**$ 4,366**	$ 3,427	27%	25%	**$ 12,169**	$ 10,302	18%	17%
Revenue ton miles (RTMs) *(millions)*	**58,540**	55,875	5%	5%	**175,645**	176,575	(1%)	(1%)
Freight revenue/RTM *(cents)*	**7.46**	6.13	22%	19%	**6.93**	5.83	19%	17%
Carloads *(thousands)*	**1,469**	1,427	3%	3%	**4,289**	4,327	(1%)	(1%)
Freight revenue/carload *($)*	**2,972**	2,402	24%	21%	**2,837**	2,381	19%	18%

Revenues for the quarter ended September 30, 2022 were $4,513 million compared to $3,591 million for the same period of 2021, an increase of $922 million, or 26%. Revenues for the first nine months of 2022 were $12,565 million compared to $10,724 million for the same period in 2021, an increase of $1,841 million, or 17%. The increases in both periods were mainly due to higher fuel surcharge revenue driven by higher fuel prices, freight rate increases, higher Canadian export volumes of coal via west coast ports, higher volumes of U.S. grain and the positive translation impact of a weaker Canadian dollar. For the first nine months of 2022, this increase was partly offset by significantly lower export volumes of Canadian grain.

Fuel surcharge revenues increased by $549 million in the third quarter and $1,210 million in the first nine months of 2022 when compared to the same period in 2021, mainly as a result of higher fuel prices.

RTMs, measuring the relative weight and distance of freight transported by the Company, increased by 5% in the third quarter and declined by 1% in the first nine months of 2022 when compared to the same periods in 2021. Freight revenue per RTM increased by 22% in the third quarter and increased by 19% in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel surcharge revenue driven by higher fuel prices, freight rate increases and the positive translation impact of a weaker Canadian dollar. The increase in the first nine months was also due to a decrease in the average length of haul.

Petroleum and chemicals

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Revenues *(millions)*	**$ 850**	$ 715	19%	16%	**$ 2,435**	$ 2,061	18%	16%
RTMs *(millions)*	**11,715**	10,695	10%	10%	**35,604**	31,481	13%	13%
Revenue/RTM *(cents)*	**7.26**	6.69	9%	6%	**6.84**	6.55	4%	3%
Carloads *(thousands)*	**161**	150	7%	7%	**482**	443	9%	9%

Revenues for this commodity group increased by $135 million, or 19%, in the third quarter and $374 million, or 18%, in the first nine months of 2022 when compared to the same periods in 2021. The increases in both periods were mainly due to higher fuel surcharge revenue, increased volumes of refined petroleum products, petroleum crude and natural gas liquids, freight rate increases and the positive translation impact of a weaker Canadian dollar.

Revenue per RTM increased by 9% in the third quarter and 4% in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel surcharge revenue, freight rate increases and the positive translation impact of a weaker Canadian dollar.

Metals and minerals

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Revenues *(millions)*	**$ 539**	$ 410	31%	28%	**$ 1,411**	$ 1,155	22%	20%
RTMs *(millions)*	**7,441**	7,181	4%	4%	**20,853**	20,126	4%	4%
Revenue/RTM *(cents)*	**7.24**	5.71	27%	23%	**6.77**	5.74	18%	16%
Carloads *(thousands)*	**264**	266	(1%)	(1%)	**709**	730	(3%)	(3%)

Revenues for this commodity group increased by $129 million, or 31%, in the third quarter and $256 million, or 22%, in the first nine months of 2022 when compared to the same periods in 2021. The increases in both periods were mainly due to higher fuel surcharge revenue, more revenue generating moves of empty customer-owned cars, freight rate increases and the positive translation impact of a weaker Canadian dollar. In addition, the increase in the third quarter was partly offset by lower volumes of semi-finished steel products and construction materials.

Revenue per RTM increased by 27% in the third quarter and 18% in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel surcharge revenue, more revenue generating moves of empty customer-owned cars, freight rate increases and the positive translation impact of a weaker Canadian dollar; partly offset by an increase in the average length of haul.

Forest products

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Revenues *(millions)*	**$ 550**	$ 425	29%	26%	**$ 1,489**	$ 1,305	14%	12%
RTMs *(millions)*	**6,614**	6,234	6%	6%	**19,083**	19,861	(4%)	(4%)
Revenue/RTM *(cents)*	**8.32**	6.82	22%	19%	**7.80**	6.57	19%	17%
Carloads *(thousands)*	**86**	82	5%	5%	**250**	258	(3%)	(3%)

Revenues for this commodity group increased by $125 million, or 29%, in the third quarter and $184 million, or 14%, in the first nine months of 2022 when compared to the same periods in 2021. The increase in the third quarter was mainly due to higher fuel surcharge revenue, freight rate increases, increased volumes of lumber and panels and the positive translation impact of a weaker Canadian dollar. The increase in the first nine months was mainly due to higher fuel surcharge revenue, freight rate increases and the positive translation impact of a weaker Canadian dollar; partly offset by lower volumes of lumber and woodpulp as a result of continuing supply chain challenges.

Revenue per RTM increased by 22% in the third quarter and 19% in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel surcharge revenue, freight rate increases and the positive translation impact of a weaker Canadian dollar.

Coal

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Revenues *(millions)*	**$ 258**	$ 169	53%	51%	**$ 702**	$ 453	55%	54%
RTMs *(millions)*	**5,769**	5,189	11%	11%	**17,264**	13,863	25%	25%
Revenue/RTM *(cents)*	**4.47**	3.26	37%	36%	**4.07**	3.27	24%	23%
Carloads *(thousands)*	**130**	109	19%	19%	**377**	278	36%	36%

Revenues for this commodity group increased by $89 million, or 53%, in the third quarter and $249 million, or 55% in the first nine months of 2022 when compared to the same periods in 2021. The increases in both periods were mainly due to higher Canadian export volumes of thermal and metallurgical coal via west coast ports due to the re-opening of two mines in November 2021 and favorable market conditions due to rising energy prices, as well as higher fuel surcharge revenue.

Revenue per RTM increased by 37% in the third quarter and 24% in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel surcharge revenue and a decrease in the average length of haul.

Grain and fertilizers

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Revenues *(millions)*	**$ 621**	$ 510	22%	20%	**$ 1,829**	$ 1,832	—%	(1%)
RTMs *(millions)*	**11,944**	11,774	1%	1%	**37,748**	44,537	(15%)	(15%)
Revenue/RTM *(cents)*	**5.20**	4.33	20%	18%	**4.85**	4.11	18%	16%
Carloads *(thousands)*	**135**	131	3%	3%	**422**	469	(10%)	(10%)

Revenues for this commodity group increased by $111 million, or 22%, in the third quarter and decreased by $3 million in the first nine months of 2022 when compared to the same periods in 2021. The increase in the third quarter was mainly due to higher fuel surcharge revenue, increased volumes of U.S. grain, and freight rate increases; partly offset by reduced potash shipments. The decrease in the first nine months was mainly due to lower export volumes of Canadian grain compared to record volumes in the prior year and reduced potash shipments; offset by higher fuel surcharge revenue, increased volumes of U.S. grain and freight rate increases.

Revenue per RTM increased by 20% in the third quarter and 18% in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel surcharge revenue, a decrease in the average length of haul and freight rate increases.

Intermodal

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Revenues *(millions)*	**$ 1,340**	$ 1,061	26%	25%	**$ 3,722**	$ 3,066	21%	20%
RTMs *(millions)*	**14,340**	14,241	1%	1%	**42,966**	44,883	(4%)	(4%)
Revenue/RTM *(cents)*	**9.34**	7.45	25%	24%	**8.66**	6.83	27%	26%
Carloads *(thousands)*	**641**	649	(1%)	(1%)	**1,894**	2,016	(6%)	(6%)

Revenues for this commodity group increased by $279 million, or 26%, in the third quarter and $656 million, or 21%, in the first nine months of 2022 when compared to the same periods in 2021. The increases in both periods were mainly due to higher fuel surcharge revenue, an increase in ancillary services including container storage and freight rate increases; partly offset by lower international container traffic volumes via the port of Vancouver as a result of supply chain congestion.

Revenue per RTM increased by 25% in the third quarter and 27% in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel surcharge revenue, an increase in ancillary services including container storage and freight rate increases.

Automotive

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Revenues *(millions)*	**$ 208**	$ 137	52%	48%	**$ 581**	$ 430	35%	33%
RTMs *(millions)*	**717**	561	28%	28%	**2,127**	1,824	17%	17%
Revenue/RTM *(cents)*	**29.01**	24.42	19%	16%	**27.32**	23.57	16%	14%
Carloads *(thousands)*	**52**	40	30%	30%	**155**	133	17%	17%

Revenues for this commodity group increased by $71 million, or 52%, in the third quarter and $151 million, or 35%, in the first nine months of 2022 when compared to the same periods in 2021. The increases in both periods were mainly due to higher volumes of finished vehicles and higher fuel surcharge revenue.

Revenue per RTM increased by 19% in the third quarter and 16% in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel surcharge revenue and a decrease in the average length of haul.

Other revenues

	Three months ended September 30				Nine months ended September 30			
	2022	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Revenues *(millions)*	**$ 147**	$ 164	(10%)	(13%)	**$ 396**	$ 422	(6%)	(8%)

Other revenues decreased by $17 million, or 10%, in the third quarter and $26 million, or 6%, in the first nine months of 2022 when compared to the same periods in 2021, mainly due to lower revenues for international freight forwarding.

Operating expenses

Operating expenses for the third quarter of 2022 were $2,581 million compared to $2,250 million for the same period of 2021. Operating expenses for the first nine months of 2022 were $7,637 million compared to $6,674 million in the same period of 2021. The increases of $331 million, or 15%, in the third quarter and $963 million, or 14%, in the first nine months of 2022 were mainly driven by higher fuel prices and the negative translation impact of a weaker Canadian dollar; partly offset by Transaction-related costs of $84 million recorded in the third quarter of 2021 resulting from the terminated CN Merger Agreement with KCS. In addition, the increase in the first nine months of 2022 was also due to the Recovery of the loss on assets held for sale of $137 million recorded in the first quarter of 2021 resulting from the Company entering into an agreement for the sale of non-core lines.

The following table provides the components of total operating expenses for the three and nine months ended September 30, 2022 and 2021:

	Three months ended September 30				Nine months ended September 30			
In millions, unless otherwise indicated	**2022**	2021	% Change	% Change at constant currency	**2022**	2021	% Change	% Change at constant currency
Labor and fringe benefits	**$ 770**	$ 728	(6%)	(4%)	**$ 2,204**	$ 2,205	—%	1%
Purchased services and material	**520**	502	(4%)	(2%)	**1,615**	1,578	(2%)	(1%)
Fuel	**649**	350	(85%)	(80%)	**1,846**	1,094	(69%)	(65%)
Depreciation and amortization	**435**	405	(7%)	(6%)	**1,278**	1,215	(5%)	(4%)
Equipment rents	**72**	82	12%	15%	**254**	254	—%	2%
Casualty and other	**135**	99	(36%)	(31%)	**440**	381	(15%)	(13%)
Recovery of loss on assets held for sale	**—**	—	—%	—%	**—**	(137)	(100%)	(100%)
Transaction-related costs	**—**	84	100%	100%	**—**	84	100%	100%
Total operating expenses	**$ 2,581**	$ 2,250	(15%)	(12%)	**$ 7,637**	$ 6,674	(14%)	(13%)

Labor and fringe benefits

Labor and fringe benefits expense increased by $42 million, or 6%, in the third quarter and remained flat in the first nine months of 2022 when compared to the same periods in 2021. The increase in the third quarter was mainly due to an incremental wage accrual for the tentative agreements with the U.S. unions, higher incentive compensation and the negative translation impact of a weaker Canadian dollar; partly offset by employee termination benefits and severance costs related to a workforce reduction program in the third quarter of 2021 and lower average headcount. In the first nine months of 2022, the incremental wage accrual for the tentative agreements with the U.S. unions, the negative translation impact of a weaker Canadian dollar and general wage increases were offset by lower pension expense, employee termination benefits and severance costs related to a workforce reduction program in the third quarter of 2021 and lower average headcount.

Purchased services and material

Purchased services and material expense increased by $18 million, or 4%, in the third quarter and $37 million, or 2%, in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher material costs and the negative translation impact of a weaker Canadian dollar. In addition, the increase in the first nine months was also due to higher snow clearing driven by harsher winter operating conditions; partly offset by lower freight forwarding expense.

Fuel

Fuel expense increased by $299 million, or 85%, in the third quarter and $752 million, or 69%, in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher fuel prices and the negative translation impact of a weaker Canadian dollar.

Depreciation and amortization

Depreciation and amortization expense increased by $30 million, or 7% in the third quarter and $63 million, or 5%, in the first nine months of 2022 when compared to the same periods in 2021, mainly due to a higher depreciable asset base and the negative translation impact of a weaker Canadian dollar.

Equipment rents

Equipment rents expense decreased by $10 million, or 12%, in the third quarter and remained flat in the first nine months of 2022 when compared to the same periods in 2021. The decrease in the third quarter was mainly due to higher locomotive horsepower-hour income; partly offset by the negative translation impact of a weaker Canadian dollar. In the first nine months of 2022, higher locomotive horsepower-hour income was offset by the negative translation impact of a weaker Canadian dollar.

Casualty and other

Casualty and other expense increased by $36 million, or 36%, in the third quarter and $59 million, or 15%, in the first nine months of 2022 when compared to the same periods in 2021, mainly due to higher operating taxes and the negative translation impact of a weaker Canadian dollar. In addition, the increase in the first nine months was also due to advisory fees related to shareholder matters of $22 million.

Recovery of loss on assets held for sale

Recovery of loss on assets held for sale of $137 million ($102 million after-tax) in the first quarter of 2021 resulting from the Company entering into an agreement with a short line operator, for the sale of non-core lines in Wisconsin, Michigan and Ontario representing 850 miles that were classified as assets held for sale plus an additional 50 miles of track and roadway assets. See *Note 6 – Assets held for sale* to the Company's unaudited Interim Consolidated Financial Statements for further information.

Transaction-related costs

For the three and nine months ended September 30, 2021, the Company incurred transaction costs related to the terminated CN Merger Agreement of $84 million, consisting of $125 million transaction-related costs; US$700 million ($845 million) paid to KCS and reported as an advance to KCS in the second quarter and expensed in the third quarter; and the related refund received of US$700 million ($886 million) in the third quarter. See *Note 4 – Acquisition* to the Company's unaudited Interim Consolidated Financial Statements for further information.

Other income and expenses

Interest expense

Interest expense was $141 million and $395 million for the three and nine months ended September 30, 2022, respectively, compared to $197 million and $485 million, respectively, for the same periods in 2021. The decreases in both periods were mainly due to amortization of bridge financing and other fees recorded in 2021. See *Note 4 – Acquisition* to the Company's unaudited Interim Consolidated Financial Statements for further information.

Other components of net periodic benefit income

Other components of net periodic benefit income were $125 million and $374 million for the three and nine months ended September 30, 2022, respectively, compared to $98 million and $295 million, respectively, for the same periods in 2021 (1). The increases in both periods were due to lower amortization of net actuarial loss and higher expected return on assets; partly offset by higher interest cost. These effects primarily resulted from changes to discount rates, actual returns in excess of expected returns, as well as an increase to the Company’s expected long-term rate of return assumption in 2022.

Other income (loss)

Other loss was $1 million and $25 million for the three and nine months ended September 30, 2022, respectively, compared to other loss of $27 million and other income of $22 million, respectively, for the same periods in 2021. Other loss decreased by $26 million in the third quarter of

2022 and increased by $47 million for the first nine months of 2022 when compared to the same periods of 2021, mainly due to fluctuations in the fair value of an equity investment in autonomous driving technology.

Income tax expense (1)

Income tax expense was $460 million and $1,184 million for the three and nine months ended September 30, 2022, respectively, compared to $415 million and $1,070 million, respectively, for the same periods in 2021. The effective tax rates for the three and nine months ended September 30, 2022 were 24.0% and 24.3%, respectively, compared to 19.8% and 22.4%, respectively, for the same periods in 2021. The increases in the effective tax rates were mainly attributable to the merger termination fee, transaction-related costs, and bridge financing and other fees resulting from the KCS transaction recorded in the 2021 Consolidated Statements of Income, taxed at a lower inclusion rate.

(1) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

Summary of quarterly financial data

	2022 Quarters			2021 Quarters				2020 Quarter
In millions, except per share data	**Third**	Second	First	Fourth	Third	Second	First	Fourth
Revenues	**$ 4,513**	$ 4,344	$ 3,708	$ 3,753	$ 3,591	$ 3,598	$ 3,535	$ 3,656
Operating income (1)	**$ 1,932**	$ 1,769	$ 1,227	$ 1,566	$ 1,341	$ 1,382	$ 1,327	$ 1,411
Dividends per share	**$ 0.7325**	$ 0.7325	$ 0.7325	$ 0.6150	$ 0.6150	$ 0.6150	$ 0.6150	$ 0.5750
Financial measures impacted by change in accounting policy								
Net income (1)(2)	**$ 1,455**	$ 1,325	$ 918	$ 1,201	$ 1,686	$ 1,036	$ 976	$ 1,016
Net income as previously reported (1)	**N/A**	N/A	N/A	$ 1,199	$ 1,685	$ 1,034	$ 974	$ 1,021
Basic earnings per share (2)	**$ 2.13**	$ 1.92	$ 1.31	$ 1.70	$ 2.38	$ 1.46	$ 1.37	$ 1.43
Basic earnings per share as previously reported	**N/A**	N/A	N/A	$ 1.70	$ 2.38	$ 1.46	$ 1.37	$ 1.44
Diluted earnings per share (1)(2)	**$ 2.13**	$ 1.92	$ 1.31	$ 1.70	$ 2.37	$ 1.46	$ 1.37	$ 1.42
Diluted earnings per share as previously reported (1)	**N/A**	N/A	N/A	$ 1.69	$ 2.37	$ 1.46	$ 1.37	$ 1.43

(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 2021 Annual MD&A for additional information on these items.

(2) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

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 2021 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 2021 Annual MD&A. There were no significant changes during the first nine months of 2022, except as noted below.

As at September 30, 2022 and December 31, 2021, the Company had Cash and cash equivalents of $403 million and $838 million, respectively; Restricted cash and cash equivalents of $503 million and $503 million, respectively; and a working capital surplus of $32 million and $306 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) Working capital is a Non-GAAP measure which management believes is a useful measure of liquidity. The Company defines working capital as current assets less current liabilities. Working capital as at September 30, 2022 was calculated as current assets of $3,389 million less current liabilities of $3,357 million. Working capital as at December 31, 2021 was calculated as current assets of $3,426 million less current liabilities of $3,120 million. Working capital does not have any standardized meaning prescribed by GAAP and therefore, may not be comparable to a similar measure presented by other companies.

Available financing sources

Shelf prospectus and registration statement

On May 4, 2022, the Company filed a new shelf prospectus with Canadian securities regulators and a registration statement with the United States Securities and Exchange Commission (SEC), pursuant to which CN may issue up to $6.0 billion of debt securities in the Canadian and U.S. capital markets over a 25 month period following the filing date. This shelf prospectus and registration statement replaced CN's previous shelf prospectus and registration statement that expired on March 11, 2022. As at September 30, 2022, the remaining capacity of this shelf prospectus and registration statement was $4.1 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

The Company has an unsecured revolving credit facility with a consortium of lenders which is available for general corporate purposes including backstopping the Company's commercial paper programs. The revolving credit facility agreement adopts a sustainability linked loan structure whereby its applicable margins are adjusted upon achievement of certain sustainability targets, starting in 2022. The credit facility of $2.5 billion consists of a $1.25 billion tranche maturing on March 31, 2025 and a $1.25 billion tranche maturing on March 31, 2027. The credit facility provides for borrowings at various benchmark interest rates, such as Secured Overnight Financing Rate (SOFR) and the Canadian Dollar Offered Rate (CDOR), plus applicable margins, based on CN's credit ratings and sustainability targets.

As at September 30, 2022 and December 31, 2021, the Company had no outstanding borrowings under this revolving credit facility and there were no draws during the nine months ended September 30, 2022.

On March 18, 2022, the Company entered into a $1.0 billion two-year unsecured revolving credit facility agreement with a consortium of lenders. The credit facility is available for working capital and general corporate purposes and provides for borrowings at various benchmark interest rates, such as SOFR and CDOR, plus applicable margins, based on CN's credit ratings. As at September 30, 2022, the Company had no outstanding borrowings under this revolving credit facility and there were no draws during the nine months ended September 30, 2022.

Equipment loans

The Company has a non-revolving term loan credit facility for financing or refinancing the purchase of equipment. The equipment loans made under the non-revolving credit facility have a tenor of 20 years, bear interest at variable rates such as LIBOR and CDOR plus a margin, are repayable in equal quarterly installments, are prepayable at any time without penalty, and are secured by rolling stock.

As at September 30, 2022, the Company had outstanding borrowings of US$549 million ($760 million) and had no further amount available under this non-revolving term loan facility. As at December 31, 2021, the Company had outstanding borrowings of US$572 million ($723 million) and had no further amount available under this non-revolving term loan facility.

Commercial paper

The Company’s commercial paper programs are backstopped by the Company’s $2.5 billion revolving credit facility. The maximum aggregate principal amount of commercial paper that can be issued is $2.5 billion, or the equivalent amount in US dollars.

As at September 30, 2022 and December 31, 2021, the Company had total commercial paper borrowings of US$138 million ($191 million) and US$111 million ($140 million), respectively, presented in Current portion of long-term debt on the Consolidated Balance Sheets.

Accounts receivable securitization program

The Company has an agreement, expiring on February 1, 2024, to sell an undivided co-ownership interest in a revolving pool of accounts receivable to unrelated trusts for maximum cash proceeds of $450 million. The Company has retained the responsibility for servicing, administering and collecting the receivables sold. The average servicing period is approximately one month and the interest on borrowings under the Accounts receivable securitization program is renewed based on commercial paper, LIBOR or CDOR rates then in effect.

As at September 30, 2022, and December 31, 2021, the Company had no borrowings under the accounts receivable securitization program and there were no activities for the nine months ended September 30, 2022.

Bilateral letter of credit facilities

The Company has a series of committed and uncommitted bilateral letter of credit facility agreements. On March 31, 2022, the Company extended the maturity date of certain committed bilateral letter of credit facility agreements to April 28, 2025.

As at September 30, 2022, the Company had outstanding letters of credit of $398 million ($394 million as at December 31, 2021) under the committed facilities from a total available amount of $518 million ($518 million as at December 31, 2021) and $100 million ($158 million as at December 31, 2021) under the uncommitted facilities.

As at September 30, 2022, included in Restricted cash and cash equivalents were $394 million ($396 million as at December 31, 2021) and $100 million ($100 million as at December 31, 2021) which were pledged as collateral under the committed and uncommitted bilateral letter of credit facilities, respectively.

Additional information relating to the Company's financing sources is provided in the section entitled *Liquidity and capital resources – Available financing sources* of the Company's 2021 Annual MD&A as well as *Note 9 – Financing activities* to the Company's unaudited Interim Consolidated Financial Statements.

Credit ratings

The following table provides the Company's long-term debt and commercial paper credit ratings as of the date of this MD&A, which remain unchanged from those described in the section entitled *Liquidity and capital resources – Credit ratings* of the Company's 2021 Annual MD&A.

	Outlook	Long-term debt rating (1)	Commercial paper rating (1)
DBRS Morningstar	Stable	A	R-1 (low)
Moody's Investors Service	Negative	A2	P-1
Standard & Poor's	Negative	A	A-1

(1) These credit ratings are not recommendations to purchase, hold, or sell the securities referred to above. Ratings may be revised or withdrawn at any time by the credit rating agencies. Each credit rating should be evaluated independently of any other credit rating.

Cash flows

The following table provides the cash flows for the three and nine months ended September 30, 2022 and 2021:

	Three months ended September 30			Nine months ended September 30		
In millions	**2022**	2021	Variance	**2022**	2021	Variance
Net cash provided by operating activities	**$ 2,112**	$ 2,458	$ (346)	**$ 4,395**	$ 4,885	$ (490)
Net cash provided by (used in) investing activities	**(756)**	42	(798)	**(1,573)**	(2,013)	440
Net cash used in financing activities	**(1,473)**	(908)	(565)	**(3,261)**	(1,285)	(1,976)
Effect of foreign exchange fluctuations on cash, cash equivalents, restricted cash, and restricted cash equivalents	**3**	1	2	**4**	—	4
Net increase (decrease) in cash, cash equivalents, restricted cash, and restricted cash equivalents	**(114)**	1,593	(1,707)	**(435)**	1,587	(2,022)
Cash, cash equivalents, restricted cash, and restricted cash equivalents, beginning of period	**1,020**	1,094	(74)	**1,341**	1,100	241
Cash, cash equivalents, restricted cash, and restricted cash equivalents, end of period	**$ 906**	$ 2,687	$ (1,781)	**$ 906**	$ 2,687	$ (1,781)

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, 2022 and 2021, to the non-GAAP free cash flow presented herein:

	Three months ended September 30		Nine months ended September 30	
In millions	**2022**	2021	**2022**	2021
Net cash provided by operating activities	**$ 2,112**	$ 2,458	**$ 4,395**	$ 4,885
Net cash provided by (used in) investing activities	**(756)**	42	**(1,573)**	(2,013)
Net cash provided before financing activities	**1,356**	2,500	**2,822**	2,872
Adjustments:				
Cash income taxes for merger transaction-related payments and cash receipts (1)	**—**	—	**102**	—
Transaction-related costs (2)	**—**	26	**—**	89
Advance for acquisition (3)	**—**	—	**—**	845
Refund of advance for acquisition (3)	**—**	(886)	**—**	(886)
Merger termination fee (3)	**—**	(886)	**—**	(886)
Total adjustments	**—**	(1,746)	**102**	(838)
Free cash flow	**$ 1,356**	$ 754	**$ 2,924**	$ 2,034

(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 unaudited Interim Consolidated Financial Statements for further information.

(2) Relates to Transaction-related costs of $125 million, of which $63 million was paid in the second quarter and $26 million was paid in the third quarter. As at September 30, 2021, $36 million remained to be paid. See Note 4 - Acquisition to the Company's unaudited Interim Consolidated Financial Statements for further information.

(3) See Note 4 – Acquisition to the Company's unaudited Interim Consolidated Financial Statements for further information.

Operating activities

Net cash provided by operating activities decreased by $346 million in the third quarter of 2022 and decreased by $490 million in the first nine months of 2022 when compared to the same periods in 2021. The decrease in both periods was mainly due to the additional income generated in 2021 from the merger termination fee as well as direct and incremental expenses resulting from the Company's strategic decision to bid for KCS.

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.

Actuarial valuations are generally required on an annual basis for all Canadian defined benefit pension plans, or when deemed appropriate by the Office of the Superintendent of Financial Institutions (OSFI). Actuarial valuations are also required annually for the Company's U.S. qualified defined benefit pension plans. For accounting purposes, the funded status is calculated under GAAP. For funding purposes, the funded status of the Company's Canadian registered defined benefit pension plans is calculated under going concern and solvency scenarios as prescribed under federal pension legislation and is subject to guidance issued by the Canadian Institute of Actuaries and OSFI. The federal pension legislation requires funding deficits to be paid over a number of years. Alternatively, a letter of credit can be subscribed to fulfill solvency deficit payments.

In November 2021, the OSFI issued a revised instruction guide for the Preparation of Actuarial Reports for Defined Benefit Pension Plans ("Guide") that was used for the December 31, 2021 actuarial valuations. The revised Guide did not have a significant impact on the solvency status of the Company's defined benefit pension plans, and did not trigger additional pension contributions in 2022.

The Company's most recently filed actuarial valuations for funding purposes for its Canadian registered defined benefit pension plans conducted as at December 31, 2021 indicated a funding excess on a going concern basis of approximately $4.2 billion and a funding excess on a solvency basis of approximately $1.1 billion calculated using the three-year average of the plans' hypothetical wind-up ratio.

Pension contributions for the nine months ended September 30, 2022 and 2021 of $57 million and $95 million, respectively, 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. Based on the results of the December 31, 2021 valuations, the CN Pension Plan is fully funded and at a level such that the

Company was prohibited from making contributions to the CN Pension Plan as of April 2022 once the actuarial valuation report was filed. For 2022, the Company expects to make total cash contributions of approximately $70 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.

Additional information relating to the pension plans is provided in *Note 17 – Pensions and other postretirement benefits* to the Company's 2021 Annual Consolidated Financial Statements.

Income tax payments

Net income tax payments for the nine months ended September 30, 2022 and 2021 were $954 million and $582 million, respectively. The increase was mostly due to higher required installment payments in Canada and in the U.S. mainly caused by the merger termination fee recorded in 2021 and higher pre-tax income. For 2022, the Company's net income tax payments are expected to be approximately $1.25 billion.

Investing activities

Net cash used in investing activities increased by $798 million in the third quarter of 2022 and decreased by $440 million in the first nine months of 2022 when compared to the same period in 2021. The increase in the third quarter was mainly due to the $886 million refund of the advance paid to KCS, which was received in 2021. The decrease in the first nine months was mainly due to the proceeds received from the assets held for sale and lower property additions.

Property additions

The following table provides the property additions for the three and nine months ended September 30, 2022 and 2021:

	Three months ended September 30		Nine months ended September 30	
In millions	**2022**	2021	**2022**	2021
Track and roadway	**$ 584**	$ 637	**$ 1,230**	$ 1,397
Rolling stock	**47**	75	**287**	258
Buildings	**19**	25	**39**	45
Information technology	**75**	72	**206**	186
Other	**19**	27	**68**	91
Property additions	**$ 744**	$ 836	**$ 1,830**	$ 1,977

2022 Capital expenditure program

For 2022, the Company continues to expect to invest approximately 17% of revenues in its capital program, which will be financed with cash generated from operations or with cash from financing activities as required.

Financing activities

Net cash used in financing activities increased by $565 million in the third quarter of 2022 and increased by $1,976 million in the first nine months of 2022 when compared to the same periods in 2021. The increase in both periods was primarily driven by higher repurchases of common shares; partly offset by higher cash provided by debt financing activities.

Debt financing activities

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. In conjunction with this 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 (see *Note 14 – Financial instruments* for additional information).
- Net repayment of commercial paper of $1,745 million in the third quarter and $39 million in the first nine months.

Debt financing activities in the first nine months of 2021 included the following:

- On September 15, 2021, early redemption of US$400 million ($506 million) 2.85% Notes due 2021;
- On March 31, 2021, issuance of US$310 million ($389 million) equipment loan under the non-revolving credit facility;
- On January 18, 2021, early redemption of $250 million 2.75% Notes due 2021; and
- Net issuance of commercial paper of $903 million in the second quarter and $916 million in the first nine months.

Additional information relating to the Company's outstanding debt securities is provided in *Note 15 – Debt* to the Company's 2021 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 42.0 million common shares between February 1, 2022 and January 31, 2023. As at September 30, 2022, the Company had repurchased 22.8 million common shares for $3,526 million under its current NCIB.

The Company repurchased 11.1 million common shares under its previous NCIB effective between February 1, 2021 and January 31, 2022, which allowed for the repurchase of up to 14.0 million common shares.

The following table provides the information related to the share repurchases for the three and nine months ended September 30, 2022 and 2021:

	Three months ended September 30		Nine months ended September 30	
In millions, except per share data	**2022**	2021	**2022**	2021
Number of common shares repurchased	**7.6**	0.8	**23.6**	3.7
Weighted-average price per share [(1)]	**$ 155.29**	$ 147.46	**$ 154.38**	$ 142.79
Amount of repurchase [(1)(2)]	**$ 1,178**	$ 109	**$ 3,644**	$ 523

(1) Includes brokerage fees.

(2) Includes settlements in subsequent periods.

Dividends paid

The Company paid quarterly dividends of $0.7325 per share amounting to $498 million and $1,511 million in the third quarter and first nine months of 2022 compared to $435 million and $1,307 million, respectively, at the quarterly rate of $0.6150 per share for the same periods in 2021.

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, 2022:

In millions	**Total**	2022	2023	2024	2025	2026	2027 & thereafter
Debt obligations [(1)]	**$ 15,389**	$ 551	$ 243	$ 520	$ 387	$ 729	$ 12,959
Interest on debt obligations	**11,364**	93	625	616	600	579	8,851
Finance lease obligations	**3**	—	—	—	—	3	—
Operating lease obligations [(2)]	**524**	36	133	102	84	57	112
Purchase obligations [(3)]	**2,266**	1,377	601	144	137	1	6
Other long-term liabilities [(4)]	**599**	29	56	42	39	26	407
Total contractual obligations	**$ 30,145**	**$ 2,086**	**$ 1,658**	**$ 1,424**	**$ 1,247**	**$ 1,395**	**$ 22,335**

(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 $40 million of imputed interest.

(3) Includes fixed and variable commitments for railroad cars, information technology services and licenses, locomotives, wheels, rail, engineering services, 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.

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, 2022 and 2021, to the adjusted measures presented herein, which have been used to calculate the non-GAAP adjusted debt-to-adjusted EBITDA multiple:

In millions, unless otherwise indicated	*As at and for the twelve months ended September 30,*	**2022**	2021
Debt		**$ 15,392**	$ 13,556
Adjustments:			
Operating lease liabilities, including current portion (1)		**484**	430
Pension plans in deficiency (2)		**444**	545
Adjusted debt		**$ 16,320**	$ 14,531
Net income (3)		**$ 4,899**	$ 4,714
Interest expense		**520**	619
Income tax expense (3)		**1,557**	1,403
Depreciation and amortization		**1,661**	1,617
Operating lease cost (4)		**138**	130
Other components of net periodic benefit income (3)		**(486)**	(367)
Other loss (income)		**4**	(22)
Adjustments:			
Workforce reduction program (5)		**—**	39
Advisory fees related to shareholder matters (6)		**35**	7
Recovery of loss on assets held for sale (7)		**—**	(137)
Transaction-related costs (8)		**—**	84
Merger termination fee (9)		**—**	(886)
Adjusted EBITDA		**$ 8,328**	$ 7,201
Adjusted debt-to-adjusted EBITDA multiple *(times)*		**1.96**	2.02

(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) In the first quarter of 2022, the Company changed its method of calculating market-related values of pension assets for its defined benefit plans using a retrospective approach. Comparative figures have been restated to conform to the change in methodology. See Note 2 – Change in accounting policy to CN's unaudited Interim Consolidated Financial Statements for additional information.

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

(5) Relates to employee termination benefits and severance costs related to a workforce reduction program, recorded in Labor and fringe benefits within the Consolidated Statements of Income.

(6) Relates to advisory fees related to shareholder matters recorded in Casualty and other within the Consolidated Statements of Income.

(7) Relates to the recovery of $137 million of the $486 million loss on assets held for sale recorded in the second quarter of 2020, resulting from the Company entering into an agreement for the sale of non-core lines. See Note 6 – Assets held for sale to the Company's unaudited Interim Consolidated Financial Statements for further information.

(8) Relates to transaction costs incurred as a result of the terminated CN Merger Agreement of $84 million, consisting of $125 million of transaction-related costs, partially offset by $41 million of income generated as a result of the applicable foreign exchange rates prevailing at the time of payment and related receipt of the US$700 million advance to KCS. See Note 4 –Acquisition to the Company's unaudited Interim Consolidated Financial Statements for further information.

(9) Relates to the termination fee resulting from KCS terminating the CN Merger Agreement and entering into a merger agreement with CP. See Note 4 –Acquisition to the Company's unaudited Interim Consolidated Financial Statements for further 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, 2022, the Company has not recorded a liability with respect to guarantees and indemnifications. Additional information relating to guarantees and indemnifications is provided in *Note 13 – Major commitments and contingencies* to the Company's unaudited Interim Consolidated Financial Statements.

Outstanding share data

As at October 25, 2022, the Company had 676.0 million common shares and 3.6 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 2021 Annual MD&A.

Derivative financial instruments

Foreign currency risk

As at September 30, 2022, the Company had outstanding foreign exchange forward contracts with a notional value of US$1,135 million (US$910 million as at December 31, 2021) at a weighted-average exchange rate of $1.29 per US$1.00 ($1.27 per US$1.00 as at December 31, 2021) for a weighted-average term of 159 days (251 days as at December 31, 2021). For the three and nine months ended September 30, 2022, the Company recorded gains of $137 million and $173 million, respectively, related to foreign exchange forward contracts compared to gains of $28 million and $2 million, respectively, for the same periods in 2021. These gains were largely offset by the re-measurement of US dollar-denominated monetary assets and liabilities recorded in Other income.

As at September 30, 2022, the fair value of outstanding foreign exchange forward contracts included in Other current assets and Accounts payable and other was $103 million and $nil, respectively ($nil and $2 million, respectively, as at December 31, 2021).

Interest rate risk

During the year, CN entered into treasury lock agreements to hedge US Treasury benchmark rates related to an expected debt issuance in 2022. The treasury locks were designated as cash flow hedging instruments with cumulative gains or losses recorded in Accumulated other comprehensive loss in derivative instruments. On August 5, 2022, CN settled a notional US$675 million ($868 million) of treasury locks in conjunction with the issuances of US$800 million ($1,028 million) Notes due 2032 and US$700 million ($900 million) Notes due 2052, resulting in a cumulative loss of $2 million. The 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.

As at September 30, 2022, there were no treasury locks outstanding.

Fair value of financial instruments

As at September 30, 2022, the Company's debt, excluding finance leases, had a carrying amount of $15,389 million ($12,475 million as at December 31, 2021) and a fair value of $13,813 million ($14,424 million as at December 31, 2021).

Additional information relating to financial instruments is provided in *Note 14 – Financial instruments* to the Company's unaudited Interim Consolidated Financial Statements.

Recent accounting pronouncements

The following recent Accounting Standards Update (ASU) issued by the Financial Accounting Standards Board (FASB) has an effective date after September 30, 2022 and has not been adopted by the Company:

ASU 2021-10 Disclosures by business entities about government assistance (Topic 832)
The ASU will increase the transparency of government assistance including the disclosure of types of assistance, an entity's accounting for the assistance, and the effect of the assistance on an entity's financial statements.

The ASU is effective for annual periods beginning after December 15, 2021. Early adoption is permitted.

The adoption of the ASU is not expected to have a significant impact on the Company's Consolidated Financial Statements, other than for new disclosure requirements. The Company will include the relevant disclosures within the 2022 Annual Consolidated Financial Statements.

The following recent ASU issued by the FASB came into effect in 2020, was amended in 2021 and has not been adopted by the Company:

ASU 2020-04 Reference rate reform (Topic 848): Facilitation of the effects of reference rate reform on financial reporting and related amendments
USD London Interbank Offered Rate (LIBOR)and Canadian Dollar Offered Rate (CDOR) are benchmark interest rates referenced in a variety of agreements. The administrators of LIBOR and CDOR have ceased the publication of certain LIBOR and CDOR rates in January 2022 and May 2021, respectively, and intend to discontinue the remaining LIBOR and CDOR rates on June 30, 2023 and June 30, 2024, respectively. The recommended alternative reference rates are the Secured Overnight Financing Rate (SOFR) and Canadian Overnight Repo Rate Average (CORRA), respectively.

The ASU provides optional expedients and exceptions for applying generally accepted accounting principles to transactions affected by reference rate reform if certain criteria are met. These transactions include contract modifications, hedging relationships, and sale or transfer of debt securities classified as held-to-maturity.

The ASU was effective starting on March 12, 2020, and is available to be adopted on a prospective basis no later than December 31, 2022. The Company has a non-revolving credit facility that references LIBOR and CDOR. As at September 30, 2022, the Company has equipment loans made under the non-revolving credit facility referencing LIBOR with outstanding borrowings of US$549 million. The equipment loans would be affected by the provisions of this ASU and were not impacted by the administrator of LIBOR ceasing publication of certain LIBOR rates. The Company also has revolving credit facilities that reference CDOR and an accounts receivable securitization program that references LIBOR and CDOR, see *Note 9 – Financing activities* to the Company's unaudited Interim Consolidated Financial Statements. The Company had no outstanding borrowing under these credit facilities or the accounts receivable securitization program as at September 30, 2022. Within all of these agreements, the Company has fallback language that allows for the succession of an alternative reference rate. The Company is evaluating the effects that the adoption of the ASU will have on its Consolidated Financial Statements and related disclosures, and whether it will elect to apply any of the optional expedients and exceptions provided in the ASU.

Other recently issued ASUs required to be applied on or after September 30, 2022 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 2021 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 2022, other than the change in accounting policy for determining net periodic pension cost (income) disclosed below.

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.

Pensions

Effective January 1, 2022, CN elected to change its accounting methodology for determining the market-related value of assets for the Company's defined benefit pension plans. The new accounting method changes the calculation of market-related value of pension plan assets used to determine net periodic benefit cost but has no impact on the annual funded status of the plans. The Company's previous methodology calculated market-related value for pensions whereby realized and unrealized gains/losses and appreciation/depreciation in the value of the investments were recognized over a period of five years. The Company's new methodology will apply a corridor approach so that the market-related value does not result in a value that deviates excessively from its fair value. Specifically, the market-related value will not exceed 110% or be less than 90% of the fair value. This change establishes a corridor approach whereby the amount causing the market-related value to be outside of the 10% corridor will be recognized immediately in the market-related value of assets and will not be subject to the five year period of recognition. There is no change in the recognition approach for investment income.

CN considers the use of a calculated value with a corridor approach preferable to the previous calculated value approach as it results in a more current reflection of impacts of changes in value of these plan assets in the determination of net periodic benefit cost. The new accounting method to calculate the market-related value for pensions also aligns with the prevailing guidance issued by the Office of the Superintendent of Financial Institutions (OSFI) for the preparation of actuarial valuations for funding purposes for all registered Canadian defined benefit pension plans, whereby the Company has adopted and applied the updated OSFI guidance starting with the December 31, 2021 funding valuations that were filed during the second quarter of 2022.

The change in accounting method was applied retrospectively to all periods presented within CN's financial statements. The change did not impact Operating income or Net cash provided by operating activities but did impact the previously reported portion of Other components of net periodic benefit cost (income) for defined benefit pension plans along with related consolidated income items such as Net income and Earnings per share. Other impacts included related changes to previously reported consolidated Other comprehensive income (loss), Retained earnings, Accumulated other comprehensive income (loss), and associated line items within the determination of Net cash provided (used) by operating activities.

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 2021 Annual MD&A for a detailed description of such key areas of business risks and uncertainties with respect to: Pandemic risk and economic downturn, Competition, Environmental matters, Personal injury and other legal claims, Labor negotiations, Regulation, 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, 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.

The following are certain changes to the risks described in the Company's 2021 Annual MD&A, as well as an update on competition, the labor workforce and negotiations, regulatory matters, reliance on technology and related cybersecurity risk and fuel costs.

Competition

CP-KCS merger agreement

On February 28, 2022, CN filed a responsive application with the Surface Transportation Board (STB) requesting the STB to condition any approval of a CP-KCS merger on the divestiture of the KCS line from Kansas City, Missouri to Springfield and East St. Louis, Illinois ("the Kansas City Speedway") to CN, pursuant to the STB's statutory authority to order "the divestiture of parallel tracks" as a merger condition. Granting CN control of the line will provide customers with a new competitive option to move goods across a key North American economic corridor. On March 16, 2022, the STB suspended the procedural schedule until further notice in order for Applicants to explain an "apparent inconsistency" in baseline 2019 tonnage data presented by the Applicants. On April 27, 2022, the STB required Applicants to amend their operating plan and required parties to submit amended comments and responsive applications. On May 27, 2022, the STB issued a revised procedural schedule.

On June 9, 2022, the Company submitted comments on Applicants' amended operating plan, and the Company submitted an amended operating plan in support of the divestiture of the Kansas City Speedway. On July 1, 2022, the STB accepted the Company's responsive application for consideration and consolidated the Company's divestiture request with the primary application. On July 12, 2022, the Company submitted reply comments, and parties of record submitted reply comments to the Company's proposed divestiture of the Kansas City Speedway. On July 22, 2022, the STB scheduled a three-day hearing for September 28 to 30, 2022. On August 11, 2022, the Company filed its rebuttal in support of its responsive application. The STB held a seven-day hearing between September 28 and October 7, 2022. The Company filed Comments on the Draft Environmental Impact Statement for the CP-KCS merger on October 14, 2022. The Company filed its final brief on October 21, 2022.

There can be no assurance that the Company will be able to compete effectively against current and future competitors in the transportation industry, or that further consolidation within the transportation industry, including consolidation arising from the CP-KCS merger, if approved, and legislation allowing for more leniency in size and weight for motor carriers will not adversely affect the Company's competitive position. No assurance can be given that competitive pressures will not lead to reduced revenues, profit margins or both.

Labor workforce and negotiations

As at September 30, 2022, CN employed a total of 17,239 employees in Canada, of which 12,726, or 74%, were unionized employees, and 6,589 employees in the U.S., of which 5,582, or 85%, were unionized employees. The Company's relationships with its unionized workforce are governed by, amongst other items, collective bargaining agreements which are negotiated from time to time. Disputes relating to the renewal of collective bargaining agreements could potentially result in strikes, slowdowns and loss of business. Future labor agreements or renegotiated agreements could increase labor and fringe benefits and related expenses. There can be no assurance that the Company will be able to renew and have its collective bargaining agreements ratified without any strikes or lockouts or that the resolution of these collective bargaining negotiations will not have a material adverse effect on the Company's results of operations or financial position.

Canadian workforce

On September 13, 2021, the Company served notice to commence bargaining for the renewal of the collective agreement with the International Brotherhood of Electrical Workers (IBEW) governing approximately 700 signals and communications workers, which expired on December 31, 2021. After six months of bargaining, the IBEW served notice of dispute with the Minister of Labour which commences the conciliation/mediation process under the Canada Labour Code. On June 15, 2022, the IBEW gave a 72-hour notice of its intention to strike and on June 18, 2022 the IBEW commenced their strike. On July 4, 2022, the IBEW agreed to binding arbitration, bringing the strike to an end. On October 7, 2022, the arbitrator rendered a decision dated October 12, 2022 awarding a three percent wage increase per year from 2022 through 2024. This decision finalizes the collective agreement between CN and the IBEW, which expires on December 31, 2024.

On December 1, 2021, CN filed an application with the Canadian Industrial Relations Board (CIRB) pursuant to Section 18.1 of the Canada Labour Code to review the current bargaining unit structure applicable to running trades on its Canadian railway. There are currently 12 bargaining units and 16 collective agreements covering Locomotive Engineers and Conductors. CN believes that this structure is no longer appropriate for labor relations. A consolidated unit of Locomotive Engineers and Conductors governed by one collective agreement will address these issues and would be a more appropriate bargaining unit structure. On March 23, 2022, the Teamsters Canada Rail Conference (TCRC) served notice to commence bargaining for the renewal of the Conductor and Yard Coordinator collective agreement governing approximately 3,000 employees, which expired on July 22, 2022. In April 2022, CN filed a formal request with the CIRB requesting that the expiry date of the collective agreement be extended until the CIRB has rendered a decision on our application to conduct a bargaining unit review. On September 8, 2022, with the assistance of the CIRB as arbitrators, CN and the TCRC reached an agreement to consolidate 15 of the 16 collective bargaining agreements into one single agreement. On September 29, 2022, the CIRB ruled that the sixteenth agreement, represented by Unifor, would be consolidated with the other Transportation agreements into one single agreement, one bargaining unit. As a result of the mediated agreement between CN and the TCRC, the parties will negotiate one collective agreement for Locomotive Engineers and Conductors. CN and the TCRC will have up to 45 days to determine the process for consolidation, starting on the date that the CIRB issues the new bargaining certificate. The earliest possible day that CN and the TCRC will commence bargaining is October 27, 2022.

U.S. workforce

Collective bargaining agreements covering all non-operating and operating craft employees at Grand Trunk Western Railroad Company (GTW), companies owned by Illinois Central Corporation (ICC), companies owned by Wisconsin Central Ltd. (WC) and Bessemer & Lake Erie Railroad Company (BLE), and all employees at Pittsburgh and Conneaut Dock Company (PCD) are in place. The agreements in place have various moratorium provisions, which preserve the status quo with respect to the applicable collective bargaining agreement during the terms of such moratoriums. Where negotiations are ongoing, the terms and conditions of existing agreements generally continue to apply until new agreements are reached or the processes of the *Railway Labor Act* have been exhausted.

The general approach to labor negotiations by U.S. Class I railroads is to bargain on a collective national basis with the industry, which GTW, ICC, WC and BLE currently participate in, for collective bargaining agreements covering all union-represented employees, with the exception of two employee groups working at PCD covering in total fewer than 35 employees. National bargaining has reached the final dispute resolution processes as required under U.S. labor law (*Railway Labor Act* – "RLA"). On July 15, 2022, the President established a Presidential Emergency Board (PEB) that became effective on July 18, 2022. The PEB had 30 days after the effective date to issue a report with their recommendation for terms of a settlement. On August 17, 2022, the PEB issued its report and the second 30-day cooling off period commenced. The Class I railroads negotiated tentative agreements with 12 unions before the expiration of the cooling off period on September 16, 2022. The tentative agreements implement the PEB's recommendations. All of the new agreements increase wages by a compounded 24 percent over the five-year term of the contract, from 2020 through 2024, with a 14.1 percent wage increase effective immediately. The agreements also include five US$1,000 annual lump sum payments, adjustments to health care premiums, health benefit enhancements, and an additional personal leave day for all employees. A portion of the wage increases and lump sum payments are retroactive and will be paid out promptly upon ratification of the agreements by the unions' membership. The following six unions have ratified the agreements: the Transportation Communications Union/IAM (TCU/IAM), the Brotherhood of Railway Carmen (BRC), the International Brotherhood of Electrical Workers (IBEW), the American Train Dispatchers Association (ATDA), the SMART Railroad, Mechanical and Engineering Department (SMART MD) and the National Conference of Firemen & Oilers (NCFO). The tentative agreement with the Brotherhood of Maintenance of Way Employes Division of the International Brotherhood of Teamsters (BMWED) failed the ratification process. For any agreements that fail the membership ratification process, the status quo provisions will remain in place for a time period after the announcement of the voting results. The membership ratification vote for the remaining agreements will conclude by mid-November 2022, and the status quo dates are currently set for mid-November or mid-December 2022.

Regulation

Economic regulation - U.S.

The STB sought comments on a supplemental proposed rulemaking to establish a new rate case method for smaller cases known as Final Offer Rate Review that was originally proposed by the agency in 2019. The STB also sought comments on proposed rules for new voluntary alternative dispute resolution. Comments were submitted in the first quarter of 2022 in both proceedings.

On March 15 and 16, 2022, the STB held a public hearing concerning a proposal by the STB in 2016 to amend its regulations regarding reciprocal switching. Written testimony and post-hearing comments were submitted in February and April 2022. The STB members conducted additional meetings with stakeholders.

On August 8, 2019, the STB issued interim findings and guidance to National Railroad Passenger Corporation (Amtrak) and the Company regarding the terms and conditions for Amtrak's use of the Company's lines. On March 3, 2022, the STB issued a schedule for Amtrak and the Company to submit opening, reply, and rebuttal submissions on the remaining issues in the case. Opening and reply submissions were submitted in May and July 2022, and rebuttal submissions are due in August 2022.

On April 26 and April 27, 2022, the STB held a hearing on "Urgent Issues in Freight Rail Service". The STB required four Class I railroads to attend and invited three other Class I railroads, including the Company, to attend. On May 6, 2022, the STB required all Class I railroads to submit additional weekly service data and additional monthly employment data for six months. The STB also required certain Class I railroads to submit service recovery plans, but the Company is not required to do so.

On April 22, 2022, the STB proposed to revise its existing service emergency rules for rail shippers seeking a directed service order during a service emergency and propose accelerated process for acute service emergencies. Comments were submitted in May and June 2022.

On August 16, 2022, the U.S. government enacted the *Inflation Reduction Act* ("IRA"). The IRA imposes a one percent excise tax on specified repurchases of stock by certain publicly traded corporations, effective for repurchases after December 31, 2022. The amount on which the tax is imposed is reduced by the value of any stock issued by such corporation during the tax year. This provision currently does not impact CN. Future regulations and interpretations are expected to be issued to clarify how the excise tax will be applied in practice and may alter the Company's initial assessment. Although payments of this excise tax would increase the cost of making repurchases, it would not affect the Company's results of operations as they would be accounted for as direct costs of common share repurchases and recorded within Total shareholders' equity.

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.

Safety regulation - Canada

On March 10, 2021, the Minister issued two orders respecting railway uncontrolled movements. The first order imposes special interim procedures aimed at reducing the risks of uncontrolled movements. The second order requires the Canadian railway industry to revise existing rules to incorporate design and performance parameters for locomotives with roll-away protection, to develop a precise definition of attended versus unattended equipment as well as incorporate requirements on the use of roll-away protection to reduce the risks of an uncontrolled movement. In accordance with the second order, the Railway Association of Canada filed the requested revisions on March 10, 2022. The Minister approved the revised rules on May 9, 2022 and they came into force on October 1, 2022.

On November 25, 2020, the Minister approved the new Duty and Rest Period Rules for Operating Employees subject to conditions clarifying some aspects of the Rules. In accordance with the new Rules, CN filed with Transport Canada on November 25, 2021, its Fatigue Management Plan containing an extensive set of prescriptive requirements for processes around scheduling, fitness for duty, deadheading, and other requirements of the new rules. On March 11, 2022, Transport Canada opened pre-consultations on proposed Fatigue Management System Regulations. On November 25, 2022, provisions of the Rules prohibiting employees from commencing a duty period or operating railway equipment if unfit for duty come into force. The other provisions of the Rules applicable to CN will come into effect on May 25, 2023.

On July 9 and 11, 2021, Transport Canada issued orders pursuant to the *Railway Safety Act* in response to wildfires in British Columbia. In addition to requiring the implementation of specific measures aimed at reducing the risk of fires and improving their detection, the Order directed railway companies to complete and implement a Final Extreme Weather Fire Risk Mitigation Plan ("Final Plan") within 60 days following the issuance of these orders. In accordance with this requirement, CN filed its proposed Final Plan on September 9, 2021. On October 14, 2021, the Transportation Safety Board confirmed that its investigation of the Lytton fire had not revealed any evidence to link railway operations to the fire. On June 15, 2022, the Minister approved the *Railway Extreme Heat and Fire Risk Mitigation Rules* requiring railway companies to reduce speed and conduct additional track inspections when temperatures are high, inspect locomotive exhaust systems more frequently, and implement a fire risk reduction plan.

Transport Canada issued an order effective October 30, 2021 requiring employers in the federally regulated rail sectors to either establish mandatory vaccination policies for all employees in their organizations or require rail crew and track employees to submit to rigorous testing protocols. Each railway that implements a mandatory vaccination policy must include a provision for employee attestation/declaration of their vaccination status; include a description of consequences for employees who do not comply or who falsify information; and meet standards consistent with the approach taken by the Government of Canada for the Core Public Administration. After November 15, 2021, each railway is required to guarantee employees have at least one shot of a COVID-19 vaccine or they will be unable to work. All employees were required to be fully vaccinated by January 24, 2022. On June 17, 2022, Transport Canada issued an order ending vaccination mandates for railway passengers and employees. As of October 1, 2022, proof of vaccination, pre-entry and arrival tests, as well as quarantine are no longer required for travellers, including train crews, entering Canada.

On May 31, 2022, the Minister approved revisions to the Rules Respecting Track Safety which will come into force on May 31, 2023. The revisions include requirements to make available to Transport Canada railway track standards and for the confidential treatment of technical sensitive information provided by railway companies. The revisions also provide for the development of a plan for selecting, defining and analyzing key performance indicators; new requirement for crossties and new inspection requirements for Class I track where occupied passenger trains are operated.

On July 25, 2022, the Minister issued an order requesting railway companies to revise the Railway Freight and Passenger Train Brake Inspection and Safety Rules to incorporate enhanced inspection requirements for the performance of air brakes, including in cold temperatures. The proposed revisions respecting air brake train tests must be filed by November 30, 2022 and those respecting test standards must be filed by May 31, 2023.

On September 2, 2022, Transport Canada's Locomotive Voice and Video Recorder ("LVVR") Regulations came into force. These regulations prohibit a railway company from operating railway equipment unless it is fitted with prescribed recording instruments and the prescribed information is recorded, collected and preserved. LVVR technology will assist in preventing accidents and facilitate investigations to better understand the circumstances of accidents. Supply chain disruptions have hampered the industry's ability to strictly adhere to the implementation timelines. Transport Canada acknowledges these challenges and encourages the industry to diligently equip their operating railway equipment.

On October 6, 2022, a Task Force appointed by the Minister on January 31, 2022 made recommendations regarding short and long-term actions to alleviate supply chain congestion. No formal action has been announced by the Minister on the basis of this report.

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.

Safety regulation - U.S.

On February 18, 2020, the Federal Railroad Administration (FRA) issued a final rule that requires each Class I railroad and certain shortline railroads to develop a railroad Risk Reduction Program (RRP) in a written plan that will be reviewed and approved by the FRA and will be subject to audit. CN submitted its plan on August 16, 2021. Rail labor previously challenged aspects of the FRA rule in the United States Court of Appeals for the DC Circuit, including protection from discovery for information compiled by railroads for purposes of implementing the rule. On August 20, 2021, the United States Court of Appeals for the DC Circuit denied the challenge filed by rail labor to the FRA's final rule concerning the risk reduction programs. In November 2021, the FRA denied the Class I risk reduction program plans with comments. CN submitted its revised plan on February 7, 2022 and made further revisions in response to comments from the FRA on March 25, 2022. On July 7, 2022, the FRA approved the Company's RRP. On September 8, 2022, the FRA issued a notice of proposed rulemaking regarding the RRP, whether the FRA should retain or remove a provision in the final rule clarifying that contractors who perform a significant portion of a railroad’s operations are considered the railroad’s directly affected employees for purposes of the RRP rule. The FRA is seeking comments in response to a petition for reconsideration of the final rule filed by the Association of American Railroads (AAR). Comments are due November 7, 2022.

On March 1, 2021, the FRA implemented an emergency order governing the use of face masks in railroad operations. On April 19, 2022, the FRA announced that it will not enforce its face mask emergency order at this time in light of the court decision concerning the Centers for Disease Control and Prevention (CDC) transportation mask order.

The U.S. government previously announced that it intended to impose vaccine mandates on (1) government contractors and (2) all private sector employers with 100 or more employees. As to government contractors, the Biden Administration issued Executive Order 14042 called “Ensuring Adequate COVID-19 Safety Protocols for Federal Contractors.” The Executive Order required federal government contractors and others doing business with federal contractors to require vaccination of their employees. The contractor mandate was originally scheduled to go into effect on January 10, 2022. However, a federal court enjoined the contractor mandate on a nationwide basis. Requests to stay the injunction pending appeal were denied. The Eleventh Circuit Court of Appeals held oral argument on the validity of the contractor mandate on April 8, 2022. On August 26, 2022, the Eleventh Circuit held the Biden Administration did not have authority to issue the vaccine mandate for federal contractors, but the court concluded that the injunction’s nationwide scope is too broad and upheld the injunction for the seven states in the litigation. The Biden Administration has indicated that they do not plan to enforce the mandate with the preliminary injunction in place. For private sector employers, the Occupational Safety and Health Administration (OSHA) issued an emergency temporary standard (ETS) requiring employers with 100 or more employees to mandate vaccination. After a decision by the United States Supreme Court, OSHA withdrew the ETS.

On June 13, 2022, the FRA issued a final rule requiring Class I and other railroads to submit fatigue risk management program plans by July 13, 2023 to the FRA for approval. Railroads have 36 months to implement their plans after the FRA approves the plans.

On July 28, 2022, the FRA proposed a rule requiring two-person crew, except in certain circumstances. Comments are due on December 2, 2022. The FRA announced that it will hold a public hearing on the proposed rule.

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.

Reliance on technology and related cybersecurity risk

New regulatory obligations related to cybersecurity and technology risk may impose additional costs and obligations on the Company and may lead to government inquiries or requests for information. This includes, but is not limited to, a December 2021 Security Directive from the United States Department of Homeland Security (DHS) and Transportation Security Administration (TSA) requiring rail operators to take several actions in 2022 to enhance rail cybersecurity.

On October 18, 2022, the TSA issued the second Security Directive titled Rail Cybersecurity Mitigation Actions that applies to Class I railroads effective October 24, 2022. This security directive applies to critical cyber systems, which if compromised could result in an operational disruption, and requires railroads to submit a cybersecurity implementation plan by February 21, 2023 to the TSA for approval and develop a cybersecurity assessment program plan, which must be updated annually.

Fuel costs and supply disruptions

The Company is susceptible to the volatility of fuel prices due to changes in the economy or supply disruptions. Rapid rises in fuel prices, such as those experienced in 2022, or fuel supply disruptions can occur due to refinery disruptions, production quota restrictions, climate, as well as labor and political instability such as the ongoing Russia-Ukraine conflict. Increases in fuel prices or supply disruptions may materially adversely affect the Company's results of operations, financial position or liquidity.

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, 2022, have concluded that the Company's disclosure controls and procedures were effective.

During the third quarter ended September 30, 2022, 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.