

## Rail Renaissance: Returns, Capital & Capacity

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**SEARS/Chattanooga!**

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# Rail Assessment

## Strengths

- Strong secular growth
- Favorable market structure
- Supply constraints
- Solid barriers to entry
- Limited alternatives

## Opportunities

- Pricing
- Volume Growth
- Service levels / productivity
- Modal shift
- Consolidation?

## Challenges

- Capital intensity
- Capacity bottlenecks
- Port congestion
- Reliability vs. trucks

## Threats

- Economic malaise
- Rising capital requirements
- Regulation
- Maritime trade flows

## FY2010/H12011 – Recovery is not just an Eminem song

- Rails (all modes) surprised by the volume strength
- 2010, H1/11 results exceed street expectations; slowdown feared....
- 2011 – guidance returns to some extent
- Capex numbers way (20%+) up – but so are overall free cash flows, DPS and repos
- 2012 - beyond recovery into growth?

# Future Growth Potential

- Oil, Carbon, Infrastructure & Efficiency/5 Secular stories
- 1-Intermodal – International *and* Domestic
- 2-Grain – the world's breadbasket
- 3-Coal? Exports – “legs”?
- 4-Shale to the rescue?
- 5-Chemicals
- The Manifest/Carload “Problem”/MSW (garbage), perishables, others
- Point-to-point vs. Hub & Spoke (or Southwest vs. United)

# Railway Innovation

- CP – larger trains
- CN – alliances, routing protocols – the scheduled railroad!
- BNSF – grain “Shuttles”; JBHT&Domestic Intermodal
- NS – PPPs, JVs and “Corridors”
- KCS – little engine that can - Mexico
- CSX – MSW, RailEx, Trop Train, etc....
- UP- Doublestacks, exploiting the carload franchise; the PRB
- All: Short line cooperation, Operating Plans, communications/IT/PTC, Disintermediation, operating excellence....

# Intermodal Growth Drivers

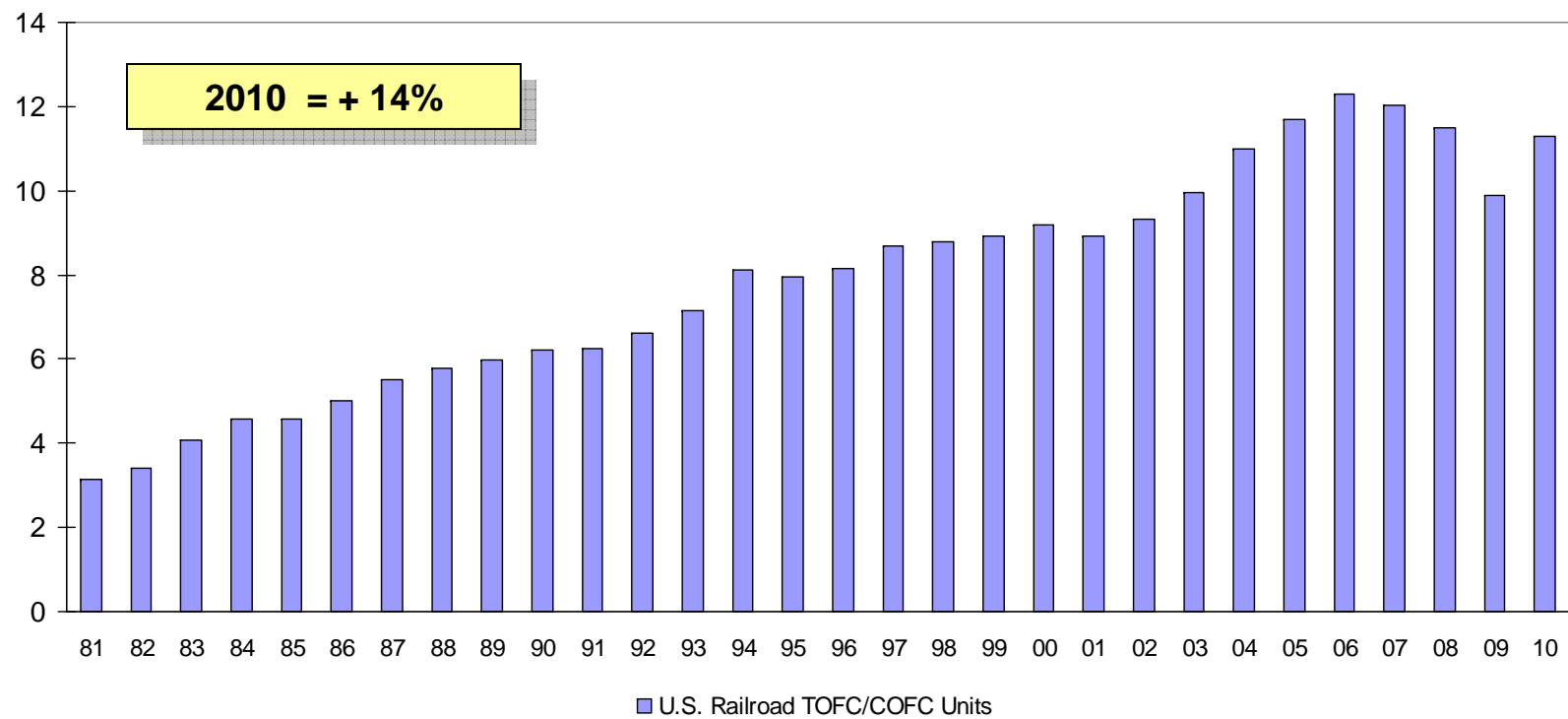
## Domestic *and* International

- **Globalization**
- **Trade**
- **Railroad Cost Advantages**
- **Fuel prices**
- **Carbon footprint**
- **Share Recovery From Highway**
- **Infrastructure deficit & taxes**
- **Truckload Issues; drivers**



# U.S. Railroad Intermodal Traffic

(millions)



Source: Association of American Railroads' *Weekly Railroad Traffic*

# Domestic Intermodal

- The real growth opportunity is the age-old goal of taking trucks off of the highway
- Driving down the LOH (requires very tight service standards)
- Corridor development (see NS' "Crescent"); truck partnerships (see JBHunt)
- Fuel price, carbon footprint, infrastructure shortages and congestion, driver shortages (CSA 2010)
- Trailer (TOFC/"Piggyback") the gateway drug" for containerization
- Opportunities in unitized carload as well

# Carbon Footprint– from cocktail chatter to decision point

- 2003 – 221/F500 report on carbon; 409/F500 in '09
- Green supply chains enforcement by Wal-Mart (from \$2B transport spend to \$4B+ by '11); GE, P&G, etc....
- Anticipating future EPA regs and emissions law

# Truck/Rail Intermodal Market Share

## Truck and Rail Intermodal in Markets 500 Miles and Greater

Mileage Blocks	Truck	Rail Intermodal	Total Market	Truck Share	Rail Share
500 to 749	17.8	1.2	19.0	94%	6%
750 to 999	10.1	2.3	12.4	82%	18%
1000 to 1499	7.7	2.0	9.7	79%	21%
1500 to 2000	3.7	2.1	5.8	63%	37%
>2000	2.8	4.9	7.7	36%	64%
<b>Total</b>	<b>42.1</b>	<b>12.5</b>	<b>54.6</b>	<b>77%</b>	<b>23%</b>

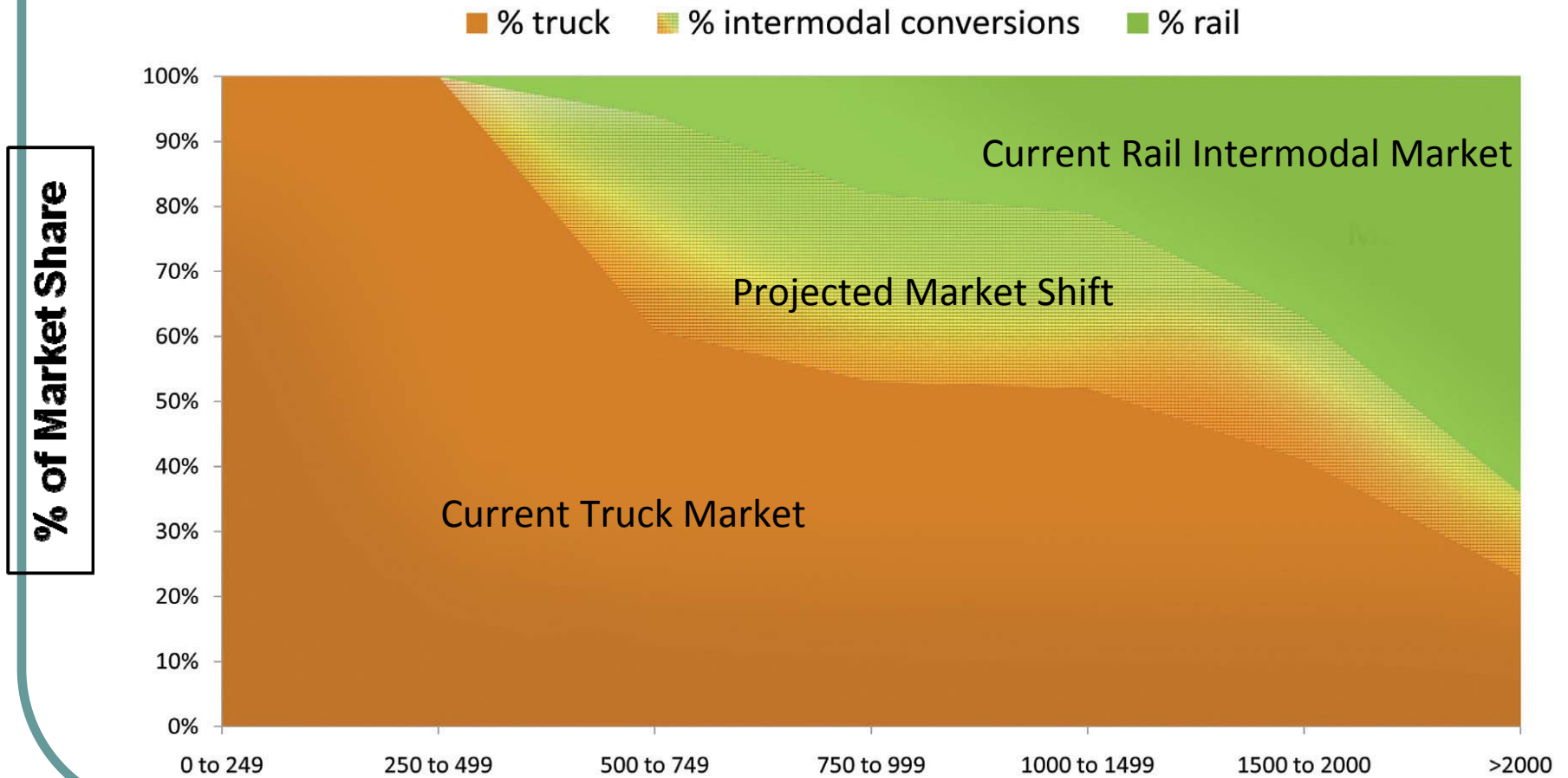
Millions of units

Source: Assessment of 2007 Commodity Flow Survey and 2007 Rail Carload Waybill Sample

**National  
Rail Plan**

# National Rail Plan

## Modal Shift Projection



# Truck/Rail Intermodal Market Share 2035 Status Quo

## Truck and Rail Intermodal in Markets 500 Miles and Greater

Mileage Blocks	Truck	Rail Intermodal	Total Market	Truck Share	Rail Share
500 to 749	22.0	1.5	23.5	94%	6%
750 to 999	12.4	2.8	15.2	82%	18%
1000 to 1499	9.4	2.5	11.9	79%	21%
1500 to 2000	4.6	2.7	7.3	63%	37%
>2000	3.4	6.0	9.4	36%	64%
<b>Total</b>	<b>51.8</b>	<b>15.5</b>	<b>67.3</b>	<b>77%</b>	<b>23%</b>

Millions of units

**National  
Rail Plan**

Source: Assessment of 2007 Commodity Flow Survey and 2007 Rail Carload Waybill Sample

# Truck/Rail Intermodal Market Share

## 2035 50% Market Share

### Truck and Rail Intermodal in Markets 500 Miles and Greater

Mileage Blocks	Truck	Rail Intermodal	Total Market	Truck Share	Rail Share
500 to 749	14.3	9.2	23.5	61%	39%
750 to 999	8.1	7.1	15.2	53%	47%
1000 to 1499	6.1	5.8	11.9	52%	48%
1500 to 2000	3.0	4.3	7.3	41%	59%
>2000	2.2	7.2	9.4	23%	77%
<b>Total</b>	<b>33.6</b>	<b>33.6</b>	<b>67.3</b>	<b>50%</b>	<b>50%</b>

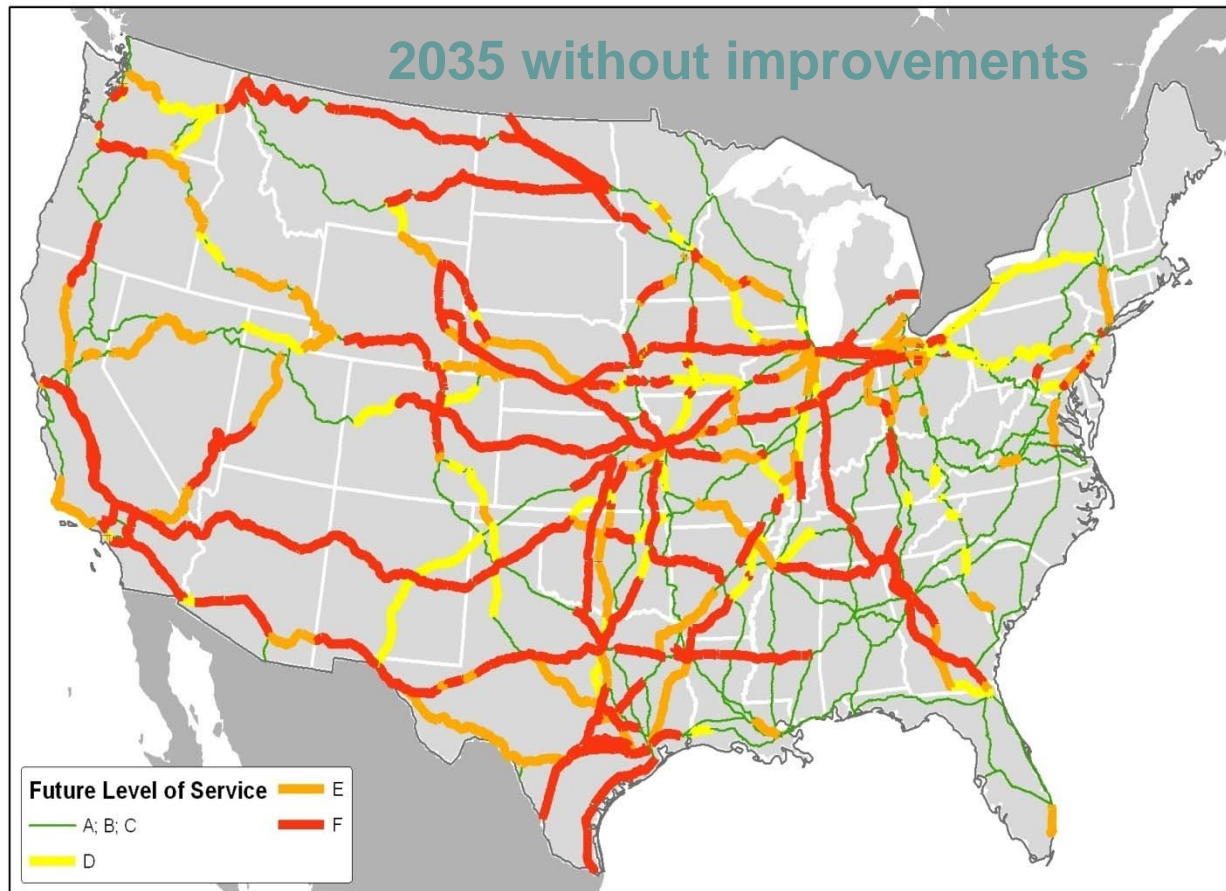
Millions of units

Source: Assessment of 2007 Commodity Flow Survey and 2007 Rail Carload Waybill Sample

One example of the dramatic benefits of shifting to rail intermodal is illustrated by the fact that just one long-distance, double-stack train between Chicago and Los Angeles can save 75,000 gallons of fuel by replacing 300 trucks, each traveling 1,983 miles.

Source: *Comparative Evaluation of Rail and Truck Fuel Efficiency on Competitive Corridors*, ICF International, published by the Federal Railroad Administration (2009)

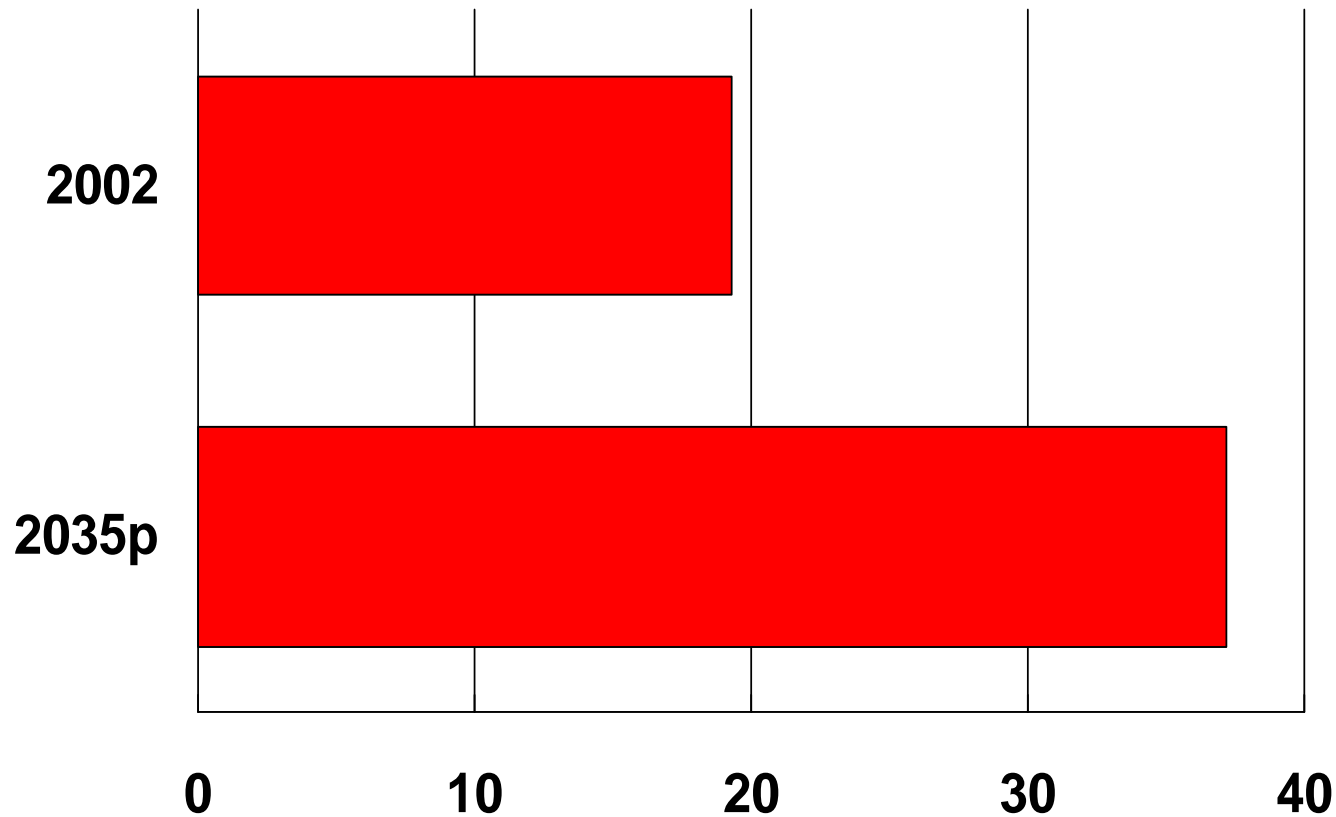
# CS: Future Corridor Volumes Compared to Current Corridor Capacity (Cambridge/AAR) - 2007



- Below capacity
- Near capacity
- At capacity
- Above capacity

# DOT: Future Demand for Freight Transportation Will Continue to Grow

*Billions of Tons of Freight Transported in the U.S.*



p – U.S. DOT projection

# S0 -What *is* the growth rate?

- Great studies done – in 2007/ New ones- “*any day now....*”
- Is there a “Great Re-set”? (paper, autos, retail, coal)
- Or do we look past 2035 and simply add a few “lost” years? (the emerging consensus save for the coal question)
- AAR new assumptions suggest coal is flat from DOT projections while the rest reaches 2025 targets despite Great Recession impact (ie; *future intermodal/carload growth is higher than recent studies...*)
- Will the government policy help to increase modal share by 10%?

## Rail Intermediate term volume prospects

### ABOVE GDP

- Intermodal – Domestic (++)
- Intermodal - International
- Agricultural products
- Export Coal
- Ethanol

### BELOW GDP

- Paper
- Auto Parts (?)

### GDP-GROWTH

- Autos
- Lumber
- Chemicals (+?)
- Aggregates
- Metals

### UNCERTAIN

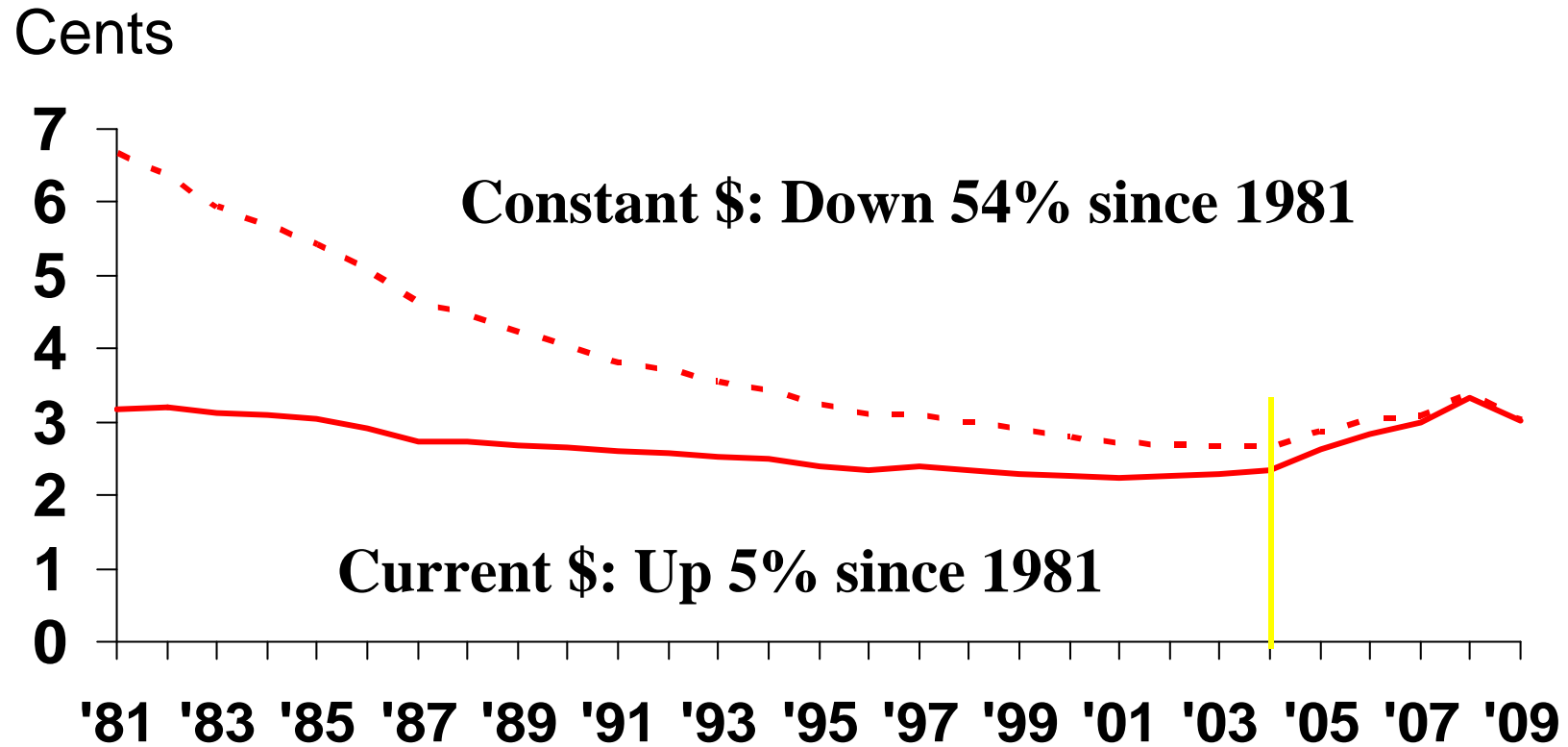
- Domestic Coal

# Growth is Expensive

- Huge Capex - \$50B in the last 5 years in the US – *through the Great Recession!*
- AND: Comeback of the share repo/DPS?
- EPS beat the Street consistently, yet:
  - Uneven returns in the Modern Age
  - Recent improving trend line
  - Threats to ROIC threaten capacity
  - *Street begins to call for capex reduction?*

# Railroad Rates- the old story

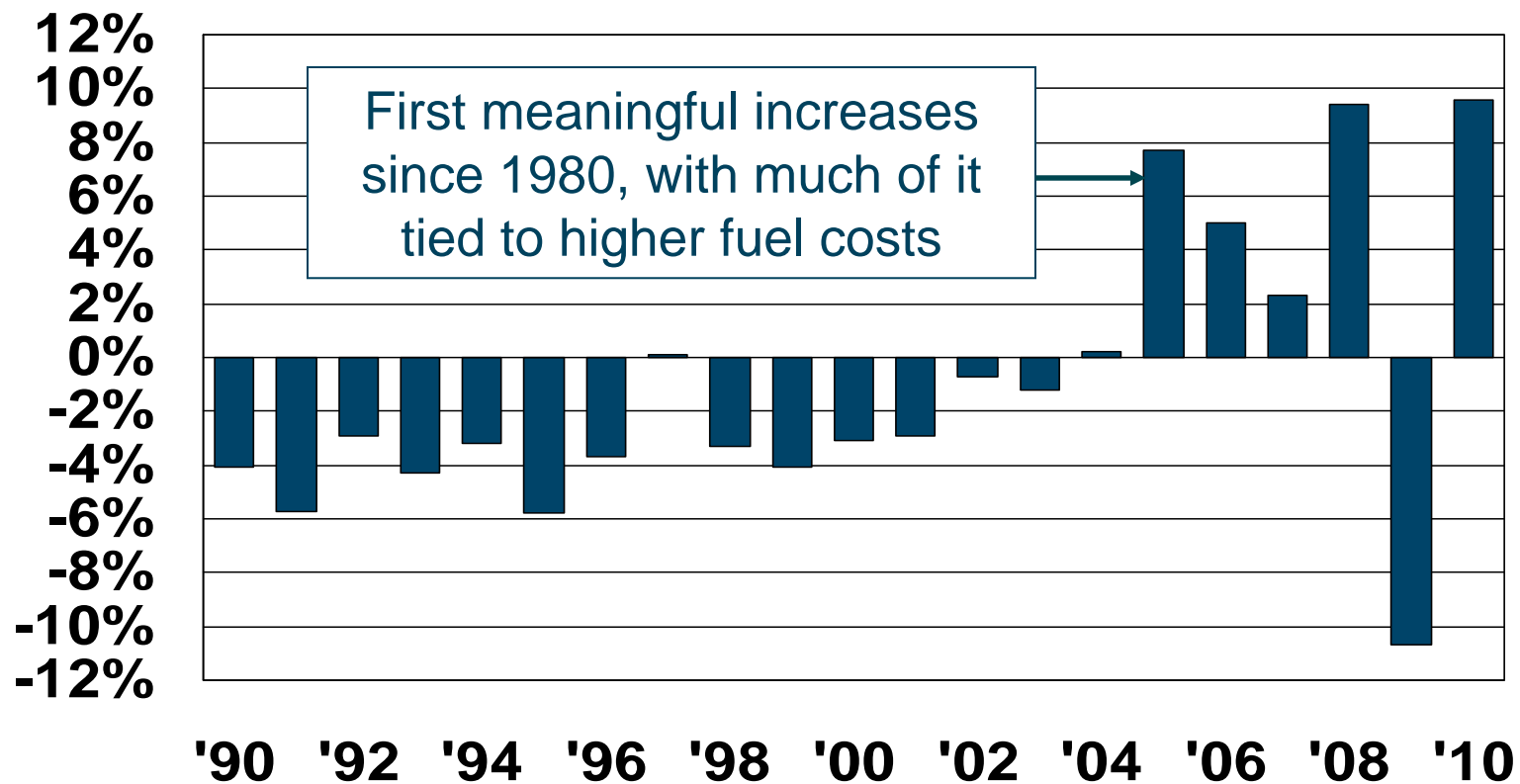
Class I Railroads, Revenue Per Ton-Mile – *another (related) New Paradigm*



Source: *Railroad Facts*, AAR

# Rail Rates Began to Rise

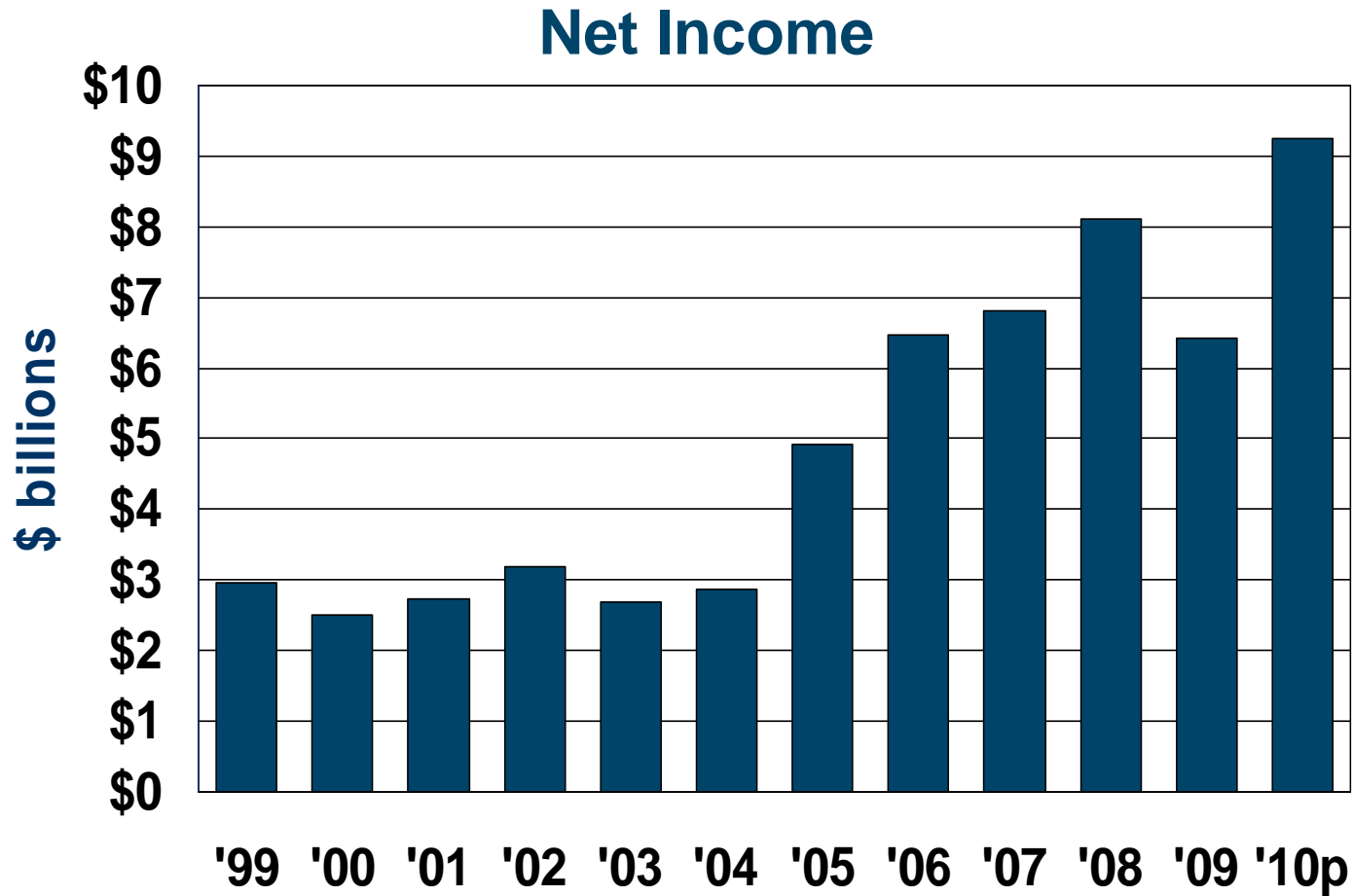
% Change in Avg. Inflation-Adjusted Rail Rates\*



\*Revenue per ton-mile

Source: AAR

# Finally, Railroads Making Decent Money...



Source: AAR

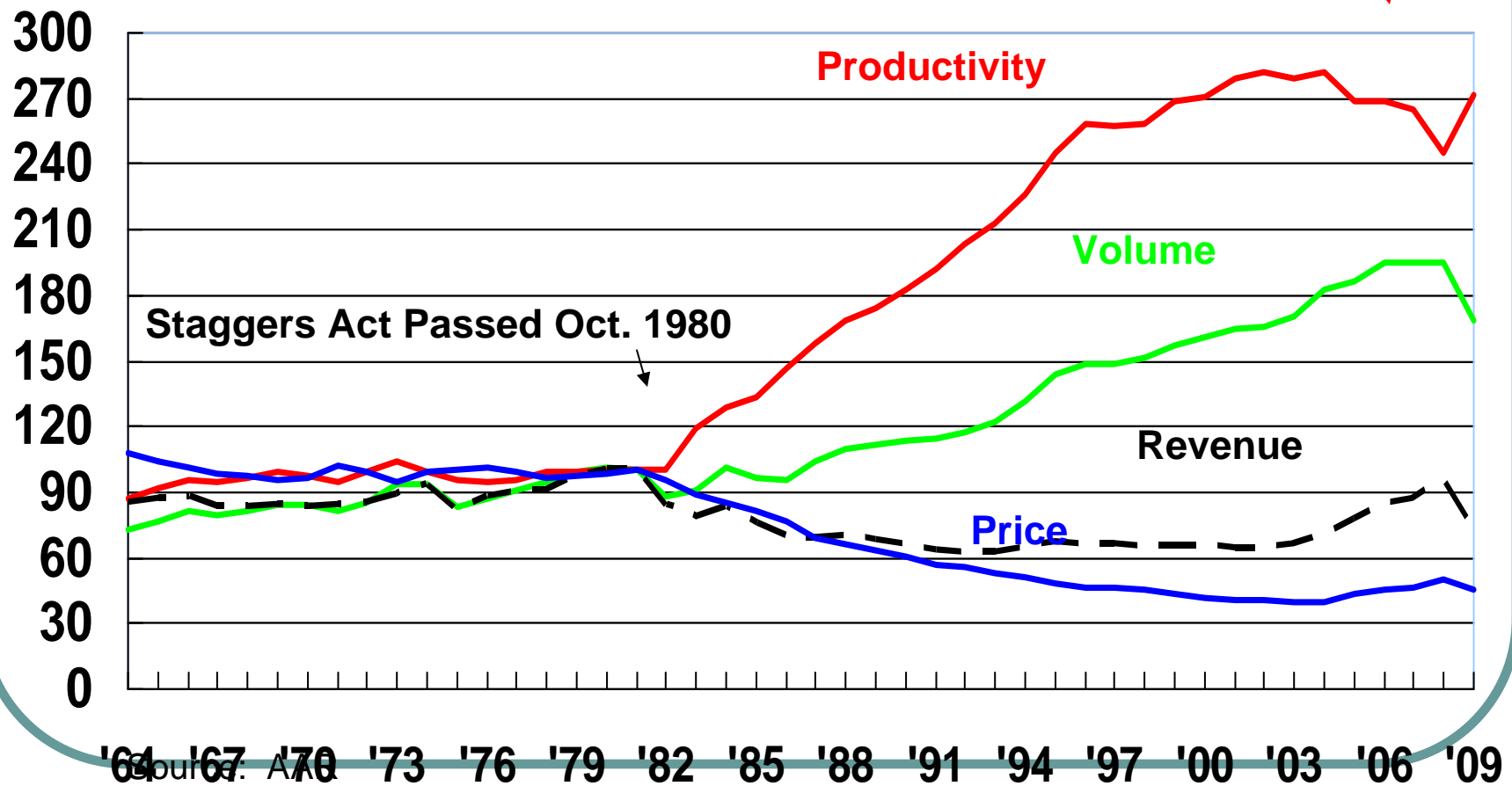
# Regulatory Review/Discussion

- Staggers (1980) and predecessor Acts
- Freedom to set rates
- Freedom to sell/abandon low density track (growth of short line industry)
- Freedom to exit passenger business
- Impetus to cut costs, divest massive non-rail holdings & become “pure” rail plays

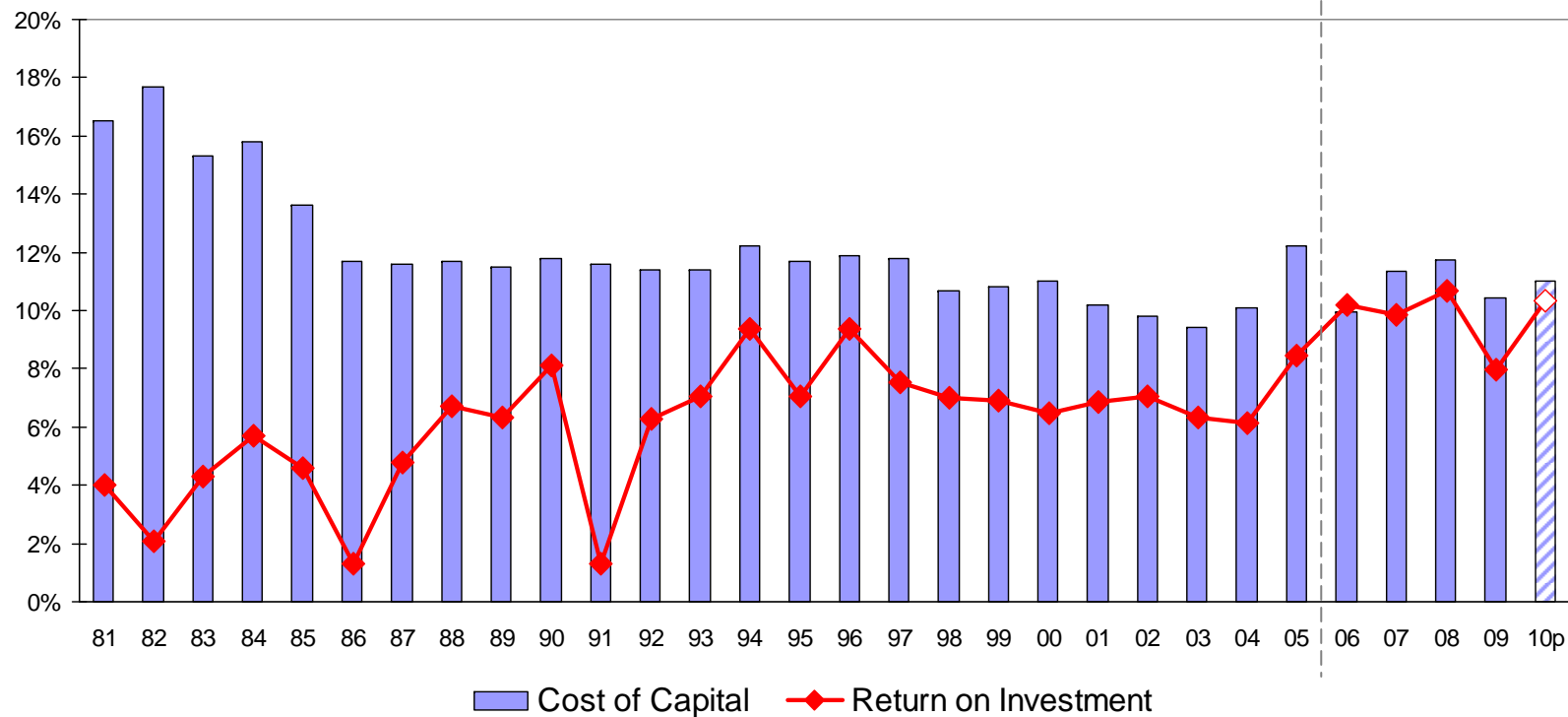
# The Staggers Act: An American Success Story

(Index 1981 = 100)

Productivity decline due  
mainly to fuel price volatility.

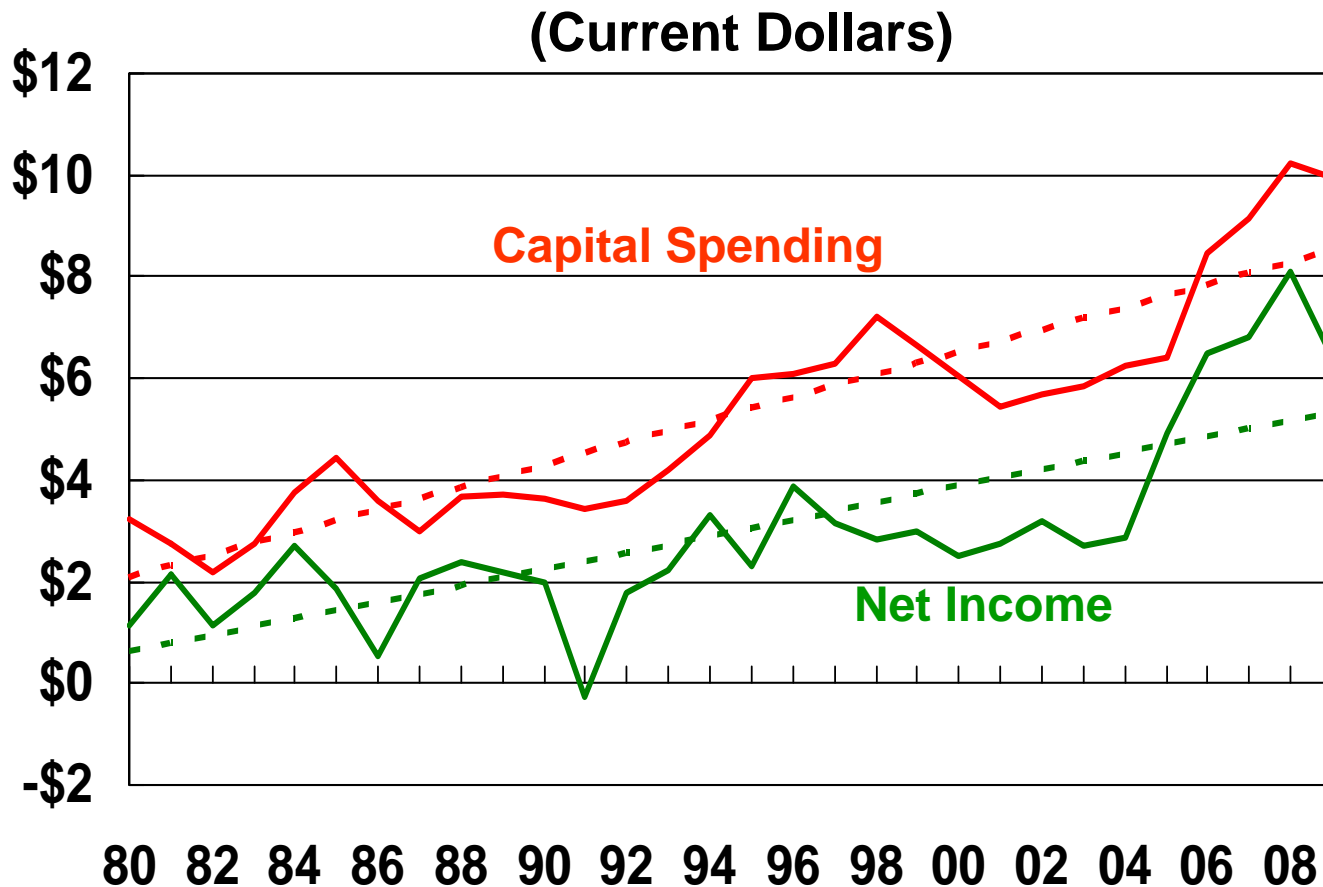


# RR CoC vs. ROIC – RR Stocks have done well but... they still trade at a discount to all stocks



Source: Surface Transportation Board      2010p Cost of Capital is AAR filing, not decided by STB  
Note: Cost of equity estimation method changed by Board effective 2006 and 2008.

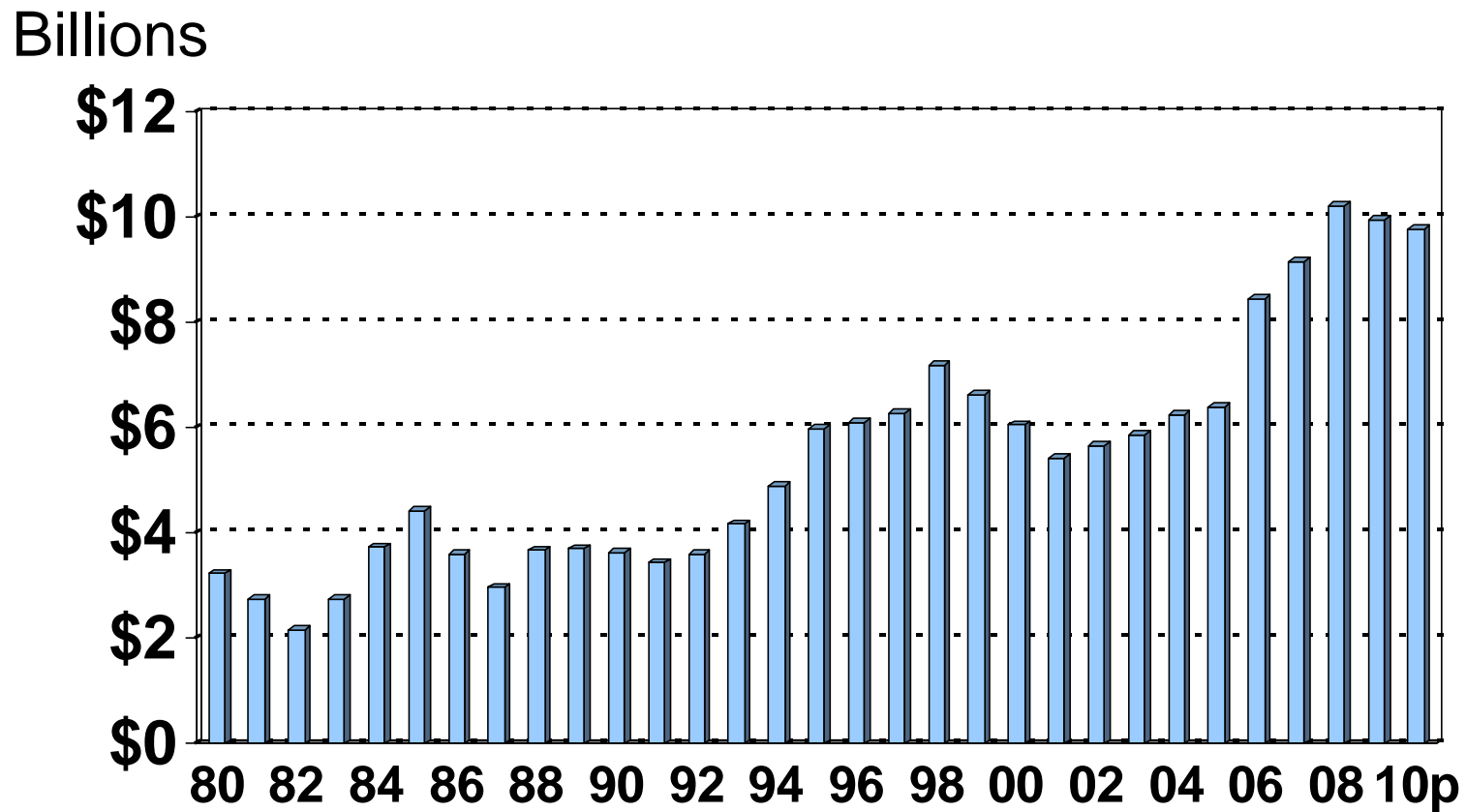
# Class I Railroad Capital Spending vs. Net Income



Source: Association of American Railroads

# Railroad Capital Expenditures

Class I Railroads



Source: *Railroad Facts & Analysis of Class I Railroads*, AAR

# What is covered by the STB

- Regulated traffic constitutes about 20% of the rail total (and a higher % of OPI)
- Non-competitive, “Captive Shipper” traffic (ie; not intermodal, lumber, etc)
- Contract traffic is voluntarily exempted (so % could increase – to a third? - if one side or the other saw the advantage in moving to tariff)
- Greater impact on the east (exact margin/contribution etc data unknown – even to carriers themselves?)

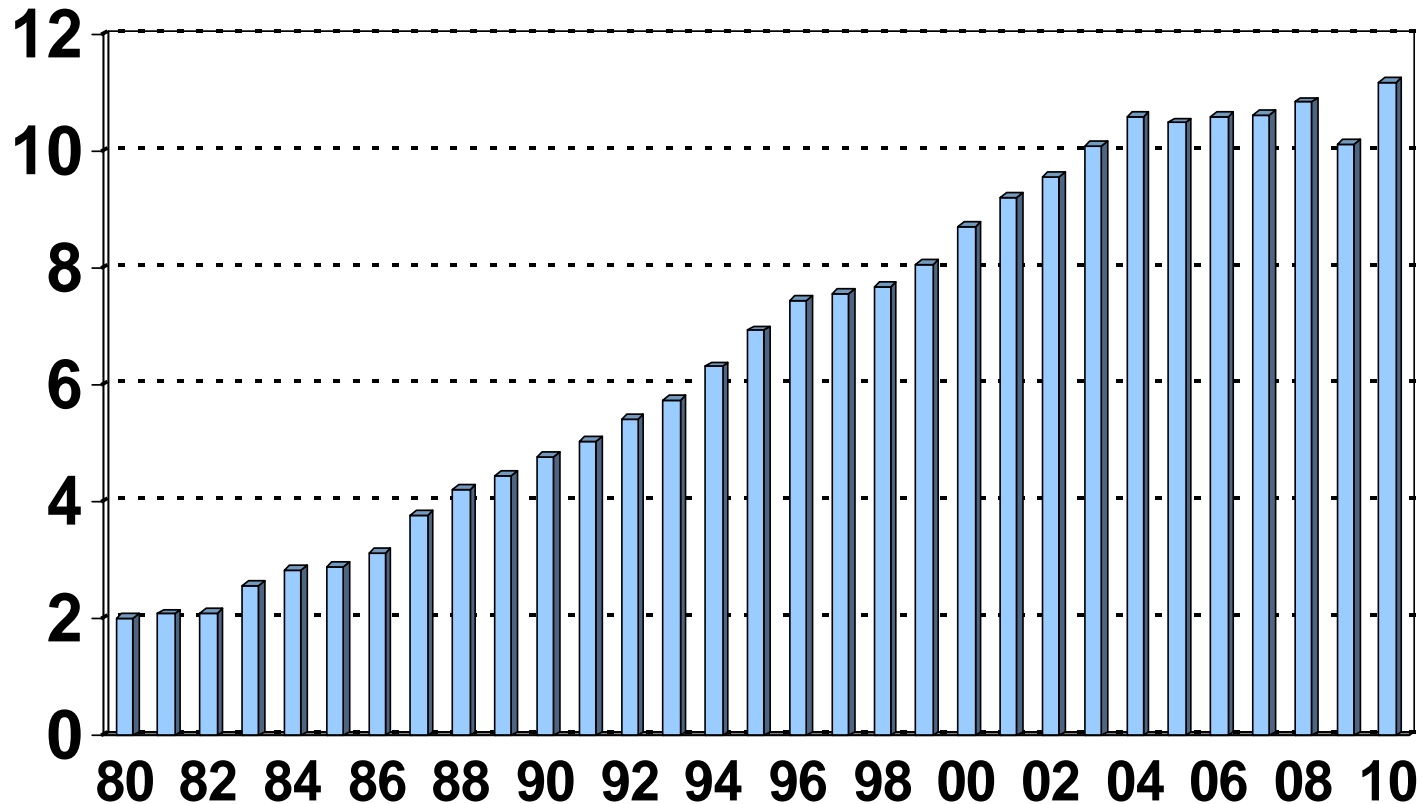
# Positive Train Control (PTC)

- “Unfunded Mandate” – part of 2008 safety bill
- Overseer is FRA – who puts cost/benefit ratio at 22:1
- Rails have put cost of installation and maintenance at \$10B – and rising (UP, CSX have increased 2011 capex based in PTC)
- Possible benefits in capacity, velocity, fuel consumption as well as safety; many of those captured by other technological advances
- Covers all rail interaction with passengers and TIH as of 2008; short lines exempted
- Technology proven only in limited scope (BN/Wabtec: “ETMS”)
- Initiated after Chatsworth accident – obvious public benefits
- Contrarian viewpoints exist – the new “Digital Railway”
- Efforts to reduce footprint, extend deadline....

# Railroad Employee Productivity

Class I Railroads, Ton-Miles Per Freight Service Employee

Millions



Source: *Railroad Facts*, AAR

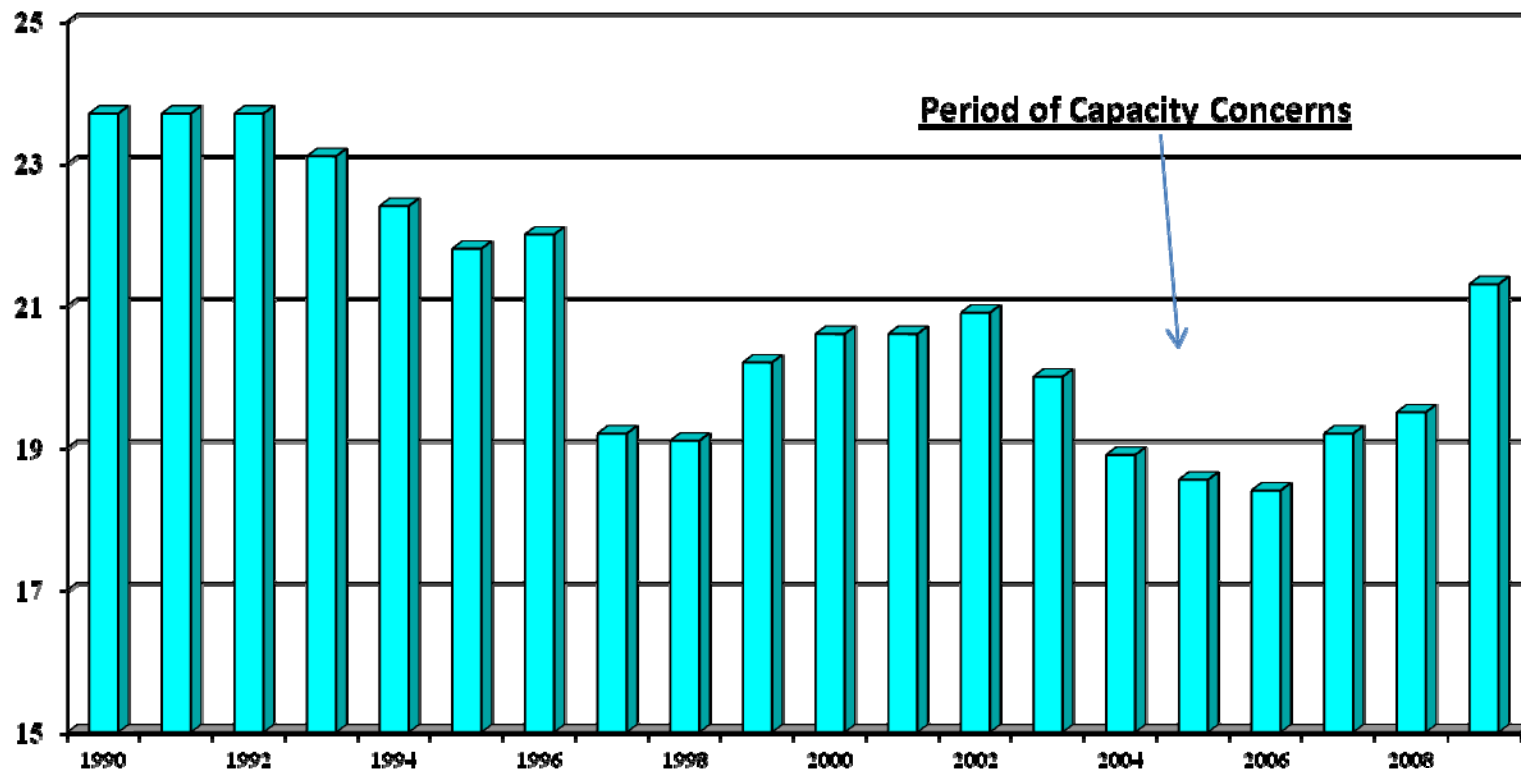
# Rail Service Cycles

- Is the recent improvement in the metrics sustainable? Systemic?
- Is it a product of huge capex injection and IT?
- Or, is it merely a product of lower volumes/less stress on the network...

## Service will be the Key to the Next Cycle

- Service at all time highs
- \$40B spend in last 5 years (service ought to be better!)
- Putting increased traffic back on at current velocity means: Higher asset utilization, more market share gains, greater operating leverage (perfect circle affects all stakeholders)
- Implications for equipment fleets

# Freight Train Speed (Class I Railroads)



Source: Analysis of Class I Railroads, Association of American Railroads (Freight train miles per freight train hour)

# Current Issues

- Rails in the Recovery – or in another slowdown?
- What's true? *RR traffic or business headlines?*
- *Capex – Strategic or Tactical plans prevail?*
- After the Rereg Fight what? STB? TSW?
- Govt role –partner? Or preoccupied &broke?
- The Green mantle – two-edged sword....
- PE &Infrastructure funds – back for good?
- New “Golden Age”? **Service**

# Street influence on RRs – and Why that affects ALL stakeholders

- **Battle for cash**
- **Management's reactions to pressures**
- **Investors, competitors, regulators, politicians, labor – oh, yes, and customers**
- **Rare Industry: Short term decisions (current economic outlook)/long term consequences (40+ year life of a locomotive)**
- ***Remember 2004! (?) – rails unprepared for volume; embargoes***
- **Which “bucket” (Capex, share repo, DPS) will they place their chips?**

# Simple Math

- Rates
- Returns
- Capital Expenditures
- Capacity
- Service

*ARE ALL CONNECTED!*

*Virtuous Circle ('03-07) or Disinvestment?*

# Developing website

- [www.abhatchconsulting.com](http://www.abhatchconsulting.com)
- *TopShipper Survey*
- *RailTrends 2011 November 1-2*



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# Warren's \$44B "all-in" bet

- Advantages of going private? (capex cycle) – *will we see now?*
- Influence in DC - "Robber Baron" vs. "Sage"
- Bets not (just) on economy – rereg, coal, western intermodal
- Bought on the cheap! – How does the investment look today, folks?