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Docket No. EP 775 – Growth in the Freight Rail Industry
Public Hearing – September 16-17, 2024

Wolfe Research Testimony

Thank you, Chairman Primus, Vice Chairman Hedlund, Board Member Fuchs, Board Member Schultz, and your staffs for the opportunity to present at today's important hearing regarding growth in the freight railroad industry.

My name is Scott Group and I am the Senior Transportation Analyst at Wolfe Research, a leading equity research firm based in New York. Our clients are primarily mutual fund and hedge fund analysts and portfolio managers who invest in the public equity and debt securities of the railroads and other transportation companies. I will make some comments for the record and have also submitted the slides that I plan to present today.

First, given the focus of these hearings, let's acknowledge that the rails have not grown volumes over the past decade. As shown on **Slide 2**, total rail industry volumes have declined by almost 1% annually over the past decade. In part, this reflects a roughly 40% decline in coal volumes over this period. But industry volumes are still down slightly excluding the impact of secular declines in coal traffic as intermodal volumes have also declined modestly during this time period. We believe there are several factors here including a challenging macro backdrop the past couple of years with a broad freight recession and the ISM manufacturing index in contraction territory below 50 for 20 of the past 21 months. The rails also faced an industrial recession in 2015-16 and large declines in volumes during the peak of the pandemic in 2020. In addition, the rails culled some volumes during the implementation of PSR in the latter parts of the last decade and certainly lost some business due to service challenges coming out of the pandemic. So, we believe the lack of industry growth reflects a combination of secular coal declines, a challenging macro backdrop, and some self-inflicted wounds. But as we'll discuss today, we believe that the industry is increasingly focused on profitable growth moving forward. It's also worth noting on this slide that the two rails with the worst operating ratios currently – BNSF and NSC – have actually lagged CSX and UNP on volumes over the past five years. So, there's no evidence based on data that better margins are coming at the expense of volumes.

Next, **Slide 3** takes a more recent look at volume trends for the rail industry. Following the freight recession in 2022-23, the rails are currently leading the broader transport complex out of the freight recession with positive y/y volumes the past four quarters. Rail volume growth has accelerated the past two quarters, and volumes are currently trending up 4% in 3Q QTD, the highest y/y growth in 13 quarters. Importantly, intermodal growth has accelerated in each of the past four quarters, and we are currently witnessing the best intermodal growth in 3 years in 3Q QTD, fueled by strong West Coast import volumes. In addition to intermodal strength, we are also seeing strength in grain and petroleum/chemicals volumes. We are

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currently forecasting over 2% rail volume growth this year after declines in four out of the previous five years.

We also want to highlight an important change in behavior we've witnessed from the rails the past couple of years during the past freight recession. **Slide 4** shows from the year 2000 through the pandemic in 2020, there were nine years of negative rail volumes for the industry. And on average in those nine years, the rails reduced headcount levels by 5% on average, perfectly matching the average historical decline in volumes. But we saw something very different in 2022 and 2023 with rail headcount up 2% in 2022 and up another 5% in 2023, despite industry volumes falling nearly 4% over this two-year period. As a result of these large increases in headcount, the rails faced unprecedented margin declines in 2022 and 2023, with margins declining y/y in 9 of the past 10 quarters through 1Q before inflecting positive again in 2Q.

We believe this investment in resources over the past couple of years is paying off today as we're now seeing a period of both volume growth and improving service levels as shown on **Slide 5**. Historically, volume growth in the industry has typically coincided with periods of increased rail congestion and rail service challenges. In fact, from 2013-2021, there have only been five years of positive rail industry volume growth. And in each of these five years with positive volume growth, rail service levels – calculated as an average of train speeds and dwell times – deteriorated by 5% on average. But once again, we're seeing something different today. In 2024 YTD, train speeds and dwell times have improved by 2.5% while rail volumes are tracking up more than 2%. This shows that the rails can in fact grow volumes without sacrificing quality service for shippers.

Staying on the topic of service, **Slide 6** shows that absolute average train speeds and dwell times have clearly improved over the past two plus years. And with improved service levels, we are starting to see signs of the rails gaining share from trucks again. **Slide 7** shows results from our proprietary quarterly shipper survey of large traffic managers and railroad shippers. Each quarter, we ask shippers about market share shifts to and from the rails. Based on our survey results shown here, shippers had been making net shifts to trucks since late 2018 amidst periods of lower fuel prices, poor rail service, and more recently falling trucking rates. But we have seen an inflection the past two quarters with our survey respondents now reporting net shifts back to rails. We're encouraged with the volume and service trends we're seeing in recent quarters, and thus believe the state of the industry today is strong.

I now want to address the topic of rail operating ratios. I've heard certain industry analysts and Board members talk about the cult of the OR for the rails. While analysts and investors certainly care about rail margins, it's important to understand that the OR is an output of our models and not an input. Rather, we often talk about the three legs of the stool as the key inputs into our rail models: volumes, pricing and productivity. If a railroad is successful at growing volumes, improving pricing, and generating positive productivity and operating leverage, then that rail's margins will naturally improve over time. And ultimately, if a railroad is able to provide good service and grow volumes, we don't believe it should be an issue if that rail's margins are naturally improving. I want to illustrate the power of the three legs of the stool for the rails. **Slide 8** shows that the rails were able to achieve double-digit annual earnings CAGRs



over the past 15 years without actually growing volumes as margins effectively doubled from 2004 through 2020. But going forward, if the rails are unable to start growing volumes, we believe the industry will struggle to maintain double-digit earnings growth from just pricing and margin improvement alone as illustrated with hypothetical Railroad 3. Rather, we believe volumes are an increasingly important third leg of the stool for the rails to maintain double-digit earnings growth going forward, as illustrated in Railroad 4 on this slide. And to be clear, we believe investors will reward the railroad stocks with the best profitable growth going forward.

Speaking of margins, let's take a longer term look at rail margins on **Slide 9**. As shown, rail margins more than doubled from almost 20% in 2000 to over 40% in 2021 through a combination of inflation-plus pricing and improved productivity trends. However, rail margins have actually declined the past two years and reached their lowest level in six years during 2023. We believe this reflects some of the headcount investments discussed above, record levels of cost inflation, and a more challenging pricing backdrop with record declines in competitive truck rates the past couple of years.

With that, let's now discuss rail pricing trends on the next couple of slides. **Slide 10** tracks rail and truck pricing over the past 40-plus years and depicts the rail pricing renaissance that began in 2004. Since deregulation in 1980, rail rates dropped sharply over the following 20-plus years. Rail rates have subsequently increased since 2004 at an average annual rate of around 2% on an inflation-adjusted basis. However, rail rates remain down nearly 40% since deregulation. Moreover, the spread between truck and rail pricing has widened over the past 40 years.

Slide 11 takes a closer look at more medium-term pricing trends for the rails compared to truckload (TL) and less-than-truckload (LTL) carriers. Over the past ten years, the rails have averaged 2% annual pricing increases relative to more than 5% for both the TLs and LTLs. So, while the rails continue to generate positive pricing, they have actually materially lagged the pricing increases of their closest competitors, despite those competitors being much more fragmented and naturally competitive. Thus, we do not see any evidence of excess or outsized pricing power being exhibited in the rail industry.

Slide 12 then compares the current volume mix for the rails by commodity end market today versus 25 years ago. Most notably, intermodal has increased from 34% of volume in 1998 to 46% of volume today. And on the flip side, coal has shrunk from 27% of industry rail volumes 25 years ago to just 11% of volumes today. In other words, the rails have naturally become much more truck competitive over time with less captive coal traffic. Intermodal should be the biggest growth area for the rails with secular shares gains from the trucking sector.

Turning to capital expenditures, **Slide 13** shows annual rail CapEx and spending as a percentage of total rail revenues. Rail CapEx peaked at over \$17B in 2015, or 24% of revenues, and then hit a trough of \$10B in 2021 amid the proliferation of PSR and the slowdown from COVID. Rail spending fell to just 13.5% of total revenues in 2022. However, rail CapEx has ramped up again the past two years and we expect total spending to reach almost \$13B in 2024, or more than 15% of total revenues. So, the rails represent one of



the most capital-intensive industries anywhere, and as a result, the rails have low financial returns on a replacement basis. We also note that the rails are completely responsible for maintaining their own track and terminal infrastructure, which is obviously not the case for the trucking industry where the government funds highway maintenance.

As the rails compete with the trucking industry, we believe that their fuel efficiency and ESG advantages should lead to increased share gains over time. On **Slide 14**, we show that rails are 3x-4x more fuel efficient than trucks. Since 1990, the trucking industry has increased average miles per gallon (MPG) by 20% through 2022, while the rails have increased their fuel efficiency by almost 50%. As ESG matters more to shippers, the rails have a clear advantage as seen on **Slide 15**. The rail industry accounted for less than 2% of total US transportation-related greenhouse gas emissions, and just 0.5% of total US GHG emissions. One gallon of diesel fuel can move one ton of cargo 145 miles on a truck, or 477 miles on a railroad. Rail remains the cheapest and most efficient mode of land transportation for shippers today.

Next, **Slide 16** shows that shippers consistently report to us that railroad rates are 10%-15% cheaper than comparable truck rates on a lane-by-lane basis. Rails can also help relieve highway congestion since one double-stacked intermodal train can remove 300 trucks off the nation's already congested highway system. Meanwhile, laying one mile of rail track is about one-fifth the cost of laying one mile of new highway.

As a result of these clear advantages relative to trucking, we believe it is important to maintain a regulatory framework that supports future rail spending and growth. The rails are vital to the North American transportation network and we believe the rails play a crucial role in alleviating highway congestion and promoting a safe and environmentally conscious transportation grid.

In conclusion, the implementation of PSR is behind us. Rail investors are increasingly differentiating the stocks based on expectations for profitable growth, with higher P/E multiples being applied to the rails with the highest growth expectations. And with more of a focus on growth, we've seen clear changes in not just the words, but the actions from the rails including rising headcount and CapEx. And this change in behavior is paying dividends today with improving service during a period of growing volumes this year. Thus, we believe that the interests of rail shareholders, the rails themselves, and the STB are more aligned today than they have been for many years. So, we do not see the need for meaningful regulatory reform at the Board to incent growth. Rather, we believe it's critical that the STB maintain a regulatory framework that supports the rails' ability to maintain differential pricing power and thus healthy margins and cash flow to support continued investment for growth. In other words, we believe any regulatory action that would lead to reduced pricing power for the railroads would lead to less capital spending and less growth for the industry in the years ahead.

This concludes my prepared remarks. Thank you for your time and I welcome your questions.

AIRFREIGHT & SURFACE TRANSPORTATION

STB Hearing

EP 775 – Growth in the Rail Industry

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The Rails Have Not Grown Volumes...

Notably, the Rails with the worst operating ratios – BNSF and NSC – have lagged CSX and UNP on volumes over the last five years

	Industry Carloads (000s)			5-Year CAGR	10-Year CAGR
	2013	2018	2023		
Total Carloads	43,038	45,038	39,972	(2.4%)	(0.7%)
Total Ex-Coal	35,622	39,263	35,188	(2.2%)	(0.1%)
Intermodal	18,243	20,855	18,045	(2.9%)	(0.1%)

	Total Carloads (000s)			5-Year CAGR	10-Year CAGR
	2013	2018	2023		
CSX	6,539	6,482	6,142	(1.1%)	(0.6%)
NSC	7,341	7,928	6,744	(3.2%)	(0.8%)
BNSF	10,093	10,698	9,003	(3.4%)	(1.1%)
UNP	9,022	8,908	8,112	(1.9%)	(1.1%)

Source: AAR; Company reports; Wolfe Research.

... But Rails are Leading Out of the Current Freight Recession

Quarterly Y/Y Rail Volumes by Commodity Segment

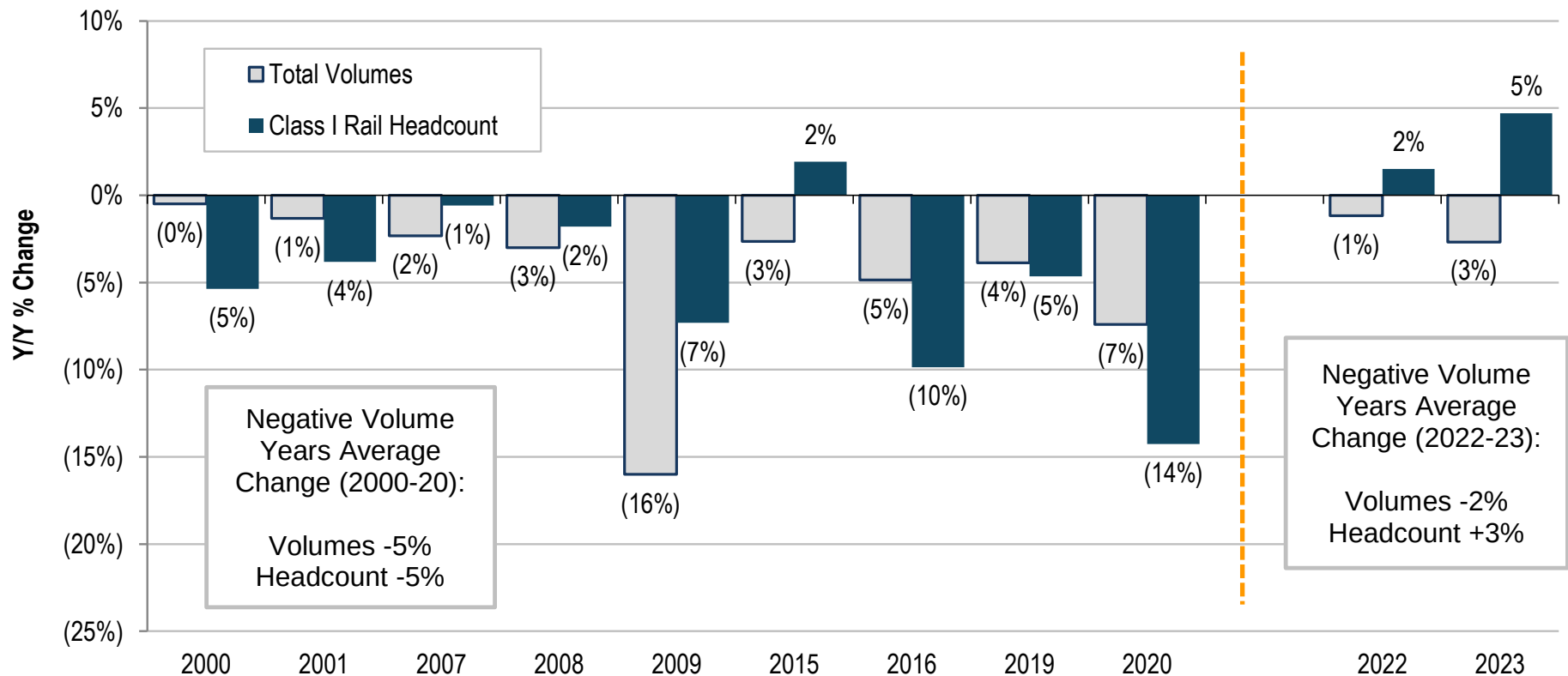
Commodity	3Q:22	4Q:22	1Q:23	2Q:23	3Q:23	4Q:23	1Q:24	2Q:24	3Q QTD	2Q to 3Q Trend
Intermodal	(0.6%)	(2.4%)	(9.4%)	(11.1%)	(7.5%)	2.8%	6.7%	6.9%	8.8%	Intermodal ▲
Automotive	17.4%	11.4%	10.3%	14.0%	13.7%	9.5%	1.7%	4.0%	(6.1%)	Automotive ▼
Coal	3.4%	1.2%	0.3%	(0.6%)	(3.4%)	2.8%	(13.8%)	(16.8%)	(8.2%)	Coal ▲
Grain	5.6%	5.8%	2.8%	(4.5%)	(7.9%)	(3.8%)	(1.8%)	5.1%	13.7%	Grain ▲
Chemicals	(0.3%)	(8.3%)	(3.7%)	(3.6%)	0.3%	8.2%	3.3%	5.2%	4.7%	Chemicals ▼
Petroleum	(1.5%)	1.7%	6.3%	(4.1%)	(0.3%)	8.7%	3.8%	10.7%	7.2%	Petroleum ▼
Paper/Lumber	(1.0%)	(6.5%)	(3.8%)	(8.6%)	(9.4%)	(1.3%)	(1.0%)	0.0%	0.5%	Paper/Lumber ▲
Metals	(5.7%)	(3.8%)	5.6%	1.2%	4.1%	7.9%	1.2%	(5.7%)	(7.2%)	Metals ▼
Minerals/Stone	4.1%	3.5%	5.2%	2.5%	(0.6%)	(1.5%)	(7.5%)	(4.0%)	(4.8%)	Minerals/Stone ▼
Total	0.7%	(0.9%)	(3.3%)	(5.6%)	(4.1%)	2.6%	1.1%	2.1%	3.6%	Total ▲

Note: 2024 AAR data through week 34.

Source: AAR; Company reports; Wolfe Research.

Signs of Change – Rails Added Headcount During the 2022-23 Freight Recession

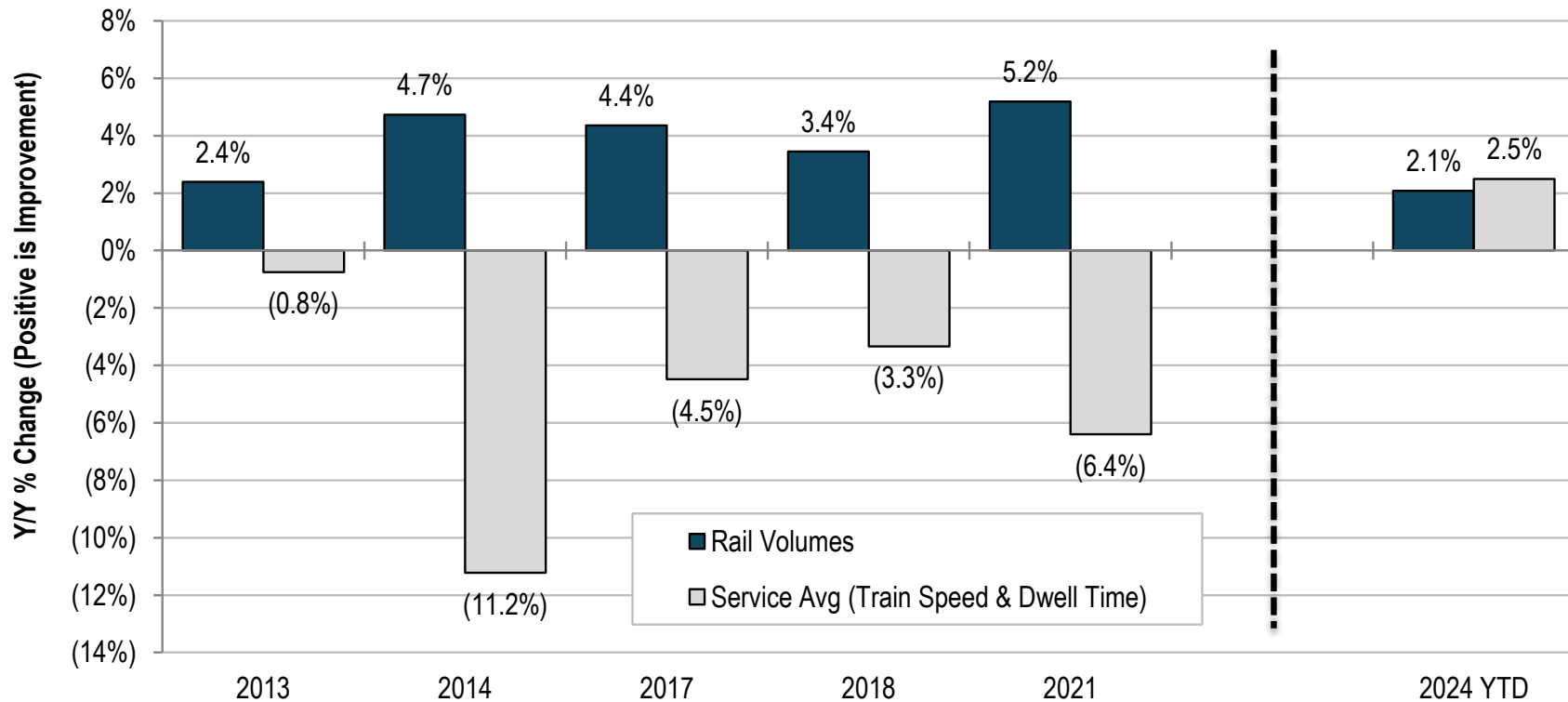
Rail Volumes vs. headcount growth during years with volume declines.



Source: AAR; Wolfe Research.

A Clear Payoff: Unprecedented Improvement in Rail Service This Year as Volumes are Improving

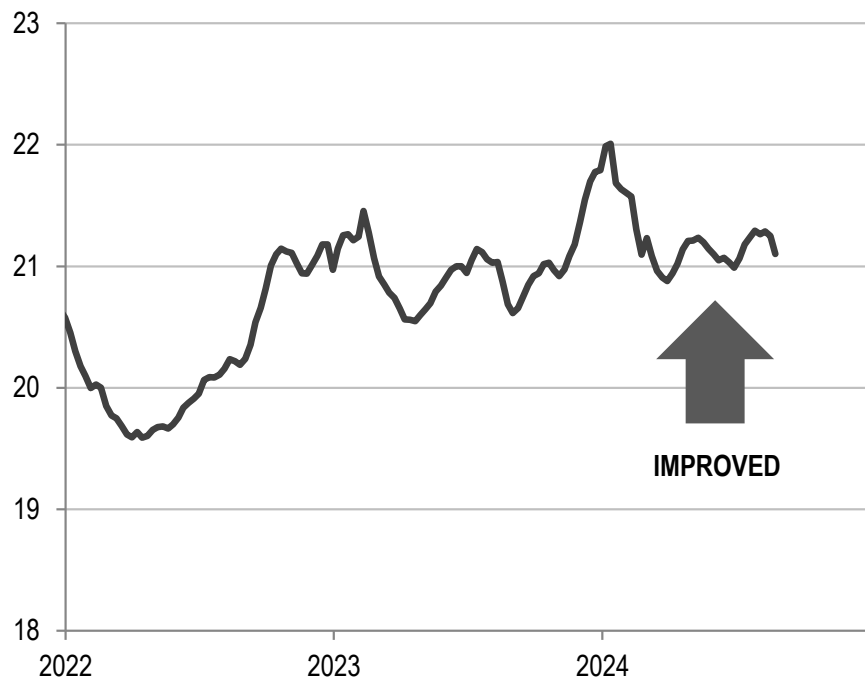
Rail Volumes vs. Rail Service Metrics Average (Train Speeds and Dwell Times)



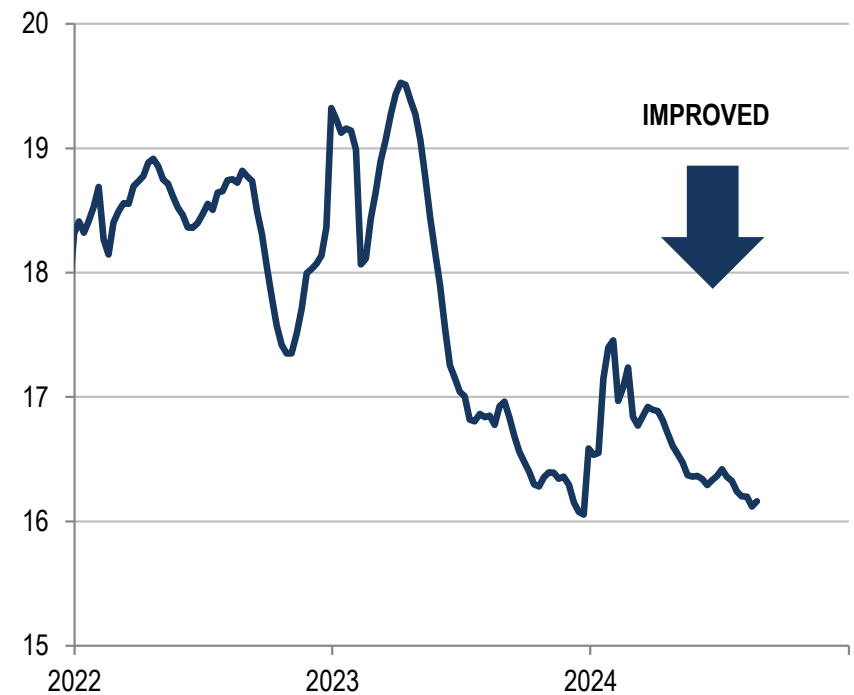
Note: 2024 YTD through week 34.
Source: AAR; Company reports; Wolfe Research.

Absolute Service Metrics Remain Strong

Total Average Train Speeds (MPH)

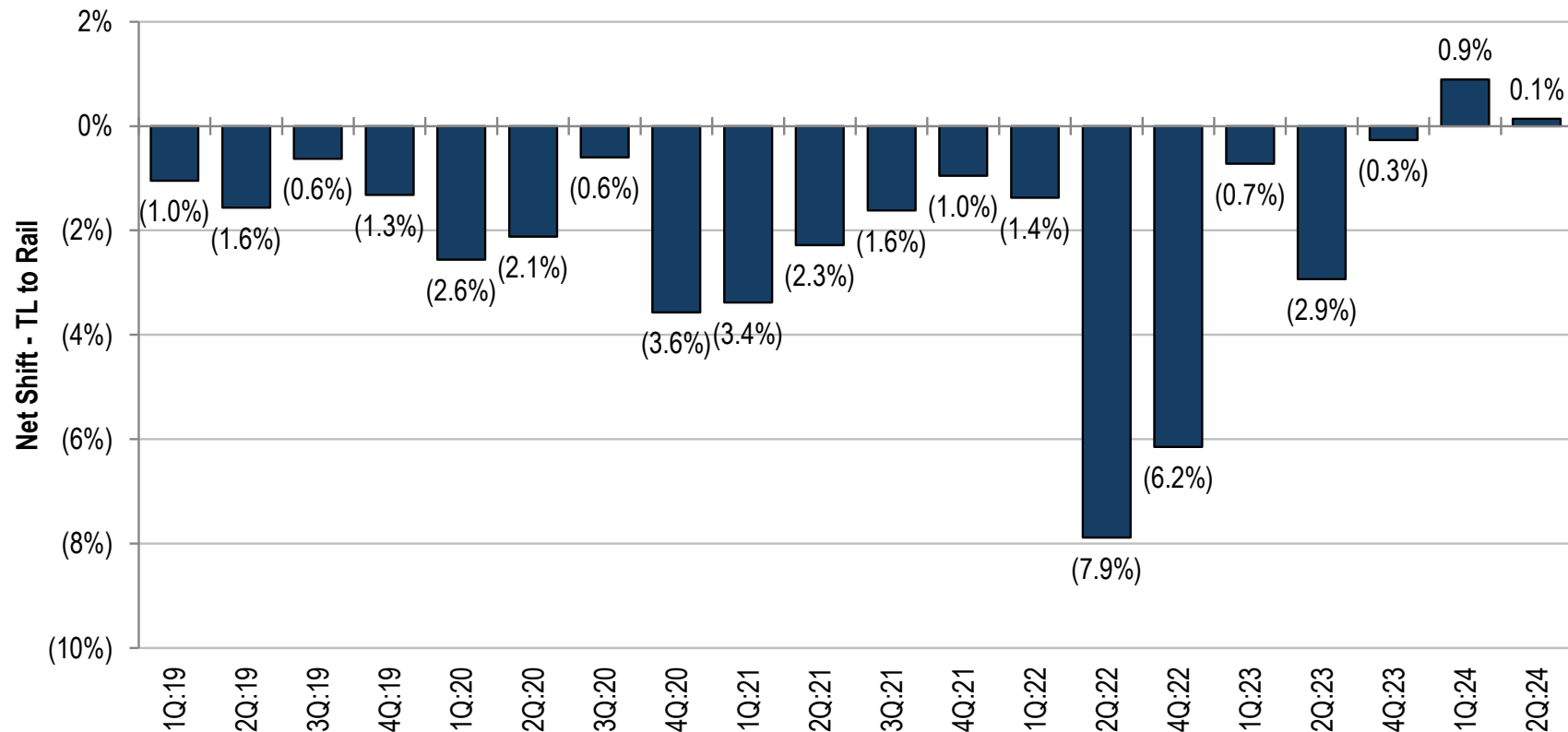


Total Average Dwell Times (Hours)



Service Begets Growth: Inflection Reached – Shippers Shifting Freight from Truck Back to Rail

Wolfe Shipper Survey – Net Shift from Truck to Rail (Past 6 Months)



Source: Wolfe Research.

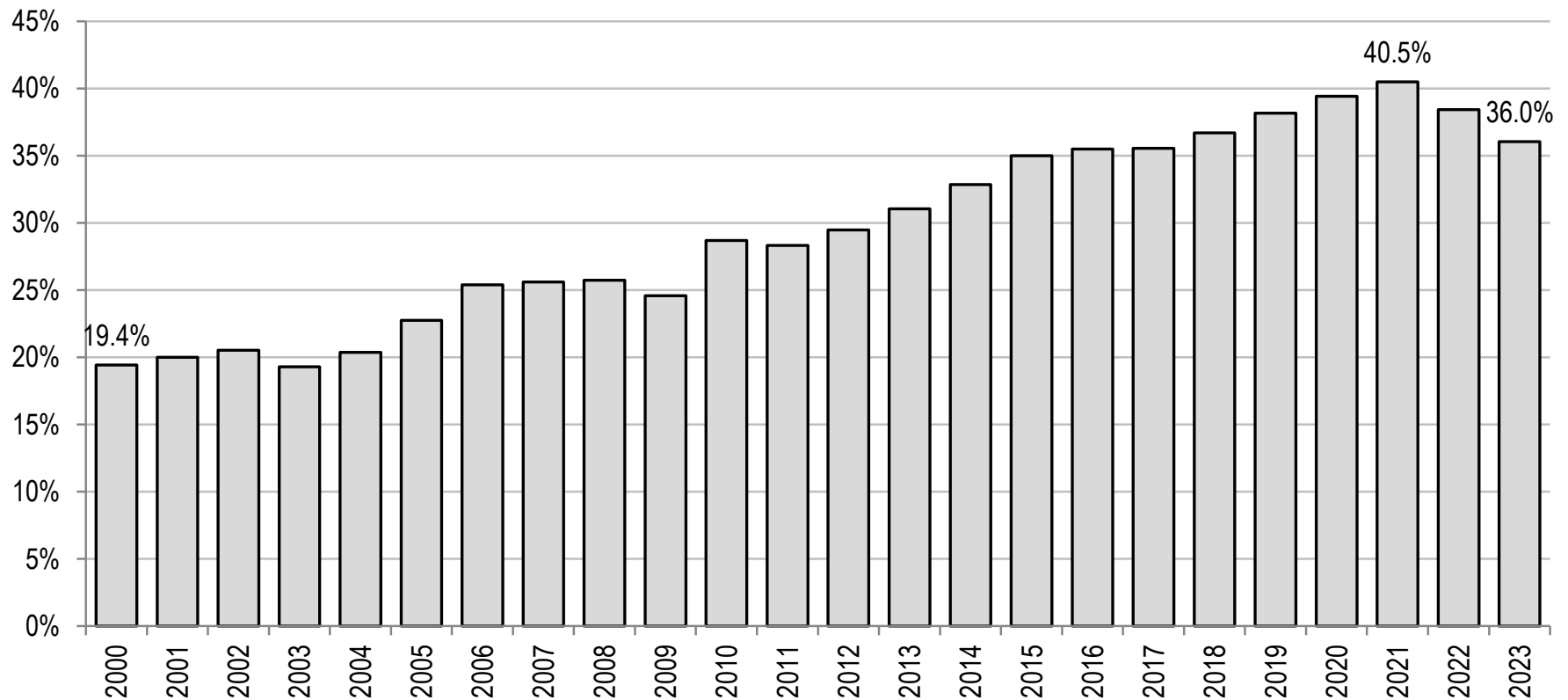
The New Earnings Algorithm for Rails – Volumes Matter More

	(\$ million)	Railroad 1 Renaissance 2004-14	Railroad 2 PSR 2015-20	Railroad 3 Post-PSR v1	Railroad 4 Post-PSR v2
Assumptions	Starting Revenue	\$10,000	\$10,000	\$10,000	\$10,000
	Starting OR	80.0%	70.0%	60.0%	60.0%
	Volume Growth	(1%)	(1%)	(1%)	2%
	RPU Growth	4%	4%	4%	3%
	OR Improvement	100bp	100bp	100bp	75bp
	Share Repurchases	3%	3%	3%	3%
	Interest Expense / Other	(\$500)	(\$500)	(\$500)	(\$500)
	Effective Tax Rate	23%	23%	23%	23%
Year 0	Annual Revenue	\$10,000	\$10,000	\$10,000	\$10,000
	OR	80.0%	70.0%	60.0%	60.0%
	Operating Income	\$2,000	\$3,000	\$4,000	\$4,000
	Pre-Tax Income	\$1,500	\$2,500	\$3,500	\$3,500
	Net Income	\$1,155	\$1,925	\$2,695	\$2,695
	Shares Outstanding (M)	500	500	500	500
	EPS	\$2.31	\$3.85	\$5.39	\$5.39
Year 1	Revenue Growth	3%	3%	3%	5%
	Annual Revenues	\$10,296	\$10,296	\$10,296	\$10,506
	OR	79.0%	69.0%	59.0%	59.3%
	Operating Income	\$2,162	\$3,192	\$4,221	\$4,281
	Pre-Tax Income	\$1,662	\$2,692	\$3,721	\$3,781
	Net Income	\$1,280	\$2,073	\$2,865	\$2,912
	Shares Outstanding (M)	485	485	485	485
	EPS	\$2.64	\$4.27	\$5.91	\$6.00
	EPS Growth	14.2%	11.0%	9.6%	11.4%

Source: Wolfe Research.

What Cult of the OR? Rail Operating Margins Have Declined the Past 2 Years – Lowest Level in 6 Years

Annual Rail Operating Margins

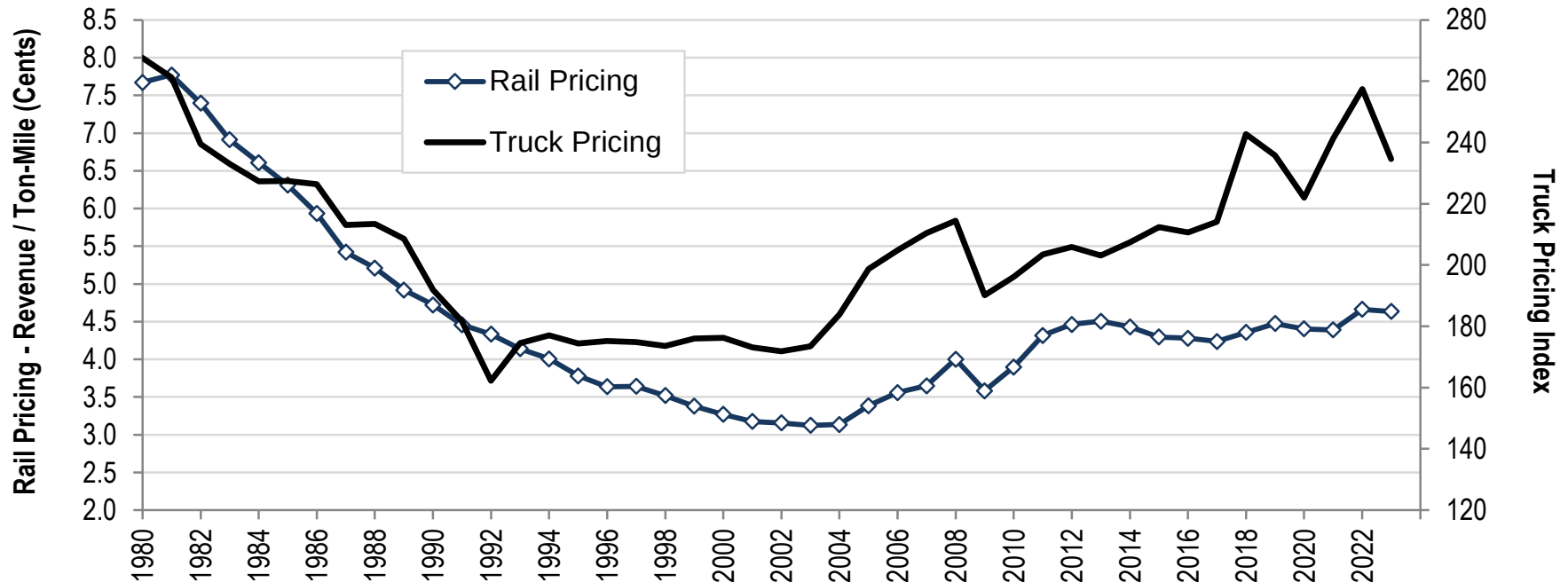


Note: Simple average of annual Class I rail operating margins including BNSF.

Source: AAR; Wolfe Research.

Rail Rate Increases Have Materially Lagged the Trucking Industry Since Rail Deregulation

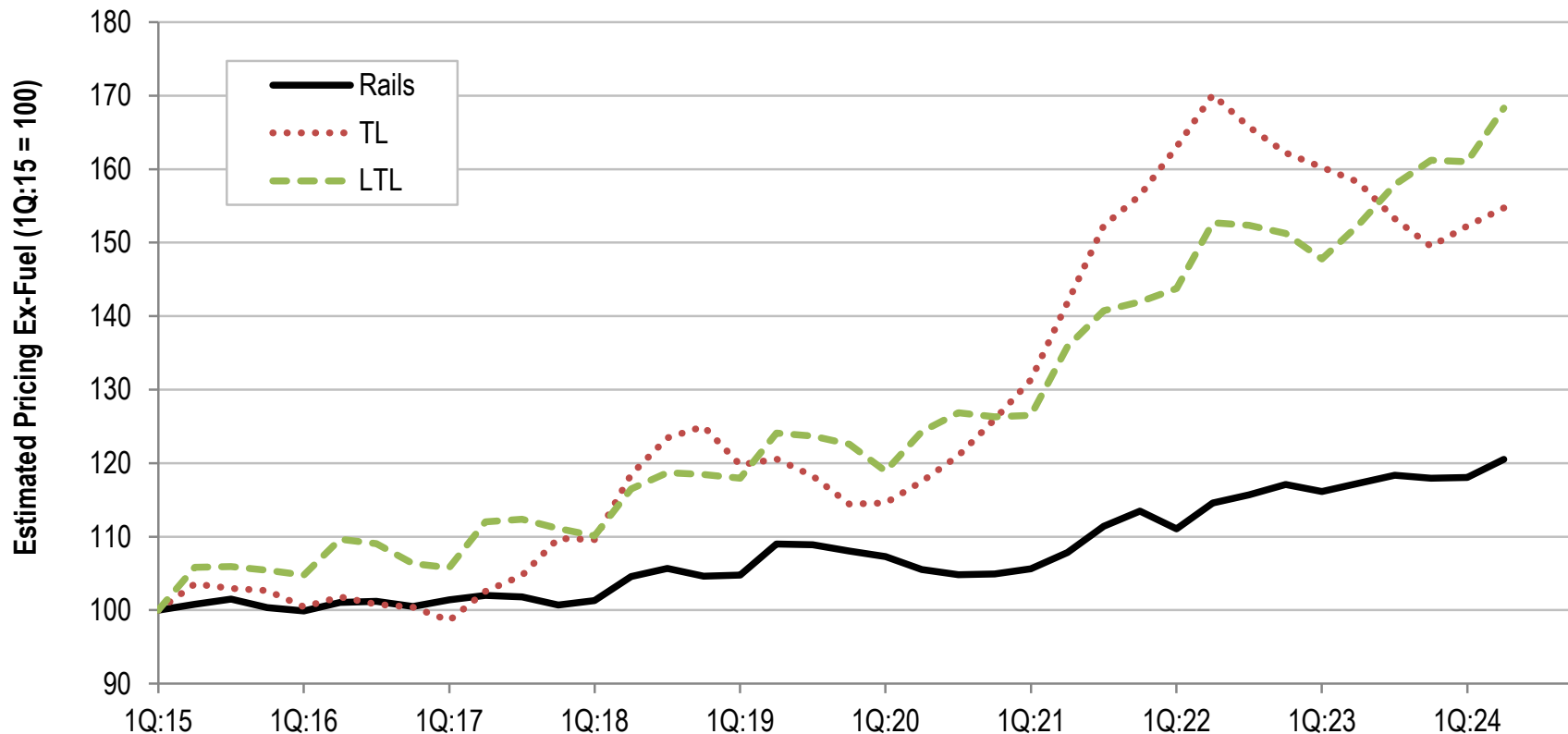
Long-Term Pricing – Rail vs. Trucking



Source: AAR; ATA; US Bureau of Economic Analysis (BEA); Wolfe Research.

Rail Pricing Has Also Materially Lagged TL and LTL Pricing Over the Past Decade

Recent Pricing Trends – Rail vs. Trucking

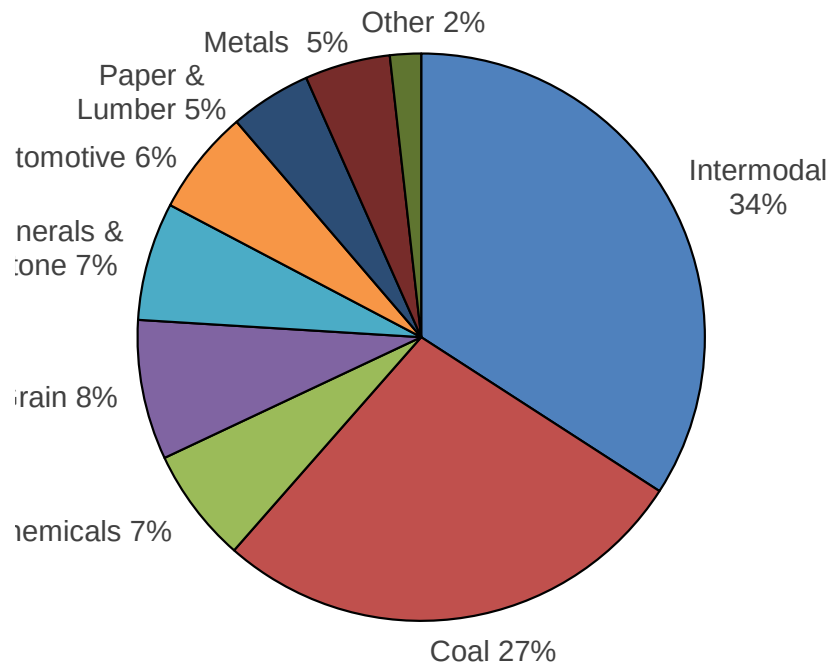


Note: Rails = CNI, CP, CSX, NSC, UNP
 TL = CVLG, JBHT, KNX, WERN
 LTL = ARCB, XPO, ODFL, SAIA, TFII
 Source: Company reports; Wolfe Research.

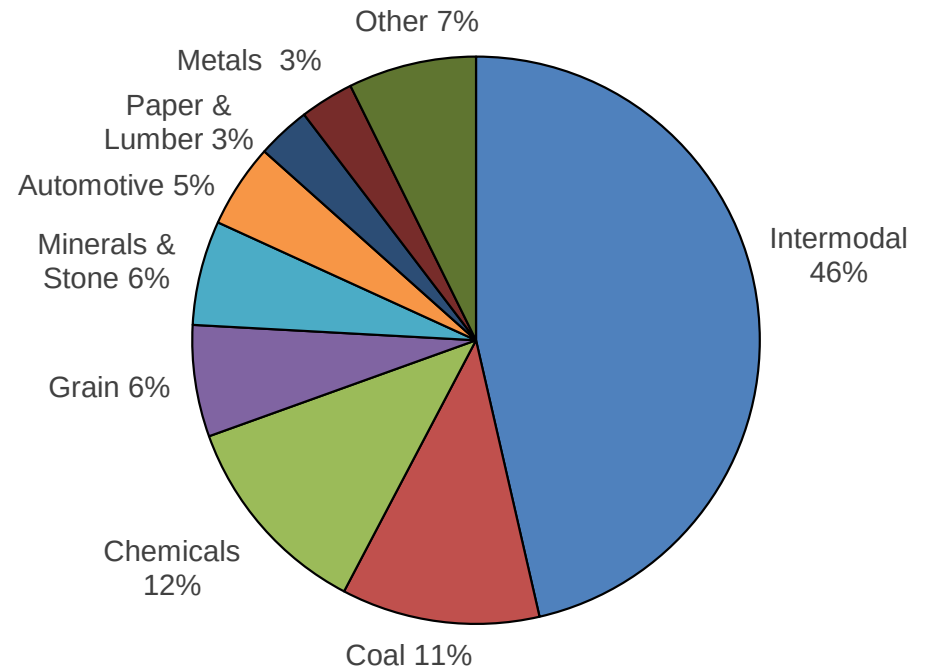
Changing Rail Commodity Mix

Over the past 25 years, intermodal has grown while coal exposure has shrunk.

1998 Carload Mix

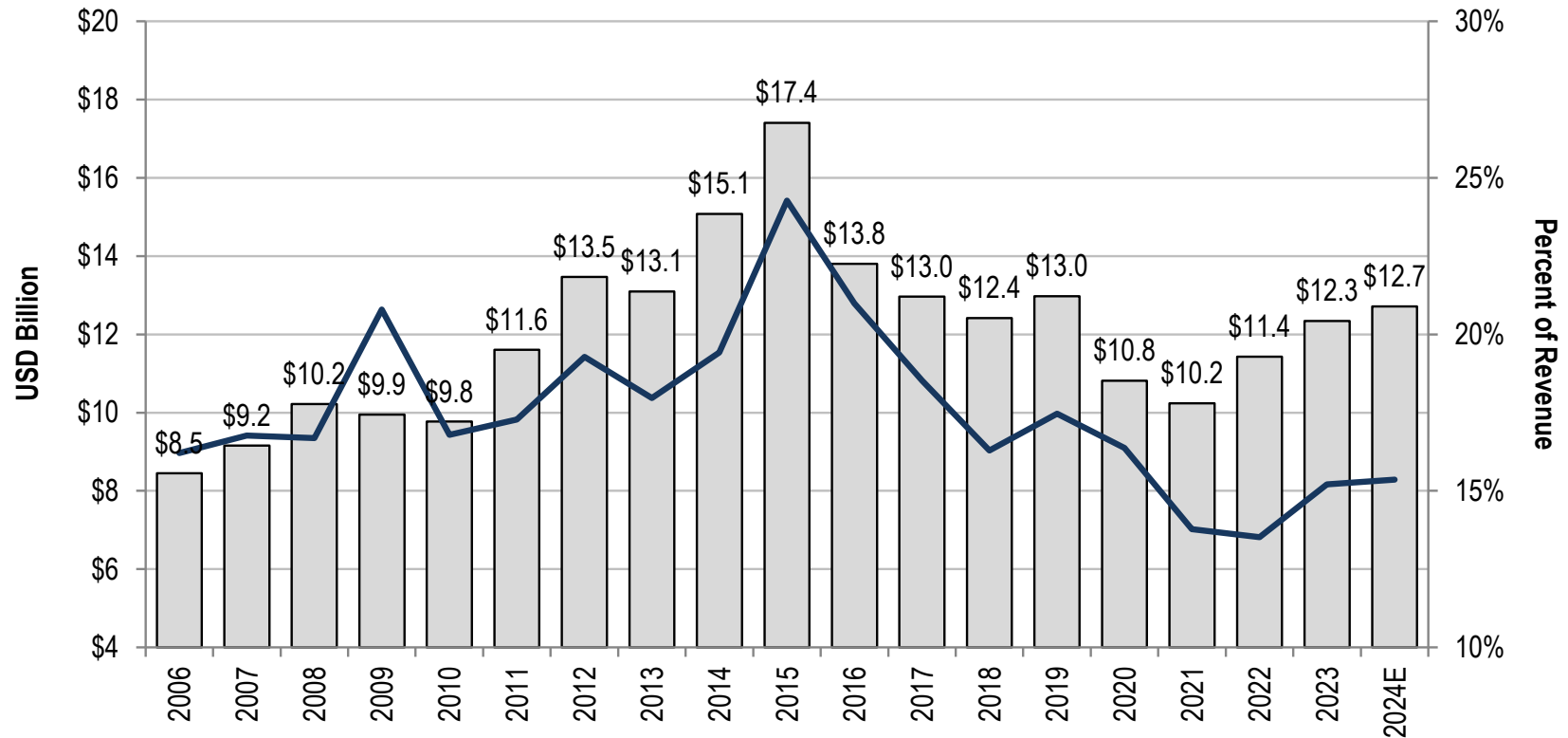


2023 Carload Mix



Source: AAR; Wolfe Research.

Rail Capital Expenditures on the Rise Again

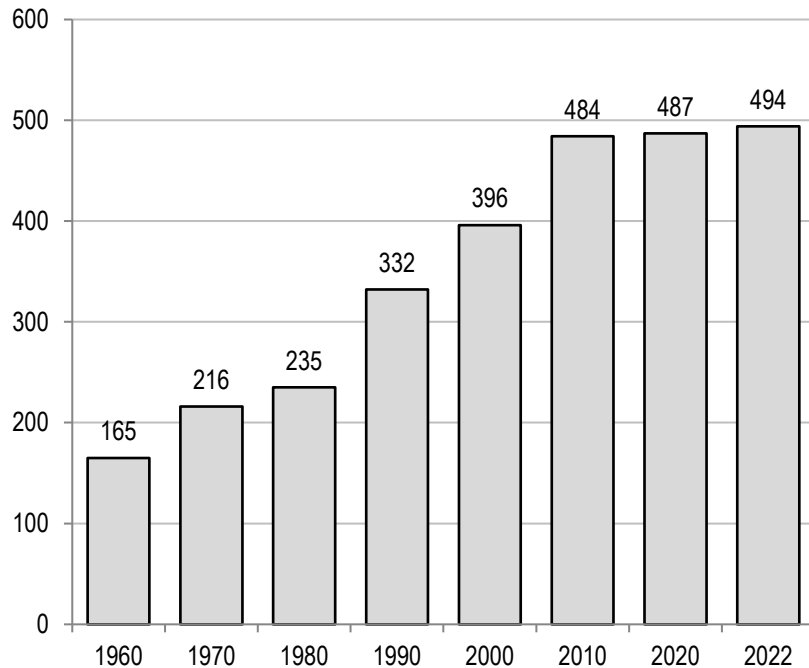


Source: AAR; Wolfe Research

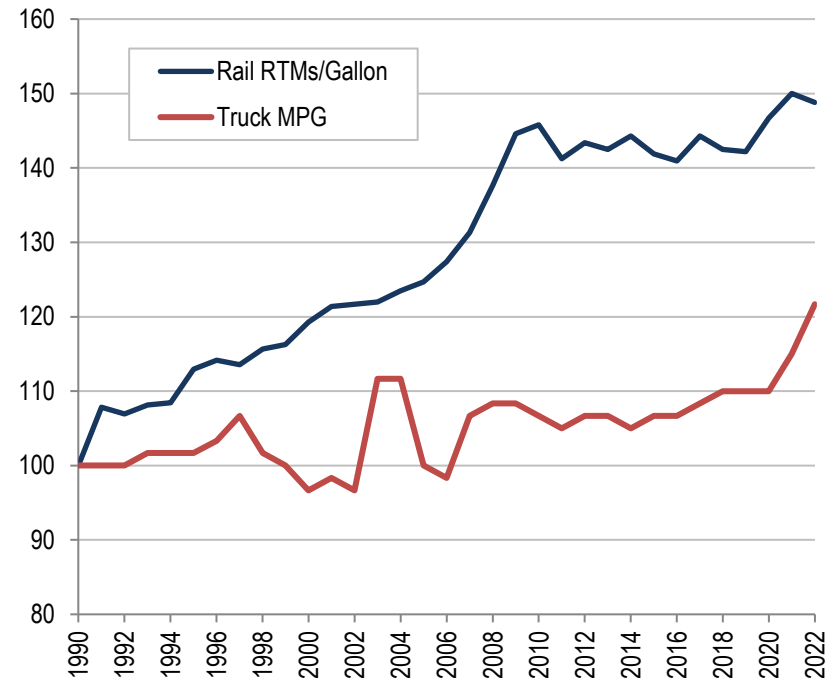
Rails are 3x-4x More Fuel Efficient than Trucks on Average

Rail vs. Truck Fuel Efficiency

Rail RTMs per Gallon of Fuel Consumed



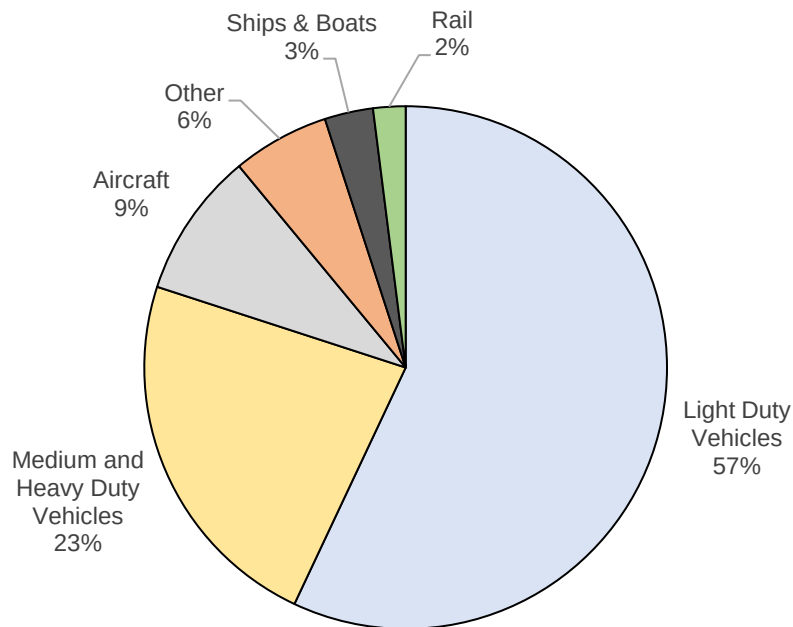
Fuel Efficiency (1990 = 100)



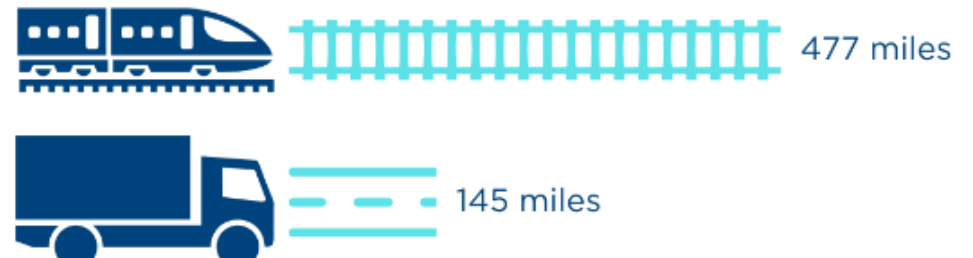
ESG Further Favors Moving More Volume to the Rails

Freight railroads account for 1.8% of US transportation-related greenhouse gas emissions and just 0.5% of total US GHG emissions.

US Transportation GHG Emissions (2022)

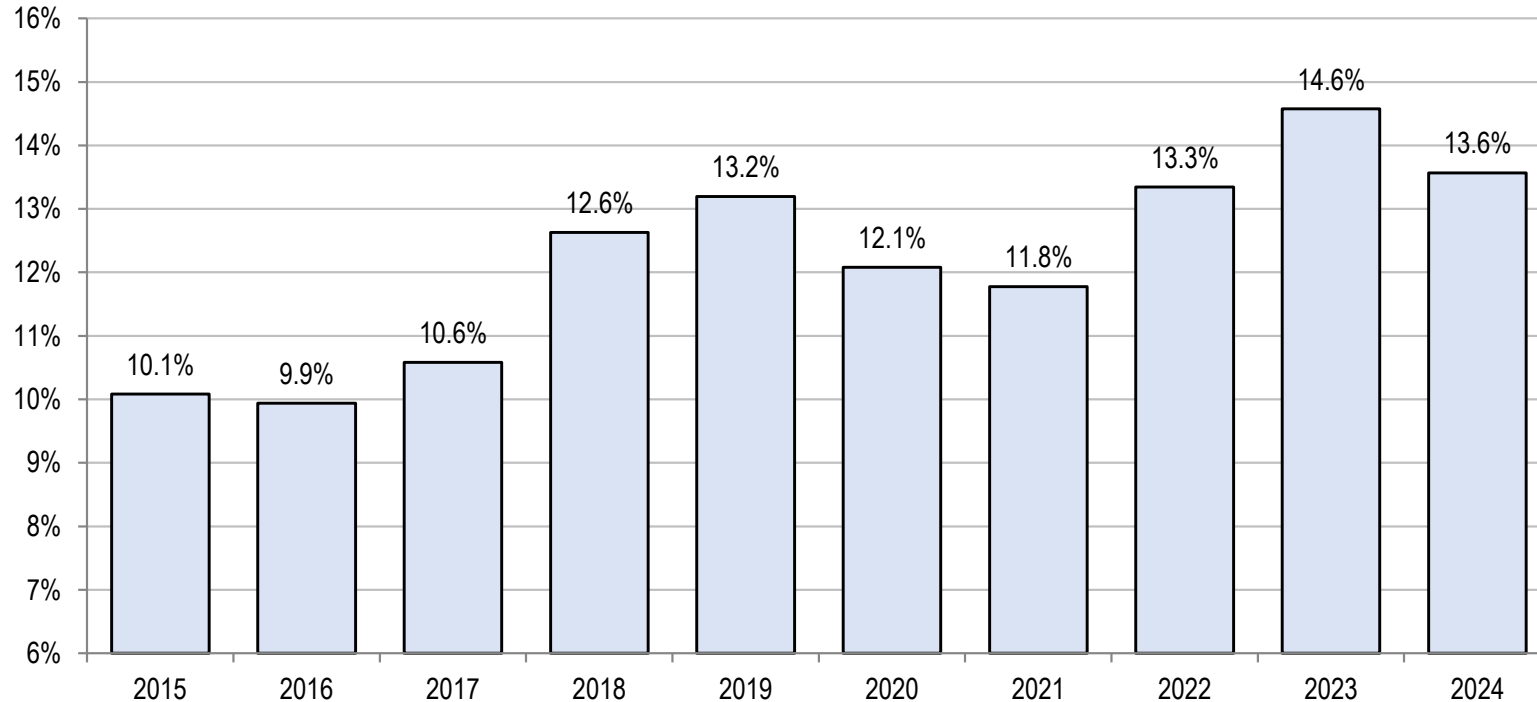


Distance Moved – One Ton of Cargo on One Gallon of Diesel Fuel



According to Shippers, Rail Rates Are Consistently Cheaper than Trucking Rates

Wolfe Shipper Survey – Where rails and trucks compete, how much cheaper are your railroad transportation costs, on average, compared to comparable truckload movements?



Note: Average of quarterly responses each year.
Source: Wolfe Research.

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