STIFEL

Time For a New North American Rail Strategy

November 28, 2017

Transportation and Logistics Advisors, LLC

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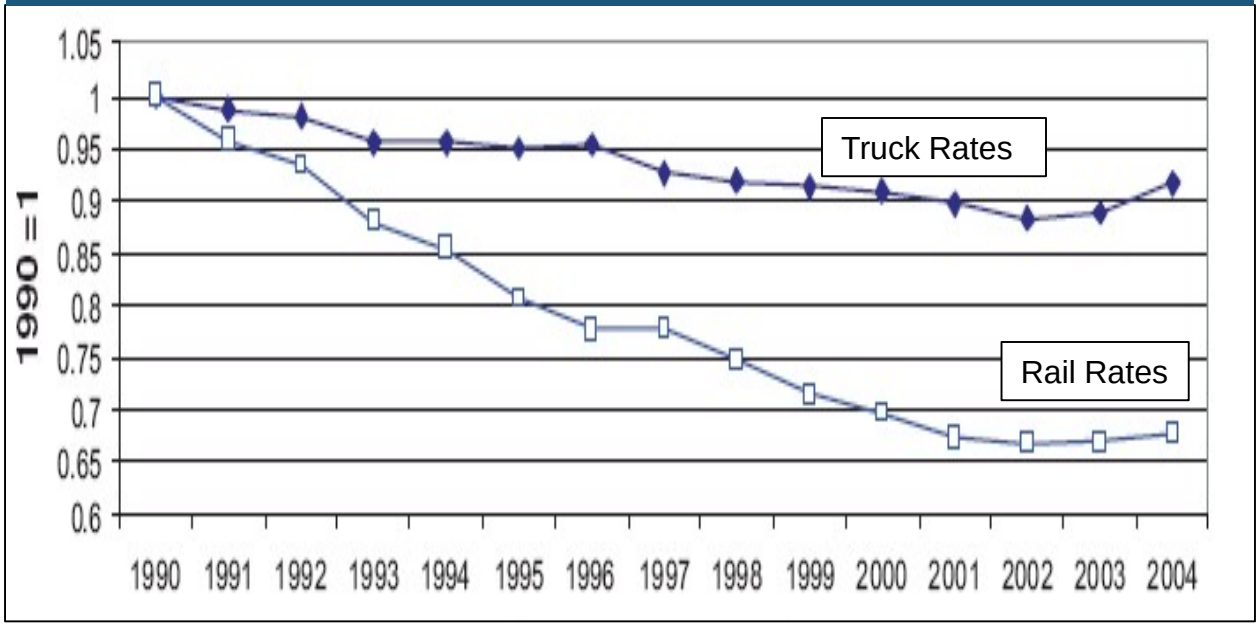
Agenda

- **Rail Strategy Deregulation Though 2004**
- Rail Strategy 2004 - 2014
- Recent Strategy Limitations
- The Growth Opportunity

After deregulation, railroad rates not only declined significantly, but declined faster than truck rates

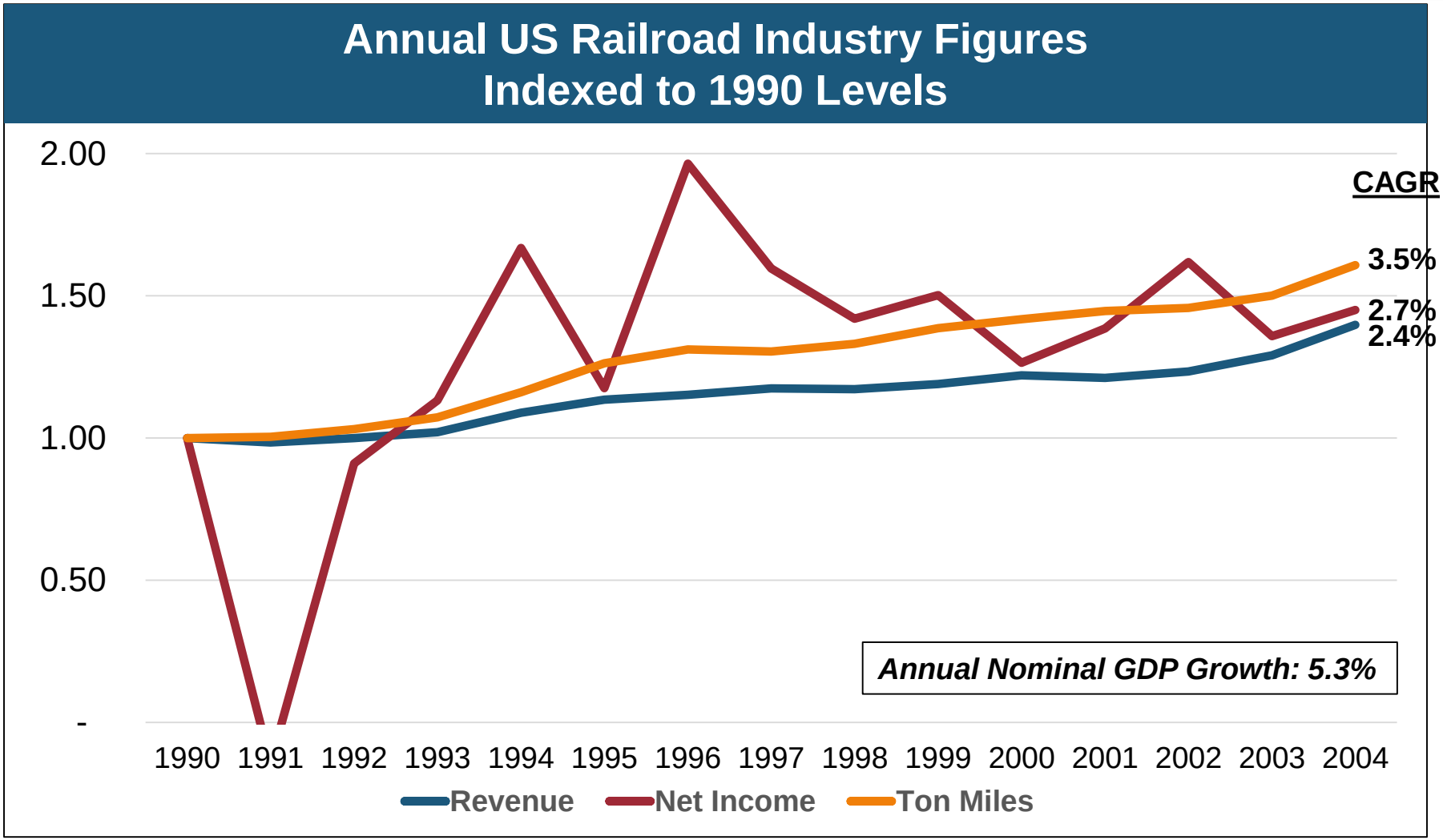
Real Change in Rail and Truck Rates (1990 - 2004)



Sources: ACT Publications, Morgan Stanley; BLS; AAR 2014 presentation to the Transportation Research Board; TandLA analysis

- From 1990 to 2004 both rail and truck inflation-adjusted rates declined
  - Rail rates decreased over 30%
  - Truck rates decreased less than 10%
- Truck rate declines came to an end in 2002 and began to trend upward

The result was volume, revenue and profitability growth, but below GDP growth, and railroads were not earning their cost of capital



Sources: AAR Annual Analysis of Class I Railroads; TandLA analysis and estimates

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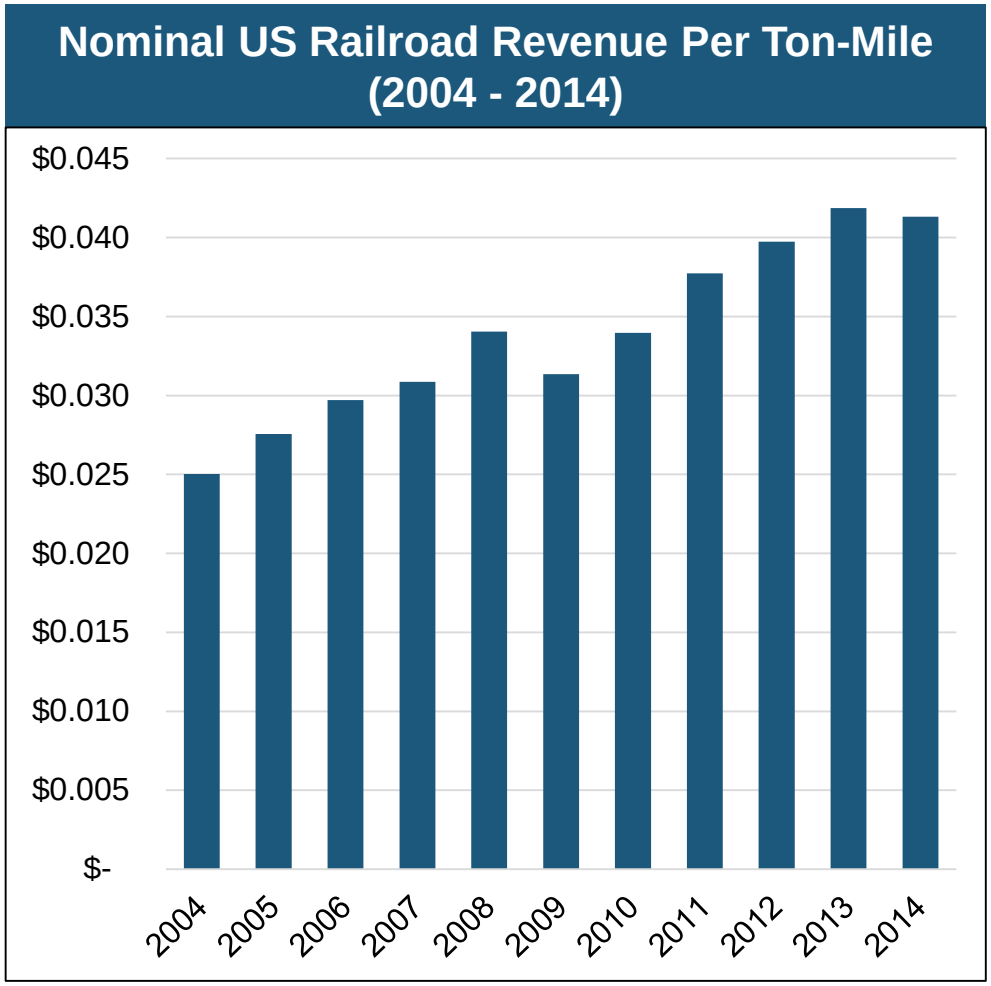
Starting in the early 2000's railroads changed strategy, focusing on improving Operating Ratio and earning cost of capital

- **Changed from declining rates to increasing rates**
  - Closed price gap with truck and barge
- **Continued focus on productivity and driving down costs**
  - Cut overhead
  - Changed train operations
    - Added distributed power
    - Larger/longer trains
    - Focused away from low density lines
  - Added more productive equipment
    - Newer technology railcars
    - More fuel efficient locomotives
- **Focused CapEx on infrastructure**
  - Added capacity in growing areas
  - Levered Infastructure to facilitate smoother operations and lower operating costs

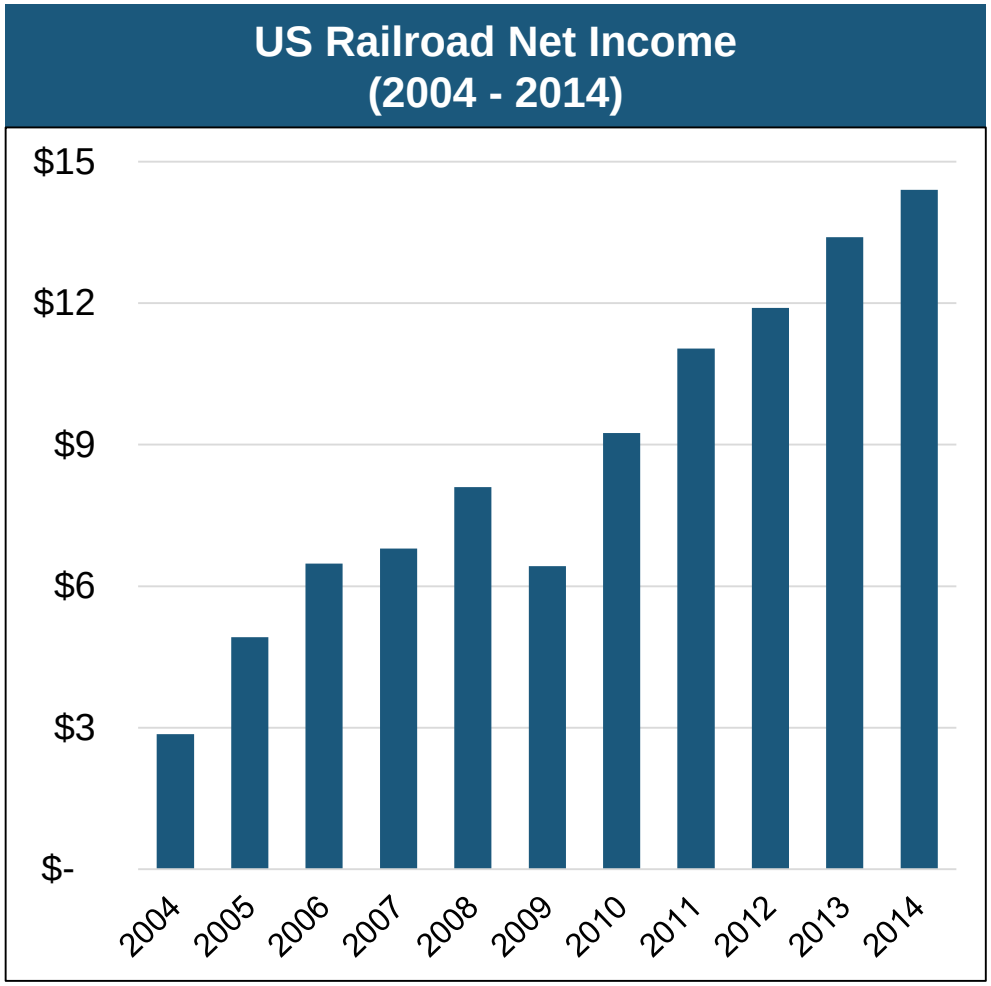
The result was rate increases averaging 5% per year, after declining about 1% per year over the previous 20+ years



- Nominal revenue/ton mile increased 5.1% per year on average from 2004 to 2014
- From 1981 to 2004 nominal revenue/ton mile decreased about 1% per year

Sources: AAR Annual Analysis of Class I Railroads; AAR 2014 Overview of America's Freight Railroads; TandLA analysis and estimates

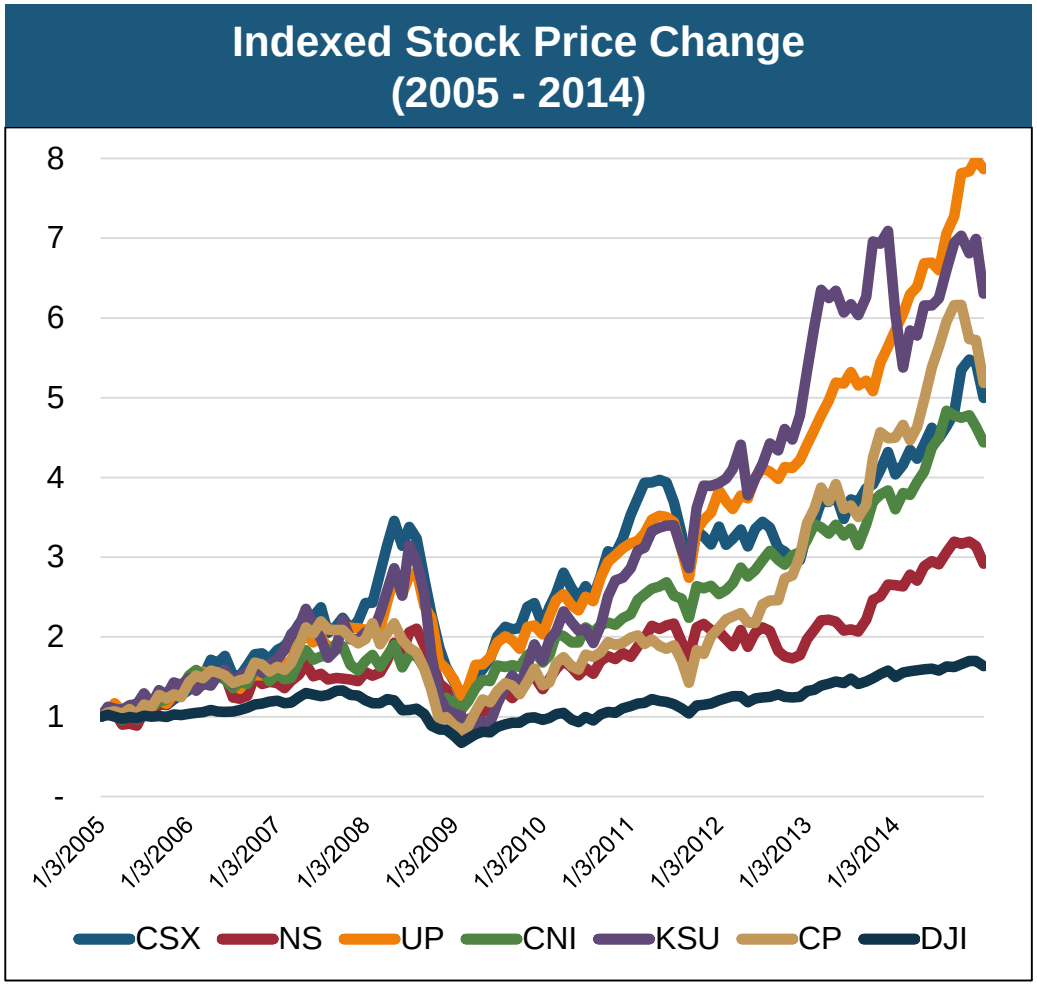
This strategy proved financially very successful, as railroad profitability increased about 400% from 2004 to 2014



- Rail industry net income increased 17.5% per year on average from 2004 to 2014
  - From about $3 B to more than $14 B in a decade
- Even the Great Recession only created a one year pause in net income growth

Sources: AAR Annual Analysis of Class I Railroads; TandLA analysis and estimates

Along with net income, stock prices also grew significantly faster than the over-all market



Sources: Fidelity.com; TandLA analysis and estimates

- Between the start of 2005 and end of 2014 the market increased:
  - Dow: Up ~65%
  - S&P500: Up ~70%
- Rail stocks performed much better:
  - UP: Up 690%
  - KCS: Up 530%
  - CP: Up 420%
  - CSX: Up 400%
  - CN: Up 340%
  - NS: Up 190%

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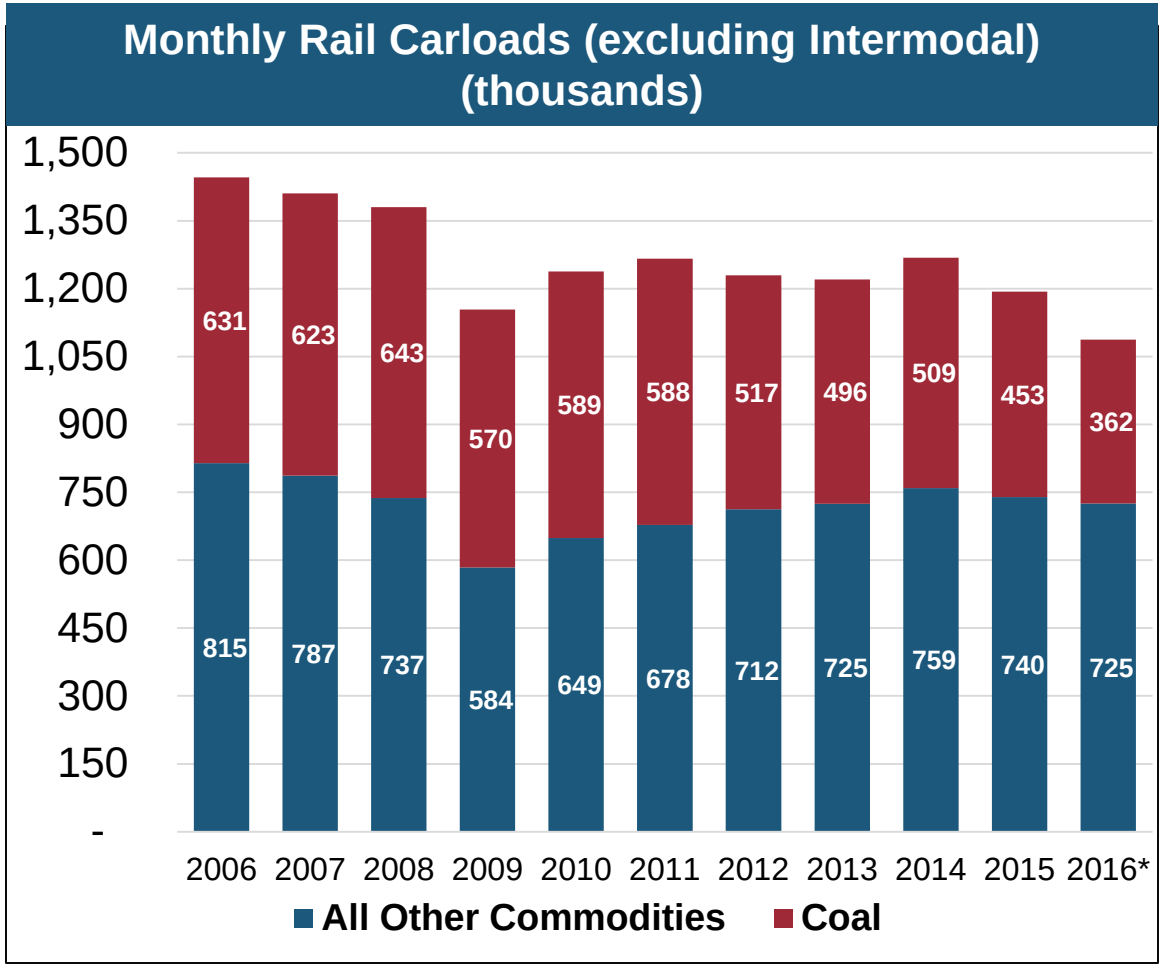
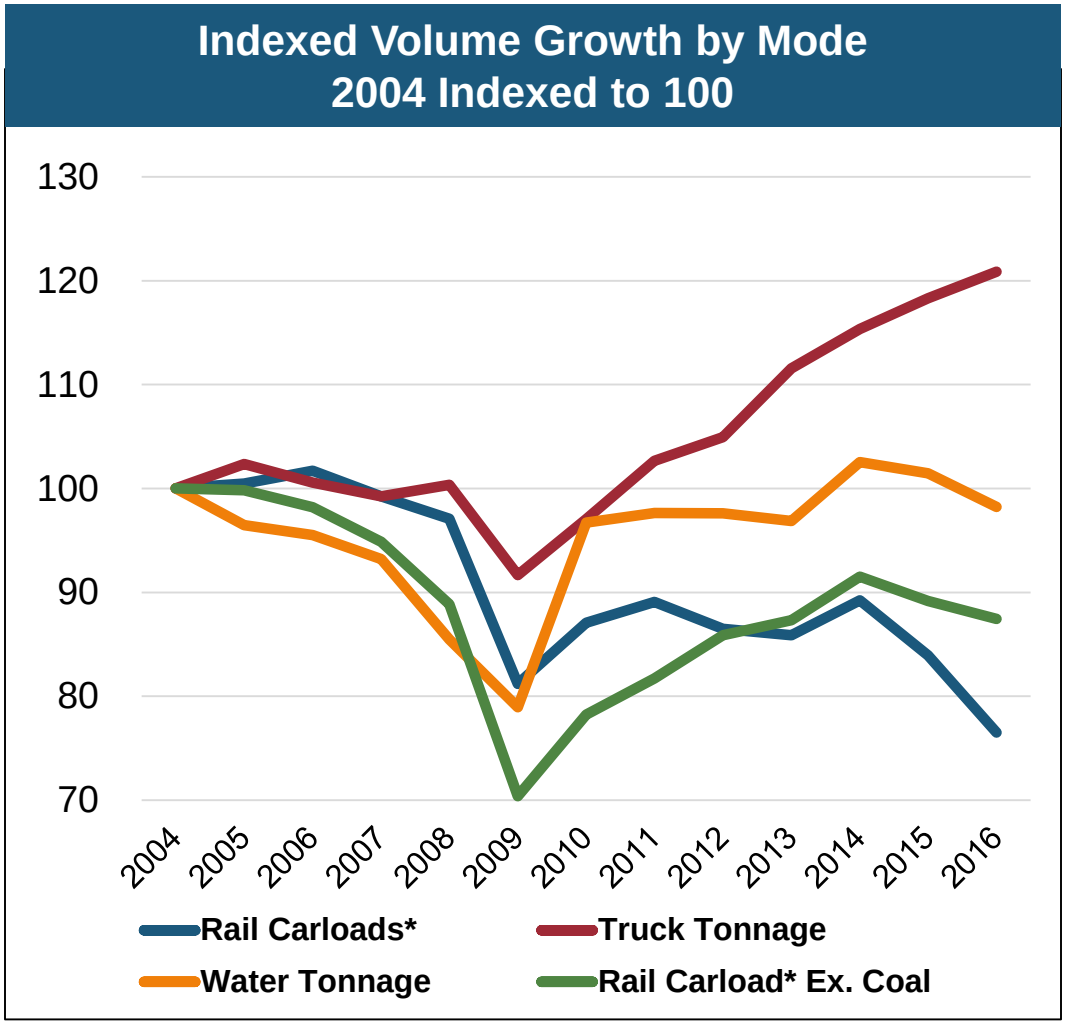
Following the Great Recession, volume initially rebounded, but never approached earlier levels. In 2015 the decline in carload volume resumed



- Rail carloads were relatively flat from 2000 to 2008
- Rail carloads recovered from 2009 to 2014
  - Total up 10%
  - Non-coal up 30%
- However, the 2014 recovery peak was well below 2006 levels
  - Total down 11%
  - Non-coal down 7%
- From 2014 to 2016 the decline hastened
  - Total down 14%
  - Coal down 29%
  - Non-coal down 4.5%
- Even the 2017** "recession recovery" is leaving volumes down vs. 2015. 2017 YTD:
  - Up 5.5% from 2016
  - Down 9% from 2015

*2016 is annualized based on actual January – November volume
**All comparisons through first 12 weeks
Sources: St. Louis Federal Reserve; Bureau of Transportation Statistics; AAR Commodity database; AAR weekly rail volume; TandLA analysis and estimates

Since 2004, rail carload volume has under-performed, even excluding the impact of coal on rail – particularly since the Great Recession

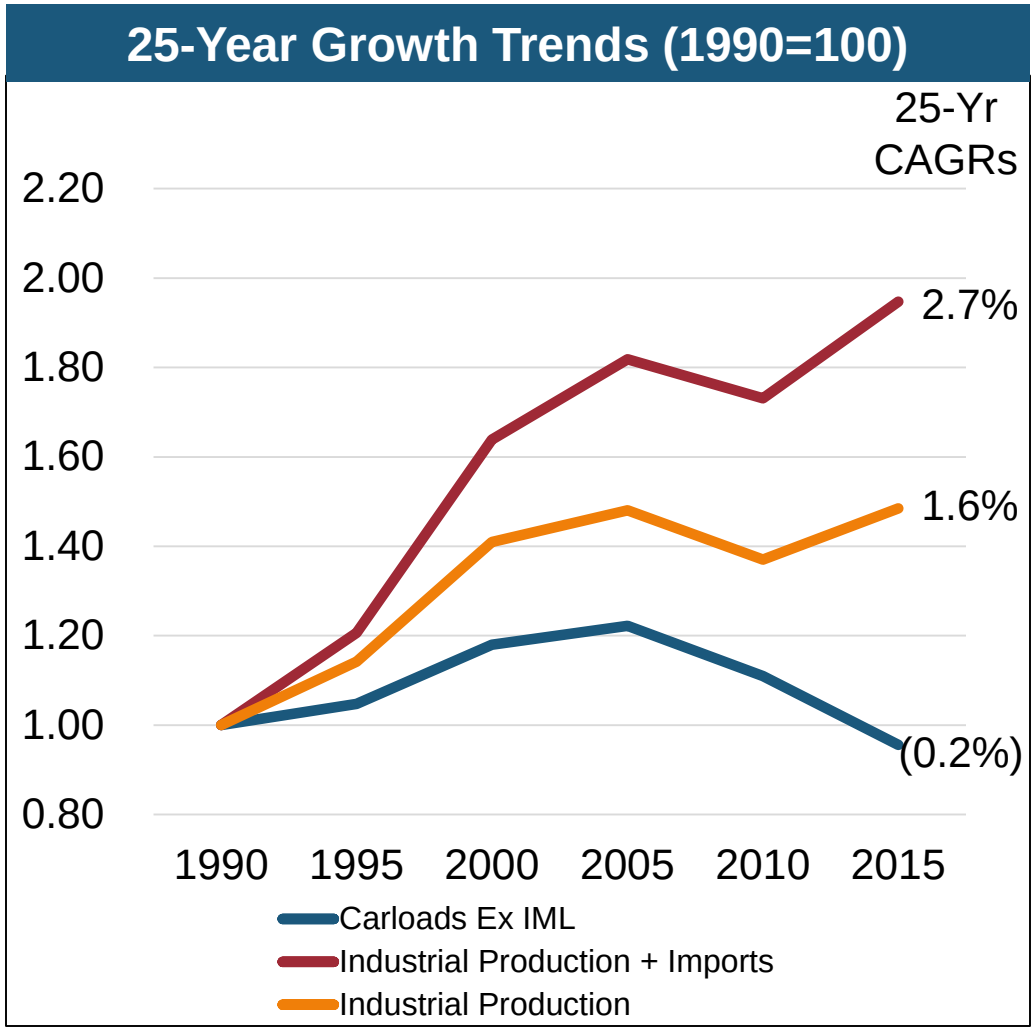


- Rail carload volumes roughly tracked truck in the mid-2000's and outperformed barge
  - Driven by growth in coal
  - Non-coal was in slow decline
- In the Great Recession, rail carload took the worst hit and never recovered
- Since 2014, the rail carload decline has accelerated
  - Decline is more than coal driven

*Excludes intermodal

Sources: St. Louis Federal Reserve; Bureau of Transportation Statistics; AAR Commodity database; AAR weekly rail volume; TandLA analysis and estimates

Rail carload growth (excluding intermodal) has significantly trailed US industrial production and US industrial production plus imports

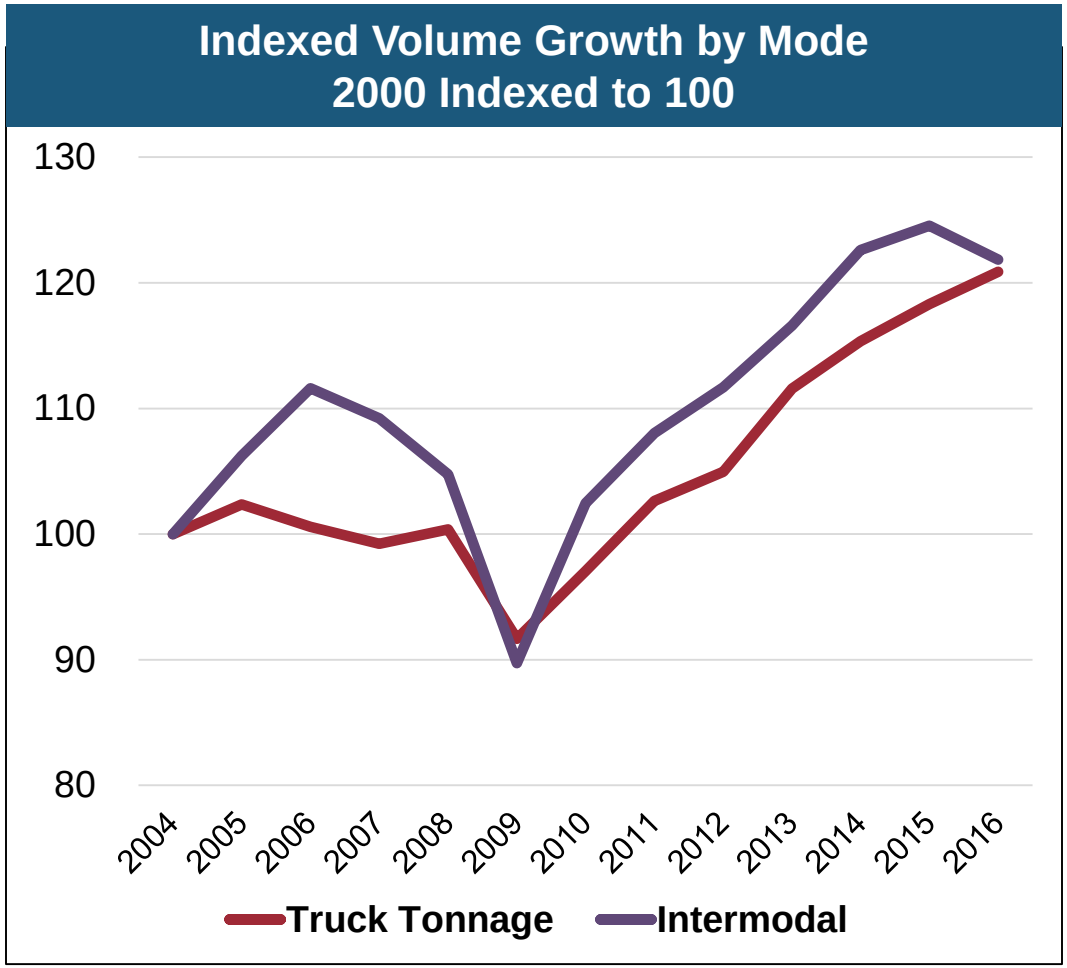


- Rail carloads excluding intermodal are down from 1990 levels
- Tons/carload is only a partial explanation for the period up to 2000 – but much less so since 2000
  - 1990 tons/carload*: 81
  - 2000 tons/carload*: 87
  - 2015 tons/carload*: 88

*Excluding intermodal

Sources: U.S. BEA; AAR Analysis of Class I Data 1986– 2015; IANA data; TandLA analysis and estimates

Intermodal has also ceased to be rail's market share savior. Growth only slightly outpaced truck 2004 to 2016, and declined in 2016, giving back all of its share gains since 2004

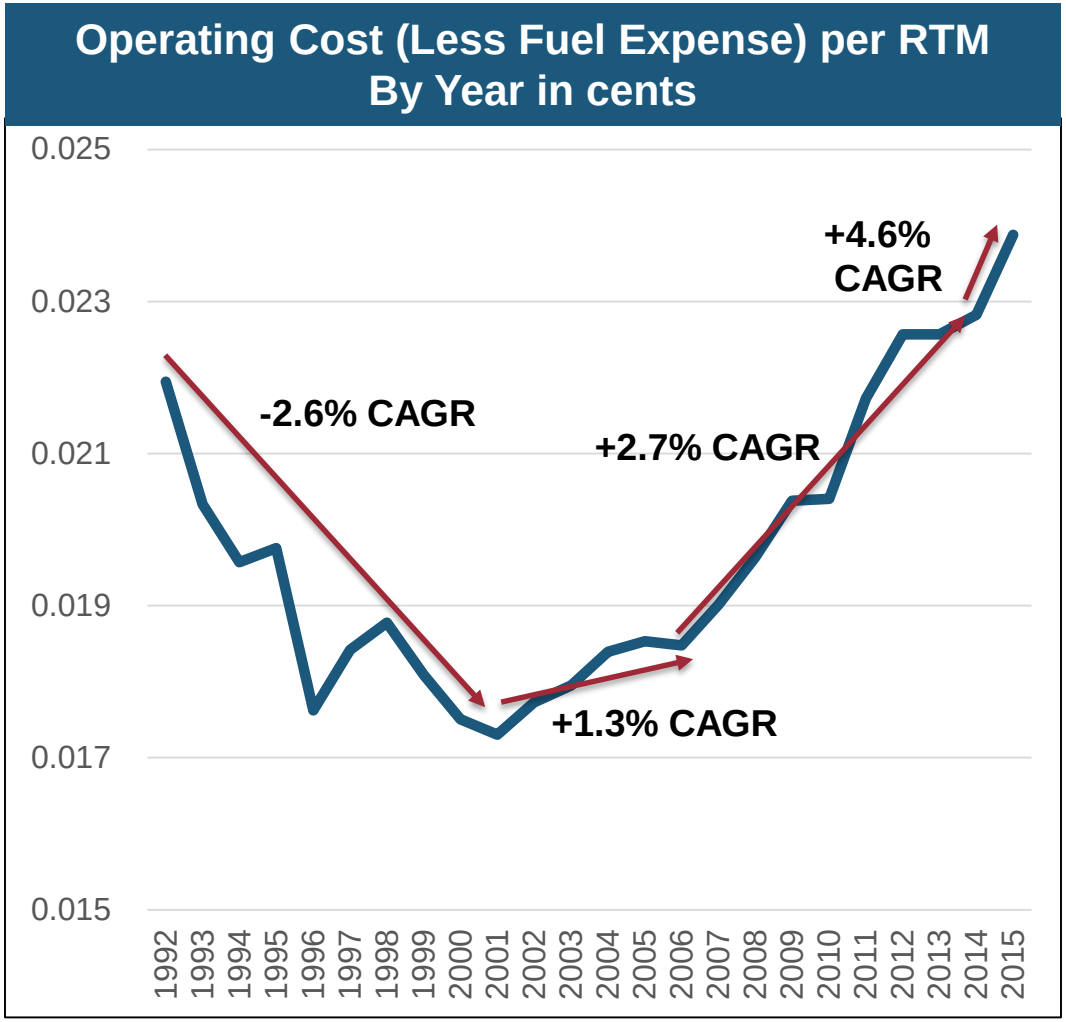


CAGRs		
	IML	Truck
2004-2014	2.1%	1.4%
2014-2016	(0.3%)	2.4%

- Intermodal gave back its market share gain in the Great Recession
- Intermodal regained share in the recovery, but…
- Gave back its share gains again in 2016
- Intermodal is only up 1.1% through 12 weeks of 2017

Sources: St. Louis Federal Reserve; Bureau of Transportation Statistics; AAR Commodity database; AAR weekly rail volume; TandLA analysis and estimates

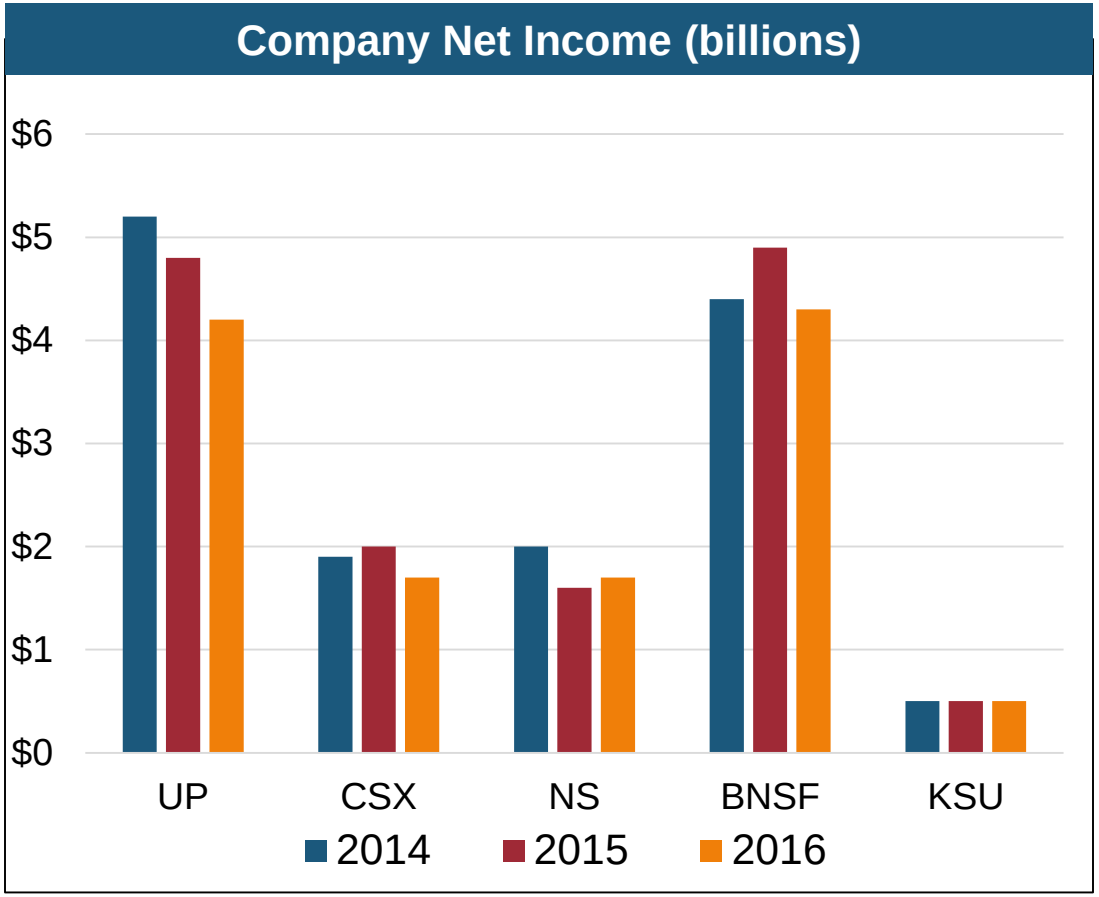
Railroads can no longer count on cost savings to drive earnings. Operating costs (excluding fuel) per RTM have been increasing since the early 2000's, and particularly since 2006



- Rail cost (excluding fuel) per RTM has changed significantly over time
  - From 1992 to 2001 *decreased* 2.6% per year
  - From 2001 to 2006 *increased* 1.3% per year
  - From 2006 to 2014 *increased* 2.7% per year
  - 2015 i*ncreased* 4.6%
- **Rail cost per RTM now climbing faster than inflation**

Sources: AAR Green Book data 1990– 2015; TandLA analysis and estimates

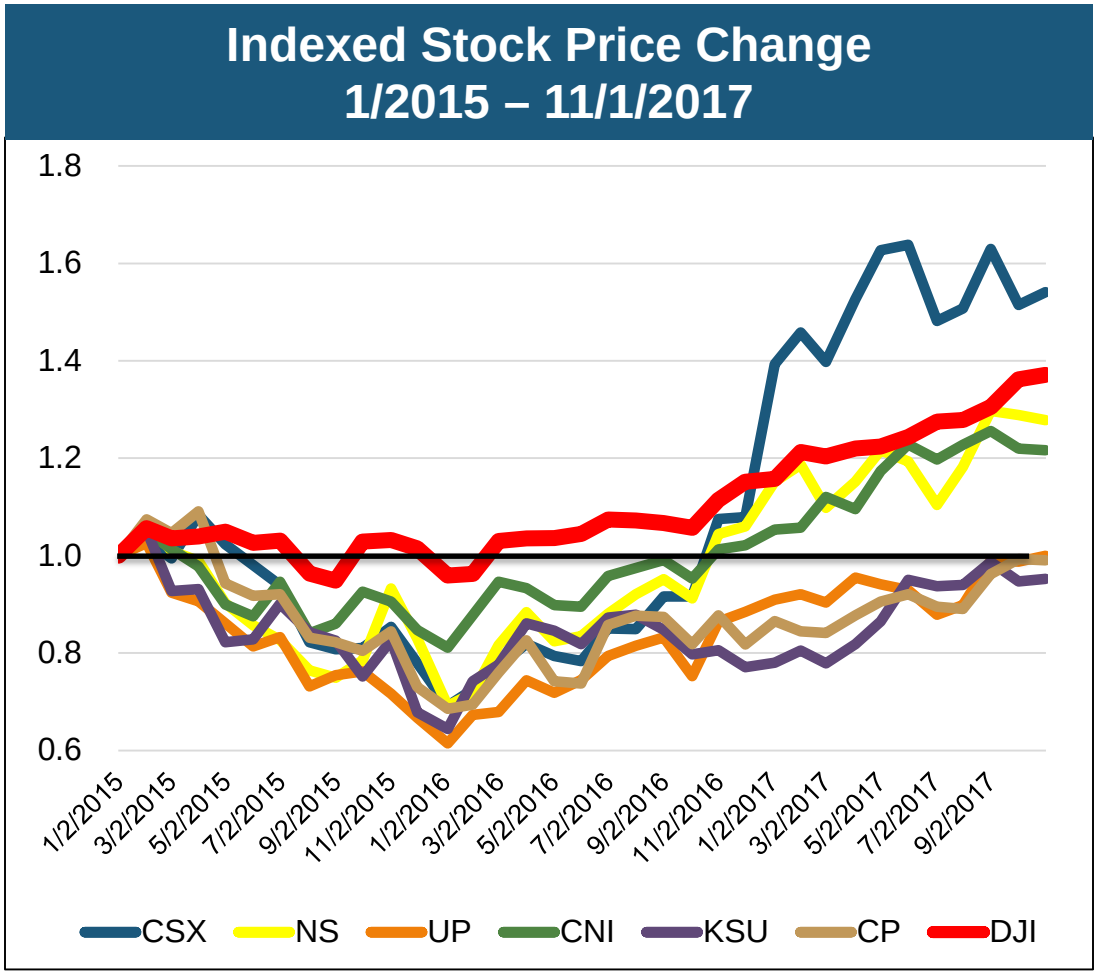
Volume declines and cost increases are now limiting net income growth



- 2016 net income was below 2014 levels at the four largest US railroads
- KCS held constant

Sources: Company 2017 10-K SEC filings; TandLA analysis

And, after a long run of beating the DJIA, railroad stock prices generally have been trailing the broader market



- Between 1/1/2015 and 11/1/2017, railroads stock mostly underperformed the broader market
- Most rail stocks underperformed the Dow
  - CSX: Up 54%
  - **Dow: Up 37%**
  - NS: Up 28%
  - CNI: Up 22%
  - UP: Flat
  - CP: Down 1%
  - KCS: Down 5%

Sources: Fidelity.com; TandLA analysis

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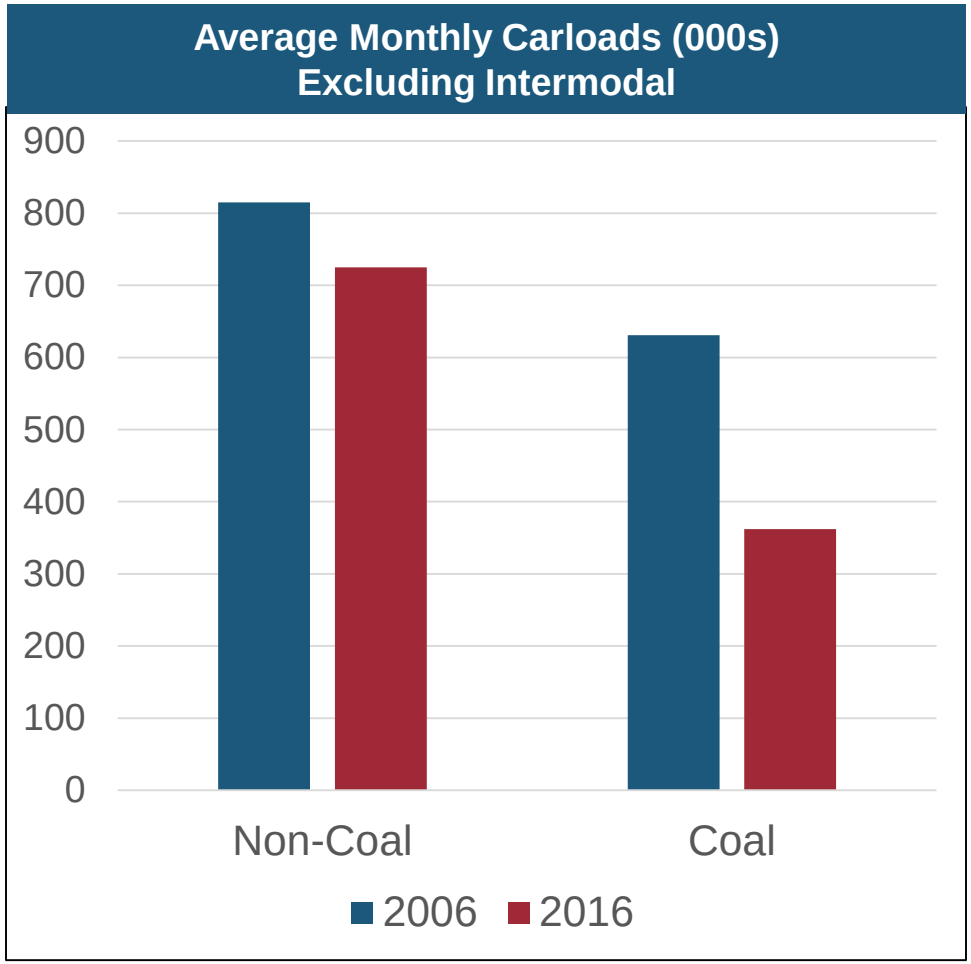
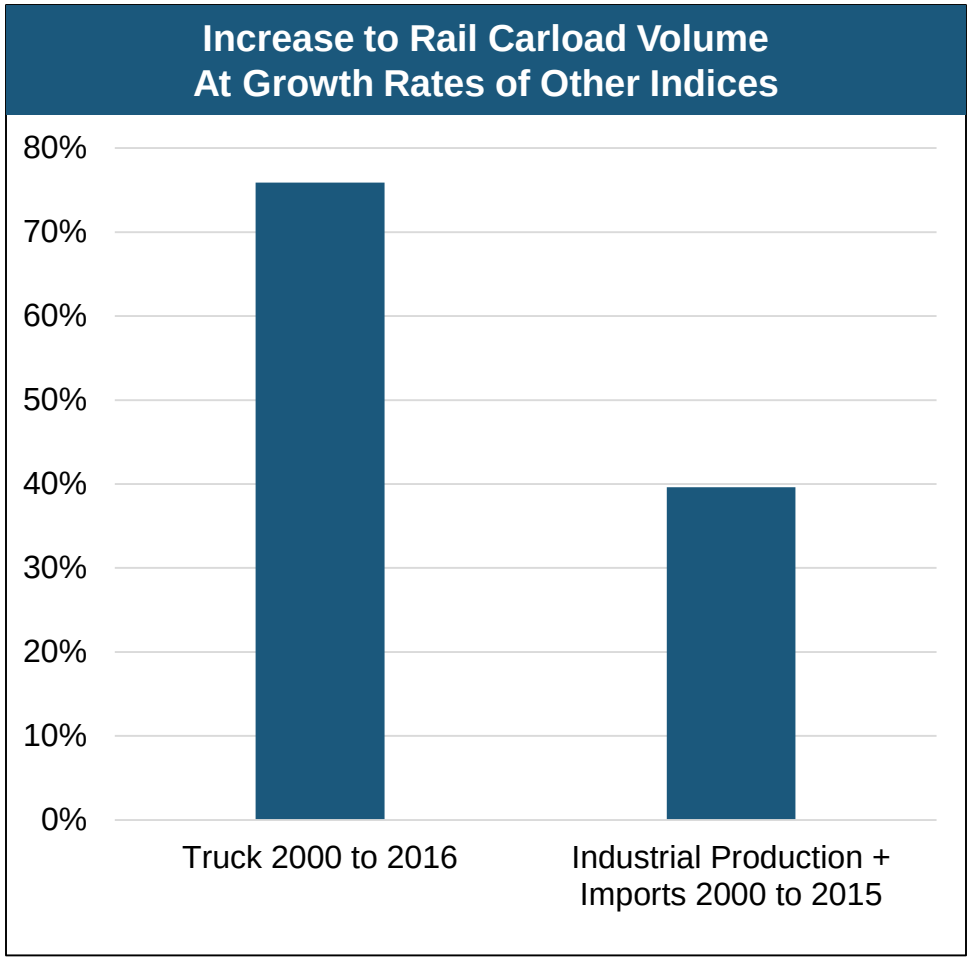
If railroads shift to a growth strategy, there is plenty of room to grow. Just gaining back lost *volume* would be significant



- Regaining volume to 2006 levels would increase carloads by 33%
- Even gaining back only the non-coal volume would add 12.5% more non-coal carloads to the system, or 8.2% to total carloads

Sources: St. Louis Federal Reserve; Bureau of Transportation Statistics; AAR Commodity database; AAR weekly rail volume; TandLA analysis and estimates

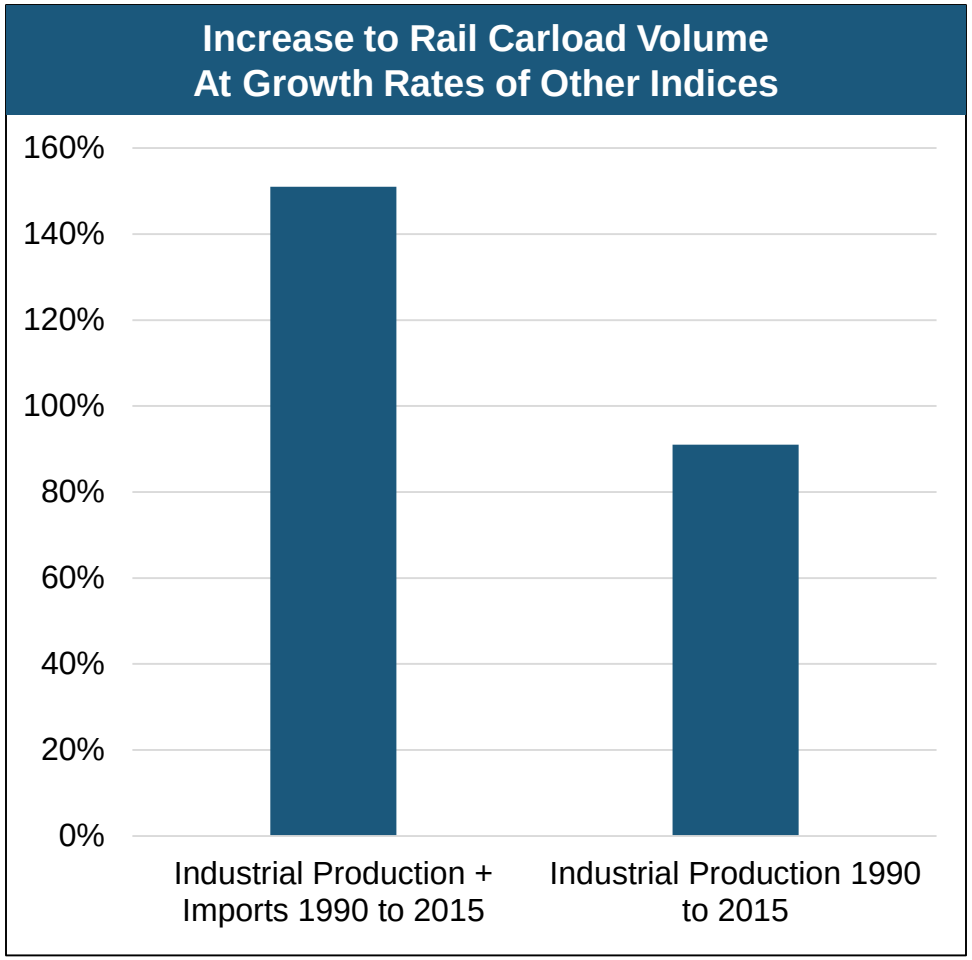
But regaining lost *share* from 2000 would be more significant. Carload volumes would be 40% to 75% higher today



- The overall economy in 2015 was 75% larger than it was in 2000 (30% on an inflation adjusted basis)
- Rail carload volume would have been 40% to 75% higher if rail had tracked truck tonnage or Industrial Production + Imports growth since 2000

*Truck is based on tonnage; Industrial Production + Imports based on inflation adjusted dollars
Sources: U.S. BEA; AAR Green Book data 1986– 2015; IANA data; St. Louis Federal Reserve; Bureau of Transportation Statistics; AAR Commodity database; AAR weekly rail volume; TandLA analysis and estimates

But if rail could regain its *market share of 1990*, carload volumes would be 90% to 150% higher than today



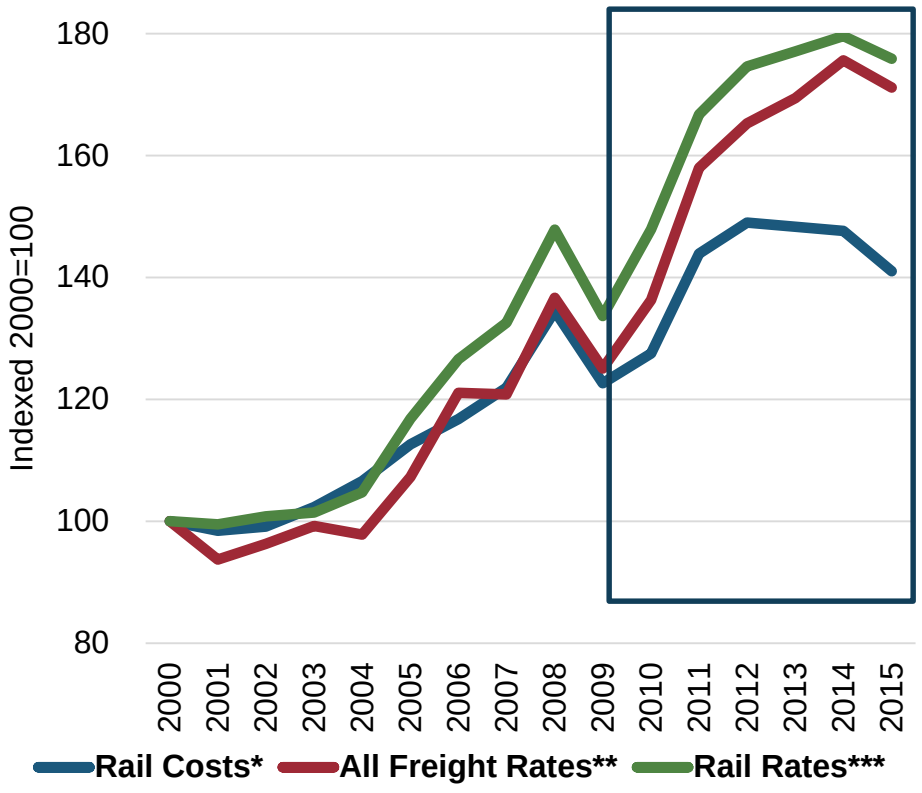
- 1990 to 2015
  - Economy *grew* 200%, 83% on an inflation-adjusted basis
  - Rail carload volume *declined* 4%
- Rail carload volume would have been 151% higher if rail had tracked industrial production plus imports since 1990
- Rail carload volume would have been 91% higher if rail had tracked industrial production since 1990 – disregarding the loss of production to imports

*Based on inflation-adjusted dollars

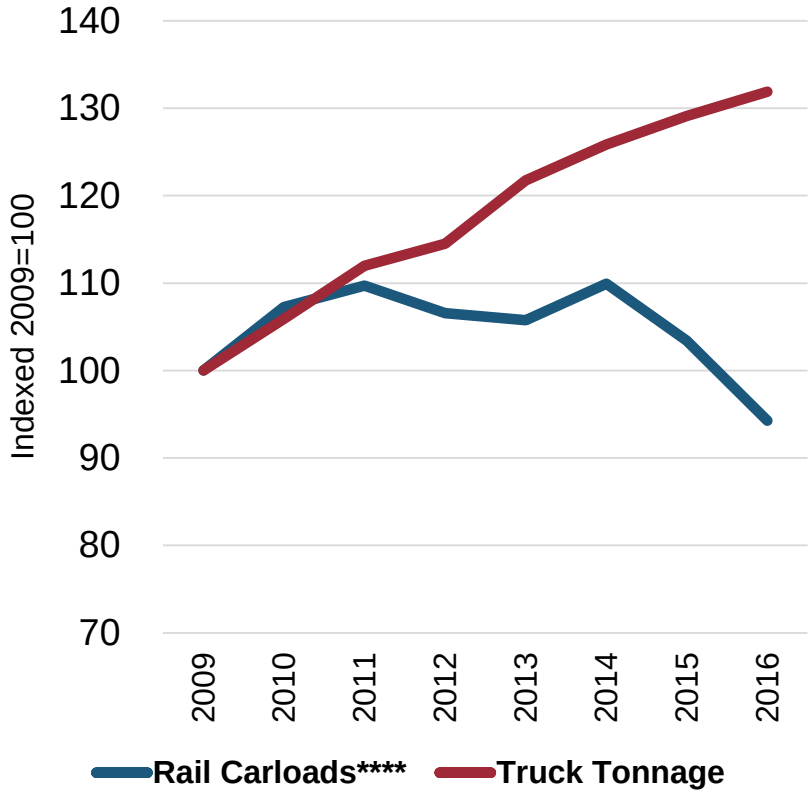
Sources: U.S. BEA; AAR Green Book data 1986– 2015; IANA data; St. Louis Federal Reserve; Bureau of Transportation Statistics; AAR Commodity database; AAR weekly rail volume; TandLA analysis and estimates

There are few economic barriers to rail growth. Most share loss occurred post Great Recession, when rail cost competitiveness was improving

Rail Costs vs. Transportation Freight Rates Indexed to 2000 Levels



Indexed Volume Growth by Mode 2009 Indexed to 100



*Rail expenses per revenue ton mile; includes intermodal
**Across freight modes, but most is truckload
***Industry revenue per revenue ton mile
****Excludes intermodal
Sources: AAR Annual Analysis of Class 1 Railroads; St. Louis Federal Reserve; Bureau of Transportation Statistics; AAR Commodity database; AAR weekly rail volume; CASS Freight Index; TandLA analysis and estimates

Going forward the outlook for trucking is for continued cost increases, but that alone is unlikely to reverse rail's share decline

- Trucking cost increases:
  - Truck driver shortage driving up pay and benefits
    - Exacerbated through new regulations
    - Drivers leaving the profession
      - Retirements – age profile is weighted towards older drivers
    - Barriers to bringing in new drivers
      - Insurance age requirements limiting bringing drivers in after high school, leading them into other professions
      - Pay and lifestyle gap versus manufacturing and construction
  - Electronic log (ELDs) limiting productivity
  - New, more costly engines to meet EPA requirements
  - Highway congestion continuing to decrease productivity
- Why this will not drive volume to rail:
  - Since 2009 rail share loss has accelerated in the face of a significant cost gap versus trucking
  - Unless the strategy changes, why will the future be any different?

For rail to regain lost share, it needs to reassess all aspects of its marketing strategy – *as cutting rates to grow is not an option*

Potential Levers	
• Existing Services	Understand where existing services can levered for growth
• New Services	Develop new service offerings to create value and capture volume
• New Channels & Fit with Digital Era	Provide the customer with more ways to buy your service

Existing Services - Understand where existing services can levered for growth

- Reassess processes, data and tools for managing existing services in existing markets
  - Current processes and tools were built for a different era and objective, are they aligned for managing share?
  - Reassess lost business, are we incrementally better off getting it back? Does it even still exist to get back?
- Reassess pricing structures
  - Are they structured so that we do not have to lower price on existing business to gain incremental business?
- Reassess benefits of incremental volume. Cost gaps have opened vs. truck is it now worth pursuing?
  - Do we understand the incremental impacts of adding volume from existing customers vs. new customers?
- Reassess the market rail doesn't have. A lot of old move have gone away, but new ones have emerged.
  - What don't we have that the existing services can compete for?
  - Shift from "rust-belt" to south?
  - Shift to imports?

New services – Develop new service offerings to create value and capture volume

- TandLA believes that there are significant barriers that to-date have prevented new rail services from coming to market
- TandLA also believes that the barriers are not rail costs and that new services can be built with higher margins than existing services
- We believe that the barriers to these services to date are:
  - Inability of shippers to know what could be done
  - Capital and facilities to support the new service
  - Channels to sell the services
  - Access to “C-Suite” to sell change
- Some new services may require the participation of labor in the service design

New Channels & Fit with Digital Era – Provide the customer with more ways to buy your service

- Lack of rail sales coverage
  - Compare rail sales as a percent of revenue or on any other metric versus other transport modes – the gap is in the 10X+ range
- Lack of alternative channels
  - Only intermodal has channel partners
  - Nearly every other mode uses partners for some or all of the go-to-market processes
    - Almost all modes are selling through transport management companies
    - Most/all TL carriers use both agents and brokers
    - Most/all LTL carriers fastest growing channel is agents (two different types)
    - UPS has a franchise reseller, as does FedEx
  - Issue is not to have or not have an alternative channel, but how to structure the relationship
- Digital channels
  - Fit in supply chain planning software
  - Fit in tactical bidding software for developing annual plan
  - Fit with TMS systems for load execution
  - Fit with service recovery/load covering processes
  - VAR's, standardize modules, add as a technology update?

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