Roads in the Fork: Railroads 2018 & Beyond

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The “Railroad Renaissance”
Part One ~2003-2014

• Railroads gain pricing power ~2003
• RR ORs decline; ROIs reach CoC levels
• Rereg threats emerge (as) rails’ financial position improves
• RR Capex jumps (to 20%/revenues) but so do DPS/repos
• Intermodal booms (with domestic joining)
• Warren buys BNSF (‘08)
• Activists emerge (TCI, 3G, Pershing, Mantle Ridge)
• PSR: EHH from CN to CP
• Boom/Busts – not just Ag but ethanol, CBR
• Coal begins secular decline (2010)
• Freight Recession
Fork in the Road – Railroads 2015-?

- Coal plummets
- Rail recovery volumes don’t (yet) reach 2006-07 peak
- Auto recovery temporary?
- Trade recovery temporary?
- False Hopes? (Ethanol/CBR/Sand?/Plastics?)
- End of “Super Cycle” impacts Ag, Steel
- IM mysteriously slows 2015-16; recovers trend
- Volumes inflect H2/16; remain above-GDP even as comparisons get tougher
Issues for RR/Intermodal to 2020

• Return to Growth?
• Fight over Capital – MoW vs Buybacks? Activists, IT, PTC, etc
• M&A Fight fallout effect on Capex?
• RR Pricing Power Still?
• Coal – Dead Cat Bounce?
• Factors: Oil Prices, Consumer Spend/GDP, Truck Capacity
• Infrastructure & the RR Advantage (vs subsidized highway)
• Trade and the Panama Canal impacts? NAFTA? China?
• Rail Service (& Safety) Deterioration?
• Productivity (train lengths, etc) Improvements
• Insourcing
• Driverless beats One Man Crews to the market?
Renaissance 2?

- Intermodal?
- “Merchandise”?
- Trade?? 42% US RR units 2016
- IT spend?
- IT Threat? (AV/Tesla/Amazon/etc)?
- Capex vs. FCF in the era of the Activist?
- PSR vs Other? (the “Post-Hunter Era’ begins – prematurely....)
- Short Lines?
Big Issues Winter 2018

• **CSX “Post-Hunter”** – is heavy-lifting done??
• **M&A? NO WAY!**
• **Volume/economic outlook**
• **Orange Crush** – Washington on coal/trade/infrastructure/regulation
• **RR Service Improvements** – CSX, CN, UP, NS (anyone left out?) – must happen!
• **2018 Capex Plans** (hardly unrelated; see NRC, company announcements) – holding the short-termists at bay? Investing in IT & Growth?
The Tax Cut

• US Class Ones are (were) large cash tax payers
• Increase RR Capex? Its all about ROIC
• Increase overall capex? S&P thinks not – buybacks and DPS! (KCS example)
• Sparks a trade war?
• Impact in housing; consumer spending?
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
RR/Intermodal – Opportunities

- Panama Canal threats mostly over (All Water=All (mostly) Highway (2010-15)
- Driver turnover at 95% (Q3/17) – before ELDs, etc
- TL and RR/IM Pricing improving ahead of capacity squeeze
- Most Big Projects completed (“Corridors”, etc)
- CSX’ IM re-think
- Extending logistical reach off the network (CN, CP, etc)
- Growth of 28’ TOFC traffic: Parcel Shippers (& AMZN) already on board
- Trade – growth from BC, Mexico – and LA/LB
- IM Share ~18-19% : On the Way Up
- RR Capex/Network Advantage (see ASCE Grades!)
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\n• 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)
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
Future Growth Potential (Revised)

Secular stories and specific targeted sectors (in order)....

1. **Intermodal** – international *and now* domestic
2. **Chemicals/re-industrialization?** Near-sourcing/Mexico (??)
3. **Cyclical recovery** – housing, steel, autos (still?) & parts, paper?
4. **Grain & Food** – Exports up 10% this CY? CY17 an issue, long term still positive: NA still the world’s breadbasket, but obviously (un)predictable?
5. **Car-load merchandise – capacity available!**
6. **Shale/(if not) oil/sand** – demonstrated “flexibility”
7. **Other rail opportunities** exist but in smaller scale: for example:
   - Unitization
   - Industrial Products/MSW
   - Perishables
U.S. Rail Carloads of Coal: Not Pretty!

Data are originations and do not include the U.S. operations of CN and CP.
Source: AAR Weekly Railroad Traffic
2018 RR EPS/Expectations

- RR earnings 2016-H1 struggled to match improved sentiment & increased expectations
- H2/16 Volume inflection (coal stabilizes/IM grows)
- **3Qb was well above bullish expectations; despite H2 facing tougher comps....**
- Productivity (and price) retention; improvement
- Capex down...but not out (?) – once again, CN leads the way!
- Guidance & Visibility slightly improved....
- Winter is coming (and going) – AV, etc
- Big Labor Year yields peace but not progress? (more insourcing?)
- Hunter’s Comeback (and tragedy– watch for interesting reactions at NS, CP (ETC!))
Rapid Intermodal Growth

(millions)

Source: AAR Weekly Railroad Traffic
Why Has Intermodal Grown Over the Years?

- Better service
- Huge RR investments
- Truck problems
  -- fuel
  -- driver shortages
  -- congestion
- Switch from other freight cars
- Growing economy and trade

*trade*
Containers vs. Trailers as % of U.S. Rail Intermodal Traffic

Source: AAR (Weekly Railroad Traffic)
Lower Intermodal Volumes in 2016

(millions of containers and trailers)

Source: AAR (Weekly Railroad Traffic)
Why Did Intermodal Fall in 2016?

- Cheaper diesel fuel partially offsets RRs’ fuel efficiency advantage
- Inventory overhang
- Truck overcapacity
- Driver turnover “only” ~75%
- Lack of strong economic growth
Rail (Five-Year) Growth Potential

1. Intermodal (domestic)*
2. Intermodal (International)
3. Mexico/Southern US
4. Chemicals/plastics (US Gulf)
5. Housing/Construction
6. Sand & Aggregates
7. Grain
8. Industrial Products/”Merchandise” (car-load)*
9. Neutral – Autos, Positive – Auto Parts*

(*Secular Modal Share Shift Opportunities)
Long Term Trends

Class I Freight Railroad Capital Spending From Staggers Through 2015

($ billions)

Source: AAR
Railroads: Far More Capital Intensive Than Other Industries

Capital Expenditures as a % of Revenue*

*Average 2006-2015  Sources: Census Bureau, AAR
Record Railroad Capital Spending since GFR

Data are for Class I railroads. 2016 is preliminary. Source: AAR

NOTE: 2017 3Q Capex -14%
Future Rail Capex

- Much to Learn: Q4/17 results /2018 Previews (& NRC) will yield insights
- Stated range between 15%/revenues (UP) and 20% (CN)
- Most (but not all) mega-projects completed
- PTC moving from Capex to Opex
- PTC moving from “Unfunded Mandate” to the “Backbone of the New Digital Railroad”
- IT %total capital spend will grow
Railroad Capital Spending
($ billions, current dollars)

2016 is preliminary. Data are for Class I railroads. Source: AAR
The Tax Cut

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• Increase RR Capex? It’s all about ROIC
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Not Realistic to Think Highway Construction Will Keep Up

(index 1980 = 100)

Source: Federal Highway Administration
Higher Rail Profitability = Higher Rail Spending

($ billions)

*Capital spending plus maintenance expenses.
Data are current dollars and are for Class I railroads. Source: AAR
Close Correlation Between RR ROI and Spending

RR ROI** (left scale)

Rail spending* (right scale, $ bil)

*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 Recently Earned Their Cost of Capital

Class I RR Cost of Capital vs. Return on Investment

Note: In 2006, the Surface Transportation Board significantly changed the method by which it calculates the rail industry cost of capital. Source: STB
Long-Term Demand for Freight Transportation Will Grow

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

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<th>Year</th>
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<td>25.3</td>
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The U.S. DOT forecasts total U.S. freight movements to rise from around 18.0 billion tons in 2015 to 25.3 billion tons in 2045 – a 41% increase.

e – estimated  p – projected  Source: FHWA - Freight Analysis Framework, version 4.3
“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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