AN OUTLOOK FOR THE NORTH AMERICAN RAIL CAR FLEET:
THE RISE... THE FALL... THE ???

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Recent Fleet Performance
US Freight Market

CAGR

'92-'02 '01 '08 '11
5.0% 1.5%-0.9%
-3.1%-1.8%-2.5%
0.2%-1.0%-0.1%
4.1% 2.2%-3.2%

Source: FTR, AAR, DOT, BTS, DOC
US Rail Car Market

Source: FTR, AAR
North American Rail Car Fleet

Source: FTR, ARCI, AAR

* 1997 Canada added & 2002 Mexico added
Economically Derived Demand vs. Rail Car Deliveries

Source: FTR
Today’s Fleet
Fleet Segmentation

Source: ARES, Inc., AAR

2009 North American Rail Car Fleet, 1.6 million cars
Box Car Fleet
Box Car Fleet

**Fleet Size**

- B, 50'
- C/E, 50', 100t
- C/E, 50', 70t
- C/E, 60', 100t
- F/G, 50', 100t
- F/G, 60', 100t
- F/G, 86'
- Other
- Mechanical Refer
- RBL/RB

**Ownership**

- Class 1: 39%
- Class 2/3: 11%
- Lessor: 48%
- Shipper: 2%

207,000 cars (2009) AAR
Box Car Traffic

**Industry**
- Forest Products 58%
- Food & Ag 18%
- Transportation 13%
- Other 11%

**Top Commodities (000 carloads)**
- Packaging Paper
- Printing Paper
- Auto Parts
- Wood Panels
- Pulp
- Beverages
- Scrap Paper
- Canned Goods
- Aluminum
- Appliances
- Other

1,600,000 carloads (2007) STB Public Waybill
Box Car Fleet

Age Distribution

Average Fleet Age

- B, 50'
- C/E, 50', 100t
- C/E, 50', 70t
- C/E, 60', 100t
- F/G, 50', 100t
- F/G, 60', 100t
- F/G, 86'
- Other
- Mechanical Refer
- RBL/RB

207,000 cars (2009) AAR
Box Car Fleet

Deliveries & Retirements

- **New car spec**
  - Plate F, 50’, 286k
  - Plate F, 60’, 268k
  - Mechanical refers, Plate F, 60’/70’, 268k

- **Key car characteristics**
  - Plate size
  - GRL / nominal capacity / tare wt.
  - Inside length
  - Draft gear / cushion units

- **Other important characteristics**
  - Door type & width
  - Floor type / strength
  - Interior wall / lining

Source: RSI / ARCI
Covered Hopper Fleet
Covered Hopper Fleet

**Fleet Size**

- Specialty
- PD5
- PD3
- Plastic Pellet
- Super Gravity
- Jumbo Gravity
- Large Gravity
- Medium Gravity
- Small Gravity

**Ownership**

- Class 1: 20%
- Class 2/3: 3%
- Shipper: 28%
- Lessor: 49%

528,000 cars (2009) AAR
Covered Hopper Fleet

Industry

- Agriculture 59%
- Petro-Chemical 20%
- Mining 18%
- Other 3%

Top Commodities (000 carloads)

- Corn
- Plastic Resins
- Wheat
- Cement
- Soybeans
- Soybean Flour
- Potash
- Soda Ash
- Sand
- Superphosphate
- Other

4,450,000 carloads (2007) STB Public Waybill
Covered Hopper Fleet

Age Distribution

Average Fleet Age

- Specialty
- PD5
- PD3
- Plastic Pellet
- Super Gravity
- Jumbo Gravity
- Large Gravity
- Medium Gravity
- Small Gravity

528,000 cars (2009) AAR
Covered Hopper Fleet

Deliveries & Retirements

- New car spec
  - Gravity, 5150 cuf, 286k
  - Gravity, 3300 cuf, 286k
  - Gravity, 6300 cuf, 286k
  - Pneumatic, 6200 cuf, 268k
  - Pressure differential, 5600 cuf, 286k
  - Pressure differential, 3300 cuf, 286k

- Key car characteristics
  - Unloading system
  - Cubic capacity
  - GRL / nominal capacity / tare wt.

- Other important characteristics
  - Hatch type
  - Gate type / size
  - Lining

Source: RSI / ARCI
Open Top Hopper Fleet
Open Top Hopper Fleet

Fleet Size

- Other OTH 70t
- Other OTH >=3600
- Other OTH < 3600
- Ore Jennies <= 2300
- Coal Steel Rotary
- Coal Steel non-Rotary (>=3600)
- Coal Steel non-Rotary (< 3600)
- Coal Aluminum

Ownership

- Class 1 37%
- Class 2/3 8%
- Lessor 24%
- Shipper 31%

187,000 cars (2009) AAR
Open Top Hopper Fleet

Industry

- Mining: 92%
- Agriculture: 3%
- Petro-Chemical: 4%
- Forest Products: 1%
- Other: 0.4%

Top Commodities (000 carloads)

- Bituminous Coal
- Crushed Stone
- Iron Concentrates
- Phosphate Rock
- Coal Coke
- Petroleum Coke
- Wood Chips
- Lignite Coal
- Coke
- Aggregates
- Other

6,100,000 carloads (2007) STB Public Waybill
Open Top Hopper Fleet

Age Distribution

Average Fleet Age

- Other OTH (70 ton)
- Other OTH (>=3600)
- Other OTH (< 3600)
- Ore Jennies (<= 2300)
- Coal Steel Rotary (>=3600)
- Coal Steel non-Rotary (>=3600)
- Coal Steel non-Rotary (< 3600)
- Coal Aluminum

187,000 cars (2009) AAR
Open Top Hopper Fleet

Deliveries & Retirements

- **New car spec**
  - Aluminum, 286k, 4300 cuf, auto discharge gates, rotary coupler
  - Hybrid Alum/Stainless, 286k, rotary
  - Ore OTH, 286k, 1300 cuf, 31’
  - Aggregate OTH, 286k, 2500 cuf, 42’-45’

- **Key car characteristics**
  - Body material
  - GRL / nominal capacity / tare wt.
  - Cubic capacity
  - Coupler type
  - Gate type

- **Other important characteristics**
  - # hopper outlets
  - Outside length

Source: RSI / ARCI
Gondola Fleet
Gondola Fleet

Fleet Size

- Other Gons
- Mill Gons
- Covered Gons
- Steel Coal Gons
- Aluminum Coal Gons

Ownership

- Class 1: 37%
- Class 2/3: 7%
- Lessor: 31%
- Shipper: 25%

272,000 cars (2009) AAR
Gondola Fleet

Industry

- Mining: 79%
- Metal: 16%
- Forest Products: 2%
- Agriculture: 1%
- Other: 2.3%

Top Commodities (000 carloads)

- Coal
- Scrap Steel
- Steel Coils
- Crushed Stone
- Steel Ingots
- Steel
- Wood Chips
- Coke
- Other

5,700,000 carloads (2007) STB Public Waybill
Gondola Fleet

Age Distribution

- 0-5
- 6-10
- 11-15
- 16-20
- 21-25
- 26-30
- 31-35
- 36-40
- > 40

Average Fleet Age

- Other Gondola
- Covered Gondola
- Mill Gondola
- Steel Coal Gondola
- Aluminum Coal Gondola

272,000 cars (2009) AAR
Gondola Fleet

Deliveries & Retirements

- **New car spec**
  - Aluminum, 286k, 4500 cuf, rotary
  - Hybrid Alum/Stainless steel coal gon
  - 52' Mill gon, 286k, 5'6" sides, 2750 cuf
  - 66' Mill gon, 286k, 6' sides, 3500 cuf
  - Covered coil steel gons, 286k, 42’-48’
  - High-side gons, 6250-7000 cuf, 286k
  - Ore gondola, 286k, 1800 cuf, 34’

- **Key car characteristics**
  - Body material
  - GRL / nominal capacity / tare wt.
  - Cubic capacity
  - Coupler type

- **Other important characteristics**
  - Inside length
  - Side height
  - Covers

Source: RSI / ARCI
Flat Car Fleet
Flat Car Fleet

Fleet Size

IM Low Profile
IM Conventional
IM Double
IM Double
IM Double
Heavy Duty
Gen Service
Center Beam
Bulkhead
Tri-level
Bi-level

Ownership

TTX 56%
Railroad 21%
Shipper 4%
Lessor 19%

237,000 cars (2009) AAR
Flat Car Fleet

Industry (000 carloads)

- Misc Freight
- Transportation
- Manufacturing
- Forest Products
- Agriculture
- Petro-Chemical
- Metal
- Construction Materials

Top Commodities (000 carloads, excluding Intermodal)

- Trucks
- Automobiles
- Lumber
- Gypsum Wallboard
- Steel Ingots
- Iron or Steel Plates
- Saw Logs
- Motor Vehicle Frames
- Used Vehicles
- Pulpwood Logs
- Other

17,300,000 carloads (2007) STB Public Waybill
Flat Car Fleet

Age Distribution

Average Fleet Age

IM 53' Dbl Stk
IM 45-48' Dbl Stk
IM 40' Dbl Stk
IM Low Profile
IM Conventional
Heavy Duty
Gen Serv
C-Beams
Bulkhead
Tri-level
Bi-level

237,000 cars (2009) AAR
Flat Car Fleet

Deliveries & Retirements

- New car spec
  - 40' 5-unit Articulated Well, 125 ton
  - 53' 3-unit Articulated Well, 125 ton
  - 53' Standalone Well, 70 ton
  - 73' Center-beam, 286k
  - 62' Bulkhead Flat, 286k

- Key car characteristics
  - Body type / commodity service
  - Platform / well length
  - GRL / nominal capacity / tare wt.
  - Articulation

- Other important characteristics
  - Center partition
  - Rack configuration
  - Tie-down equipment

Source: RSI / ARCI
Tank Car Fleet
Tank Car Fleet

Fleet Size

- Specialty
- Pressure
- NC / NI
- EC / I

Ownership

- Lessor 75%
- Shipper 25%
- Railroad 0%

304,000 cars (2009) AAR
Tank Car Fleet

**Industry**
- Petro-Chemical: 67%
- Mining: 6%
- Agriculture: 24%
- Other: 3%

**Top Commodities** (000 carloads)
- Alcohols
- LPG
- Corn Syrup
- Asphalt
- Sulphuric Acid
- Soybean Oil
- Sulphur
- Residual Fuel
- Sodium Alkalies
- Nitrogen
- Other

2,150,000 carloads (2007) STB Public Waybill
Tank Car Fleet

Age Distribution

Average Fleet Age

Pressure
GP Large
GP 25.5k
GP 23.5k
GP 20k
GP Small

304,000 cars (2009) AAR
Tank Car Fleet

Deliveries & Retirements

- **New car spec**
  - GP 20k gallon, EC / I, 263k
  - GP 23.5k gallon EC / I, 263k
  - GP 25.5k gallon EC / I, 286k
  - GP 29k gallon, EC / I, 286k
  - GP 30k gallon NC / NI, 263k
  - Pressure 18k gallon, 263k, 600 psi, Chlorine
  - Pressure 22k gallon, 263k, 500 psi, CO2
  - Pressure 26k gallon, 263k, 300 psi, VCM
  - Pressure 33k gallon, 263k, 340-400 psi, LPG
  - Pressure 34k gallon, 263k, 500 psi, AA
  - GP Corn Syrup, 20k, 286k
  - GP Acid, 14-21k gallon, NC / NI
  - Variety of specialty cars

- **Key car characteristics**
  - Pressure / shell thickness
  - Gallonage capacity
  - Coils
  - Insulation

- **Other important characteristics**
  - GRL / nominal capacity / tare wt.
  - Linings
  - Valves

Source: RSI / ARCI

EC = exterior Coiled; I = Insulated; NC = Non-coiled; NI = Non-insulated
Looking Ahead
Economic Implications for the Fleet

Equipment Values for Gravity Covered Hoppers

- Lease rates, FMV’s, OEC, new builds rates, fleet utilization rates, surpluses all tied to freight volumes
  - Agricultural covered hoppers
    - C113 – 4750 cuf
    - C114 – 5150 cuf
    - C617 – PD5
  - Other covered hoppers (not shown)
    - C112 – 3000-3300 cuf
    - C612 – PD3

Source: ARES, Inc.
Original Equipment Costs

Fair market values
(10 yr C114 & C614, 25 yr C113)

Source: ARES, Inc.
Thank You

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