Roads in the Fork: Railroads 2018 & Beyond

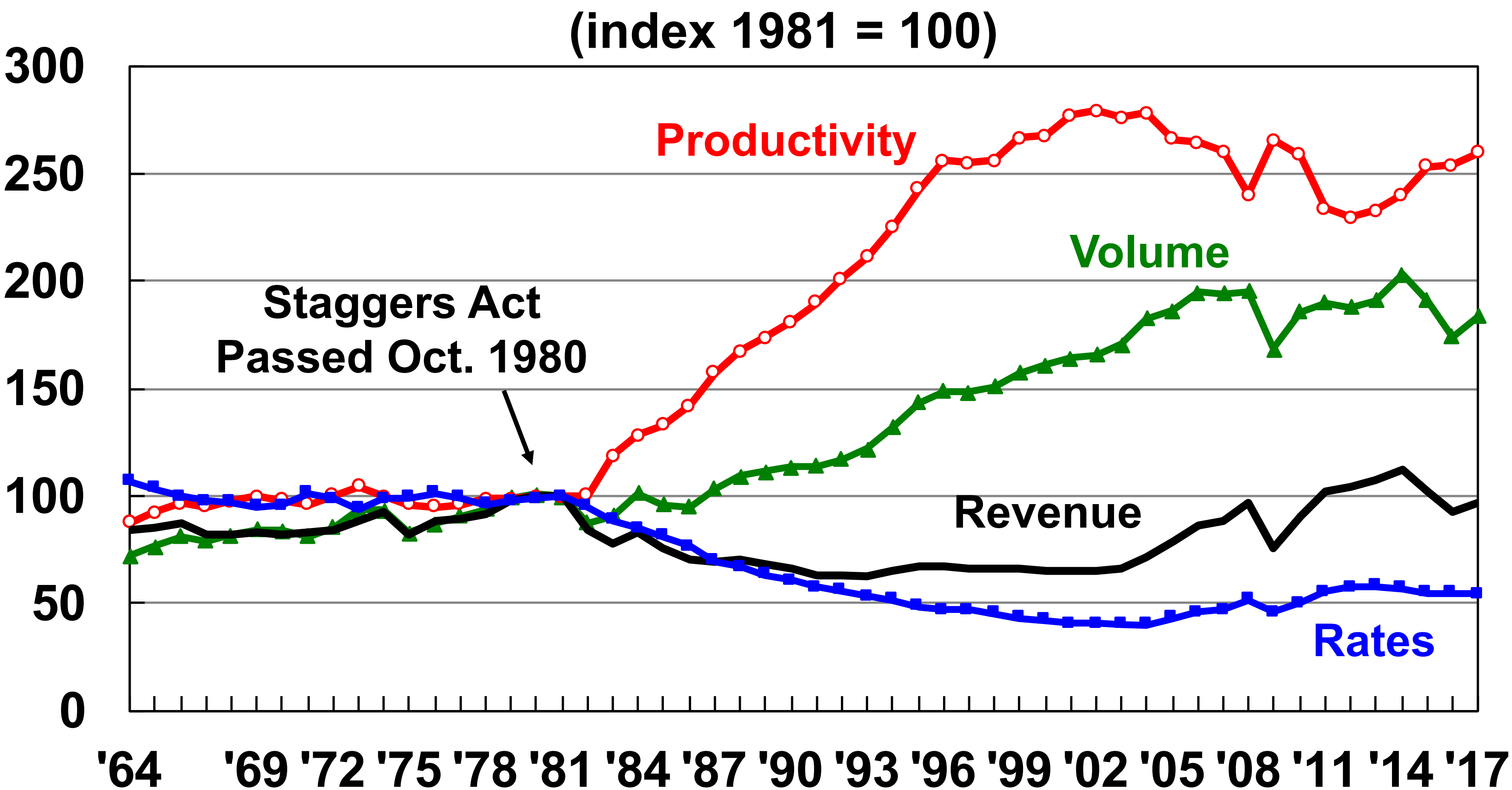
abh consulting

NU/Sandhouse

Christmas Lunch

December 4, 2018

The U.S. Freight Railroad Industry in One Chart



Source: AAR

Renaissance 2?

- New Operating Plans!! PSR vs Other? PSR vs PHH?
- Intermodal? Opportunity or Missed Opportunity?
- Merchandise: Plastics? Housing? Perishables? ? Infrastructure? (??)
- CBR back from the dead? Sand back to the dead?
- Trade?? 42% *US* RR units (in 2014….)
- IT spend? Versus….
- IT Threat? (AV/Tesla/Amazon/etc)?
- Capex vs. FCF in the era of the Activist?
- New Golden Age for Short Lines?

PSR Spectrum
Precision Scheduled Railroading

- Hunter: IC to CN to CP to CSX
- PHH: CN, CP, soon CSX?
- PSR without EHH+: “Measured”, “Lite” or “2.0”?
- PSR as part of G55+0/Unified Plan 2020
- PSR tenets informing new Operating Plan: NSC
- PSR-by-Neighbor: KSU
- PSR-by-Connection: GWR
- PSR? BNSF

So – What *is* PSR?

- Is it new? (car-focus vs train, etc)
- Is it a playbook or an *attitude?*
- Is it just cost cutting?
- Is it closing humps?
- Is it point to point?
- Can intermodal survive PSR?
- Is it key-man driven? (Change agent)
- Does it work? PSR and PHR!

Challenges/*Opportunities* to/*for* SLs

- SLs lack true pricing power (and Fuel Surcharge coverage)
- SLHCs –may - lose local focus; tough central/decentralized strategic mix
- SLs do not participate in the hotter markets:
  - IM to any degree
  - nor in Mexico
- *C1s more focused on car-load (SL sweet-spot)*
- *C1s more focused on ROI (create more SLs?)*

Rails & Politics

- Now more than ever!
- Trade!! (NAFTA 2.0; China; steel/aluminum tariffs for *national security* reasons)
- Freight *and* Passenger
- Funding & Infrastructure Spend(ASCE Grade B)
- Technology Impact
- Social Impact (demographics, Millennials, etc)
- Regulatory Impact – see UP & PSR….
- Tweet Impact

Big Issues (fall) 2018

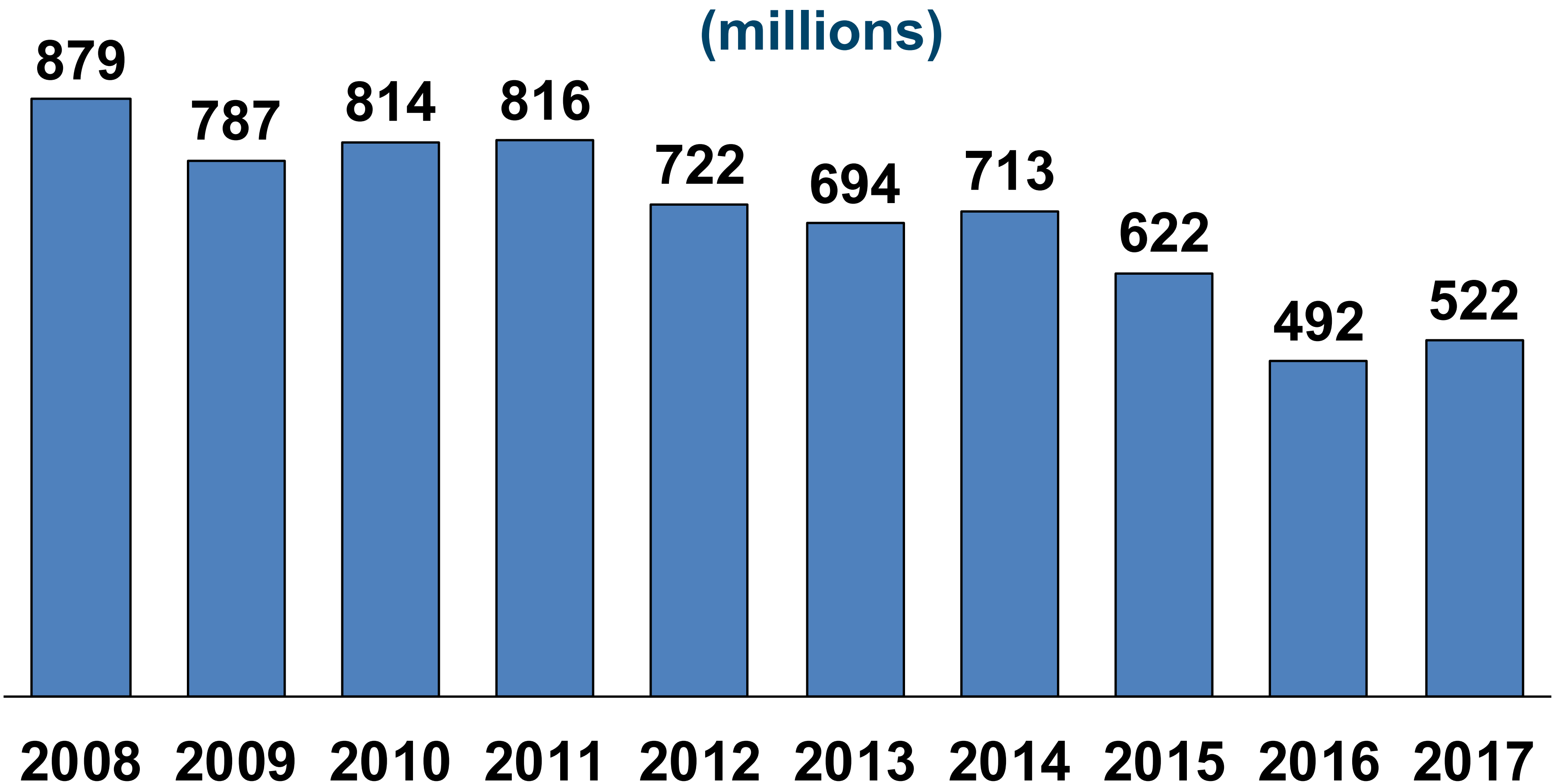
"Trump has made economic uncertainty great again"/Chief Economist, Gluskin Sheff

- *CSX "Post-Hunter"* – Worst-to-First!
- *UNP, NSC (and KSU? GWR?) join the PSR-Party! (?)*
- *Volume/economic outlook – plenty of demand, tougher comps*
- *Q3/18 earnings all beat expectations – does it matter?*
- *Orange Crush* – Washington on coal/trade/infrastructure/regulation/MAFTA vs NAFTA
- Trade impact is underestimated (AAR's 2014 42% loads)
- *RR Service Improvements* – CSX (ok) CN (ahead of schedule) BUT- UP, NS (anyone left out?) – must happen!
- *2018 and now 2019 Capex Plans* (hardly unrelated; see NRC, company announcements) – holding the short-termists at bay? Investing in IT & Growth? *Is service improvement truly on the way?*
- *M&A back on the table? (WHY?!?!)*

RRs and NAFTA

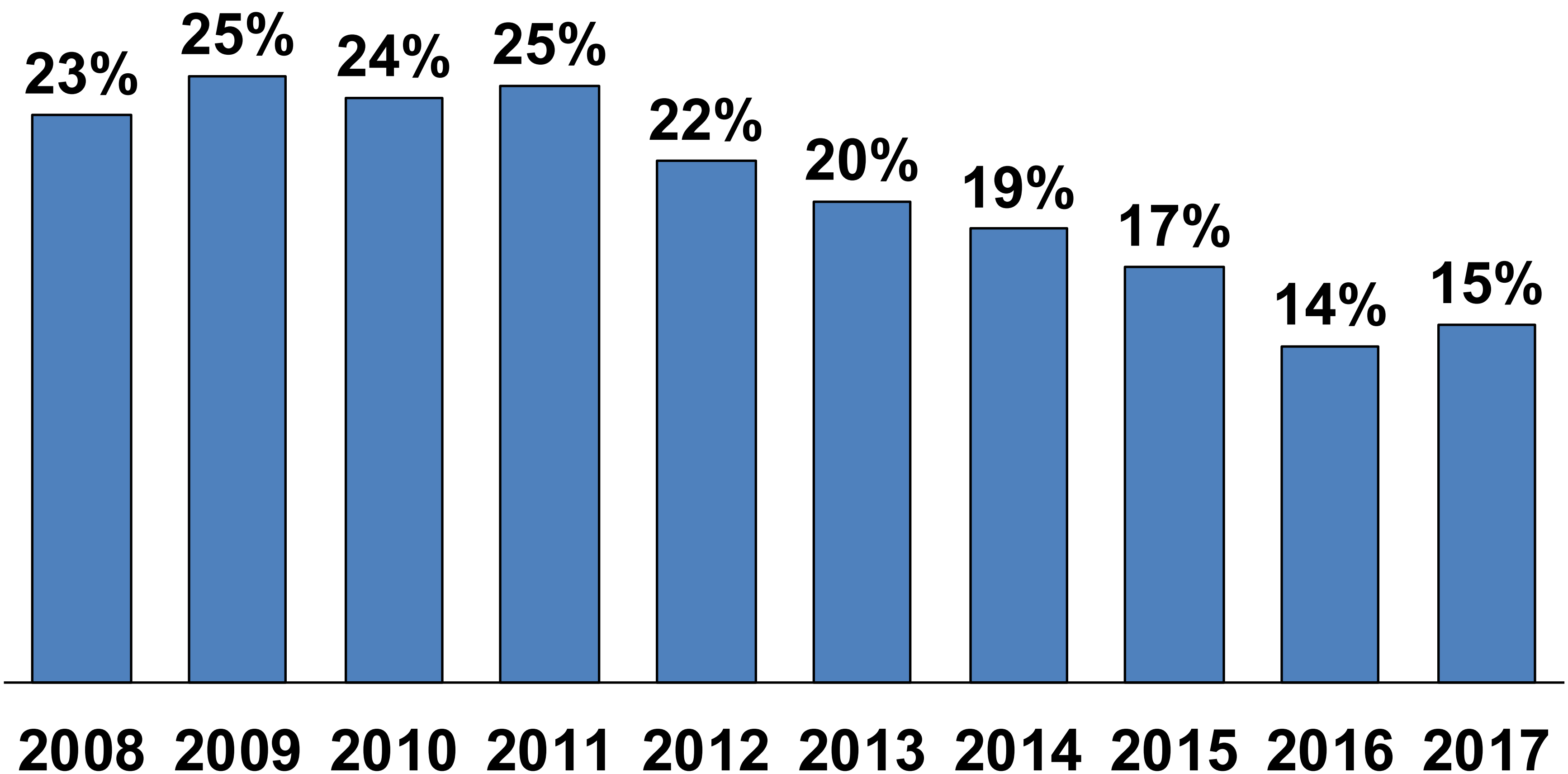
- • U.S. to Canada: intermodal, motor vehicles, chemicals, coal, food
- U.S. to Mexico: motor vehicles, intermodal, food, grain, chemicals
- Mexico to U.S.: motor vehicles & parts, food, electrical machinery
- Canada to U.S.: intermodal, chemicals, lumber & paper, motor vehicles, grains

Sharp Decline in Rail Coal Tonnage



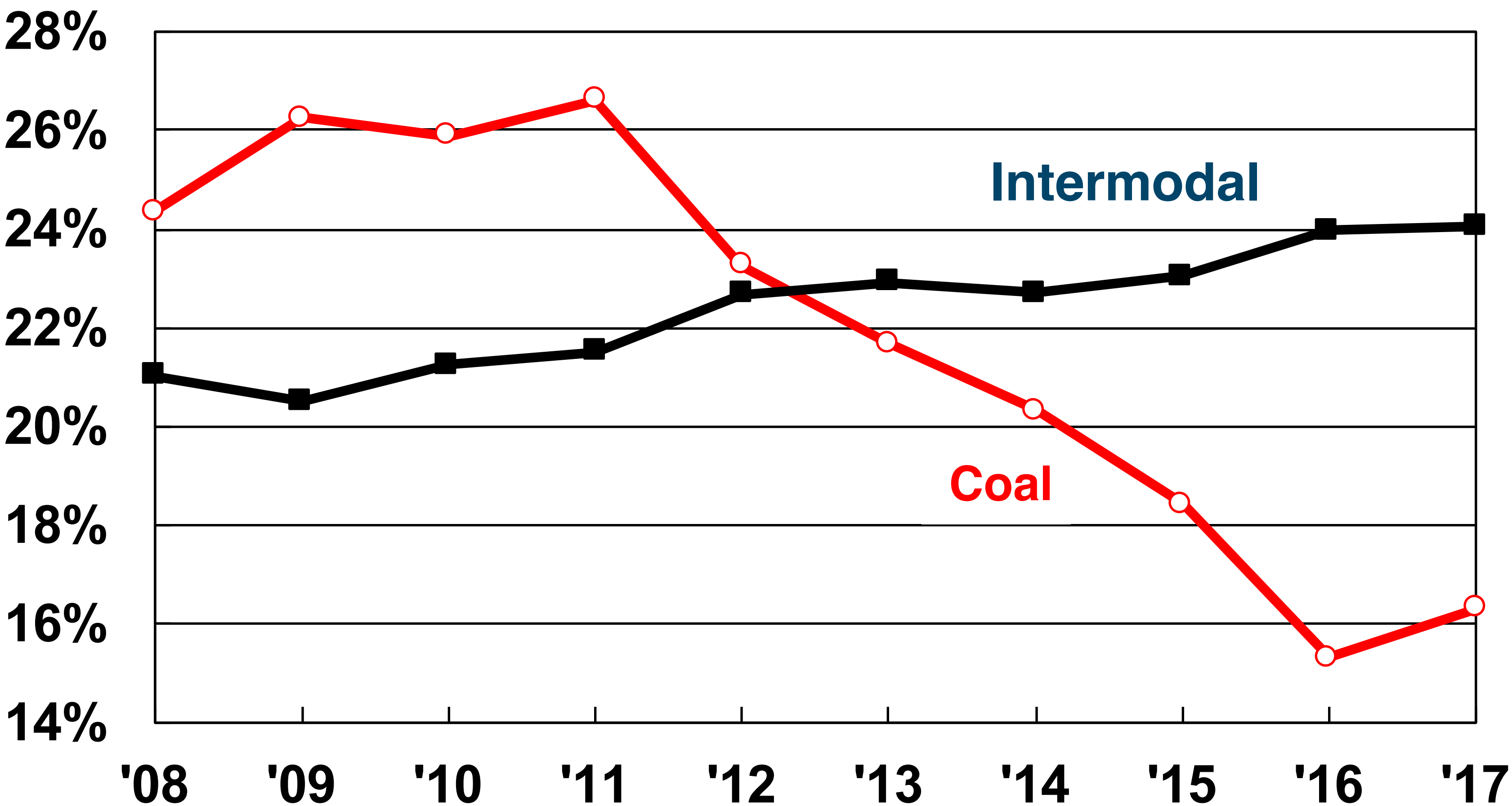
Data are originated tons for Class I railroads. Source: AAR (*Freight Commodity Statistics*)

Coal as % of U.S. Railroad Revenue



Source: AAR (*Freight Commodity Statistics*)

Coal vs. Intermodal as % of U.S. Rail Revenue



Data are for BNSF, CSX, KCS, NS, and UP combined. Source: company reports

Service is Even More Critical

New Traffic Mix Shifts Toward Service-Sensitive Freight (Growth drivers shifting to optimized service")

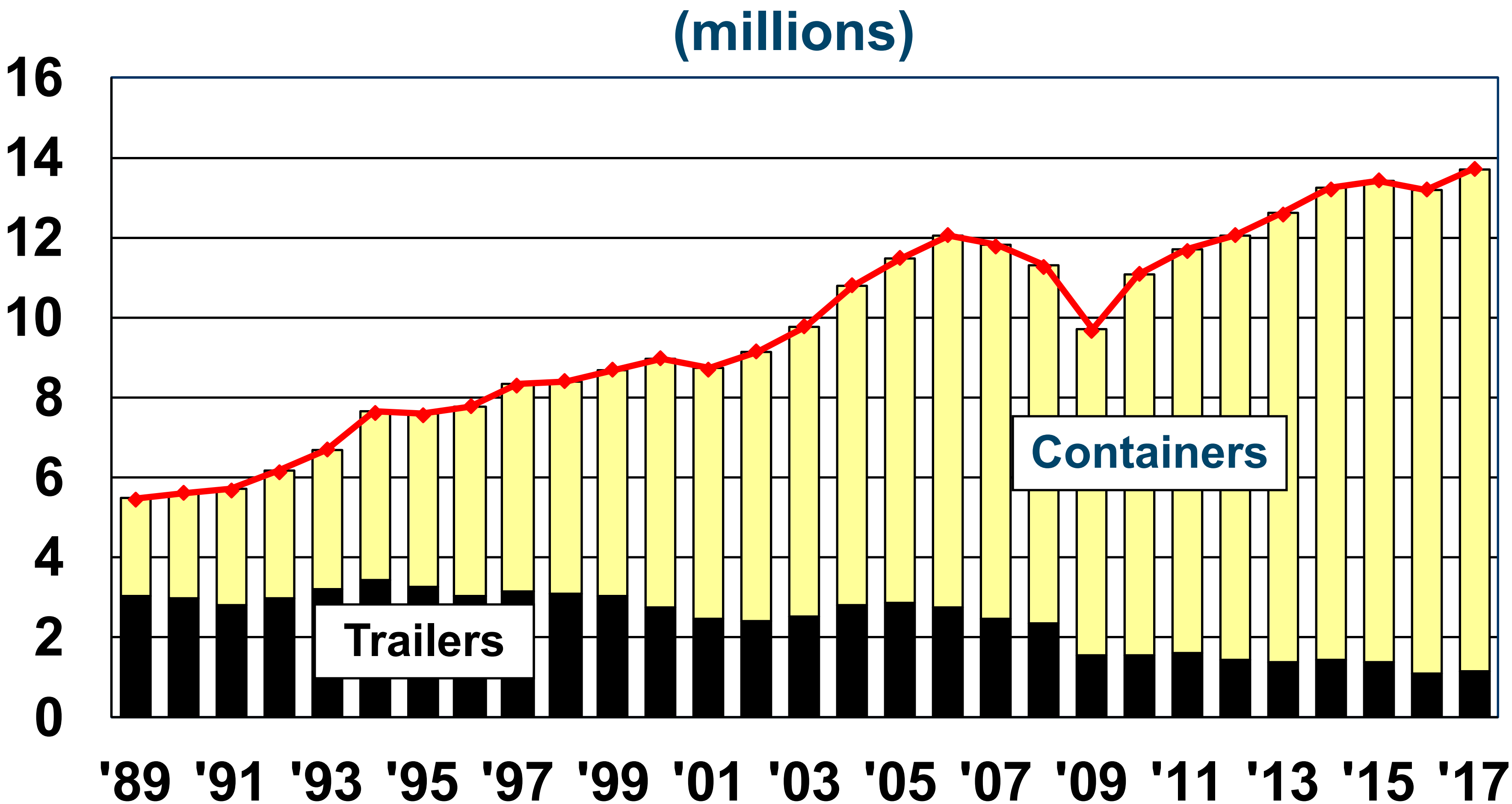
Emerging Trends:

- CSX (PSR and rail service) – asset-intensive focus
- 2017 AAR "Metrics" – Need improvement
- Longer trains, parked equipment
- Capex boom past peak? Forecast range 15-20%
- CN – orders 200 locos, renews hiring
- Increased IT spend (predictive MoW, ease-of-doing-business, visibility, etc)
- Insourcing vs. Outsourcing

The “Grand Bargain”

- *In return for higher prices (& ROI), rails spend, increase capacity & improve service* (2005-2012) – The unstated **“Grand Bargain”**
- Rails gain pricing power (~2003) & F/S
- Rails (re) Gain Market Share
- Rails Spend Cash “Disproportionately” on Capex (~18-20% of revenues)
- Promotes “*Virtuous Circle*” – all stakeholders benefit
- Under challenge, perceived and real

Rapid Intermodal Growth



Source: AAR *Weekly Railroad Traffic*

RR/Intermodal: Threats

- AV Trucking – putting 20% of the RR/IM market at risk (and all of the growth?)
- EVs reducing RR's historic 4-5X fuel advantage\
- Infrastructure Bill to reduce RR/IM's huge network advantage? (hint: unlikely)
- Trade war hurts all transport (and more)
- Loss of key suppliers/allies? (GET?)
- Amazon (etc) moving further into logistics – threat or opportunity?
- Short-termism
- Regulation (so far beaten – see ECP, etc)

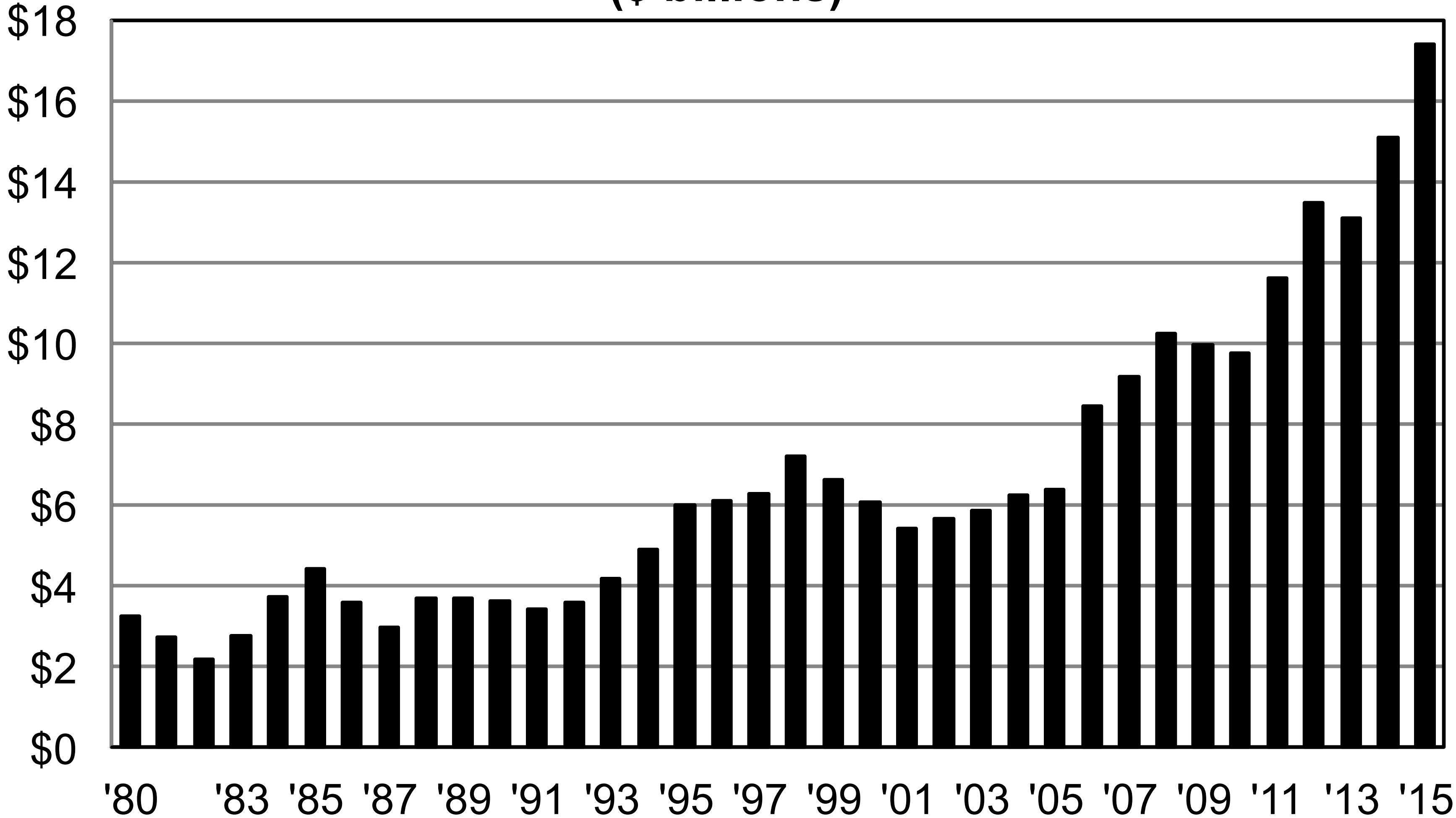
Rail Response

- Regaining IT “mojo” is an acknowledged need
- PTC moving from Capex/Opex; 2018/20 deadlines will be met (by Class One RRs, anyway)
- PTC moving from “the unfunded mandate” to “the backbone of the digital RR” (CN, NS)
- Tech in MoW: drones, predictive MoW, sensors, etc (but thankfully NO ECP due to DP)
- 2022 Labor contract (one man consist? – see Rio in Oz, etc)
- Driving toward ZERO derailments (for safety and service reasons)

Long Term Trends

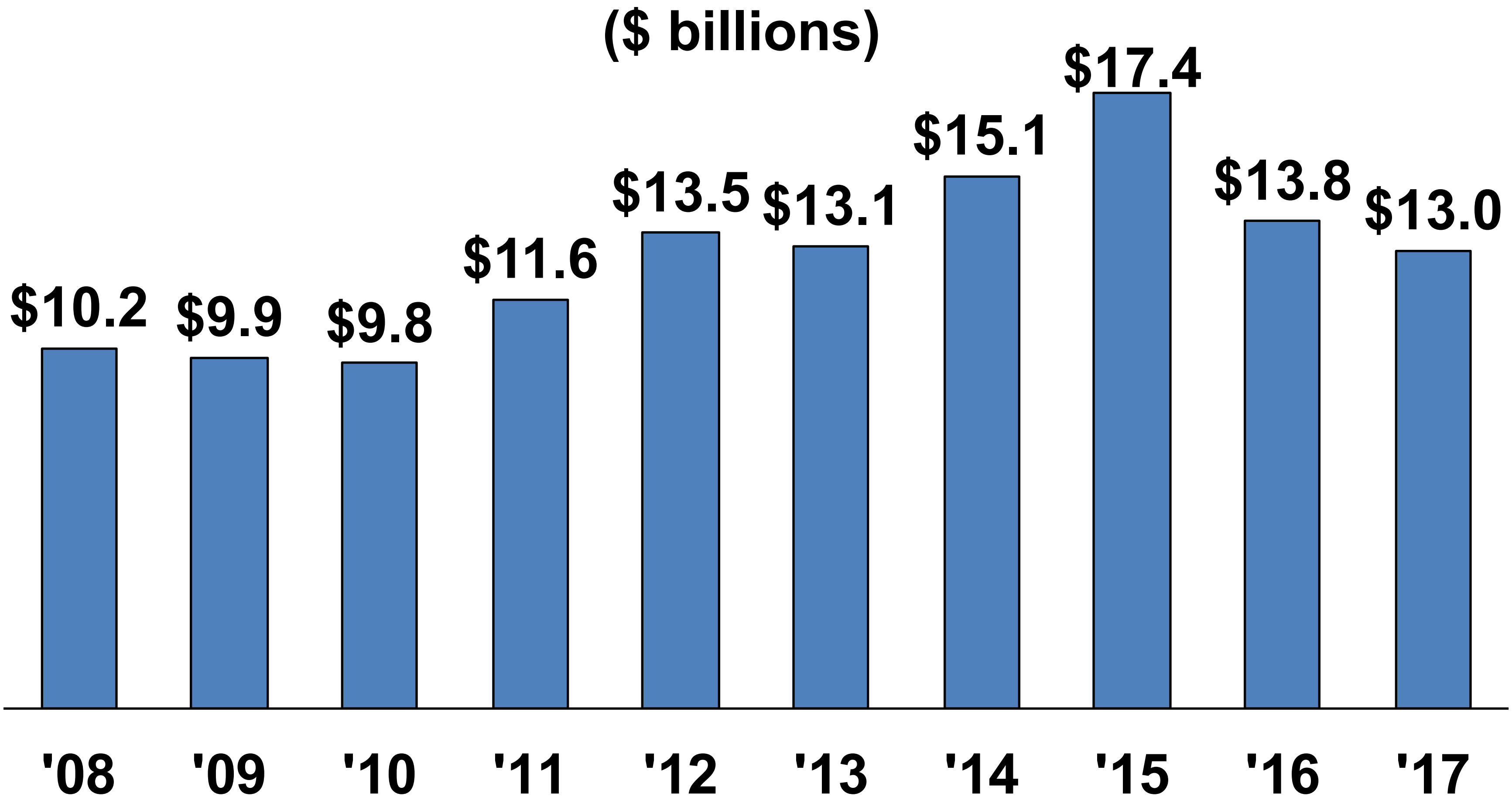
Class I Freight Railroad Capital Spending From Staggers Through 2015

($ billions)



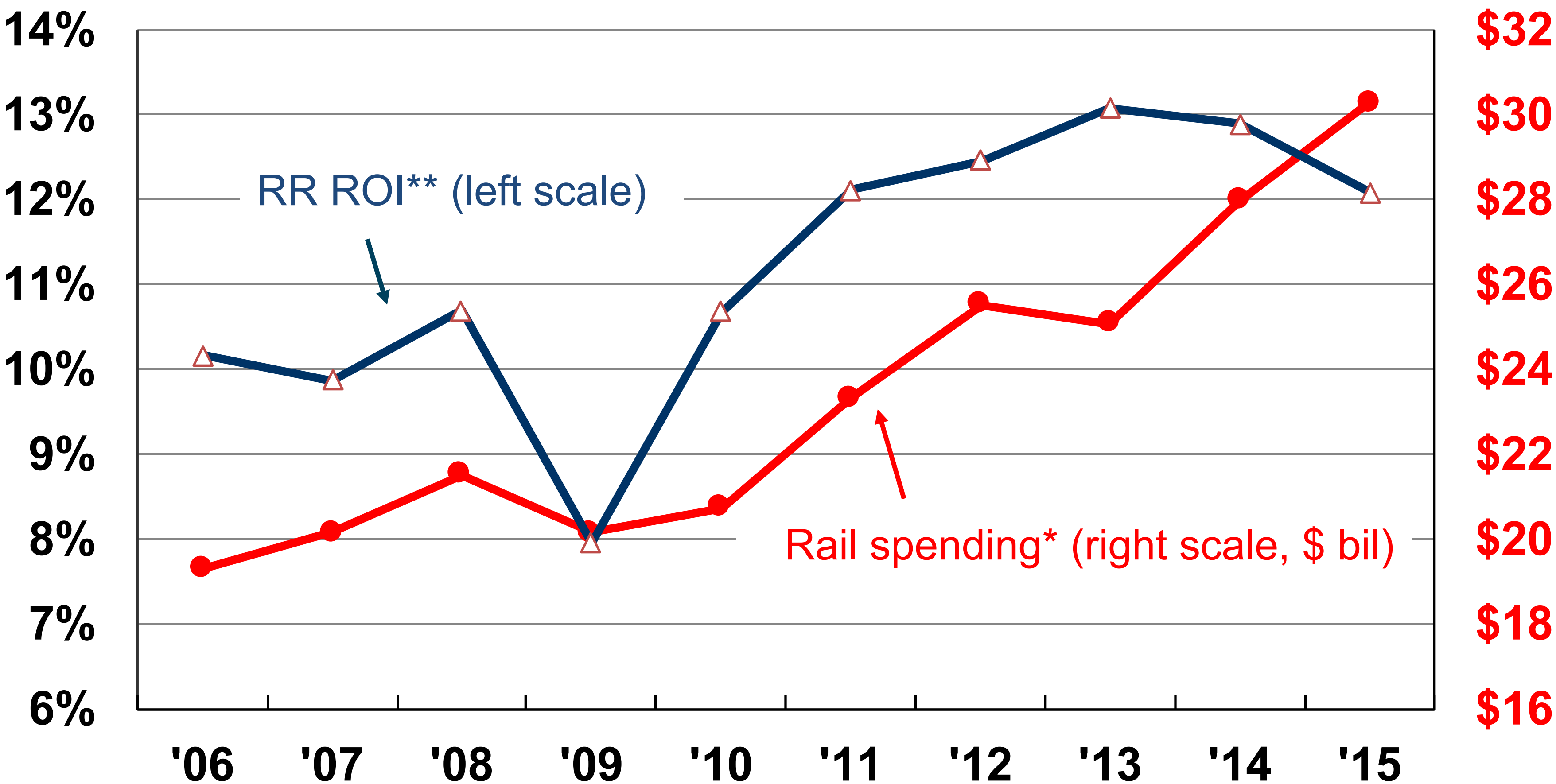
Source: AAR

Record Railroad Capital Spending in Recent Years



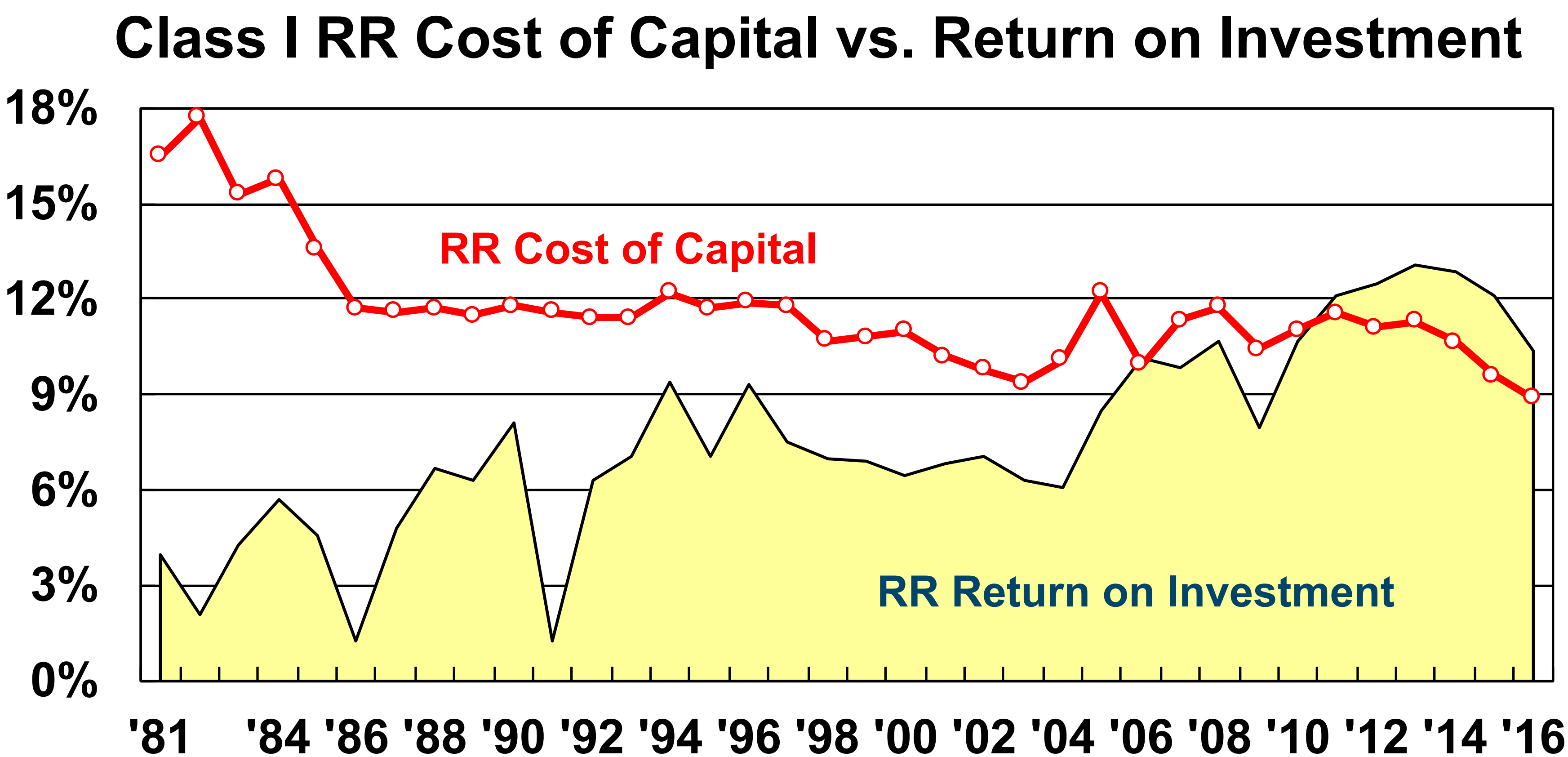
Data are for Class I railroads. Source: AAR

Close Correlation Between RR ROI and Spending



*Capital spending + maintenance expense. **Net railway operating income / average net investment in transportation property. Data are for Class I railroads. Source: AAR

Railroads Have Only in Recent Years Earned Their Cost of Capital

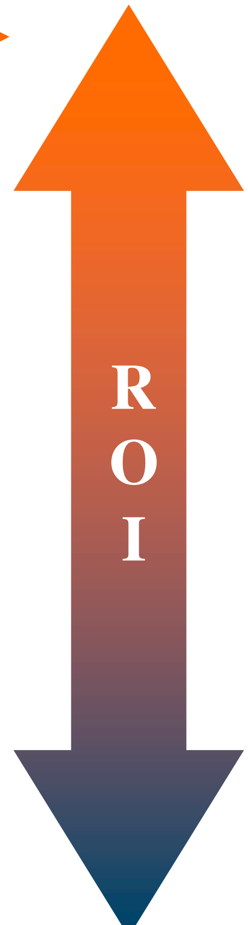


Note: In 2006, the Surface Transportation Board significantly changed the method by which it calculates the rail industry cost of capital. Source: STB

Return on Investment is Crucial

If ROI > cost of capital:

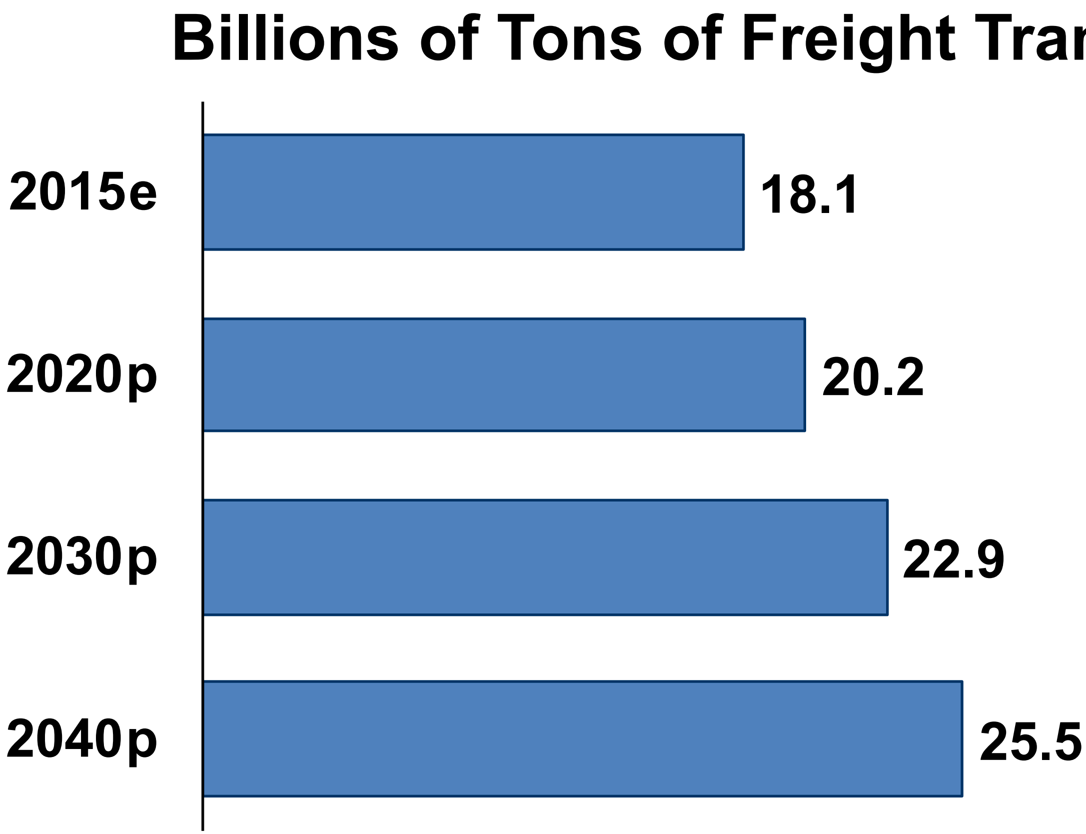
- Capital spending expands
- Stronger physical plant; more and better equipment.
- Faster, more reliable service
- Sustainability



If ROI < cost of capital:

- Lower capital spending
- Weaker physical plant, equipment
- Slower, less reliable service
- Disinvestment

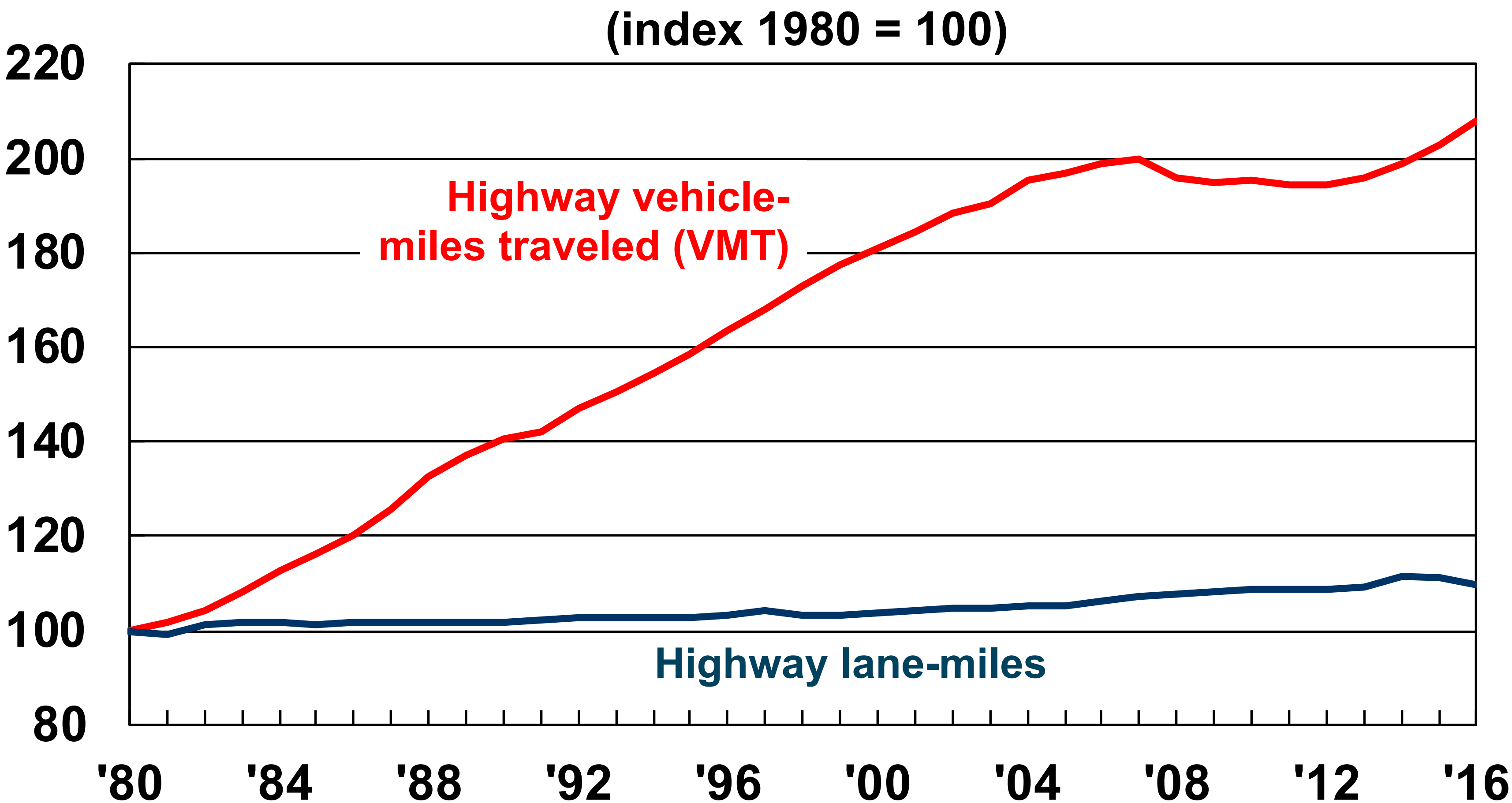
Long-Term Demand for Freight Transportation Will Grow



The U.S. DOT forecasts total U.S. freight movements to rise from around 18.1 billion tons in 2015 to 25.5 billion tons in 2040 – a 41% increase.

e – estimated p – projected Source: FHWA - *Freight Analysis Framework*, version 4.4

Not Realistic to Think Highway Construction Will Keep Up



Source: Federal Highway Administration

Figure 4-3 Peak-Period Congestion on the National Highway System: 2040

NOTES: Highly congested segments are stop-and-go conditions with volume/service flow ratios greater than 0.95. Congested segment have reduced traffic speeds with volume/service flow ratios between 0.75 and 0.95. The volume/service flow ratio is estimated using the procedures outlined in the *Highway Performance Monitoring System Field Manual*, Appendix N.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, *Freight Analysis Framework*, version 3.5, 2015.

“Our Troubled Industry*”?

- 2017 OR averaged ~63%, improving by ~200+bps
- Rail Network in best-ever condition
- Rail Finance in best-ever condition
- Coal has stabilized, at least
- Volumes have inflected H216 (and growth has continued even as comparisons get tougher)
- Intermodal is growing again
- *What’s next?*

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