QUIC
QUEEN'S UNIVERSITY
INVESTMENT COUNSEL

Stock Rating	Buy
Price Target	CAD 105.12
Current Price	CAD 90.20

Bear Case	Price Target	Bull Case
$81.08	$105.12	$111.42

Ticker	CP
Market Cap. (MM)	$60,100

CN Rail vs. CP Rail
Tracking the Alpha

The freight rail industry in Canada is dominated by two major players: Canadian National Railway (CNR) and Canadian Pacific Railway (CP). Both have long histories of serving Canada and North America by offering quick transcontinental service, often faster than their US Counterparts. With the major takeover battle over the acquisition of Kansas City Southern Rail (KCS) having largely been settled, the Industrials team decided to examine both companies to decide which one represented a better long-term value play.

Canadian National Railway – Strengths:

- Unbeatable scale connecting all three coasts
- Diversified revenue mix, less susceptible to commodities
- Exclusive access to major ports (i.e. Prince Rupert, Halifax)

Canadian National Railway – Weaknesses:

- Subpar management team, disappointing financial results
- Less upside potential, although management disputes this

Canadian Pacific Railway – Strengths:

- Extremely well-managed efficient company
- Potential to emulate CNR's network with the acquisition of KCS

Canadian Pacific Railway – Weaknesses:

- Potential risk associated with an expensive acquisition like KCS
- Higher exposure to price-volatile commodities

Based on the above points and accompanying valuations, the team is recommending divesting 100% of our CNR holdings and using the funds to purchase CP Stock.

Stock Rating	Sell
Price Target	CAD 148.14
Current Price	CAD 151.67

Bear Case	Price Target	Bull Case
$132.69	$148.14	$168.16
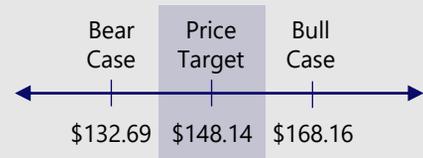
Ticker	CNR
Market Cap. (MM)	$107,380

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Table of Contents

Company Overview: Canadian Pacific Railway

Company Introduction

Canadian Pacific Railway (CP) is a Class I Canadian freight railway in Canada and the US. Founded in 1881 and headquartered in Calgary, Alberta, CP spans seven provinces and serves across Canada from Montreal, Quebec, Vancouver, BC, and US Northeast and Midwest regions. CP provides rail and intermodal transportation services over a network of 13,000 miles, transporting bulk commodities, merchandise freight, and intermodal traffic. It generated C$7.8B of revenue in 2020 with a market capitalization of C$ 57.8B.
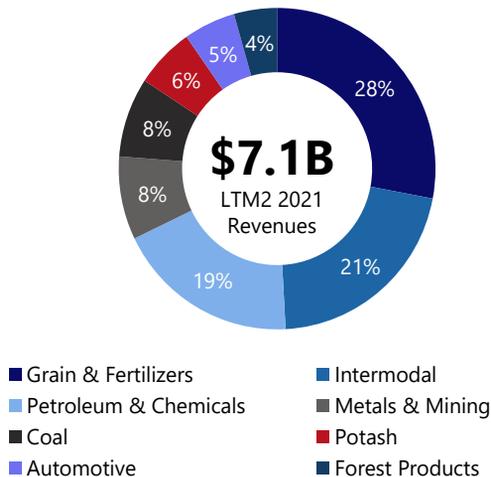
Business Model Overview

CP's operations focus is on efficiency: delivering goods utilizing the shortest routes. By targeting major centers and facilitating connections with Class I railroads, over 100 transload facilities, and short-line partnerships, CP drives down expansion costs while maintaining its reach to areas not directly served by rail.

Primary company advantages are CP's acquisition of the Central Maine and Quebec Railway (CMQ) and the closing of the Kansas City Southern deal. The former extends CP's commercial rights and access to the far-right coast of Canada (past Montreal), while the latter agreement will create the first direct railway linking Canada, the United States, and Mexico.

CP's revenue is primarily generated through its diverse portfolio of commodities, as seen in Exhibit I. The segment, Bulk, includes subsegments of Grain (24%), Coal (8%), Potash (7%), and Fertilizers and Sulphur (4%). Merchandise includes subsegments of Energy, Chemicals and Plastics (20%), Metals, Minerals and Consumer Products (8%), Automotive (4%), and Forest Products (12%). Finally, Domestic Intermodal (2%) and International Intermodal (9%) make up the Intermodal revenue segment.

EXHIBIT I

Revenue Breakdown by Segments Served

Legend:
- Grain & Fertilizers
- Intermodal
- Petroleum & Chemicals
- Metals & Mining
- Coal
- Potash
- Automotive
- Forest Products

Source(s): CP Investor Fact Book, 2021

EXHIBIT II

Revenue and EBITDA (quarterly)

EBITDA ■ Revenues
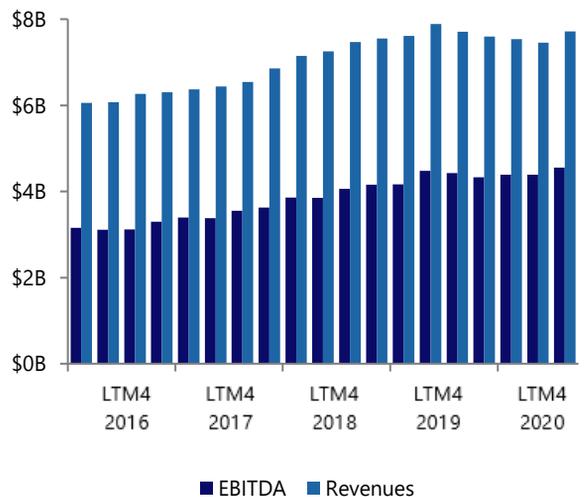
Source(s): Capital IQ

Company Overview: Canadian National Railway

Company Introduction

Canadian National Railway (CNR) is a Class I Canadian freight railway headquartered in Montreal, Quebec. Founded in 1919, CNR was originally a Crown Corporation before going public in 1955. It is Canada's largest railway, generating C$13,819M of revenue in 2020 with a market capitalization of C$104,634.7M. CNR's unique three-point coast system is the only one that connects Canada's Western and Eastern coasts with the U.S. South, spanning 20,400 miles across its rail network.

Business Model Overview

CNR views itself as a backbone of the Canadian economy and has maintained its position as Canada's largest transportation company. CNR's service and operations foundations lie in Precision Scheduling Railroading (PSR). PSR optimizing rail networks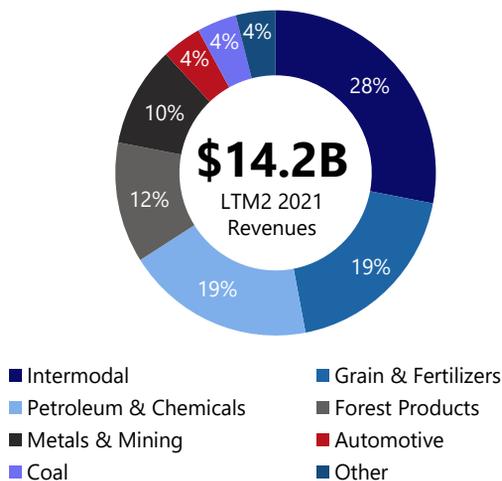 to transporting more freight with the same number of cars. Dispatching cars onto trains running on fixed schedules allows customer goods to be moved more efficiently with less fuel.

One of CNR's assets comes from Chicago's outer ring road. CN's unique networks allow it to go around the city as to through it, taking time. CNR also holds the Port of Prince Rupert, the closest transportation point between Asia and America. Through partnerships between ocean carriers and major Canadian port gateways, CNR offers a single-line service between the last call port in Asia and Chicago in 16 days.

CNR's revenue is primarily generated through its diverse portfolio of commodities, as seen in Exhibit III. The three largest sectors are International Intermodal, Grain and Fertilizers, and Petroleum and Chemicals, all congruent with the company's mission of transporting Canadian-produced commodities.

EXHIBIT III

Revenue Breakdown by Segments Served

Legend: Intermodal (28%), Grain & Fertilizers (19%), Petroleum & Chemicals (19%), Forest Products (12%), Metals & Mining (10%), Automotive (4%), Coal (4%), Other (4%)

$14.2B LTM2 2021 Revenues
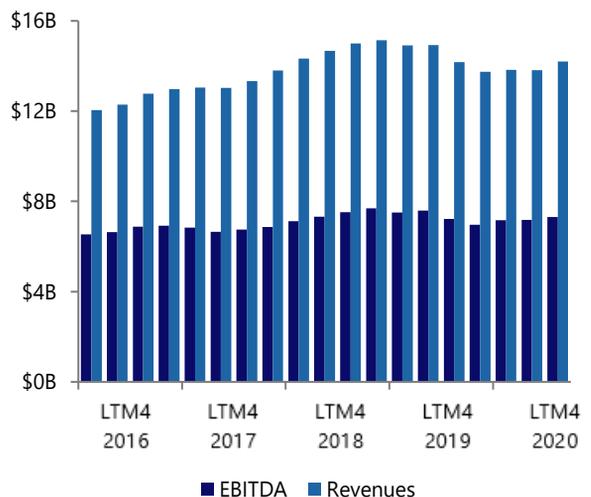
Source(s): CNR Investor Presentation, July 2021

EXHIBIT IV

Revenue and EBITDA (quarterly)
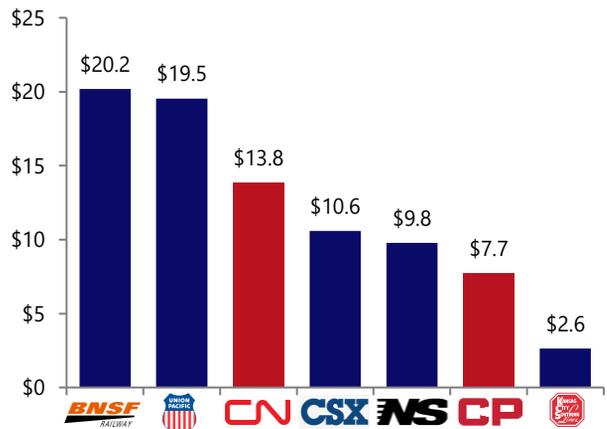

Source(s): Capital IQ

Railroad Industry Dynamics

Industry Structure of North American Rail Freight Transportation

Throughout North America, the rail freight industry is generally consolidated amongst the seven "Class I" (>$505MM in revenues) railroads: Canadian National Railway (TSX: CNR), Canadian Pacific Railway (TSX: CP), Burlington Northern Santa Fe (BNSF) Railway (subsidiary of Berkshire Hathaway), Union Pacific (NYSE: UNP), CSX Transportation (NASDAQ: CSX), Norfolk Southern Railway (NYSE: NSC), and Kansas City Southern Railway (NYSE: KSU). While 22 regional and 584 local/short-line railroads classified as Class II and Class III railway operators exist in the U.S., they are typically regional, local, and switching and terminal railroads and have >1000 miles of tracks. Within the nearly 140,000-mile U.S. freight rail network, the seven Class I railroads account for ~68% of freight rail mileage and 94% of revenues. The Class I railroads tend to operate in regional duopolies, splitting Canada, the Western U.S., and Eastern U.S. In the United States, UP and BNSF control the West, Norfolk Southern and CSX control the East, and most Class I operators operating along the Mississippi River from Chicago to New Orleans / Houston / Mexico. Within Canada, there is a duopoly of control over rail transportation between CNR and CP, representing >95% of Canada's annual rail ton-kilometers, >75% of Canada's tracks (passenger railways compose remainder), and ¾ of overall tonnage carried by the rail sector. Within Canada, CP tends to dominate Western Canadian traffic and CNR dominates Eastern Canadian traffic. Furthermore, as U.S.-based railways BNSF, CSX, and UP are connected to but not operating within Canada, this creates a demand-side competitive advantage for CNR and CP for transborder freight as customers seek single-carrier transportation services. From a scale perspective, of the Class I operators, CNR is the third-largest by revenue (2019) behind BNSF and UP, and CP is the sixth-largest behind CSX and Norfolk Southern, solely ahead of KCS. Ultimately, the scale, network control, maturity, and capital infrastructure among the Class I railroads creates economic moats and internal competition based on operating ratios.
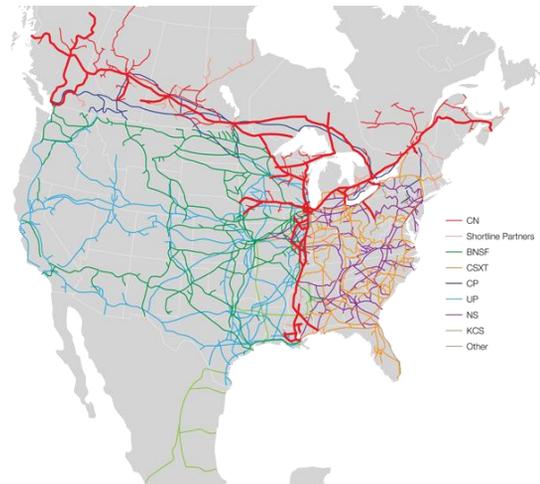
EXHIBIT V

2020 Class I Railroad Revenues ($B)

Source(s): S&P Capital IQ

EXHIBIT VI

Class I Railroad Network in North America

Source(s): Canadian National Railway, Google Images

Railroad Industry Dynamics

Rail Freight in North American Intracontinental Freight & Other Transportation Modes

For North American intracontinental freight, rail mainly competes with the trucking industry. Railroads have a competitive advantage over other methods of transportation through their ability to ship bulk freight over large distances quickly, cost-effectively, and environmentally sustainably. Freight railroads account for roughly 40% of U.S. long-distance freight volume and are the most fuel-efficient way to move freight over land, moving one ton of freight over 480 miles per gallon on average. However, trucking is the largest competitor to railroads, transporting 64.6% of U.S. domestic freight volumes compared to rail transporting just 9.7% of volumes. Trucking offers the competitive advantage of offering end-to-end transportation to consumers and versatility for small and bulk freight while rail typically requires large freight and that both the shipper and recipient can load and unload rail directly. On a fuel efficiency and environmental basis, railroads are on average three to four times more fuel efficient than trucks, and account for just 1.9% of transportation-related greenhouse gas emissions. A rapidly increasing trend is the use of multi-modal transportation that combines truck, rail, and ocean freight, as seen with increasing intermodal transportation in both Canada and the U.S. Regarding air and water transportation, air freight is generally a non-competitor to railroads given its main customer use for small, time-sensitive, and valuable freight alongside its greater costs. Water transportation is also a limited competitor as it is time intensive and geographically and seasonally limited in where it can operate and deliver goods. Lastly, pipelines represent competition for railways as oil is a substantial end-market for railroads, representing 17% of domestic freight volumes and transporting 75% of combined crude and petroleum products. While pipelines are cheaper and more time-efficient for transporting oil products, we believe that large scale pipeline projects to mitigate existing shortages will continue to be blocked in the future, leading to greater market opportunities for rail in oil freight transportation.

Weight & Value of U.S. Freight Shipments in 2017
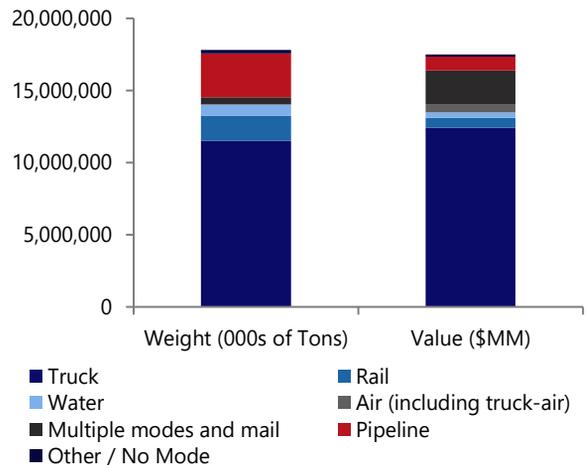
Source(s): U.S. Bureau of Transportation Statistics

Industry Dynamics – Seasonality, Cyclicality & Cost Structure

The rail freight industry is cyclical and carries substantial macroeconomic and end-market exposure. Rail freight demand is a byproduct of economic activity from industrial and commodities sectors and is reliant on both domestic and international economic growth. Rail freight end-market demand can be broken up into petroleum and chemicals, intermodal, metals and minerals, forest products, coal, grain and fertilizers, consumer products, and automobiles. Rail freight revenues are also seasonal, with lower revenues during winter seasons due to weather conditions, costs of operating, seasonality of commodities, and port closures in the Great Lakes. However, Q4 typically tends to be the most profitable quarter as retail increases and grain is harvested.

Railroad Industry Dynamics

From a cost and investment perspective, railroads require substantial capital expenditure and maintenance expenses, spending an average of 19% on capital expenditures to maintain substantial rail networks, improve fuel efficiency, obtain new train cars, around six times more than the average U.S. manufacturer. Given substantial capital expenditure requirements, railroads operate at high debt/equity ratios with an average debt/equity ratio of 103.38%, creating substantial barriers to entry. However, the duopoly structure of the railroad industry enables lower effective costs of capital on debt financing for capital expenditures. Furthermore, fuel costs typically represent ~20% of a railroad's operating expenses and generate revenues for railroads through fuel surcharges to offset costs. However, with substantial volatility in oil prices (oil shocks in 2014-2016, 2018 and 2020), railroads are not able to generate revenues on fuel surcharges during periods of low oil prices and oil price shocks, are not able to fully hedge against fluctuations through futures contracts.

Supply Chain Shortages Impact on Rail

As supply chain shortages occur throughout the logistics industry, rail has experienced the lowest pricing and volume impacts. In the air freight industry, given that ~55% of pre-COVID air freight was transported on passenger jets, projected limited international travel demand into 2024 will continue exacerbated shortages and pricing, as indexed (2000) US inbound air freight pricing increased from 167.9 in March 2020 to 255.2 in Sept. 2021. In the ocean freight logistics industry, continued port congestion due to labor shortages, ~10% of sailings continuing to be cancelled, and exacerbated supply / demand imbalances are increasing freight rates by 2-10x pre-pandemic levels. In the trucking industry, oversupply from limits to ocean and air, combined with labor shortages have increased pricing by ~30%. As a result, while overall rail freight supply of intermodal freight is bottlenecked by reduced volumes of ocean and trucking freight, rail's ~10% pricing increase have increased intermodal rail freight volumes by ~10%.
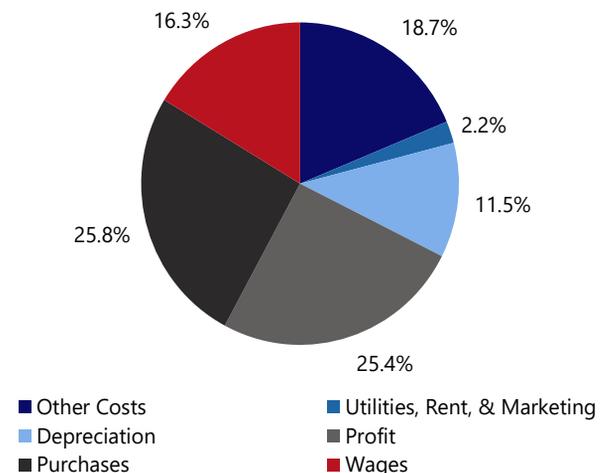
Historical Railroad Industry CapEx as % of Revenue
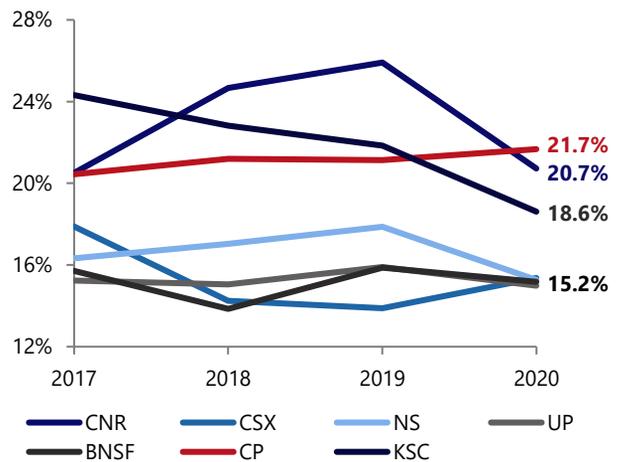
Source(s): S&P Capital IQ

Breakdown of Average Rail Freight Industry Costs
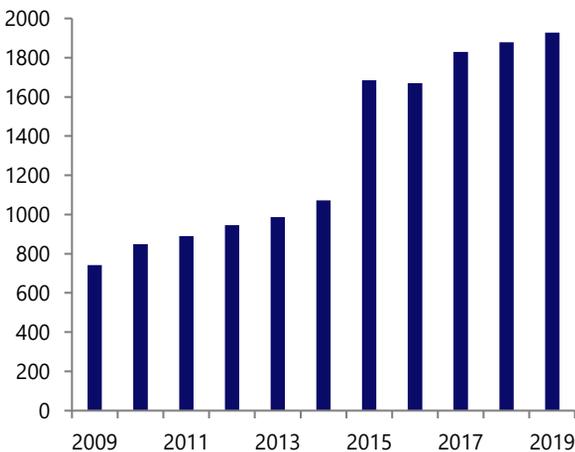

Source(s): IBIS World

End-Market Outlook and Commentary

Intermodal

Intermodal containers consist of high-value, time-sensitive retail goods in domestic and overseas containers that can be transported seamlessly between multiple modes, such as trains, ships, and trucks. Over the past couple of decades, rail has stolen intermodal share from trucks, in large part due to the widespread adoption of PSR that has made rail a viable option through increasing network efficiencies and providing faster shipment of goods. Additionally, rail offers 3-4x greater fuel efficiency compared to trucking and one intermodal train can keep roughly 300 trucks off the road. This consideration is becoming increasingly important due to the increasing prevalence of environmental regulations in Canada and the U.S. As a result of these factors, rail is expected to continue holding significant share in the intermodal transportation market, which is projected to register a CAGR of 8.27% into 2025.

Energy, Chemicals & Plastics

Inadequate pipeline takeaway capacity has plagued Western Canadian oil producers for years, however, rail companies have largely been a beneficiary of the Canadian and U.S. governments' unwillingness to approve new pipeline projects. The lack of sufficient pipeline capacity has forced Canadian producers to increasingly rely on crude-by-rail to get incremental production to market – 4x the amount of crude is moved by rail today than in 2010. However, rail is beginning to struggle to meet the increased demand from oil producers, and the ability for rail companies to increase capacity over time will be critical to servicing this heightened demand.

Demand for plastics in coming years will likely benefit from growth in demand from a number of downstream industries. Steady growth in manufacturing output in North America and continued construction growth amidst an improving economy should propel plastic production in the coming years.

EXHIBIT X

Number of Intermodal Carloads by Rail in Canada

Source(s): Railway Association of Canada

EXHIBIT XI

NA Crude Oil Production (MM barrels/day)
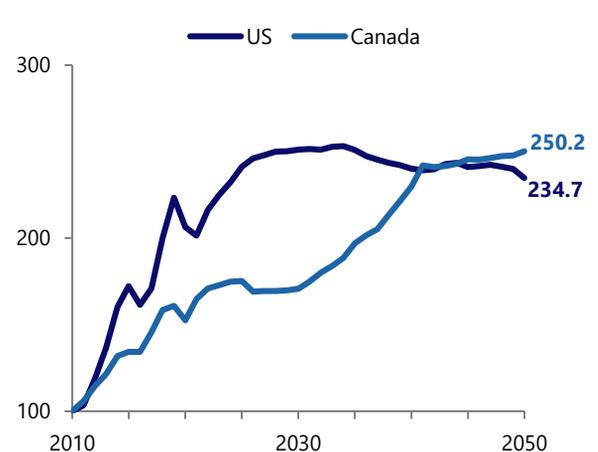
Source(s): EIA

End-Market Outlook and Commentary

Grain, Potash & Fertilizers

Throughout 2020, Canadian grain production flourished, and almost all major crops saw year-over-year production gains. However, 2021 crop yields have been significantly lower than expected, with domestic grain crop expected to decrease 37% due to drought conditions across the Prairies. Estimates predict that total production of major grain crops will fall to 49.3M tonnes in 2021-2022, from last year's record of 78.5M tonnes, which would mean the lowest production levels and grain exports in over a decade. U.S. grain volumes, however, are expected to remain more resilient amidst near-record production of corn and soybeans, which are supported by more planted acres. Additionally, U.S. volumes may be more tied to pricing than production because there is significantly more storage capacity in the U.S. than in Canada.

Lower crop production in Canada would naturally put a strain on domestic demand for fertilizers. Further, regulatory challenges have the potential to create significant longer-term challenges for the fertilizer market. Through the proposed *A Healthy Environment and a Healthy Economy Act*, the Government of Canada is envisioning a 30% absolute emissions reduction target for on-farm fertilizer use by the year 2030. Reduced fertilizer use could also have an adverse impact on Canadian crop yields.

Forest Products (Pulp & Paper, Lumber)

China and Brazil have increased their demand for paper tremendously in recent years. As the business sectors of these countries have expanded in recent years, so has their demand for the paper necessary to carry out their services, given relatively low internet penetration rates. China now accounts for a third of global paper demand. Wood pulp is also a key input for various types of paper packaging, which tends to be linked to general consumer demand for a broad array of goods. Therefore, as consumer demand and spending are expected to rise over the next several years, demand for wood pulp should follow suit.

Most of the lumber produced in Canada is exported, primarily to the U.S.; less than 40% of production is consumed domestically. The primary use of lumber is for residential housing construction, which is expected to see continued growth in the coming years due to continued low interest rates and anticipation of a full economic reopening in both Canada and the US. However, many producers are still playing catch-up and supply has not been able to keep up with increased levels of demand. A large number of lumber mills shut down or curtailed their operations as a result of the COVID pandemic, with many mills remaining closed to this day, which could continue to strain shipment volumes for Canadian carriers.

EXHIBIT XII

Major Grain Prices Remain Above Historical Averages (C$/Tonne)
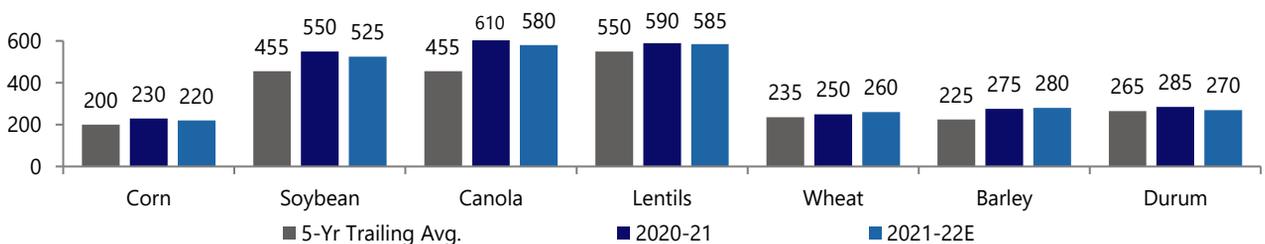
Source(s): Statistics Canada, AAFC, USDA, CanFax

End-Market Outlook and Commentary

Coal

Nearly half of the coal produced in Canada is for thermal use (electricity) and half for metallurgical use (steelmaking). However, metallurgical coal represents roughly 95% of Canadian coal exports, with the majority of exports shipped to Chinese manufacturers.

In the face of changing market conditions and increasingly-tightening government regulation across the globe, the once-mighty thermal coal sector is facing inevitable decline. However, the sector is expected to increase its share of electricity generation from 20% in 2020 to 24% in 2021-22, as a byproduct of natural gas prices that have been driven higher by geopolitical tensions and supply restraints. In the long-term, however, as the world moves towards cleaner sources of energy, the thermal coal industry will inevitably be left behind in favour of alternative fuels.

Metallurgical coal has also ceded market share to more environmentally-friendly electric arc furnaces (EAF), and roughly 55% of the world has shifted to EAF processes, up from ~30% at the turn of the century. However, tight scrap supply and expensive electricity continue to undermine EAF's near-term feasibility in China, which produces 57% the world's steel. The country continues to use met coal for >90% of production, which should support short-term demand.

Metals, Minerals & Consumer Products

Demand for steel and construction aggregates, such as sand, stone, and gravel, is anticipated to grow at an attractive CAGR of 6.1% globally into 2025. Continued and growing interest in green infrastructure and commercial building projects in Canada is expected to drive demand for new construction starts and renovations,. Expansion will be further backstopped by an expanding and reopening post-COVID economy in North America.

EXHIBIT XIII

Global Coal Consumption by Region, 2018-2025 (Mt)
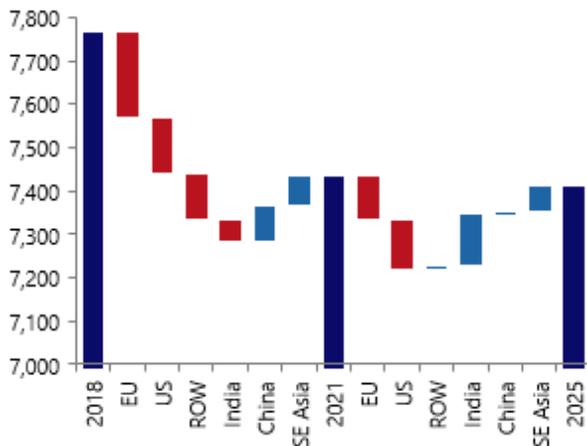
Source(s): EIA

EXHIBIT XIV

Value of Non-Residential Construction in Canada ($B)
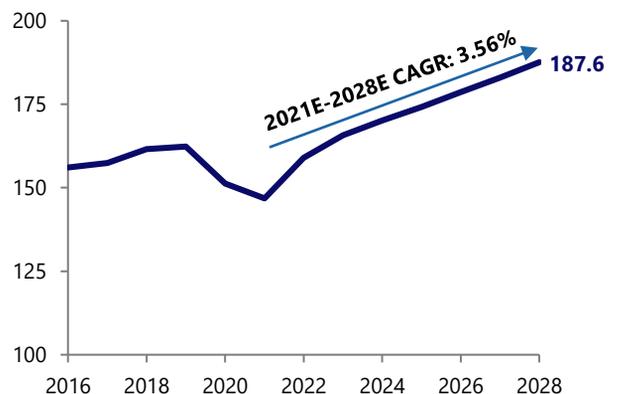
Source(s): IBISWorld

End-Market Outlook and Commentary

Impacts of Commodity Trends on CP

The bleak crop forecast for the coming year will be particularly difficult for CP, as the company derives 24% of its freight revenues from grain, compared with just 15% for CN. Headwinds of roughly 6% are expected for CP's top-line throughout 2021, as opposed to 4% for CN.

Although CP will be challenged by its outsized exposure to coal, nearly 90% of CP's coal mix consists of metallurgical coal, primarily shipped to China. Considering China still uses metallurgical coal for over 90% of steel production and the challenges it has faced in transitioning to electric arc processes, CP should be less affected by declining demand in the short-term than its American peers, who have significantly more exposure to thermal coal.

More positively, should CP's acquisition of Kansas City Southern be pushed through by regulators, CP would gain vast exposure to both petroleum products and industrial/consumer products, which together comprise roughly 47% of KCS' revenue. These segments both have positive outlooks in the short-term and will benefit tremendously from a return to normal economic activity over the coming years, in addition to higher expected levels of commercial and residential construction.

Impacts of Commodity Trends on CNR

From an end-market perspective and network scale perspective, CNR has an advantage in competitive position from its end-market diversification and greater exposure to intermodal, metals and mining, and forest products.

CNR's higher end-market exposure in forest products relative to CP will be a catalyst for growth, representing 12.9% of CNR's revenues compared to 4% of CP's revenues. This is the result of anticipated long-term demand for residential housing construction that will increase forest product volumes and reduce lumber volatility.

CNR's comparative and absolute advantage over CP for intermodal end-markets will be a growth catalyst due to increased intermodal freight transportation demand, supply chain shortages in air, ocean, and trucking driving capacity to rail, and its Chicago rail advantage, and strong presence in both West/East Canada coastal ports.

Lastly, CNR is currently impacted through it's greater exposure to the automobile industry as semiconductor chip shortages limit production of new vehicles and the USMCA threatens North America production, ultimately reducing freight volumes for CNR.

EXHIBIT XV

CP vs. Canadian National Commodity Mix
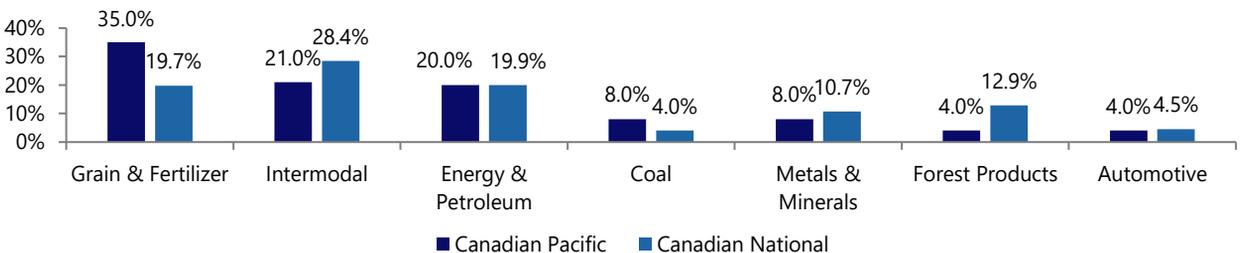
Source(s): Company Filings

Economic Moats – Why We Like Rail

Barriers to Entry

There exists clear industry-wide barriers to entry that protect CNR, CP, and other Class I railways from the possibility of new entrants penetrating the market.

Significant capital outlays must be made in order for new rail lines to be built, which would result in extremely low initial returns on capital for a would-be entrant. The rule of thumb for new track construction is that the cost of building a new mile of track can range between $1M to $2M per mile, depending on the constructor. The cost of replicating the networks of existing Class I railroads is simply too high to overcome, as any potential competitor would need to spend billions of dollars to build a competing rail network. It would also be a significant challenge for a would-be entrant to obtain contiguous and attractive rights of way on which to lay steel rail, in order to build a competitive network over a significant portion of North America. Together, these factors greatly insulate incumbents from the possibility of new entrants.

Efficient Scale

Efficient scale in the rail industry has been achieved through significant industry consolidation that was made possible by the *1980 Staggers Rail Act*. The Staggers Act deregulated the American railroad industry to a significant extent by permitting the sale, abandonment, and combination of rail lines in America, along with the ability for operators to negotiate private contracts with shippers. As a result of this act, industry operators have been able to significantly increase their network efficiency and quality by consolidating, and the number of Class I freight rails in North America has shrunk from over 40 in 1980 to just seven today. On all but the highest-demand routes, a single railroad operator can efficiently serve an end-of-the-line shipper. It is for this reason that railways typically operate within regional duopolies throughout North America. Therefore, CN and CP are both major beneficiaries of efficient scale.

Cost Advantage

Railroad companies have historically competed internally against other railroads for freight contracts, as well as against other methods of transportation, such as trucking. While moving freight via rail tends to be more logistically complex for shippers, CN and CP's trucking competitors are unable to compete with them on the basis of cost. Rail is particularly attractive for larger orders that are shipped over further distances, as the flexibility of trucking becomes less important for shippers.

The cost of transporting goods by rail is roughly $0.04 per tonne/mile, as opposed to $0.21 per tonne/mile for trucking. A primary driver of this cost advantage is that rail makes more economical use of assets and manpower. A single train can haul the equivalent of roughly 400 trucks worth of goods. Furthermore, while two rail operators can operate one train, trucking operators would require several hundred drivers to haul the same amount of freight; for this reason, labour costs comprise a significantly larger portion of costs for trucking companies, therefore driving rail's cost advantage. Moreover, moving the same amount of freight by rail consumes 75% less fuel than on the highway. This further increases the cost efficiency of rail, particularly when oil prices are elevated.

EXHIBIT XVI

Rail/Truck Cost Ratio by Trip Length (miles)
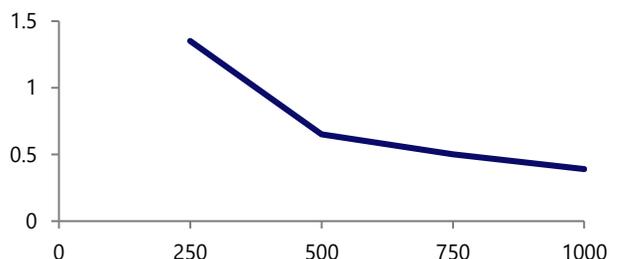
Source(s): TEMS

Economic Moats – Canadian Pacific's Advantage

Highly Efficient Domestic Intermodal Network

CP has a highly strategic and efficient network that enhances the value proposition for its domestic intermodal customers greatly. Compared to more price-sensitive bulk commodity shippers, intermodal shipments tend to be higher-value and more time-sensitive products. Therefore, intermodal customers highly value service and efficiency levels in picking a carrier.

CP's highly strategic network has key advantages over CN and other Class I railroads in major domestic intermodal corridors. CP boasts the shortest and fastest route between Eastern Canada and the major logistics markets of Vancouver and Calgary due to a greater number of straight-line tracks as opposed to arch lines. Additionally, CP's route is 200 miles shorter from the Port of Vancouver to Chicago, which is by far North America's busiest intermodal hub, handling 6.45M containers in 2018 (by comparison, the next two largest hubs, Long Beach and Atlanta, handle 5.42M and 1.45M containers per year, respectively). The recent acquisition of CMQ Railway also provides CP with access to two deep-water ports on the Atlantic (Searsport & Port Saint John). These new direct links offer CP a route from the east coast to Montreal and Toronto that is 320km shorter than competing railways, as well as the shortest route from Port Saint John to Chicago. CP is aiming to increase capacity in PSJ from 200,000 to 800,000 TEUs by 2023, which should help to further expand the company's ability to provide industry-leading service to key intermodal hubs in Canada and the U.S.

Additionally, CP has a unique opportunity to expand its intermodal capacity organically, with over 1,000 acres of undeveloped land adjacent to its existing facilities across major intermodal hubs such as the Port of Vancouver, Chicago, Minnesota, and its CMQ locations. Railroads have been extremely challenged in keeping up with intermodal capacity throughout 2021, as inventories have nearly doubled year-over-year despite a decrease in inbound shipments. CP's ability to build out capacity through additional land assets is unique in the industry and will help the company to maintain a high degree of service and strengthen its customer relationships moving forward.

Industry-Leading North American Grain Network

Grain is CP's largest line of business and arguably is the end-market in which it holds the largest competitive advantage over other rail companies. CP is the only North American railroad with meaningful grain franchises in both Canada and the U.S. CP's network is strategically positioned through the heart of the major grain-producing regions of Western Canada and Northern Plains of the U.S. With many high-throughput unit train loading elevators and access to major export terminals, CP has a clear advantage over CN in its grain network. Additionally, should the CP/KCS merger go through, the combined network would be able to offer an efficient, single line-haul service from its origin-rich grain network to U.S. and Mexican outlets, as well as gaining access to 12 additional Gulf and Pacific ports for export.

Over the next several years, CP will be continuing its transition into a High Efficiency Product (HEP) train model that will drive greater supply chain capacity and efficiency. With planned investments of $500M to acquire 5,900 additional covered hoppers, CP will be able to move roughly 44% more grain per train across its entire network. Not only will this investment enable the company to meet the expanding capacity needs of its grain customers, but it will also enable the company to drive greater network efficiencies and margin expansion through greater rates of train utilization.

EXHIBIT XVII

CP's Grain Network

Source(s): Company Filings

Assessing Management – Canadian National Railway

Measuring Management Performance

The President and CEO of CNR is Jean-Jaques Ruest (July 2018 – Present), was previously CNR's EVP and CMO from January 2010, and has been at CNR since 1996. Under Ruest's tenure, CNR's management has exhibited moderate performance. While CNR had the 2nd highest industry ROIC between LTM3 2012 and LTM1 2018, CNR's ROIC decline over the past three years has indicated poor operating and investing strategy from management. Since 2018, CNR's ROIC has declined from ~14% to 10.25%. This has been slightly attributed to increases in COGS, with EBITDA margin reductions from 52.4% in 2017 to lows of ~50% in 2018 and 2019, and LTM EBTIDA margins of 51.4%. CNR has also seen substantial outpaced growth in D&A, increasing from $1.28B in 2017 to $1.6B in 2021 at a CAGR of 9.3%. CNR's ROIC has also been adversely impacted by its increased debt position, increasing debt/equity from 65% to 84% between LTM1 2016 and 2020. CNR's increased debt position has failed to generate ROIC at historical revenues despite its industry-leading capex as a percentage of revenue in 2018 and 2019, highlighting management's historically inefficient capital investment strategy. However, given D&A's substantial impact on ROIC, from a cash flow perspective, OCF grew at a 3.8% CAGR and UFCF grew at a 2% CAGR between 2017 and 2020. Furthermore, on a comparative operating ratio basis, CNR had the second-highest operating ratio from all Class I railroads, only ahead of Norfolk Southern. Ultimately, management's financial performance over the past five years has been lackluster on both an absolute and comparative basis.

M&A, Dividend, and Buyback History

CNR's capital employment strategy to generate shareholder returns through dividends and buybacks has been ineffective over the past five years. CNR's dividend payout ratio has increased from 31.8% in FY 2016 to 42.1% in LTM2 2021, with continued dividend increases throughout the pandemic despite reduced revenues and net income, failing to invest in
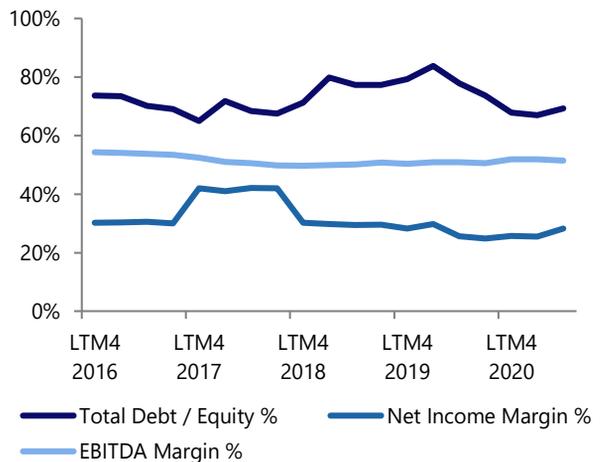
Historical Railroad Industry ROICs
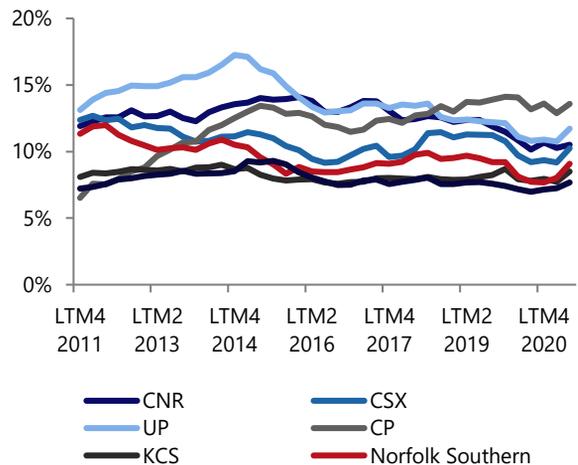
Source(s): S&P Capital IQ

CNR's Historical Debt/Equity Ratio, EBITDA & Net Income Margins

Source(s): S&P Capital IQ

Assessing Management – Canadian National Railway

operational improvements. With CNR generating an average ~1.7% dividend yield over the past five years, management has continually returned capital to investors. CNR has also consistently repurchased shares, with an average of $371.35MM of shares repurchased per quarter between Q1 2016 and Q1 2020. While CNR paused share repurchases from Q2-Q4 2020, share repurchases have resumed from Q1 2021. As a result, CNR has employed capital to generate direct returns for investors at the cost of limiting CapEx. CNR also has limited M&A history over the past three years, with the $148.52MM acquisition of Trans X LTD and the $77.79MM acquisition of H&R Transport Ltd's both closed in 2019.

Evaluating CNR's Investment Plan

In September, CNR announced its new strategic and financial value creation plan. For 2022, CNR expects EPS to grow by ~20%, $700MM in operating income improvements, operating ratio (O/R) improvement to 57%, ~15% ROIC, increasing share repurchases to ~C$5B, reducing capex to 17% of revenue from 2022-24. CNR plans to reduce its O/R by: "prioritizing rail operations, including car velocity, train speed and train length, and committing to pursuing strategic alternatives for adjacent non-rail businesses that are not best-in-class; and rationalizing its cost structure by streamlining management to improve labor productivity." CNR has also reaffirmed FY 2021 targets of adjusted diluted EPS of C$5.31, capital investments of C$3B, and FCF between C$3-3.3B. CNR's investment plan appear to indicate overly bullish sentiments on O/R and capex, with analyst consensus indicating a ~60% O/R and 20% capex. While O/R estimates are in-line with various Class I railroads' targets of mid-50%, given that CNR has already implemented Precision Scheduled Railroading (PSR), and targets mainly are based off operating efficiency improvements, we are bearish on CNR's management targets.

Shareholder Structure Breakdown

In terms of CNR's shareholder structure, institutions hold 56.21% of shares, public/other investors hold 25.33%, VC/PE firms hold 9.71%, hedge fund managers hold 5.18%, and individuals/insiders hold 3.57%. CNR's largest shareholders are Cascade Investment (9.71%), TCI Fund Management (5.18%), MFS Investment Management (4.53%), Melinda Gates (3.34%), and BMO Global Asset Management (2.97%). Regarding recent activity from CNR's largest shareholders, since June 30, Cascade has trimmed their position by 21% while TCI and Melinda Gates have increased their positions by 22% and 66% respectively. The institutional influence has allowed less board influence over management than under a non-active owner but more influence than under a controlling owner.

Failed Kansas City Southern Acquisition & Shareholder Activism

On April 20th, 2021, CNR offered to buy KCS for $33.7B, exceeding CP's original $25B offer, and was accepted on May 13th. However, following regulatory concerns from both the Department of Justice and the Surface Transportation Board (STB) and the STB rejecting the deal, KCS agreed to accept CP's new $27.2B bid on September 12th. CNR's shareholder structure has substantial relevance following CNR's receipt of notice of termination of it's purchase agreement with KCS in September 2021. This is due to TCI Fund Management's public shareholder activism which has pushed for a special meeting of CNR shareholders to discuss management and board changes at CNR. Following comments that CNR's management showed "a basic misunderstanding of the railroad industry and regulatory environment", TCI has proposed four new nominated board members and the replacement of CEO Jean-Jacques Ruest with former CNR COO Jim Vena. While TCI is CNR's second-largest shareholder, TCI is also the largest shareholder of CP, with 8.38% ownership in the competing railroad. Ultimately, we believe that with CNR's unappealing management 'legacy' background qualifications, NEO compensation overly aligned with share price performance, and poor historical performance, CNR's current management team will not generate sufficient shareholder returns.

Assessing Management – Canadian Pacific Railway

Asset Utilization:

In a capital-intensive business such as rail, it is essential that utilization is constantly monitored and changed in order to extract the highest generated value. CP's management team has continuously proven to do this both with newly acquired assets, and legacy assets.

Legacy assets are often re-visited to determine whether there is a more efficient use or means of using them. For example, when storage facilities in the Port of Vancouver reached record low vacancies in 2020, CP immediately re-assessed certain landholdings in the region and quickly announced a project to convert an underutilized parking and storage area into an additional transload facility. While such projects are typically slow to both plan and announce, the whole process is expected to take less than 12 months from researching and planning all the way to completion.

Technology

Technology is also valued by management as a means of increasing asset turnover. CP was first to develop a develop autonomous track and car monitoring software in order to reduce the number of visual inspections. Developed by CP-itself in 2018, the predictive modelling and artificial intelligence associated with the new technology has drastically improved operating performance – such as a 30% decrease in wheel-related interruptions. CP is also the first rail line to be testing and designing hydrogen powered locomotives. While this specific investment can appear gimmicky to some, it demonstrates the forward-looking nature of the CP executive team relative to some of its larger competitors.

CMQ Acquisition

The acquisition of the Central-Maine Quebec Railway by CP in July 2021 yet again demonstrates management's constant push to increase the competitive appeal of its lines. This, in tandem with the Detroit River Tunnel Project enabled CN to cut 200

miles from the shortest competitor route, ensuring that goods could move into the Midwest far quicker than other projects. Already, traffic throughput on the line has increased 13% and is likely to increase as CP outlays the final ½ of it's planned investments into the short line – improving efficiency.

EXHIBIT XX

Historical ROIC %
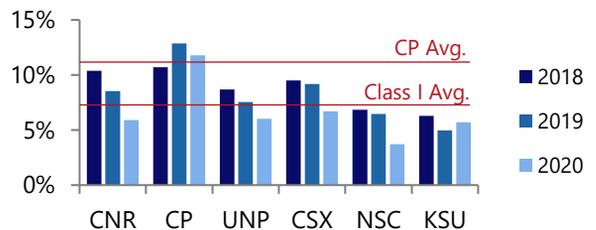
Source: Capital IQ

EXHIBIT XXI

CP Performance vs. Class I Railroads
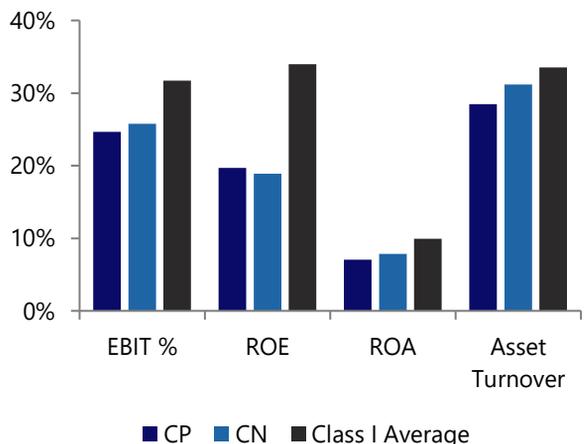
Source: Capital IQ

Management Compensation

CP Compensation Strategy

While we believe that CP's compensation plan does an adequate job of aligning management with shareholders, there isn't anything particularly notable about the plan which sets it apart from CNR. This is likely because both compensation strategies were designed by the same firm: Willis Towers Watson. We do appreciate that CP places a 50% higher weighting on safety performance compared to CN, a metric which long-term can help with the corporate culture.

The Industrials Team does have concerns with two incentive components. Firstly, 24% of compensation is given in the form of redeemable options which vest 25% over a four-year period. As presumed, our team is hesitant about options as a form of compensation largely because they only have upside risk for the holder, which could potentially encourage risky decision-making. Furthermore, options are awarded unconditionally without consideration for executive performance (the board allots a certain number of options annually). Such compensation fails to punish executives for weak capital allocation, and our team thinks that a larger proportion of share units should be awarded in the place of options like CNR.

We also worry about the fact that only 1 of 10 board members owns any CP common stock. Nine of the Ten members own zero shares, and instead take ownership through the form of deferred share units. While great at encouraging the company success in the long term (which is very important in rails), this may prevent the board from also considering the short-term performance of the company to the same extent; of which there may exist a short-term opportunity cost for investors that should be considered.

CNR Compensation Strategy

When evaluating CN's NEO compensation, there are strong concerns around CN's long-term incentives and their ability to incentivize short-term financial objectives. As 55% of CN's NEO's long-term incentives

are comprised of Performance Share Units (PSUs), 60% of the PSU value is composed of average ROIC targets and minimum average closing share prices, as well as relative performance to Class I railroads and S&P/TSX 60 companies. This raises strong concerns that management will be incentivized in long-term compensation plans to undertake short-term strategies increasing share pricing over long-term strategies emphasizing investments to generate operational efficiencies and shareholder returns

EXHIBIT XXII

Insider Ownership %
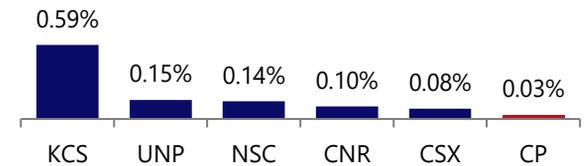
Source: Capital IQ

EXHIBIT XXIII

Compensation Components

Source: Company Filings

Catalysts and Risks

CNR — Catalysts

CNR's exclusive rights to Prince Rupert Port in BC allow plenty of Chinese imports into North America. As restrictions lift, the rebound in the usage of goods has resulted in high domestic and international transportation demand. Especially as Asia is a huge importer and exporter of commodities and goods, CNR has a considerable advantage through its Asia to Chicago line. Furthermore, emulating the success of its Prince Rupert model, CNR plans to leverage its Eastern network to deliver competitive end-to-end service to the U.S. Midwest and Ontario. Its current target geographies lie around Chicago, Detroit, Minneapolis, and Toronto, where all three of its three-point coast tracks meet.

CNR — Risks

A recent disadvantage of CNR is the dissonance between shareholders and management. Following the fall-through of the Kansas City Southern merger, a major shareholder of CNR, TCI, called for CNR's chairman and CEO to resign immediately. Whereas TCI wants CNR to improve existing operations as its financial performance has lagged behind other railways since 2016, CNR is adamant about new expansions being their key to success. This disagreement in direction has caused many doubts by CNR's major shareholders regarding management, potentially leading to investors viewing CNR with less confidence.

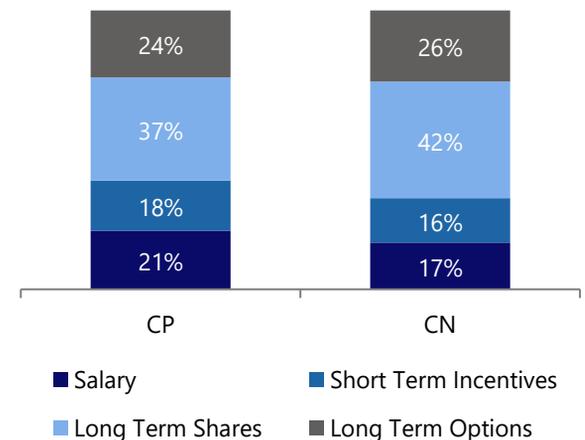### CP — Catalysts

The most recent merger with Kansas City Southern is the most promising catalyst driving CP's growth. In the railway industry, high barriers to entry and strong network effects effectively lock companies in by their rail network geographies. This agreement will create the first single-line rail network linking U.S., Mexico, and Canada with no overlap, providing the company with a unique advantage.

Secondly, internal development towards more control in the end-to-end supply chain further solidifies CP's role in the transportation industry. By reducing third-party truck involvement in major cities like Vancouver, CP plans to save thousands of city-wide rounds trips and strengthen intermodal transportation in North America.

CP — Risks

Grain makes up CP's largest market segment. However, dry weather conditions across Western Canada during Summer 2021 are expected to impact the 2021 grain harvest. For example, The Port of Thunder Bay has continually reduced grain shipments as Prairie harvest yields hit a ten-year low. Monthly grain loads were down 30% in September, with year-to-date grain shipments 5% below average. Furthermore, one of the primary reasons the CP-KCS merger was approved was CP's small size and lack of overlapping routes. CP-KCS remains the smallest Class I Canadian freight railway, so they may still have difficulty competing against larger rail lines.

EXHIBIT XXIV

CP – KCS Rail Network

Source(s): Railfan & Railroad Magazine

Valuation - Comparables

When analyzing the railroad industry from a historical comparable valuation perspective, railroads are primarily valued on a P/E, P/CF, and EV/EBITDA multiples basis. While the P/E ratio is used to compare railroads, given the substantial capital intensity of the industry, it fails to accurately measure the value of investing activities. In the industry, scale is correlated with trading multiples, as UP and CNR historically trade at premiums relative to other Class I railroads and are industry-leading in revenues and network size. Both on a historical basis and currently, CNR has traded at a minimal premium to CP on a P/E and EV/EBITDA basis due to it's larger, more diversified network.

Despite CP's relative historical discount compared to CNR and other larger Class I railroads, CP's current discount to both CNR and other Class I railroads inaccurately depicts its industry-leading operating ratios, and the opportunity for strengthened scale and supply/demand economic moats though its acquisition of KCS.
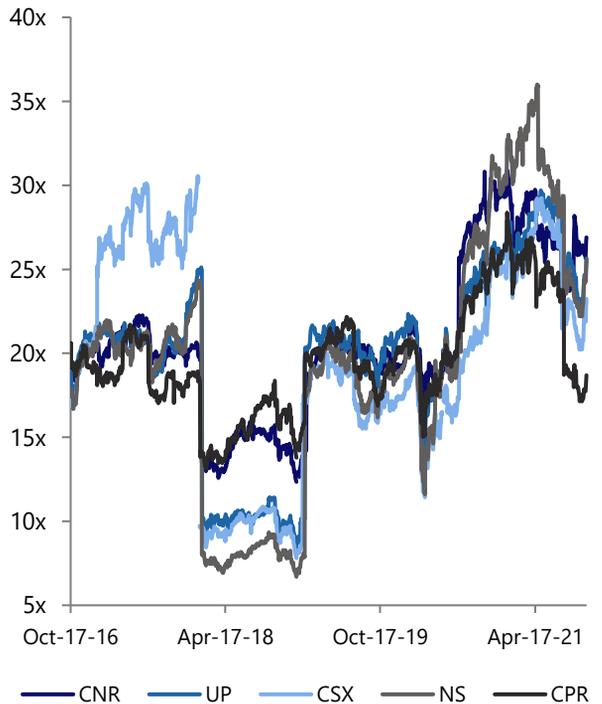
EXHIBIT XXV

Historical Rail Freight Industry EV/EBITDA Multiples

Source(s): S&P Capital IQ

EXHIBIT XXVI

Historical Rail Freight Industry P/E Multiples

Source(s): S&P Capital IQ

EXHIBIT XXVII

CP Comparables Valuation

Ticker	Price	P/E 2020A	P/E 2021E	P/E 2022E	EV/EBITDA 2020A	EV/EBITDA 2021E	EV/EBITDA 2022E	P/OCF 2020A	P/OCF 2021E	P/OCF 2022E
CNR	$151.70	30.3x	26.5x	22.4x	16.9x	16.8x	15.0x	17.5x	18.4x	16.4x
UNP	$225.40	28.5x	22.8x	20.2x	17.5x	15.2x	14.1x	17.7x	16.9x	15.5x
CSX	$34.20	28.4x	22.9x	20.0x	15.7x	13.9x	13.0x	18.3x	15.1x	14.6x
NSC	$275.60	35.0x	23.3x	20.7x	17.4x	14.6x	13.6x	19.2x	16.3x	15.3x
KSU	$295.60	45.0x	35.2x	29.1x	22.0x	19.9x	17.2x	25.2x	23.3x	20.6x
Mean		33.4x	26.1x	22.5x	17.9x	16.1x	14.6x	19.6x	18.0x	16.5x
Median		30.3x	23.3x	20.7x	17.4x	15.2x	14.1x	18.3x	16.9x	15.5x
CP	$90.20	25.0x	22.8x	21.0x	15.6x	15.8x	14.4x	21.7x	17.0x	15.7x

CNR Comparables Valuation

Ticker	Price	P/E 2020A	P/E 2021E	P/E 2022E	EV/EBITDA 2020A	EV/EBITDA 2021E	EV/EBITDA 2022E	P/OCF 2020A	P/OCF 2021E	P/OCF 2022E
CP	$90.20	25.0x	22.8x	21.0x	15.6x	15.8x	14.4x	21.7x	17.0x	15.7x
UNP	$225.40	28.5x	22.8x	20.2x	17.5x	15.2x	14.1x	17.7x	16.9x	15.5x
CSX	$34.20	28.4x	22.9x	20.0x	15.7x	13.9x	13.0x	18.3x	15.1x	14.6x
NSC	$275.60	35.0x	23.3x	20.7x	17.4x	14.6x	13.6x	19.2x	16.3x	15.3x
KSU	$295.60	45.0x	35.2x	29.1x	22.0x	19.9x	17.2x	25.2x	23.3x	20.6x
Mean		32.4x	25.4x	22.2x	17.6x	15.9x	14.5x	20.4x	17.7x	16.3x
Median		28.5x	22.9x	20.7x	17.4x	15.2x	14.1x	19.2x	16.9x	15.5x
CNR	$151.70	30.3x	26.5x	22.4x	16.9x	16.8x	15.0x	17.5x	18.4x	16.4x

EXHIBIT XXVIII

Canadian Pacific Implied Valuation

Ratio	Multiple	Metric	Implied Price
P/E 2019A	33.4x	$3.61	$120.58
P/E 2020E	26.1x	$3.95	$103.09
P/E 2021E	22.5x	$4.29	$96.31
EV/EBITDA 2019A	17.9x	$4,390.00	$105.34
EV/EBITDA 2020E	16.1x	$4,330.40	$92.15
EV/EBITDA 2021E	14.6x	$4,729.86	$91.12
P/OCF 2019A	19.6x	$2,802.00	$81.47
P/OCF 2020E	18.0x	$3,564.40	$95.40
P/OCF 2021E	16.5x	$3,827.45	$93.69
Mean			$97.68
Implied Return			7.7%

Canadian National Implied Valuation

Ratio	Multiple	Metric	Implied Price
P/E 2019A	32.4x	$5.01	$162.10
P/E 2020E	25.4x	$5.72	$145.50
P/E 2021E	22.2x	$6.77	$150.34
EV/EBITDA 2019A	17.6x	$7,167.00	$159.18
EV/EBITDA 2020E	15.9x	$7,183.44	$141.90
EV/EBITDA 2021E	14.5x	$8,064.48	$145.63
P/OCF 2019A	20.4x	$6,165.00	$176.64
P/OCF 2020E	17.7x	$5,856.15	$145.85
P/OCF 2021E	16.3x	$6,589.92	$151.51
Mean			$153.18
Implied Return			1.0%

Source: Capital IQ

Valuation – Canadian Pacific Railway DCF

	2020A	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Revenue	**7,710**	**8,219**	**9,274**	**12,260**	**13,083**	**14,110**	**15,259**	**16,470**	**17,744**	**19,082**	**20,483**
Revenue Growth		7%	13%	32%	7%	8%	8%	8%	8%	8%	7%
Operating Expenses	3,620	3,684	4,244	5,610	5,987	6,457	6,982	7,537	8,120	8,732	9,373
EBITDA	**4,090**	**4,535**	**5,030**	**6,650**	**7,096**	**7,654**	**8,277**	**8,934**	**9,625**	**10,350**	**11,110**
EBITDA Margin %	*53%*	*55%*	*54%*	*54%*	*54%*	*54%*	*54%*	*54%*	*54%*	*54%*	*54%*
Less: Depreciation	661	696	706	779	832	949	1,754	1,815	1,899	1,995	2,100
EBIT	**3,429**	**3,839**	**4,324**	**5,871**	**6,265**	**6,705**	**6,523**	**7,118**	**7,726**	**8,355**	**9,010**
EBIT Margin %	*44%*	*47%*	*47%*	*48%*	*48%*	*48%*	*43%*	*43%*	*44%*	*44%*	*44%*
Less: Cash Taxes	758	726	809	840	921	1,022	1,132	1,244	1,364	1,490	1,620
NOPAT	**2,671**	**3,113**	**3,515**	**5,031**	**5,344**	**5,683**	**5,391**	**5,875**	**6,362**	**6,865**	**7,389**
Add: Depreciation		696	706	779	832	949	1,754	1,815	1,899	1,995	2,100
Less: Capital Expenditures		1,524	1,790	2,335	2,492	2,687	2,906	3,137	3,379	3,634	3,901
Less: Change in NWC		(82)	(127)	(450)	(67)	(87)	(98)	(104)	(111)	(117)	(123)
Free Cash Flows		**2,367**	**2,558**	**3,925**	**3,751**	**4,031**	**4,337**	**4,658**	**4,992**	**5,343**	**5,712**
Discount Period		1.25	2.25	3.25	4.25	5.25	6.25	7.25	8.25	9.25	10.25
Discount Factor		0.92	0.86	0.80	0.75	0.70	0.66	0.61	0.57	0.53	0.50
Present Value of UFCF		**2,175**	**2,197**	**3,150**	**2,814**	**2,826**	**2,841**	**2,852**	**2,857**	**2,858**	**2,855**

EXHIBIT XXIX

Deriving the Share Price

Valuation Walkthrough	
Cumulative Value of UFCF	27,424
Terminal Value:	
UFCF 2030E	5,712
Terminal Growth Rate	*2%*
Discount Rate	*7%*
Terminal Value	116,520
Discounted Terminal Value	58,239.3
% of Enterprise Value	68%
Implied Enterprise Value	**85,663.7**
Less: Total Debt	7,850.0
Less: Minority Interest	-
Plus: Cash and Cash Equivalents	826.4
Implied Equity Value	**78,640.1**
Shares Outstanding	927.6
Implied Share Price (CAD)	**$105.12**
Current Share Price	$90.20

EXHIBIT XXX

Financials Visualization ($B)
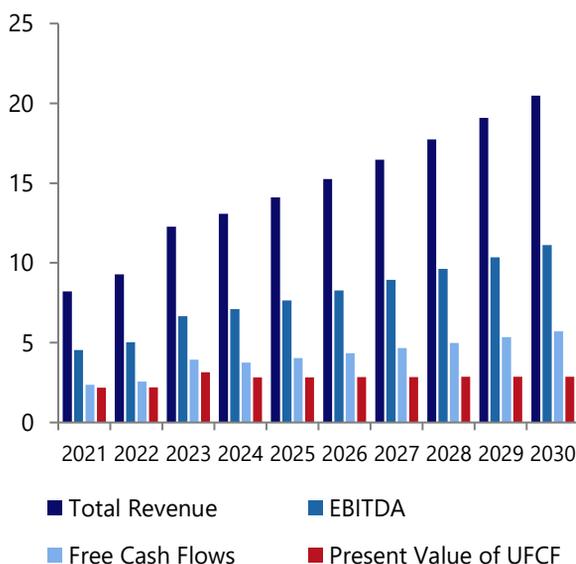
Valuation – Canadian National Railway DCF

	2020A	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total Revenue	**13,819**	**13,923**	**15,268**	**16,444**	**17,222**	**17,917**	**18,518**	**19,142**	**19,792**	**20,469**	**21,173**
Revenue Growth		10%	8%	5%	4%	3%	3%	3%	3%	3%	3%
Operating Expenses	7,453	7,053	6,139	6,426	7,935	8,256	8,347	8,629	8,526	8,817	9,120
EBITDA	**6,366**	**6,870**	**9,129**	**10,019**	**9,287**	**9,662**	**10,171**	**10,514**	**11,266**	**11,652**	**12,052**
EBITDA Margin %	*46%*	*49%*	*60%*	*61%*	*54%*	*54%*	*55%*	*55%*	*57%*	*57%*	*57%*
Less: Depreciation	1,589	1,540	1,689	1,819	1,905	1,982	2,048	2,117	2,189	2,264	2,342
EBIT	**4,777**	**5,330**	**7,440**	**8,200**	**7,382**	**7,680**	**8,122**	**8,396**	**9,077**	**9,388**	**9,711**
EBIT Margin %	*35%*	*38%*	*49%*	*50%*	*43%*	*43%*	*44%*	*44%*	*46%*	*46%*	*46%*
Less: Cash Taxes	982	1,332	1,860	2,050	1,846	1,920	2,031	2,099	2,269	2,347	2,428
NOPAT	**3,795**	**3,997**	**5,580**	**6,150**	**5,537**	**5,760**	**6,092**	**6,297**	**6,808**	**7,041**	**7,283**
Add: Depreciation		1,540	1,689	1,819	1,905	1,982	2,048	2,117	2,189	2,264	2,342
Less: Capital Expenditures		2,367	2,290	2,467	2,583	1,792	1,852	1,914	1,979	2,047	2,117
Less: Change in NWC		(50)	(76)	(110)	(62)	(64)	(67)	(69)	(71)	(74)	(76)
Free Cash Flows		**3,220**	**5,054**	**5,612**	**4,920**	**6,014**	**6,355**	**6,569**	**7,089**	**7,331**	**7,583**
Discount Period		1.25	2.25	3.25	4.25	5.25	6.25	7.25	8.25	9.25	10.25
Discount Factor		0.92	0.86	0.80	0.75	0.70	0.66	0.61	0.57	0.53	0.50
Present Value of UFCF		**2,959**	**4,341**	**4,504**	**3,690**	**4,216**	**4,163**	**4,022**	**4,057**	**3,921**	**3,790**

EXHIBIT XXXI

Deriving the Share Price

Valuation Walkthrough	
Cumulative Value of UFCF	39,664
Terminal Value:	
UFCF 2030E	7,583
Terminal Growth Rate	*2%*
Discount Rate	*7%*
Terminal Value	154,702
Discounted Terminal Value	77,323.5
% of Enterprise Value	66%
Implied Enterprise Value	**116,987.7**
Less: Total Debt	11,996.0
Less: Minority Interest	-
Plus: Cash and Cash Equivalents	569.0
Implied Equity Value	**105,560.7**
Shares Outstanding	712.6
Implied Share Price (CAD)	**$148.14**
Current Share Price	$151.67

EXHIBIT XXXII

Financials Visualization ($B)

Legend: Total Revenue, EBITDA, Free Cash Flows, Present Value of UFCF
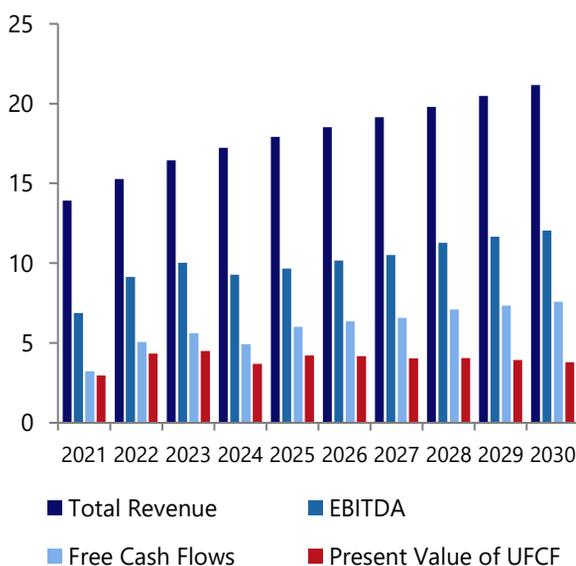
References

1. ACW Railway
2. Agriculture and Agri-Food Canada
3. Association of American Railroads
4. Bloomberg
5. CanFax
6. Company Filings
7. Capital IQ
8. Federal Reserve Economic Data (FRED)
9. Freightos Data
10. GlobeNewswire
11. IBISWorld
12. Investopedia
13. Mergent Online
14. Morningstar
15. Progressive Railroading
16. PWC
17. Railway Association of Canada
18. ResearchGate
19. Sell Side Handbook
20. Statistics Canada
21. SMART Union
22. TEMS
23. Transport Canada
24. USDA
25. USDOT
26. World Steel Association