State of the Industry

A New Golden Age?

University of Illinois, April 11, 2008
Agenda-1

• Freight
• Passenger

In terms of
• Where we are today
• How we got here
• And where we might be going
Agenda-2

I will consider:
• Markets-strengths and weaknesses
• Infrastructure
• Equipment
• Operations
• Financial
And the role of:
• Technology
• Public Policy
The Nature of the Beast
(Econ 101)

- Moves large quantities from A to B very, very efficiently
- But as volumes decline and origin-destination pairs expand, rail loses to truck and automobile
The Nature of the Beast (Econ 101)

- Is a batch process mode, with all the difficulties that implies for service quality
- In modern America, it is an inconvenient mode in society that values convenience above all else
- But the worm turns, as we shall see
What Trains Do Well

BNSF north of Ft. Worth
And Not So Well

Railroads: A New Golden Age?

UP east of San Antonio
The State of Rail Freight

NS at Chattanooga
Freight:
Where We Are

• Markets:
  – Ton miles market share up
    • At expense of barges/pipeline/Great Lakes, not trucks
    • Revenue share down slightly (trucks dominate)

• Infrastructure:
  – Good to great physical condition
  – Choke points remain

• Equipment:
  – Good except for some in general merchandise service
Freight:
Where We Are

- **Operations/ Service:**
  - Highly efficient
  - Improving, but further gains needed

- **Financial:**
  - Good to excellent
  - Some earning cost of capital
  - About middle of Fortune 500
  - The “comeback kid”
Freight
How We Got Here: *Markets Moved*

• **Decline started in early 20\textsuperscript{th} Century**
  – And went downhill until mid 1980s (WW II excepted)
  – Auto, truck and air were not cheaper
  – Rather, they were often faster and *much more convenient*

• **The weaker rail services went first**
  – Passenger service/railway express
  – Less carload services/light density lines

• **The impact on freight was less severe in the South and West**
Freight

How We Got Here: *Markets Moved, Railroads Did Not*

• Railroads slow to create a new business models
  – Not unlike legacy airlines, steel, domestic autos
  – Railroads in denial, blamed others (“Age of Whining”)
  – Not all railroads were guilty (most notably the Southern)

• Government and labor out of touch
  – Regulatory constraints
  – Inefficient work rules
Freight

How We Got Here: Role of Government

• To deal with the Northeastern (Penn Central) rail crisis, DOT/US Railway provided a plan and capital
  – Mandated restructuring
  – Government practiced “tough love”

• “Deregulation” was a mindset, not a single event
  – Staggers was just one component
  – Process took two decades
  – And had a lot of moving parts:
    • Mergers / shed feeder lines / two man crew / shed redundant operations, yards and tracks
Freight

How We Got Here: *Acquire New Markets*

- Low sulfur coal created a huge growth in ton-miles
  - Most of the stability of truck vs. rail ton mile share driven by western coal alone
- Regulatory flexibility and technology working hand in hand
Freight

How We Got Here: Acquire New Markets

• The other “really big deal” was international intermodal
• Put railroads back into the handling of retail traffic
• Regulatory flexibility and technology working hand in hand

ATSF north of Cajon Pass
Freight

How We Got Here: Technology

• But for technology, the industry would have died
  – Diesels/traffic control/welded rail/detectors/HAL/MOW automation/ etc.
• Technology bridged the gap to institutional changes
• And was an essential component of both marketing and institutional changes
  – Reduced man count required technology
  – Coal unit trains and stack trains, the “engines of growth,” required new technology
Freight

Where We Are Going: *Markets Are Moving Again*

- High fuel costs and trade deficits will *profoundly* alter the transportation marketplace
- Past: transport demand grew as costs reduced
- Now: seek to reduce dependency on transportation by:
  - Reduce cross hauling/exit some markets/relocate plants (back to Mexico?)
- Some traditional rail markets will suffer
Freight

Where We Are Going: *Tilting Toward Efficiency*

- The trade-offs are complex
  - Shorter haul for auto parts vs. longer haul for vehicles/scrubbers vs. long haul coal
- *Choices between convenience and efficiency will tilt toward efficiency*
  - Reversing 100 years of US history
- It is already happening
  - Airlines: RJ aircraft and no food
  - Trucking: run full, charge for dock handling
  - Ships: slowing down/vessel sharing/calling at fewer ports
Freight

Where We Are Going: *The Green Card*

- Rail has a *much* lower carbon footprint than truck
- More efficient use of land
- An overall advantage for rail, *BUT not a “slam dunk”*
  - Coal is a dirty fuel and more controls are coming
  - Carbon tax will raise cost of transportation and thus reduce demand (again, a risk to long haul rail)
  - Rail is seen as green *until* its in my back yard
    - Impediment to new intermodal terminals
    - Or expanded train operations (DM&E vs. Rochester, MN)
Freight
Where We Are Going: *The Sky Is Not Falling*

• Growth will slow
  – And the difference between (say) a 5% growth rate and a 2% growth rate is profound over a decade in terms of
    – Infrastructure needs
    – Equipment needs
• Slow growth or even no growth is not the end of profitable railroading
  – *Carriers are right sized and profitable at current traffic levels*
Freight

Where We Are Going: **A Huge Opportunity For Railroads**

- Growth may slow in some traditional rail markets, but new markets can emerge
- Truckers are toast
  - Significant diversions from truck to rail will occur
  - Most in intermodal service but some carload also
  - How much depends on rail costs/service
- Huge opportunities in 500-1000 mile markets
  - Where truckers are dominant mode
  - Even modest diversions equal huge growth for rail
Freight
Where We Are Going: *Threats to Success*

- **Reregulation is of growing concern**
  - As much changes in attitude at STB than new law
  - And legislated reregulation is possible as well
  - Either will reduce capital for modernization and expansion

- **Wall Street focus on short term is a risk**
  - Will TCI succeed at CSX and then look elsewhere?

- **More capacity is needed but hard to achieve**
  - Environmental/community opposition mounting
  - Costs up along with “time to market”
  - Trucks will be hurt worse but everyone suffers
Freight

Where We Are Going: Government Funding

• Railroads now make some use of public funds for freight projects
  – Amounts are small in terms of overall CAPEX

• Government will not be a reliable source of funds
  – Financially, most of government is broke
  – Mounting social demands (healthcare/education)
  – Static per capita income = aversion to new taxes
  – Rail competes with other needs—will often lose

• Again, trucks are toast
Freight

Where We Are Going: *The Role of Technology*

- Railroads must do more with less
- Technology saved the railroads from becoming irrelevant
- And is a key component of any future growth
  - Throughput on existing infrastructure corridors must be increased as cheaply as possible
  - Costs must be contained; railroads cannot just keep raising rates
Freight

Where We Are Going: **Bottom Line**

- Increased emphasis on efficiency
- The constraints are many and long term:
  - Energy/land/money
- Railroads are efficient so opportunity is great
- Success is not assured
  - Service must improve and cost is always a factor
- Railroads must continue to do more with less
- Technology has a critical role
The State of Rail Passenger

Acela passing an Acela
Passenger
Where We Are: *Northeast Corridor*

- Solid gains in ridership
- Much has been rebuilt but much needs to be done
- Remains a loser (capital costs)
Passenger

Where We Are: Other Corridors

- Some real progress
- States have led the way
- California has best effort
- But progress in Washington/Illinois/Pennsylvania
- All require government $ for operations and capital
Passenger
Where We Are: *Commuter Rail*

- Existing systems expanding
- New systems coming on line
  - Albuquerque
  - Twin Cities
- Costs are high and federal aid essential
- Public support strong in many areas
Passenger
Where We Are: *Long Haul Services*

- Largely irrelevant in scheme of things
- Substantial operating losses relative to revenues
- Freight rails subsidize below the rail costs
- Continued operating conflicts with freight rails

Southwest Chief west of Belen, NM
Passenger
How We Got Here: *Intercity Passenger*

- Northeast rail crisis forced government to act
  - Hoped to avoid bankruptcy of Penn Central and others
- A political compromise-keep a skeleton national network but with little in operating subsidies and capital infusion
- Amtrak had *no* profitable services and no guaranteed financial support
  - Staying alive, but barely
Passenger
How We Got There: *Commuter Rail*

• Some level of public support prior to Northeast rail crisis
  • Mainly capital subsidies

• Creation of Conrail began serious process of separating commuter from rail freight
  • Infrastructure and people

• Mass Transit Act gave impetus to expansions and new starts
  • Shift from defense to offense

• Congestion in urban areas created political will for expansions
Passenger
Where We Might Be Going: *Northeast Corridor*

- Continued ridership growth
- Continued shortage of capital
  - New equipment/cantenary between NY and DC
  - Funding limits will constrain both intercity and commuter in the NEC
- Localities and states do not want to support full costs of NEC, thus continued conflict with Feds
Passenger
Where We Might Be Going: *Other Corridors*

- **Factors for success**
  - High frequency
  - Broad public perception that rail is needed
  - Good urban feeder systems to rail
  - Mounting highway congestion/gridlock
  - Deterioration in availability of air service
  - Having the right funding entities (bonding authorities, etc.)
  - Cooperation of freight railroads
  - *And do not waste time/money chasing very high speed*
Passenger
Where We Might Be Going: *Long Haul Services*

- Remains the most vulnerable service, BUT
- Total losses are not that huge
- Strong emotional attachment remains
  - Which is bolstered by high fuel costs, deterioration in highway and air
- Remains irrelevant as solution to transportation needs
- But will probably survive on limited scale
- Need for new equipment and mounting congestion on freight lines are major uncertainties
Passenger
Where We Might Be Going: Commuter Rail

• May be the big growth story of the future, even more than rail freight
• Mounting urban mobility crisis and few if any highway new starts create need
• Again, case of efficiency trumping convenience
• But there are large impediments to growth
  • The worst rail freight congestion is in urban area so conflicts are inevitable and costly to fix
  • Funding will always be an issue (mass transit vs. drugs for aging boomers)
Summing Up
A New Golden Age?

• Yes, **BUT**

• Success is by no means guaranteed

• The same factors the create new rail markets will hurt some existing traffic
  
  • *i.e. A serious policy on climate change means more rail merchandise and passenger traffic but less coal*

• Much of rail success will be due to deterioration of other modes ("ugly dog contest")

• Success will be limited by economic realities/other priorities
What Kind of Railroad Would I Want?

• There will be shifts in demand—but often we will not know exactly where
• So a railroad needs:
  – A route network that reaches many markets
  – A diverse traffic mix
  – A willingness to create new services with new technology
  – “Time to market” will be critical
  – Think flexible and creative
Thank you for your time and attention
Questions?

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