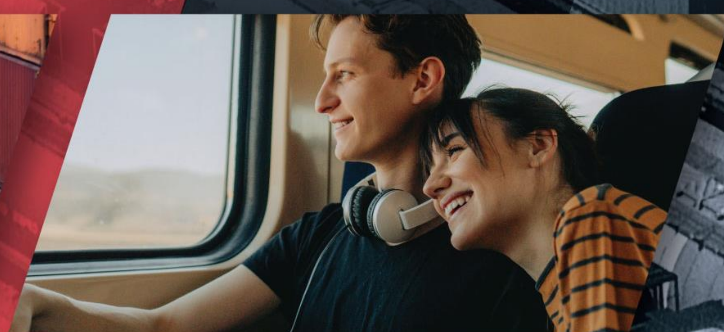
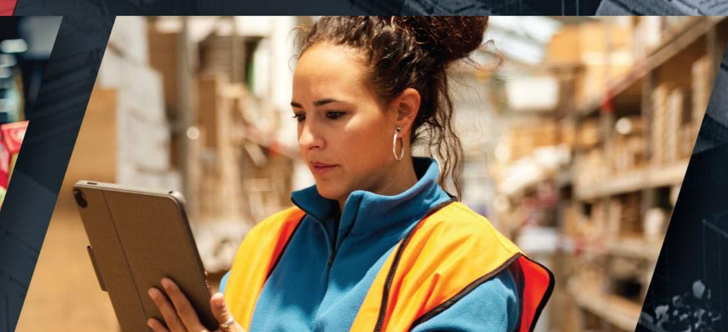
Railway Association of Canada

RAC QUARTERLY REPORT Q2-2023



August 26, 2023

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Introduction

The Railway Association of Canada's (RAC) Quarterly Report compiles weekly, monthly, and quarterly data from railways and various statistical and regulatory agencies to provide a timely update on the state of the economy, the transportation sector, and freight and passenger rail operations.[1] Links to all data sources are included throughout the report. In addition, RAC's quarterly and annual reports can be accessed on the RAC website.

Starting in 2023, the Class 1 freight data include CN and the combined CPKC data.[2]

Note: This report covers the period up to June 30, 2023. While the full impact of the recent ILWU work stoppage on the rail sector will be covered in the next edition of RAC's Quarterly Report, it is worth noting that the lead up to the work stoppage also resulted in lost volumes and under-utilized rail capacity as many rail shippers exercised other transportation options.

Executive Summary

Freight Rail

A slowing economy and softer consumer demand driving North American traffic lower yet railways well-positioned to service future growth.

In the second quarter of 2023, Class 1 freight traffic (CN and CPKC, network-wide), measured using revenue-ton miles (RTMs), was down 6% compared to the same period last year. Carloads and freight revenues were also down by 5% and 4%, respectively. RTMs decreased for all commodities except automotive. The 6% (7,214 million) reduction in total RTMs was driven by a 12% (2,932 million) reduction in intermodal RTMs; 12% (2,618 million) reduction in energy, chemicals, and plastics; and 11% (1,024 million) reduction in forest products. On a year-to-date (YTD) basis, total RTMs have been flat compared to 2022, much thanks to a strong first quarter for grain. Statistics Canada's carload data shows that on a YTD basis (Jan-May), carload traffic is up 8% while intermodal traffic is down 11%.

In terms of performance, four out of ten key financial and operating metrics improved compared to the same period last year, one remained unchanged, and five worsened (including average train weight, train length, and fuel efficiency). Train weight and length were reduced to accommodate a softer demand environment and lower traffic levels, and this train size reduction contributed to declining fuel efficiency. Despite the demand challenges, Class 1s continued to invest in their assets – over $1.5 billion in Q2-23. Combined, the two Class 1s and heading into Q3-23 with more than 45,000 employees across their networks. With strong investment and workforce numbers, they are well-positioned to respond to an increase in volumes in the back half of 2023 if it comes and to service traffic growth into the future.

Supply chain performance across modes was generally similar, or favourable to the previous year. Global marine vessel delays and on-time performance continued to improve; however, key performance metrics remain unfavourable compared to pre-pandemic levels. On-time performance improved from 36.9% in Q2-22 to 65.1% in Q2-23 and average delays for late vessels decreased from an average of 6.4 days in Q2-22 to 4.4 days in Q2-23.

Container import dwell at the Port of Vancouver has improved to only 3% longer than it was in Q2-22, while container import dwell at the Port of Montreal averaged 4.2 days (101 hours), a significant 52% improvement from exceptionally long dwell times in Q2-22 (211 hours). Despite this improvement, import dwell at both major ports remain significantly elevated compared to

[1] Much of the data in this report are measured against the same period in previous years, for year-over-year comparisons' sake. However, in some cases, data are compared to earlier periods to provide context relative to pre-pandemic activity levels.

[2] Canadian Pacific Kansas City Limited, *Unaudited Combined Summary of Supplemental Data.*

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pre-pandemic levels. Railway terminal (yard) dwell times continued on trend to remain relatively consistent with previous years, averaging 8.6 hours in Q2-23. The impacts of the July 2023 B.C. ports strike will be presented in the next edition of RAC's Quarterly Report. However, it is worth noting that impacts to rail volumes and underutilization of rail capacity were felt in advance of any labour action due to shippers choosing to use alternative routings and transportation options to access their end markets.

Throughout the first half of 2023 rail freight rates have come down 5.3%. Data for truck freight rates are available as recent as March 2023. Throughout the pandemic (January 2020 to March 2023), trucking prices have increased to a greater extent than the increase in rail freight rates.

Passenger Rail

Urban transit and intercity passenger rail ridership is recovering and approaching pre-pandemic levels.

After hovering around 30% below pre-pandemic levels between September 2022 and February 2023, urban transit ridership has finally begun to edge up. In May, ridership was sitting at 22% below pre-pandemic levels.

Intercity passenger rail ridership continued to climb. In Q1-23,[3] VIA Rail ridership more than doubled Q1-22 ridership and was sitting24% below the Q1-19 (pre-pandemic) level. In Q2-23, Amtrak ridership for routes with segments in Canada increased significantly compared to last year and was within 4% of its Q2-19 (pre-pandemic) level. This increase was aided by Amtrak's resumption of service on its Adirondack route between New York City and Montreal, marking the return of all cross-border service between the U.S. and Canada.

Rail Safety

Solid safety performance this quarter.

Safety is the top priority for every railway and every railroader. The improvement in the safety metrics for Q2-23 reflect this focus and commitment. The Canadian Class 1 *Federal Railroad Administration (FRA)* personal injuries rate was 8% below the 2020-2022 average;[4] and the train accident rate was 17% below the 2022 level and 24% below the 2020-2022 average. Looking at *Transportation Safety Board (TSB)* data, in Q2-23, the overall accident rate was 15% below the 2018-2022 average. In addition, the number of accidents across all key accident categories were below the 2018-2022 average: main-track derailments (-24%), crossing and trespassing (-4%), and accidents involving dangerous goods (-16%).

[3] Latest available data as of August 17, 2023.
[4] 2020 is the earliest year for which data are available.

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State of the Canadian Economy

June 2023 data are not yet publicly available for all the key economic indicators. As such, May data are compared against February to analyze recent trends.

From February to May 2023, total employment (all industries) increased by 0.3% (58,800 jobs), from 20.05 million to 20.11 million.

Over the same three months, GDP increased by 0.4%, from $2,082B to $2,091B. The real estate and rental and leasing sector contributed to nearly half of total GDP growth. Transportation and warehousing sector GDP increased by 0.9%.

From February to May 2023, trade (exports + imports) decreased by 1.3%, from $127.7B to $126.1B. Non-seasonally adjusted data show that trade in transportation equipment, machinery, and crops (exports) were much higher than in the February to May 2022 period; while trade in oil and gas, petroleum and coal, chemicals, primary metals, and wood products drove the overall downward trend.

Domestic retail sales provide insight into household consumption, which is the largest contributor to Canada's GDP at over 50% of total GDP and a key driver of intermodal rail volumes. In May, retail sales (in current dollars) dropped to 0.2% below February 2023 levels. Over this same period, consumer prices for goods increased by 1.6%, suggesting that *real* retail sales likely declined to an even greater extent. As stated in RAC's Q1-2023 Quarterly Report, the reduction in retail sales from February to May was predicted based on the reduction in intermodal rail volumes as a leading indicator.

Manufacturing shipments provide an indication into the strength of Canada's manufacturing sector and the global demand for its outputs. Manufacturing shipments increased by 1.9% from February to May.

Growth of Key Canadian Economic Indicators

	Employment (millions)	GDP ($B, annualized)	Exports + Imports ($B)	Retail Sales ($B)	Manufacturing Shipments ($B)
February 2023	20.05	2,082	127.7	66.1	71.5
May 2023	20.11	2,091	126.1	66.0	72.9
3-month change	**0.3%**	**0.4%**	**-1.3%**	**-0.2%**	**1.9%**

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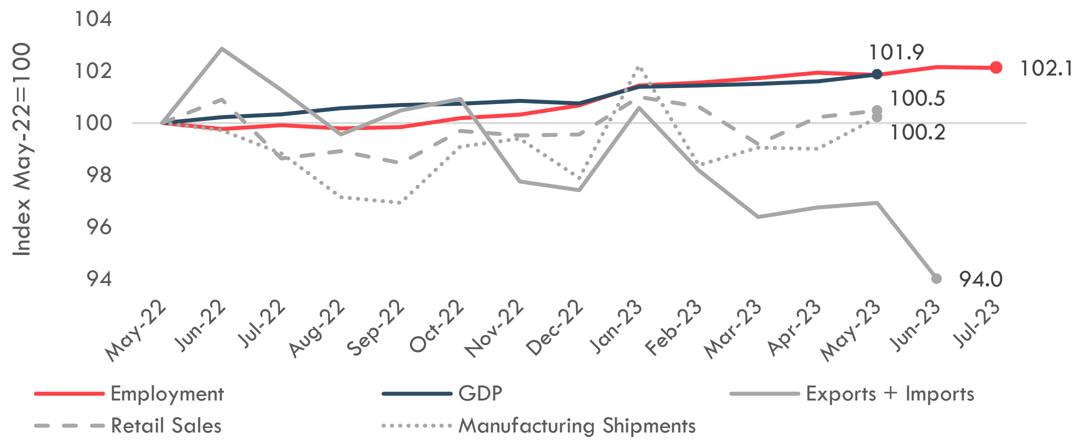
Key Canadian Economic Indicators



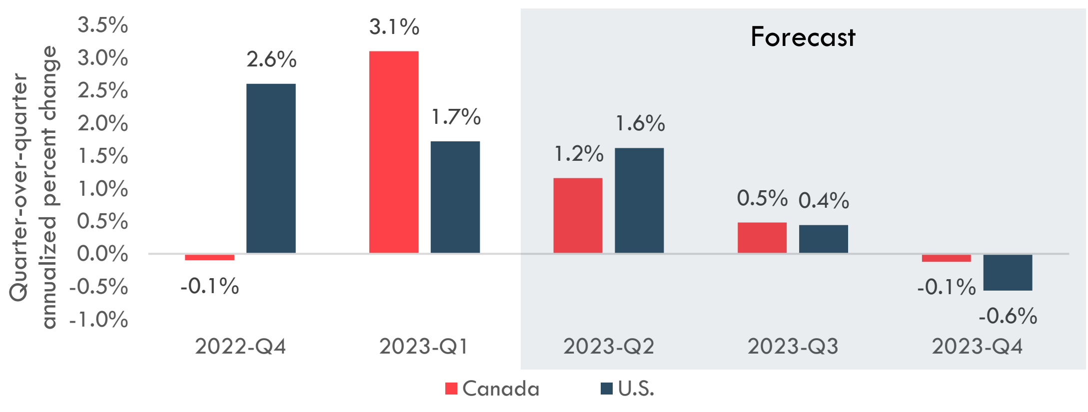
Source: Statistics Canada, Labour Force Survey; Gross domestic product at basic prices; Canadian International Merchandise Trade; Retail trade sales by industry; and Monthly Survey of Manufacturing
Note: Data are seasonally adjusted. The GDP index is an index of Real GDP in chained (2012) dollars. The indices for trade, retail sales, and manufacturing shipments are in nominal dollars.

Economic Outlook

After a small contraction of -0.1% in 2022-Q4 (in Canada), the Canadian economy grew again by 3.1% in 2023-Q1 (on an annualized basis) – outperforming the banks' average forecast shown in the previous RAC Quarterly Report of 1.6%. Canada's major banks are now forecasting modest growth in Canada for Q2 and Q3, which is an improvement from the mild recession predicted three months earlier. The outlook for Canada and the U.S. for the remainder of 2023 follow a similar path.

For rail, the outlook for the back half of 2023 varies by commodity. Demand challenges will likely persist through the back half of 2023. Consumer-driven commodities expect to see continued weakness (e.g., intermodal, forest products), except automotive, where the industry continues to play catch up as the demand for finished vehicles remains strong. Expectations remain positive for bulk commodities, including grain (it is anticipated that a slightly smaller crop this year will be offset by a strong carry-in crop from 2022-23), potash, and coal, the latter should perform relatively well compared to the second half of 2022, which experienced shipper outages at some locations.

Canadian and U.S. Real GDP Forecast



Source: TD, Scotiabank, CIBC, RBC, and BMO forecasts. The figures presented are the average of the five banks' latest forecasts.

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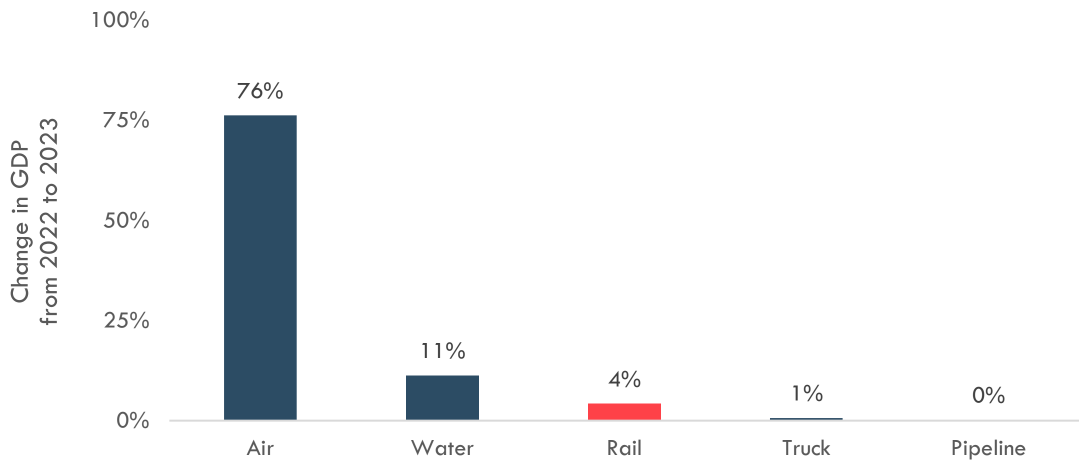
Rail and Other Modes of Freight Transportation

Each transportation mode has been impacted differently since the onset of the pandemic. The adverse impacts on some sectors were significant, especially for those that are more oriented toward passenger services. This affects the initial values used in year-over-year trend analysis and, as such, the findings in this section should be interpreted with caution.

Compared to last year, the air transportation sector experienced the most significant growth in GDP, with a 76% increase on a year-to-date (YTD) basis. This brought the air transportation sector's GDP up to 73% of its pre-pandemic (2019) level.

YTD GDP was flat or up compared to 2022 in every transportation sector: air (+76%), water (or marine) (+11%), rail (+4%), truck (+1%), and pipeline (+0.1%).

Modal Comparison of GDP (YTD Jan-May)



Source: Statistics Canada, Gross Domestic Product by Industry
Note: Data are seasonally adjusted.

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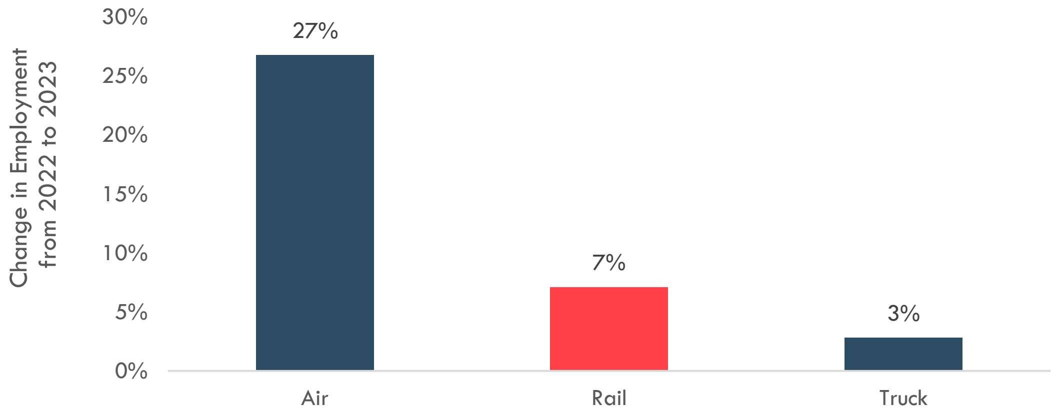
YTD employment was up for all three transportation sectors for which data are available (air, rail, and truck).

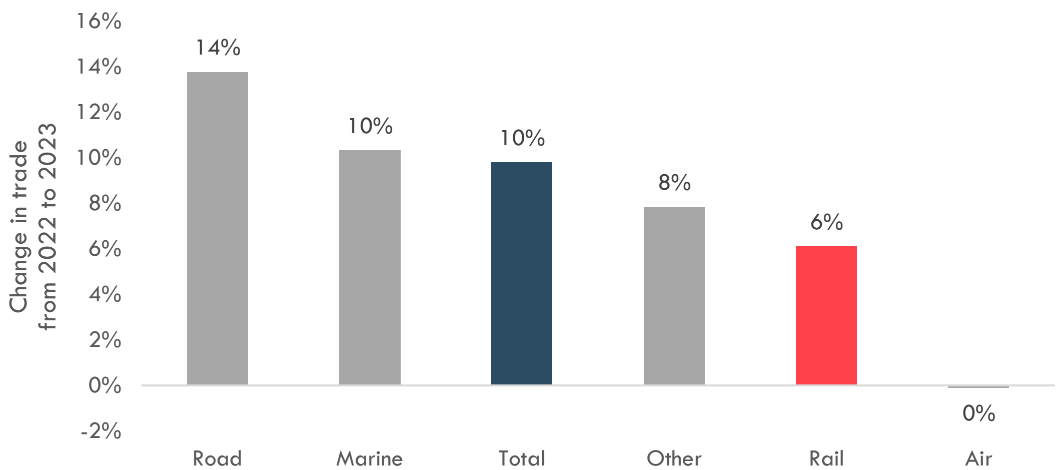
Modal Comparison of Employment (YTD Jan-May)



Source: Statistics Canada, [Survey of Employment, Payrolls and Hours]
Note: The Survey of Employment, Payrolls and Hours does not provide information on employment for the marine or pipeline sectors.
Note: Data are seasonally adjusted.

Trade volumes were up 15% in the first quarter of 2023, compared to the same period in 2022.[5] Trade by road increased the most (14%), followed by marine (10%), other (8%), and rail (6%), while trade by air was relatively flat (-0.1%).[6]

Modal Comparison of Trade (YTD Jan-Mar)



Source: Transport Canada, [Transport Canada in brief]

[5] As of August 14, 2023, the latest available data from Transport Canada in brief covered March 2023.
[6] The data source does not provide a definition for "Other modes".

Class 1 Data

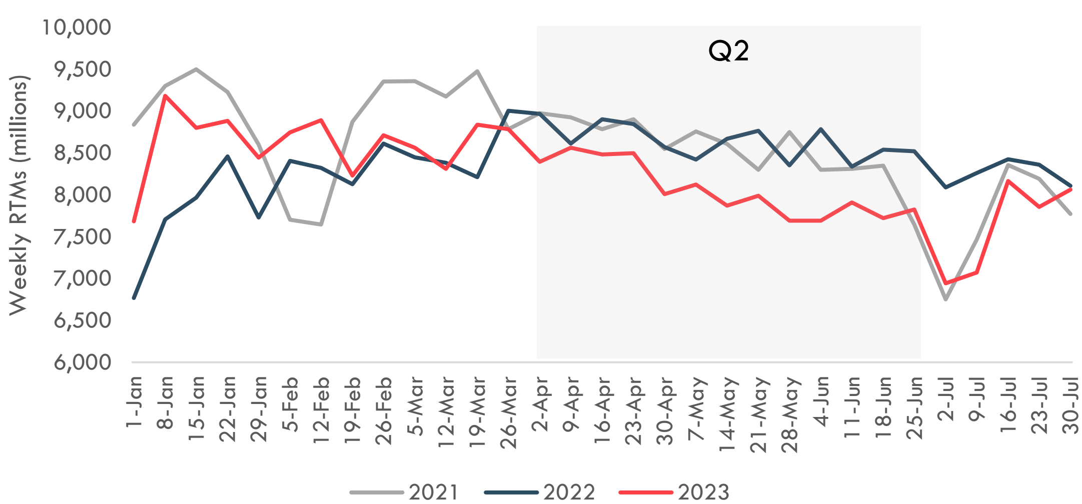
The Class 1 data cover CN and CPKC's network-wide operations across North America (see *Introduction*).

Weekly Trend

Class 1 Q2-23 revenue ton-miles (RTMs) were down 6% compared to both Q2-22 and Q2-21. RTMs were below 2022 levels in each of the quarter's 13 weeks. Throughout the quarter, RTMs remained consistently low for intermodal; forest products; and energy, chemicals and plastics. Furthermore, data from the first five weeks of Q3-23 show continued weakness in these three commodities. Total RTMs were down 8%, led by a 25% decrease in intermodal.

Data from the first two weeks of Q3-23 (weeks beginning July 2 and July 9) show the significant impact of the B.C. ports strike on rail traffic. The graph below shows the impact of this early July shock (red line) on the annual run rate and in comparison to the previous year (blue line). Comparisons to 2021 (grey line) must be informed by the timing of a difficult wildfire season in western Canada and in particular the Lytton fire in July[7] 2021 (grey line).

Canadian Class 1 Revenue Ton-miles



Source: CN Key Weekly Metrics; CPKC Weekly Key Metrics
Note: The dates indicate the first day of the week (e.g., "1-Jan" corresponds to the week of Jan 1-8). The week starting January 1, 2023, is compared against the weeks starting January 2, 2022, and January 3, 2021.

Revenues, Revenue Ton-miles, and Carloads

As shown in the figure and table below, compared to Q2-22, freight traffic was down or relatively flat for all commodities, except automotive.

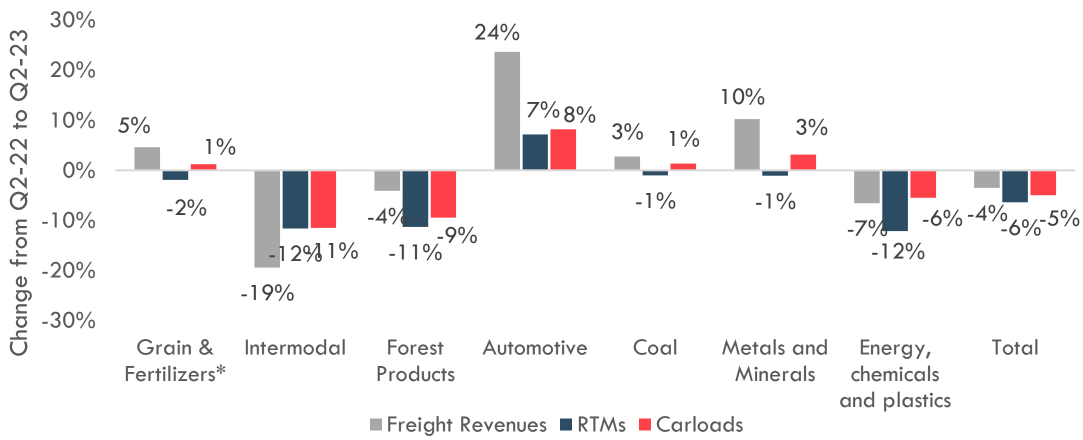
The 6% (7,214 million) reduction in RTMs was driven by a 12% (2,932 million) reduction in intermodal RTMs; 12% (2,618 million) reduction in energy, chemicals and plastics; and 11% (1,024 million) reduction in forest products. Despite these significant reductions, on a YTD basis, total RTMs have been flat compared to 2022, thanks to a strong first quarter for grain shipments.

[7] The Lytton fire began on June 30, 2021.

In the second quarter of 2023, intermodal freight revenue per RTM was down 9% compared to Q2-2022. Pricing was challenged by soft demand and pricing pressure from the trucking sector – reinforcing the fact that railways compete not only against each other, but also against other modes, including trucking.

Total freight revenue per RTM, a proxy for freight rates, was only 3% higher in Q2-23 compared to Q2-22. Most notably, intermodal freight revenue per RTM was down 9%, driven by soft demand and enhanced pricing pressure from trucking on intermodal business.

Class 1 Freight Revenues, RTMs, and Carloads by Commodity, Q2-23 vs Q2-22



Q2: Canadian Class 1 RTMs (millions), by Commodity

	Q2-23	Q2-22	Change (%)	Change (#)
Grain & Fertilizers*	30,707	31,315	-2%	-608
Intermodal	21,560	24,392	-12%	-2,832
Forest Products	8,010	9,034	-11%	-1,024
Automotive	1,864	1,739	7%	125
Coal	11,887	12,010	-1%	-123
Metals and Minerals	12,203	12,337	-1%	-134
Energy, chemicals and plastics	18,891	21,509	-12%	-2,618
Total	**105,122**	**112,336**	**-6%**	**-7,214**

YTD (Q1-Q2): Canadian Class 1 RTMs (millions), by Commodity

	YTD-23	YTD-22	Change (%)	Change (#)
Grain & Fertilizers*	67,538	61,863	9%	5,675
Intermodal	42,084	45,552	-8%	-3,468
Forest Products	16,310	17,069	-4%	-759
Automotive	3,464	3,257	6%	207
Coal	23,386	23,281	0%	105
Metals and Minerals	24,251	23,071	5%	1,180
Energy, chemicals and plastics	39,426	42,004	-6%	-2,578
Total	**216,459**	**216,097**	**0%**	**362**

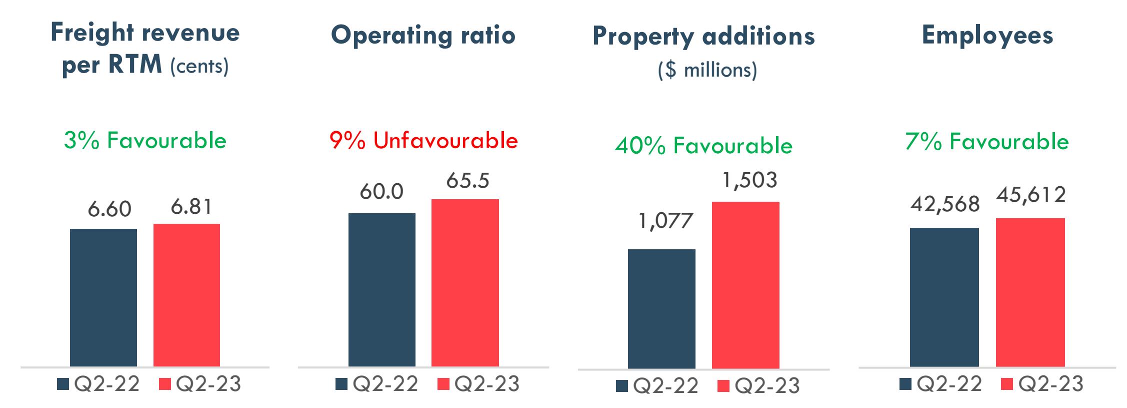
Source: CN Quarterly Review; CPKC Unaudited Combined Summary of Supplemental Data.
**Includes potash and sulphur.*

Select Key Financial and Operating Metrics

From Q2-22 to Q2-23, freight revenue per RTM increased by a modest 3%. The average Class 1 operating ratio increased significantly (+9.2%), largely driven by the estimated effects of the CP-KCS transaction. Canada's Class 1 railways invested over $1.5 billion into their assets – a 40% increase compared to the same period last year. Employment increased by 7% to over 45,000 employees. Hiring plans are expected to moderate and employment to stabilize, as demand has been softer than expected and the railways are well-resourced to service future traffic growth. Both Class 1 railways spoke to significant engineering work in Q2, supported by the higher staffing levels and relatively low traffic volumes.

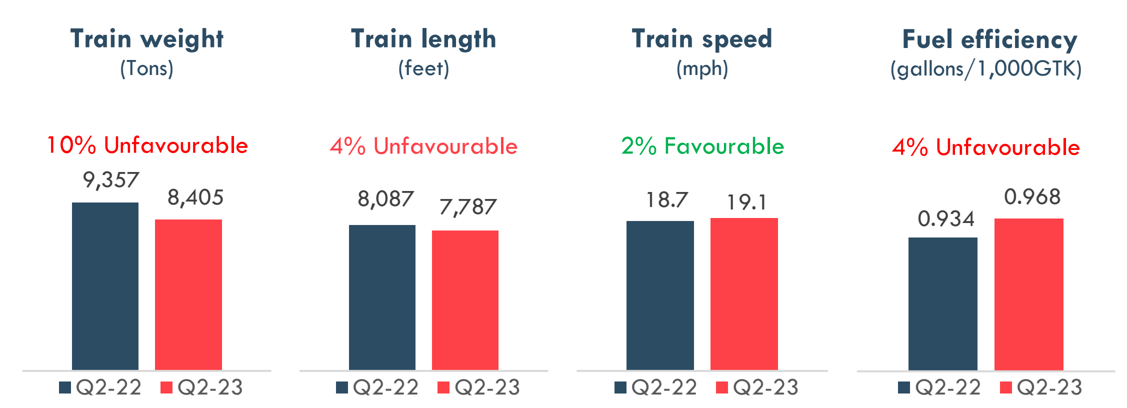
During the second quarter of 2023, Canadian Class 1s invested over $1.5 billion dollars in their assets (track, railcars, locomotives and systems), representing a 40% increase compared to Q2-22.

Heading into Q3-2022 with over 45,000 employees, Canadian Class 1 railways are well-resourced to service future traffic growth.



Source: [CN Quarterly Review](); [CPKC Unaudited Combined Summary of Supplemental Data]().
Note: The operating ratio is calculated as the simple average of CN and CPKC.

In Q2-23, average train weight and length decreased by 10% and 4%, respectively. Average train weight and length were reduced to accommodate lower traffic levels, contributing to a 4% decline in fuel efficiency. Average train speed increased by 2%.



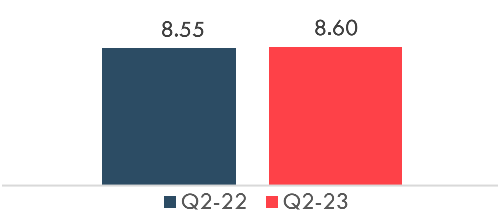
Source: [CN Quarterly Review](); [CPKC Unaudited Combined Summary of Supplemental Data]().
Note: All four metrics are calculated using the simple average of CN and CPKC.

In Q2-23, railway terminal dwell times consistently remained below 10 hours throughout each week of the quarter. Overall, railway terminal dwell averaged 8.60 hours for the quarter – flat compared to Q2-22. In addition, across the first 12 weeks of the quarter, the average terminal dwell time at major yards was shorter than in the previous year, averaging 8% shorter (not shown).

The average numbers of rail cars on line decreased by 3% (5,598 cars) compared to Q2-22, to accommodate lower traffic levels.

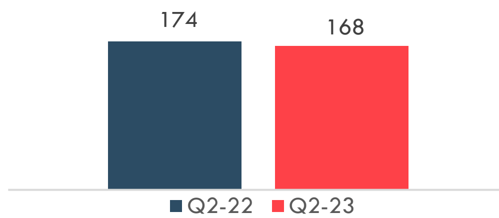
Terminal dwell (hours)

No Change



Cars on line
(thousands)

3% Unfavourable



Source: CN Quarterly Review; CPKC Unaudited Combined Summary of Supplemental Data; CN Key Weekly Metrics; CPKC Weekly Key Metrics
Note: Terminal dwell is calculated using the simple average of CN and CPKC.

Freight Industry Data

The freight industry data in this section of the report have some overlap with the Class 1 data reported above. The Class 1 data cover CN and CPKC's operations across North America, whereas this section is specific to Canadian operations and include data from all freight railways, including shortlines.

The data from the various statistical agencies included in this section have a slightly longer lag time than the Class 1 data, and as a result, the data are not always available for all months of the most recent quarter. As such, most of the freight data are analyzed on either a YTD or monthly basis, rather than quarterly.

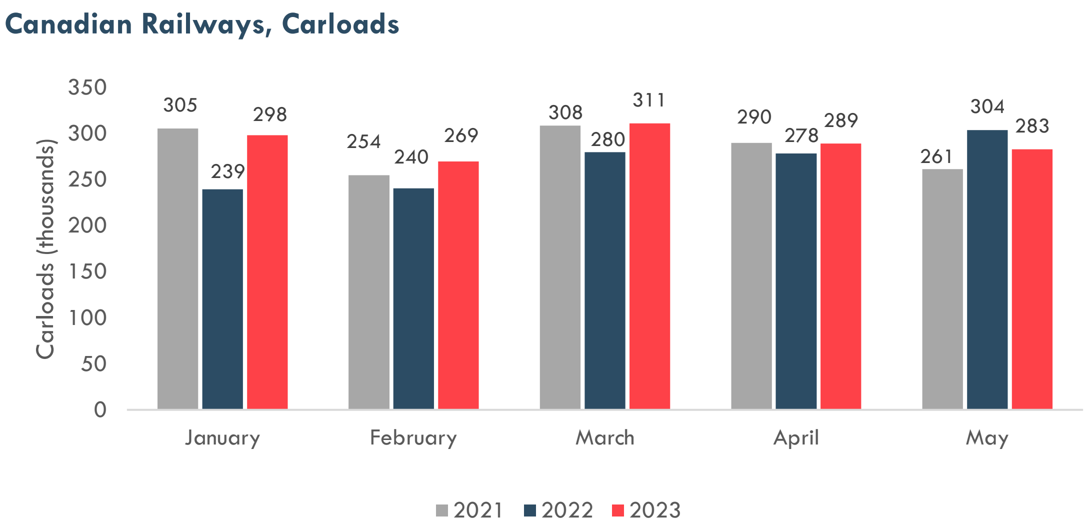
Carloads & Intermodal Units

In the first half of 2023, the American Association of Railroads (AAR) reported that freight traffic (measured as total carloads and intermodal units) was down 4.0% in the U.S. and 1.4% in Canada.

Statistics Canada reports monthly carloadings for over 60 commodities (which are categorized into 10 commodity groupings in this report), as well as intermodal units.

Non-intermodal carloadings in May (the latest month of available Statistics Canada data) were down 7% compared to last year; however, on a YTD basis (January-May), non-intermodal carloadings were 8% above 2022 levels. Carloads were up for six non-intermodal commodity groupings, led by a 73% increase in agriculture, followed by double-digit growth in food products, machinery & automotive, and manufactured & miscellaneous. Carloadings for the remaining six non-intermodal commodity groupings were within 3% of their 2022 levels. The strong year-over-year growth in agricultural traffic continues to reflect the delivery of a bumper harvest from 2022 relative to a very small crop in 2021.

On a YTD basis (January-May), total 2023 intermodal traffic loaded was 11% below 2022 levels. May 2023 marked the sixth consecutive month of year-over-year declines in intermodal traffic.



Source: Statistics Canada, Monthly Railway Carloadings Survey

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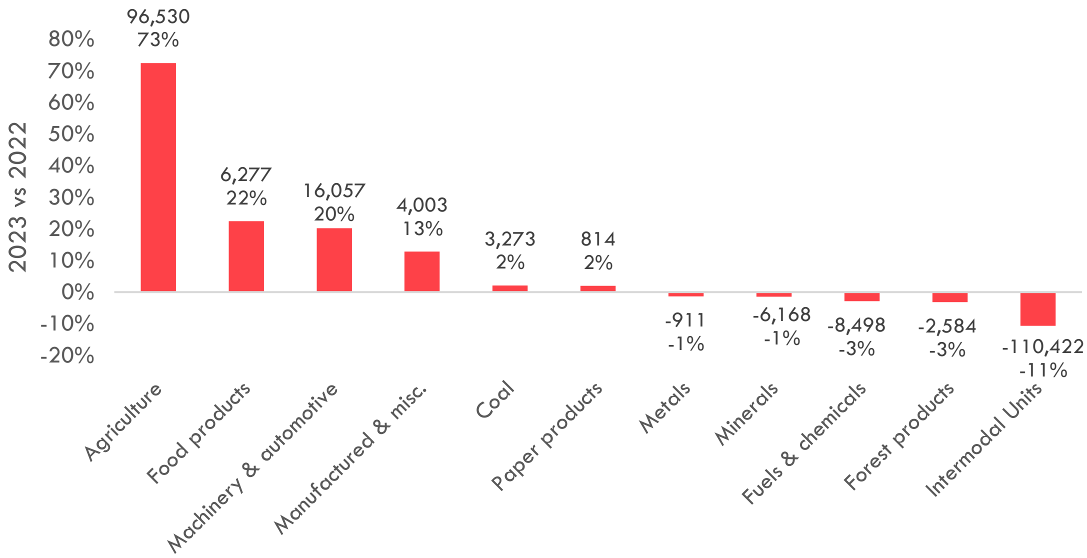
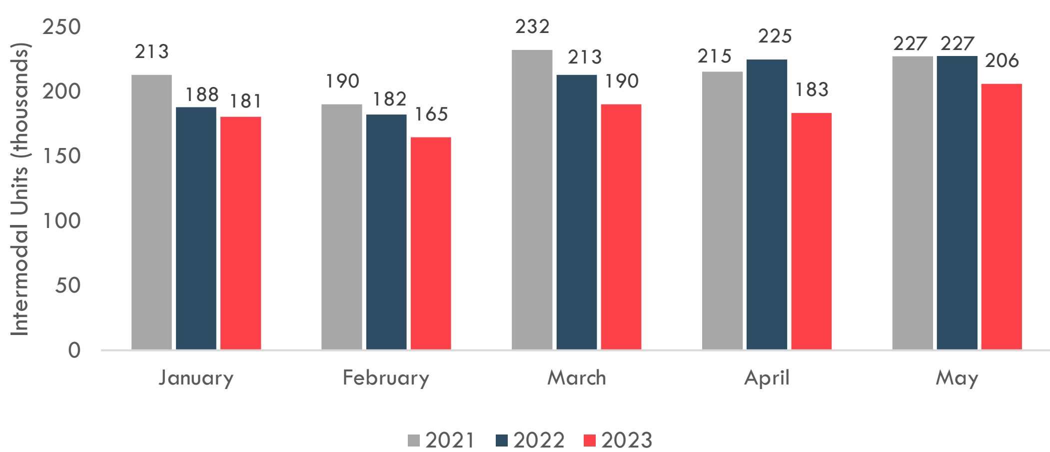
Canadian Railways, Carloads by Commodity & Intermodal Units (Jan-May)



Source: Statistics Canada, [Monthly Railway Carloadings Survey]

Canadian Railways, Intermodal Units



Source: Statistics Canada, [Monthly Railway Carloadings Survey]

On a YTD basis (January-May), carloads were up in both Eastern Canada (+2%) and Western Canada (+13%), while intermodal units were down by 6% in Eastern Canada and 14% in Western Canada. The relatively stronger growth in carloads in Western Canada is largely the result of year-over-year growth in agricultural shipments. When excluding agricultural shipments in the west, carloads of all other goods were up just 1%.

YTD (Jan-May): CDN Carloads and Intermodal Units by Region

	2023 vs 2022
Eastern Division	
Carloads	2%
Intermodal Units	-6%
Western Division	
Carloads	13%
Intermodal Units	-14%
Total	
Carloads	8%
Intermodal Units	-11%

Source: Statistics Canada, [Monthly Railway Carloadings Survey]

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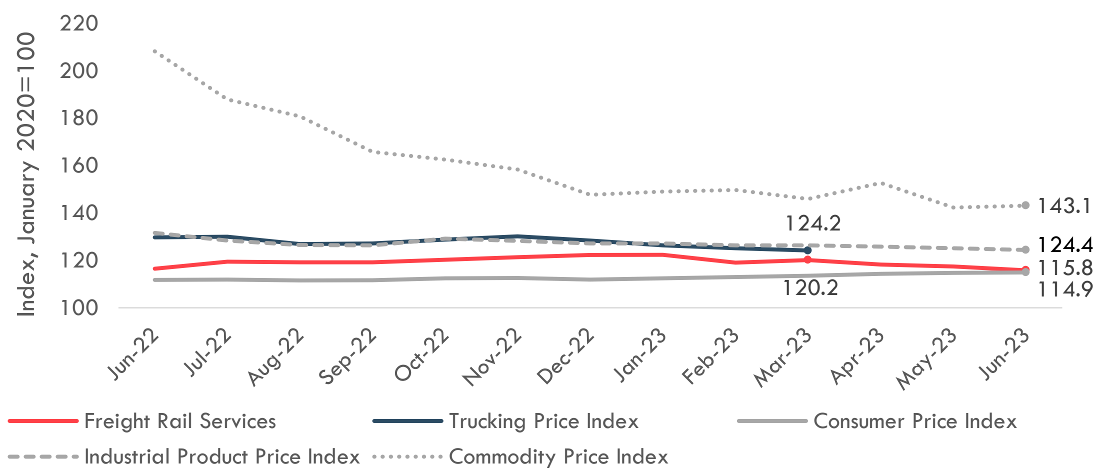
Freight Rates

From the onset of the pandemic until around January 2022, Statistics Canada's measurement of rail freight rates, trucking rates, and consumer prices were all following a similar inflationary path. However, relative to consumer prices, trucking prices began to rise more rapidly starting in January 2022, and rail freight rates began to rise more rapidly starting in May 2022, albeit to a lesser extent. Higher fuel prices were likely the most significant contributing factor to this recent, short-term trend.[8]

Throughout the first half of 2023, most price indices have either stabilized or come down. The consumer price index has increased by 2.1% since January, while all other price indices have decreased: industrial prices (-2.1%), commodity prices (-3.9%), and rail freight rates (-5.3%). Truck freight rates are available as recent as March 2023, which decreased by 1.7% from January to March. The March 2023 data indicate that, since the onset of the pandemic, trucking prices have increased to a greater extent than the increase in rail freight rates.

Price Index of Rail Services vs Other Price Indices

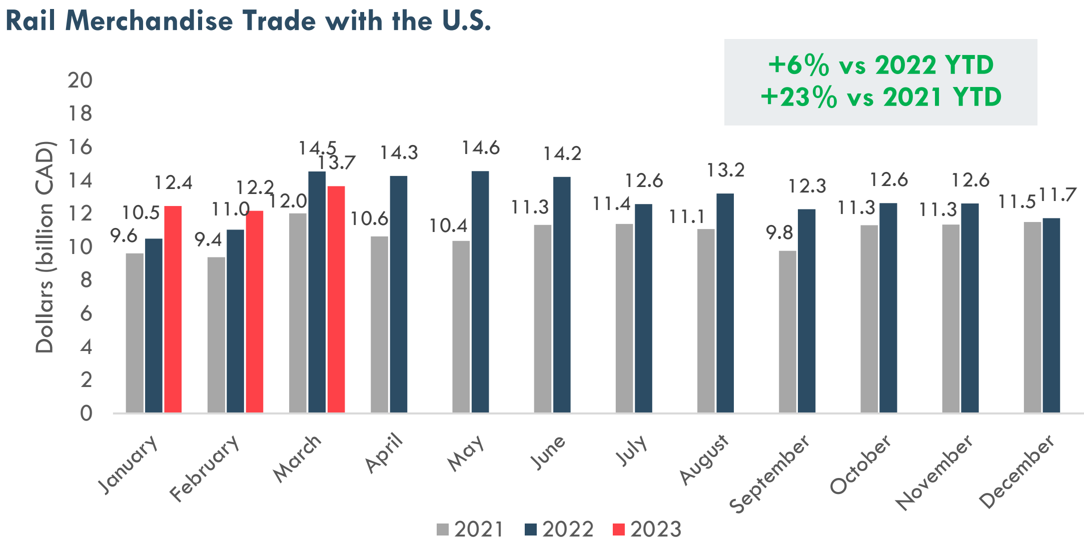


Source: Statistics Canada, Freight Rail Services Price Index, Industrial Product Price Index, For-hire Motor Carrier Freight Services Price Index, and Consumer Price Index. Bank of Canada, Commodity Price Index

[8] Fuel surcharges are included in Statistics Canada's *Freight Rail Services Price Index* and *For-hire Motor Carrier Freight Services Price Index*.

Exports

On a YTD basis (January-March),[9] trade by rail with the U.S. was 6% above 2022 levels and 23% above 2021 levels.



Source: Transport Canada, [Transportation activity indicators]

The 2022-2023 grain crop was significantly larger than the crop in the previous crop year.[10] Canada's railways transported comparatively large grain volumes from September 2022 through spring 2023. Since then, grain shipments to western ports have slowed as grain companies reduced orders and chose to hold back shipments for their own commercial reasons. It is estimated that grain companies are "carrying-in" approximately 10 MMT of grain into the 2023-24 season, which may increase future timing and capacity concerns for grain supply chain participants in the busy fall grain shipping season.

On a YTD basis, grain shipments destined for Western Ports were up 97% compared to 2022, but down 12% compared to 2021.[11]

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[9] As of August 17, 2023, the latest available trade data from *Transport Canada in brief* cover March 2023.
[10] https://www150.statcan.gc.ca/n1/daily-quotidien/221202/dq221202b-eng.htm
[11] Previous editions of the RAC Quarterly Report used data for *hopper cars unloaded at western ports* from Transport Canada. That data source typically had a lag, where one month of quarterly data was not available for the RAC Quarterly Reports. As of August 17th, the latest available data from Transport Canada was March. Therefore, this edition relied on data from the Canadian Grain Monitor. Since the Grain Monitor data typically has a shorter lag, and the data is presented in MMT (the generally preferred indicator for grain shipments, as opposed to carloads), the Grain Monitor data will be used moving forward in future RAC Quarterly Reports.

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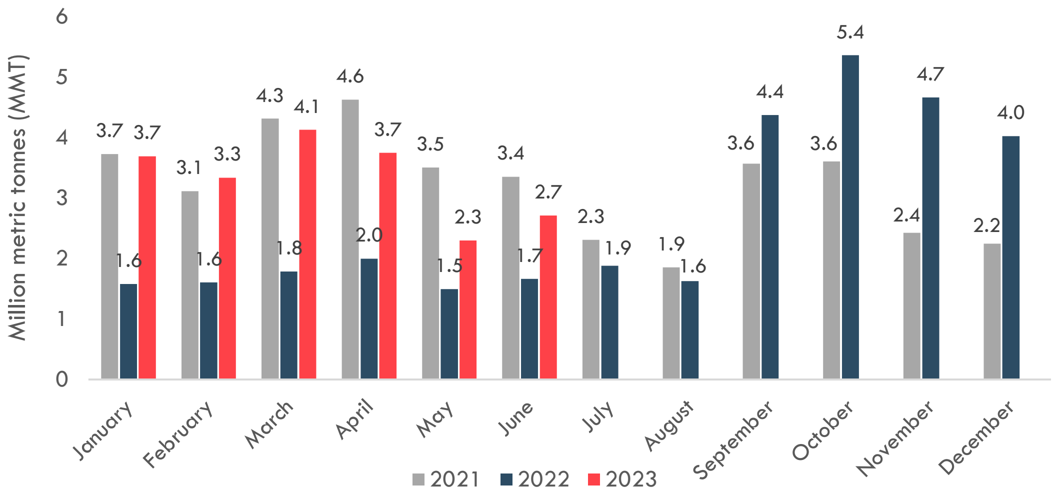
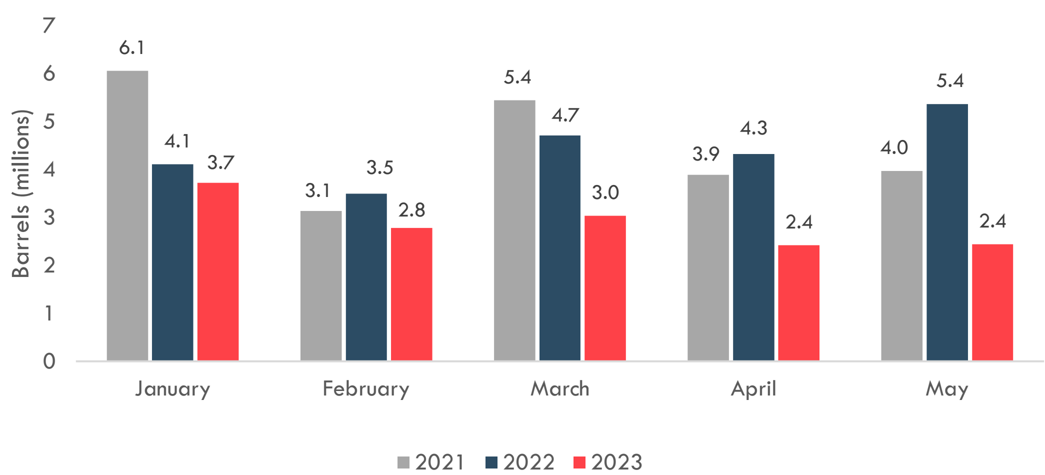
Grain in Hopper Cars Destined for Western Ports



Source: Quorum Corporation, *[Canadian Grain Monitor, Monthly Report](), GMP Data Table 2B-1 M*

Over the first five months of 2023, exports of crude oil by rail were down 35% compared to 2022 and 36% compared to 2021.

Canadian Crude Oil Exports by Rail



Source: Canada Energy Regulator, [Canadian Crude Oil Exports by Rail]()

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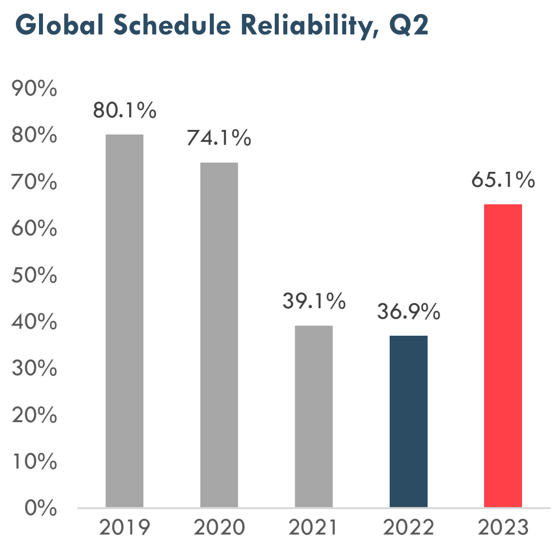
Supply Chains

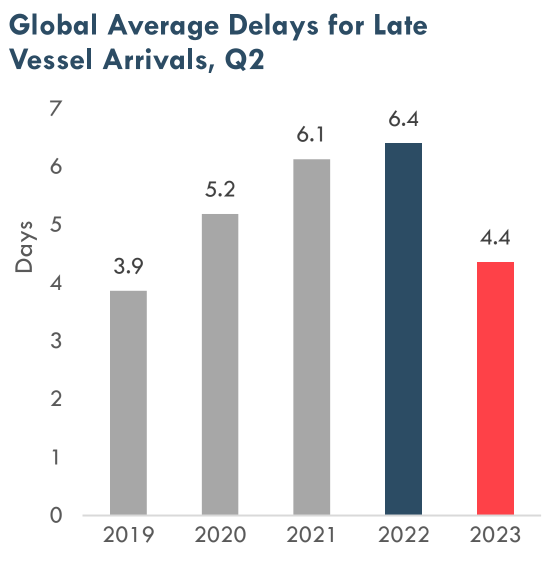
Modern supply chains are complex and, when they fall out of synchronization, the effects on transportation providers, shippers, suppliers, and consumers are felt widely and deeply. Rail has remained among the most reliable and least variable supply chain partner during the last few years of enormous upheaval.[12] Conditions and performance are starting to show improvement for other links in supply chains; however, while not shown in this report, the July 2023 B.C. ports strike remind us that supply chain disruptions can occur at any moment and will impact all the participants and those who rely on their services. Supply chain capacity and fluidity impact the cost-of-living, and affordability is a top-of-mind concern for Canadians.

Supply chain disruptions add to the cost of doing business for all sectors of the economy, ultimately adding to inflation as these costs are borne by consumers. The impacts of the July 2023 strike at Canada's west coast ports cannot be understated and will have consequences that outlive the weeks-long backlogs they have caused. A full examination will be presented in the next edition of RAC's Quarterly Report. Railways and others continue to urge the federal government to give itself more 'tools in the toolkit' to prevent future work stoppages of this nature before they happen, while respecting collective bargaining rights.

Global

In Q2-2023, global marine vessel delays and on-time performance continued to improve. According to Sea-Intelligence's *Global Liner Performance report, Global Schedule Reliability* increased from 36.9% in Q2-22 to 65.1% in Q2-23. However, this is still below pre-pandemic reliability, as shown below. The *Global Average Delays for Late Vessel Arrivals* made significant improvements. Delays decreased from an average of 6.4 days in Q2-22 to 4.4 days in Q2-23 – still half a day longer than in the pre-pandemic (Q2-19) period.





Source: Sea-Intelligence, Global Liner Performance (GLP) report

[12] Railway Association of Canada, *Strengthening all Links: Building More Resilient, Fluid Supply Chains in Canada*, May 2023.

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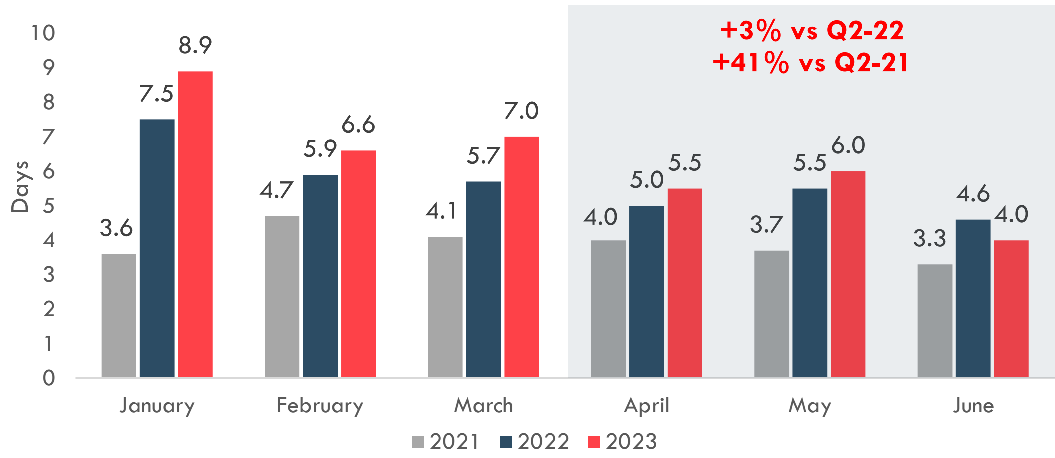
Canadian Ports

Dwell at the Port of Vancouver averaged 5.2 days in Q2-23, which was 3% longer than dwell in Q2-22 and 41% longer than in Q2-21.

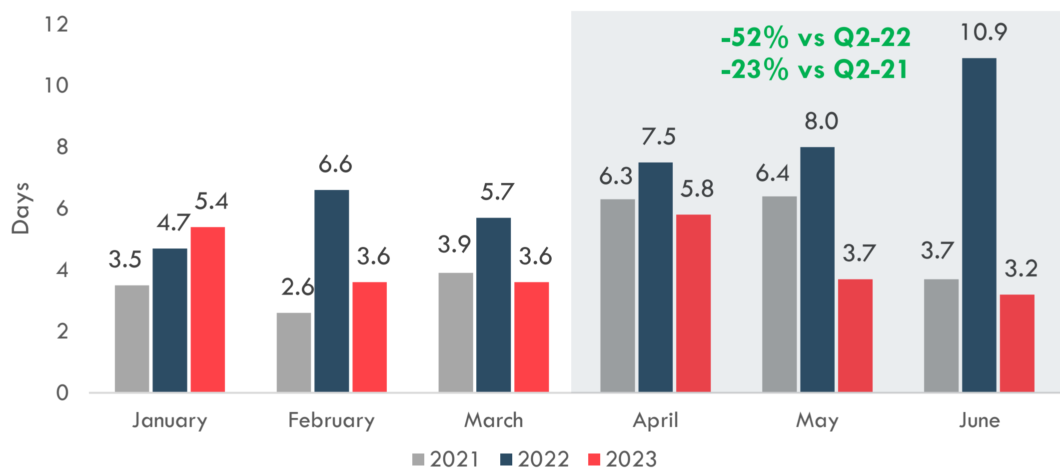
Dwell at the Port of Montreal averaged 4.2 days, which was 52% shorter than Q2-22 and 23% shorter than Q2-21.

Vancouver - Gateway terminal rail dwell performance by month



Source: Port of Vancouver, [Supply chain performance, Container terminal rail performance]()

Montreal - Average terminal dwell of containers (import-rail)



Source: Port of Montreal, [Performance Reports, Monthly Intermodal Scorecard]()

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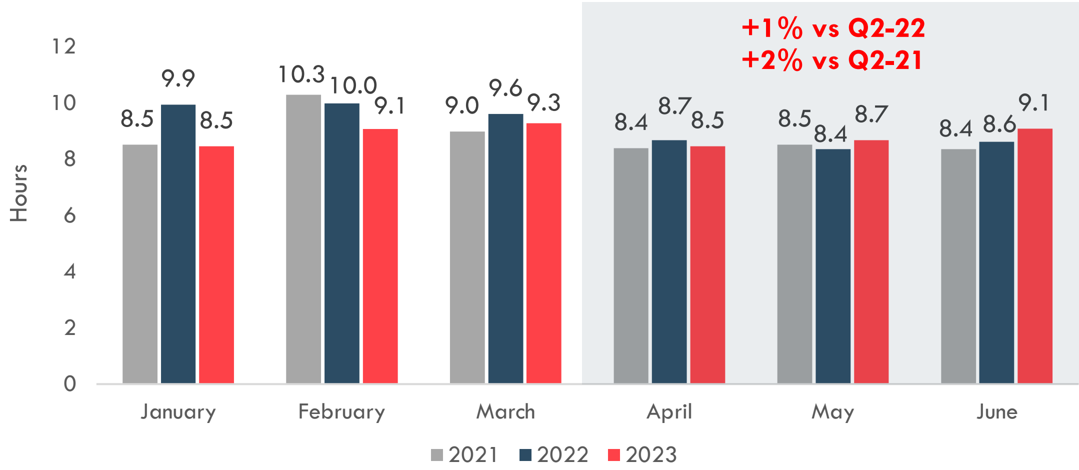
Canadian Railways

In Q2-23, railway dwell times remained consistent with previous years. In Q2-23, average dwell times were just 1% longer than Q2-22 and 2% longer than Q2-21.

Canadian Class 1 Railways - Average Terminal Dwell



Source: [CN Key Weekly Metrics](); [CPKC Weekly Key Metrics](); [CN Quarterly Review](); [CPKC Unaudited Combined Summary of Supplemental Data.]()

Note: The average terminal dwell time is calculated as the simple average of CN and CPKC. Weekly data have been converted into monthly data. The conversion is not exact as some months are allocated 4 weeks of data and others are allocated 5 weeks of data, and the start dates of the weeks vary across years. The year-over-year comparisons for the quarter as a whole use data from CN and CPKC's quarterly reports and may not align precisely with the constructed monthly data presented in the figure.

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Passenger Rail Data

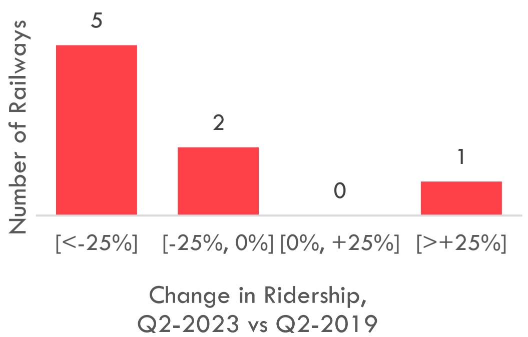
There are fewer monthly and quarterly datapoints available for passenger rail operations compared to freight rail operations, and in some cases, there may be a longer lag period. This section looks at both in-year passenger volumes and comparisons to pre-pandemic ridership levels.

RAC Member Ridership

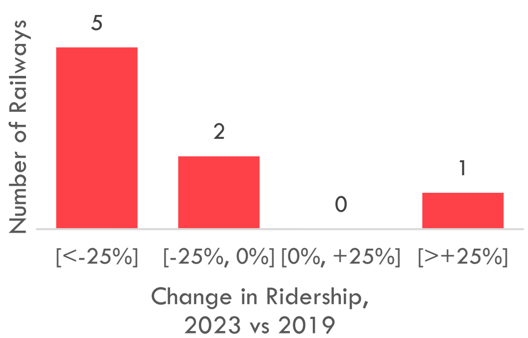
Passenger rail ridership was significantly impacted by the COVID-19 pandemic and evolving restrictions; and variable rates of employees returning to office work continue to affect ridership. This section looks at the recovery of passenger rail ridership among RAC members.

Despite a steady upward trend over the last year, ridership remains well off pre-pandemic levels. In Q2-23, eight RAC members reported ridership. On both a Q2 and YTD-basis, seven members reported a decrease in ridership compared to the same period in 2019 – five of them reporting a decline of over 25% and two reporting a decline between 0% and 25%.[13] One member reported a ridership increase greater than 25% compared to 2019.

RAC Members, Ridership, Q2



RAC Members, Ridership, YTD



Urban Transportation

Urban transit ridership, and commuter rail ridership in particular, is adjusting to fundamental structural shifts in commuting patterns and the proliferation of remote and hybrid office work arrangements. A recent Statistics Canada analysis on commuting patterns by mode (driving, bus, subway, train, walk, bike, motorcycle) indicated that ridership recovery is proving especially difficult for commuter rail.[14]

The urban transit ridership data presented below corrects for seasonality, by comparing ridership in each month to the corresponding month in 2019. Urban transit ridership was hovering around 30% below pre-pandemic levels between September 2022 and February 2023. Since February, ridership has begun to edge up, and in May was sitting 22% below pre-pandemic levels.

Since the onset of the pandemic, in terms of ridership recovery, Atlantic Canada has fared the best. In April 2023, ridership in Atlantic Canada reached its pre-pandemic level, and remained at its pre-pandemic level in May as well. The differences in the modal shares of urban transit (bus, subway, train, etc.) by region are likely a very strong, contributing factor to the uneven

[13] https://www.railcan.ca/membership/member-railways/
[14] Statistics Canada, Number of commuters remains below May 2016 levels in May 2022, except for driving to work, November 2022.

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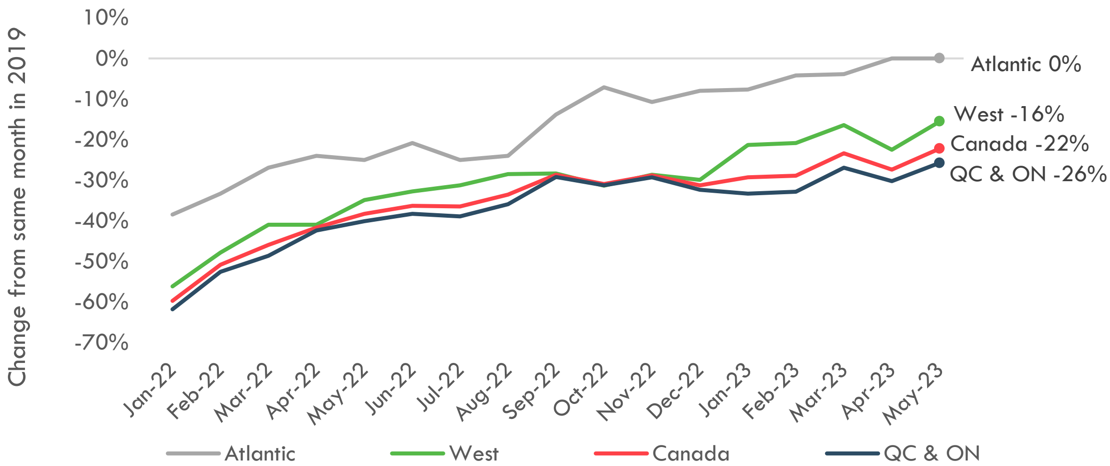
ridership witnessed across regions. The pandemic had a relatively smaller negative impact on bus ridership. Atlantic Canada, relying on bus service, recovered the quickest.

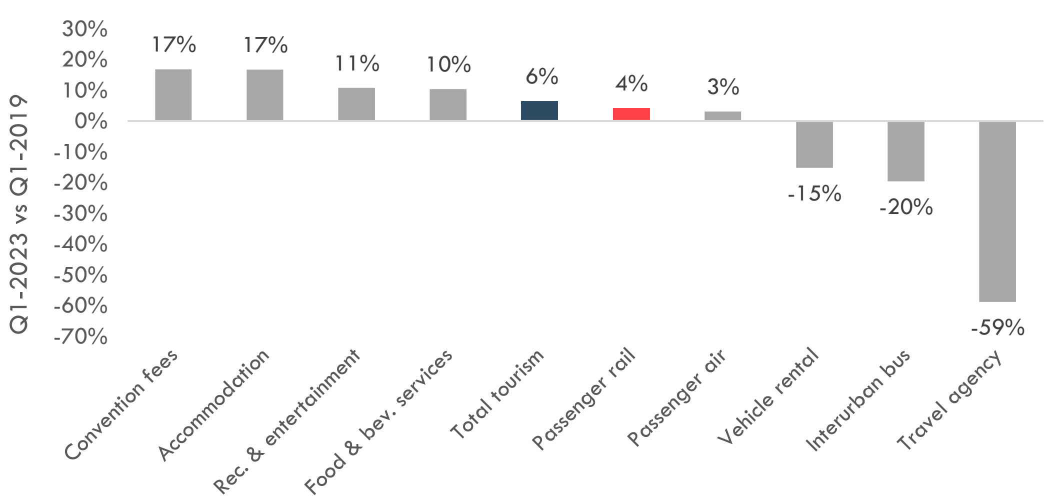


Source: Statistics Canada, [Monthly Passenger Bus and Urban Transit Survey]

Tourism Rail

There is a considerable lag in data on tourism expenditures. The latest available data cover Q1-23. Tourism expenditures are analyzed compared to their pre-pandemic (2019) levels, in order to deliver a clear picture of the extent of the recovery.

In Q1-23, the overall tourism sector had recovered, with expenditures reaching 6% above their pre-pandemic (Q1-19) level. Tourism expenditures on passenger rail services were just 4% above pre-pandemic levels. Since the first quarter is the off-season for most tourism rail operators, tourism expenditures on other passenger rail services (e.g., intercity) are primarily driving these figures.

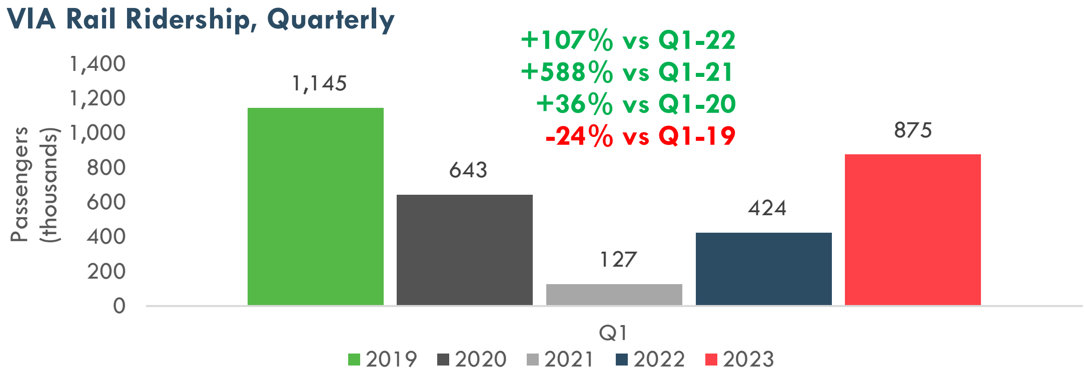


Source: Statistics Canada, [National Tourism Indicators]

Intercity Passenger Rail

The latest quarterly ridership data available for VIA Rail covers Q1-23.

In Q1-23, VIA Rail ridership reached 875,000 passengers – more than doubling Q1-22 ridership and sitting just 24% below the Q1-19 (pre-pandemic) level of 1.145 million passengers.

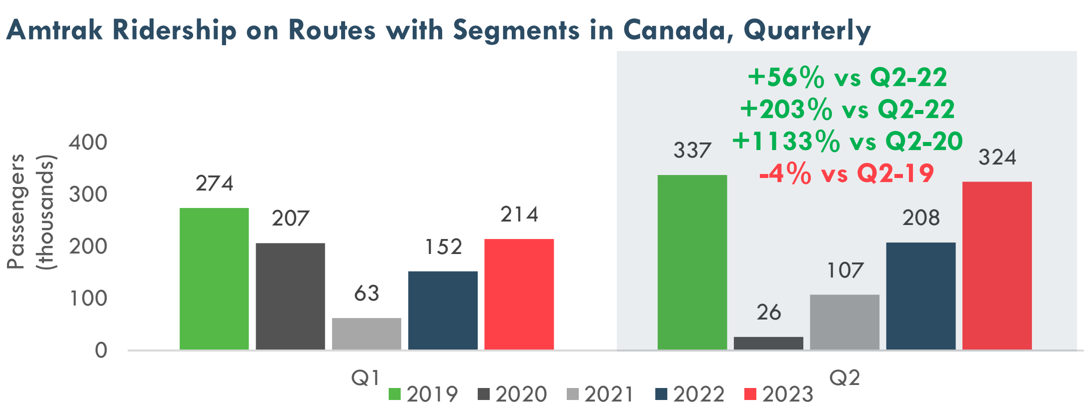


Source: VIA Rail, [Quarterly and Annual Reports]

Amtrak has many routes throughout the U.S., and three routes that include a Canadian segment. Ridership on these three routes does not imply that passengers crossed the border, as they may have travelled a particular segment on either side of the border.[15]

Q2-23 data for Amtrak's routes with segments in Canada indicate that ridership continued to recover strongly. Notably, on April 3, 2023, Amtrak resumed service on its Adirondack route between New York City and Montreal – marking the return of all cross-border service between the U.S. and Canada for the first time since 2020.[16] The resumption of the Adirondack supported the Q2 increase in ridership to just 4% below its pre-pandemic level.

On April 3, Amtrak resumed service on its Adirondack route between New York City and Montreal – marking the return of all cross-border service between the U.S. and Canada for the first time since 2020.



Source: Amtrak, [Monthly Performance Reports]
Note: Includes three routes (Maple Leaf; Cascades; Adirondack).

[15] For example, the Maple Leaf route extends from New York City to Toronto; Cascades extends from Eugene Oregon to Vancouver; and Adirondack extends from New York City to Montreal.
[16] https://media.amtrak.com/2023/04/amtrak-adirondack-train-resumes-today-between-new-york-city-and-montreal/

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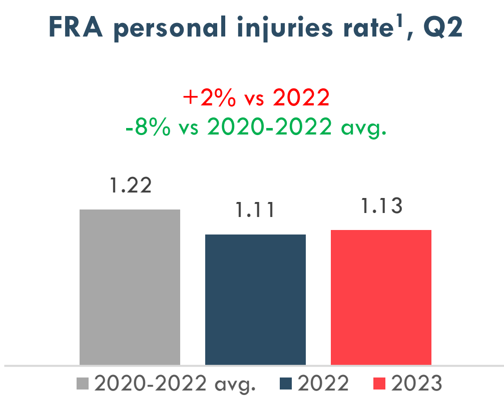
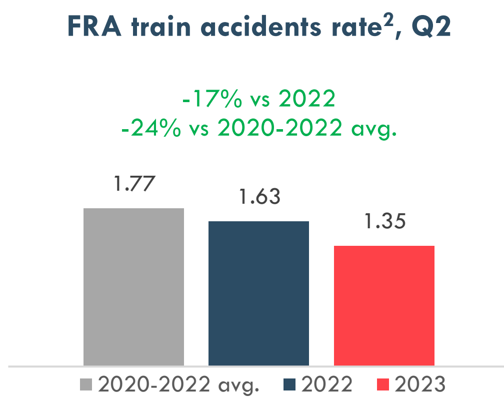
Rail Safety Data

The RAC tracks Canadian rail safety performance data from the Federal Railroad Administration (FRA) and the Transportation Safety Board (TSB). Safety remains the industry's number one priority, and the data for Q2-23 reflect this.

Federal Railroad Administration Safety Data

In Q2-23, the Canadian Class 1 FRA personal injuries rate was 8% below the 2020-2022 average;[17] and the train accident rate was 17% below the 2022 level and 24% below the 2020-2022 average.





Source: [CN Quarterly Review](); [CPKC Selected Unaudited Combined Summary of Historical Data.]()
Note: The rates are calculated using the simple average of CN and CPKC.
[1] Injuries per 200,000 employee hours
[2] Accidents per million train-miles

[17] 2020 is the earliest year for which data are available.

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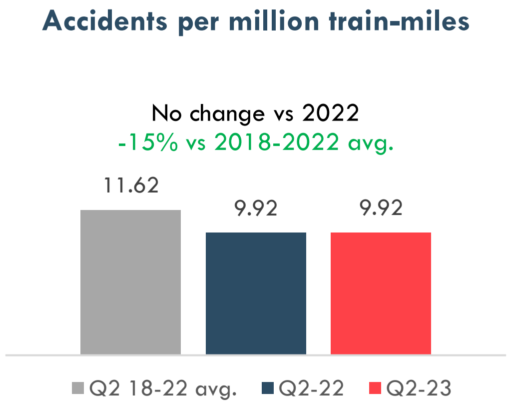
Transportation Safety Board Data

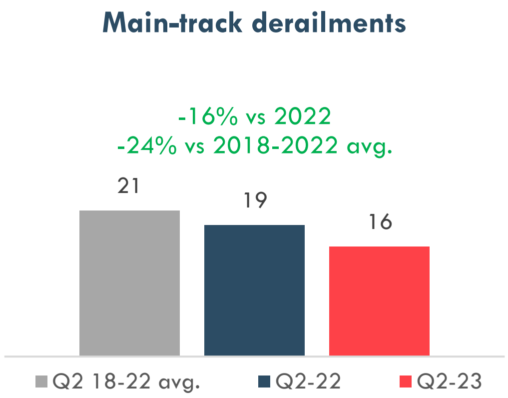
This section analyzes the most recent data from the Transportation Safety Board, which provides railway occurrence statistics of all federally regulated railways in Canada.

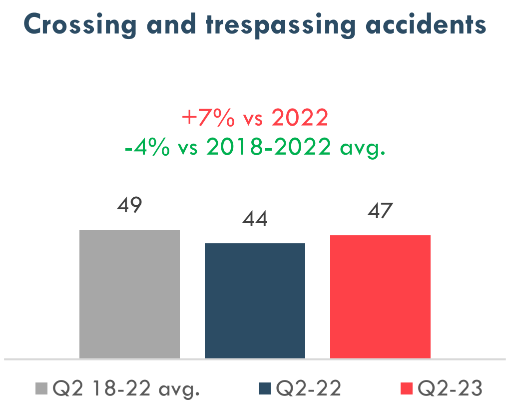
The accident rate and the number of accidents across three key categories all improved compared to the 2018-2022 average.

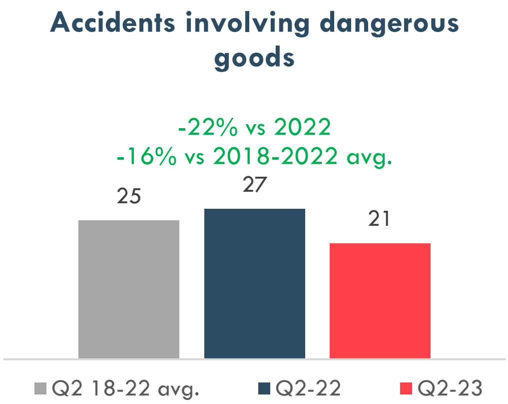
In the second quarter of 2023, the overall accident rate and the number of accidents across all three key accident categories – main-track derailments, crossing and trespassing, and accidents involving dangerous goods – were below the 2018-2022 average.

In Q2-23, the overall accident rate was 15% below the 2018-2022 average. The number of main track derailments was 16% below the 2022 level and 24% below the 2018-2022 average. The number of crossing and trespassing accidents, while 7% (or 3 accidents) higher than 2022, was 4% (or 2 accidents) below the 2018-2022 average. The number of accidents involving dangerous goods showed a 22% improvement compared to last year, and was 16% below the 2018-2022 average.









Source: Transportation Safety Board, [Monthly rail transportation occurrence statistics]
Note: The TSB data are preliminary and subject to year-end validation and reconciliation.

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