ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with the Company's Interim Consolidated Financial Statements and the related notes for the three and six months ended June 30, 2020 in Item 1. Financial Statements, other information in this report, and Item 8. Financial Statements and Supplementary Data of the Company's 2019 Annual Report on Form 10-K. Except where otherwise indicated, all financial information reflected herein is expressed in Canadian dollars.

For purposes of this report, all references herein to "CP", "the Company", "we", "our" and "us" refer to CPRL, CPRL and its subsidiaries, CPRL and one or more of its subsidiaries, or one or more of CPRL's subsidiaries, as the context may require.

Available Information

CP makes available on or through its website www.cpr.ca free of charge, its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such reports are filed with or furnished to the Securities and Exchange Commission ("SEC"). Our website also contains charters for our Board of Directors and each of its committees, our corporate governance guidelines and our Code of Business Ethics. SEC filings made by CP are also accessible through the SEC's website at www.sec.gov. The information on our website is not part of this quarterly report on Form 10-Q.

The Company has included the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") certifications regarding the Company's public disclosure required by Section 302 of the Sarbanes-Oxley Act of 2002 as Exhibits to this report.

Executive Summary

Second Quarter of 2020 Results

- *Financial performance* - In the second quarter of 2020, CP reported Diluted earnings per share ("EPS") of $4.66, a decrease of 10% as compared to the same period of 2019 and Net income of $635 million in the second quarter of 2020, a decrease of 12% as compared to the same period of 2019. These decreases were primarily due to lower Operating income in the second quarter of 2020 and an income tax recovery associated with a change in tax rate in 2019, partially offset by higher foreign exchange ("FX") translation gains on debt and lease liabilities in 2020.

  Adjusted diluted EPS was $4.07 in the second quarter of 2020, a decrease of 5% compared to the same period of 2019. Adjusted income was $553 million in the second quarter of 2020, a decrease of 8% compared to the same period of 2019. These decreases were primarily due to lower Operating income in the second quarter of 2020.

  Adjusted diluted EPS and Adjusted income are defined and reconciled in Non-GAAP Measures and discussed further in Results of Operations of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

  CP reported an Operating ratio of 57.0% in the second quarter of 2020, a 140 basis point improvement as compared to the same period of 2019. This improvement was primarily due to favourable changes in fuel prices, revenue from liquidated damages, including customer volume commitments, higher freight rates, and efficiencies generated from improved operating performance, partially offset by lower volumes.

- *Total revenues* - Total revenues decreased by 9% in the second quarter of 2020 to $1,792 million from $1,977 million in the same period of 2019. This decrease was primarily due to lower volumes as measured by revenue ton-miles ("RTMs") primarily due to the impacts of the novel strain of Coronavirus ("COVID-19"), partially offset by the favourable effect of liquidated damages, including customer volume commitments, and higher freight rates.

- *Operating performance* - CP's average train weight increased by 7% to 9,984 tons and average train length increased by 8% to 8,089 feet, compared to the same period in 2019. These increases were a result of improvements in operating plan efficiency and continued improvements in operational efficiency for Grain trains, partially offset by lower volumes of heavier commodities such as Canadian coal, in each case compared to the same period in 2019. These metrics are discussed further in Performance Indicators of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Recent Developments

- On July 21, 2020, CP declared a quarterly dividend of $0.95 per share on the outstanding Common Shares, an increase from $0.83 per share from the prior quarter. The dividend is payable on October 26, 2020 to holders of record at the close of business on September 25, 2020.

- In the second quarter of 2020, the effects of COVID-19 on consumer demand resulted in lower volumes in the following lines of business: Energy, chemicals and plastics, Metals, minerals and consumer products, Intermodal, and Automotive. The future impacts of the COVID-19 pandemic on CP's business continue to be uncertain, however the Company has put forward our current estimate of the impact on our business in our revised 2020 outlook discussed below. CP continues to adapt its resources in real time and deliver for our customers and the North American economy.

As COVID-19 continued to spread throughout Canada and the United States during the three months ended June 30, 2020, CP conducted business as usual, to the greatest extent possible in the circumstances, while continuing to apply principles of precision scheduled railroading to respond to changes in demand. The Company is continuing to take a variety of measures to ensure the availability of its transportation services throughout our network, promote the safety and security of our employees , and support the communities in which we operate. CP is also supporting employees by working with labour unions to shorten recall times, to be prepared for demand increases. Certain modifications the Company has made in response to the COVID-19 pandemic include but are not limited to: implementing a period of working at home for all non-essential support staff; restricting employee business travel; implementing post-travel employee screening; strengthening clean workplace practices; reinforcing socially responsible sick leave recommendations; limiting visitor and third-party access to Company facilities; launching internal COVID-19 resources for employees; creating a pandemic response team comprised of employees and members of senior management; encouraging telephonic and video conference-based meetings along with other hygiene and social distancing practices recommended by health authorities including Health Canada, the U.S. Centers for Disease Control and Prevention, and the World Health Organization; and supplementing employment insurance payments and maintaining health benefit coverage of employees through the pandemic. CP is responding to this crisis through measures designed to protect our workforce and prevent disruptions to the central role the Company's operations provide to the North American economy. CP's service is deemed essential as part of the transportation industry. We remain well positioned to adjust to market conditions to assist our customers as they work to manage their supply chain and inventories.

Since health authorities in some North American jurisdictions have begun slowly easing restrictions, the Company began a phased reintegration back into the workplace of non-essential office employees who had been working remotely. The Company implemented preventative measures that serve to minimize the risk of exposure to COVID-19. The measures include slowly progressing the number of employees returning to the office, modifying our workspace to implement physical distancing measures, and continuously reevaluating our efforts with safety as a top priority.

We have observed many other companies, including companies in our industry, taking precautionary and preemptive actions to address the COVID-19 pandemic, and companies may take further actions that alter their normal business operations. We will continue to actively monitor the situation and may take further actions that could materially alter our business operations as may be required or recommended by federal, provincial, state or local authorities, or that we determine are in the best interests of our employees, customers, shareholders, partners, suppliers, and other stakeholders.

Additional information concerning the impact COVID-19 may have to our future business and results of operations is provided in Part II, Item 1A. Risk Factors.

- In the second quarter of 2020, CP completed its previously announced acquisition of Central Maine and Québec Railway U.S. Inc. ("CMQ U.S."). Together with the earlier completion of the previously announced acquisition of Central Maine & Québec Railway Canada Inc. ("CMQ Canada"), the acquisition of CMQ U.S. completes CP's purchase of the entire CMQ network originally announced on November 20, 2019. CMQ U.S. and CMQ Canada will continue to operate in the U.S. and in Canada respectively as subsidiaries of CP. This allows CP to integrate CMQ U.S.'s 244.2 route-miles of rail line in Maine and Vermont into CP's network. The transaction also includes 57.3 route-miles leased from the Maine Department of Transportation. CMQ U.S.'s network links CP directly to the Atlantic Ocean port of Searsport, Maine, and to Port Saint John in New Brunswick through connections with Eastern Maine Railway and New Brunswick Southern Railway. With the CMQ acquisition, CP is now a 13,000-mile rail network connecting the Atlantic coast to the Pacific coast across six Canadian provinces and 11 U.S. states.

Prior Developments

- For the first quarter of 2020, the global emergence of the novel strain of COVID-19 had no material impact to CP’s business, financial condition, or results of operations. However, given the uncertainty of the future impacts of the COVID-19 pandemic on CP’s business and the broader macroeconomic environment, the Company updated its 2020 outlook based on the estimate of the impact on its business.

- The Company’s annual meeting of shareholders, held on April 21, 2020, was conducted via a virtual-only format by live webcast online for the first time. All 11 director nominees were elected.

- During the first quarter of 2019, the Company experienced severe winter operating conditions and an increase in the frequency and severity of casualty incidents and derailments. As a result, the Company incurred significant costs to manage severe weather conditions, as well as direct casualty costs, and higher operating costs. During this period and the subsequent network recovery the Company also experienced losses and deferrals of potential revenues.

2020 Outlook

Based on the strength of the Company’s performance to date, on July 22, 2020, CP updated the outlook for 2020 that CP had previously updated on April 21, 2020. The Company now expects to deliver Adjusted diluted EPS growth year over year based on Adjusted diluted EPS of $16.44 in 2019. CP continues to expect volume, as measured in RTMs, to be down mid-single digits and capital expenditures of $1.6 billion as the Company takes advantage of available track time to better position the network for recovery and support long-term shareholder returns. CP's revised earnings guidance assumes an FX rate of approximately $1.35 USD/CAD as compared to $1.40 USD/CAD previously, other components of net periodic benefit recovery to decrease by approximately $40 million as compared to 2019 and an effective tax rate of approximately 24.8 percent as a result of the accelerated reduction of the Alberta corporate tax rate as compared to 25.0 percent previously. Adjusted diluted EPS is defined and reconciled in Non-GAAP Measures and discussed further in Results of Operations of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Although CP has provided a forward-looking Non-GAAP measure (Adjusted diluted EPS), management is unable to reconcile, without unreasonable efforts, the forward-looking Adjusted diluted EPS to the most comparable GAAP measure, due to unknown variables and uncertainty related to future results. These unknown variables may include unpredictable transactions of significant value. In past years, CP has recognized significant asset impairment charges, management transition costs related to senior executives and discrete tax items. These or other similar, large unforeseen transactions affect diluted EPS but may be excluded from CP's Adjusted diluted EPS. Additionally, the U.S.-to-Canadian dollar exchange rate is unpredictable and can have a significant impact on CP's reported results but may be excluded from CP's Adjusted diluted EPS. In particular, CP excludes the FX impact of translating the Company's debt and lease liabilities, the impact from changes in income tax rates and a provision for uncertain tax item from Adjusted diluted EPS. Please see Forward-Looking Statements in this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations for further discussion.

Performance Indicators

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

	For the three months ended June 30			**For the six months ended June 30**		
	2020	2019(1)	% Change	**2020**	2019(1)	% Change
Operations Performance						
Gross ton-miles ("GTMs") (millions)	**63,077**	72,717	(13)	**134,410**	137,571	(2)
Train miles (thousands)	**6,865**	8,373	(18)	**15,238**	16,196	(6)
Average train weight - excluding local traffic (tons)	**9,984**	9,295	7	**9,544**	9,088	5
Average train length - excluding local traffic (feet)	**8,089**	7,523	8	**7,713**	7,350	5
Average terminal dwell (hours)	**6.5**	6.4	2	**6.4**	7.1	(10)
Average train speed (miles per hour, or "mph")	**22.4**	22.4	—	**22.0**	21.8	1
Locomotive productivity (GTMs / operating horsepower)	**212**	207	2	**206**	196	5
Fuel efficiency (U.S. gallons of locomotive fuel consumed / 1,000 GTMs)	**0.921**	0.934	(1)	**0.947**	0.972	(3)
Total Employees and Workforce						
Total employees (average)	**12,001**	13,274	(10)	**12,244**	13,059	(6)
Total employees (end of period)	**11,988**	13,330	(10)	**11,988**	13,330	(10)
Workforce (end of period)	**12,033**	13,365	(10)	**12,033**	13,365	(10)
Safety Indicators(1)						
FRA personal injuries per 200,000 employee-hours	**1.12**	1.00	12	**1.14**	1.46	(22)
FRA train accidents per million train-miles	**1.06**	0.87	22	**1.02**	1.23	(17)

(1) FRA personal injuries per 200,000 employee-hours for the six months ended June 30, 2019 was previously reported as 1.47, restated to 1.46 for the current report. FRA train accidents per million train-miles for the three and six months ended June 30, 2019 were previously reported as 0.77 and 1.18, restated to 0.87 and 1.23, respectively for the current report. These adjustments reflect new information available within specified periods stipulated by the FRA but that exceed the Company's financial reporting timeline.

For key measures of the Company's revenue performance, refer to Operating Revenues of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Operations Performance

These key measures are used by management as comparisons to historical operating results and in the planning process to facilitate decisions that continue to drive further productivity improvements in the Company's operations. Results of these key measures reflect how effective CP's management is at controlling costs and executing the Company's operating plan and strategy. Continued monitoring of these key measures ensures that the Company can take appropriate actions to ensure the delivery of superior service and be able to grow its business at low incremental cost.

Three months ended June 30, 2020 compared to the three months ended June 30, 2019

- A **GTM** is defined as the movement of one ton of train weight over one mile. GTMs are calculated by multiplying total train weight by the distance the train moved. Total train weight comprises the weight of the freight cars, their contents, and any inactive locomotives. An increase in GTMs indicates additional workload. GTMs decreased by 13% in the second quarter of 2020 compared to the same period of 2019. This decrease was mainly attributable to lower volumes of crude, Coal, frac sand, and Intermodal. This decrease was partially offset by higher volumes of Canadian grain, Fertilizers and sulphur, and Potash.

- **Train miles** are defined as the sum of the distance moved by all trains operated on the network. Changes in train miles indicate the combined effect of changes in workload (GTMs) and train weight efficiency. Train miles decreased by 18% in the second quarter of 2020 compared to the same period of 2019. This decrease reflects the impact of a 13% decrease in workload (GTMs) as well as a 7% increase in average train weights.

- **Average train weight** is defined as the average gross weight of CP trains, both loaded and empty. This excludes trains in short-haul service, work trains used to move CP's track equipment and materials, and the haulage of other railroads' trains on CP's network. An increase in average train weight indicates improved asset utilization and may also be the result of moving heavier commodities. Average train weight increased by 7% in the second quarter of 2020 compared to the same period of 2019. This increase was a result of improvements in operating plan efficiency and continued improvements in operational efficiency for Grain trains driven by the 8,500-foot High Efficiency Product ("HEP") train model, partially offset by lower volumes of heavier commodities such as Canadian coal.

- **Average train length** is defined as the average total length of CP trains, both loaded and empty. This includes all cars and locomotives on the train and is calculated as the sum of each car or locomotive's length multiplied by the distance travelled, divided by train miles. This excludes trains in short-haul service, work trains used to move CP's track equipment and materials, and the haulage of other railroads' trains on CP's network. An increase in average train length indicates improved asset utilization. Average train length increased by 8% in the second quarter of 2020 compared to the same period of 2019. This increase was a result of improvements in operating plan efficiency and continued improvements in operational efficiency for Grain trains driven by the 8,500-foot HEP train model, partially offset by lower volumes of commodities such as Canadian coal, which move in longer trains.

- **Average terminal dwell** is defined as the average time a freight car resides within terminal boundaries expressed in hours. The timing starts with a train arriving at the terminal, a customer releasing the car to the Company, or a car arriving at interchange from another railroad. The timing ends when the train leaves, a customer receives the car from CP, or the freight car is transferred to another railroad. Freight cars are excluded if they are being stored at the terminal or used in track repairs. A decrease in average terminal dwell indicates improved terminal performance resulting in faster cycle times and improved railcar utilization. Average terminal dwell increased by 2% in the second quarter of 2020 compared to the same period of 2019. This increase was a result of aligning the operating plan to demand in order to maintain efficiencies in network fluidity.

- **Average train speed** is defined as a measure of the line-haul movement from origin to destination including terminal dwell hours. It is calculated by dividing the total train miles travelled by the total train hours operated. This calculation does not include delay time related to customers or foreign railroads and excludes the time and distance travelled by: i) trains used in or around CP's yards; ii) passenger trains; and iii) trains used for repairing track. An increase in average train speed indicates improved on-time performance resulting in improved asset utilization. Average train speed was flat in the second quarter of 2020 compared to the same period of 2019.

- **Locomotive productivity** is defined as the daily average GTMs divided by daily average operating horsepower. Operating horsepower excludes units offline, tied up or in storage, or in use on other railways, and includes foreign units online. An increase in locomotive productivity indicates more efficient locomotive utilization and may also be the result of moving heavier commodities. Locomotive productivity increased by 2% in the second quarter of 2020 compared to the same period of 2019. This increase was due to improvements in operating plan efficiency.

- **Fuel efficiency** is defined as U.S. gallons of locomotive fuel consumed per 1,000 GTMs. Fuel consumed includes gallons from freight, yard and commuter service but excludes fuel used in capital projects and other non-freight activities. An improvement in fuel efficiency indicates operational cost savings and CP's commitment to corporate sustainability through a reduction of greenhouse gas emissions intensity. Fuel efficiency improved by 1% in the second quarter of 2020 compared to the same period of 2019. This increase in efficiency was due to improved train productivity.

Six months ended June 30, 2020 compared to the six months ended June 30, 2019

- **GTMs** decreased by 2% for the first six months of 2020 compared to the same period of 2019. This decrease was primarily due to decreased volumes of Canadian coal, frac sand, and U.S. grain. This decrease was partially offset by increased volumes of Canadian grain, and Fertilizers and sulphur.

- **Train miles** decreased by 6% for the first six months of 2020 compared to the same period of 2019. This decrease reflected the impact of a 2% decrease in workload (GTMs), as well as a 5% increase in average train weights.

- **Average train weight** increased by 5% for the first six months of 2020 compared to the same period of 2019. This increase was a result of improvements in operating plan efficiency, continued improvements in operational efficiency for Grain trains driven by the 8,500-foot HEP train model, and improved winter operating conditions in the first quarter of 2020. This increase is partially offset by lower volumes of heavier commodities such as Canadian coal.

- **Average train length** increased by 5% for the first six months of 2020 from the same period of 2019. This increase was primarily due to improvements in operating plan efficiency and continued improvements in operational efficiency for Grain trains driven by the 8,500-foot HEP train model, partially offset by lower volumes of commodities such as Canadian coal, which move in longer trains.

- **Average terminal dwell** decreased by 10% in the first six months of 2020 compared to the same period of 2019. This favourable decrease was due to improved network fluidity as a result of a continued focus on velocity and terminal efficiency in the first quarter of 2020, partially offset by the alignment of the operating plan to demand in order to maintain efficiencies in network fluidity in the second quarter of 2020.

- **Average train speed** increased by 1% in the first six months of 2020 compared to the same period of 2019. This increase in speed was due to improved winter operating conditions in the first quarter of 2020.

- **Locomotive productivity** increased by 5% in the first six months of 2020 compared to the same period of 2019. This increase was driven by improvements in operating plan efficiency.

- **Fuel efficiency** improved by 3% in the first six months of 2020 compared to the same period of 2019. This increase in efficiency was primarily due to improved winter operating conditions in the first quarter of 2020 and increased train productivity.

Total Employees and Workforce

An **employee** is defined as an individual currently engaged in full-time, part-time, or seasonal employment with CP while **workforce** is defined as total employees plus contractors and consultants. The Company monitors employment and workforce levels in order to efficiently meet service and strategic requirements. The number of employees is a key driver to total compensation and benefits costs.

The average number of total employees decreased by 10% and 6% for the three and six months ended June 30, 2020, respectively, compared to the same periods of 2019. The total number of employees as at June 30, 2020 was 11,988, a decrease of 1,342, or 10%, compared to 13,330 as at June 30, 2019. The total workforce as at June 30, 2020 was 12,033, a decrease of 1,332, or 10%, compared to 13,365 as at June 30, 2019. The decrease in total employees and workforce is due to more efficient resource planning, including furloughs associated with the economic downturn caused by COVID-19, partially offset by the addition of employees from the acquisition of CMQ.

Safety Indicators

Safety is a key priority and core strategy for CP's management, employees, and Board of Directors. Personal injuries and train accidents are indicators of the effectiveness of the Company's safety systems, and are used by management to evaluate and, as necessary, alter the Company's safety systems, procedures, and protocols. Each measure follows U.S. Federal Railroad Administration ("FRA") reporting guidelines, which can result in restatement after initial publication to reflect new information available within specified periods stipulated by the FRA but that exceed the Company's financial reporting timeline.

The **FRA personal injuries per 200,000 employee-hours** frequency is the number of personal injuries, multiplied by 200,000 and divided by total employee hours. Personal injuries are defined as injuries that require employees to lose time away from work, modify their normal duties or obtain medical treatment beyond minor first aid. FRA employee-hours are the total hours worked, excluding vacation and sick time, by all employees, excluding contractors. The FRA personal injuries per 200,000 employee-hours frequency for CP was 1.12 in the second quarter of 2020, an increase from 1.00 in the same period of 2019. For the first six months of 2020, the FRA personal injury rate per 200,000 employee-hours for CP was 1.14, a decrease from 1.46 in the same period of 2019.

The **FRA train accidents per million train-miles** frequency is the number of train accidents, multiplied by 1,000,000 and divided by total train miles. Train accidents included in this metric meet or exceed the FRA reporting threshold of U.S. $10,700 in damage. The FRA train accidents per million train-miles was 1.06 in the second quarter of 2020, an increase from 0.87 in the same period of 2019. For the first six months of 2020, the FRA train accidents per million train-miles was 1.02, a decrease from 1.23 in the same period of 2019.

Financial Highlights

The following table presents selected financial data related to the Company's financial results as of, and for the three and six months ended, June 30, 2020 and the comparative figures in 2019. The financial highlights should be read in conjunction with Item 1. Financial Statements and this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

	For the three months ended June 30		For the six months ended June 30	
(in millions, except per share data, percentages and ratios)	**2020**	2019	**2020**	2019
Financial Performance and Liquidity				
Total revenues	**$ 1,792**	$ 1,977	**$ 3,835**	$ 3,744
Operating income	**770**	822	**1,604**	1,365
Net income	**635**	724	**1,044**	1,158
Adjusted income[(1)]	**553**	602	**1,160**	994
Basic EPS	**4.68**	5.19	**7.67**	8.28
Diluted EPS	**4.66**	5.17	**7.64**	8.25
Adjusted diluted EPS[(1)]	**4.07**	4.30	**8.49**	7.08
Dividends declared per share	**0.8300**	0.8300	**1.6600**	1.4800
Cash provided by operating activities	**835**	721	**1,324**	1,134
Cash used in investing activities	**(468)**	(455)	**(830)**	(674)
Cash used in financing activities	**(322)**	(572)	**(366)**	(474)
Free cash[(1)]	**333**	265	**491**	458
Financial Position	**As at June 30, 2020**		As at December 31, 2019	
Total assets	**$ 23,562**		$ 22,367	
Total long-term debt, including current portion	**9,548**		8,757	
Total shareholders' equity	**7,465**		7,069	
	For the three months ended June 30		For the six months ended June 30	
Financial Ratios	**2020**	2019	**2020**	2019
Operating ratio[(2)]	**57.0%**	58.4%	**58.2%**	63.5%
	For the twelve months ended June 30			
	2020		2019	
Return on average shareholders' equity[(3)]	**31.8%**		33.9%	
Adjusted return on invested capital ("Adjusted ROIC")[(1)]	**17.1%**		16.8%	
Long-term debt to Net income ratio[(4)]	**4.1**		3.7	
Adjusted net debt to adjusted EBITDA ratio[(1)]	**2.4**		2.4	

(1) These measures have no standardized meanings prescribed by accounting principles generally accepted in the United States of America ("GAAP") and, therefore, may not be comparable to similar measures presented by other companies. These measures are defined and reconciled in Non-GAAP Measures of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

(2) Operating ratio is defined as operating expenses divided by revenues, further discussed in Results of Operations of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

(3) Return on average shareholders' equity is defined as Net income divided by average shareholders' equity, averaged between the beginning and ending balance over a rolling 12-month period, further discussed in Results of Operations of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

(4) Long-term debt to Net income ratio is defined as long-term debt, including long-term debt maturing within one year, divided by Net income, further discussed in Liquidity and Capital Resources of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Results of Operations

Three months ended June 30, 2020 compared to the three months ended June 30, 2019

Income

Operating income was $770 million in the second quarter of 2020, a decrease of $52 million, or 6%, from $822 million in the same period of 2019. This decrease was primarily due to lower volumes as measured by RTMs due to the impacts of COVID-19.

This decrease was partially offset by:
- liquidated damages, including customer volume commitments, and higher freight rates;
- the favourable impact of $24 million from changes in fuel prices; and
- the efficiencies generated from improved operating performance and asset utilization.

Net income was $635 million in the second quarter of 2020, a decrease of $89 million, or 12%, from $724 million in the same period of 2019. This decrease was primarily due to lower Operating income in 2020 and an income tax recovery associated with a change in tax rate in 2019, partially offset by higher FX translation gains on U.S. dollar-denominated debt and lease liabilities compared to the same period of 2019.

Adjusted income, defined and reconciled in Non-GAAP Measures of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, was $553 million in the second quarter of 2020, a decrease of $49 million, or 8%, from $602 million in the same period of 2019. This decrease was primarily due to lower Operating income.

Diluted Earnings per Share

Diluted EPS was $4.66 in the second quarter of 2020, a decrease of $0.51, or 10%, from $5.17 in the same period of 2019. This decrease was due to lower Net income, partially offset by a lower average number of outstanding shares due to the Company's share repurchase program.

Adjusted diluted EPS, defined and reconciled in Non-GAAP Measures of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, was $4.07 in the second quarter of 2020, a decrease of $0.23, or 5%, from $4.30 in the same period of 2019. This decrease was primarily due to lower Adjusted income, partially offset by a lower average number of outstanding shares due to the Company's share repurchase program.

Operating Ratio

The Operating ratio provides the percentage of revenues used to operate the railway. A lower percentage normally indicates higher efficiency in the operation of the railway. The Company's Operating ratio was 57.0% in the second quarter of 2020, a 140 basis point improvement from 58.4% in the same period of 2019. This improvement was primarily due to:
- the favourable impact of changes in fuel prices;
- liquidated damages, including customer volume commitments, and higher freight rates; and
- the efficiencies generated from improved operating performance and asset utilization.

This improvement was partially offset by lower volumes as measured by RTMs and lower gains on land sales.

Return on Average Shareholders' Equity and Adjusted Return on Invested Capital

Return on average shareholders' equity and Adjusted ROIC are measures used by management to determine how productively the Company uses its long-term capital investments, representing critical indicators of good operating and investment decisions. Adjusted ROIC is also an important performance criteria in determining certain elements of the Company's long-term incentive plan.

Return on average shareholders' equity was 31.8% for the twelve months ended June 30, 2020, a 210 basis point decrease compared to 33.9% for the twelve months ended June 30, 2019. This decrease was due to higher average shareholders' equity due to accumulated Net income, partially offset by the impact of the Company's share repurchase program.

Adjusted ROIC was 17.1% for the twelve months ended June 30, 2020, a 30 basis point increase compared to 16.8% for the twelve months ended June 30, 2019, primarily due to higher Operating income. This increase was partially offset by the increase in adjusted average invested capital primarily due to higher Adjusted income, partially offset by the impact of the Company's share repurchase program. Adjusted ROIC is a Non-GAAP measure, which is defined and reconciled from Return on average shareholders' equity, the most comparable measure calculated in accordance with GAAP, in Non-GAAP Measures of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Six months ended June 30, 2020 compared to the six months ended June 30, 2019

Income

Operating income was $1,604 million in the first six months of 2020, an increase of $239 million, or 18%, from $1,365 million in the same period of 2019. This increase was primarily due to:

- liquidated damages, including customer volume commitments, and higher freight rates;
- the efficiencies generated from improved operating performance and asset utilization;
- the favourable impact of changes in fuel prices; and
- the impact of harsher winter operating conditions in 2019.

This increase was partially offset by higher depreciation and amortization of $42 million (excluding FX) and cost inflation.

Net income was $1,044 million in the first six months of 2020, a decrease of $114 million, or 10%, from $1,158 million in the same period of 2019. This decrease was primarily due to an FX translation loss on U.S. dollar-denominated debt and lease liabilities of $129 million, compared to an FX translation gain of $82 million in the same period of 2019, an income tax recovery of $88 million associated with a change in tax rate in 2019, partially offset by higher Operating income.

Adjusted income was $1,160 million in the first six months of 2020, an increase of $166 million, or 17%, from $994 million in the same period of 2019. This increase was primarily due to higher Operating income, partially offset by higher taxes due to higher taxable income.

Diluted Earnings per Share

Diluted EPS was $7.64 in the first six months of 2020, a decrease of $0.61, or 7%, from $8.25 in the same period of 2019. This decrease was due to lower Net income, partially offset by a lower average number of outstanding shares due to the Company's share repurchase program.

Adjusted diluted EPS was $8.49 in the first six months of 2020, an increase of $1.41, or 20%, from $7.08 in the same period of 2019. This increase was primarily due to higher Adjusted income and a lower average number of outstanding shares due to the Company's share repurchase program.

Operating Ratio

The Company's Operating ratio was 58.2% in the first six months of 2020, a 530 basis point improvement from 63.5% in the same period of 2019. This improvement was primarily due to:

- liquidated damages, including customer volume commitments, and higher freight rates;
- the favourable impact of changes in fuel prices;
- the efficiencies generated from improved operating performance and asset utilization; and
- the impact of harsh winter operating conditions in 2019.

This improvement was partially offset by higher depreciation and amortization and cost inflation.

Impact of FX on Earnings

Fluctuations in FX affect the Company's results because U.S. dollar-denominated revenues and expenses are translated into Canadian dollars. U.S. dollar-denominated revenues and expenses increase (decrease) when the Canadian dollar weakens (strengthens) in relation to the U.S. dollar. In the second quarter of 2020, the impact of a stronger U.S. dollar resulted in an increase in total revenues of $35 million, an increase in total operating expenses of $19 million, and an increase in interest expense of $4 million from the same period of 2019. In the first six months of 2020, the impact of a stronger U.S. dollar resulted in an increase in total revenues of $41 million, an increase in total operating expenses of $25 million, and an increase in interest expense of $5 million from the same period of 2019.

On July 17, 2020, the noon buying rate certified for customs purposes by the U.S. Federal Reserve Bank of New York was U.S. $1.00 = 1.36 Canadian dollar.

The following tables set forth, for the periods indicated, the average exchange rate between the Canadian dollar and the U.S. dollar expressed in the Canadian dollar equivalent of one U.S. dollar, the period end exchange rates, and the high and low exchange rates for the periods indicated. Averages for year-end periods are calculated by using the exchange rates on the last day of each full month during the relevant period. These rates are based on the noon buying rate certified for customs purposes by the U.S. Federal Reserve Bank of New York set forth in the H.10 statistical release of the Federal Reserve Board.

Average exchange rates (Canadian/U.S. dollar)		**2020**		2019
For the three months ended - June 30	**$**	**1.39**	$	1.34
For the six months ended - June 30	**$**	**1.37**	$	1.33

Ending exchange rates (Canadian/U.S. dollar)		**2020**		2019
Beginning of year - January 1	**$**	**1.30**	$	1.36
Beginning of quarter - April 1	**$**	**1.41**	$	1.33
End of quarter - June 30	**$**	**1.36**	$	1.31

	For the three months ended June 30				**For the six months ended June 30**			
High/Low exchange rates (Canadian/U.S. dollar)		**2020**		2019		**2020**		2019
High	**$**	**1.42**	$	1.35	**$**	**1.45**	$	1.36
Low	**$**	**1.34**	$	1.31	**$**	**1.30**	$	1.31

The impact of FX on total revenues and operating expenses is discussed further in Item 3. Quantitative and Qualitative Disclosures About Market Risk, in the Foreign Exchange Risk section.

Impact of Fuel Price on Earnings

Fluctuations in fuel prices affect the Company's results because fuel expense constitutes a significant portion of CP's operating costs. As fuel prices fluctuate, there will be an impact on earnings due to the timing of recoveries from CP's fuel cost adjustment program. The following table indicates the average fuel price for the three and six months ended June 30, 2020 and the comparative periods of 2019.

Average Fuel Price (U.S. dollars per U.S. gallon)		**2020**		2019
For the three months ended - June 30	**$**	**1.63**	$	2.61
For the six months ended - June 30	**$**	**1.98**	$	2.51

The impact of fuel prices on earnings includes the impacts of carbon taxes, levies, and obligations under cap-and-trade programs recovered and paid, on revenues and expenses, respectively.

In the second quarter of 2020, the favourable impact of fuel prices on Operating income was $24 million. Lower fuel prices resulted in a decrease in Total operating expenses of $81 million. Lower fuel prices, partially offset by the timing of recoveries from CP's fuel cost adjustment program, and increased carbon tax recoveries, resulted in a decrease in Total revenues of $57 million from the same period of 2019.

In the first six months of 2020, the favourable impact of fuel prices on Operating income was $38 million. Lower fuel prices resulted in a decrease in Total operating expenses of $94 million. Lower fuel prices, partially offset by the timing of recoveries from CP's fuel cost adjustment program, and increased carbon tax recoveries, resulted in a decrease in Total revenues of $56 million from the same period of 2019.

Impact of Share Price on Earnings

Fluctuations in the Common Share price affect the Company's operating expenses because share-based liabilities are measured at fair value. The Company's Common Shares are listed on the Toronto Stock Exchange ("TSX") and the New York Stock Exchange ("NYSE") with ticker symbol "CP". The following tables indicate the opening and closing Common Share price on the TSX and the NYSE for the three and six months ended June 30, 2020 and the comparative periods in 2019.

TSX (in Canadian dollars)	**2020**	2019
Opening Common Share price, as at January 1	**$ 331.03**	$ 242.24
Ending Common Share price, as at March 31	**$ 310.55**	$ 275.34
Ending Common Share price, as at June 30	**$ 345.32**	$ 308.43
Change in Common Share price for the three months ended June 30	**$ 34.77**	$ 33.09
Change in Common Share price for the six months ended June 30	**$ 14.29**	$ 66.19

NYSE (in U.S. dollars)	**2020**	2019
Opening Common Share price, as at January 1	**$ 254.95**	$ 177.62
Ending Common Share price, as at March 31	**$ 219.59**	$ 206.03
Ending Common Share price, as at June 30	**$ 255.34**	$ 235.24
Change in Common Share price for the three months ended June 30	**$ 35.75**	$ 29.21
Change in Common Share price for the six months ended June 30	**$ 0.39**	$ 57.62

In the second quarter of 2020, the impact of the change in Common Share prices resulted in an increase in stock-based compensation expense of $20 million compared to an increase of $16 million in the same period of 2019.

In the first six months of 2020, the impact of the change in Common Share prices resulted in an increase in stock-based compensation expense of $3 million compared to an increase of $29 million in the same period of 2019.

The impact of share price on stock-based compensation is discussed further in Item 3. Quantitative and Qualitative Disclosures About Market Risk, Share Price Impact on Stock-Based Compensation.

Operating Revenues

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

For the three months ended June 30	**2020**	2019	Total Change	% Change	FX Adjusted % Change[2]
Freight revenues (in millions)[1]	**$ 1,752**	$ 1,931	$ (179)	(9)	(11)
Non-freight revenues (in millions)	**40**	46	(6)	(13)	(13)
Total revenues (in millions)	**$ 1,792**	$ 1,977	$ (185)	(9)	(11)
Carloads (in thousands)	**631.0**	716.8	(85.8)	(12)	N/A
Revenue ton-miles (in millions)	**35,727**	39,820	(4,093)	(10)	N/A
Freight revenue per carload (in dollars)	**$ 2,777**	$ 2,694	$ 83	3	1
Freight revenue per revenue ton-mile (in cents)	**4.90**	4.85	0.05	1	(1)

(1) Freight revenues include fuel surcharge revenues of $63 million in 2020 and $126 million in 2019. Fuel surcharge revenues include recoveries of carbon taxes, levies, and obligations under cap-and-trade programs.
(2) FX Adjusted % Change does not have any standardized meaning prescribed by GAAP and, therefore, is unlikely to be comparable to similar measures presented by other companies. FX Adjusted % Change is defined and reconciled in Non-GAAP Measures of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Freight revenues were $1,752 million in the second quarter of 2020, a decrease of $179 million, or 9%, from $1,931 million in the same period of 2019. This decrease was primarily due to lower volumes as measured by RTMs. This decrease was partially offset by higher freight revenue per revenue ton-mile.

RTMs are defined as the movement of one revenue-producing ton of freight over a distance of one mile. RTMs measure the relative weight and distance of rail freight moved by the Company. RTMs for the second quarter of 2020 were 35,727 million, a decrease of 10% compared with 39,820 million in the same period of 2019. This decrease was mainly attributable to lower volumes of crude, Coal, frac sand, and Intermodal. This decrease was partially offset by higher volumes of Canadian grain, Fertilizers and sulphur, and Potash.

Freight revenue per revenue ton-mile is defined as freight revenue per revenue-producing ton of freight over a distance of one mile. This is an indicator of yield. Freight revenue per revenue ton-mile was 4.90 cents in the second quarter of 2020, an increase of 0.05 cents, or 1%, from 4.85 cents in the same period of 2019. This increase was primarily due to higher liquidated damages, including customer volume commitments, higher freight rates, and the favourable impact of the change in FX of $35 million. This increase was partially offset by moving lower volumes of Automotive, which has a higher freight revenue per revenue ton-mile compared to the corporate average, as well as the unfavourable impact of lower fuel surcharge revenue, as a result of lower fuel prices of $57 million.

Carloads are defined as revenue-generating shipments of containers and freight cars. Carloads were 631.0 thousand in the second quarter of 2020, a decrease of 85.8 thousand, or 12%, from 716.8 thousand in the same period of 2019. This decrease was primarily due to lower volumes of Automotive, Coal, crude, Intermodal, and frac sand. This decrease was partially offset by higher volumes of Canadian grain, Fertilizers and sulphur and Potash.

Freight revenue per carload is defined as freight revenue per revenue-generating shipment of containers or freight cars. This is an indicator of yield. Freight revenue per carload was $2,777 in the second quarter of 2020, an increase of $83, or 3%, from $2,694 in the same period of 2019. This increase was primarily due to liquidated damages, including customer volume commitments, higher freight rates, and the favourable impact of the change in FX of $35 million. This increase was partially offset by the unfavourable impact of lower fuel surcharge revenue, as a result of lower fuel prices of $57 million.

Non-freight revenues were $40 million in the second quarter of 2020, a decrease of $6 million, or 13%, from $46 million in the same period of 2019. This decrease was primarily due to lower passenger revenues and switching fees.

For the six months ended June 30		**2020**		2019		Total Change	% Change	FX Adjusted % Change[(2)]
Freight revenues (in millions)[(1)]	**$**	**3,752**	$	3,657	$	95	3	1
Non-freight revenues (in millions)		**83**		87		(4)	(5)	(5)
Total revenues (in millions)	**$**	**3,835**	$	3,744	$	91	2	1
Carloads (in thousands)		**1,321.6**		1,352.4		(30.8)	(2)	N/A
Revenue ton-miles (in millions)		**74,945**		75,822		(877)	(1)	N/A
Freight revenue per carload (in dollars)	**$**	**2,839**	$	2,704	$	135	5	4
Freight revenue per revenue ton-mile (in cents)		**5.01**		4.82		0.19	4	3

(1) Freight revenues include fuel surcharge revenues of $182 million in 2020 and $233 million in 2019. Fuel surcharge revenues include carbon taxes, levies, and obligations recovered under cap-and-trade programs.

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

Freight revenues were $3,752 million in the first six months of 2020, an increase of $95 million, or 3%, from $3,657 million in the same period of 2019. This increase was primarily due to higher freight revenue per revenue ton-mile, partially offset by lower volumes as measured by RTMs.

RTMs for the first six months of 2020 were 74,945 million, a decrease of 1% compared with 75,822 million in the same period of 2019. This decrease was mainly attributable to lower volumes of Coal, frac sand, and U.S. grain. This decrease was partially offset by higher volumes of Canadian grain and Fertilizers and sulphur.

Freight revenue per revenue ton-mile was 5.01 cents in the first six months of 2020, an increase of 0.19 cents, or 4%, from 4.82 cents in the same period of 2019. This increase was primarily due to liquidated damages, including customer volume commitments, higher freight rates, and the favourable impact of the change in FX of $41 million. This increase was partially offset by moving lower volumes of Automotive, which has a higher freight revenue per revenue ton-mile compared to the corporate average, as well as the unfavourable impact of lower fuel surcharge revenue, as a result of lower fuel prices, of $56 million.

Carloads were 1,321.6 thousand in the first six months of 2020, a decrease of 30.8 thousand, or 2%, from 1,352.4 thousand in the same period of 2019. This decrease was primarily due to lower volumes of Coal, Automotive, and frac sand. This decrease was partially offset by higher volumes of Canadian grain.

Freight revenue per carload was $2,839 in the first six months of 2020, an increase of $135, or 5%, from $2,704 in the same period of 2019. This increase was primarily due to higher liquidated damages, including customer volume commitments, higher freight rates, and the favourable impact of the change in FX of $41 million. This increase is partially offset by the unfavourable impact of lower fuel surcharge revenue, as a result of lower fuel prices of $56 million.

Non-freight revenues were $83 million in the first six months of 2020, a decrease of $4 million, or 5%, from $87 million in the same period of 2019. This decrease was primarily due to lower passenger revenues and switching fees.

Fuel Cost Adjustment Program

Freight revenues include fuel surcharge revenues associated with CP's fuel cost adjustment program, which is designed to respond to fluctuations in fuel prices and help reduce exposure to changing fuel prices. The surcharge is applied to shippers through tariffs and by contract, within agreed-upon guidelines. This program includes recoveries of carbon taxes, levies, and obligations under cap-and-trade programs. Freight revenues included fuel surcharge revenues of $63 million in the second quarter of 2020, a decrease of $63 million, or 50%, from $126 million in the same period of 2019. This decrease was primarily due to lower fuel prices and lower volumes. This decrease was partially offset by the timing of recoveries from CP's fuel cost adjustment program and increased carbon tax recoveries.

In the first six months of 2020, fuel surcharge revenues were $182 million, a decrease of $51 million, from $233 million in the same period of 2019. This decrease was primarily due to lower fuel prices. This decrease was partially offset by the timing of recoveries from CP's fuel cost adjustment program and increased carbon tax recoveries.

Lines of Business

Grain

For the three months ended June 30	**2020**	2019	Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	**$ 446**	$ 422	$ 24	6	3
Carloads (in thousands)	**118.4**	113.1	5.3	5	N/A
Revenue ton-miles (in millions)	**10,169**	9,452	717	8	N/A
Freight revenue per carload (in dollars)	**$ 3,767**	$ 3,731	$ 36	1	(1)
Freight revenue per revenue ton-mile (in cents)	**4.39**	4.46	(0.07)	(2)	(4)

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

Grain revenue was $446 million in the second quarter of 2020, an increase of $24 million, or 6%, from $422 million in the same period of 2019. This increase was primarily due to moving record volumes of Canadian grain, primarily to Vancouver and Thunder Bay, higher freight rates, and the favourable impact of the change in FX. This increase was partially offset by decreased freight revenue per revenue ton-mile and moving lower volumes of U.S. grain, primarily corn, to western Canada. Freight revenue per revenue ton-mile decreased due to the unfavourable impact of lower fuel surcharge revenue as a result of lower fuel prices. RTMs increased more than carloads driven by moving increased volumes of Canadian grain to Vancouver, which has a longer length of haul.

For the six months ended June 30	**2020**	2019	Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	**$ 864**	$ 802	$ 62	8	6
Carloads (in thousands)	**219.0**	205.9	13.1	6	N/A
Revenue ton-miles (in millions)	**19,185**	17,804	1,381	8	N/A
Freight revenue per carload (in dollars)	**$ 3,945**	$ 3,895	$ 50	1	—
Freight revenue per revenue ton-mile (in cents)	**4.50**	4.50	—	—	(1)

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

Grain revenue was $864 million in the first six months of 2020, an increase of $62 million, or 8%, from $802 million in the same period of 2019. This increase was primarily due to moving record volumes of Canadian grain, primarily to Vancouver and Thunder Bay, higher freight rates, and the favourable impact of the change in FX. This increase was partially offset by lower volumes of U.S. grain, primarily corn, to western Canada and lower fuel surcharge revenue as a result of lower fuel prices. RTMs increased more than carloads driven by moving increased volumes of Canadian grain to Vancouver, which has a longer length of haul.

Coal

For the three months ended June 30	2020	2019	Total Change	% Change	FX Adjusted % Change[(1)]
Freight revenues (in millions)	**$ 131**	$ 173	$ (42)	(24)	(24)
Carloads (in thousands)	**59.4**	77.7	(18.3)	(24)	N/A
Revenue ton-miles (in millions)	**4,337**	5,492	(1,155)	(21)	N/A
Freight revenue per carload (in dollars)	**$ 2,205**	$ 2,227	$ (22)	(1)	(1)
Freight revenue per revenue ton-mile (in cents)	**3.02**	3.15	(0.13)	(4)	(4)

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

Coal revenue was $131 million in the second quarter of 2020, a decrease of $42 million, or 24%, from $173 million in the same period of 2019. This decrease was primarily due to lower volumes of Canadian coal, driven by supply chain challenges at both the mines and the ports, lower volumes of U.S. coal to Wisconsin, and decreased freight revenue per revenue ton-mile. Freight revenue per revenue ton-mile decreased due to the unfavourable impact of lower fuel surcharge revenue as a result of lower fuel prices. Carloads decreased more than RTMs driven by moving lower volumes of U.S. coal to Wisconsin, which has a shorter length of haul.

For the six months ended June 30	2020	2019	Total Change	% Change	FX Adjusted % Change[(1)]
Freight revenues (in millions)	**$ 281**	$ 331	$ (50)	(15)	(15)
Carloads (in thousands)	**123.2**	148.1	(24.9)	(17)	N/A
Revenue ton-miles (in millions)	**8,772**	10,724	(1,952)	(18)	N/A
Freight revenue per carload (in dollars)	**$ 2,281**	$ 2,235	$ 46	2	2
Freight revenue per revenue ton-mile (in cents)	**3.20**	3.09	0.11	4	4

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

Coal revenue was $281 million in the first six months of 2020, a decrease of $50 million, or 15%, from $331 million in the same period of 2019. This decrease was primarily due to lower volumes of Canadian coal, driven by supply chain challenges at both the mines and ports and lower fuel surcharge revenue as a result of lower fuel prices. This decrease was partially offset by increased freight revenue per revenue ton-mile due to higher freight rates.

Potash

For the three months ended June 30	2020	2019	Total Change	% Change	FX Adjusted % Change[(1)]
Freight revenues (in millions)	**$ 146**	$ 136	$ 10	7	5
Carloads (in thousands)	**47.0**	44.4	2.6	6	N/A
Revenue ton-miles (in millions)	**5,490**	5,242	248	5	N/A
Freight revenue per carload (in dollars)	**$ 3,106**	$ 3,063	$ 43	1	(1)
Freight revenue per revenue ton-mile (in cents)	**2.66**	2.59	0.07	3	—

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

Potash revenue was $146 million in the second quarter of 2020, an increase of $10 million, or 7%, from $136 million in the same period of 2019. This increase was primarily due to higher volumes of domestic potash following three consecutive poor application seasons, higher volumes of export potash following resolved international contract negotiations as well as increased freight revenue per revenue ton-mile. This increase was partially offset by lower fuel surcharge revenue as a result of lower fuel prices. Freight revenue per revenue ton-mile increased due to higher freight rates and the favourable impact of the change in FX.

For the six months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	$	258	$	250	$	8	3	2
Carloads (in thousands)		83.4		82.3		1.1	1	N/A
Revenue ton-miles (in millions)		9,628		9,815		(187)	(2)	N/A
Freight revenue per carload (in dollars)	$	3,094	$	3,038	$	56	2	1
Freight revenue per revenue ton-mile (in cents)		2.68		2.55		0.13	5	4

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

Potash revenue was $258 million in the first six months of 2020, an increase of $8 million, or 3%, from $250 million in the same period of 2019. This increase was primarily due to increased freight revenue per revenue ton-mile and higher volumes of domestic potash. This increase was partially offset by lower fuel surcharge revenue as a result of lower fuel prices and lower volumes of export potash driven by unresolved international contract negotiations in the first quarter of 2020. Freight revenue per revenue ton-mile increased due to higher freight rates and the favourable impact of the change in FX. Carloads increased while RTMs decreased driven by moving proportionately less export potash to the Port of Vancouver, which has a longer length of haul.

Fertilizers and Sulphur

For the three months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	$	77	$	63	$	14	22	20
Carloads (in thousands)		16.7		14.1		2.6	18	N/A
Revenue ton-miles (in millions)		1,233		940		293	31	N/A
Freight revenue per carload (in dollars)	$	4,611	$	4,468	$	143	3	2
Freight revenue per revenue ton-mile (in cents)		6.24		6.70		(0.46)	(7)	(8)

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

Fertilizers and sulphur revenue was $77 million in the second quarter of 2020, an increase of $14 million, or 22%, from $63 million in the same period of 2019. This increase was primarily due to higher volumes of dry fertilizers and sulphur as a result of improved application conditions and the favourable impact of the change in FX. This increase was partially offset by decreased freight revenue per revenue-ton mile. Freight revenue per revenue ton-mile decreased due to lower fuel surcharge revenue as a result of lower fuel prices. RTMs increased more than carloads driven by moving proportionately more dry fertilizers from Chicago, Illinois to western Canada, which has a longer length of haul.

For the six months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	$	147	$	120	$	27	23	20
Carloads (in thousands)		31.8		27.8		4.0	14	N/A
Revenue ton-miles (in millions)		2,328		1,842		486	26	N/A
Freight revenue per carload (in dollars)	$	4,623	$	4,317	$	306	7	5
Freight revenue per revenue ton-mile (in cents)		6.31		6.51		(0.20)	(3)	(5)

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

Fertilizers and sulphur revenue was $147 million in the first six months of 2020, an increase of $27 million, or 23%, from $120 million in the same period of 2019. This increase was primarily due to higher volumes of dry fertilizers, sulphur, and wet fertilizers as well as the favourable impact of the change in FX. This increase was partially offset by decreased freight revenue per revenue-ton mile. Freight revenue per revenue ton-mile decreased due to lower fuel surcharge revenue as a result of lower fuel prices. RTMs increased more than carloads driven by moving proportionately more dry fertilizers from Chicago, Illinois to western Canada, which has a longer length of haul.

Forest Products

For the three months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	$	**81**	$	78	$	3	4	—
Carloads (in thousands)		**17.5**		18.5		(1.0)	(5)	N/A
Revenue ton-miles (in millions)		**1,319**		1,289		30	2	N/A
Freight revenue per carload (in dollars)	$	**4,629**	$	4,216	$	413	10	6
Freight revenue per revenue ton-mile (in cents)		**6.14**		6.05		0.09	1	(2)

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

Forest products revenue was $81 million in the second quarter of 2020, an increase of $3 million, or 4%, from $78 million in the same period of 2019. This increase was primarily due to higher volumes of wood pulp and increased freight revenue per revenue ton-mile. This increase was partially offset by lower volumes of lumber and lower fuel surcharge revenue as a result of lower fuel prices. Freight revenue per revenue ton-mile increased due to higher freight rates and the favourable impact of the change in FX. RTMs increased while carloads decreased due to higher volumes of wood pulp from Ontario to the U.S., which has a longer length of haul.

For the six months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	$	**159**	$	151	$	8	5	3
Carloads (in thousands)		**35.6**		35.6		—	—	N/A
Revenue ton-miles (in millions)		**2,596**		2,468		128	5	N/A
Freight revenue per carload (in dollars)	$	**4,466**	$	4,242	$	224	5	3
Freight revenue per revenue ton-mile (in cents)		**6.12**		6.12		—	—	(2)

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

Forest products revenue was $159 million in the first six months of 2020, an increase of $8 million, or 5%, from $151 million in the same period of 2019. This increase was primarily due to higher volumes of wood pulp and panel products, higher freight rates, and the favourable impact of the change in FX. This increase was partially offset by lower fuel surcharge revenue as a result of lower fuel prices. RTMs increased while carloads remained flat due to higher volumes of panel products and wood pulp from eastern Canada to the U.S., which have a longer length of haul.

Energy, Chemicals and Plastics

For the three months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	$	**341**	$	346	$	(5)	(1)	(3)
Carloads (in thousands)		**62.8**		87.4		(24.6)	(28)	N/A
Revenue ton-miles (in millions)		**4,512**		6,971		(2,459)	(35)	N/A
Freight revenue per carload (in dollars)	$	**5,430**	$	3,959	$	1,471	37	35
Freight revenue per revenue ton-mile (in cents)		**7.56**		4.96		2.60	52	50

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

Energy, chemicals and plastics revenue was $341 million in the second quarter of 2020, a decrease of $5 million, or 1%, from $346 million in the same period of 2019. This decrease was primarily due to lower volumes of crude and liquefied petroleum gas ("LPG") as a result of the COVID-19 pandemic and lower fuel surcharge revenue as a result of lower fuel prices. This decrease was partially offset by increased freight revenue per revenue ton-mile. Freight revenue per revenue ton-mile increased primarily due to higher liquidated damages, including customer volume commitments, the favourable impact of the change in FX, and higher freight rates. RTMs decreased more than carloads due to moving lower volumes of crude, which has a longer length of haul.

For the six months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[(1)]
Freight revenues (in millions)	$	**832**	$	661	$	171	26	25
Carloads (in thousands)		**164.6**		166.2		(1.6)	(1)	N/A
Revenue ton-miles (in millions)		**13,361**		13,330		31	—	N/A
Freight revenue per carload (in dollars)	$	**5,055**	$	3,977	$	1,078	27	26
Freight revenue per revenue ton-mile (in cents)		**6.23**		4.96		1.27	26	25

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Energy, chemicals and plastics revenue was $832 million in the first six months of 2020, an increase of $171 million, or 26%, from $661 million in the same period of 2019. This increase was primarily due to higher freight revenue per revenue ton-mile and higher volumes of crude. This increase was partially offset by lower fuel surcharge revenue as a result of lower fuel prices and lower volumes of LPG as a result of the COVID-19 pandemic. Freight revenue per revenue ton-mile increased primarily due to higher liquidated damages, including customer volume commitments, higher freight rates and the favourable impact of the change in FX.

Metals, Minerals and Consumer Products

For the three months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[(1)]
Freight revenues (in millions)	$	**133**	$	205	$	(72)	(35)	(37)
Carloads (in thousands)		**45.1**		63.7		(18.6)	(29)	N/A
Revenue ton-miles (in millions)		**1,877**		2,867		(990)	(35)	N/A
Freight revenue per carload (in dollars)	$	**2,949**	$	3,218	$	(269)	(8)	(11)
Freight revenue per revenue ton-mile (in cents)		**7.09**		7.15		(0.06)	(1)	(4)

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Metals, minerals and consumer products revenue was $133 million in the second quarter of 2020, a decrease of $72 million, or 35%, from $205 million in the same period of 2019. This decrease was primarily due to lower volumes of frac sand and steel as a result of the COVID-19 pandemic and decreased freight revenue per revenue ton-mile. This decrease was partially offset by the favourable impact of the change in FX. Freight revenue per revenue ton-mile decreased due to lower fuel surcharge revenue as a result of lower fuel prices. RTMs decreased more than carloads due to moving lower volumes of frac sand to the Bakken, which has a longer length of haul.

For the six months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[(1)]
Freight revenues (in millions)	$	**322**	$	378	$	(56)	(15)	(17)
Carloads (in thousands)		**103.3**		117.2		(13.9)	(12)	N/A
Revenue ton-miles (in millions)		**4,648**		5,315		(667)	(13)	N/A
Freight revenue per carload (in dollars)	$	**3,117**	$	3,225	$	(108)	(3)	(5)
Freight revenue per revenue ton-mile (in cents)		**6.93**		7.11		(0.18)	(3)	(5)

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Metals, minerals and consumer products revenue was $322 million in the first six months of 2020, a decrease of $56 million, or 15%, from $378 million in the same period of 2019. This decrease was primarily due to moving lower volumes of frac sand as a result of the COVID-19 pandemic and decreased freight revenue per revenue ton-mile. This decrease was partially offset by the favourable impact of the change in FX. Freight revenue per revenue ton-mile decreased due to lower fuel surcharge revenue as a result of lower fuel prices.

Automotive

For the three months ended June 30		**2020**		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	**$**	**34**	$	104	$	(70)	(67)	(68)
Carloads (in thousands)		**11.9**		31.5		(19.6)	(62)	N/A
Revenue ton-miles (in millions)		**130**		439		(309)	(70)	N/A
Freight revenue per carload (in dollars)	**$**	**2,857**	$	3,302	$	(445)	(13)	(16)
Freight revenue per revenue ton-mile (in cents)		**26.15**		23.69		2.46	10	7

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Automotive revenue was $34 million in the second quarter of 2020, a decrease of $70 million, or 67%, from $104 million in the same period of 2019. This decrease was primarily due to lower volumes caused by manufacturing plant shutdowns across North America as a result of the COVID-19 pandemic and lower fuel surcharge revenue as a result of lower fuel prices. This decrease was partially offset by higher freight revenue per revenue ton-mile. Freight revenue per revenue ton-mile increased due the favourable impact of the change in FX and higher freight rates. RTMs decreased more than carloads due to increased short haul volumes within southern Ontario.

For the six months ended June 30		**2020**		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	**$**	**121**	$	180	$	(59)	(33)	(34)
Carloads (in thousands)		**40.1**		56.6		(16.5)	(29)	N/A
Revenue ton-miles (in millions)		**456**		774		(318)	(41)	N/A
Freight revenue per carload (in dollars)	**$**	**3,017**	$	3,180	$	(163)	(5)	(7)
Freight revenue per revenue ton-mile (in cents)		**26.54**		23.26		3.28	14	12

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Automotive revenue was $121 million in the first six months of 2020, a decrease of $59 million, or 33%, from $180 million in the same period of 2019. This decrease was primarily due to lower volumes caused by manufacturing plant shutdowns across North America as a result of the COVID-19 pandemic and lower fuel surcharge revenue as a result of lower fuel prices. This decrease was partially offset by higher freight revenue per revenue ton-mile. Freight revenue per revenue ton-mile increased due to the favourable impact of the change in FX and higher freight rates. RTMs decreased more than carloads due to increased short haul volumes within southern Ontario.

Intermodal

For the three months ended June 30		**2020**		2019		Total Change	% Change	FX Adjusted % Change[1]
Freight revenues (in millions)	**$**	**363**	$	404	$	(41)	(10)	(11)
Carloads (in thousands)		**252.2**		266.4		(14.2)	(5)	N/A
Revenue ton-miles (in millions)		**6,660**		7,128		(468)	(7)	N/A
Freight revenue per carload (in dollars)	**$**	**1,439**	$	1,517	$	(78)	(5)	(6)
Freight revenue per revenue ton-mile (in cents)		**5.45**		5.67		(0.22)	(4)	(5)

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Intermodal revenue was $363 million in the second quarter of 2020, a decrease of $41 million, or 10%, from $404 million in the same period of 2019. This decrease was primarily due to lower domestic volumes as a result of the COVID-19 pandemic, and decreased freight revenue per revenue ton-mile. This decrease was partially offset by the onboarding of a new international customer and the favourable impact of the change in FX. Freight revenue per revenue ton-mile decreased due to lower fuel surcharge revenue as a result of lower fuel prices. Carloads decreased less than RTMs due to moving proportionately higher volumes of international intermodal, which has a shorter length of haul.

For the six months ended June 30		2020		2019		Total Change	% Change	FX Adjusted % Change[(1)]
Freight revenues (in millions)	$	**768**	$	784	$	(16)	(2)	(3)
Carloads (in thousands)		**520.6**		512.7		7.9	2	N/A
Revenue ton-miles (in millions)		**13,971**		13,750		221	2	N/A
Freight revenue per carload (in dollars)	$	**1,475**	$	1,529	$	(54)	(4)	(4)
Freight revenue per revenue ton-mile (in cents)		**5.50**		5.70		(0.20)	(4)	(4)

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Intermodal revenue was $768 million in the first six months of 2020, a decrease of $16 million, or 2%, from $784 million in the same period of 2019. This decrease was primarily due to decreased freight revenue per revenue ton-mile, and lower domestic volumes as a result of the COVID-19 pandemic. This decrease was partially offset by higher international volumes due to onboarding of a new international customer and the favourable impact of the change in FX. Freight revenue per revenue ton-mile decreased due to lower fuel surcharge revenues as a result of lower fuel prices, and moving proportionately more international intermodal, which has a lower freight revenue per revenue ton-mile compared to domestic intermodal.

Operating Expenses

For the three months ended June 30 (in millions)		2020		2019		Total Change	% Change	FX Adjusted % Change[(1)]
Compensation and benefits	$	**347**	$	383	$	(36)	(9)	(11)
Fuel		**131**		236		(105)	(44)	(46)
Materials		**50**		54		(4)	(7)	(7)
Equipment rents		**33**		34		(1)	(3)	(6)
Depreciation and amortization		**195**		183		12	7	6
Purchased services and other		**266**		265		1	—	(1)
Total operating expenses	$	**1,022**	$	1,155	$	(133)	(12)	(13)

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Operating expenses were $1,022 million in the second quarter of 2020, a decrease of $133 million, or 12%, from $1,155 million in the same period of 2019. This decrease was primarily due to:

- the favourable impact of $81 million from lower fuel prices;
- lower volume variable expense; and
- efficiencies generated from improved operating performance and asset utilization.

This decrease was partially offset by the unfavourable impact of the change in FX of $19 million and gains on land sales of $17 million in 2019.

For the six months ended June 30 (in millions)		2020		2019		Total Change	% Change	FX Adjusted % Change[(1)]
Compensation and benefits	$	**745**	$	789	$	(44)	(6)	(6)
Fuel		**343**		445		(102)	(23)	(24)
Materials		**109**		111		(2)	(2)	(2)
Equipment rents		**69**		69		—	—	(1)
Depreciation and amortization		**387**		343		44	13	12
Purchased services and other		**578**		622		(44)	(7)	(8)
Total operating expenses	$	**2,231**	$	2,379	$	(148)	(6)	(7)

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Operating expenses were $2,231 million in the first six months of 2020, a decrease of $148 million, or 6%, from $2,379 million in the same period of 2019. This decrease was primarily due to:
- the favourable impact of $94 million from lower fuel prices;
- efficiencies generated from improved operating performance and asset utilization;
- lower volume variable expenses;
- the impact of harsher winter operating conditions in 2019; and
- the impact of changes in share price on stock-based compensation of $26 million.

This decrease was partially offset by:
- higher depreciation and amortization of $42 million (excluding FX);
- cost inflation; and
- the unfavourable impact of the change in FX of $25 million.

Compensation and Benefits

Compensation and benefits expense includes employee wages, salaries, fringe benefits, and stock-based compensation. Compensation and benefits expense was $347 million in the second quarter of 2020, a decrease of $36 million, or 9%, from $383 million in the same period of 2019. This decrease was primarily due to:
- lower volume variable expense as a result of decreased workload as measured by GTMs;
- labour efficiencies;
- reduced training costs; and
- lower incentive compensation.

This decrease was partially offset by:
- higher pension current service cost of $8 million;
- the impact of wage and benefit inflation;
- the unfavourable impact of the change in FX of $5 million; and
- increase to stock-based compensation primarily driven by the $4 million impact of changes to stock price.

Compensation and benefits expense was $745 million in the first six months of 2020, a decrease of $44 million, or 6%, from $789 million in the same period of 2019. This decrease was primarily due to:
- labour efficiencies;
- reduction to stock-based compensation primarily driven by the impact of changes in share price of $26 million;
- reduced training costs;
- the impact of weather related costs as a result of harsh winter operating conditions in the first quarter of 2019; and
- lower volume variable expense as a result of decreased workload as measured by GTMs.

This decrease was partially offset by:
- the impact of wage and benefit inflation;
- higher pension current service cost of $16 million; and
- the unfavourable impact of the change in FX of $6 million.

Fuel

Fuel expense consists mainly of fuel used by locomotives and includes provincial, state, and federal fuel taxes. Fuel expense was $131 million in the second quarter of 2020, a decrease of $105 million, or 44%, from $236 million in the same period of 2019. This decrease was primarily due to:
- the favourable impact of $81 million from lower fuel prices;
- a decrease in workload, as measured by GTMs; and
- an increase in fuel efficiency of approximately 1% resulting from improved train productivity and higher horsepower utilization.

This decrease was partially offset by the unfavourable impact of the change in FX of $7 million.

Fuel expense was $343 million in the first six months of 2020, a decrease of $102 million, or 23%, from $445 million in the same period of 2019. This decrease was primarily due to:
- the favourable impact of $94 million from lower fuel prices;
- an improvement in fuel efficiency of 3% from improved winter operating conditions in the first quarter of 2020 and increased train productivity; and
- a decrease in workload, as measured by GTMs.

This decrease was partially offset by the unfavourable impact of the change in FX of $9 million.

Materials

Materials expense includes the cost of materials used for the maintenance of track, locomotives, freight cars, and buildings, as well as software sustainment. Materials expense was $50 million in the second quarter of 2020, a decrease of $4 million, or 7%, from $54 million in the same period of 2019. This decrease was due to lower freight car maintenance net of recoveries, locomotive maintenance and vehicle fuel prices.

Materials expense was $109 million in the first six months of 2020, a decrease of $2 million, or 2%, from $111 million in the same period of 2019. This decrease was due to lower vehicle fuel prices, locomotive servicing and track maintenance, partially offset by higher locomotive maintenance.

Equipment Rents

Equipment rents expense includes the cost associated with using other railways' freight cars, intermodal equipment, and locomotives, net of rental income received from other railroads for the use of CP's equipment. Equipment rents expense was $33 million in the second quarter of 2020, a decrease of $1 million, or 3%, from $34 million in the same period of 2019. This decrease was primarily due to lower usage of pooled freight cars as a result of lower volumes; partially offset by the unfavourable impact of the change in FX of $1 million.

Equipment rents expense was $69 million in the first six months of 2020, unchanged from $69 million in the same period of 2019. Lower usage of pooled freight cars as a result of lower volumes was offset by the unfavourable impact of the change in FX of $1 million.

Depreciation and Amortization

Depreciation and amortization expense represents the charge associated with the use of track and roadway, buildings, rolling stock, information systems, and other depreciable assets. Depreciation and amortization expense was $195 million in the second quarter of 2020, an increase of $12 million, or 7%, from $183 million in the same period of 2019. This increase was primarily due to a higher depreciable asset base and the unfavourable impact of the change in FX of $1 million.

Depreciation and amortization expense was $387 million in the first six months of 2020, an increase of $44 million, or 13%, from $343 million in the same period of 2019. This increase was primarily due to a higher depreciable asset base, the unfavourable impact of the change in FX of $2 million, and other adjustments made in 2019.

Purchased Services and Other

For the three months ended June 30 (in millions)	**2020**	2019	Total Change	% Change
Support and facilities	**$ 63**	$ 66	$ (3)	(5)
Track and operations	**62**	74	(12)	(16)
Intermodal	**47**	55	(8)	(15)
Equipment	**27**	35	(8)	(23)
Casualty	**30**	16	14	88
Property taxes	**31**	36	(5)	(14)
Other	**6**	—	6	—
Land sales	**—**	(17)	17	(100)
Total Purchased services and other	**$ 266**	$ 265	$ 1	—

Purchased services and other expense encompasses a wide range of third-party costs, including expenses for joint facilities, personal injuries and damage claims, environmental remediation, property taxes, contractor and consulting fees, insurance, and gains on land sales. Purchased services and other expense was $266 million in the second quarter of 2020, an increase of $1 million from $265 million in the same period of 2019. This increase was primarily due to:

- gains on land sales of $17 million in 2019, reported in Land sales;
- higher expenses primarily due to the increased number and severity of casualty incidents, reported in Casualty; and
- the unfavourable impact of the change in FX of $5 million.

This increase was partially offset by:

- lower volume variable expenses, reported primarily in Intermodal and Equipment;
- lower business travel and event costs due to COVID-19, reported primarily in Support and facilities and Track and operations;
- efficiencies generated from improved operating performance, reported primarily in Equipment and Track and operations; and
- lower property taxes.

For the six months ended June 30 (in millions)	**2020**	2019	Total Change	% Change
Support and facilities	**$ 136**	$ 137	$ (1)	(1)
Track and operations	**140**	149	(9)	(6)
Intermodal	**104**	111	(7)	(6)
Equipment	**58**	67	(9)	(13)
Casualty	**68**	85	(17)	(20)
Property taxes	**67**	72	(5)	(7)
Other	**9**	18	(9)	(50)
Land sales	**(4)**	(17)	13	(76)
Total Purchased services and other	**$ 578**	$ 622	$ (44)	(7)

Purchased services and other expense was $578 million in the first six months of 2020, a decrease of $44 million, or 7%, from $622 million in the same period of 2019. This decrease was primarily due to:

- lower expenses primarily due to the reduced number and severity of casualty incidents, reported in Casualty;
- lower snow removal and other weather related costs reported in Track and operations and Intermodal;
- a decrease in charges associated with contingencies of $10 million, reported in Other;
- reduced business travel, reported in Track and operations and Support and facilities; and
- lower property taxes.

This decrease was partially offset by higher gains on land sales of $13 million in 2019, reported in Land sales and the unfavourable impact of the change in FX of $7 million.

Other Income Statement Items

Other (Income) Expense

Other (income) expense consists of gains and losses from the change in FX on debt and lease liabilities and working capital, costs related to financing, shareholder costs, equity income, and other non-operating expenditures. Other income was $86 million in the second quarter of 2020, an increase of $46 million, or 115%, from $40 million in the same period of 2019. This increase was primarily due to a higher FX translation gain on U.S. dollar-denominated debt and lease liabilities of $49 million.

Other expense was $125 million in the first six months of 2020, a change of $212 million, or 244%, compared to an income of $87 million in the same period of 2019. This change was primarily due to a FX translation loss on U.S. dollar-denominated debt and lease liabilities of $129 million, compared to a FX translation gain of $82 million in the same period of 2019.

FX translation gains and losses on debt and lease liabilities are discussed further in Non-GAAP Measures of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Other Components of Net Periodic Benefit Recovery

Other components of net periodic recovery was $86 million in the second quarter of 2020, a decrease of $12 million or 12%, compared to $98 million in the same period of 2019 and was $171 million in the first six months of 2020, a decrease of $24 million or 12%, compared to $195 million in the same period of 2019. These decreases were primarily due to increases in the recognized net actuarial loss.

Net Interest Expense

Net interest expense includes interest on long-term debt and finance leases. Net interest expense was $118 million in the second quarter of 2020, an increase of $6 million, or 5%, from $112 million in the same period of 2019. This increase was primarily due to the unfavourable impact of the change in FX of $4 million.

Net interest expense was $232 million in the first six months of 2020, an increase of $6 million, or 3%, from $226 million in the same period of 2019. This increase was primarily due to:

- the unfavourable impact of an increase in debt levels of $11 million;
- the unfavourable impact of the change in FX of $5 million; and
- an increase in commercial paper interest of $3 million.

This was partially offset by a reduction in interest related to long-term debt of $15 million as a result of a lower effective interest rate following the Company's debt refinancing in 2019 and 2020.

Income Tax Expense

Income tax expense was $189 million in the second quarter of 2020, an increase of $65 million, or 52%, from $124 million in the same period of 2019. This increase was primarily due to the Alberta provincial corporate tax rate decrease enacted in 2019 resulting in deferred income tax recoveries of $88 million, partially offset by lower taxable earnings and a lower effective tax rate.

Income tax expense was $374 million in the first six months of 2020, an increase of $111 million, or 42%, from $263 million in the same period of 2019. This increase was primarily due to deferred income tax recoveries in 2019, described above.

The effective tax rate in the second quarter of 2020, including discrete items, was 22.98% compared to 14.63% in the same period of 2019. The effective tax rate in the first six months of 2020, including discrete items, was 26.38% compared to 18.50% in the same period of 2019. The effective tax rate in the second quarter and first six months of 2020, excluding discrete items, was 25.00% compared to 25.75% in 2019. The decrease in the effective tax rate excluding discrete items was primarily due to the decrease in Alberta's corporate tax rate and the 2020 U.S. track maintenance credit.

The Company expects an effective tax rate in 2020 of 24.80%. The Company’s 2020 outlook for its effective income tax rate is based on certain assumptions about events and developments that may or may not materialize or that may be offset entirely or partially by new events and developments. This is discussed further in Item 1A. Risk Factors of CP's 2019 Annual Report on Form 10-K.

Share Capital

At July 21, 2020, the latest practicable date, there were 135,533,633 Common Shares and no preferred shares issued and outstanding, which consists of 13,877 holders of record of the Common Shares. In addition, CP has a Management Stock Option Incentive Plan (“MSOIP”), under which key officers and employees are granted options to purchase the Common Shares. Each option granted can be exercised for one Common Share. At July 21, 2020, 1,510,722 options were outstanding under the MSOIP and stand-alone option agreements entered into with Mr. Keith Creel. There are 895,523 options available to be issued by the Company’s MSOIP in the future. CP has a Director's Stock Option Plan (“DSOP”), under which directors are granted options to purchase Common Shares. There are no outstanding options under the DSOP, which has 340,000 options available to be issued in the future.

Liquidity and Capital Resources

The Company believes adequate amounts of Cash and cash equivalents are available in the normal course of business to provide for ongoing operations, including the obligations identified in the tables in Contractual Commitments of this Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations. The Company is not aware of any trends or expected fluctuations in the Company's liquidity that would create any deficiencies. The Company's primary sources of liquidity include its Cash and cash equivalents, its commercial paper program, its bilateral letter of credit facilities, and its revolving credit facility.

As at June 30, 2020, the Company had $277 million of Cash and cash equivalents compared to $133 million at December 31, 2019.

As at June 30, 2020, the Company's revolving credit facility was undrawn (December 31, 2019 - undrawn), from a total available amount of U.S. $1.3 billion. The agreement requires the Company to maintain a financial covenant in conjunction with the credit facility. As at June 30, 2020, the Company was in compliance with all terms and conditions of the credit facility arrangements and satisfied the financial covenant.

The Company has a commercial paper program that enables it to issue commercial paper up to a maximum aggregate principal amount of U.S. $1.0 billion in the form of unsecured promissory notes. This commercial paper program is backed by the revolving credit facility. As at June 30, 2020, total commercial paper borrowings was $nil, compared to U.S. $397 million as at December 31, 2019.

As at June 30, 2020, under its bilateral letter of credit facilities, the Company had letters of credit drawn of $62 million from a total available amount of $300 million. This compares to letters of credit drawn of $80 million from a total available amount of $300 million as at December 31, 2019. Under the bilateral letter of credit facilities, the Company has the option to post collateral in the form of Cash or cash equivalents, equal at least to the face value of the letter of credit issued. As at June 30, 2020 and December 31, 2019, the Company did not have any collateral posted on its bilateral letter of credit facilities.

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

Operating Activities

Cash provided by operating activities was $835 million in the second quarter of 2020, an increase of $114 million, or 16%, compared to $721 million in the same period of 2019. This increase was primarily due to a favourable change in working capital which included lower income tax payments, partially offset by a decrease in cash generating income during the second quarter of 2020, compared to the same period of 2019. The Company had lower income tax payments in the second quarter of 2020 as a result of the deferral of Canadian federal and provincial as well as U.S. federal payments until the third quarter of 2020 due to COVID-19.

Cash provided by operating activities was $1,324 million in the first six months of 2020, an increase of $190 million, or 17%, compared to $1,134 million in the same period of 2019. This increase was primarily due to higher cash generating income and a favourable change in working capital primarily due to lower income tax payments, partially offset by a decrease in receipts from customers in advance of performing services in the six months ended June 30, 2020, compared to the same period of 2019.

Investing Activities

Cash used in investing activities was $468 million in the second quarter of 2020, an increase of $13 million, or 3%, compared to $455 million in the same period of 2019. Cash used in investing activities was $830 million in the first six months of 2020, an increase of $156 million, or 23%, compared to $674 million in the same period of 2019. These increases were primarily due to higher capital additions during 2020 compared to the same periods of 2019.

Free Cash

CP generated positive Free cash of $333 million in the second quarter of 2020, an increase of $68 million from $265 million, or 26%, in the same period of 2019. For the first six months of 2020, CP generated positive Free cash of $491 million, an increase of $33 million, or 7%, from $458 million in the same period of 2019. These increases were primarily due to an increase in cash provided by operating activities, partially offset by an increase in cash used in investing activities as a result of higher additions to properties.

Free cash is affected by seasonal fluctuations and by other factors including the size of the Company's capital programs. Free cash is defined and reconciled in Non-GAAP Measures of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Financing Activities

Cash used in financing activities was $322 million in the second quarter of 2020, a decrease of $250 million, or 44%, compared to $572 million in the same period of 2019. This decrease was primarily due to the principal repayment of U.S. $350 million 7.250% notes in the second quarter of 2019 as well as lower payments to buy back shares under the Company's share repurchase program during the three months ended June 30, 2020. This was partially offset by net repayments of commercial paper and short-term borrowings compared to net issuances of commercial paper in the same period of 2019.

Cash used in financing activities was $366 million in the first six months of 2020, a decrease of $108 million, or 23%, compared to $474 million in the same period of 2019. This decrease was primarily due to the issuances of U.S. $500 million 2.050% notes due March 5, 2030 and $300 million 3.050% notes due March 9, 2050, compared to the issuance of $400 million 3.150% notes due March 13, 2029 in the same period of 2019, as well as the principal repayment of U.S. $350 million of the Company's 7.250% notes during the six months ended June 30, 2019. This was partially offset by net repayments of commercial paper during the six months ended June 30, 2020 compared to net issuances in the same period of 2019, and higher payments to buy back shares under the Company's share repurchase program during 2020.

Credit Measures

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

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

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

As at June 30, 2020, CP's credit ratings from Standard & Poor's Rating Services ("Standard & Poor's") and Moody's Investor Service ("Moody's") remain unchanged from December 31, 2019.

Credit ratings as at June 30, 2020[1]

Long-term debt			Outlook
Standard & Poor's			
	Long-term corporate credit	**BBB+**	stable
	Senior secured debt	**A**	stable
	Senior unsecured debt	**BBB+**	stable
Moody's			
	Senior unsecured debt	**Baa1**	stable
Commercial paper program			
Standard & Poor's		**A-2**	N/A
Moody's		**P-2**	N/A

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

Financial Ratios

The Long-term debt to Net income ratio for the twelve months ended June 30, 2020 and June 30, 2019 was 4.1 and 3.7, respectively. This increase was primarily due to higher debt.

The Adjusted net debt to Adjusted earnings before interest, tax, depreciation and amortization ("EBITDA") ratio remained unchanged at 2.4 for the twelve months ended June 30, 2020 and June 30, 2019. The Adjusted net debt to Adjusted EBITDA ratio is a Non-GAAP measure, which is defined and reconciled from the Long-term debt to Net income ratio, the most comparable measure calculated in accordance with GAAP, in Non-GAAP Measures of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations. Over the long term, CP targets an Adjusted net debt to Adjusted EBITDA ratio of 2.0 to 2.5.

Although CP has provided a target Non-GAAP measure (Adjusted net debt to Adjusted EBITDA ratio), management is unable to reconcile, without unreasonable efforts, the target Adjusted net debt to Adjusted EBITDA ratio to the most comparable GAAP measure (Long-term debt to Net income ratio), due to unknown variables and uncertainty related to future results. These unknown variables may include unpredictable transactions of significant value. In past years, CP has recognized significant asset impairment charges, management transition costs related to senior executives and discrete tax items. These or other similar, large unforeseen transactions affect Net income but may be excluded from CP's Adjusted EBITDA. Additionally, the U.S.-to-Canada dollar exchange rate is unpredictable and can have a significant impact on CP's reported results but may be excluded from CP's Adjusted EBITDA. In particular, CP excludes the FX impact of translating the Company's debt and lease liabilities, interest and taxes from Adjusted EBITDA. Please see Forward-Looking Statements in this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations for further discussion.

Supplemental Guarantor Financial Information

Canadian Pacific Railway Company ("CPRC"), a 100%-owned subsidiary of Canadian Pacific Railway Limited ("CPRL"), is the issuer of certain securities which are fully and unconditionally guaranteed by CPRL on an unsecured basis. The other subsidiaries of CPRC do not guarantee the securities and are referred to below as the "Non-Guarantor Subsidiaries". The following is a description of the terms and conditions of the guarantees with respect to securities for which CPRC is the issuer and CPRL provides a full and unconditional guarantee.

As of June 30, 2020, CPRC has outstanding $7,972 million principal amount of debt securities due through 2115, and $47 million in perpetual 4% consolidated debenture stock, for all of which CPRL is the guarantor.

CPRL fully and unconditionally guarantees the payment of the principal (and premium, if any) and interest on the debt securities and consolidated debenture stock issued by CPRC, any sinking fund or analogous payments payable with respect to such securities, and any additional amounts payable when they become due and payable, whether at maturity or otherwise. The guarantee is CPRL's unsubordinated and unsecured obligation and ranks equally with all of CPRL's other unsecured, unsubordinated obligations.

CPRL will be released and relieved of its obligations under the guarantees after obligations to the holders are satisfied in accordance with the terms of the respective instruments.

The Company early adopted Rule 13-01 of the SEC's Regulation S-X which simplifies the existing disclosure requirements relating to our guaranteed securities and allows such disclosure to be included within this Part 1, Item II, "Management's Discussion and Analysis of Financial Condition and Results of Operations." Pursuant to Rule 13-01, we are eligible to provide this summarized financial and non-financial information in lieu of providing separate financial statements of CPRC.

More information on the securities under this guarantee structure can be found in Exhibit 22.1 List of Issuers and Guarantor Subsidiaries of this quarterly report.

Summarized Financial Information

The following tables present summarized financial information for CPRC (Subsidiary Issuer) and CPRL (Parent Guarantor) on a combined basis after elimination of (i) intercompany transactions and balances among CPRC and CPRL; (ii) equity in earnings from and investments in the Non-Guarantor Subsidiaries; and (iii) intercompany dividend income.

Statements of Income

	CPRC (Subsidiary Issuer) and CPRL (Parent Guarantor)	
(in millions of Canadian dollars)	**For the six months ended June 30, 2020**	For the year ended December 31, 2019
Total revenues	**$ 2,872**	$ 5,662
Total operating expenses	**1,665**	3,446
Operating income[(1)]	**1,207**	2,216
Less: Other[(2)]	**211**	(13)
Income before income tax expense	**996**	2,229
Net income	**$ 712**	$ 1,704

(1) Includes net lease costs incurred from non-guarantor subsidiaries for the six months ended June 30, 2020 and for the year ended December 31, 2019 of $160 million and $320 million, respectively.

(2) Includes Other (income) expense, Other components of net periodic benefit recovery, and Net interest expense.

Balance Sheets

	CPRC (Subsidiary Issuer) and CPRL (Parent Guarantor)	
(in millions of Canadian dollars)	**As at June 30, 2020**	As at December 31, 2019
Assets		
Current assets	**$ 847**	$ 842
Properties	**10,679**	10,287
Other non-current assets	**1,423**	1,208
Liabilities		
Current liabilities	**$ 1,192**	$ 1,833
Long-term debt	**9,458**	8,145
Other non-current liabilities	**2,750**	2,711

Excluded from the Income Statements and Balance Sheets above are the following significant intercompany transactions and balances that CPRC and CPRL have with the Non-Guarantor Subsidiaries:

Cash Transactions with Non-Guarantor Subsidiaries

	CPRC (Subsidiary Issuer) and CPRL (Parent Guarantor)	
(in millions of Canadian dollars)	**For the six months ended June 30, 2020**	For the year ended December 31, 2019
Dividend income from non-guarantor subsidiaries	**$ 97**	$ 158
Capital contributions to non-guarantor subsidiaries	**—**	(125)
Redemption of shares by non-guarantor subsidiaries	**—**	1,345

Balances with Non-Guarantor Subsidiaries

	CPRC (Subsidiary Issuer) and CPRL (Parent Guarantor)	
(in millions of Canadian dollars)	**As at June 30, 2020**	As at December 31, 2019
Assets		
Accounts receivable, intercompany	**$ 192**	$ 318
Short-term advances to affiliates	**19**	14
Long-term advances to affiliates	**8**	7
Liabilities		
Accounts payable, intercompany	**$ 125**	$ 249
Short-term advances from affiliates	**3,754**	3,700
Long-term advances from affiliates	**88**	84

Non-GAAP Measures

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

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

Non-GAAP Performance Measures

The Company uses adjusted earnings results including Adjusted income and Adjusted diluted earnings per share to evaluate the Company's operating performance and for planning and forecasting future business operations and future profitability. These Non-GAAP measures are presented in Financial Highlights and discussed further in other sections of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations. These Non-GAAP measures provide meaningful supplemental information regarding operating results because they exclude certain significant items that are not considered indicative of future financial trends either by nature or amount. As a result, these items are excluded for management assessment of operational performance, allocation of resources and preparation of annual budgets. These significant items may include, but are not limited to, restructuring and asset impairment charges, individually significant gains and losses from sales of assets, the FX impact of translating the Company's debt and lease liabilities (including borrowings under the credit facility), discrete tax items, and certain items outside the control of management. These items may not be non-recurring. However, excluding these significant items from GAAP results allows for a consistent understanding of the Company's consolidated financial performance when performing a multi-period assessment including assessing the likelihood of future results. Accordingly, these Non-GAAP financial measures may provide insight to investors and other external users of the Company's consolidated financial information.

In the first six months of 2020, there was one significant item included in Net income as follows:

- during the year to date, a non-cash loss of $129 million ($116 million after deferred tax) due to FX translation of debt and lease liabilities that unfavourably impacted Diluted EPS by 95 cents as follows:
  - in the second quarter, an $86 million gain ($82 million after deferred tax) that favourably impacted Diluted EPS by 59 cents; and
  - in the first quarter, a $215 million loss ($198 million after deferred tax) that unfavourably impacted Diluted EPS by $1.44.

In 2019, there were three significant items included in Net income as follows:

- in the fourth quarter, a deferred tax expense of $24 million as a result of a provision for an uncertain tax item of a prior period that unfavourably impacted Diluted EPS by 17 cents;
- in the second quarter, a deferred tax recovery of $88 million due to the change in the Alberta provincial corporate income tax rate that favourably impacted Diluted EPS by 63 cents; and
- during the course of the year, a net non-cash gain of $94 million ($86 million after deferred tax) due to FX translation of debt and lease liabilities as follows:
  - in the fourth quarter, a $37 million gain ($32 million after deferred tax) that favourably impacted Diluted EPS by 22 cents;
  - in the third quarter, a $25 million loss ($22 million after deferred tax) that unfavourably impacted Diluted EPS by 15 cents;
  - in the second quarter, a $37 million gain ($34 million after deferred tax) that favourably impacted Diluted EPS by 24 cents; and
  - in the first quarter, a $45 million gain ($42 million after deferred tax) that favourably impacted Diluted EPS by 30 cents.

In the last six months ended December 31, 2018, there was one significant item included in Net income as follows:

- a net non-cash loss of $75 million ($70 million after deferred tax) due to FX translation of debt as follows:
  - in the fourth quarter, a $113 million loss ($103 million after deferred tax) that unfavourably impacted Diluted EPS by 72 cents; and
  - in the third quarter, a $38 million gain ($33 million after deferred tax) that favourably impacted Diluted EPS by 23 cents.

Reconciliation of GAAP Performance Measures to Non-GAAP Performance Measures

The following tables reconcile the most directly comparable measures presented in accordance with GAAP to the Non-GAAP measures presented in Financial Highlights and discussed further in other sections of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations:

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

	For the three months ended June 30		For the six months ended June 30		For the twelve months ended December 31
(in millions)	**2020**	2019	**2020**	2019	2019
Net income as reported	**$ 635**	$ 724	**$ 1,044**	$ 1,158	$ 2,440
Less significant items (pre-tax):					
Impact of FX translation gain (loss) on debt and lease liabilities	**86**	37	**(129)**	82	94
Add:					
Tax effect of adjustments[(1)]	**4**	3	**(13)**	6	8
Income tax rate changes	**—**	(88)	**—**	(88)	(88)
Provision for uncertain tax item	**—**	—	**—**	—	24
Adjusted income	**$ 553**	$ 602	**$ 1,160**	$ 994	$ 2,290

(1) The tax effect of adjustments was calculated as the pre-tax effect of the adjustments multiplied by the applicable tax rate for the above items of 5.62% and 9.87% for the three and six months ended June 30, 2020, 9.47% and 7.82% for the three and six months ended June 30, 2019, and 8.55% for the twelve months ended December 31, 2019, respectively. The applicable tax rates reflect the taxable jurisdictions and nature, being on account of capital or income, of the significant items.

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

	For the three months ended June 30		For the six months ended June 30		For the twelve months ended December 31
	2020	2019	**2020**	2019	2019
Diluted earnings per share as reported	**$ 4.66**	$ 5.17	**$ 7.64**	$ 8.25	$ 17.52
Less significant items (pre-tax):					
Impact of FX translation gain (loss) on debt and lease liabilities	**0.63**	0.27	**(0.94)**	0.58	0.67
Add:					
Tax effect of adjustments[(1)]	**0.04**	0.03	**(0.09)**	0.04	0.05
Income tax rate changes	**—**	(0.63)	**—**	(0.63)	(0.63)
Provision for uncertain tax item	**—**	—	**—**	—	0.17
Adjusted diluted earnings per share	**$ 4.07**	$ 4.30	**$ 8.49**	$ 7.08	$ 16.44

(1) The tax effect of adjustments was calculated as the pre-tax effect of the adjustments multiplied by the applicable tax rate for the above items of 5.62% and 9.87% for the three and six months ended June 30, 2020, 9.47% and 7.82% for the three and six months ended June 30, 2019, and 8.55% for the twelve months ended December 31, 2019, respectively The applicable tax rates reflect the taxable jurisdictions and nature, being on account of capital or income, of the significant items.

Adjusted ROIC

Adjusted ROIC is calculated as Adjusted return divided by Adjusted average invested capital. Adjusted return is defined as Net income adjusted for interest expense, tax effected at the Company's adjusted annualized effective tax rate, and significant items in the Company's Consolidated Financial Statements, tax effected at the applicable tax rate. Adjusted average invested capital is defined as the sum of total Shareholders' equity, Long-term debt, and Long-term debt maturing within one year, as presented in the Company's Consolidated Financial Statements, each averaged between the beginning and ending balance over a rolling 12-month period, adjusted for the impact of significant items, tax effected at the applicable tax rate, on closing balances as part of this average.

Adjusted ROIC excludes significant items reported in the Company's Consolidated Financial Statements, as these significant items are not considered indicative of future financial trends either by nature or amount, and excludes interest expense, net of tax, to incorporate returns on the Company's overall capitalization. Adjusted ROIC is a performance measure that measures how productively the Company uses its long-term capital investments, representing critical indicators of good operating and investment decisions made by management, and is an important performance criteria in determining certain elements of the Company's long-term incentive plan. Adjusted ROIC, which is reconciled below from Return on average shareholders' equity, the most comparable measure calculated in accordance with GAAP, is also presented in Financial Highlights and discussed further in Results of Operations of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Beginning in the first quarter of 2020, CP aligned the reconciliation sequence for Adjusted ROIC to start with Net income, with no change to the calculated Adjusted return.

Calculation of Return on average shareholders' equity

	For the twelve months ended June 30	
(in millions, except for percentages)	**2020**	2019
Net income as reported	**$ 2,326**	$ 2,325
Average shareholders' equity	**$ 7,311**	$ 6,866
Return on average shareholders' equity	**31.8%**	33.9%

Reconciliation of Net income to Adjusted return

	For the twelve months ended June 30	
(in millions)	**2020**	2019
Net income as reported	**$ 2,326**	$ 2,325
Add:		
Net interest expense	**454**	452
Tax on interest[(1)]	**(113)**	(114)
Significant items:		
Impact of FX translation loss (gain) on debt and lease liabilities (pre-tax)	**117**	(7)
Tax on significant items[(2)]	**(11)**	1
Income tax recovery from income tax rate changes	**—**	(88)
Provision for uncertain tax item	**24**	—
Adjusted return	**$ 2,797**	$ 2,569

(1) Tax was calculated at the adjusted annualized effective tax rate of 24.69% and 25.03% for the twelve months ended June 30, 2020 and 2019, respectively.
(2) Tax was calculated as the pre-tax effect of the adjustments multiplied by the applicable tax rate for the above items of 9.68% and 14.62% for the twelve months ended June 30, 2020 and 2019, respectively.

Reconciliation of Average shareholders' equity to Adjusted average invested capital

	For the twelve months ended June 30	
(in millions)	**2020**	2019
Average shareholders' equity	**$ 7,311**	$ 6,866
Average Long-term debt, including long-term debt maturing within one year	**9,044**	8,511
	$ 16,355	$ 15,377
Less:		
Income tax recovery from income tax rate changes	**—**	44
Provision for uncertain tax item	**(12)**	—
Adjusted average invested capital	**$ 16,367**	$ 15,333

Calculation of Adjusted ROIC

	For the twelve months ended June 30	
(in millions, except for percentages)	**2020**	2019
Adjusted return	**$ 2,797**	$ 2,569
Adjusted average invested capital	**$ 16,367**	$ 15,333
Adjusted ROIC	**17.1%**	16.8%

Free Cash

Free cash is calculated as Cash provided by operating activities, less Cash used in investing activities, adjusted for changes in cash and cash equivalents balances resulting from FX fluctuations, and the acquisition of Central Maine and Québec Railway ("CMQ"). Free cash is a measure that management considers to be an indicator of liquidity. Free cash is useful to investors and other external users of the Company's Consolidated Financial Statements as it assists with the evaluation of the Company's ability to generate cash from its operations without incurring additional external financing. The acquisition of CMQ is not indicative of investment trends and has also been excluded from Free cash. Positive Free cash indicates the amount of cash available for reinvestment in the business, or cash that can be returned to investors through dividends, stock repurchase programs, debt retirements or a combination of these. Conversely, negative Free cash indicates the amount of cash that must be raised from investors through new debt or equity issues, reduction in available cash balances or a combination of these. Free cash should be considered in addition to, rather than as a substitute for, Cash provided by operating activities. Free cash is presented in Financial Highlights and discussed further in Liquidity and Capital Resources of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Reconciliation of Cash Provided by Operating Activities to Free Cash

	For the three months ended June 30		For the six months ended June 30	
(in millions)	**2020**	2019	**2020**	2019
Cash provided by operating activities	**$ 835**	$ 721	**$ 1,324**	$ 1,134
Cash used in investing activities	**(468)**	(455)	**(830)**	(674)
Effect of foreign currency fluctuations on U.S. dollar-denominated cash and cash equivalents	**(15)**	(1)	**16**	(2)
Less:				
Investment in Central Maine and Québec Railway	**19**	—	**19**	—
Free cash	**$ 333**	$ 265	**$ 491**	$ 458

Foreign Exchange Adjusted % Change

FX adjusted % change allows certain financial results to be viewed without the impact of fluctuations in foreign currency exchange rates, thereby facilitating period-to-period comparisons in the analysis of trends in business performance. Financial result variances at constant currency are obtained by translating the comparable period of the prior year results denominated in U.S. dollars at the foreign exchange rates of the current period.

FX adjusted % changes in revenues are further used in calculating FX adjusted % change in freight revenue per carload and RTM. These items are presented in Operating Revenues of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

	For the three months ended June 30				
(in millions)	**Reported 2020**	Reported 2019	Variance due to FX	FX Adjusted 2019	FX Adjusted % Change
Freight revenues by line of business					
Grain	**$ 446**	$ 422	$ 9	$ 431	3
Coal	**131**	173	—	173	(24)
Potash	**146**	136	3	139	5
Fertilizers and sulphur	**77**	63	1	64	20
Forest products	**81**	78	3	81	—
Energy, chemicals and plastics	**341**	346	5	351	(3)
Metals, minerals and consumer products	**133**	205	7	212	(37)
Automotive	**34**	104	3	107	(68)
Intermodal	**363**	404	4	408	(11)
Freight revenues	**1,752**	1,931	35	1,966	(11)
Non-freight revenues	**40**	46	—	46	(13)
Total revenues	**$ 1,792**	$ 1,977	$ 35	$ 2,012	(11)

	For the six months ended June 30				
(in millions)	**Reported 2020**	Reported 2019	Variance due to FX	FX Adjusted 2019	FX Adjusted % Change
Freight revenues by line of business					
Grain	**$ 864**	$ 802	$ 10	$ 812	6
Coal	**281**	331	—	331	(15)
Potash	**258**	250	3	253	2
Fertilizers and sulphur	**147**	120	2	122	20
Forest products	**159**	151	3	154	3
Energy, chemicals and plastics	**832**	661	6	667	25
Metals, minerals and consumer products	**322**	378	8	386	(17)
Automotive	**121**	180	4	184	(34)
Intermodal	**768**	784	5	789	(3)
Freight revenues	**3,752**	3,657	41	3,698	1
Non-freight revenues	**83**	87	—	87	(5)
Total revenues	**$ 3,835**	$ 3,744	$ 41	$ 3,785	1

FX adjusted % changes in operating expenses are presented in Operating Expenses of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

	For the three months ended June 30				
(in millions)	**Reported 2020**	Reported 2019	Variance due to FX	FX Adjusted 2019	FX Adjusted % Change
Compensation and benefits	**$ 347**	$ 383	$ 5	$ 388	(11)
Fuel	**131**	236	7	243	(46)
Materials	**50**	54	—	54	(7)
Equipment rents	**33**	34	1	35	(6)
Depreciation and amortization	**195**	183	1	184	6
Purchased services and other	**266**	265	5	270	(1)
Total operating expenses	**$ 1,022**	$ 1,155	$ 19	$ 1,174	(13)

	For the six months ended June 30				
(in millions)	**Reported 2020**	Reported 2019	Variance due to FX	FX Adjusted 2019	FX Adjusted % Change
Compensation and benefits	**$ 745**	$ 789	$ 6	$ 795	(6)
Fuel	**343**	445	9	454	(24)
Materials	**109**	111	—	111	(2)
Equipment rents	**69**	69	1	70	(1)
Depreciation and amortization	**387**	343	2	345	12
Purchased services and other	**578**	622	7	629	(8)
Total operating expenses	**$ 2,231**	$ 2,379	$ 25	$ 2,404	(7)

Adjusted Net Debt to Adjusted EBITDA Ratio

Adjusted net debt to Adjusted EBITDA ratio is calculated as Adjusted net debt divided by Adjusted EBITDA. The Adjusted net debt to Adjusted EBITDA ratio is a key credit measure used to assess the Company's financial capacity. The ratio provides information on the Company's ability to service its debt and other long-term obligations. The Adjusted net debt to Adjusted EBITDA ratio, which is reconciled below from the Long-term debt to Net income ratio, the most comparable measure calculated in accordance with GAAP, is also presented in Financial Highlights and discussed further in Results of Operations of this Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Calculation of Long-term Debt to Net Income Ratio

(in millions, except for ratios)	**2020**	2019
Long-term debt including long-term debt maturing within one year as at June 30	**$ 9,548**	$ 8,539
Net income for the twelve months ended June 30	**2,326**	2,325
Long-term debt to Net income ratio	**4.1**	3.7

Reconciliation of Long-term Debt to Adjusted Net Debt

Adjusted net debt is defined as Long-term debt, Long-term debt maturing within one year and Short-term borrowing as reported on the Company's Consolidated Balance Sheets adjusted for pension plans deficit, operating lease liabilities recognized on the Company's Consolidated Balance Sheets, and Cash and cash equivalents.

(in millions)		2020		2019
Long-term debt including long-term debt maturing within one year as at June 30	**$**	**9,548**	$	8,539
Add:				
Pension plans deficit[1]		**294**		263
Operating lease liabilities		**343**		375
Less:				
Cash and cash equivalents		**277**		45
Adjusted net debt as at June 30	**$**	**9,908**	$	9,132

(1) Pension plans deficit is the total funded status of the Pension plans in deficit only.

Reconciliation of Net Income to EBIT, Adjusted EBIT and Adjusted EBITDA

Earnings before interest and tax ("EBIT") is calculated as Net income before Net interest expense and Income tax expense. Adjusted EBIT excludes significant items reported in both Operating income and Other (income) expense. Adjusted EBITDA is calculated as Adjusted EBIT plus operating lease expense and Depreciation and amortization, less Other components of net periodic benefit recovery.

	For the twelve months ended June 30			
(in millions)		2020		2019
Net income as reported	**$**	**2,326**	$	2,325
Add:				
Net interest expense		**454**		452
Income tax expense		**817**		656
EBIT		**3,597**		3,433
Less significant items (pre-tax):				
Impact of FX translation (loss) gain on debt and lease liabilities		**(117)**		7
Adjusted EBIT		**3,714**		3,426
Add:				
Operating lease expense		**80**		102
Depreciation and amortization		**750**		697
Less:				
Other components of net periodic benefit recovery		**357**		388
Adjusted EBITDA	**$**	**4,187**	$	3,837

Calculation of Adjusted Net Debt to Adjusted EBITDA Ratio

(in millions, except for ratios)		2020		2019
Adjusted net debt as at June 30	**$**	**9,908**	$	9,132
Adjusted EBITDA for the twelve months ended June 30	**$**	**4,187**	$	3,837
Adjusted net debt to Adjusted EBITDA ratio		**2.4**		2.4

Off-Balance Sheet Arrangements

Guarantees

As at June 30, 2020, the Company had residual value guarantees on operating lease commitments of $2 million. The maximum amount that could be payable under these and all of the Company's other guarantees cannot be reasonably estimated due to the nature of certain of these guarantees. All or a portion of amounts paid under certain guarantees could be recoverable from other parties or through insurance. The Company accrues for all guarantees that it expects to pay. As at June 30, 2020, these accruals amounted to $6 million, reduced from $10 million at December 31, 2019, as a result of settlements.

Contractual Commitments

The following table indicates the Company's obligations and commitments to make future payments for contracts such as debt, leases, and commercial arrangements as at June 30, 2020.

Payments due by period (in millions)	**Total**	2020	2021 & 2022	2023 & 2024	Thereafter
Contractual commitments					
Interest on long-term debt and finance leases	**$ 11,821**	$ 237	$ 885	$ 766	$ 9,933
Long-term debt	**9,486**	55	876	594	7,961
Finance leases	**157**	4	119	15	19
Operating leases[(1)]	**389**	36	126	97	130
Supplier purchases	**1,949**	241	832	493	383
Other long-term liabilities[(2)]	**474**	28	104	100	242
Total contractual commitments	**$ 24,276**	$ 601	$ 2,942	$ 2,065	$ 18,668

(1) Residual value guarantees on certain leased equipment with a maximum exposure of $2 million are not included in the minimum payments shown above.
(2) Includes expected cash payments for environmental remediation, post-retirement benefits, workers' compensation benefits, long-term disability benefits, pension benefit payments for the Company's non-registered supplemental pension plan, and certain other long-term liabilities. Projected payments for post-retirement benefits, workers' compensation benefits, and long-term disability benefits include the anticipated payments for years 2020 to 2029. Pension contributions for the Company's registered pension plans are not included due to the volatility in calculating them. Pension payments are discussed further in Critical Accounting Estimates of Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of the Company's 2019 Annual Report on Form 10-K.

Certain Other Financial Commitments

In addition to the financial commitments mentioned previously in Off-Balance Sheet Arrangements and those mentioned above, the Company is party to certain other financial commitments discussed below.

Letters of Credit

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

Capital Commitments

The Company remains committed to maintaining the current high level of quality of our capital assets in pursuing sustainable growth. As part of this commitment, CP has entered into contracts with suppliers to make various capital purchases related to track and rolling stock programs. Payments for these commitments are due in 2020 through 2032. These expenditures are expected to be financed by cash generated from operations or by issuing new debt.

The following table outlines the Company's commitments to make future payments for letters of credit and capital expenditures as at June 30, 2020:

Payments due by period (in millions)	**Total**	2020	2021 & 2022	2023 & 2024	Thereafter
Certain other financial commitments					
Letters of credit	**$ 62**	$ 62	$ —	$ —	$ —
Capital commitments	**581**	233	206	70	72
Total certain other financial commitments	**$ 643**	$ 295	$ 206	$ 70	$ 72

Critical Accounting Estimates

To prepare consolidated financial statements that conform with GAAP, the Company is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reported periods. Using the most current information available, the Company reviews estimates on an ongoing basis, including those related to environmental liabilities, pensions and other benefits, property, plant and equipment, deferred income taxes, and personal injury and other claims liabilities. Additional information concerning critical accounting estimates is supplemented in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of the Company's 2019 Annual Report on Form 10-K.

Following completion of the January 1, 2020 actuarial valuations of the Canadian pension plans, CP has changed its estimate of aggregate pension contributions, including its defined benefit and defined contribution plans, to be in the range of $40 million to $50 million in 2020, a reduction of $25 million from the previous estimate. The estimate for 2021 to 2023 remains in the range of $50 million to $100 million per year. There have been no other material changes to the Company's critical accounting estimates in the first six months of 2020.

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

Forward-Looking Statements

This Management's Discussion and Analysis of Financial Condition and Results of Operations and Quarterly Report on Form 10-Q contains certain forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and other relevant securities legislation, including applicable securities laws in Canada. Forward-looking statements typically include words such as “financial expectations”, “key assumptions”, “anticipate”, “believe”, “expect”, “plan”, “will”, “outlook”, “should” or similar words suggesting future outcomes. To the extent that CP has provided forecasts or targets using Non-GAAP financial measures, the Company may not be able to provide a reconciliation to a GAAP measure without unreasonable efforts, due to unknown variables and uncertainty related to future results. This Management's Discussion and Analysis of Financial Condition and Results of Operations and Quarterly Report on Form 10-Q includes forward-looking statements relating, but not limited to, statements concerning 2020 volume as measured in revenue ton-miles, adjusted diluted EPS, capital program investments, the U.S.-to-Canadian dollar exchange rate and expected impacts resulting from changes therein, annualized effective tax rate and other components of net periodic benefit recovery, the purpose of which is to assist readers in understanding our expected and targeted financial results, and this information may not be appropriate for other purposes.

The forward-looking statements contained in this Management’s Discussion and Analysis of Financial Condition and Results of Operations and Quarterly Report on Form 10-Q are based on current expectations, estimates, projections and assumptions, having regard to the Company's experience and its perception of historical trends, and includes, but is not limited to, expectations, estimates, projections and assumptions relating to: North American and global economic growth; commodity demand growth; sustainable industrial and agricultural production; commodity prices and interest rates; foreign exchange rates (as specified herein); effective tax rates (as specified herein); performance of our assets and equipment; sufficiency of our budgeted capital expenditures in carrying out our business plan; geopolitical conditions; applicable laws, regulations and government policies; the availability and cost of labour, services and infrastructure; the satisfaction by third parties of their obligations to the Company; and the anticipated impacts of the COVID-19 pandemic on the Company’s business, operating results, cash flows and/or financial condition. Although the Company believes the expectations, estimates, projections and assumptions reflected in the forward-looking statements presented herein are reasonable as of the date hereof, there can be no assurance that they will prove to be correct. Current conditions, economic and otherwise, render assumptions, although reasonable when made, subject to greater uncertainty.

Undue reliance should not be placed on forward-looking statements as actual results may differ materially from those expressed or implied by forward-looking statements. By their nature, forward-looking statements involve numerous inherent risks and uncertainties that could cause actual results to differ materially from the forward-looking statements, including but not limited to the following factors: changes in business strategies; general North American and global economic, credit and business conditions; risks associated with agricultural production such as weather conditions and insect populations; the availability and price of energy commodities; the effects of competition and pricing pressures; industry capacity; shifts in market demand; changes in commodity prices; uncertainty surrounding timing and volumes of commodities being shipped via CP; inflation; geopolitical instability; changes in laws, regulations and government policies, including regulation of rates; changes in taxes and tax rates; potential increases in maintenance and operating costs; changes in fuel prices; uncertainties of investigations, proceedings or other types of claims and litigation; labour disputes; risks and liabilities arising from derailments; transportation of dangerous goods; timing of completion of capital and maintenance projects; currency and interest rate fluctuations; effects of changes in market conditions and discount rates on the financial position of pension plans and investments; trade restrictions or other changes to international trade arrangements; climate change; various events that could disrupt operations, including severe weather, such as droughts, floods, avalanches and earthquakes, and cybersecurity attacks, as well as security threats and governmental response to them, and technological changes; and the pandemic created by the outbreak of the novel strain of coronavirus (and the disease known as COVID-19) and resulting effects on economic conditions, the demand environment for logistics requirements and energy prices, restrictions imposed by public health authorities or governments, fiscal and monetary policy responses by governments and financial institutions, and disruptions to global supply chains. The foregoing list of factors is not exhaustive. There are more specific factors that could cause actual results to differ materially from those described in the forward-looking statements contained in this Management's Discussion and Analysis of Financial Condition and Results of Operations and Quarterly Report on Form 10-Q. These more specific factors are identified and discussed in Item 1A. Risk Factors of CP's 2019 Annual Report on Form 10-K. Other risks are detailed from time to time in reports filed by CP with securities regulators in Canada and the United States.

The forward-looking statements contained in this Management’s Discussion and Analysis of Financial Condition and Results of Operations and Quarterly Report on Form 10-Q are made as of the date hereof. Except as required by law, CP undertakes no obligation to update publicly or otherwise revise any forward-looking statements, or the foregoing assumptions and risks affecting such forward-looking statements, whether as a result of new information, future events or otherwise.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes to interest rate risk during the three and six months ended June 30, 2020 from the information provided in Item 7A. Quantitative and Qualitative Disclosure about Market Risk of CP's 2019 Annual Report on Form 10-K. Refer to information on foreign exchange risk and share price impact on stock-based compensation discussed below:

Foreign Exchange Risk

Although CP conducts business primarily in Canada, a significant portion of its revenues, expenses, assets, and liabilities including debt are denominated in U.S. dollars. The value of the Canadian dollar is affected by a number of domestic and international factors, including, without limitation, economic performance, and Canadian, U.S. and international monetary policies. Consequently, the Company’s results are affected by fluctuations in the exchange rate between these currencies. On an annualized basis, a $0.01 weakening (or strengthening) of the Canadian dollar relative to the U.S. dollar positively (or negatively) impacts Total revenues by approximately $30 million (2019 - approximately $28 million), negatively (or positively) impacts Operating expenses by approximately $15 million (2019 - approximately $15 million), and negatively (or positively) impacts Net interest expense by approximately $3 million (2019 - approximately $3 million).

CP uses U.S. dollar-denominated debt to hedge its net investment in U.S. operations. As at June 30, 2020, the net investment in U.S. operations is less than the total U.S. denominated debt. Consequently, FX translation on the Company’s undesignated debt and lease liabilities causes additional impacts on earnings in Other (income) expense. For further information on the net investment hedge, please refer to Financial Statements, Note 19 Financial instruments of CP's 2019 Annual Report on Form 10-K.

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

Share Price Impact on Stock-Based Compensation

Based on information available at June 30, 2020, for every $1.00 change in share price, stock-based compensation expense has a corresponding change of approximately $0.5 million to $0.6 million (2019 - approximately $0.4 million to $0.6 million). This excludes the impact of changes in share price relative to the S&P/TSX 60 Index, the S&P/TSX Capped Industrial Index, the S&P 1500 Road and Rail Index, and to Class I railways, which may trigger different performance share unit payouts. Stock-based compensation may also be impacted by non-market performance conditions.

Additional information concerning stock-based compensation is included in Item 1. Financial Statements, Note 14 Stock-based compensation.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of June 30, 2020, an evaluation was carried out under the supervision of and with the participation of CP's management, including its CEO and CFO, of the effectiveness of the design and operation of the Company's disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Based on that evaluation, the CEO and CFO concluded that these disclosure controls and procedures were effective as of June 30, 2020, to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified by the SEC rules and forms and (ii) accumulated and communicated to the Company's management, including the CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

During the second quarter of 2020, the Company has not identified any changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.