

Rails Beyond Coal – The Impacts of “New Energy” & the Dawning of the Domestic Intermodal Age

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Ten Years After - The RR & the Industrial
Renaissance

MARS

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Underlying Themes or “Givens”

- Green is here to stay
- Oil Prices will remain high (price points at \$65, \$45, \$25/bl)
- Governments spending will be problematic
- Infrastructure will be challenged
- Trade will be dynamic but remain strong
- Near-sourcing and in-sourcing remain themes
- Trucking Productivity has peaked
- Driver shortages are a secular/demographic issue exacerbated by govt regs (CSA/HoS)

Rail Renaissance Phase Two

- Rails to exit transitional period
- CBR to continue
- Domestic Intermodal will achieve investable returns – the *big bet* will pay off
- Market confusion – OR vs ROIC=opportunity (BNSF example)
- Industrial revival – the real energy advantage
- NAFTA

Future Growth Potential

5 Secular stories (in order)....

- 1-Intermodal – International *and now* Domestic
- 2 –Shale/Oil – Problem and solution?
- 3-Chemicals/Re-Industrialization?Near-Sourcing
- 4 - Grain – the world’s breadbasket
- 5 – Cyclical recovery - Housing
- Other Rail Opportunities exist but in smaller **scale**: The Manifest/Carload “Problem” (hub&spoke) vs. point-to-point “Unitization”/Industrial products/MSW (garbage) /perishables/others/Coal? Exports – “legs”?

Rail Intermediate term volume prospects

ABOVE GDP

ABOVE GDP

- Intermodal/Domestic (++)
- Intermodal/International
- Shale/oil
- Agricultural products
- Export Coal
- Chemicals!
- Industrial-Products/
Metals

BELOW GD

- Domestic Coal (?)

@GDP-GROWTH

- Autos (+?)/Parts
- Lumber (+?)
- Aggregates

UNCERTAIN

- Paper
- Ethanol
- Export Coal!

Bridge Year

- End of the coal slide?
- End of the drought?
- Continued slow economic growth
- Improved cyclical recovery in housing & autos
- Shipper capex in chemicals, autos, Mexico
- Rail investment in Domestic Intermodal
- CBR and other shale impacts
- Re-Industrialization

New Developments 2014

- Ave et Vale Pacer
- CP sells DMEW for \$210mm – to GWR!
- BNSF accident – no excuses – rails end year under safety cloud
-and with service issues reborn
- The weather aint helping
- Record capex again (that will)....
- New managements at BNSF – soon NSC, CP

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- ***Risks: Service; Execution; Safety; Regulation***

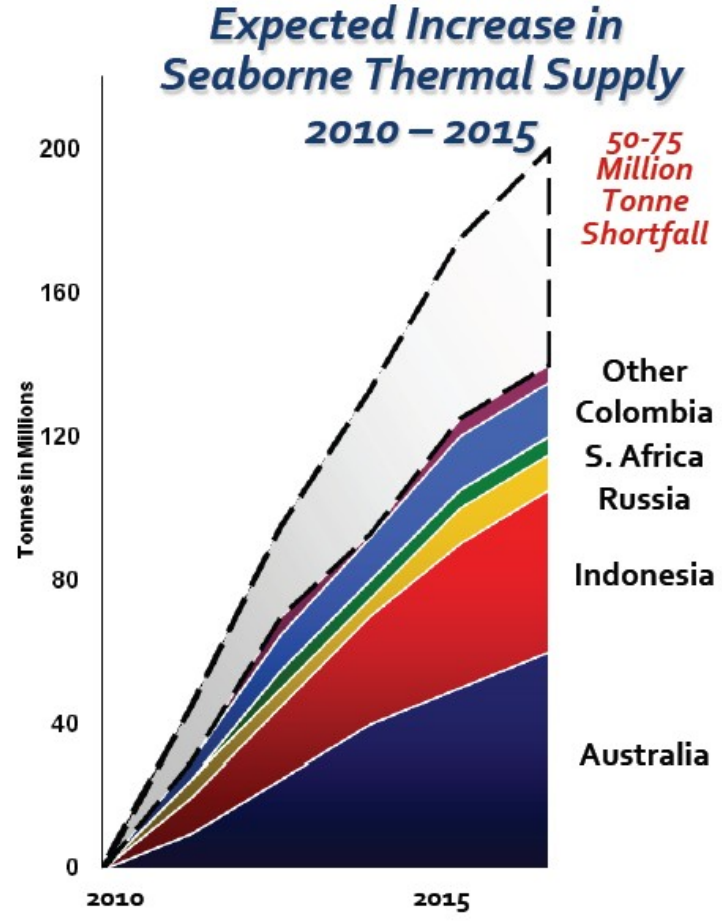
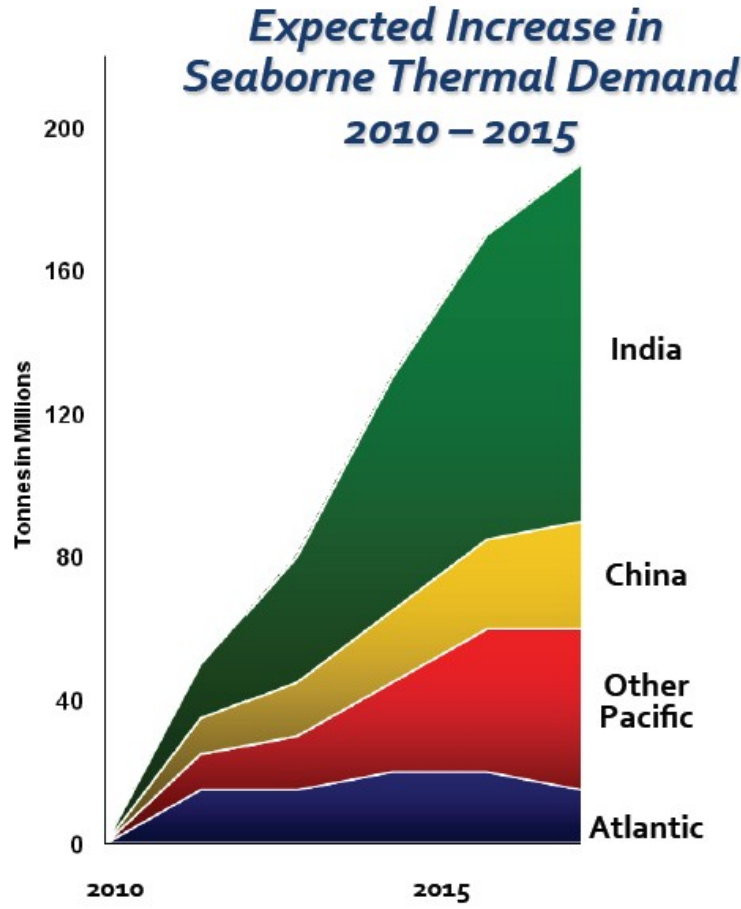
Q4/13 Earnings

- Overall up over 20%
- Even Ex-CP, GWR (both +~50%) up 12-15%
- CSX will set the table 1/15
- Calls *will* focus on Capex vs FCF; winter impacts for Q1, price, economic outlook
- Calls *should* focus on capex vs growth, safety and service

Coal in Trouble

- Domestic in secular decline due to regs/legislation, accelerated by weather, economy and, especially NG price
- Exports tied to global economy (ie; China); competition – and infrastructure access
- What was once “stable” and base business is the most uncertain
- Solution: invest elsewhere....

Exports to the rescue?



Shale

- Frac Sand, brine & water, pipe and aggregates inbound
- In cases of Oil, “Rolling Pipelines” out....
- Hess – 286 cars, 9 trainsets now, 27 in a few years (followed by Phillips 66, Valero, others)
- Pipeline companies developing rail terminals in ND
- Rails spending capital (BNSF \$4.1B!) vs ethanol example
- Tar Sands and pipelines
- Chemical Industry – secondary impact
- Industrial Development – tertiary impact

Gas displaces Coal (PLG)

- » Natural gas now supplying approx. 30% of thermal fuel demand (~13% share
- capture from coal)
- » Despite recent increases in prices, natural gas share capture expected to
- maintain or grow
- § Environmental regulations of coal burning
- § Scheduled coal unit retirements
- New builds of coal plants unlikely at best

Why move crude by rail?

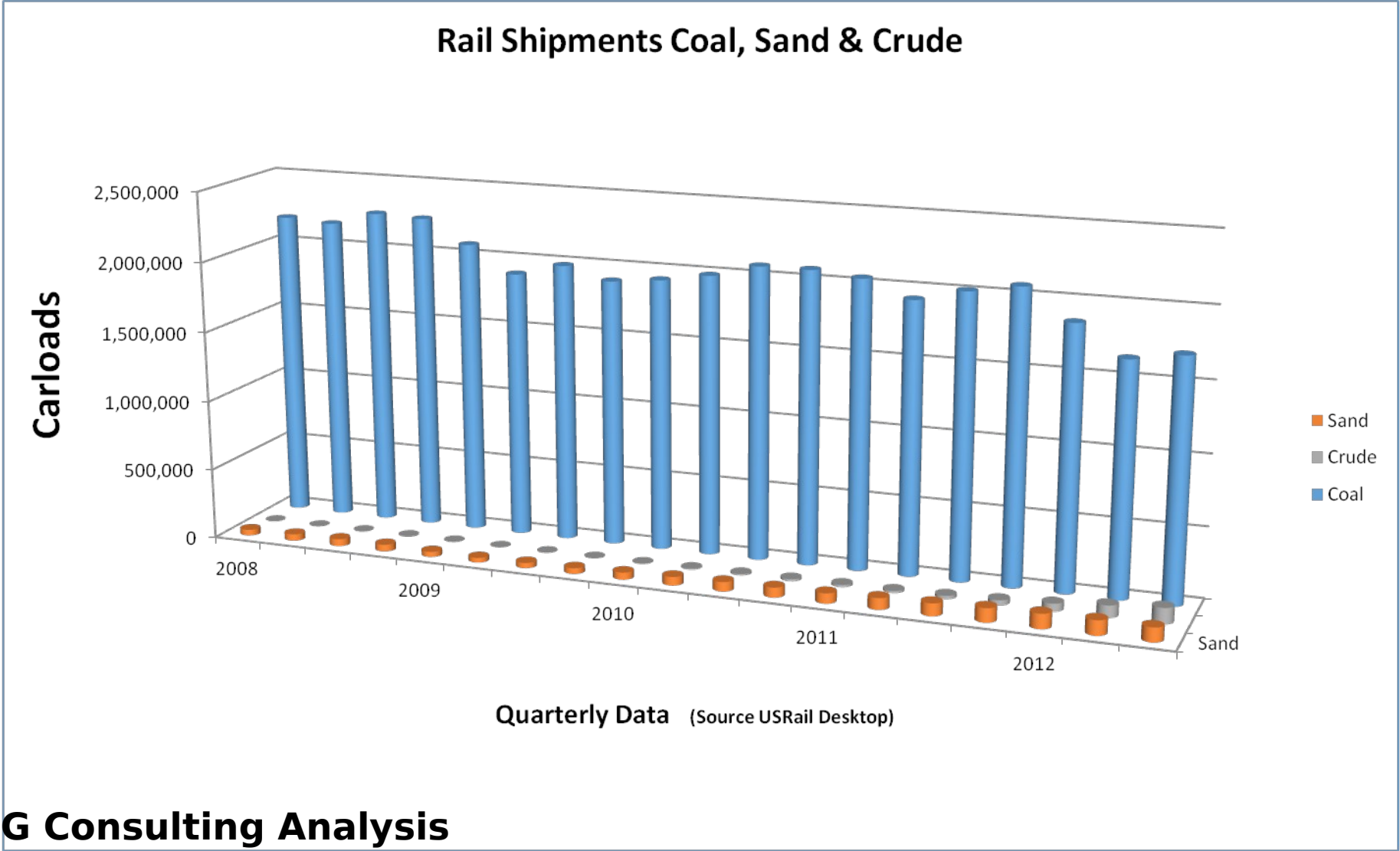
- SPREADS – **ONE** of the reasons: Moving a barrel by rail can cost \$7 to \$14, compared with \$2 to \$5 by pipe, depending on destination. But that price difference pales in comparison to a \$15 to \$30 premium for reaching the right markets
- Producers are working shale everywhere and rail transload terminals are a cost-effective, very quick way to start moving crude to market
- *Flexibility to serve all markets using existing N.A. rail infrastructure*. Existing rail routes have capacity to reach East and West Coast markets in the U.S. that may not have sufficient pipeline capacity – *note New Brunswick would not be a pipeline destination!*
- Flexibility from both the *origin* **and** *destination* – *NOTE California pipeline rejection!*
- Isolation of commodity to provide a “pure barrel” to the destination
- *Speed to market (A)* – 12 months to build a unit train rail terminal
- *Speed to market (B)* – product arrives in DAYS versus a month....
- Competition is as much water – and *foreign oil* – as it is pipe....
- Comparatively low entry level capital requirements
- **Source: abh & Watco (see Bakken II Trip September 11-12, 2013)**

Estimated Delta In RR Revenues - PLG Consulting

Approx. Annual Carloads	2008	2012 (est.)	Approx. Revenue per Car	Change in Revenue
Coal	8,856,000	6,944,000	\$1,792	\$(3,426,858,000)
Oil	11,000	372,000	\$2,601	\$938,786,000
Sand	189,000	418,000	\$3,109	\$711,916,000
TOTAL	9,056,000	7,734,000		\$(1,776,156,000)

*2012 data is estimated for Q4

Shale Related Rail Traffic Still Small Relative to Coal Volumes



CBR – End of the Ride?

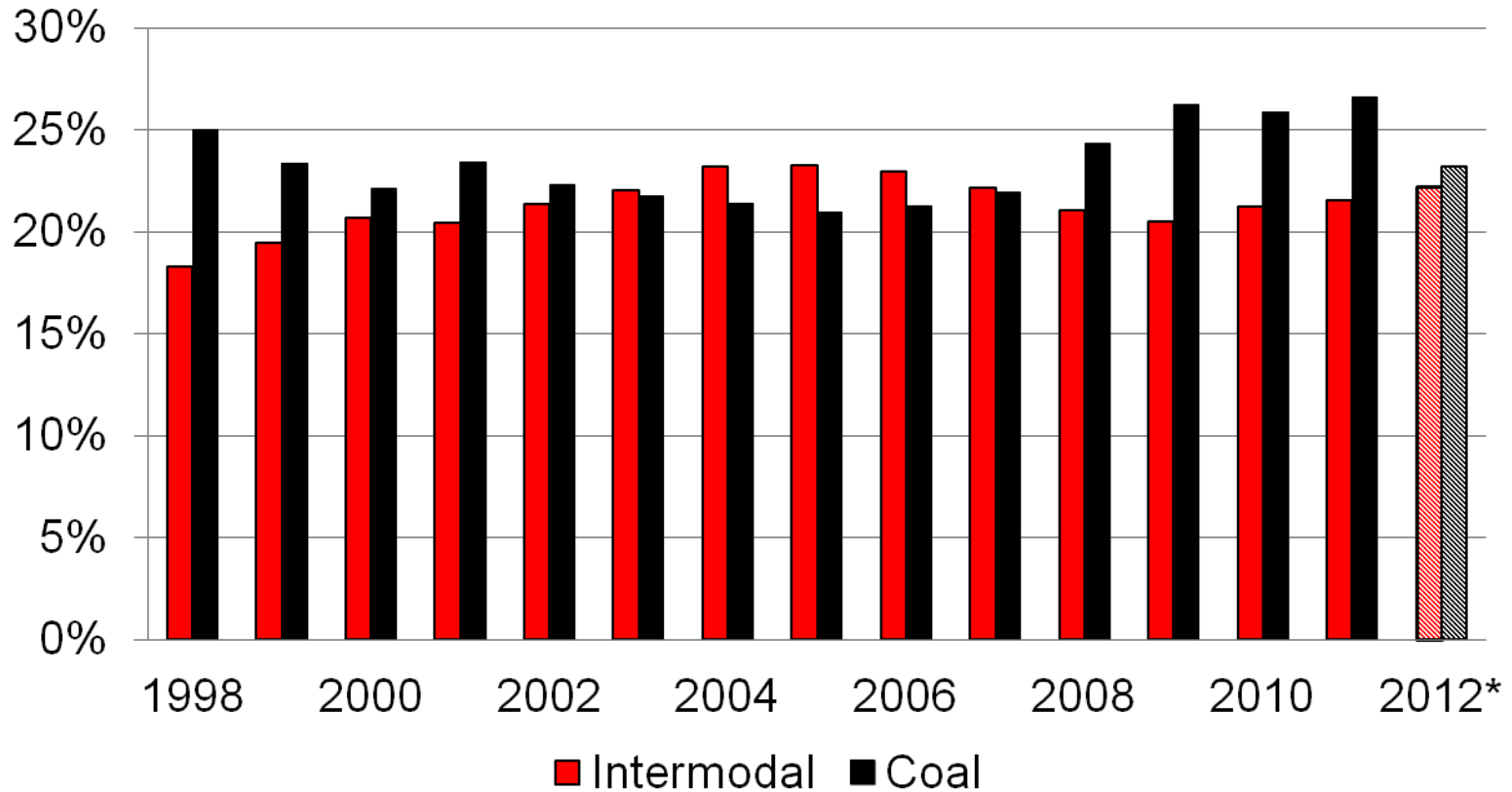
- Safety Under question
- Tank cars – rightly or wrongly, at issue
- Not “just” rail vs pipe but: vs foreign (waterborne); vs no development
- Only a form of arbitrage?
- On the other hand – opportunities in price, sand, Mexico

What, me worry?

- Coal – what % “secular” vs. weather, economy, NG price?
- Quick then suddenly – 10% hit?
- Activists – what's next?
- Compensation: shale (+++)?
- Compensation: chemicals? (Secondary Shale Effect)
- Compensation: export coal?
- Compensation: domestic intermodal?
- Re-Industrialization (Tertiary Shale Effect)

Revenue Share

Percent of Total Revenue for Major US Railroads



* 2012 estimated based on first half of year

Source: AAR analysis of 10-K reports for BNSF, CSX, KCS, NS & UP

Intermodal Growth Drivers

Domestic *and* International

- Globalization
- Trade
- Railroad Cost Advantages
- Fuel prices
- Carbon footprint
- Share Recovery From Highway
- Infrastructure deficit & taxes
- Truckload Issues; regulatory issues, driver issues

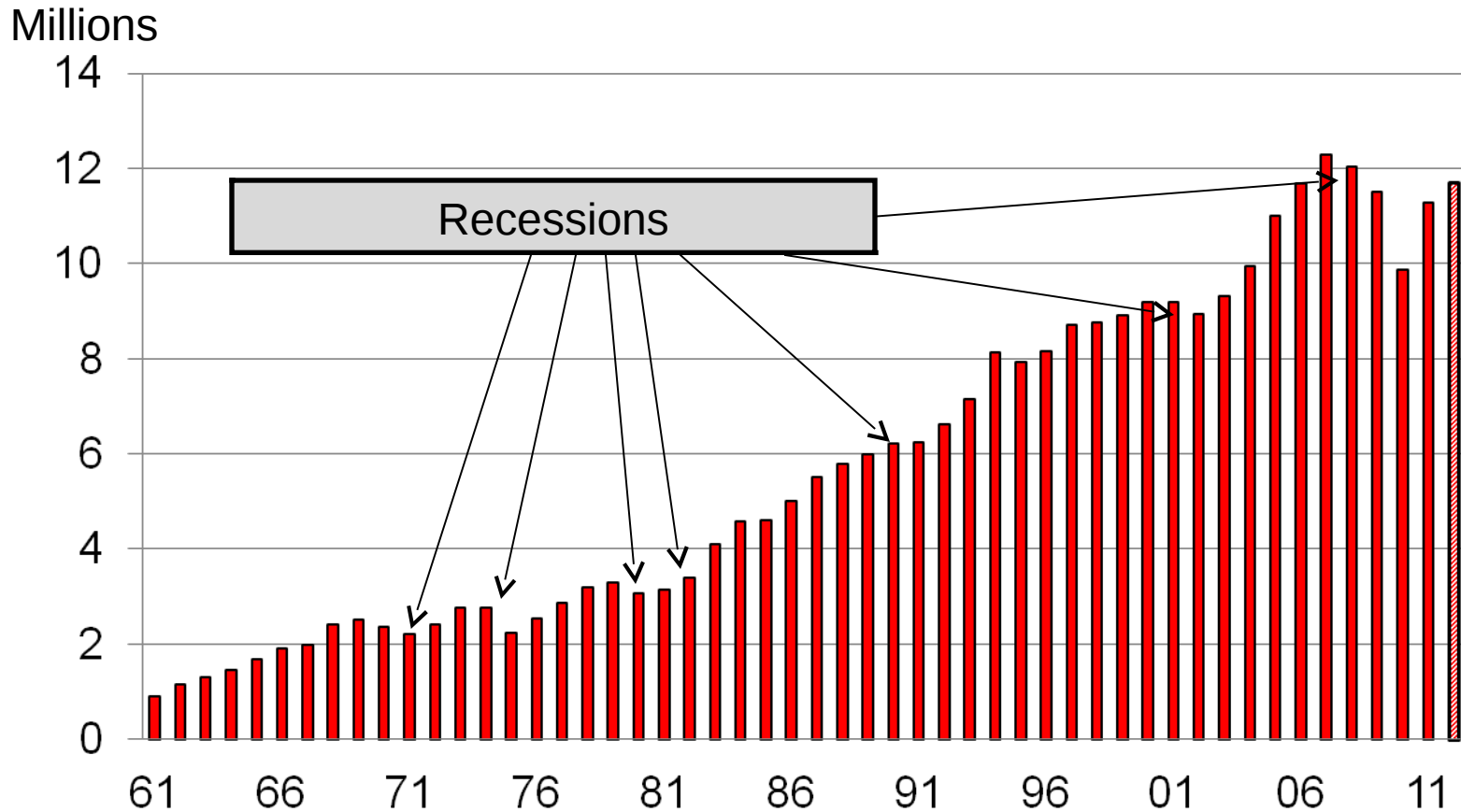


Intermodal Ten Years After

- *Rail Renaissance I* (2000s) driven by globalization & international intermodal
- The “Curse of OR”; or lack of understanding
- Capex, IT, Service, Fuel Price, Highway Issues
- Rail Renaissance II will be driven by domestic intermodal ROIC – subject of White Paper

US Railroad Intermodal Traffic

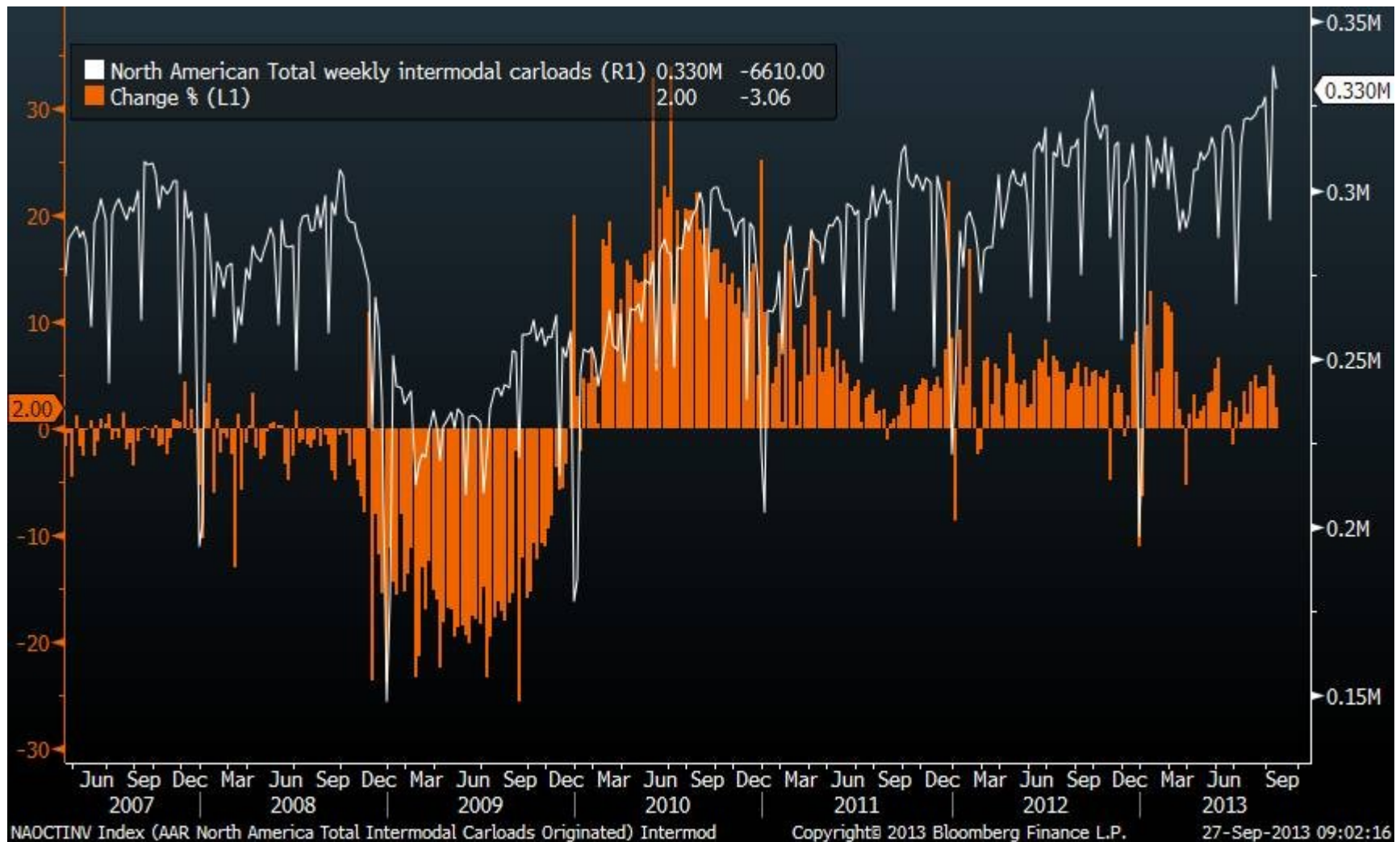
TOFC-COFC Units



* 2012 estimated based on first 35 weeks of year

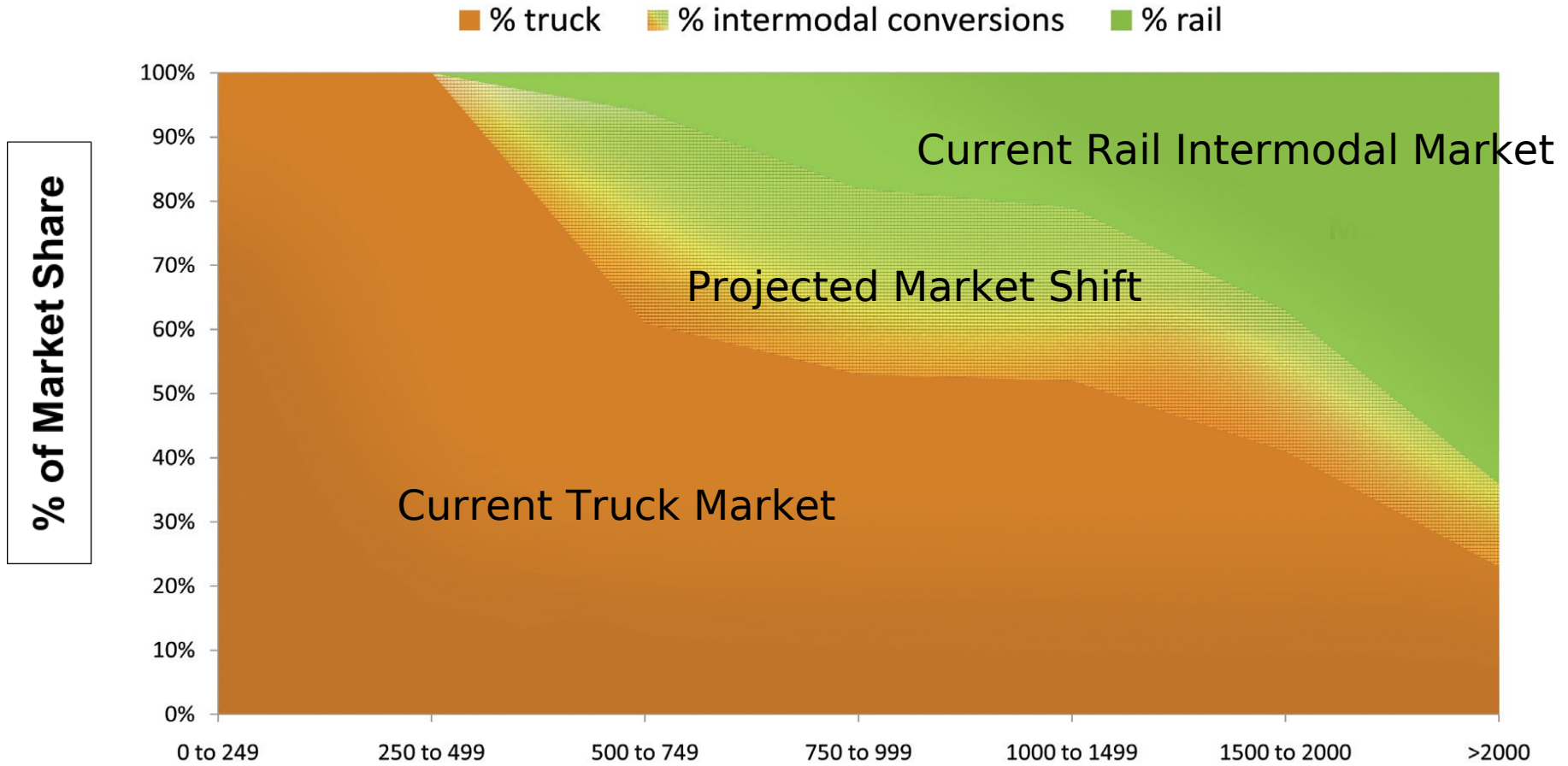
Source: AAR analysis of 10-K reports for BNSF, CSX, KCS, NS & UP

Intermodal is leading the traffic comeback



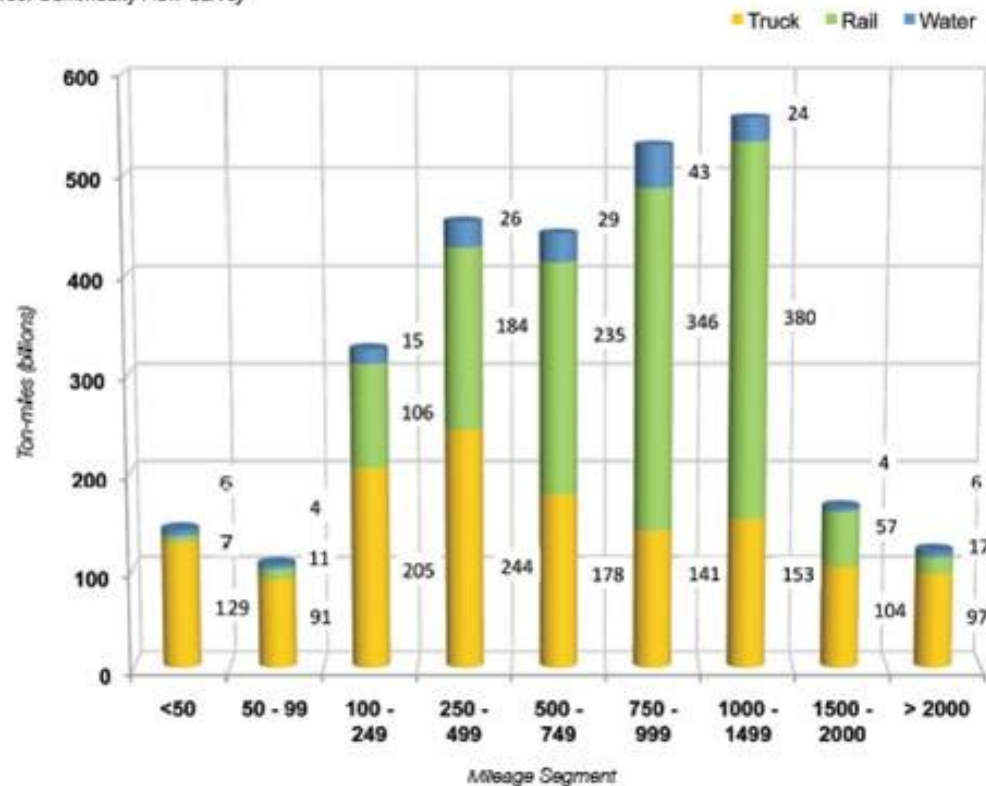
National Rail Plan

Modal Shift Projection



Another Look at Domestic Intermodal Market Opportunities

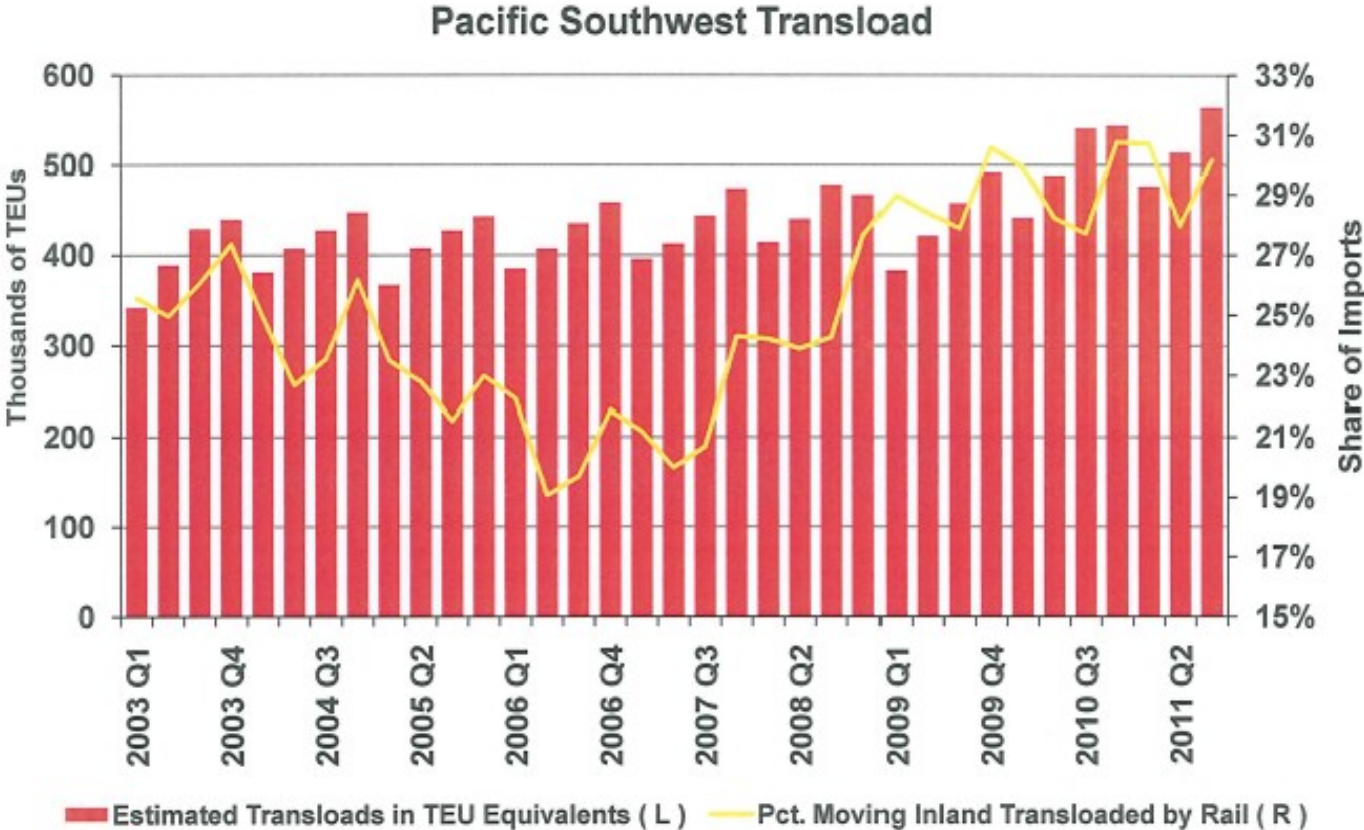
Figure 10: Freight Transportation Mode Share by Distance
Source: Commodity Flow Survey



A TOP10 LIST (UNP)

- **Innovative Intermodal**
 - Refrigerated Intermodal Containers
 - Drayage Cost Reduction
 - Containerized Exports of Bulk Products
 - Committed Capacity
 - Railroad Door-to-Door Programs
 - Premium Freight
 - GPS Tracking of Containers
 - Chassis Pools
 - Flatbed Intermodal
 - Tank Containers

TRANSLOADING REACHING NEW HIGHS



Source: TTX, IANA, Piers

Source TTX, IANS, Piers

International Intermodal

- Still game in the old vet
- Even with near-sourcing/re-shoring, etc...
- Even with changing flows (which *may* disadvantage rail)
- Retail still tied to Asia
- MLB still tied to rail service
- Growth of 1-3X GDP?

Intermodal Issues 2013+

- International: trade flows, retail sales, exports & balance
- Do we still have peaks? UNP's vision vs NRF, TTX
- Panama Canal? *On time? How much? Etc....*
- Emerging Developments – Rupert, Lazaro, Suez, Miami, *Nicaragua?!?*
- Domestic – development of “Corridors” & “Gateways”, etc
- Domestic – bimodal partners, shipper developments
- *Domestic – service & pricing?*
- *Domestic Container – service, new lanes – coming of age*
- *“There’s somethin’ happening here....” - 3-5X GDP*

Service, Capacity & Capital

- Service requirements only increasing with declining LOH
- Capacity challenges from new intermodal
- Capacity challenges from increasing passenger opportunities – HSR, HrSR
- Capacity challenges from local passenger service: Metra “rush hour windows” = 1/4 weekday freight slots in Chicago
- Can service/capacity/capital (&ROI) issues be resolved?
- Consolidation?

Re-industrialization?

- Near-Sourcing: *Mexico*, CA
- Gas effect round two:
- CHEMICAL INDUSTRY
- Fertilizers
- Steel/Aluminum/Autos/White Goods etc
- Northeast, etc back “in play”

Growth is Expensive:

Record Rail Capex in 2011-13 – 2014?

- **Broken record:** Record \$12B in 2011; record \$13B in 2012, record \$14B+ in 2013; record ~\$15B in 2014
- Many rails pegging at 16-18% of revenues (rising by double digits)
- KSU at 26%!! US industrial average +1-3%
- Some Rails have announced reductions in “%/revs” (UNP) or otherwise given guidance changes - CP
- Corridor developments, NG, terminals, locos, cars, shale build-outs, etc
- PPPs – in decline?
- Rails are still emerging as DPS plays, buying in shares
- Total spend will be ~\$25B in 2013!
- EX-PTC!
- *2014 Capex Plans/spend will be very, very interesting*

Railroad Capital Expenditures

Class I Railroads

Billions

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

abh estimates

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

Source: Surface Transportation Board

Note: Cost of equity estimation method changed by Board effective 2006 and 2008.

ROI is everything

- Rails must retain price (“rail-inflation plus” levels, or +3-5% YOY)
- Productivity – through capex, IT, scheduling, service
- Must remain de-regulated (even if not directly an intermodal issue)

Simple Math

- Rates
- Returns
- Capital Expenditures
- Capacity
- Service

ARE ALL CONNECTED!

Virtuous Circle ('03-07) or Disinvestment?

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