



Railway Association  
of Canada



# RAC QUARTERLY REPORT Q1-2022



May 10, 2022

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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. Links to all data sources are included throughout the report.

Much of the 2022 data in this report is compared to 2021, for year-over-year comparisons. However, in some cases, 2022 data is compared to earlier periods to provide context relative to pre-pandemic activity levels.

## Executive Summary

### Freight Rail

In the first quarter of 2022, Class 1 freight activity levels (CN and CP, network-wide) were adversely affected by global supply chain challenges, cold weather, the COVID-19 Omicron variant wave, as well as a brief work stoppage in March. Total revenue ton-miles (RTMs) in Q1-22 were 10% below 2021 levels. Shipments of grain & fertilizers, forest products, and automotive products were down by over 10% compared to Q1-21. In terms of performance, three out of twelve key financial, operating, and safety metrics improved compared to Q1-21, two metrics remained unchanged, while seven worsened relative to Q1-21.

On a year-to-date basis (January-February), the number of non-intermodal carloads originated by Canadian railways (including shortlines) was 15% below 2021, and the number of intermodal units was down by 10%.

Rail freight rates have increased in recent months, and in March 2022, were 9.7% above January 2020 levels. However, this is a modest increase compared to industrial prices and commodity prices, which have increased by 29% and 110%, respectively.

In recent months, railway shipments of cross-border trade have remained relatively stable at around \$11B per month. Meanwhile, challenges persist at the ports. Dwell times at the Port of Vancouver averaged 6.4 days in Q1-22, which was 54% longer than in Q1-21 and 79% longer than in Q1-20. The average dwell time at the Port of Montreal averaged 5.6 days in Q1-22, which was 69% longer than in Q1-21 and 83% longer than in Q1-20.

### Passenger Rail

A COVID-19 spike and the reintroduction of several provincial health measures in January 2022 impacted the recovery of the passenger rail sector. In January 2022, urban transit ridership edged downward after enjoying seven months of consistent gains from June through December 2021. Intercity passenger ridership remained below pre-pandemic levels but was much improved compared to the same period a year prior. The first quarter of 2021 was the off-season for most tourism rail operators.

### Rail Safety

In Q1-22, rail safety performance was strong relative to the Q1 2017-2021 average. The total number of accidents, main-track derailments, and accidents involving dangerous goods were lower than the Q1 2017-2021 average; while accidents per million train-miles edged up 3%, and the number of crossings and trespassing accidents increased by 1 occurrence (2%).

## State of the Canadian Economy

March 2022 data is not yet available for all the key economic indicators, as such, February 2022 data is compared against November 2021 to analyse trends.

From November 2021 to February 2022, employment increased by 1.1%, from 19.30 million to 19.51 million. In March 2022, employment increased by an additional 0.4% to 19.59 million (not shown).

Over the past three months, GDP increased by 1.4%, from \$2,012B to \$2,041B. The goods sector grew by 3.1%, outpacing the 0.8% growth of the services sector (not shown).

Trade (exports + imports) remained relatively flat.

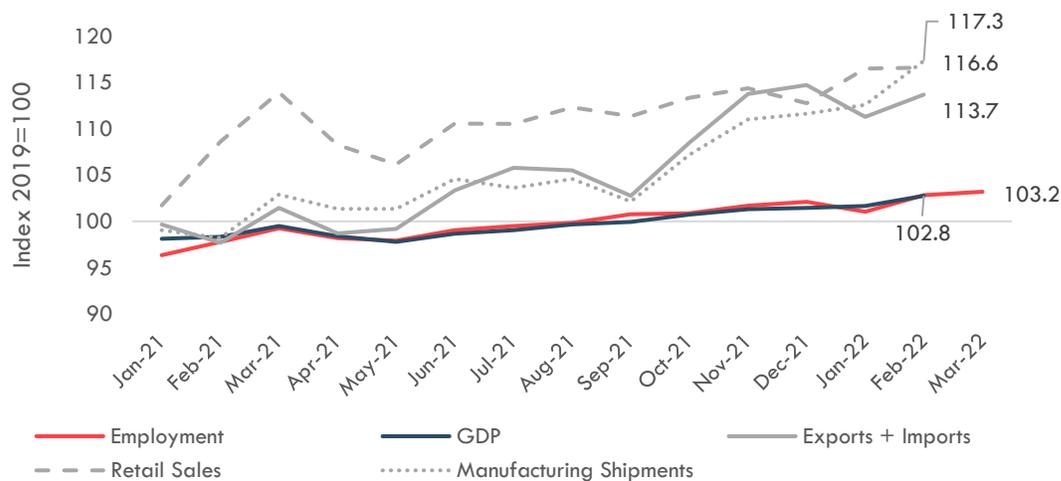
Retail sales provide insight into household consumption, which is the largest contributor to Canada's GDP at over 50% of total GDP. From November 2021 to February 2022, retail sales increased by 2.0%, however, during the same period, the consumer price index increased by 1.8% – indicating that when removing the effect of higher prices, retail sales remained relatively flat.

Manufacturing shipments provide an indication into the strength of Canada's manufacturing sector. Manufacturing shipments increased by an impressive 5.7% from November 2021 to February 2022.

### Growth of Key Canadian Economic Indicators

	Employment (millions)	GDP (\$B, annualized)	Exports + Imports (\$B)	Retail Sales (\$B)	Manufacturing Shipments (\$B)
November 2021	19.30	2,012	113.2	58.8	64.0
February 2022	19.51	2,041	113.1	59.9	67.7
<b>3-month change</b>	<b>1.1%</b>	<b>1.4%</b>	<b>-0.1%</b>	<b>2.0%</b>	<b>5.7%</b>

### 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](#)

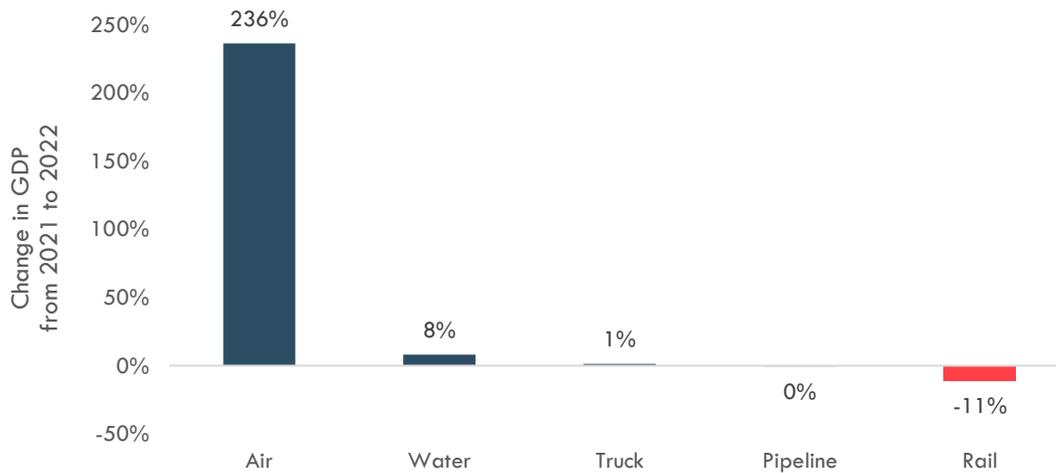
Note: Data is seasonally adjusted.

## Rail and Other Modes of Freight Transportation

Each transportation sector has been impacted differently throughout the pandemic. The adverse impacts on some sectors were significant, which affects the initial values that are used in year-over-year trend analysis. As such, the findings should be interpreted with caution.

In January and February 2021, the air transportation sector's GDP was at around one-tenth its pre-pandemic level. The strong, 236% growth over the past year, has brought the air transportation sector's GDP up to about one-third of its pre-pandemic level. Cold weather, among other factors, adversely affected the rail transportation sector in January and February 2022.

### Modal Comparison of GDP (YTD Jan-Feb)

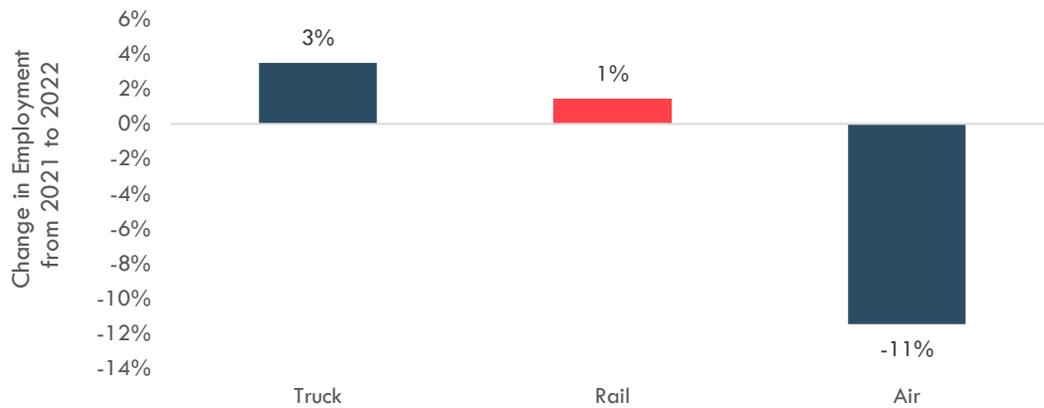


Source: Statistics Canada, [Gross Domestic Product by Industry](#)

Despite the strong rebound in air transportation sector GDP, YTD employment fell by 11% compared to last year, as multiple Canadian airlines announced layoffs in January and February.<sup>1</sup>

<sup>1</sup> <https://westjet.mediaroom.com/2021-01-08-WestJet-Slashes-Capacity-in-Response-to-Rushed-Government-Testing-Regime>; <https://cupe.ca/air-canada-taking-federal-dollars-and-running-leaving-thousands-workers-behind-cupe>

### Modal Comparison of Employment (YTD Jan-Feb)

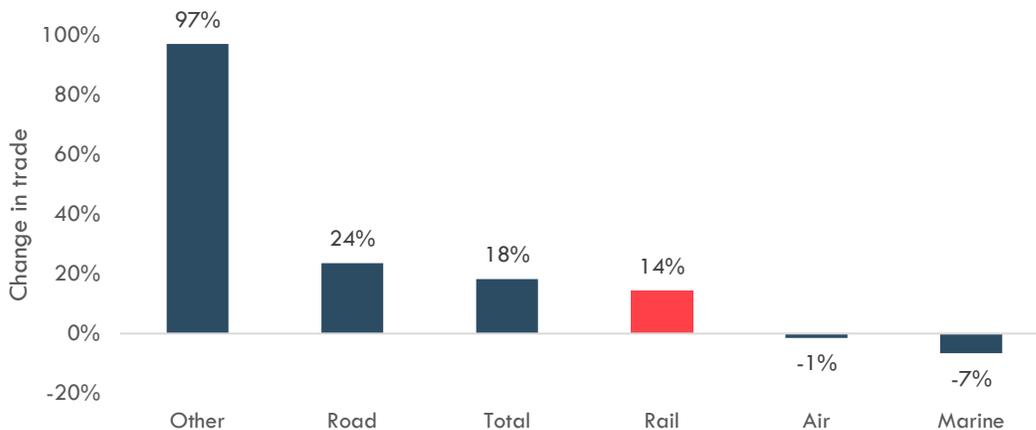


Source: Statistics Canada, [Survey of Employment, Payrolls and Hours](#)

Note: The Survey of Employment, Payrolls and Hours does not provide information on employment for the marine or pipeline sectors.

Since trade data is only available up to January, rather than analysing just one month of data, the latest three months of data are compared to the same period a year prior. In Nov-21 to Jan-22, trade via marine was down 7% compared to the same period a year earlier – longer port dwell times were likely a contributing factor. Trade by rail increased, but not quite to the same extent as trade by road (trucking). Trade via other modes (pipeline) nearly doubled compared to the previous year.

### Modal Comparison of Trade, latest 3 months (Nov-21 to Jan-22 vs Nov-20 to Jan-21)



Source: Transport Canada, [Transport Canada in brief](#)



## Class 1 Data

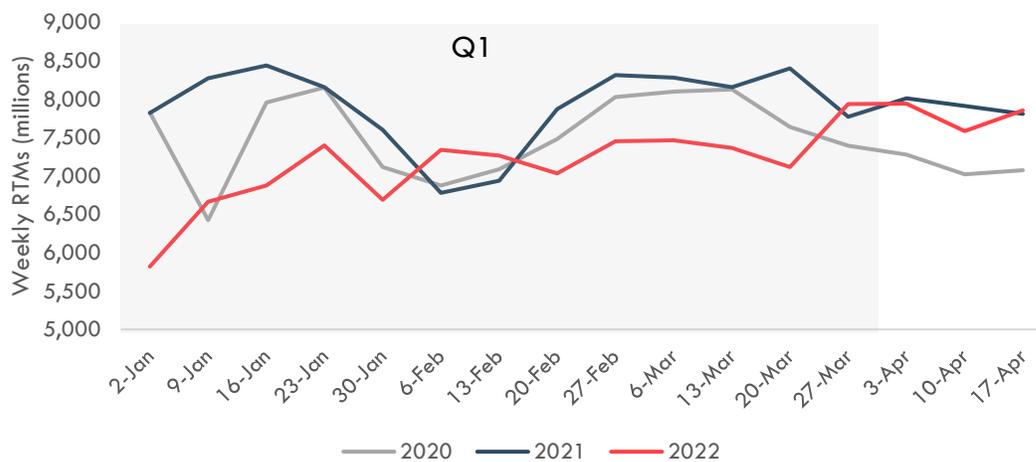
The Class 1 data covers CN and CP's network-wide operations across North America.

### Weekly Trend

Class 1s started the year off with relatively low volumes in the first quarter, affected by cold weather, the COVID-19 Omicron variant wave, as well as a brief work stoppage in March. Q1-22 revenue ton-miles (RTMs) were 10% below 2021 and 8% below 2020 levels.

Data for the first few weeks of Q2-22 show that RTMs were similar to 2021 levels, and well-above 2020 levels.

### Canadian Class 1 Revenue Ton-miles



Source: [CN Key Weekly Metrics](#); [CP Weekly Key Metrics](#)

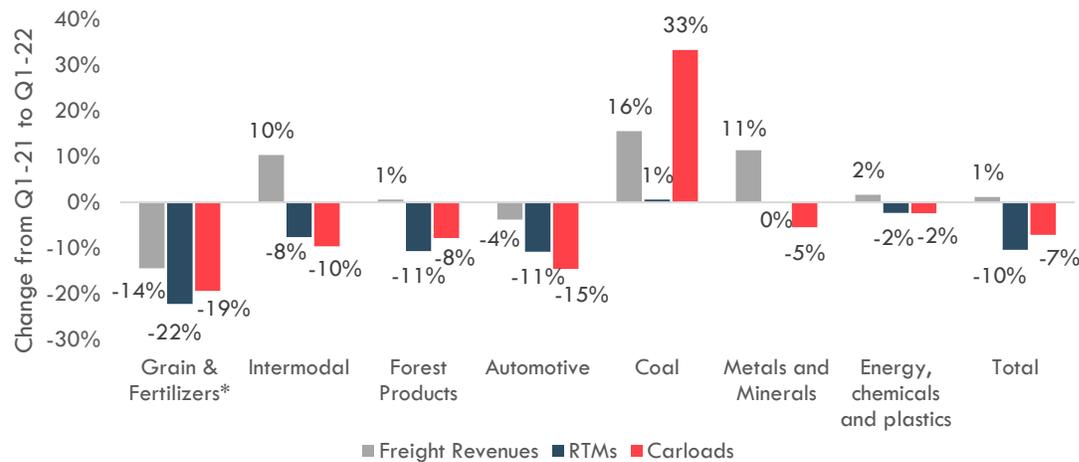
Note: The dates indicate the first day of the week (e.g., "17-Apr" corresponds to the week of April 17-23). The week starting January 2, 2022 is compared against the weeks starting January 3, 2021, January 5, 2020, and January 6, 2019.

### Revenues, Revenue Ton-miles, and Carloads

As shown in the figure and table below, in Q1-22, total Class 1 RTMs and carloads were down by 10% and 7%, respectively, while freight revenues were up by 1%. Performance varied by commodity. Shipments of grain & fertilizers remained low, as RTMs were down 22% compared to Q1-21. RTMs for forest products were down 11%, intermodal RTMs were down by 8%, and automotive RTMs were down by 11%, as global supply chain challenges and chip shortages persist. The only product category with an increase in RTMs was coal, at just 1%.

In Q1-22, freight revenues per RTM were 13% higher than in Q1-21, resulting in an increase in freight revenues despite a reduction in overall traffic. Since the onset of the pandemic, increases in rail freight rates have been in line with increases in consumer prices, and much lower than the significant increases in commodity and industrial prices (see [Freight Rates](#)).

## Class 1 Freight Revenues, RTMs, and Carloads by Commodity, Q1-22 vs Q1-21



Source: [CN Quarterly Review](#); [CP Quarterly Earnings Release](#)

\*Includes potash and sulphur

### Q1: Canadian Class 1 RTMs (millions), by Commodity

	Q1-22	Q1-21	Change (%)	Change (#)
Grain & Fertilizers*	26,196	33,669	-22%	-7,473
Intermodal	20,217	21,886	-8%	-1,669
Forest Products	7,180	8,033	-11%	-853
Automotive	1,041	1,167	-11%	-126
Coal	9,365	9,306	1%	59
Metals and Minerals	8,782	8,792	0%	-10
Energy, chemicals and plastics	17,466	17,874	-2%	-408
<b>Total</b>	<b>90,247</b>	<b>100,727</b>	<b>-10%</b>	<b>-10,480</b>

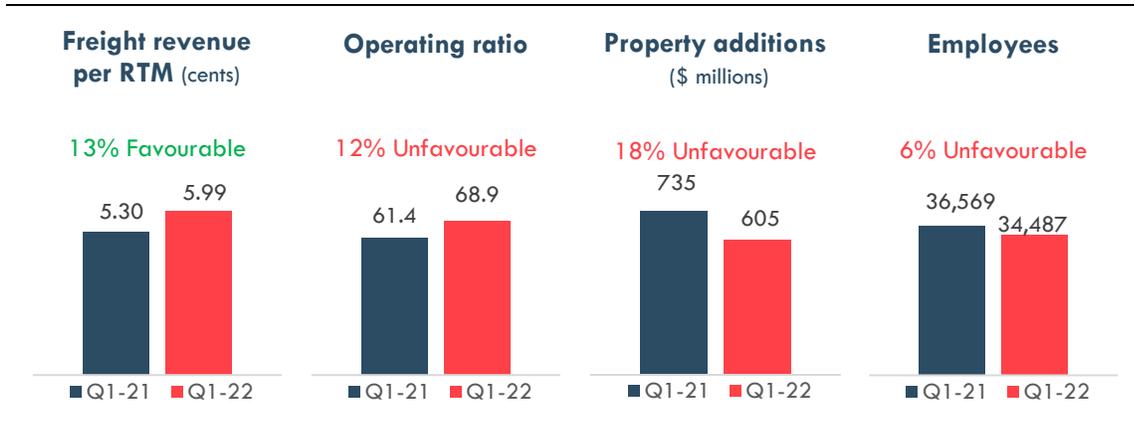
Source: [CN Quarterly Review](#); [CP Quarterly Earnings Release](#)

\*Includes potash and sulphur.

## Select Key Financial, Operating, and Safety Metrics

In Q1-22, freight revenue per RTM increased by 13%, led by a 19% increase in revenue per RTM for intermodal shipments (not shown). Freight revenue per RTM increased by between 4% and 15% for other commodity groups (not shown). Despite increases in freight revenues per RTM, the average operating ratio increased by 12%. Cold weather, the Omicron variant, a brief work stoppage, and rising fuel costs were contributing factors to the increase in operating ratios.

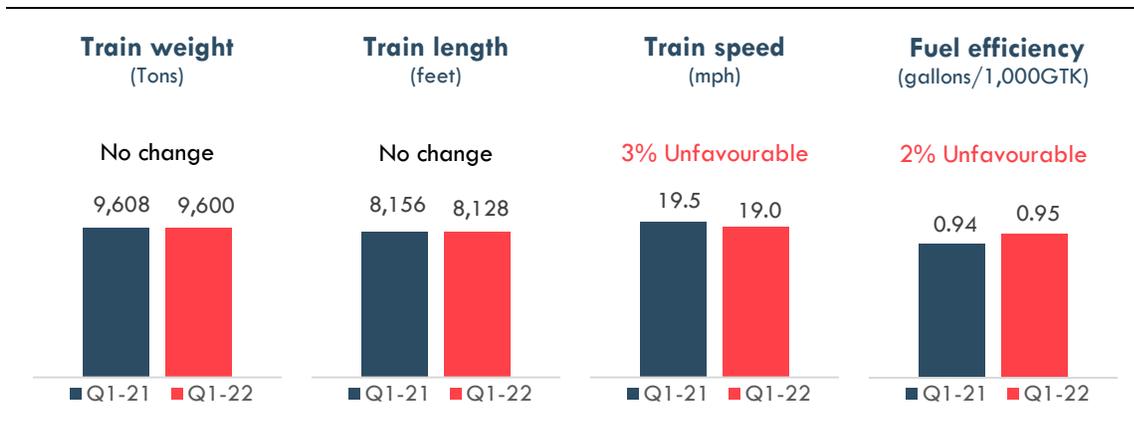
During the first quarter, Class 1s invested \$605 million dollars in their networks and employed over 34,000 workers.



Source: [CN Quarterly Review](#); [CP Quarterly Earnings Release](#)

Note: The operating ratio is calculated as the simple average of CN and CP.

Q1-22 train-related performance metrics were similar to Q1-21. Average train weight and length were unchanged from Q1-21. However, average train speeds decreased by 3% to an average of 19.0 miles per-hour, and fuel efficiency worsened by 2%. Data for the first three weeks of April (Q2-22) were more positive, indicating average train speeds above 20 miles per-hour, similar to April 2021 (not shown).



Source: [CN Quarterly Review](#); [CP Quarterly Earnings Release](#)

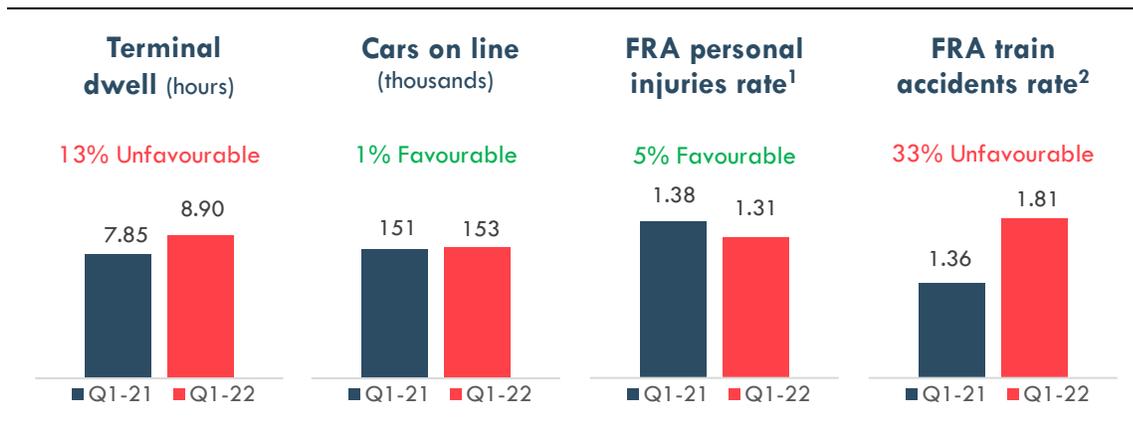
Note: All four metrics are calculated using the simple average of CN and CP.

Global supply chain challenges persisted into Q1-22. Railway terminal dwell times were longer than they were in Q1-21 for 11 out of the 13 weeks. Despite the increase in railway terminal dwell times (13%, or approximately 1 hour), other modes experienced greater delays. Port dwell times in Canada were over 50% longer than in Q1-21 (shown later in the report). These challenges extend beyond Canada – international container shipments have experienced

significant delays and very low on-time performance. China's zero-COVID policy and the Russia-Ukraine war are adding to the list of global supply chain challenges.

The average number of cars on line increased by about 2,200 cars, or 1%, compared to the previous year. The number of cars on line each week throughout the quarter was quite similar to 2021 (not shown). There were significantly fewer covered hopper cars on line (down 3,900 or 6%) due mostly to the reduction in grain shipments; which was more than offset by a 4,800 (13%) increase in tank cars on line.

Compared to Q1-21, the Canadian Class 1s' Federal Railroad Administration (FRA) personal injuries rate improved while the FRA train accidents rate increased. The FRA train accidents rate is based on a very low number of train accidents, and therefore large percentage changes across quarters are possible.



Source: [CN Quarterly Review](#); [CP Quarterly Earnings Release](#); [CN Key Weekly Metrics](#); [CP Weekly Key Metrics](#)

Note: Terminal dwell, FRA personal injuries rate, and FRA train accidents rate are calculated using the simple average of CN and CP.

<sup>1</sup> Injuries per 200,000 employee hours

<sup>2</sup> Accidents per million train-miles

## Freight Industry Data

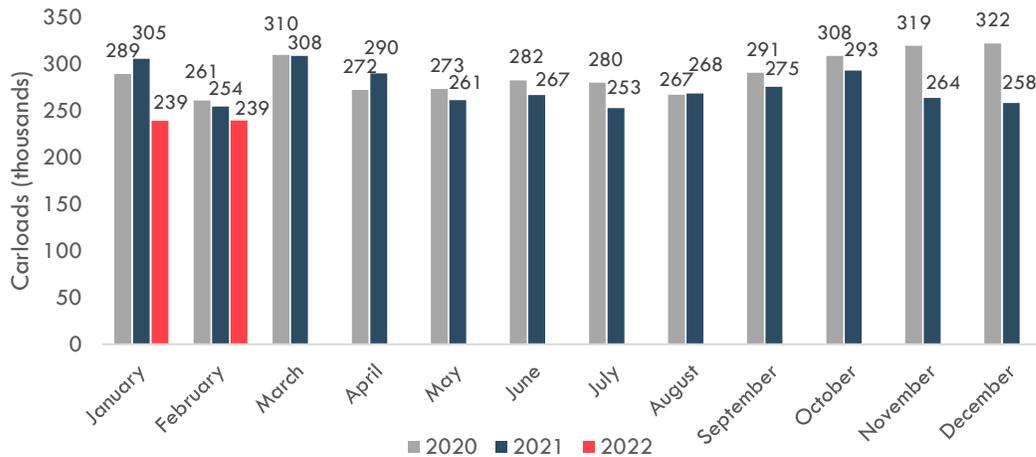
The freight industry data in this section of the report has some overlap with the Class 1 data reported above. However, this section includes data from all freight railways, including shortlines, and is specific to Canadian operations. The data from the various statistical agencies included in this section have a slightly longer lag time than the Class 1 data, and as a result, the data is not always available for all months of the most recent quarter. As such, the freight data is analyzed on either a YTD or monthly basis, rather than quarterly.

### Carloads & Intermodal Units

Statistics Canada reports monthly carloadings for over 60 commodities, as well as intermodal units.

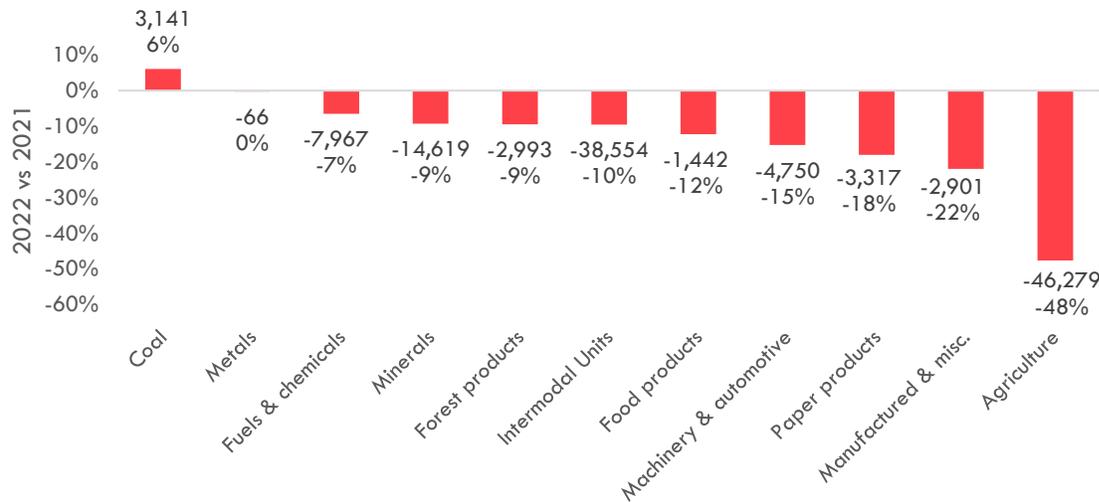
On a YTD basis (January-February 2022), non-intermodal carloadings were 15% below 2021 levels. Carloads were down for all commodity groupings except coal. Agriculture experienced the most significant decline, both in terms of percent (-48%) and absolute carloads (-46,279).

### Canadian Railways, Carloads



Source: Statistics Canada, [Monthly Railway Carloadings Survey](#)

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



Source: Statistics Canada, [Monthly Railway Carloadings Survey](#)

There are a number of factors impacting the consistent flow of intermodal shipments, including but not limited to global container issues, China’s zero-COVID policy, marine vessel delays and poor on-time performance, extreme weather, and bottlenecks at ports. On a YTD basis (January-February), total 2022 intermodal traffic loaded was 10% below 2021 levels.

## Canadian Railways, Intermodal Units



Source: Statistics Canada, [Monthly Railway Carloadings Survey](#)

Eastern Canada has been relatively less affected than Western Canada in the first couple months of 2022. In the Eastern Division, carloads were down 8% and intermodal shipments were down just 5% compared to 2021. In the Western Division, carloads and intermodal shipments were down by 19% and 12% compared to 2021, respectively.

### YTD (Jan-Feb): CDN Carloads by Region

	2022 vs 2021	2022 vs 2020
Eastern Division	-8%	-7%
Western Division	-19%	-17%
<b>Total</b>	<b>-15%</b>	<b>-13%</b>

### YTD (Jan-Feb): CDN Intermodal Units by Region

	2022 vs 2021	2022 vs 2020
Eastern Division	-5%	27%
Western Division	-12%	16%
<b>Total</b>	<b>-10%</b>	<b>20%</b>

Source: Statistics Canada, [Monthly Railway Carloadings Survey](#)

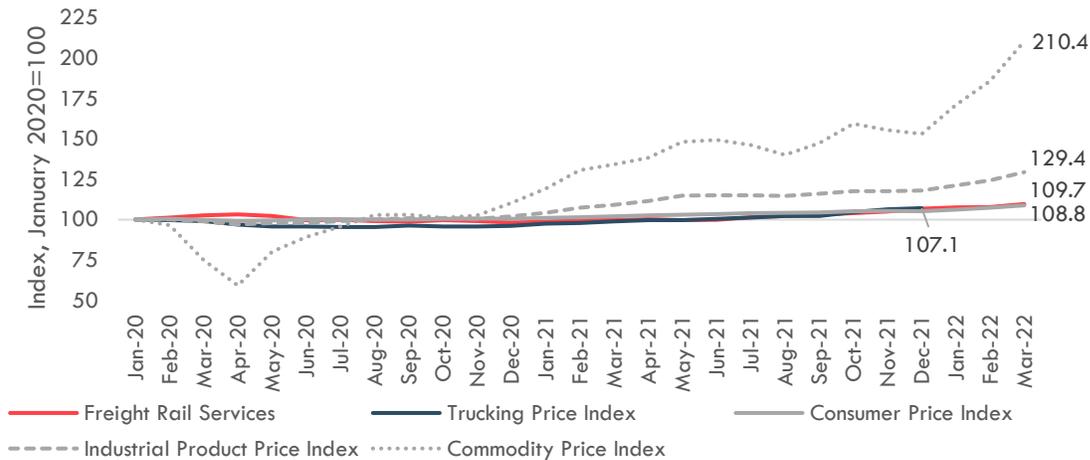
## Freight Rates

Rail freight rates, trucking rates, and consumer prices have followed a very similar path since the onset of the pandemic, while industrial and commodity prices have risen significantly.

Over the past three months (December 2021 to March 2022), rail freight rates increased by 2.7%, bringing the total increase since January 2020 to 9.7%. The latest available trucking prices are from December 2021. In December 2021, trucking prices were 7.1% above January 2020 levels while rail freight rates were 6.8% above January 2020 levels. Over the past three months, the CPI increased by 3.4%, bringing the total CPI increase since January 2020 to 8.8%.

Industrial and commodity prices continued to rise at an accelerated pace. From December 2021 to March 2022, industrial prices increased by 9.6%, bringing the total increase since January 2020 to 29.4%. From December 2021 to March 2022, Commodity prices rose an astounding 37.5%, bringing the total increase since January 2020 to 110.4% (more than doubling).

### Price Index of Rail Services vs Other Price Indices

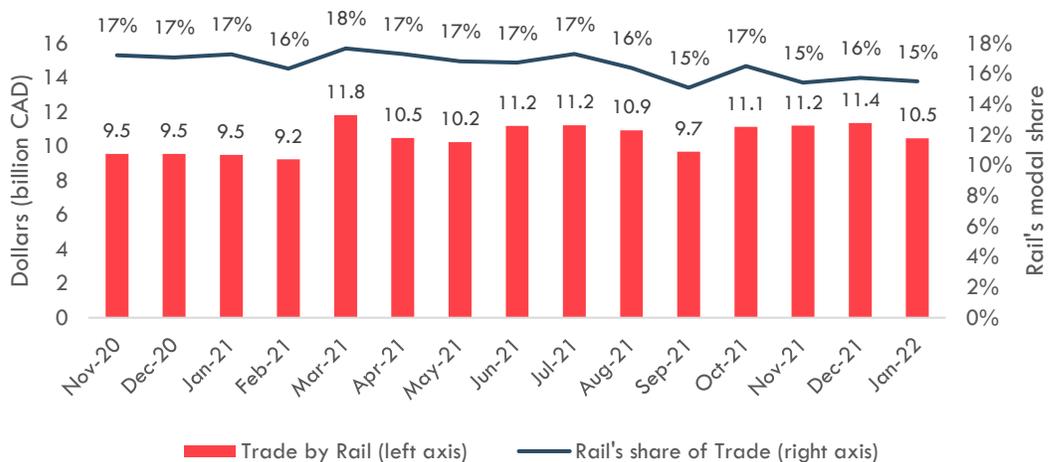


Source: Statistics Canada, [Freight Rail Services Price Index](#), [Industrial Product Price Index](#), [For-hire Motor Carrier Freight Services Price Index](#), and [Consumer Price Index](#). Bank of Canada, [Commodity Price Index](#)

### Exports

In recent months, railway shipments of cross-border trade remained relatively stable at around \$11B per month, representing just over 15% of total trade with the U.S.<sup>2</sup>

### Rail Merchandise Trade with the U.S.



Source: Transport Canada, [Transportation activity indicators](#)

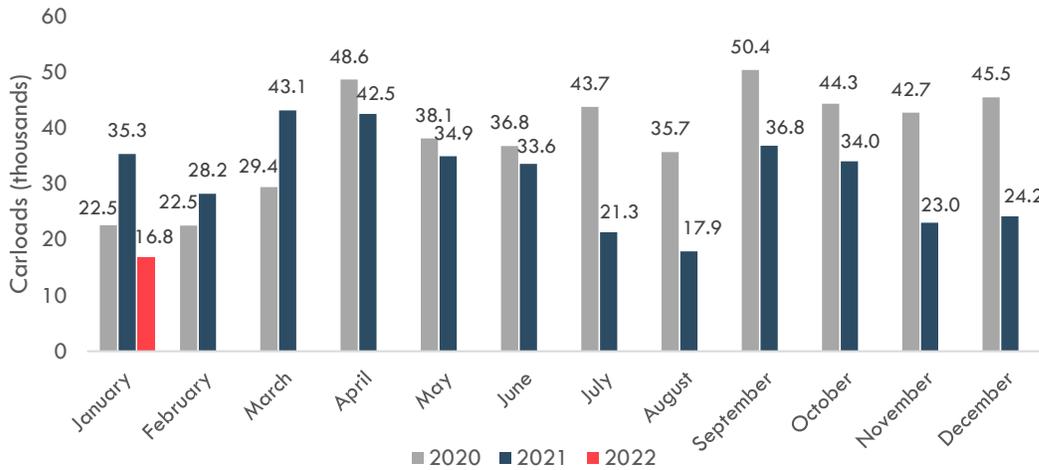
In every month since April 2021, the number of covered hopper cars unloaded at western ports has been lower than in 2020. On a calendar year basis, 2021 was down 19% compared to 2020. 2022 started off with just 16,800 covered hopper cars unloaded at western ports in January; down 53% compared to 2021 and down 26% compared to 2020.

<sup>2</sup> The trade figures presented here are for trade with the U.S., by value, and is for the mode of transport used to cross the border. Using Transport Canada annual data, the Railway Association of Canada estimates that over 50% of total export volumes are transported by rail, either through transborder rail transportation or through rail-marine exports.



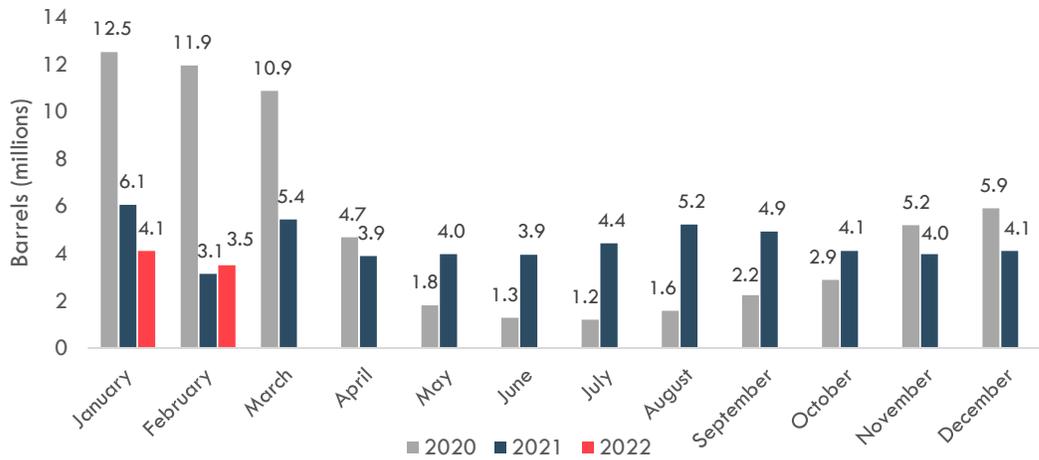
Over the first two months of 2022, exports of crude oil by rail were down 17% compared to 2021.

### Covered Hopper Cars Unloaded at Western Ports



Source: Transport Canada, [Transportation system utilization and performance](#)

### Canadian Crude Oil Exports by Rail

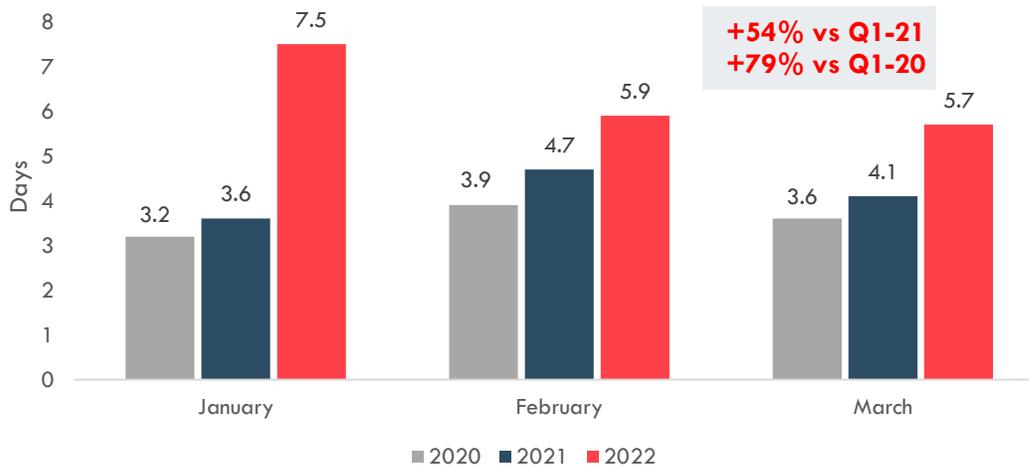


Source: Canada Energy Regulator, [Canadian Crude Oil Exports by Rail](#)

In Q1-22, dwell times at both the Port of Vancouver and Port of Montreal were significantly longer than they were in previous years.

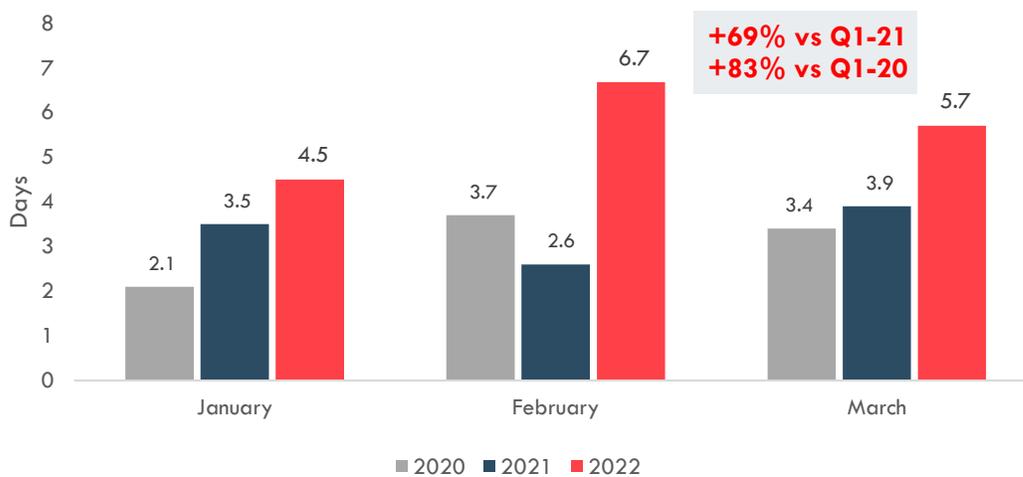
Dwell times at the Port of Vancouver were 54% longer than Q1-21 and 79% longer than Q1-20. Dwell times at the Port of Montreal were 69% longer than Q1-21 and 83% longer than Q1-20.

### Vancouver - Gateway terminal rail dwell performance by month



Source: Port of Vancouver, <https://www.portvancouver.com/port-dashboard/supply-chain-performance/>

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



Source: Port of Montreal, <https://www.port-montreal.com/en/goods/real-time/performance-report>

## Passenger Rail Data

There is less monthly and quarterly data available for the passenger rail operations compared to freight rail operations, and in some cases, there may be a longer lag period.

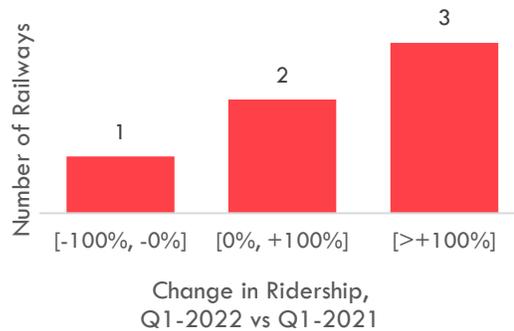
### RAC Member Ridership

Passenger rail ridership was significantly impacted by the COVID-19 pandemic and evolving restrictions. This section looks at the recovery of passenger rail ridership among RAC members.

Since January through March is the offseason for most tourism rail operators, the data below focuses on intercity and commuter railways. In Q1-22, ridership data was available for six of RAC's intercity and commuter railway operators.<sup>3</sup>

While ridership has a long way to come to reach and exceed pre-pandemic levels, there is evidence of a recovery underway. In Q1-22, compared to Q1-21 (which had very low ridership), ridership increased for 5 of the 6 reporting members. Ridership more than doubled for three of the members.

#### RAC Members, Ridership, Q1



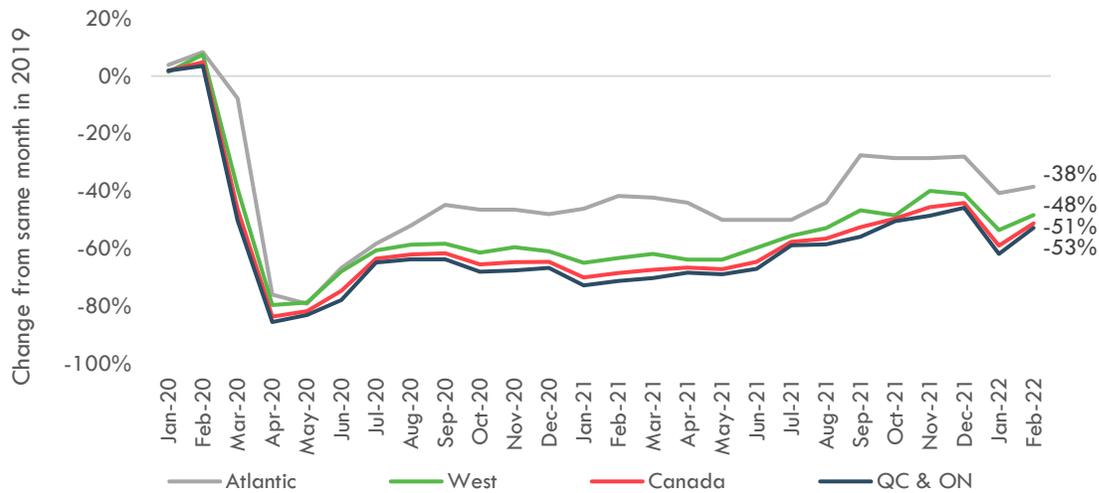
<sup>3</sup> <https://www.railcan.ca/membership/member-railways/>

## Urban Transportation

In January 2022, urban transit ridership edged downward after enjoying seven months of consistent gains from June through December 2021. The reintroduction of provincial restrictions in several province, to contain the spread of the Omicron variant, negatively impacted ridership.<sup>4</sup>

Ridership impacts continue to be most severe in Quebec and Ontario throughout the duration of the pandemic, as restrictions have generally been stronger and remained in place longer than in other provinces.

### Urban Transit Systems Ridership by Region



Source: Statistics Canada, [Monthly Passenger Bus and Urban Transit Survey](https://www150.statcan.gc.ca/n1/daily-quotidien/220321/dq220321c-eng.htm)

<sup>4</sup> Urban public transit, January 2022, The Daily, Statistics Canada (<https://www150.statcan.gc.ca/n1/daily-quotidien/220321/dq220321c-eng.htm>)

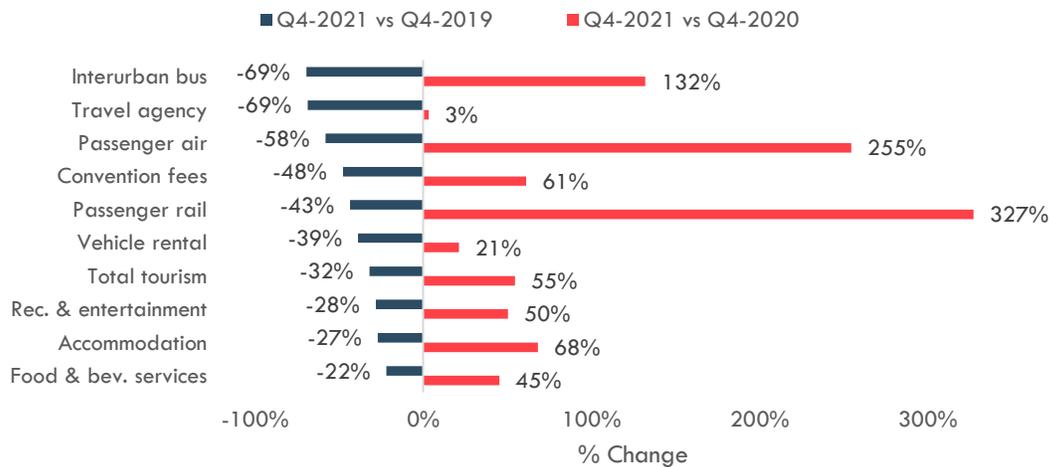
## Tourism Rail

There is a considerable lag in data on tourism expenditures. The latest available data covers Q4-21.

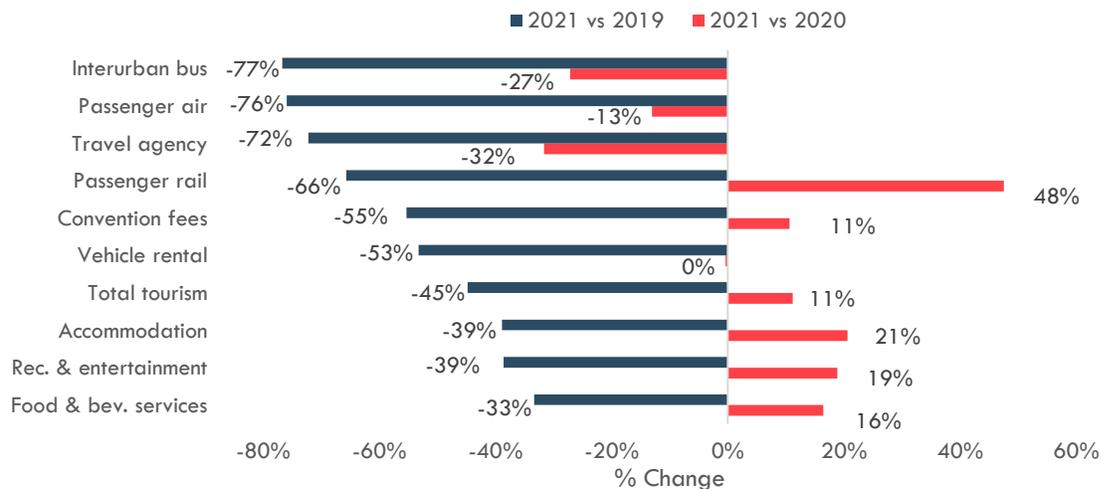
Compared to Q4-19 (pre-pandemic), total tourism expenditures in Q4-21 were down 32%. All select tourism industries were down by at least 22%, including passenger rail at -43%. However, tourism is beginning a recovery, and Q4-21 tourism expenditures exceeded Q4-20 expenditures across all select tourism industries.

On a calendar year basis, 2021 tourism expenditures were below 2019 levels across all select tourism industries, by at least 33%. Tourism expenditures in 2021 in some industries remained below 2020 levels, this is expected, as the impacts of the pandemic didn't begin to take hold until March 2020.

### Tourism Expenditures, Q4



### Tourism Expenditures, Annual



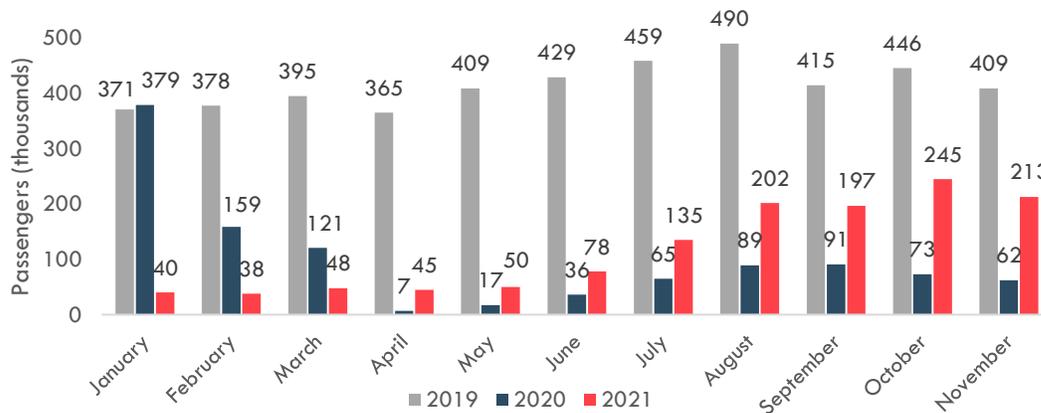
Source: Statistics Canada, [National Tourism Indicators](#)

## Intercity Passenger Rail

Monthly ridership data is available for both VIA rail and Amtrak.

VIA Rail data is available up to November 2021. Across the three latest months for which data is available (September 2021 to November 2021), VIA Rail ridership was at 52% 2019 levels. On a YTD basis (January to November), ridership was up 17% compared to 2020 but down 72% compared to 2019.

### VIA Rail Ridership, Monthly

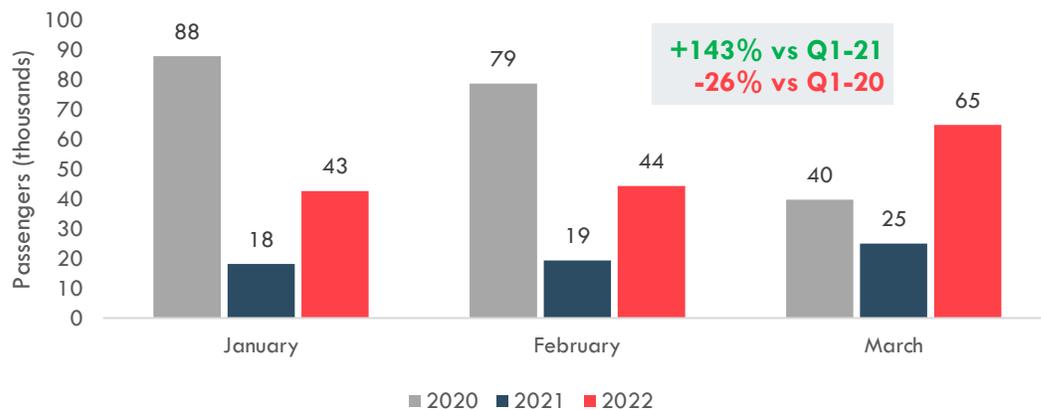


Source: Transport Canada, [Transportation activity indicators](#)

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.<sup>5</sup>

Q1-22 data for Amtrak’s routes with segments in Canada indicate that ridership is recovering. Q1-22 ridership was over twice as high as Q1-21 ridership (152,000 passengers vs 63,000) but remained 26% below Q1-20 levels.

### Amtrak Ridership on Routes with Segments in Canada, Monthly



Source: Amtrak, [Monthly Performance Reports](#)

Note: Includes three routes (Maple Leaf; Cascades; Adirondack).

<sup>5</sup> 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.

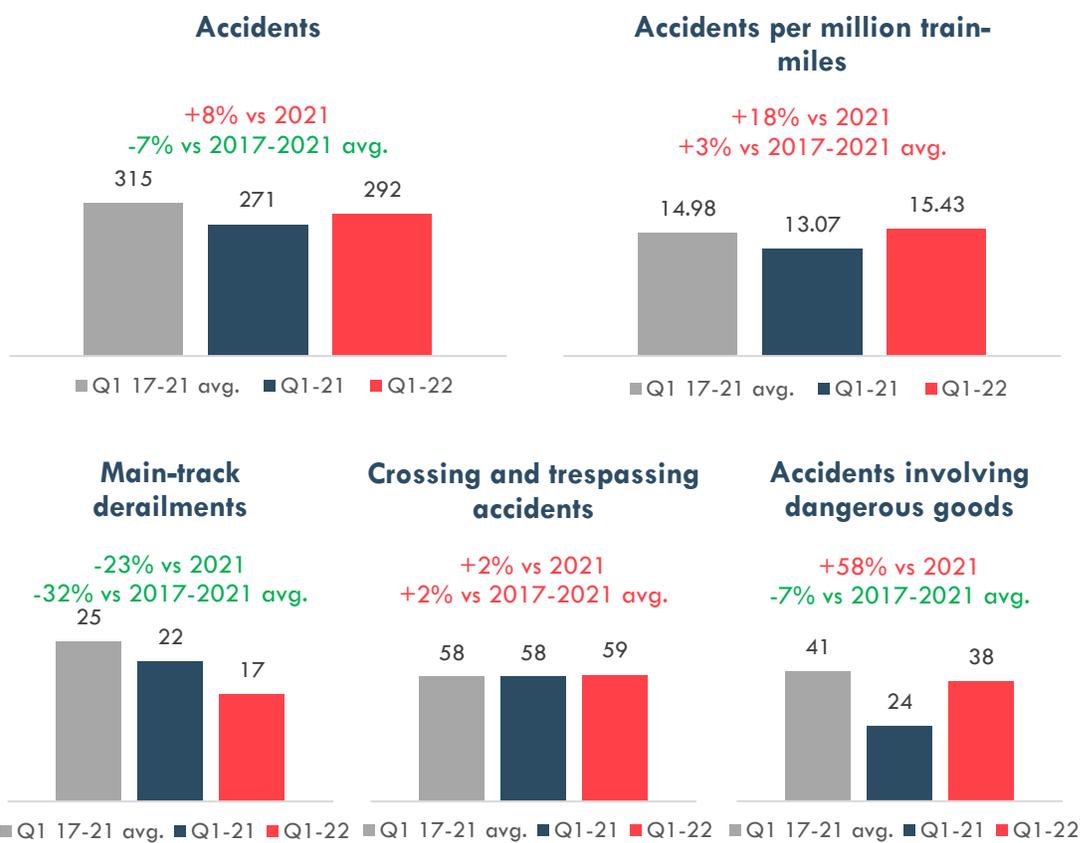


## Rail Safety Data

The Transportation Safety Board provides railway occurrence statistics of federally regulated railways in Canada.

Accident data can vary significantly from quarter to quarter, depending on a variety of factors, including weather. In Q1-22, rail safety performance was strong relative to the Q1 2017-2021 average, but was unfavourable relative to Q1-21, which was a strong quarter.

Compared to the Q1 2017-2021 average, safety performance improved in most categories. Main-track derailments were down 32%, while total accidents and accidents involving dangerous goods were both down 7%. The accident rate (accidents per million train-miles) edged up 3%, as the decrease in accidents wasn't as great as the reduction in train miles. The number of crossings and trespassing accidents increased by 1 occurrence (2%) relative to 2021 and the Q1 2017-2021 average.



Source: Transportation Safety Board, [Monthly rail transportation occurrence statistics](#)



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