



CFRA

Industry Surveys

Ground Transportation

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NEW THEMES



What's Changed: In line with the recent changes to the GICS classification system, the name for this Industry Survey has been changed to Ground Transportation from Road & Rail, effective March 2023.



What's Changed: CFRA does not expect a material decline in consumer freight demand in the near term. Check out our commentary on page 15.

EXECUTIVE SUMMARY

CFRA has a neutral fundamental outlook on the Ground Transportation industry over the next year.

Consumer Goods Demand Cooling, But Remains Elevated Even as the Pandemic Fades

In 2020 and 2021, federal stimulus coupled with pandemic restrictions on events and travel drove robust growth in real (adjusted for inflation) consumer goods spending, which by Q4 2021 was up 16% vs. Q4 2019. Many pundits expected goods spending to fall sharply once stimulus and travel restrictions tapered off, but in fact it only slightly cooled in 2022 and looks to be growing again in early 2023. In Q4 2022, U.S. real consumer goods spending was down just 1% year-over-year, and the subsequent January 2023 level was up 2% month-over-month vs. December (seasonally adjusted). In CFRA's view, large household savings and employment growth are offsetting high inflation and other post-pandemic headwinds to goods demand.

Given railroad carriers' crucial role in the consumer goods supply chain – moving raw material and intermediate goods to factories, sending finished goods out to market, and transporting import/export goods – the industry saw strong volume growth in consumer-related freight categories during the pandemic. We expect consumer goods-related volume growth for trucking firms and railroads to be in a 0%-2% year-over-year range over the next year, with a continued mix of tailwinds (job growth) and headwinds (inflation, high interest rates).

Industrial Freight Demand Will Likely Be a Mixed Bag Over the Next Year

Industrial output is a key driver for ground transportation firms, but we expect little or no growth in this area in the coming year. On the plus side, high oil and gas prices are spurring more extraction, which leads to strong fossil fuel-related volume. But the Federal Reserve's rising interest rates have begun to weigh heavily on construction activity, as the cost of new homes and commercial buildings rises rapidly with rate hikes. The U.S. has also recently seen its energy prices grow far more expensive than competing manufacturing hubs such as Southeast Asia, India, and Mexico, which already had much lower labor costs. The growing cost disparity will further incentivize manufacturers to move production out of the U.S., in our view. Overall, we see headwinds for construction and manufacturing freight leading to stagnant industrial freight volumes over the next year.

Capacity Limitations in Trucking Likely to Keep Trucking Rates Elevated

U.S. trucking firms were facing a driver shortage prior to the pandemic, which was then exacerbated by broad labor shortages stemming from the pandemic and government response. In addition to the driver shortage making it difficult for truck carriers to expand capacity, component shortages limited new truck production. The combination of elevated consumer goods demand with labor and equipment shortages led to extremely tight capacity and record pricing for U.S. trucking. Trucking rates moderated during 2022 and early 2023, as goods demand cooled slightly and more capacity has come online. But we see trucking rates remaining well above pre-pandemic levels during 2023 due to lingering driver and equipment shortages.

High Oil Prices Have Raised Costs for Ground Transportation

Low oil prices early on in the pandemic benefited ground transportation firms, as oil-derived diesel fuel is among their largest expenses. Recently, however, the oil and gas industry has become supply constrained due to Russia's invasion of Ukraine and government climate policies, with oil prices frequently above \$80 per barrel vs. below \$60 just before the pandemic. Higher oil prices mean trucking firms and railroads are paying more for fuel, which will remain a material headwind for their operating margins during 2023-2024, in CFRA's view.

Climate Change Policies Could Send Railroads' Energy-related Volumes into Long-term Decline

Whether it is transporting coal, fracking sand, crude oil, or refined petroleum products, railroads are deeply intertwined with fossil fuel markets. These revenue streams are at long-term risk from Biden administration policies, in our view, due to goals including a phase-out of gas vehicles and 0% fossil-fuel electricity generation by 2035, down from 60% in 2022 (Energy Information Administration). We see railroads, and not trucking, carrying high risk from transformational U.S. energy policy, as large U.S. trucking firms do not derive significant revenues from coal, oil, or natural gas markets, in our view. Conversely, railroads would lose thousands of highly repetitive fossil fuel shipments in a world of carbon-free energy.

GROUND TRANSPORTATION

Outlook: Neutral

MARKET CAP BREAKDOWN

RANK NO.	COMPANY NAME	MARKET CAP (\$ billion)
1	Union Pacific	123.1
2	CSX	61.3
3	Norfolk Southern	48.3
4	Old Dominion	37.5
5	J.B. Hunt	18.2
6	Knight-Swift	9.1
7	Avis Budget	7.7
8	Saia, Inc.	7.2
9	Landstar System	6.5
10	Hertz Global	5.3
	Others†	18.2

Market cap as of March 31, 2023.

Source: CFRA, S&P Global Market Intelligence.

†Refer to the Comparative Company Analysis section of this survey for other companies in the industry.

BY THE NUMBERS

17.5%

2022 real consumer goods spending vs. 2019 – such goods travel by truck and/or rail

+7.4%

Y/Y increase in U.S. e-commerce sales in 2022 – expedited e-commerce shipping relies heavily on U.S. trucking

-4.7%

2022 change in U.S. intermodal railroad volume vs. 2021

+9.0%

2022 growth in U.S. industrial output vs. 2019 – industrial growth will boost railroad volumes

+4.7%

2022 growth in U.S. trucking employment vs. 2019 – well below trucking volume growth

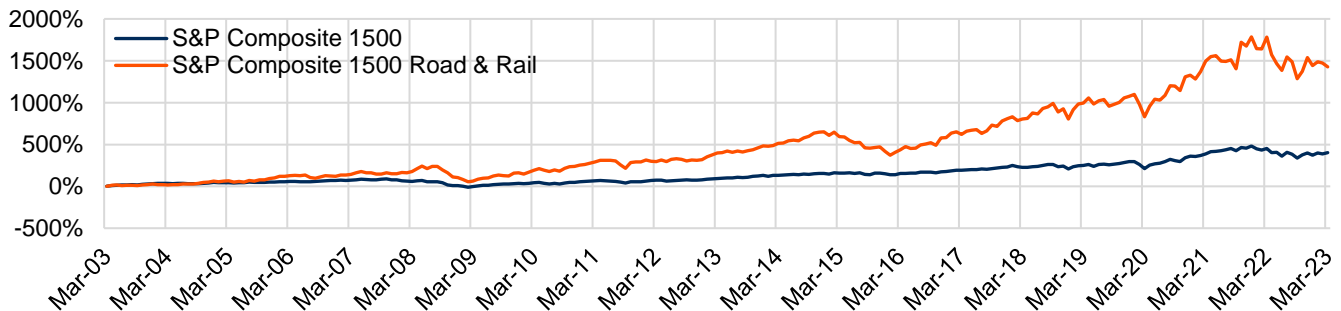
\$4.99

Retail diesel price per gallon in February 2023, up 44% vs. 2019 average

ETF FOCUS

XLI Industrial Select Sector SPDR	AUM (\$M) 13,621	Expense Ratio 0.10
VIS Vanguard Industrials	AUM (\$M) 3,806	Expense Ratio 0.10
FXR First Trust Industrials/Producer Durables AlphaDEX	AUM (\$M) 1,605	Expense Ratio 0.61
IYT iShares Transportation Ave.	AUM (\$M) 770	Expense Ratio 0.39
FIDU Fidelity MSCI Industrials Index	AUM (\$M) 691	Expense Ratio 0.08

HISTORICAL INDEX PERFORMANCE

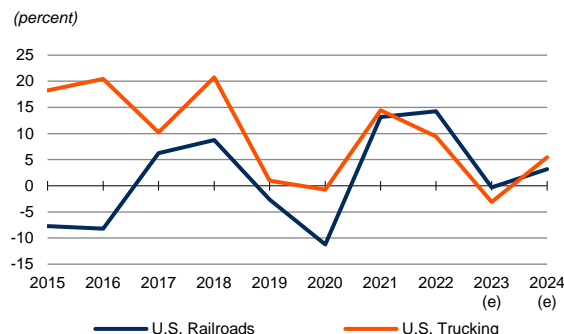


*Data through March 31, 2023.

Source: S&P Global Market Intelligence.

FINANCIAL METRICS

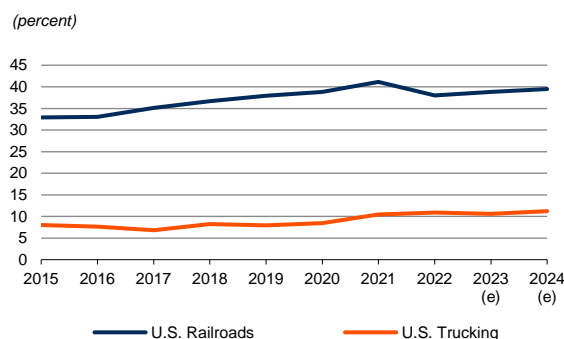
Revenue Growth



Source: CFRA, S&P Global Market Intelligence.

- ◆ The sub-industries are likely to see a sharp slowdown or a slight decline in revenue growth in 2023 and 2024, driven by suppressed consumer spending and manufacturing activity amid high inflation and rising interest rates, in CFRA's view.
- ◆ Revenue for all sub-industries grew materially in 2022 vs. 2021 on the back of stronger industrial freight demand and still robust U.S. consumer goods spending.

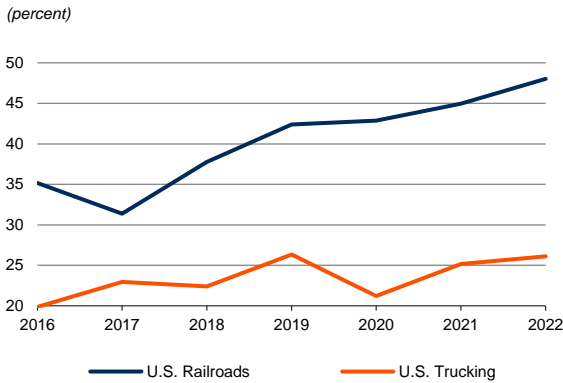
EBIT Margin



Source: CFRA, S&P Global Market Intelligence.

- ◆ The average EBIT margin for railroads is likely to remain above the five-year average of 38.5% in 2023-2024, mainly on the still-healthy industrial freight volume and strong pricing power. In addition, lower fuel costs are likely to be offset by wage inflation, in our view.
- ◆ The EBIT margin for trucking firms is likely to stay flat around 11% in 2023 and 2024 as we expect a red-hot job market will lead to rapid growth in driver wages and benefits to offset lower fuel prices.

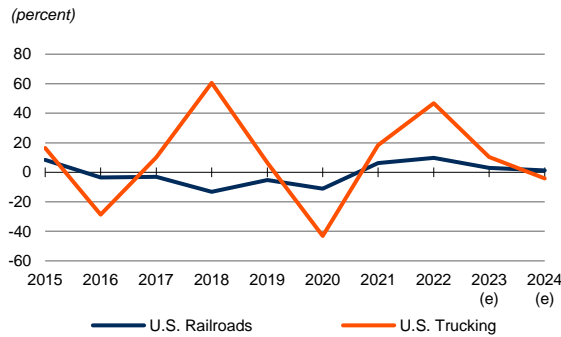
Total Debt-to-Capital



Source: CFRA, S&P Global Market Intelligence.

- ◆ Higher operating margins for railroads allow them to safely cover more interest cost, in our view, which explains their higher debt-to-capital ratio than trucking firms.
- ◆ We note that the average debt-to-capital ratio for the sub-industries rose noticeably in 2019, mostly due to new accounting rules requiring operating leases to be accounted for as debt. The ratio remained elevated in 2021 due to increases in overall debt levels needed to weather the coronavirus downturn. In 2022, instead of paying off debt, many companies spent on share buybacks, causing the ratio to rise further.
- ◆ Moving forward, we think the ratio's magnitude would largely be affected by the degree of share buybacks. However, considering the weak economic outlook, coupled with surges in the cost of debt, it makes sense for firms to reduce their borrowings as opposed to buying back shares.

Capital Expenditures Growth



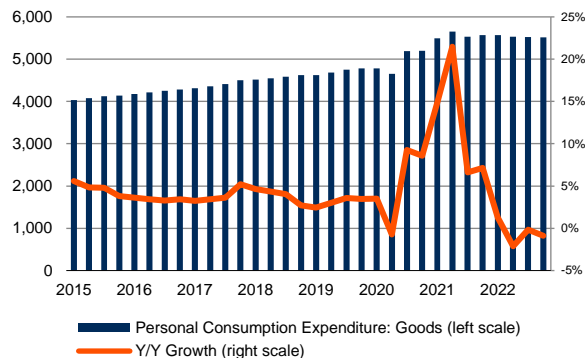
Source: CFRA, S&P Global Market Intelligence.

- ◆ Capital expenditures (capex) for the sub-industries declined significantly in 2020 due to the demand uncertainty surrounding the Covid-19 pandemic.
- ◆ Subsequently, ground transportation firms invested more in capex to increase capacity amid stronger demand in 2022. Capex growth will likely be muted in 2023 and 2024 given the dimmed growth outlook in the U.S. and a weakening global economy.

KEY INDUSTRY DRIVERS

U.S. Real Personal Consumption Expenditures: Goods

(\$, in billions, seasonally adjusted)

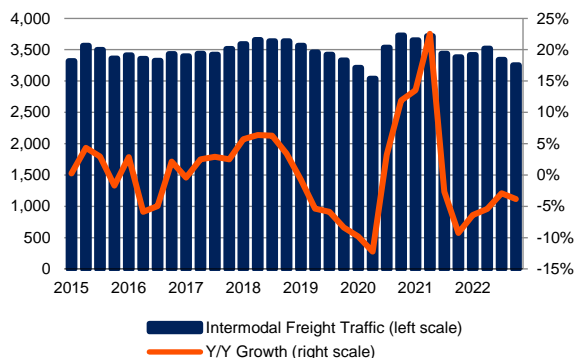


Source: Federal Reserve Economic Data.

- ◆ U.S. real personal consumption expenditures for goods is an important growth driver for trucking firms and railroads as both freight modes transport finished consumer goods, as well as raw materials and intermediate goods like parts and components for consumer goods manufacturing.
- ◆ U.S. real personal consumption expenditures for goods in 2022 was up 17.5% vs. 2019, driven by an incredibly strong job market and record household savings level coming out of the pandemic.
- ◆ We expect real spending for goods to be flat in 2023, with high inflation offsetting tailwinds from employment gains.

U.S. Rail Intermodal Volume

(units, in thousands, seasonally adjusted)

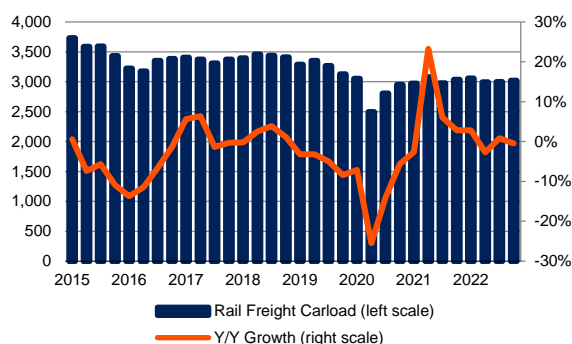


Source: Federal Reserve Economic Data.

- ◆ Rail intermodal volume measures units of intermodal freight that transport a range of mostly consumer-oriented goods, as opposed to conventional railcars that focus more on industrial and agricultural raw materials.
- ◆ U.S. rail intermodal volume dropped 4.7% in 2022 vs. the previous year. We attribute it to the tapering off of pandemic-related stimulus and activity restrictions.
- ◆ We expect intermodal volume to continue to decline in 2023, as a significant amount of consumer spending is shifting from goods back to events and travel, where railroads play little role.

U.S. Rail Carload Volume

(units, in thousands, seasonally adjusted)

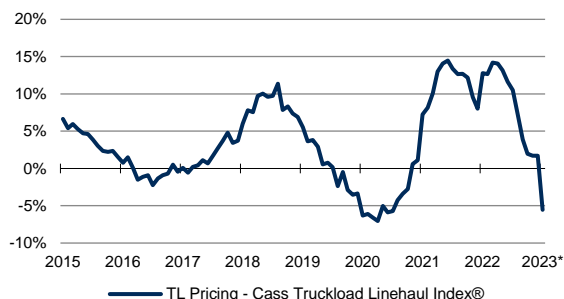


Source: Federal Reserve Economic Data.

- ◆ Rail carload volume measures the number of freight carloads (excluding intermodal) that transport mostly industrial and agricultural commodities.
- ◆ U.S. rail carload volume growth slowed to 0.1% 2022 from 6.7% 2021. The slowdown was caused by a fall in grain, ores and metals, and petroleum-related carloads.
- ◆ The decline in carload volume is in line with the declines in PMI since Q1 2022. Action Economics forecasts PMI to slow to 48.6 in 2023 and 51.3 in 2024, compared to 60.7 in 2021 and 53.5 in 2022. We expect carload volume to follow suit.

U.S. Truckload Pricing

(percent, Y/Y)



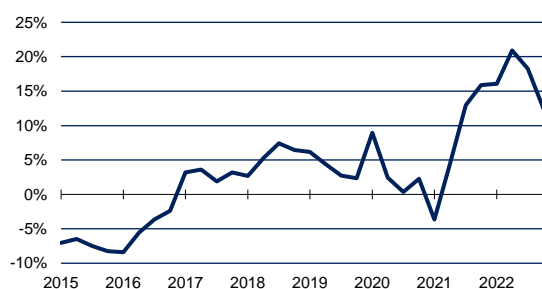
*Data through January 2023.

Source: Cass Information Systems.

- ◆ Truckload pricing grew 8.7% in 2022, mainly due to the pandemic boom in demand for consumer goods, coupled with shortages of new trucks (caused by a global microchip shortage) and truck drivers. Truckload pricing growth slowed significantly since H2 2022, followed by a decline of 5.6% in January 2023, amid easing supply chain congestion and softening volume.
- ◆ We expect trucking supply-demand to improve somewhat in 2023, bringing rates down modestly. However, we still expect rates to be well above pre-pandemic levels.

U.S. Rail Pricing

(percent, Y/Y)

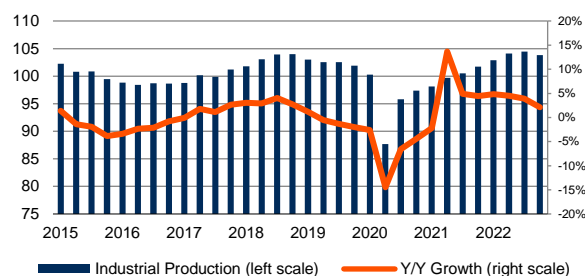


Source: Company reports.

- ◆ U.S. rail pricing is measured by the average revenue the railroads generate per carload.
- ◆ The average price grew 16.8% in 2022, driven mostly by large fuel surcharges amid the spike in oil prices. Rail pricing should moderate downward in 2023 as increased oil production keeps prices below the 2022 highs.

U.S. Industrial Production

(indexed 2017=100, seasonally adjusted)

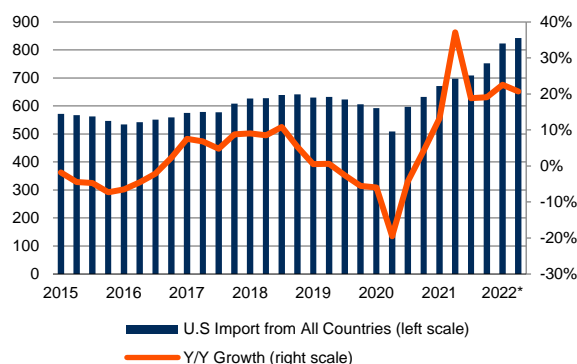


Source: Federal Reserve Economic Data.

- ◆ U.S. industrial production measures the output of businesses within the industrial sector of the economy.
- ◆ U.S. industrial production was up 3.8% in 2022. The growth was mainly driven by higher mining output and manufacturing activity compared to the prior-year period.
- ◆ Action Economics forecasts industrial production to slow to 1.1% in 2023 and 2.2% in 2024.

U.S. Goods Imports From All Countries

(thousand dollars, not seasonally adjusted)



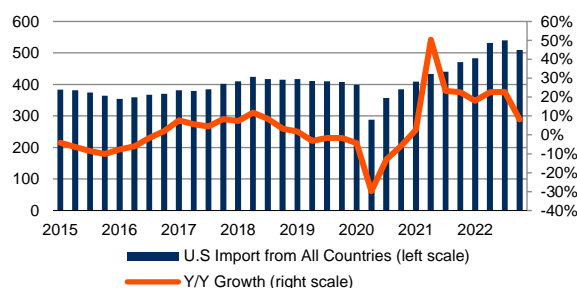
*Data through third quarter.

Source: Federal Reserve Economic Data.

- ◆ The Ground Transportation industry does significant business transporting intermodal shipping containers from U.S. port areas to inland manufacturing or distribution facilities. Much of this intermodal volume is imported goods from U.S. trading partners.
- ◆ Total U.S. imports began declining in 2018 with the onset of the U.S.-China trade war. The situation further worsened when countries around the world entered strict country-wide lockdowns to counter the pandemic.
- ◆ U.S. goods imports have recovered sharply since Q2 2020. In 2022, goods imports grew 14.7% vs. 2021, underpinned by record consumer goods demand. We think imports are likely to continue to grow in 2023, given imported goods are relatively cheap compared to local goods with elevated dollar strength.

U.S. Goods Exports to All Countries

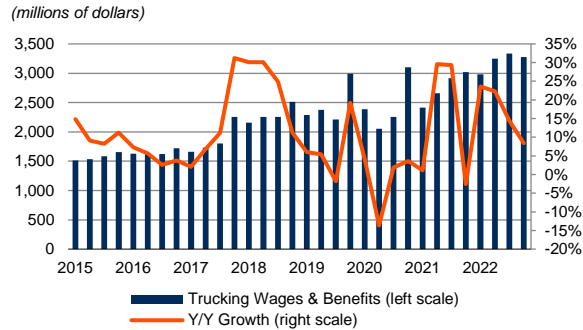
(thousand dollars, not seasonally adjusted)



Source: Federal Reserve Economic Data.

- ◆ Similar to imported goods, intermodal volume is driven by export demand as well.
- ◆ Total U.S. goods exports have seen a sharp recovery from the low point in Q2 2020. U.S. goods exports grew 17.7% in 2022, gaining momentum from the recovery in foreign economies.

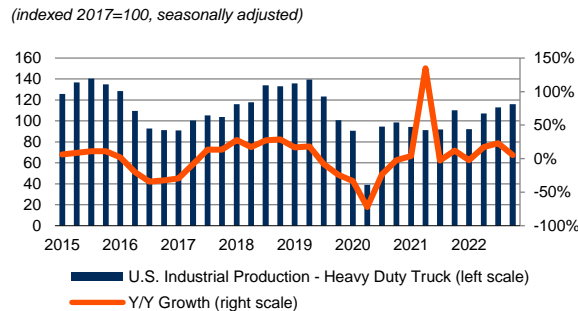
Wages & Benefits of Truckers



Source: CFRA, S&P Global Market Intelligence

- ◆ Driver compensation, including wages, benefits, and bonuses, is the largest operational cost for a trucking firm and accounts for about 44% of overall cost per mile in 2021, according to the American Transportation Research Institute.
- ◆ The growth of wages and benefits expenses increased to 16.7% in 2022, as a shortage of truck drivers has been a persistent theme for the sub-industry.
- ◆ A shortage of truck drivers in recent years has led to rising wages at trucking firms. The shortage was then exacerbated by a broader labor shortage across the U.S. economy due to the pandemic. We expect rapid wage growth for trucking firms to continue well into 2023 as driver shortage persists.

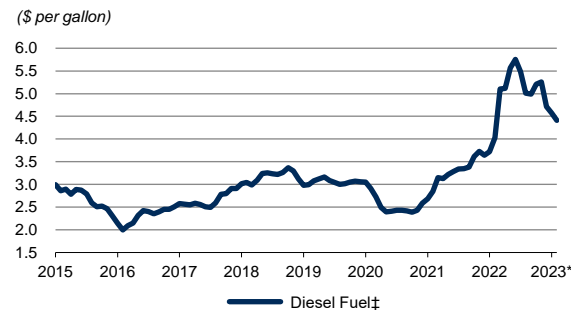
U.S. Heavy Duty Truck Production



Source: Federal Reserve Economic Data.

- ◆ Production grew 11.5% in 2022 compared to 2021 but was still down 12% vs. 2019 due to an ongoing shortage of semiconductors and other parts.
- ◆ We believe the supply chain shortage should improve in 2023 amid the semiconductor industry's excess inventory and slowing demand on high-end chips from consumer electronics.

Diesel Fuel Price



*Data through February 2023.

‡U.S. No. 2 diesel fuel.

Source: U.S. Energy Information Administration.

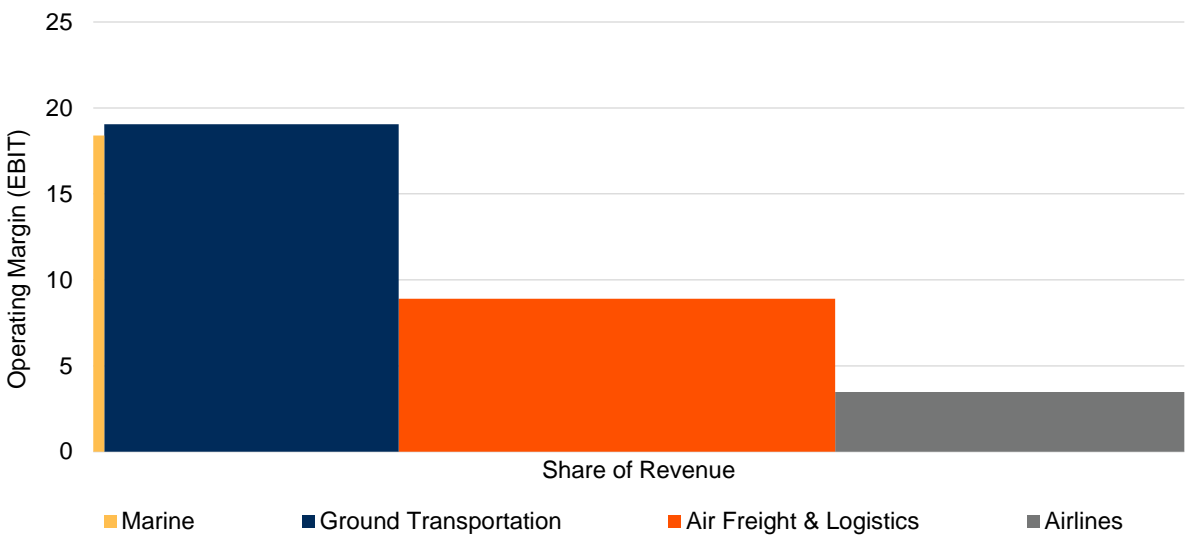
- ◆ On average, railroads are three to four times more fuel-efficient than trucks, according to the Association of American Railroads. But both sub-industries have material expenses for diesel fuel derived from crude oil.
- ◆ As of February 2023, diesel fuel prices were up 9.4% Y/Y (+47% vs. February 2019), driving up major expenditures for both railroads and trucking firms. The Energy Information Administration expects diesel prices to average \$4.17/gallon in 2023 and \$3.73/gallon in 2024, compared to \$5.02/gallon in 2022.

INDUSTRY TRENDS

Competitive Environment

The Ground Transportation industry is within the Transportation industry group (part of the Industrials sector) and is primarily comprised of trucking firms and railroads. Below are the profit maps showing the current state of the Transportation industry group and the Ground Transportation industry.

PROFIT-POOL MAP OF TRANSPORTATION INDUSTRY GROUP
(for calendar year of 2022)

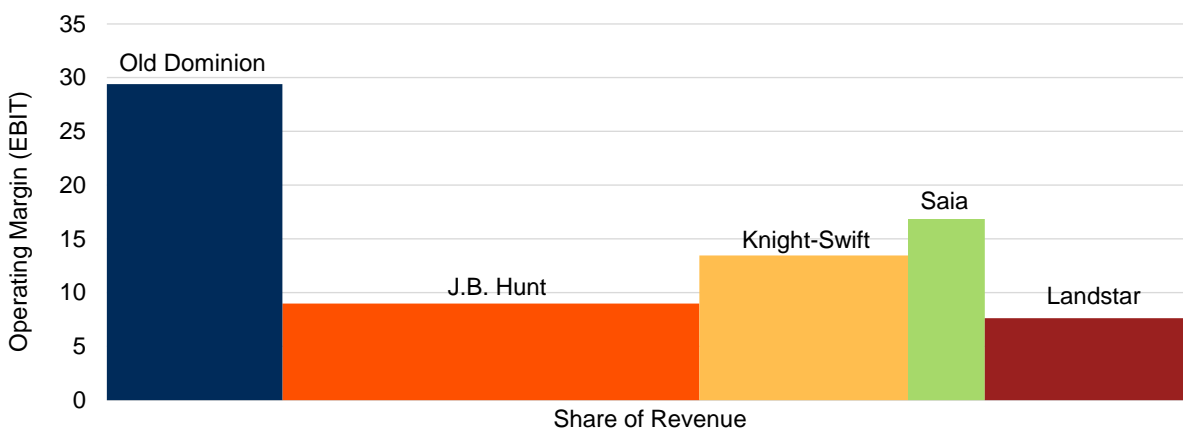


Source: CFRA, S&P Global Market Intelligence.

As depicted above, the Ground Transportation industry is ranked third in the Transportation industry group in terms of revenue market share; however, the industry posted the highest operating margin out of all industries in 2022.

PROFIT-POOL MAP OF TOP 5 COMPANIES IN TRUCKING BY MARKET CAP

(for calendar year of 2022)

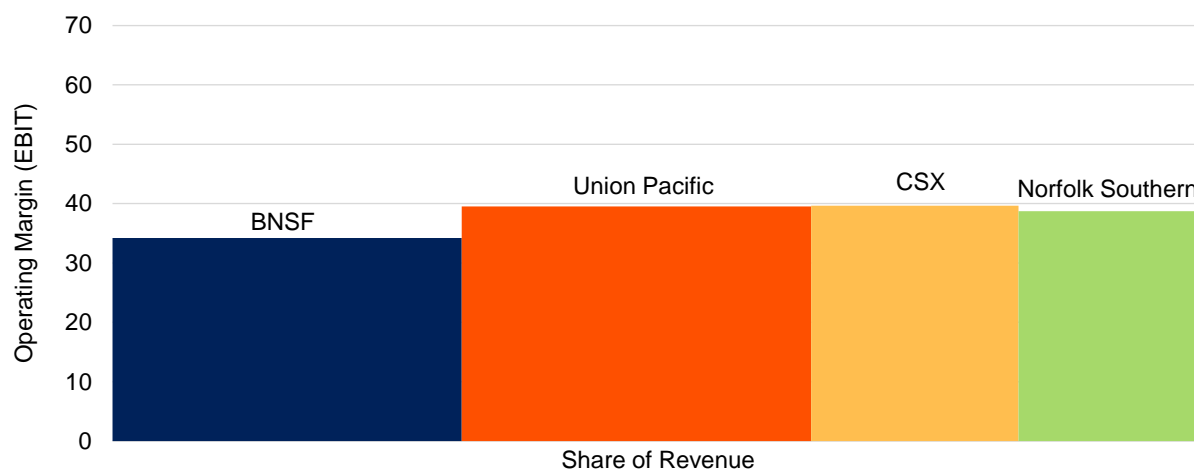


Source: CFRA, S&P Global Market Intelligence.

Trucking is highly competitive with lower barriers to entry, leading to an average operating margin of only 11%. This is well below the average of 38% for railroads.

PROFIT-POOL MAP OF TOP COMPANIES IN RAIL TRANSPORTATION

(for calendar year of 2022)



Source: CFRA, S&P Global Market Intelligence.

Compared to trucking, U.S. railroads are much more consolidated and lucrative. The sub-industry is also highly concentrated, with only a handful of big players in operation. BNSF Railway Company, a subsidiary of Berkshire Hathaway, has the highest market share at 32.4%, followed by 32.0% for Union Pacific, 19.1% for CSX, and 16.4% for Norfolk Southern. The industry average operating margin is 38.0%, which indicates greater profitability vs. trucking. Railroads have extremely high entry barriers, in our view, as the cost of replicating their vast rail networks is insurmountably high given the rights-of-way needed through densely populated areas. This allows railroads to operate with limited competition in their regions, leading to high margins and strong pricing power.

PORTER'S FIVE FORCES

Below, we use the Porter's Five Forces framework as a tool to analyze the competitive environment of the U.S. Ground Transportation industry.

	RAIL TRANSPORTATION	TRUCKING
Degree of Rivalry/ Competition	Low Highly concentrated industry dominated by seven Class I railroads, which collectively accounted for an estimated 94% of U.S. freight railroad revenue. Each Class I railroad operates in multiple states with diverse geographical presence.	High Intense competition as there are a total of 1,102,799 for-hire carriers, 718,594 private carriers, and 37,718 interstate motor carriers in the U.S. as of June 2022. Companies that operate more efficiently and with competitive advantages can outperform other competitors.
Bargaining Power of Customers	Low Railroad customers generally do not have much room to negotiate pricing given the highly concentrated nature of the industry, with any single customer location typically having at most two options for rail carriers.	Medium This generally depends on the size of customers. Large customers such as Walmart will have a lot of bargaining power with its trucking suppliers, but a small business will not.
Bargaining Power of Suppliers	Medium U.S. rails are largely unionized but have seen job cuts due to increased railroad efficiency. Other types of suppliers would be fuel, which is bought at high volumes but without much ability to bargain for discount, and locomotives and railcars, which have a few suppliers who compete for the attention of a relatively few railroads.	High A shortage of truck drivers remains the biggest issue in the sub-industry. Additionally, fluctuations in fuel prices will affect truckers' profitability as fuel expense is the second highest expense for motor carriers. Regulatory changes can also hurt productivity.
Threat of Substitutes	Medium Trucks, pipelines (crude oil and liquefied natural gas), and barges (coal, grain, oil, chemicals, etc.).	Medium Railroads, pipelines (crude oil and liquefied natural gas), and barges (coal, grain, oil, chemicals, etc.).
Threat of New Entrants	Low Highly regulated and capital-intensive industry. U.S. Class I railroad companies spend billions on infrastructure and equipment every year. Right-of-ways through densely populated areas are virtually impossible to replicate.	Low Although the barrier to entry is low, a new entrant must abide to strict regulations (highway safety and environmental goals) and be able to hire enough truck drivers.

Operating Environment

The Pandemic Boom in Consumer Freight Hasn't Subsided

Truck and railroad freight services are essential for the production and transport of U.S. consumer goods, so it should come as no surprise that the pandemic goods boom driven by federal stimulus and stay-at-home trends drove strong growth in freight demand. In fact, by year-end 2021, after nearly two years of restrictions on events and travel, as well as several waves of government stimulus money, the Cass Index of freight shipments was up 15% vs. year-end 2019.

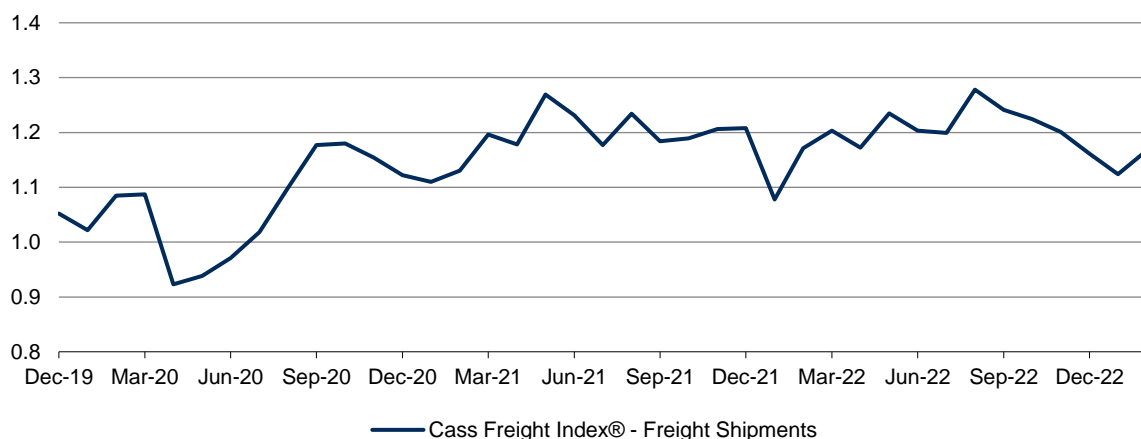
As 2022 progressed, tapering pandemic restrictions meant consumers were free to spend more of their money on events and travel again as opposed to goods, and stimulus was winding down. Add to this list of headwinds for freight demand the highest inflation in over three decades, and naturally many pundits predicted real consumer goods spending would fall sharply in 2022, collapsing freight volumes as well. However, this collapse did not materialize. As of January 2023, real consumer goods spending (adjusted for inflation) was down only 1% year-over-year, and still up 16% vs. pre-pandemic; and the Cass Index of freight shipments was flat year-over-year in February 2023.

CFRA believes roughly flat goods demand in 2022 was maintained by strong employment growth and record household savings levels coming out of the pandemic. In early 2023, U.S. employment was still growing at a healthy pace, bringing significant income growth to many households. Further, the fourth-quarter 2022 data for household bank account values was up 4.6x vs. year-end 2019. With such a huge increase in bank savings accumulated since the pandemic, households appear to be maintaining their goods demand, even as they get back to spending on events and travel, too.

Given that employment was still growing strongly in late 2022 and early 2023, but that inflation remained high as well, we expect slow growth of 0%-2% in consumer freight demand over the next 12 months – not a material decline.

FREIGHT SHIPMENTS INDEX

(Indexed 2017=100, seasonally adjusted)



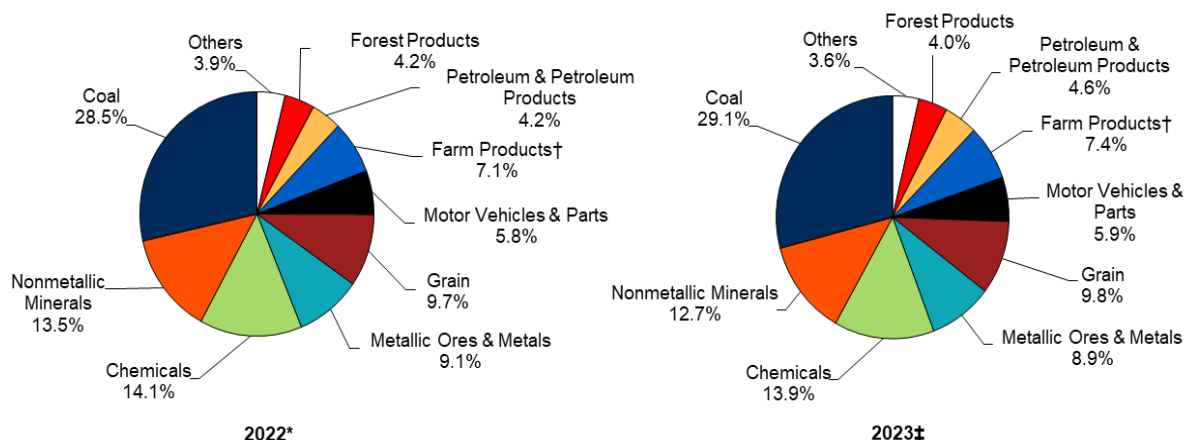
*Data through February 2023.

Source: Cass Information Systems.

Industrial Freight Volumes Could Stagnate Amid High Interest Rates and Energy Costs

Trucking and railroad firms are an essential aspect of industrial supply chains, moving large amounts of metals, minerals, and other natural resources; intermediate goods for manufacturing and construction; as well as being instrumental in all aspects of agriculture and fossil fuel markets – railroads ship fracking sand to extraction sites as well as oil and gas products both to and from refineries.

TOTAL CARLOADS BY COMMODITY GROUPS



*Data through Week 52 ended December 31, 2022. † Data through Week 9 ended March 4, 2023.

†Excluding grain and food.

Source: Association of American Railroads

The run-up in fossil fuel prices that began in 2021 and was exacerbated by Russia's invasion of Ukraine has boosted industrial freight revenues for railroads, where we estimate roughly 25% of revenues are derived from fossil fuels and related products. As fossil fuel prices rise, upstream oil and gas firms generally order more sand to be brought to fracking sites by railroads, and they also generate more output that needs to be shipped to refineries. Downstream, railroads – and to a lesser extent trucking firms – are also crucial for shipping all manner of intermediate and finished chemical products that come out of refineries. These include refined fuels like diesel and gasoline, but also chemical manufacturing and construction products like ethylene for making plastics and asphalt for roads and roofing.

We expect fossil fuel-related shipping to continue growing in the near term as geopolitical conflicts are likely to keep prices elevated above pre-pandemic level, driving growth in oil and gas production. However, we do not expect overall industrial freight shipments for trucking and railroads to grow over the next year because of the weak demand we expect in their manufacturing and construction categories.

The primary headwind we see for U.S. manufacturing is a widening gap between U.S. energy and labor prices and that of emerging markets. Energy and labor costs are typically cheaper in emerging markets like Southeast Asia, India, or Mexico than in the U.S. This gap has been widening recently due to the U.S.'s transition away from cheap fossil fuels, as well as its labor shortages. With the cost gap widening, we expect the pre-existing trend of slow growth in U.S. manufacturing will get worse over the next year, as more firms decide it is better for business to move production to friendly developing nations to save on energy and labor costs. This headwind for manufacturing in the U.S. will work against freight growth in this category.

Industrial shipments related to construction are likely to decline in 2023, too, in CFRA's view, as higher interest rates increase the cost of financing new homes and buildings. Construction relies on railroads for delivery of all kinds of construction materials like lumber, steel, cement, copper wiring, and piping. As of

January 2023, construction spending in the U.S. was down roughly 1% year-over-year after adjusting for inflation, and the recent trend was downward from a peak in spending in November 2022. We see rising interest rates as the primary driver of this weak/negative trend, and expect construction spending will continue to decline in real terms over the next year as interest rates trend even higher.

Labor and Equipment Shortages Have Led to High Prices for Truck Shipments

A shortage of truck drivers has persisted in the U.S. for many years, and the pandemic made matters worse. From 2010 to 2019, U.S. truck tonnage grew 43%, while the number of drivers grew only 22%. This resulted in long hours and significant overtime pay for drivers to fill the demand gap. Growth in salaries, wages, and benefits for trucking employees, which are mostly drivers, materially outpaced revenue growth in 2018 and 2019, as unemployment approached historic lows and made hiring new drivers more difficult.

Since 2020, labor shortages stemming from the pandemic have exacerbated the lack of drivers among U.S. trucking firms. The pandemic brought major disruptions to the labor market and has created major shortages of workers across many industries. As of January 2023, there were 10.8 million job openings in the U.S. according to the Bureau of Labor Statistics, but only about 5.9 million unemployed individuals, creating a historically severe shortage of workers. Trucking firms were already struggling to find enough drivers before the pandemic, and now they must compete with many other industries short on workers. The difficulty in finding drivers has made it harder for trucking firms to achieve capacity in line with higher freight demand since the onset of the pandemic.

In addition to the U.S. truck driver shortage, new trucks and replacement parts have been harder to come by since the pandemic. Longer than usual lead times for truck parts due to material and labor shortages have served to limit the amount of new trucks being put out by manufacturers. Normally, heavy truck production in the U.S. ticks up when consumer goods demand and industrial output grow, as they both did since the pandemic. But even with both of these categories materially above 2019 levels, U.S. heavy truck deliveries in the fourth quarter of 2022 were down roughly 5% vs. 2019 levels due to supply chain shortages.

The result of constrained trucking capacity has been strong growth in prices for truck shipments, which has been a good thing for trucking. In January 2023, despite a weak holiday shipping season, the Cass Index for truckload shipping rates was up 14% vs. January 2020 (pre-pandemic). We expect driver and truck supply chain shortages will linger into 2024, leading to trucking rates remaining elevated.

Oil Prices Collapsed Early in the Pandemic, but Now Are at Multi-year High

By Fall 2021, global oil demand had mostly recovered from the pandemic drop, while oil production was still down considerably. The result was oil prices breaking above \$80 per barrel, a price level not seen since 2014. Then in February and March 2022, the fallout from the Russian invasion of Ukraine drove oil well over \$110 per barrel and to the highest prices since 2008.

Diesel fuel prices have followed a similar upward trajectory to oil. Retail U.S. diesel prices averaged \$5.02 per gallon in 2022, up 64% from 2019. Trucking firms and railroads pass a substantial amount of their fuel costs on to customers through fuel surcharges, but these typically don't cover their entire fuel bill, and shipment volumes can often fall as the result of higher rates. Thus, high fuel prices tend to squeeze the Ground Transportation industry's profit margins.

Biden Administration Policy Goals Present Long-term Risk to Railroad Energy Revenue

President Biden is a strong, vocal proponent of transitioning the U.S. economy off fossil fuels, with stated energy policy goals that include: 1) moving the U.S. entirely to carbon-free electricity generation by 2035, vs. the 2022 U.S. level of 60% fossil fuel generation; 2) transitioning away from gas-powered vehicles to electric vehicles; and 3) restricting federal permits and raising taxes on coal, oil, and gas.

In CFRA's view, these policies will significantly reduce earnings of U.S. railroads over the long term. This is due to railroads' heavy involvement in transporting coal for electricity and industrial uses, sand used in oil and gas hydraulic fracturing, oil from production fields to refineries, and refined petroleum products out to market. We estimate that major U.S. railroads generate around 25% of revenue from transporting fossil fuels and related products, which means the risk of a full transition from fossil fuels is serious.

Biden's goal of 100% carbon-free electricity generation in the U.S. would likely require railroads to transport some raw materials and products for greater wind, solar, hydro, and nuclear generation. But given the highly recurring nature of fossil fuel transport vs. the one-time nature of deliveries related to new solar, wind, or nuclear facilities, we do not think clean energy freight would be anywhere near enough to offset the long-term elimination of railroads' fossil fuel volumes. When the fracking boom allowed natural gas to commonly replace coal energy, there was a natural offset for the railroads' loss of coal volume. But we see no such offset if fossil fuels transition to clean energy and nuclear.

Railroad Volume Is on a Long-term Downward Trend, While Truck Transport Continues to Grow

Total U.S. railroad volume in 2022 was 25.4 million cars, including 12.0 million freight carloads (47% of total volume) and 13.5 million intermodal units (53%) according to the Association of American Railroads. This volume level was down 10% from 28.2 million cars in 2018, which was already well off the all-time peak of 29.7 million cars reached back in 2006. Conversely, annual U.S. truck tonnage has grown materially faster than the broader economy's real GDP growth since 2006.

We think much of the railroads' long-term volume decline is explained by its close ties to a U.S. manufacturing sector that is seeing long-term stagnation. U.S. manufacturing has been facing intense competition from low-cost overseas production, in our view. Further, railroads are heavily involved with coal transportation, which is in a long-term decline as natural gas has become a cheaper and cleaner alternative, and as anti-carbon government regulation gains traction. Conversely, trucking is more closely aligned with the transport of consumer goods, in our view, rather than manufacturing or coal.

Additionally, CFRA believes that the increasing importance of expedited shipping in the e-commerce age has materially benefited truck transport over rail. This is due to the advent of services like Amazon Prime making free two-day shipping a standard expectation of e-commerce shoppers, with most other national retailers now offering similarly fast shipping times. Rail transport is more cost-efficient than trucking in most cases, but rail is generally slower than trucking for a similar cargo of goods. This makes trucking the primary beneficiary of the e-commerce boom, in our view, helping to explain its long-term volume growth vs. railroads' long-term decline.

HOW THE INDUSTRY OPERATES

Commercial transportation is a service that moves customers' raw materials, product parts, and finished goods from point to point in the supply chain. It is an essential link between the extraction of natural resources, the fabrication of industrial, commercial, and consumer products, and the final distribution of goods to wholesalers, retailers, and end-users. In 2021, \$1.85 trillion was spent on logistics (including transportation costs, inventory carrying costs, and other costs), representing about 8% of the annual GDP, according to the "State of Logistics Report 2022" published by the Council of Supply Chain Management Professionals in June 2022.

A variety of carriers engage in commercial freight transportation. For-hire transportation offered to all shippers is called "common carriage." If provided through dedicated equipment, it is called "contract carriage."

Transportation services are segmented by type of product, length of haul, and speed of delivery. Each transportation mode tends to specialize in certain segments of the market. Multimodal competition – overlapping competition from more than one mode – exists only for certain freight. For example, railroads and motor carriers alike transport bulk commodities and manufactured goods, but they compete directly only for short hauls of bulk commodities and medium-to-long hauls for general merchandise.

Competition is increasing between less-than-truckload (LTL) motor carriers and air cargo companies, as LTL carriers are increasingly pursuing time-critical freight that was traditionally moved by air carriers, while the latter pursues heavier ground shipments (LTL is a designation for shipments weighing 10,000 pounds or less). As manufacturers, distributors, and retailers try to minimize inventories, transportation providers become an ever more critical link in the supply chain; ultimately, cooperation and coordination across transportation modes are required for successful transportation results.

Trucking

In 2022, total revenue for general freight trucking increased 21.2% to \$320 billion, from \$264 billion in the prior year, according to the U.S. Census Bureau. Meanwhile, U.S. trucking revenue is expected to jump from \$1.08 trillion in 2021 to \$1.63 trillion by 2032, according to the American Trucking Associations (ATA) predictions. U.S. trucking primarily consists of two segments: private carriage and for-hire.

Private Carriage

Private carriers are a major part of motor carriage operations. Although little financial information is available on private carriage, the ATA estimated that 718,594 companies ran their own shipping operations as of June 2022.

The National Private Truck Council, a trade association representing private motor carrier fleets, estimates that private fleets account for roughly 82% of medium- and heavy-duty trucks registered in the U.S. – consisting of more than two million vehicles – and around 53% of all the U.S. miles traveled for medium- and heavy-duty trucks. Freight transportation news portal Transport Topics rated PepsiCo Inc., Walmart Inc., and Sysco Corp. as the industry's top three private carriers by number of tractors in 2022.

For-hire Carriers

In 2021, the for-hire transportation services contributed \$643 billion, or 2.8%, to the U.S. GDP, according to the Bureau of Transportation Statistics (BTS). Of that amount, \$184 billion (29% of for-hire transportation services) came from truck transportation.

LEADING PUBLICLY TRADED TL & LTL CARRIERS

(ranked by full year 2022 revenues)

	REVENUES (in \$, millions)				OPERATING INCOME (in \$, millions)				OPERATING RATIO (in percent)				OPERATING MARGIN (in percent)			
	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022	2019	2020	2021	2022
LEADING TL CARRIERS																
J.B. Hunt Transport Services	9,165	9,637	12,168	14,814	798	713	1,046	1,332	91.3	92.6	91.4	91.0	8.7	7.4	8.6	9.0
Landstar System	4,090	4,136	6,540	7,440	298	281	504	568	92.7	93.2	92.3	92.4	7.3	6.8	7.7	7.6
Knight-Swift Transportation†	4,844	4,674	5,998	7,429	398	567	893	1,000	91.8	87.9	85.1	86.5	8.2	12.1	14.9	13.5
Werner Enterprises	2,464	2,372	2,734	3,290	204	216	255	241	91.7	90.9	90.7	92.7	8.3	9.1	9.3	7.3
Covenant Transportation	885	839	1,046	1,217	7	5	63	80	99.2	99.4	93.9	93.4	0.8	0.6	6.1	6.6
Heartland Express	597	645	607	968	63	79	68	91	89.4	87.8	88.8	90.6	10.6	12.2	11.2	9.4
LEADING LTL CARRIERS																
UPS Freight†	13,381	15,184	17,429	16,431	977	357	1,728	1,771	92.7	97.6	90.1	89.2	7.3	2.4	9.9	10.8
FedEx Freight†	7,582	7,102	7,833	9,532	615	580	1,005	1,663	91.9	91.8	87.2	82.6	8.1	8.2	12.8	17.4
Old Dominion Freight Line	4,109	4,015	5,256	6,260	819	907	1,392	1,841	80.1	77.4	73.5	70.6	19.9	22.6	26.5	29.4
ArcBest Corporation	2,988	2,940	3,980	5,324	64	98	281	399	97.9	96.7	92.9	92.5	2.1	3.3	7.1	7.5
YRC Worldwide	4,871	4,457	5,122	5,245	16	57	104	198	99.7	98.7	98.0	96.2	0.3	1.3	2.0	3.8
SAIA	1,787	1,822	2,289	2,792	153	180	335	470	91.5	90.1	85.4	83.1	8.5	9.9	14.6	16.9

†Fiscal year ended May. †LTL operations are consolidated in the Supply Chain & Freight segment.

Source: Company reports

◆ **Truckload.** Truckload (TL) shipments are those exceeding 10,000 pounds. The TL segment is privately owned, for the most part, with the exception of some of the largest companies.

◆ **Less-than-truckload.** The revenue growth rate for two of the largest publicly traded carriers (UPS Freight and FedEx Freight) in the less-than-truckload (LTL) segment (LTL is a designation for shipments weighing 10,000 pounds or less) was 2.8% in 2022 and 13.4% in 2021. Included in this group are carriers such as Old Dominion, YRC Worldwide, ArcBest Corp, and SAIA.

Railroads

U.S. Class I railroads are classified as line haul freight railroads with at least \$900 million in operating revenues in 2021, according to the Association of American Railroads' (AAR) "Overview of America's Freight Railroads" report in March 2023.

The three publicly traded railroads are Union Pacific Corp., with total revenues of \$24.9 billion in 2022; CSX Corp., with revenues of \$14.9 billion; and Norfolk Southern Corp., with revenues of \$12.8 billion. Two Canadian railroads also operate in North America: Canadian National Railway Co. (with revenues of \$12.6 billion in 2022) and Canadian Pacific Railway Ltd. (with revenues of \$6.5 billion).

Tracking the Railroads

Most of the freight railroads revenues were generated by four major systems: Union Pacific and Burlington Northern Santa Fe LLC operating on the West Coast, and CSX and Norfolk Southern operating on the East Coast. According to AAR, about 35% of U.S. rail revenue, 27% of U.S. rail tonnage, and 42% of U.S. rail traffic are directly associated with international trade.

Rail service is slower than other modes of transportation, so railroads specialize in moving long-haul, low-value goods, such as coal, grain, ores, chemicals, and forest products. In 2020, railroads carried 3,817 tons of freight in an average train, a substantial increase from 2,923 tons in 2000, helped by improved railcar design, increased use of specialized railcars for specific commodities, and the adoption of longer trains, according to AAR. Average rail rates (measured by inflation-adjusted revenue per ton-mile rate) in 2019 was 44% lower than in 1981, according to the March 2023 AAR report. CFRA thinks revenue per

ton-mile has been aided by stronger transportation demand and higher fuel surcharge revenue on generally improved energy prices.

Three Kinds of Lines

The Rail Transportation sub-industry can be divided into trunk lines (called Class I railroads), regional railroads, and shortlines. Many of the regional railroads and shortlines operating today were once pieces of larger railroad systems.

◆ **Class I railroads.** These are the larger railroads operating in the U.S. Class I railroads, accounting for about 94% of the revenue, according to the AAR.

◆ **Regional railroads.** The regional railroads generally operate on at least 350 route miles. They tend to serve regions of two to four states.

◆ **Shortlines.** These railroads provide pickup and delivery service in limited markets. The category can be divided further into local line hauls and switching and terminal providers. Shortlines can serve several industrial markets, while switching/terminal lines are limited to one metropolitan area. Switching lines are often owned jointly by the larger regional and trunk lines that connect to them.

Commercial Transport and the Business Cycle

All commercial transportation modes experience business cycles to some degree, because demand for physical goods rises and falls with economic activity. Retailers have attempted to lengthen the cycles through use of sophisticated point-of-sale technology, helping them to avoid over-ordering. Consequently, inventories have become leaner over the years, and deliveries more constant.

Nevertheless, the business cycle has not been eliminated. Market activity is also influenced by monetary and fiscal policy changes, international currency values, and external shocks such as oil price hikes or war. In a typical cycle, the Federal Reserve Bank will raise interest rates if it fears an imminent upturn in inflation, and the higher cost of capital will inevitably lead to a curtailment in corporate capital investment and will force buyers out of the auto and housing markets. During periods of economic expansion, sales of new and existing homes boost the transport of everything from lumber to appliances to paint and wallpaper. Sales of automobiles require transportation of not only new car inventory, but also intermediate movements between parts suppliers and the assembly plants, as well as the movement of iron ore and coal used by steel mills.

In contrast, when segments of the economy slow, as housing and autos did from 2006 to 2008, all modes of transportation feel the effects. Demand for transportation services is influenced by consumer sentiment and spending. Changes in tax rates, for instance, can reduce or increase the amount of income available for personal spending. A buoyant stock market tends to stimulate spending for big-ticket consumer goods. In volatile world markets, demand for U.S. manufactured goods and raw materials can be rapidly stimulated or dampened by currency fluctuations.

Railroads More Stable

A large portion of railroads' traffic base is in coal and grain, which may be influenced more by weather than by economic activity. The AAR provides the data for each of the following shipment categories.

◆ **Coal.** Most coal is transported to electric utilities, with their demand for power determined more by weather and population growth than by economic activity. Aside from fueling power plants, coal is also used to power manufacturing businesses and to produce steel.

◆ **Intermodal.** The railroad intermodal is a cost-effective way to transport shipping containers and truck trailers, and these provide services that are as flexible as those that trucks provide, but at a competitive

rate, according to the AAR. The rise in intermodal shipments over the past decade has increased the group's exposure to economically sensitive segments such as furniture, apparel, and other retail goods.

◆ **Chemicals.** Large amounts of chemicals are transported annually throughout the U.S., with ethanol being the highest-volume chemical carried by railroads, according to the AAR's website. These chemicals also consist of thousands of products such as plastics, synthetic fibers, drugs, soaps, fertilizers, and other agricultural chemicals.

◆ **Agricultural and food products.** Railroads are critical to the transportation of grain in the U.S., the world's top grain producer and exporter. Freight railroads carry more corn than other types of grain, such as wheat and soybeans, according to the AAR. Railroads also transport smaller amounts of oats, rice, barley, rye, sorghum, and food products such as corn syrup and flour. Shipments of these products are heavily influenced by weather, politics, and relative currency values that affect export demand.

Truckers More Cyclical

TL motor carriers and air carriers are most sensitive to the business cycle. As the economy slows and inventories accumulate, manufacturers and retailers cut orders, curtailing truckers' traffic. A shipper with insufficient freight for a full TL may give the business to an LTL carrier. Although the LTL business is also cyclical, a strong secular trend favoring smaller, more frequent shipments – such as those required by just-in-time (JIT) inventory stocking – helps to support traffic levels. For many of the large publicly traded TL carriers, shipments of consumer products and retail goods represent between 30% and 50% of revenues.

HOW TO ANALYZE A COMPANY IN THIS INDUSTRY

At CFRA, we recommend a top-down approach to valuation. An examination of the industry drivers outlined on pages 8 to 11 – U.S. rail carload and intermodal volumes, rail and truckload pricing, wages of truck drivers, fuel costs, industry productions (general and for heavy duty truck), real personal consumption expenditures, imports from other countries, and exports to other countries – is a good starting point.

Industry Drivers

Trucking

◆ **Class 8 truck sales.** Class 8 tractors (more than 33,000 pounds in gross vehicle weight, or GVW) are used primarily for long-haul trucking. The number of Class 8 trucks sold, reported by Americas Commercial Transportation Research Co., LLC (ACT Research), a data and forecasting services firm for the commercial vehicle segment, is a rough indicator of incremental trucking industry capacity additions. This measure, taken together with the scrap rate, shows net additions.

◆ **S&P trucking operating ratio.** This ratio, calculated by dividing operating expenses by operating revenues, is a proprietary CFRA calculation based on the financial reports of the largest public less-than-truckload (LTL) motor carriers, weighted by size.

Railroads

◆ **Ton-miles.** This calculation, issued by the Association of American Railroads (AAR), an industry trade group, measures total industry shipment weight times the average length of haul. CFRA thinks it is the best measure of rail freight movement.

◆ **Originated tonnage.** Originated tonnage is another measure supplied by the AAR. It is the total volume handled by freight railroads.

◆ **Carloads.** Available weekly from the AAR, this measure provides an accurate indication of short-term trends, in CFRA's view. It is not useful for analyzing long-term trends, however, because fewer cars are needed today to haul the same level of freight hauled in earlier years.

◆ **Revenue per ton-mile.** Available annually through the AAR, this indicator measures how much revenue is generated by moving one ton of freight one mile.

Company Analysis

After gaining an understanding of the industry's drivers, an analyst should then focus on company-specific analysis. Company-specific analysis focuses on a range of factors – both qualitative and quantitative – and should be used to evaluate a firm's strengths and weaknesses, as well as assess its overall position within the overall retail landscape.

QUALITATIVE FACTORS

CFRA reviews numerous qualitative factors when evaluating a company relative to its peers. Three of these factors are management quality and strategy, geographic location, and market position and reputation.

◆ **Management quality and strategy.** These play a key role in setting a transportation company's strategy and moving it toward its goals. Some management teams may focus on maximizing quarterly earnings per share (EPS) numbers, while others focus on maximizing long-term return on investment,

leading to significantly different choices. Corporate governance, internal controls, and the company's treatment of minority shareholders also should be assessed.

◆ **Geographic location.** Different geographic areas face varied economic conditions, levels of competition, customers, fuel prices, and employee costs. For example, a railroad with tracks winding through mountains may operate less efficiently than a train moving across flat plains.

◆ **Market position and reputation.** A large firm with a reputation for quality service typically will find it easier to win larger customers and potentially charge higher prices than it could otherwise. Smaller firms without strong records may find it necessary to compete for business on price. In some industry segments, such as less-than-truckload (LTL), there are potential gains from economies of scale and network effects.

QUANTITATIVE FACTORS

One can find much information on a company's financial statements that will help assess its health. We discuss some key items found in the income statement, the balance sheet, and the statement of cash flows.

Income Statement

When conducting an income statement analysis, one should evaluate levels and changes of items on a seasonal basis – such as comparing quarterly figures to the corresponding year-earlier period – to normalize for seasonal differences. One may look at changes in less-seasonal items (e.g., depreciation or interest expense) on a consecutive basis to identify changes in the company's business environment or internal decisions. Some worthy items on which to focus are highlighted below.

◆ **Revenues.** This is the starting point for a company analysis. Investors typically prefer a rising trend and lower volatility, but one should look for underlying causes for changes. Revenue growth should be compared with volume growth (such as revenue ton-miles, the volume of shipment weight times distance traveled) to determine the role that activity and price increases played, and observe measures such as revenue/trucks and revenue/rail carloads to estimate productivity trends. Volume growth can hurt profitability if related costs are too high, while revenues generated by rapid price increases could lead to future customer attrition. In addition, one should consider whether items such as temporary fuel surcharges contributed to revenues.



Watch Out! Accounting guidance with respect to freight services revenue recognition allows management to choose various points in the shipping cycle in which to recognize revenue. Concern should be raised where companies recognize revenue before product is shipped. Upon adoption of the new revenue guidance in 2018, freight companies will have to evaluate the pattern of control transfer. Many companies may be able to recognize revenue earlier compared with the previous practice if control is deemed to transfer over time rather than at delivery.

◆ **Operating profit margin.** The operating profit margin is calculated as revenues minus operating expenses, expressed as a percentage of revenues. Major operating expenses include salaries, fuel, purchased transportation (from others), and depreciation. Transportation companies often refer to their “operating ratio,” which is typically calculated as 1.0 minus the operating profit margin and may be adjusted for special items. Regardless of how it is expressed, the operating profit margin is a key indicator of underlying profitability and efficiency, and it should be compared among close competitors, and over time, for a company. Industry segments tend to have different levels of operating profit margins, given their varying levels of asset intensity, financial leverage, and competition. Higher operating profit margins are positive for a company, but an excessive focus by management on the short-term operating profit margin can present dangers. For example, cost savings associated with low salaries or low depreciation

expenses (if resulting from insufficient asset investment) could later result in higher employee turnover and maintenance costs or declining on-time service.



Watch Out! Companies can boost earnings by extending the depreciable lives of property, plant & equipment (PP&E) beyond their reasonable useful lives. Therefore, it is important to refer to the notes to the financial statements to ensure that a change in depreciable life has not occurred. Additionally, analyzing the trend in depreciation expense relative to gross PP&E and comparing the depreciable lives used by competitors with those used by the company may detect potential manipulation. Finally, be wary of companies where capital expenditures consistently exceed depreciation as these companies may be understating depreciation expense or may experience an increase in depreciation expense in future periods.

◆ **Net profit margin.** This is calculated as net income divided by total sales. Along with operating profitability, net income reflects a company's tax expense as well as its non-operating income and expense items, such as interest income and interest expense. Transportation companies frequently generate non-operating income or losses on the sale of assets, so one should investigate how likely these actions are to recur, and judge whether they should be assigned the same importance as operating profits or expenses. The asset-based trucking companies tend to have relatively large and recurring gains from asset sales due to the trade cycle they follow for tractors, which is a much shorter time than for railroads.



Watch Out! Ground transportation companies can have high insurance costs related to product liability, workers' compensation and healthcare benefit costs, and some portion of these insurance costs may be self-insured. Companies that provide self-insurance are required to estimate and accrue costs related to the above noted items. To the extent that these accruals are subject to management discretion, they may be manipulated to achieve a financial performance target. We would normally expect accruals related to workers' compensation and employee health benefits to grow or decline at a rate similar to that of the business. Any deviation could be a sign of earnings management.



Watch Out! The assumptions used to determine post-retirement expenses and liabilities enable companies to manage earnings. One of the reasons that these liabilities can be so substantial is that, unlike pension plans, other post-retirement benefit plans generally do not have funding requirements. The accrual for costs associated with other postretirement benefits is based on a number of factors including the expected trend rate of medical cost increases and the discount rate used to value this long-term liability in today's dollars. The accrual is also based on a number of undisclosed actuarial assumptions for items such as the average expected life of employees after retirement.



Watch Out! The various assumptions used to determine pension benefit expenses and liabilities enable companies to manage earnings. Recent changes that impacted margins for many companies include switching to the full yield curve approach for calculating certain costs and the new requirement under U.S. GAAP to present only the service cost component of pension expense in operating income.

Balance Sheet

The balance sheet contains the major categories and value of assets, liabilities, and stockholder's equity at a specific point in time. Typically, equity investors assign higher values to companies with a strong balance sheet rather than a highly leveraged one. Below are items of particular note on a transportation company's balance sheet.

◆ **Property and equipment.** Most transportation companies own and operate significant pools of long-lived assets, so a proper analysis of these assets is important. One should find or estimate the average age of equipment – whether tractor, trailer, locomotive, or railcar – because this will affect fuel

consumption rates, expenses for maintenance and repairs, service predictability, and finance charges. An aging transportation fleet should raise red flags.

By comparing gross assets, accumulated depreciation, and annual depreciation, one may estimate the average age and average assumed useful life of a company's assets. These measures then can be compared among peers to see which companies may be operating with older fleets or are using more aggressive depreciation expense assumptions, which could indicate future increases in investment and depreciation. One should investigate the degree to which a company's transportation assets are owned, leased, or outsourced entirely. Some trucking firms limit their investment in equipment and rely heavily on independent owner-operators to move their freight. Such carriers have more sensitive rate structures than do those employing salaried drivers.

◆ **Deferred tax liabilities.** Many transportation companies have a significant long-term liability item, other than debt, called long-term deferred tax liability. Because federal income tax allows accelerated depreciation of transportation assets (while straight-line depreciation is used in financial statement tax expenses), this can make financial statement tax expenses higher than actual cash taxes paid in a period, contributing to a growing deferred tax liability. For analytical purposes, one should investigate the likelihood of this liability reversing in the future; if not, it may be more appropriate to treat this item similar to shareholders' equity.

◆ **Debt-to-capital ratio.** This ratio is an indication of financial leverage, which tends to accentuate debt repayment risk; it is worth watching, given the economic exposures of most transportation companies. One may consider adjusting this ratio upward for companies that heavily use operating leases, which move debt-like obligations off the balance sheet.

Cash Flow Statement

The statement of cash flows records all changes affecting cash in the categories of operations, investments, and financing. These cash receipts and outflows are reported quarterly for domestic companies and should be followed closely by analysts.

◆ **Cash flow from operations.** This is a rough measure of the cash-generating ability of current operations. Because depreciation expense and increases in deferred tax liabilities are added back to profits here, most transport companies have cash flow from operations greater than net income; if not, one should look closely for underlying problems.



Watch Out! Supplier financing arrangements (aka reverse factoring) can delay a company's payments to its suppliers. These arrangements can result in overstated cashflows and understated leverage ratios. There are several variations of these programs, but basically, a company arranges for a financial institution to pay its suppliers and the company repays the financial institution later. This effectively lengthens the supplier payment terms and thus improves working capital. However, operating cash flows can be overstated if the cash payment to the financial institution is presented as financing outflows rather than operating cash flows, which would be the case if the company pays the supplier directly. Furthermore, companies may not reclassify accounts payable under reverse factoring programs into financial liabilities, which may understate leverage ratios.

◆ **Cash flow from investing.** This measure indicates a company's cash invested in and received for assets for a period; the key components are usually capital expenditures and acquisitions. For most transportation companies, capital expenditures representing fleet additions and replacement are a constant necessity, but a company sometimes can boost free cash by deferring capital expenditures. One should compare capital expenditures to depreciation and assets in order to identify deviations from past normal levels.

Equity Valuation

Transportation stocks generally tend to be somewhat volatile, partly reflecting the underlying cyclical nature of the business. Prospects for future profit growth are paramount in determining a company's worth. A change in management can lead to an immediate increase in the value of a transportation company's stock if investors perceive that steps will be taken to produce higher returns. At the other extreme, the stock of a carrier with the best record may underperform other transportation equities if investors see less room for further profit improvement.

In CFRA's view, detailed discounted cash flow models with realistic long-term projections of free cash flow, incorporating the differing investment risks among companies, are a good approach to valuing transportation stocks. To supplement this, one may compare common valuation ratios among companies and through history. Below are some valuation ratios that analysts use to assess equity values. We note, however, that typical valuation ranges vary by mode of transportation, and are difficult to compare across modes.

◆ **P/E ratio.** The most common means of valuing equities, the price-to-earnings (P/E) ratio is calculated as the share price divided by either net EPS for the past 12 months or projected EPS for any future period. An analyst should also examine a company or industry's historical valuations relative to a benchmark P/E ratio.

◆ **Enterprise value-to-EBITDA.** As an alternative to the standard P/E ratio, analysts compare net debt and stock market value-to-earnings before interest, taxes, depreciation, and amortization (EBITDA) to eliminate distortions caused by differing tax rates and leverage, and better evaluate a company's operating performance.

GLOSSARY

Class I motor carrier—The U.S. Department of Transportation defines Class I motor carriers of property as those generating revenues of at least \$10 million annually. Class II carriers generate \$3 million–\$10 million; Class III carriers, less than \$3 million.

Common carrier—A motor carrier, railroad, or other transportation company that offers its services to all businesses or individuals.

Contract carrier—A motor carrier that generally has a limited number of shipper clients with which it contracts to provide trucks and drivers when needed.

For-hire carrier—A trucking firm that transports goods for monetary compensation. It may be a common or a contract carrier.

Intermodal—The movement of consumer goods and light industrial products by a railroad in a trailer or container that originates and terminates with either a motor carrier or ocean shipping line.

Just-in-time (JIT) management—A production management system under which inventories are kept to minimum levels through greater coordination among materials purchases, transportation, and production schedules. The practice originated in Japan, where it is known as Kanban.

Less-than-truckload (LTL) freight—Designation for shipments weighing 10,000 pounds or less. This quantity of freight involves more intermediate handling than does truckload freight.

Line haul—The longest leg of a shipment; also, the movement of freight between terminals.

Logistics—Management of a company's total distribution, transportation, and warehousing needs.

Owner-operators—Independent truckers who operate their own vehicles to transport exempt goods or regulated freight under a lease agreement with a common carrier or shipper.

Private carrier—A shipper that transports its goods in truck fleets that it owns or leases.

Shortline—A common term for a Class III railroad. Defined by the Surface Transportation Board (STB) as a carrier with inflation-adjusted operating revenues for three consecutive years of less than \$40 million (in 2009 dollars).

Ton-mile—A measure of freight traffic equal to moving one ton of freight one mile.

Truckload (TL)—Designation for shipments exceeding 10,000 pounds. A motor carrier may haul more than one TL shipment in a single vehicle.

Trunk line—Major rail systems that serve several regions and concentrate on long-haul shipments.

INDUSTRY REFERENCES

PERIODICALS

Action Economics

actioneconomics.com

Provides economic reports and commentary.

Cass Freight Index Report

www.cassinfo.com/transportation-expense-management/supply-chain-analysis/transportation-indexes/cass-freight-index.aspx

Reports an index that represents monthly levels of shipment activity, in terms of volume of shipments and expenditures for freight shipments.

Transport Topics

www.ttnews.com

Focuses on trucking and freight transportation news, published by a trucking trade group.

TRADE ASSOCIATIONS

American Transportation Research Institute

www.truckingresearch.org

Not-for-profit research organization that focuses on conducting transportation research, with an emphasis on trucking's essential role in a safe, efficient, and viable transportation system.

American Trucking Associations

www.trucking.org

Produces monthly, quarterly, and annual financial data on trucking.

Association of American Railroads

www.aar.org

Provides weekly, monthly, quarterly, and annual data on rail traffic and financials.

Council of Supply Chain Management Professionals

www.cscmp.org/

Leading global association for supply chain management professionals.

Intermodal Association of North America

www.intermodal.org

Represents the combined interests of the intermodal freight business; provides quarterly and annual volume and revenue intermodal statistics.

Institute for Supply Management

www.instituteforsupplymanagement.org

Non-profit association representing the purchasing and supply management profession; provides statistics on the general manufacturing industry.

National Private Truck Council

www.nptc.org/

U.S. trade association devoted exclusively to the interests of the private corporate trucking fleet industry and its professional practitioners.

MARKET RESEARCH FIRMS

Americas Commercial Transportation Research

www.actresearch.net

Data and forecasting services firm for the commercial vehicle segment.

GOVERNMENT AGENCIES

Bureau of Transportation Statistics

www.bts.gov

Offers comprehensive database of statistics on rail, highway, air, and water modes, as well as news and research on transportation issues.

Federal Reserve Economic Data

fred.stlouisfed.org/

Database maintained by the Research division of the Federal Reserve Bank of St. Louis that has more than 500,000 economic time series from 87 sources.

U.S. Census Bureau

www.census.gov/

Principal agency of the U.S. Federal Statistical System that is responsible for producing data about the American people and economy.

U.S. Department of Transportation

www.transportation.gov

Includes administrations and bureaus of interest, such as the National Highway Traffic Safety Administration, Surface Transportation Board, Federal Railroad Administration, and Federal Motor Carrier Safety Administration, each with information on transportation issues.

U.S. Environmental Protection Agency

www.epa.gov

Government agency with responsibility for enforcing compliance with clean air laws and other environment-related legislation.

COMPARATIVE COMPANY ANALYSIS

		Operating Revenues																	
Ticker	Company	Yr. End	Million \$							CAGR (%)			Index Basis (2012=100)						
			2022	2021	2020	2019	2018	2017	2016	10-Yr.	5-Yr.	1-Yr.	2022	2021	2020	2019	2018	2017	
RAILROADS																			
CSX	CSX CORPORATION	DEC	14,853.0	12,522.0	10,583.0	11,937.0	12,250.0	11,408.0	11,069.0	2.4	5.4	18.6	134	113	96	108	111	103	
NSC	NORFOLK SOUTHERN CORPORATION	DEC	12,745.0	11,142.0	9,789.0	11,296.0	11,458.0	10,551.0	9,888.0	1.4	3.9	14.4	129	113	99	114	116	107	
UNP	UNION PACIFIC CORPORATION	DEC	24,875.0	21,804.0	19,533.0	21,708.0	22,832.0	21,240.0	19,941.0	1.7	3.2	14.1	125	109	98	109	114	107	
PRIVATE RAILROADS*																			
-	BNSF RAILWAY COMPANY	DEC	25,202.0	22,513.0	20,180.0	22,745.0	22,999.0	20,747.0	19,278.0	2.1	4.0	11.9	131	117	105	118	119	108	
TRUCKING																			
ARCB	ARCBEST CORPORATION	DEC	5,324.1	3,980.1	2,940.2	2,988.3	3,093.8	2,826.5	2,700.2	9.9	13.5	33.8	197	147	109	111	115	105	
CAR	AVIS BUDGET GROUP, INC.	DEC	11,994.0	9,313.0	5,402.0	9,172.0	9,124.0	8,848.0	8,659.0	5.0	6.3	28.8	139	108	62	106	105	102	
HTLD	HEARTLAND EXPRESS, INC.	DEC	968.0	607.3	645.3	596.8	610.8	607.3	612.9	5.9	9.8	59.4	158	99	105	97	100	99	
JBHT	J.B. HUNT TRANSPORT SERVICES, INC.	DEC	14,814.0	12,168.3	9,636.6	9,165.3	8,614.9	7,189.6	6,555.5	11.4	15.6	21.7	226	186	147	140	131	110	
KNX	KNIGHT-SWIFT TRANSPORTATION HOLDINGS INC.	DEC	7,428.6	5,998.0	4,673.9	4,844.0	5,344.1	2,425.5	1,118.0	23.0	25.1	23.9	664	536	418	433	478	217	
LSTR	LANDSTAR SYSTEM, INC.	DEC	7,439.7	6,540.4	4,136.4	4,089.6	4,619.0	3,648.9	3,169.1	10.4	15.3	13.7	235	206	131	129	146	115	
MRTN	MARTEN TRANSPORT, LTD.	DEC	1,263.9	973.6	874.4	843.3	787.6	698.1	671.1	7.1	12.6	29.8	188	145	130	126	117	104	
ODFL	OLD DOMINION FREIGHT LINE, INC.	DEC	6,260.1	5,256.3	4,015.1	4,109.1	4,043.7	3,358.1	2,991.5	11.4	13.3	19.1	209	176	134	137	135	112	
R	RYDER SYSTEM, INC.	DEC	12,011.0	9,663.0	8,420.0	8,925.8	8,413.9	7,280.1	6,758.1	6.7	10.5	24.3	178	143	125	132	125	108	
SAIA	SAIA, INC.	DEC	2,792.1	2,288.7	1,822.4	1,786.7	1,653.8	1,404.7	1,250.4	9.8	14.7	22.0	223	183	146	143	132	112	
WERN	WERNER ENTERPRISES, INC.	DEC	3,290.0	2,734.4	2,372.2	2,463.7	2,457.9	2,116.7	2,009.0	4.9	9.2	20.3	164	136	118	123	122	105	
XPO	XPO, INC.	DEC	7,718.0	7,202.0	6,168.0	10,681.0	17,279.0	15,381.0	14,619.0	39.4	-12.9	7.2	53	49	42	73	118	105	

Note: Data as originally reported. CAGR-Compound annual growth rate.

[]Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.

Source: S&P Capital IQ.

Net Income

		Million \$								CAGR (%)			Index Basis (2012=100)					
Ticker	Company	Yr. End	2022	2021	2020	2019	2018	2017	2016	10-Yr.	5-Yr.	1-Yr.	2022	2021	2020	2019	2018	2017
RAILROADS																		
CSX	▮ CSX CORPORATION	DEC	4,166.0	3,781.0	2,765.0	3,331.0	3,309.0	5,471.0	1,714.0	8.4	-5.3	10.2	243	221	161	194	193	319
NSC	▮ NORFOLK SOUTHERN CORPORATION	DEC	3,270.0	3,005.0	2,013.0	2,722.0	2,666.0	5,404.0	1,668.0	6.5	-9.6	8.8	196	180	121	163	160	324
UNP	▮ UNION PACIFIC CORPORATION	DEC	6,998.0	6,523.0	5,349.0	5,919.0	5,966.0	10,712.0	4,233.0	5.9	-8.2	7.3	165	154	126	140	141	253
PRIVATE RAILROADS*																		
-	BNSF RAILWAY COMPANY	DEC	7,616.0	7,106.0	6,266.0	6,907.0	6,439.0	12,119.0	4,260.0	7.4	-8.9	7.2	179	167	147	162	151	284
TRUCKING																		
ARCB	§ ARCBEST CORPORATION	DEC	298.2	213.5	71.1	40.0	67.3	59.7	18.7	NA	37.9	39.7	1599	1145	381	214	361	320
CAR	† AVIS BUDGET GROUP, INC.	DEC	2,764.0	1,285.0	-684.0	302.0	165.0	361.0	163.0	25.3	50.2	115.1	1696	788	-420	185	101	221
HTLD	§ HEARTLAND EXPRESS, INC.	DEC	133.6	79.3	70.8	73.0	72.7	75.2	56.4	8.1	12.2	68.5	237	141	126	129	129	133
JBHT	▮ J.B. HUNT TRANSPORT SERVICES, INC.	DEC	969.4	760.8	506.0	516.3	489.6	686.3	432.1	12.1	7.2	27.4	224	176	117	119	113	159
KNX	† KNIGHT-SWIFT TRANSPORTATION HOLDINGS INC.	DEC	771.3	743.4	410.0	309.2	419.3	484.3	93.9	28.2	9.8	3.8	822	792	437	329	447	516
LSTR	† LANDSTAR SYSTEM, INC.	DEC	430.9	381.5	192.1	227.7	255.3	177.1	137.4	12.8	19.5	12.9	314	278	140	166	186	129
MRTN	§ MARTEN TRANSPORT, LTD.	DEC	110.4	85.4	69.5	61.1	55.0	90.3	33.5	15.0	4.1	29.2	330	255	208	182	164	270
ODFL	▮ OLD DOMINION FREIGHT LINE, INC.	DEC	1,377.2	1,034.4	672.7	615.5	605.7	463.8	295.8	23.3	24.3	33.1	466	350	227	208	205	157
R	† RYDER SYSTEM, INC.	DEC	867.0	519.0	-122.0	-24.4	284.6	719.6	263.1	15.2	3.8	67.1	330	197	-46	-9	108	274
SAIA	† SAIA, INC.	DEC	357.4	253.2	138.3	113.7	105.0	91.1	48.0	27.3	31.4	41.1	744	527	288	237	219	190
WERN	† WERNER ENTERPRISES, INC.	DEC	241.3	259.1	169.1	166.9	168.1	202.9	79.1	8.9	3.5	-6.9	305	327	214	211	212	256
XPO	†																	

Note: Data as originally reported. CAGR-Compound annual growth rate.

[§]Company included in the S&P 500. †Company included in the S&P MidCap 400. §Company included in the S&P SmallCap 600. #Of the following calendar year.

Source: S&P Capital IQ.

Ticker	Company	Yr. End	Return on Revenues (%)						Return on Assets (%)						Return on Equity (%)					
			2022	2021	2020	2019	2018	2017	2022	2021	2020	2019	2018	2017	2022	2021	2020	2019	2018	2017
RAILROADS																				
CSX	▯ CSX CORPORATION	DEC	28.0	30.2	26.1	27.9	27.0	48.0	9.9	9.3	6.9	8.7	9.0	15.3	31.9	28.4	22.1	27.3	24.2	41.4
NSC	▯ NORFOLK SOUTHERN CORPORATION	DEC	25.7	27.0	20.6	24.1	23.3	51.2	8.4	7.8	5.3	7.2	7.4	15.1	24.8	21.1	13.4	17.8	16.8	37.6
UNP	▯ UNION PACIFIC CORPORATION	DEC	28.1	29.9	27.4	27.3	26.1	50.4	10.7	10.3	8.6	9.6	10.1	18.5	53.2	41.9	30.5	30.7	26.4	47.8
PRIVATE RAILROADS*																				
-	BNSF RAILWAY COMPANY	DEC	30.2	31.6	31.1	30.4	28.0	58.4	8.4	7.9	7.2	7.9	7.7	14.6	11.2	10.7	9.7	10.8	10.2	20.8
TRUCKING																				
ARCB	§ ARCBEST CORPORATION	DEC	5.6	5.4	2.4	1.3	2.2	2.1	12.0	10.1	4.0	2.4	4.4	4.4	28.7	24.3	8.9	5.4	9.8	9.6
CAR	† AVIS BUDGET GROUP, INC.	DEC	23.0	13.8	NM	3.3	1.8	4.1	10.7	5.7	NM	1.3	0.9	2.0	NM	NM	NM	56.4	33.4	90.9
HTLD	§ HEARTLAND EXPRESS, INC.	DEC	13.8	13.1	11.0	12.2	11.9	12.4	8.0	8.5	7.4	8.1	9.0	9.5	16.9	10.9	10.1	11.2	12.2	13.9
JBHT	▯ J.B. HUNT TRANSPORT SERVICES, INC.	DEC	6.5	6.3	5.3	5.6	5.7	9.5	12.4	11.2	8.5	9.4	9.6	15.4	28.6	26.6	20.8	23.6	24.8	42.2
KNX	† KNIGHT-SWIFT TRANSPORTATION HOLDINGS INC.	DEC	10.4	12.4	8.8	6.4	7.8	20.0	7.0	7.0	4.8	3.7	5.3	6.3	11.4	12.0	7.1	5.6	7.9	16.1
LSTR	† LANDSTAR SYSTEM, INC.	DEC	5.8	5.8	4.6	5.6	5.5	4.9	22.3	18.7	11.6	16.0	18.5	13.1	49.3	49.1	27.2	32.3	38.0	29.6
MRTN	§ MARTEN TRANSPORT, LTD.	DEC	8.7	8.8	7.9	7.2	7.0	12.9	11.4	9.8	8.4	7.7	7.3	13.1	16.3	13.4	11.4	10.4	10.0	18.8
ODFL	▯ OLD DOMINION FREIGHT LINE, INC.	DEC	22.0	19.7	16.8	15.0	15.0	13.8	28.5	21.5	15.4	15.4	17.1	15.1	37.6	29.5	21.0	21.4	24.4	22.5
R	† RYDER SYSTEM, INC.	DEC	7.2	5.4	NM	NM	3.4	9.9	6.0	3.8	NM	NM	2.1	6.3	30.1	20.7	NM	NM	10.7	29.4
SAIA	† SAIA, INC.	DEC	12.8	11.1	7.6	6.4	6.3	6.5	16.4	13.7	8.9	8.0	9.3	9.4	25.5	23.2	15.6	15.1	16.4	17.1
WERN	† WERNER ENTERPRISES, INC.	DEC	7.3	9.5	7.1	6.8	6.8	9.6	7.8	9.9	7.8	7.8	8.1	11.2	17.3	20.4	14.7	14.1	13.7	18.6
XPO	† XPO, INC.	DEC	8.6	4.7	1.8	3.9	2.4	2.2	10.6	3.9	0.7	3.0	3.4	2.7	17.1	4.8	NM	7.0	11.1	10.2

Note: Data as originally reported. CAGR-Compound annual growth rate.

▯ Company included in the S&P 500. † Company included in the S&P MidCap 400. § Company included in the S&P SmallCap 600. # Of the following calendar year.

Source: S&P Capital IQ.

Ticker	Company	Yr. End	Current Ratio						Debt/Capital Ratio (%)						Debt as a % of Net Working Capital					
			2022	2021	2020	2019	2018	2017	2022	2021	2020	2019	2018	2017	2022	2021	2020	2019	2018	2017
RAILROADS																				
CSX	CSX CORPORATION	DEC	1.6	1.7	2.2	1.5	1.3	1.0	58.8	54.5	55.4	57.4	53.9	44.5	1,305.2	984.0	673.0	1,418.7	2,266.9	56,119.0
NSC	NORFOLK SOUTHERN CORPORATION	DEC	0.8	0.9	1.1	0.9	0.7	0.8	54.3	50.3	46.0	44.5	41.4	36.9	NM	NM	7,981.6	NM	NM	NM
UNP	UNION PACIFIC CORPORATION	DEC	0.7	0.6	1.0	0.8	0.9	1.0	72.1	65.9	59.9	56.4	49.7	38.0	NM	NM	61,756.1	NM	NM	22,764.2
PRIVATE RAILROADS*																				
-	BNSF RAILWAY COMPANY	DEC	0.8	0.8	0.9	0.9	1.1	1.0	0.7	0.8	1.2	1.3	1.4	1.4	-46.9	-61.8	NM	NM	398.7	2,778.1
TRUCKING																				
ARCB	ARCBEST CORPORATION	DEC	1.3	1.1	1.5	1.5	1.4	1.3	14.7	15.9	20.9	25.9	24.9	24.2	89.6	239.1	86.9	121.2	120.2	173.3
CAR	AVIS BUDGET GROUP, INC.	DEC	0.7	0.8	0.9	1.0	1.3	1.4	117.7	105.5	103.8	84.0	89.5	86.2	NM	NM	NM	9,837.1	619.3	508.3
HTLD	HEARTLAND EXPRESS, INC.	DEC	1.5	3.3	2.7	2.4	3.6	2.3	31.8	0.0	0.0	0.0	0.0	0.0	546.5	0.0	0.0	0.0	0.0	0.0
JBHT	J.B. HUNT TRANSPORT SERVICES, INC.	DEC	1.4	1.3	1.7	1.4	1.1	1.5	25.6	23.3	33.4	36.4	30.1	37.1	196.1	161.9	172.4	290.8	599.6	260.8
KNX	KNIGHT-SWIFT TRANSPORTATION HOLDINGS INC.	DEC	1.7	1.3	1.1	0.9	1.5	1.5	17.6	19.4	8.0	7.9	12.8	13.2	247.9	464.3	608.3	NM	273.1	253.4
LSTR	LANDSTAR SYSTEM, INC.	DEC	1.6	1.5	1.5	1.8	1.8	1.8	10.5	13.5	10.8	7.5	8.0	6.5	16.6	22.7	18.6	12.1	12.7	10.2
MRTN	MARTEN TRANSPORT, LTD.	DEC	1.9	2.0	2.0	2.0	2.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ODFL	OLD DOMINION FREIGHT LINE, INC.	DEC	1.8	3.0	3.3	2.4	2.0	1.7	2.1	2.6	2.9	1.4	1.7	1.9	19.8	10.9	11.5	9.0	12.9	19.3
R	RYDER SYSTEM, INC.	DEC	0.7	0.8	0.8	0.6	0.6	0.7	79.8	81.6	78.9	85.5	70.1	62.2	NM	NM	NM	NM	NM	NM
SAIA	SAIA, INC.	DEC	1.9	1.3	1.0	1.0	1.0	1.2	0.0	0.0	0.0	5.3	2.8	16.9	0.0	0.0	0.0	NM	492.2	327.2
WERN	WERNER ENTERPRISES, INC.	DEC	2.5	2.3	1.7	1.5	1.5	1.7	31.7	23.7	12.8	16.8	3.8	6.0	151.7	116.5	95.7	142.9	34.2	44.6
XPO	XPO, INC.	DEC	1.1	1.1	1.0	1.0	1.1	1.2	69.6	74.5	64.2	62.9	51.8	53.1	1,882.1	2,397.8	2,355.8	5,847.6	1,066.9	747.9

Note: Data as originally reported. CAGR-Compound annual growth rate.

[] Company included in the S&P 500. † Company included in the S&P MidCap 400. § Company included in the S&P SmallCap 600. # Of the following calendar year.

Source: S&P Capital IQ.

		Price/Earnings Ratio (High-Low)							Dividend Payout Ratio (%)						Dividend Yield (High-Low, %)					
Ticker	Company	Yr. End	2022	2021	2020	2019	2018	2017	2022	2021	2020	2019	2018	2017	2022	2021	2020	2019	2018	2017
RAILROADS																				
CSX	□ CSX CORPORATION	DEC	19 - 14	22 - 17	26 - 13	19 - 15	20 - 13	10 - 6	20.5	22.2	28.8	22.9	22.7	12.9	1.5 - 1.2	1.5 - 1.0	1.3 - 1.0	2.2 - 1.1	1.5 - 1.2	1.7 - 1.2
NSC	□ NORFOLK SOUTHERN CORPORATION	DEC	21 - 15	24 - 19	31 - 15	20 - 14	19 - 13	8 - 6	35.7	34.2	47.7	34.9	31.7	13.0	2.6 - 1.9	2.4 - 1.5	1.8 - 1.4	3.2 - 1.5	2.3 - 1.7	2.2 - 1.6
UNP	□ UNION PACIFIC CORPORATION	DEC	25 - 17	25 - 19	27 - 14	22 - 16	21 - 16	10 - 8	45.1	42.9	49.1	43.9	38.5	18.5	2.7 - 2.4	2.8 - 1.7	2.2 - 1.7	3.4 - 1.8	2.6 - 2.0	2.3 - 1.9
PRIVATE RAILROADS*																				
-	BNSF RAILWAY COMPANY	DEC	NA - NA	NA - NA	NA - NA	NA - NA	NA - NA	NA - NA	NA	NA	NA	NA	NA	NA	NA - NA	NA - NA	NA - NA	NA - NA	NA - NA	NA - NA
TRUCKING																				
ARCB	§ ARCBEST CORPORATION	DEC	10 - 6	15 - 5	16 - 6	26 - 16	19 - 12	17 - 7	3.6	3.8	11.5	20.5	12.3	13.8	0.7 - 0.5	0.7 - 0.3	0.8 - 0.3	2.0 - 0.7	1.3 - 0.8	1.0 - 0.6
CAR	† AVIS BUDGET GROUP, INC.	DEC	5 - 2	18 - 2	NM - NM	9 - 5	24 - 11	11 - 5	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
HTLD	§ HEARTLAND EXPRESS, INC.	DEC	10 - 8	20 - 16	25 - 18	25 - 20	27 - 20	28 - 21	4.7	8.0	9.2	9.0	9.1	8.9	0.5 - 0.5	0.6 - 0.5	0.5 - 0.4	0.5 - 0.4	0.5 - 0.4	0.5 - 0.3
JBHT	□ J.B. HUNT TRANSPORT SERVICES, INC.	DEC	23 - 17	28 - 19	30 - 16	25 - 18	29 - 20	19 - 13	17.2	16.4	22.6	21.7	21.4	14.8	1.0 - 0.8	1.0 - 0.6	0.8 - 0.6	1.4 - 0.8	1.2 - 0.8	0.9 - 0.7
KNX	† KNIGHT-SWIFT TRANSPORTATION HOLDINGS INC.	DEC	13 - 9	14 - 9	19 - 12	21 - 14	21 - 10	10 - 7	10.2	8.5	13.3	13.4	10.2	5.3	1.0 - 0.8	1.1 - 0.6	0.9 - 0.6	1.1 - 0.6	1.0 - 0.6	0.8 - 0.5
LSTR	† LANDSTAR SYSTEM, INC.	DEC	15 - 12	19 - 13	28 - 17	21 - 17	21 - 15	25 - 19	26.8	29.3	15.9	12.2	34.8	9.0	2.0 - 1.7	2.2 - 0.6	0.7 - 0.5	0.9 - 0.6	0.7 - 0.6	0.7 - 0.4
MRTN	§ MARTEN TRANSPORT, LTD.	DEC	17 - 12	18 - 14	23 - 13	20 - 14	24 - 15	12 - 8	17.7	15.5	15.9	10.7	9.9	4.8	1.2 - 1.0	4.7 - 1.1	4.4 - 3.6	3.7 - 0.5	0.7 - 0.5	0.5 - 0.4
ODFL	□ OLD DOMINION FREIGHT LINE, INC.	DEC	29 - 19	41 - 21	37 - 19	26 - 16	23 - 16	24 - 14	9.8	8.9	10.6	8.9	7.0	7.1	0.5 - 0.4	0.5 - 0.2	0.4 - 0.2	0.6 - 0.3	0.5 - 0.3	0.4 - 0.3
R	† RYDER SYSTEM, INC.	DEC	6 - 4	9 - 6	NM - NM	NM - NM	17 - 8	6 - 5	14.2	23.5	NM	NM	39.3	13.3	3.0 - 2.5	3.7 - 2.6	3.7 - 2.5	9.8 - 3.7	5.0 - 3.2	4.2 - 2.0
SAIA	† SAIA, INC.	DEC	25 - 13	38 - 18	36 - 12	24 - 12	21 - 13	20 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0
WERN	† WERNER ENTERPRISES, INC.	DEC	13 - 10	13 - 10	19 - 12	16 - 12	18 - 12	14 - 9	13.3	11.2	14.7	171.4	13.7	9.3	1.3 - 1.1	1.4 - 1.0	1.1 - 0.8	1.2 - 0.8	1.3 - 0.9	1.1 - 0.7
XPO	† XPO, INC.	DEC	14 - 6	51 - 23	141 - 47	22 - 12	36 - 14	34 - 16	0.0	0.0	0.0	0.0	0.0	0.9	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0	0.0 - 0.0

Note: Data as originally reported. CAGR-Compound annual growth rate.

□ Company included in the S&P 500. † Company included in the S&P MidCap 400. § Company included in the S&P SmallCap 600. # Of the following calendar year.

Source: S&P Capital IQ.

Ticker	Company	Yr. End	Earnings per Share (\$)						Tangible Book Value per Share (\$)						Share Price (High-Low, \$)					
			2022	2021	2020	2019	2018	2017	2022	2021	2020	2019	2018	2017	2022	2021	2020	2019	2018	2017
RAILROADS																				
CSX	CSX CORPORATION	DEC	2.0	1.7	1.2	1.4	1.3	2.0	5.9	5.9	5.7	5.1	5.1	5.5	38.6 - 25.8	37.8 - 27.7	31.2 - 15.6	26.9 - 20.0	25.4 - 16.1	19.5 - 11.9
NSC	NORFOLK SOUTHERN CORPORATION	DEC	13.9	12.1	7.8	10.2	9.5	18.6	55.8	56.8	58.7	58.9	57.3	57.6	299.0 - 203.7	299.2 - 230.2	248.0 - 112.6	211.5 - 143.6	186.9 - 127.8	146.3 - 105.9
UNP	UNION PACIFIC CORPORATION	DEC	11.2	10.0	7.9	8.4	7.9	13.4	18.7	21.1	24.2	25.3	27.3	31.0	278.9 - 183.7	253.3 - 193.1	211.1 - 105.1	181.6 - 132.2	165.6 - 121.2	136.3 - 101.1
PRIVATE RAILROADS*																				
-	BNSF RAILWAY COMPANY	DEC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRUCKING																				
ARCB	ARCBEST CORPORATION	DEC	11.7	8.0	2.7	1.5	2.5	2.3	30.2	20.2	27.0	24.2	21.1	18.3	124.0 - 65.2	125.0 - 42.5	46.3 - 13.5	41.9 - 24.7	51.5 - 30.9	38.8 - 17.0
CAR	AVIS BUDGET GROUP, INC.	DEC	57.2	19.4	-9.7	4.0	2.1	4.3	-61.7	-36.7	-29.6	-16.8	-19.9	-16.7	327.8 - 131.8	545.1 - 35.0	53.0 - 6.4	37.3 - 21.6	50.9 - 22.0	46.3 - 20.7
HTLD	HEARTLAND EXPRESS, INC.	DEC	1.7	1.0	0.9	0.9	0.9	0.9	5.5	6.8	6.6	6.0	5.7	5.1	17.3 - 12.8	20.2 - 15.7	22.8 - 15.7	22.7 - 17.3	23.9 - 17.0	25.2 - 18.7
JBHT	J.B. HUNT TRANSPORT SERVICES, INC.	DEC	9.2	7.1	4.7	4.8	4.4	6.2	33.1	27.8	22.6	19.4	18.4	15.7	218.2 - 153.9	206.8 - 133.4	144.3 - 75.3	122.3 - 83.6	131.7 - 88.4	116.8 - 83.4
KNX	KNIGHT-SWIFT TRANSPORTATION HOLDINGS INC.	DEC	4.7	4.5	2.4	1.8	2.4	4.3	10.3	7.2	9.4	8.0	6.5	5.1	62.1 - 42.5	62.3 - 39.2	47.4 - 27.5	39.4 - 24.7	51.9 - 23.3	44.6 - 30.0
LSTR	LANDSTAR SYSTEM, INC.	DEC	11.8	10.0	5.0	5.7	6.2	4.2	23.5	21.8	17.0	17.3	16.2	14.6	182.0 - 137.2	188.6 - 132.4	140.4 - 85.3	120.2 - 93.6	128.7 - 90.2	107.6 - 80.0
MRTN	MARTEN TRANSPORT, LTD.	DEC	1.4	1.0	0.8	0.7	0.7	1.1	8.7	7.8	7.5	7.3	7.0	6.4	23.4 - 15.8	18.3 - 14.7	20.1 - 10.7	15.2 - 10.6	19.7 - 10.3	14.1 - 8.5
ODFL	OLD DOMINION FREIGHT LINE, INC.	DEC	12.2	8.9	5.7	5.1	4.9	3.8	33.1	32.0	28.4	25.8	21.8	18.3	360.0 - 231.3	373.6 - 189.5	213.7 - 105.8	131.5 - 78.7	113.5 - 76.7	89.4 - 53.7
R	RYDER SYSTEM, INC.	DEC	17.0	9.6	-2.4	-0.5	5.4	13.5	38.5	38.2	32.3	36.6	37.7	45.4	97.3 - 61.7	93.1 - 60.6	64.7 - 22.6	67.7 - 44.9	90.3 - 44.8	85.8 - 62.5
SAIA	SAIA, INC.	DEC	13.4	9.5	5.2	4.3	4.0	3.5	59.1	45.8	36.0	30.8	26.3	22.0	343.0 - 168.0	365.5 - 171.2	194.0 - 61.5	107.0 - 53.4	87.1 - 52.0	72.4 - 41.3
WERN	WERNER ENTERPRISES, INC.	DEC	3.7	3.8	2.4	2.4	2.3	2.8	19.4	18.2	17.6	16.0	18.0	16.4	48.8 - 35.8	49.8 - 38.5	47.4 - 29.0	39.2 - 27.3	44.0 - 28.7	39.9 - 24.2
XPO	XPO, INC.	DEC	5.7	2.9	0.9	3.6	2.9	2.4	-7.5	-8.1	-4.9	-30.8	-18.9	-20.3	79.6 - 30.5	153.5 - 67.5	123.6 - 38.5	86.5 - 45.7	116.3 - 41.1	93.6 - 42.1

Note: Data as originally reported. CAGR-Compound annual growth rate.

[] Company included in the S&P 500. † Company included in the S&P MidCap 400. § Company included in the S&P SmallCap 600. # Of the following calendar year.

Source: S&P Capital IQ.

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