



Solid Foundation:

A look at the factors that promise to keep commercial vehicle markets healthy for several years to come

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FRB Chicago Automotive Outlook Symposium
May 2013

Axioms

- There is no substitute transportation mode for heavy trucks and tractor-trailers.
- Economic activity provides a proxy for the freight that trucks haul.
- Truckers do not buy trucks if they are not making money.
- It is difficult to buy trucks if funds are not available

Underlying Macro Assumptions

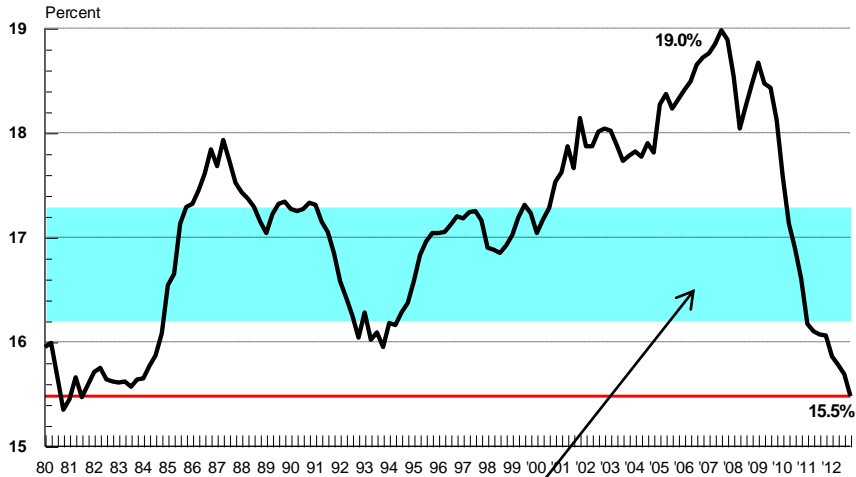
Slow growth in early 2013, strengthening into 2014

- GDP at ~2% in 2013, rising towards 3% in 2014
- Growth is more broadly based
 - Consumer balance sheets
 - Domestic energy production
 - Manufacturing
 - Residential & commercial investment
 - Low inflation
- Caveat(s):
 - Politics: Domestic & International
 - European voters

Rising Wealth, Falling Debt

**Household Financial Obligations
as % of Disposable Income**

Q1'80 - Q4'12



Source: Federal Reserve Board, ACT Research, Copyright 2013

Each ppt = ~\$100b in
annual discretionary income

Nearing record
levels (nominal)

**Balance Sheet of Households
& Non-Profit Organizations**

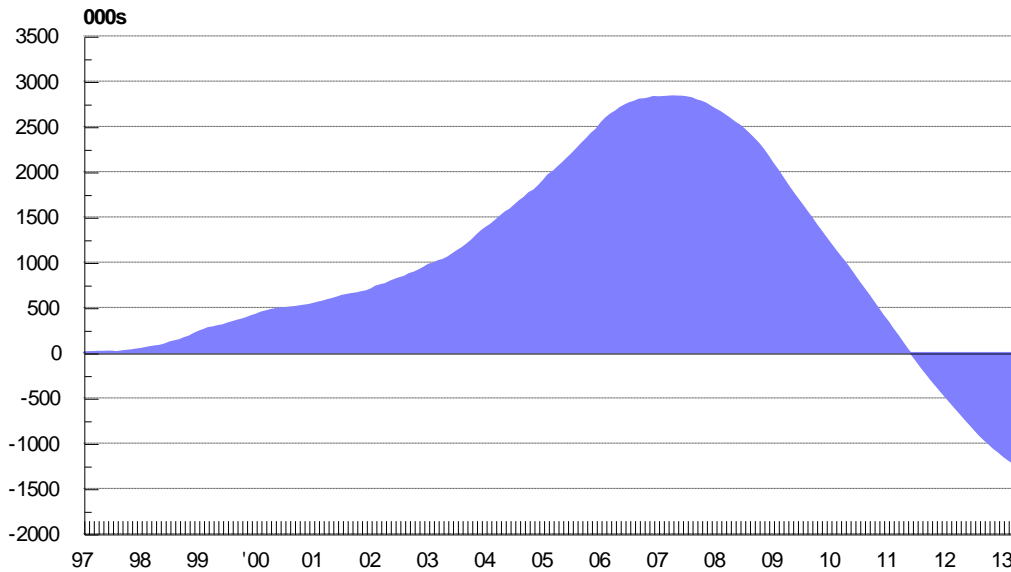
Q1'2000 - Q4'12



Source: FRB Board of Governors, ACT Research, Copyright 2013

Pent-Up New Housing Demand

U.S. Housing Bubble
 Assuming Replacement + New Demand @
 1.45mm/Year
 1997 - March 2013

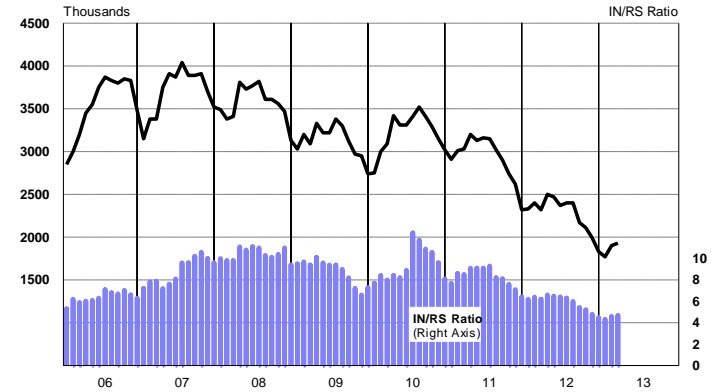


ACT Research Co., LLC: Copyright 2013

To return to 2.2 adults/
 household: 970,000 add'l homes

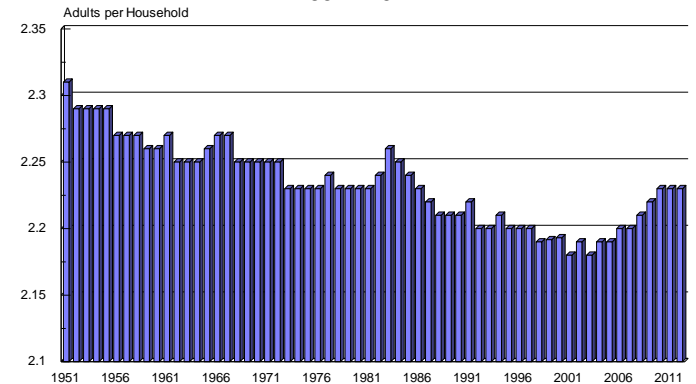
Existing Home Inventories & IN/RS

January 2006 - March 2013
 Thousands of Units-SAAR



Source: National Association of Realtors, ACT Research: Copyright 2013

**U.S. Current Population Survey:
 Adults per Family Household (18+)**
 1951 - 2012



Source: U.S. Census Bureau CPS, ACT Research Co., LLC: Copyright 2013

Domestic Energy Production

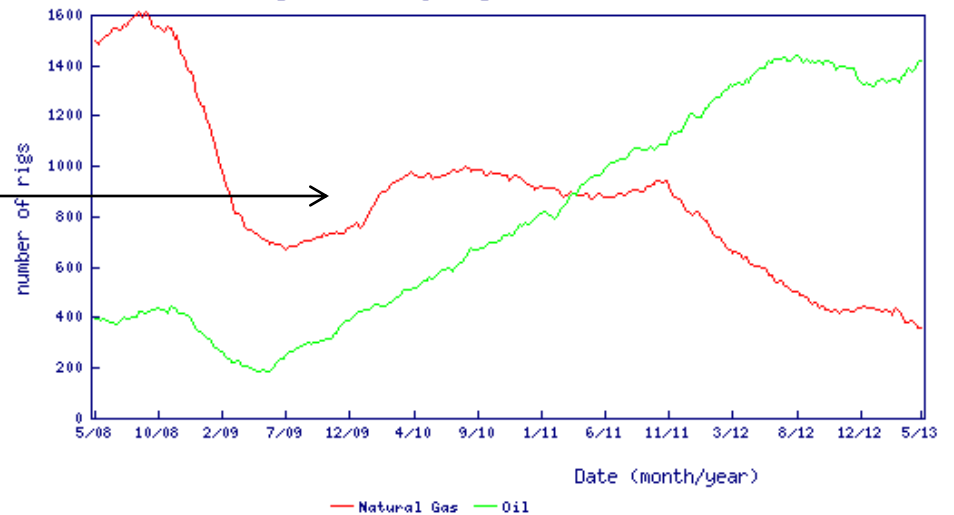
Spot Natural Gas Prices: Henry Hub

January 2006 - 2013 (Week 19)



Source: EIA, ACT Research Co., LLC. Copyright 2013

Baker Hughes Rotary Rig Count (U.S. Oil and Gas)



May 13: Down ~10%/200 rigs y/y
 . Down 500+ NG rigs

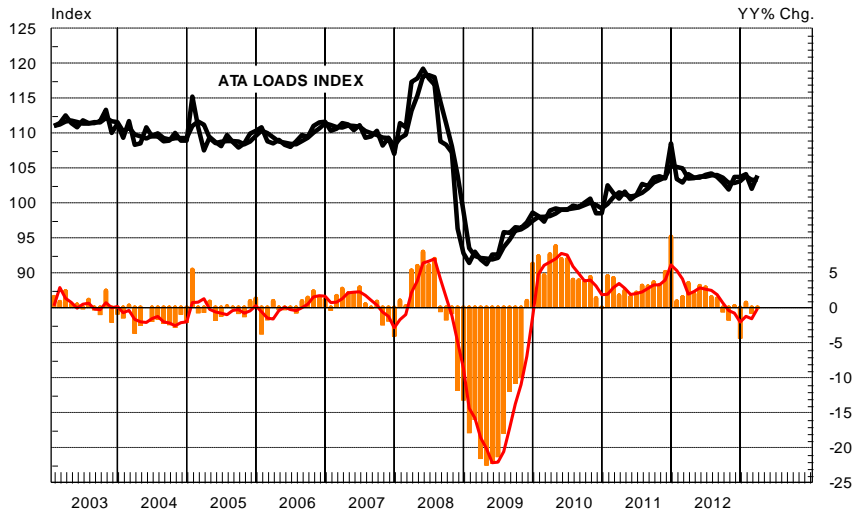
Firming Outlook

- Freight supply – truck demand in balance
 - Should tip towards truckers through 2013
- Trucker profits are at replacement levels
 - Need another 100bps-150bps for capacity additions
- Used equipment valuations at high levels*
 - Good forward visibility for profits & used equipment values
- Also,
 - **Significantly better fuel economy**
 - A really old fleet from deferred capex (maintenance, opportunity)
 - **Maturing super-productivity trends**
 - Regulatory impacts on productivity, liability, & drivers
 - HoS in July

Still Little Traction

ATA Truck Loads Index

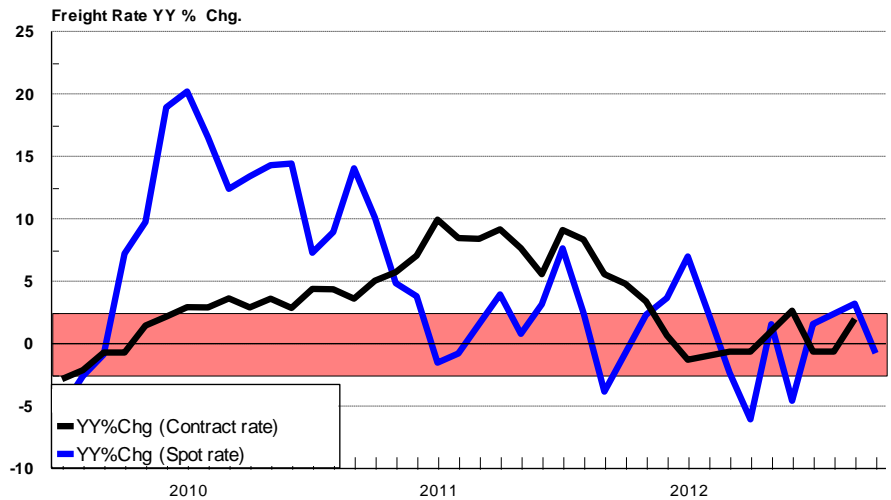
January '03 - March '13 (2000=100)



Source, American Trucking Associations, ACT Research Co., LLC: Copyright 2013

Transcore Loadboard: Dry Van Revenue per Mile (exFSC) Year over Year % Change

January '10 - April Spot '13 (2000=100)

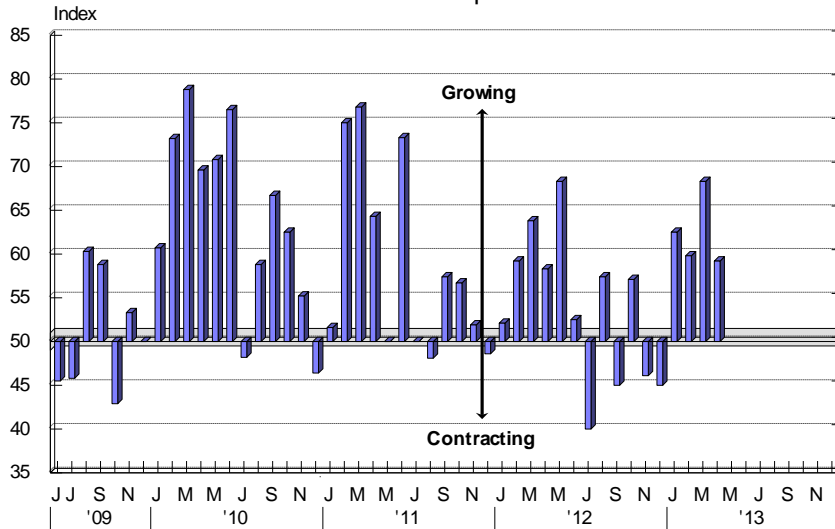


Source, Transcore Commercial Technology Group, ACT Research Co., LLC: Copyright 2013

ACT For-Hire Index

**ACT For-Hire Truckload Index
Freight Volumes**

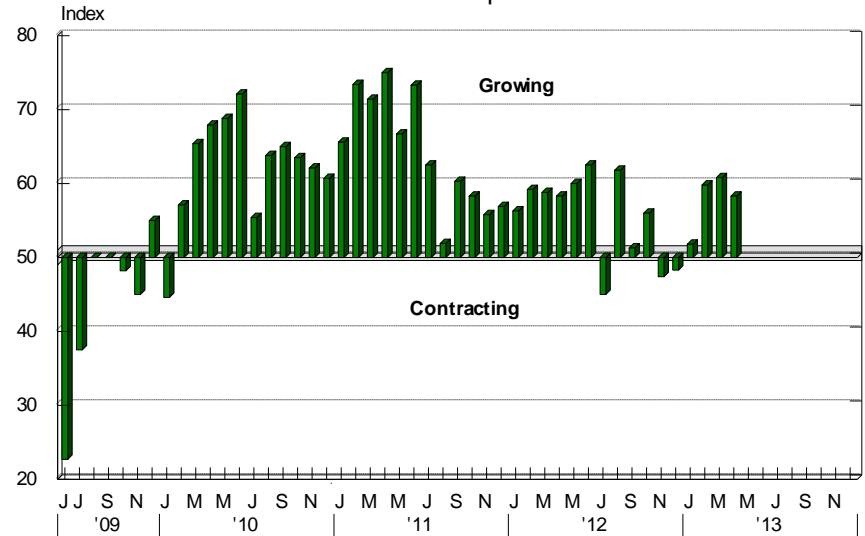
June '09 - April '13



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**ACT For-Hire Truckload Index
Freight Rates**

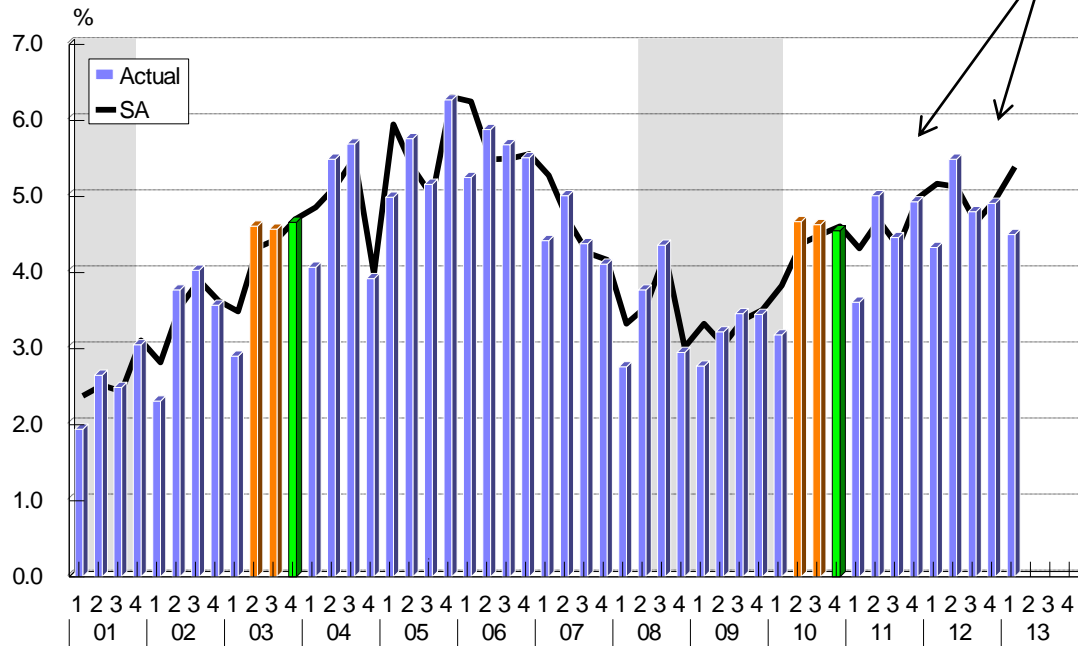
June '09 - April '13



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A Tale of Two Quarters

TL Carrier Database:
Net Profit Margin
Q1'01 - Prelim. Q1'13



Q4'11 and Q4'12 = 4.9%

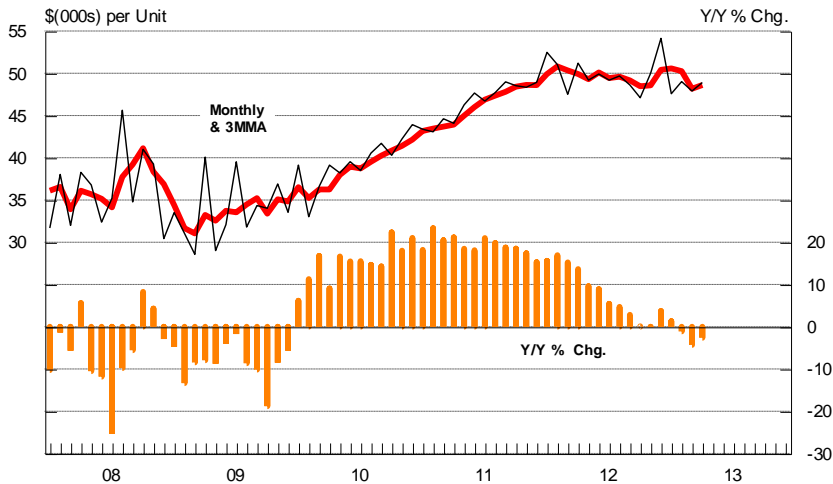
- **Q4'11: Hot**
 - GDP: +4.1%
 - ACT FC: +8.7%
 - ATA: +9.5%
- **Q4'12: Not**
 - GDP: +0.4%
 - ACT FC: +2.4%
 - ATA: -1.8%

ACT Research Co., LLC: Copyright 2013

Steady Pricing Outlook

Used Class 8: Average Retail Selling Price

January '08- April '13

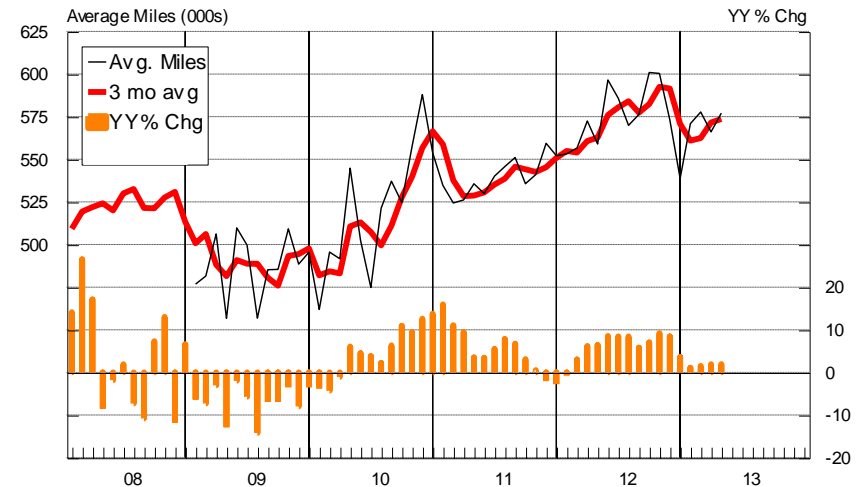


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Selling price: -3% y/y
Mileage: +2% y/y

Used Class 8: Average Miles

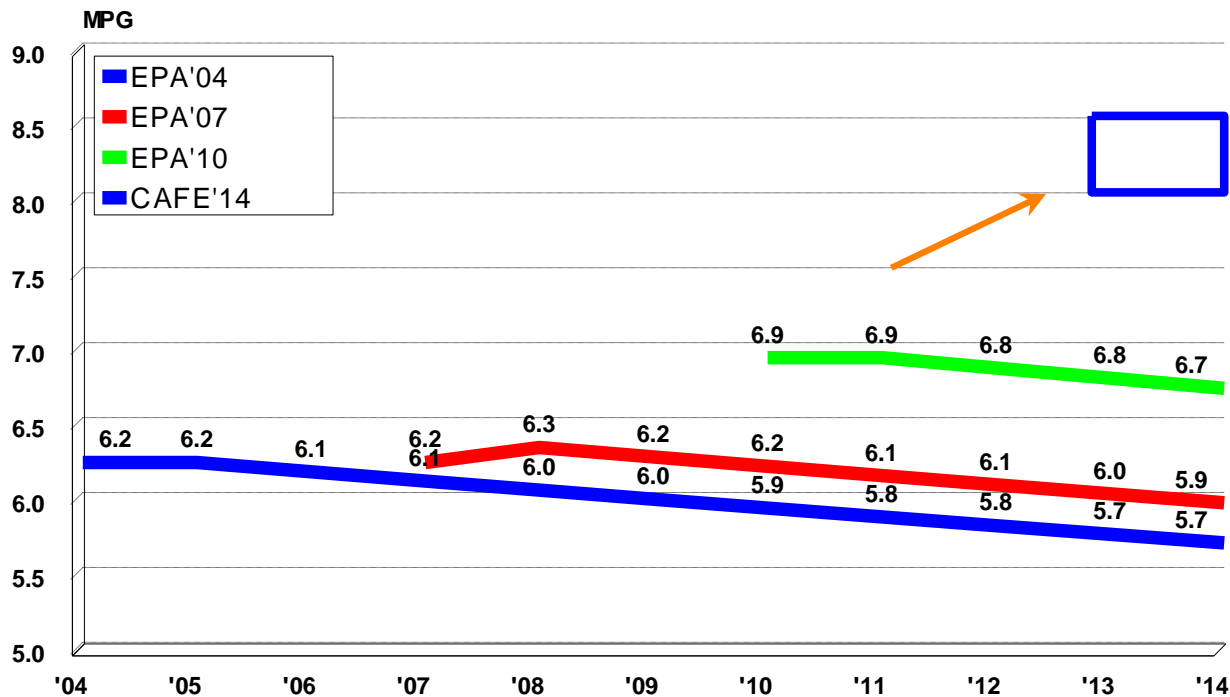
January '08 - April '13 (Not Seasonally Adjusted)



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Significantly Better MPG

Onhighway Tractor Fuel Economy & Estimated Degradation



The difference between 6mpg & 8mpg over 100k miles?

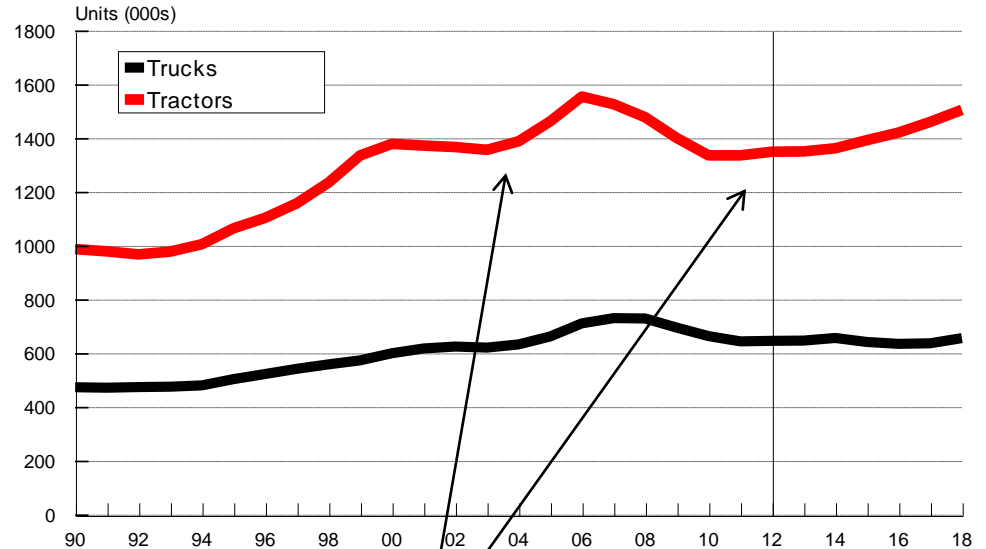
4,200 gal./yr.

Sources: ACT Research w/inputs from PHH FirstFleet, NACFE, and fleet inputs.
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U.S. Population Model

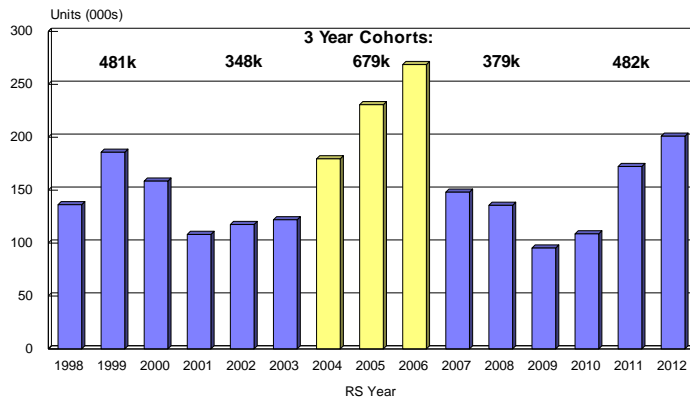
U.S. Class 8 Active Population: Trucks & Tractors

1990 - 2018



ACT Research Co., LLC: Copyright 2013

U.S. Class 8 Demographics: 2012 U-15 Population by RS Year



ACT Research Co., LLC: Copyright 2013

U.S. Tractor population today
comparable to 2003 population
 . GDP up 15%
 . But so is productivity!

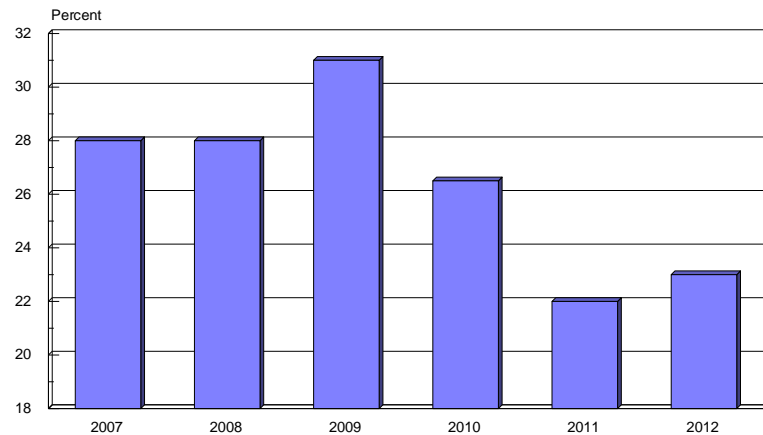
Maturing Productivity Trends

Starting around 2005, rising energy, equipment, & driver costs, caused companies to redouble efforts to reign in transportation spending:

- Packaging
- Product
- Loading
- Routing
- Intermodal
- Etc.

10% - 12%
productivity
gain since
~2006

**NPTC Benchmark Survey:
Private Fleet Empty Backhauls Percentage**



ACT Research Co., LLC: Copyright 2013

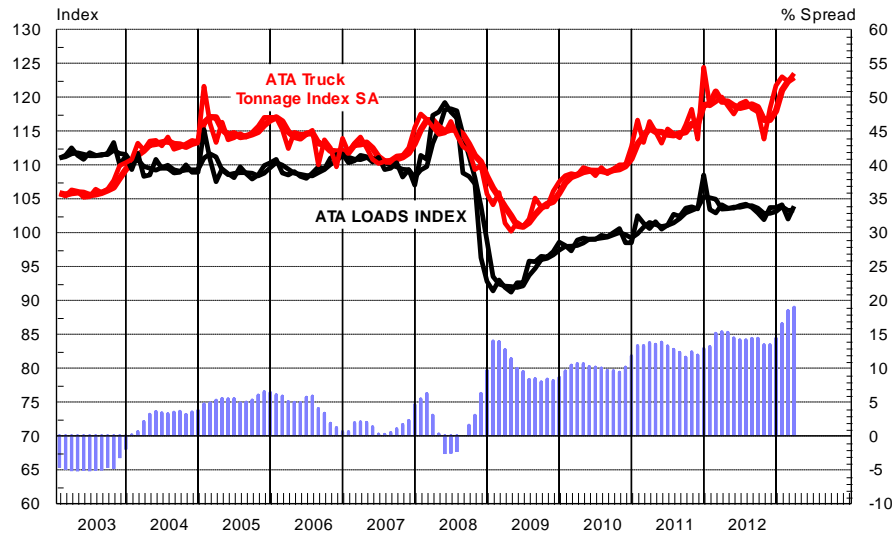
The shift from 28% to 22% private fleet empty backhauls effectively created 1.5ppts, or 25,000 units of additional tractor capacity

Additional Evidence

Widening spread between tonnage & loads implies improved freight density: 10ppt swing above typical implies ~140k population impact

ATA Truck Tonnage Index & ATA Truck Loads Index

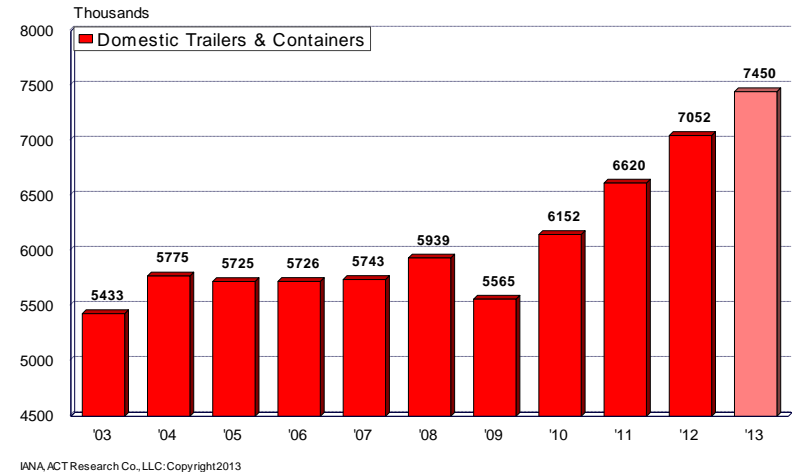
January '03 - March '13 (2000=100)



Source, American Trucking Associations, ACT Research Co., LLC: Copyright 2013

Domestic Intermodal Loadings

2003-2013F



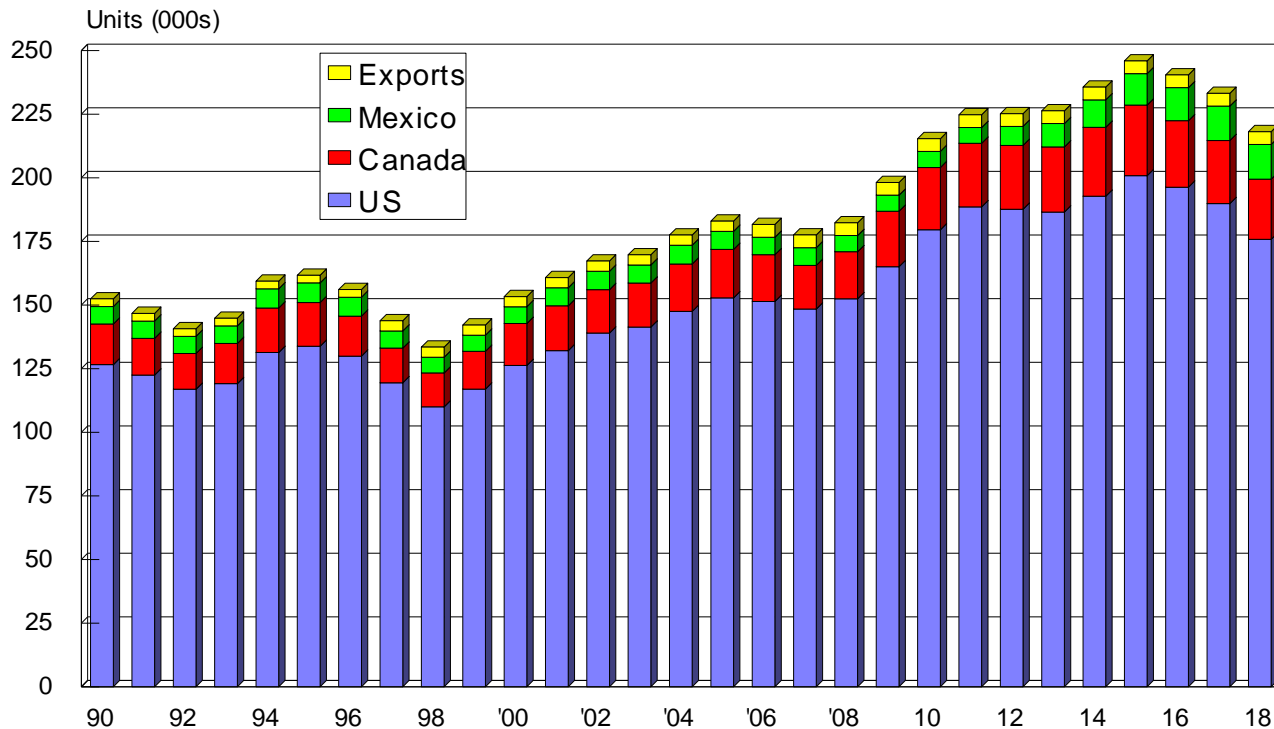
IANA, ACT Research Co., LLC: Copyright 2013

ACT's IM Truck Conversion math:
~2mm loads = 16k fewer tractors needed in population

Underlying Replacement

REPLACEMENT: NA Class 8 Active Stock

1990 - 2018




ACT Research Co., LLC: Copyright 2013

Regulatory Onslaught

- CSA ('11):
 - Productivity, Liability, Drivers
- Hours of Service (07'13):
 - Keep 11 and 14 hours (for now)
 - 34 hour reset must include 2 overnights
 - Trucking industry challenge to new rule
- EOBR mandate: (Stuck)
 - Will force for-hire to catch-up with private
 - Should curtail cheating
- CAFE Standards ('14, '18)

Productivity
squeeze =
Higher
freight rates

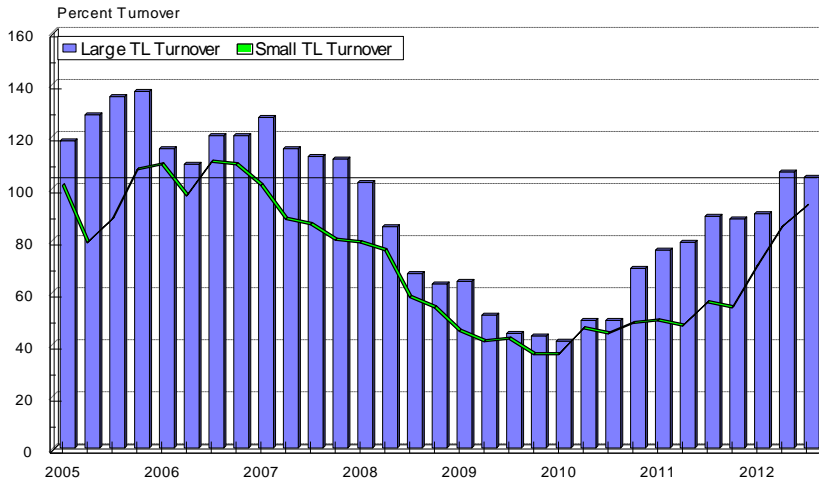


Driver Shortage

- There is no substitute transportation mode for heavy tractor-trailer combinations
 - None.
- The freight will get delivered
 - Freight determines driver demand, not the reverse
- The Law of Supply & Demand has not been repealed
 - Periods of rising freight activity exacerbate the shortage situation, causing driver wages to rise

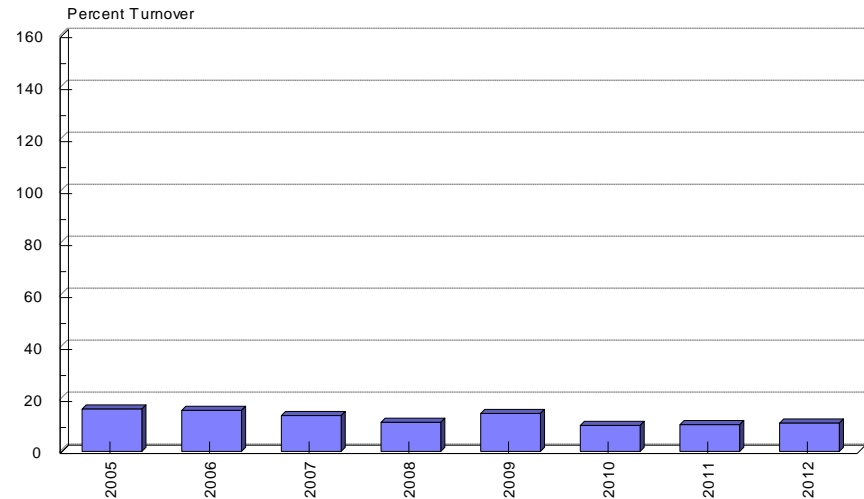
Driver Shortage?

ATA: For-Hire TL Carrier Driver Turnover
2005 - 2012 Q3



American Trucking Associations, ACT Research Co., LLC: Copyright 2013

NPTC Benchmark Survey: Private Fleet Driver Turnover
2005 - 2012



National Private Truck Council, ACT Research Co., LLC: Copyright 2013

100% annualized turnover?

Retaining drivers, rather than finding them is the problem

Lower turnover = increased safety:
42% fewer DOT recordable accidents for Survey participants than industry average

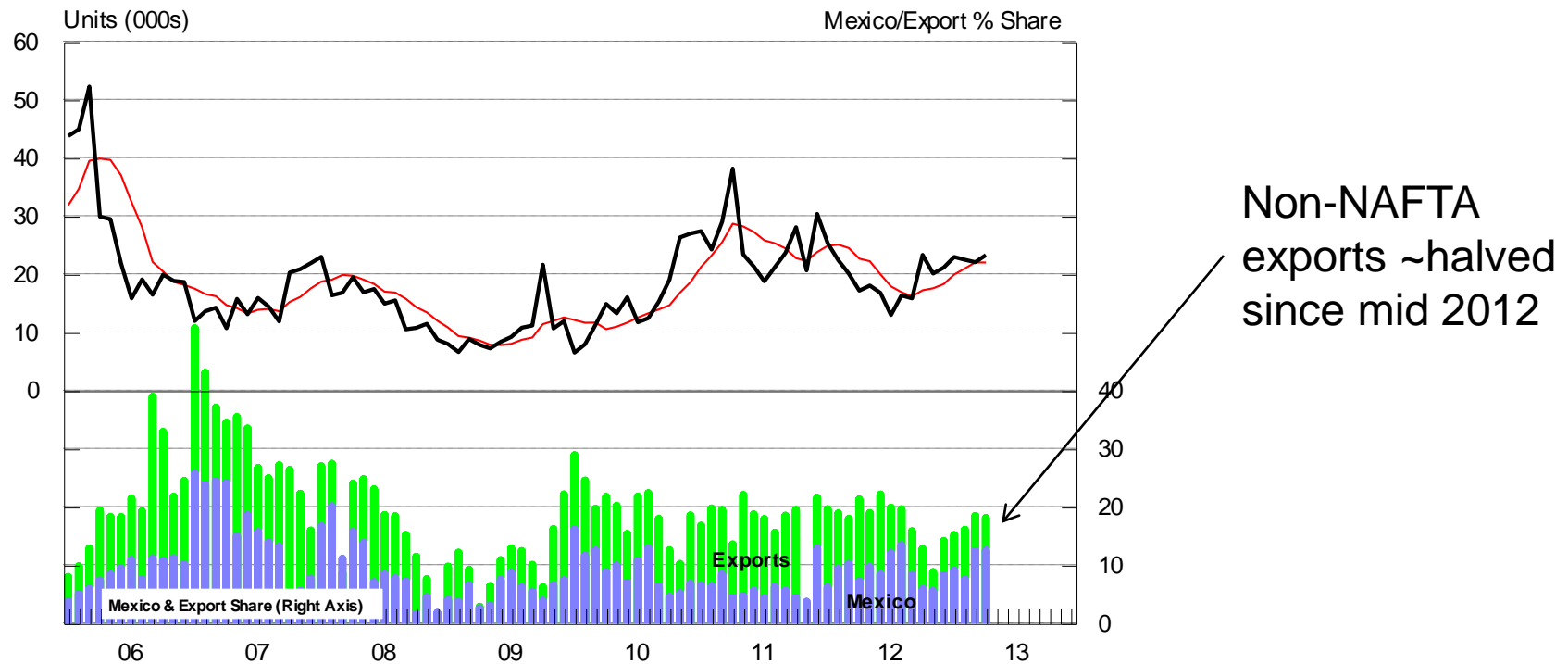
New Equipment Demand

- Short-term: Risks outweighing potential rewards
 - Ongoing economic uncertainty
 - Inconsistent freight
 - Lack of traction on freight rates & profitability
 - Large gap between new and used truck prices*
- Short-term industry outlook
 - Backlogs remain thin
 - From order to delivery in 4 to 6 weeks
 - Short-term orders increasingly important
 - Cancellation trend is falling
- Broader economic support will improve demand
 - Look for September-October pop in Class 8 orders

Good but not Great

TOTAL CLASS 8: N.A. NET ORDERS

January '06 - April '13 (Not SA)

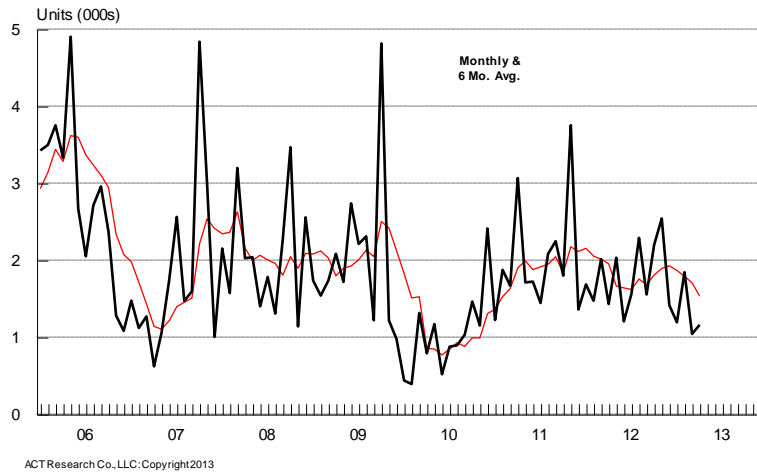


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Cancellation Pull-Back

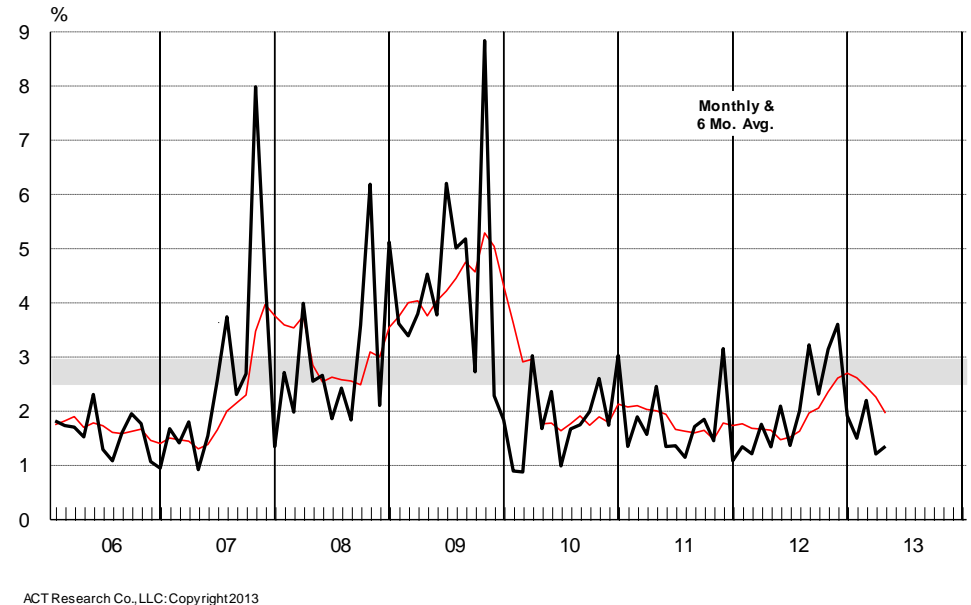
TOTAL CLASS 8: N.A. CANCELLATIONS

January '06 - April '13 (Not Seasonally Adjusted)



TOTAL CLASS 8: N.A. CANCELLATION RATE Expressed as a percentage of Backlog

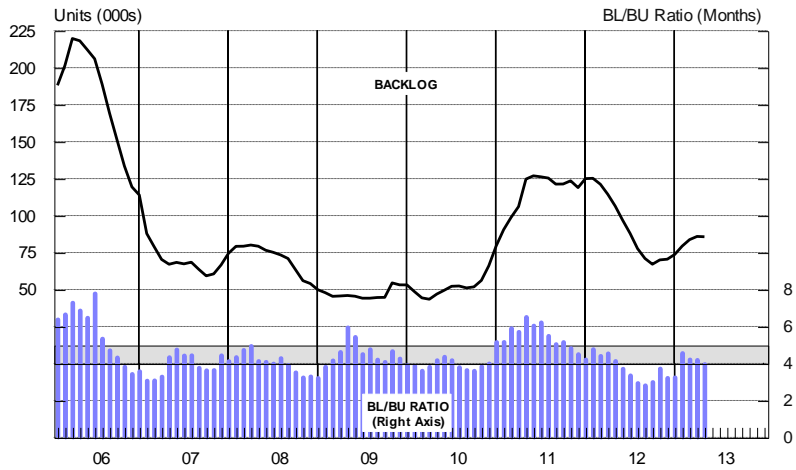
January '06 - April '13 (Not Seasonally Adjusted)



Limited Visibility

TOTAL CLASS 8: N.A. BACKLOG & BL/BU RATIO

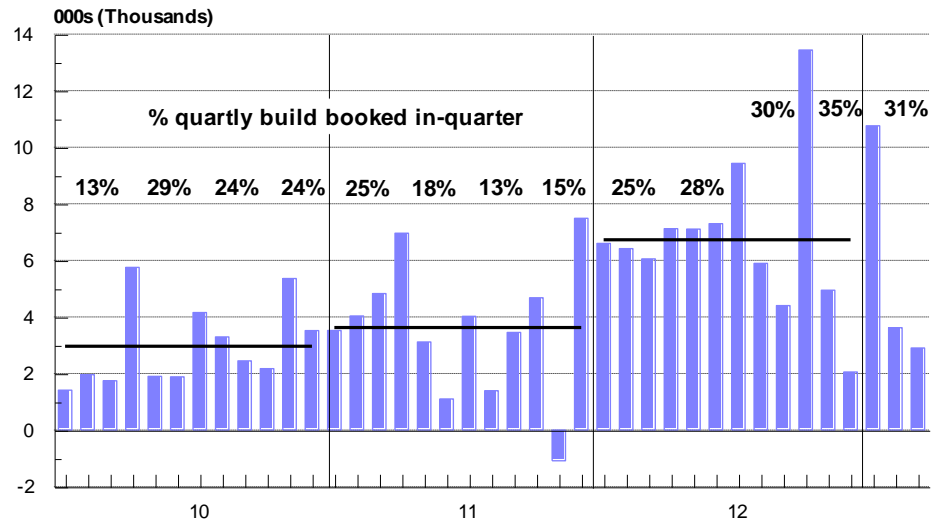
January '06 - April '13 (Not Seasonally Adjusted)



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NA Class 8 Orders: Booked Into Current Quarter

2010 - March 2013

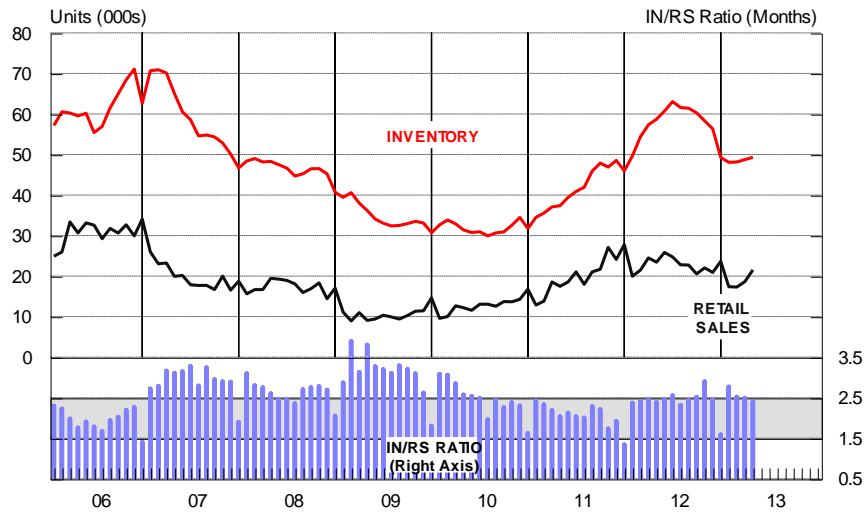


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Positive Turn

TOTAL CLASS 8: N.A. INVENTORY/RETAIL SALES RATIO

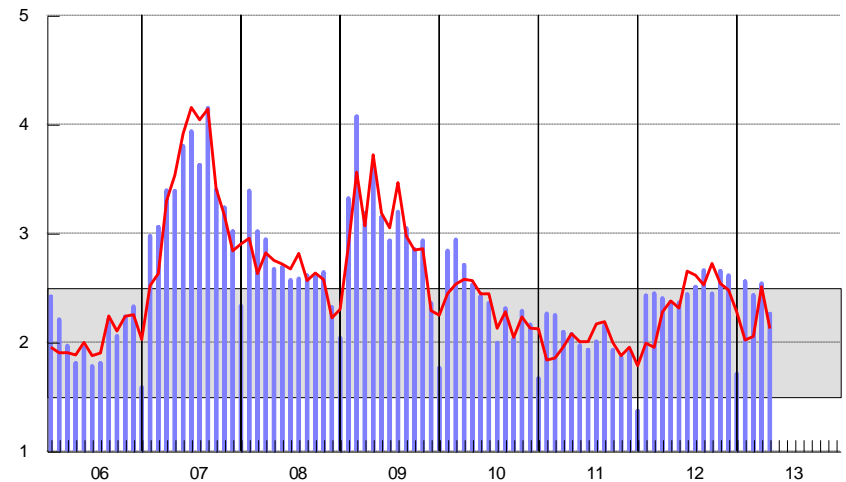
January '06 - April '13 (Not Seasonally Adjusted)



ACT Research Co., LLC: Copyright 2013

U.S. IN/RS RATIO

January '06 - April '13 (Not Seasonally Adjusted)



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Backlog Analysis

Build Timing of Units in Backlog as of April 2013

<u>CLASS 8</u>	Actual BU <u>YTD 04'13</u>	Q2'13 <u>May-Jun</u>	Q3'13 <u>Jul-Sep</u>	Q4'13 <u>Oct-Dec</u>	<u>Beyond</u>	<u>TOTAL</u>
BACKLOG DISTRIBUTION		34,426	27,990	16,073	3,956	82,445
. Distribution by Quarter		40.2%	32.7%	18.8%	4.6%	
Class 8 Actual/Forecast Build	77,681	43,600	69,000	72,000		262,281
. Open build slots:		9,174	41,010	55,927		179,836
. % Open		21.0%	59.4%	77.7%		--
	YTD'13	Q2	Q3	Q4		
DAYS	60	64	62	59		
BUILD UPD (A/F)	1,295	681	1,113	1,220		

Medium Duty

- Cancellations and key ratios (BL/BU and IN/RS) suggest fundamentals basically in line. Could use more orders.
- Job concerns loosening hold on MD vehicle buyers
- Housing accretive to economy and MD truck/RV demand
- State and local government contribute to 2013 growth
- Bus market to benefit from improved property values
- Forecast below replacement until 2H'14/1H'15
 - Cl.6-7 at ~160k/yr, Cl.4-5 at ~70k/yr
- Velocity of growth for medium duty market is determined by the pace of economic growth, in particular, consumer spending

N.A. Classes 5-7 Order Distribution

(Data through April 2013, annualized)

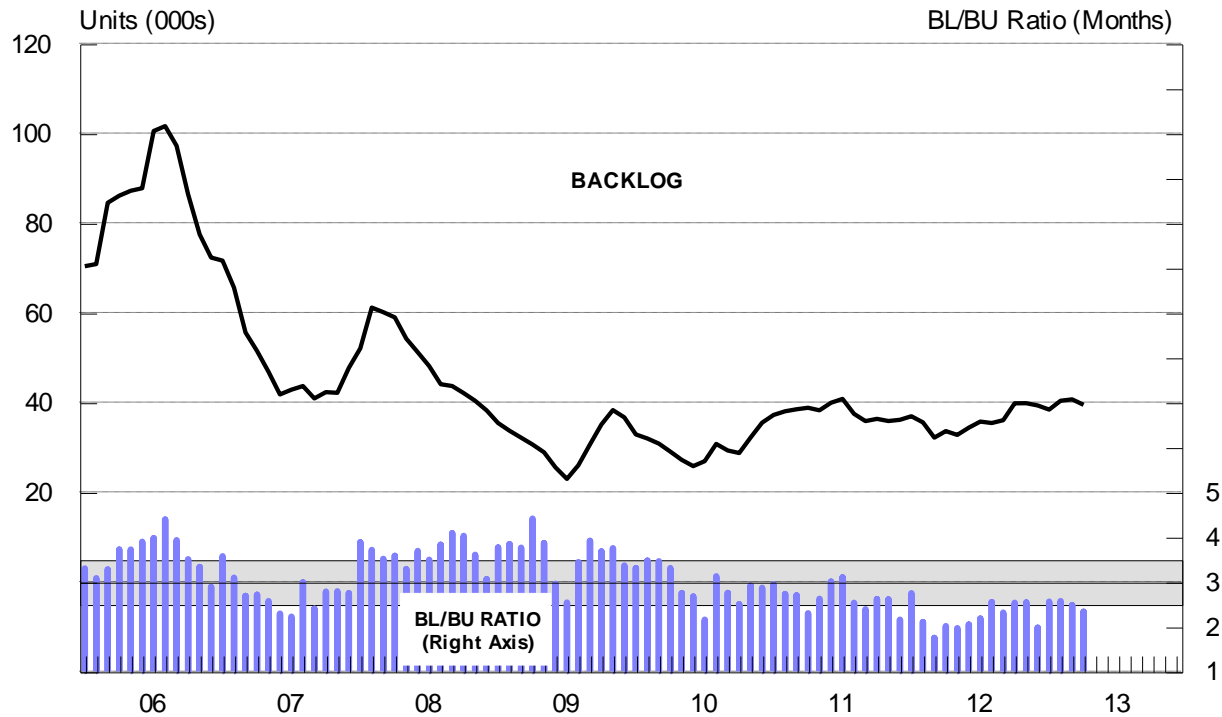
<u>Classes 5-7 Orders</u>	Truck (000s)	Bus (000s)	RV (000s)	Total* (000s)
Past 12 Mo.	128.7	32.4	13.7	180.9
Past 6 (AR)	134.2	28.1	10.1	180.0
Past 3 (AR)	133.1	34.7	12.0	192.5
April	154.0	34.0	11.9	201.0
April (SAAR)				205.6

* Total includes Step Vans

In Maintenance Mode

TOTAL CL. 5-7: N.A. BACKLOG & BL/BU RATIO

January '06 - April '13 (Not Seasonally Adjusted)

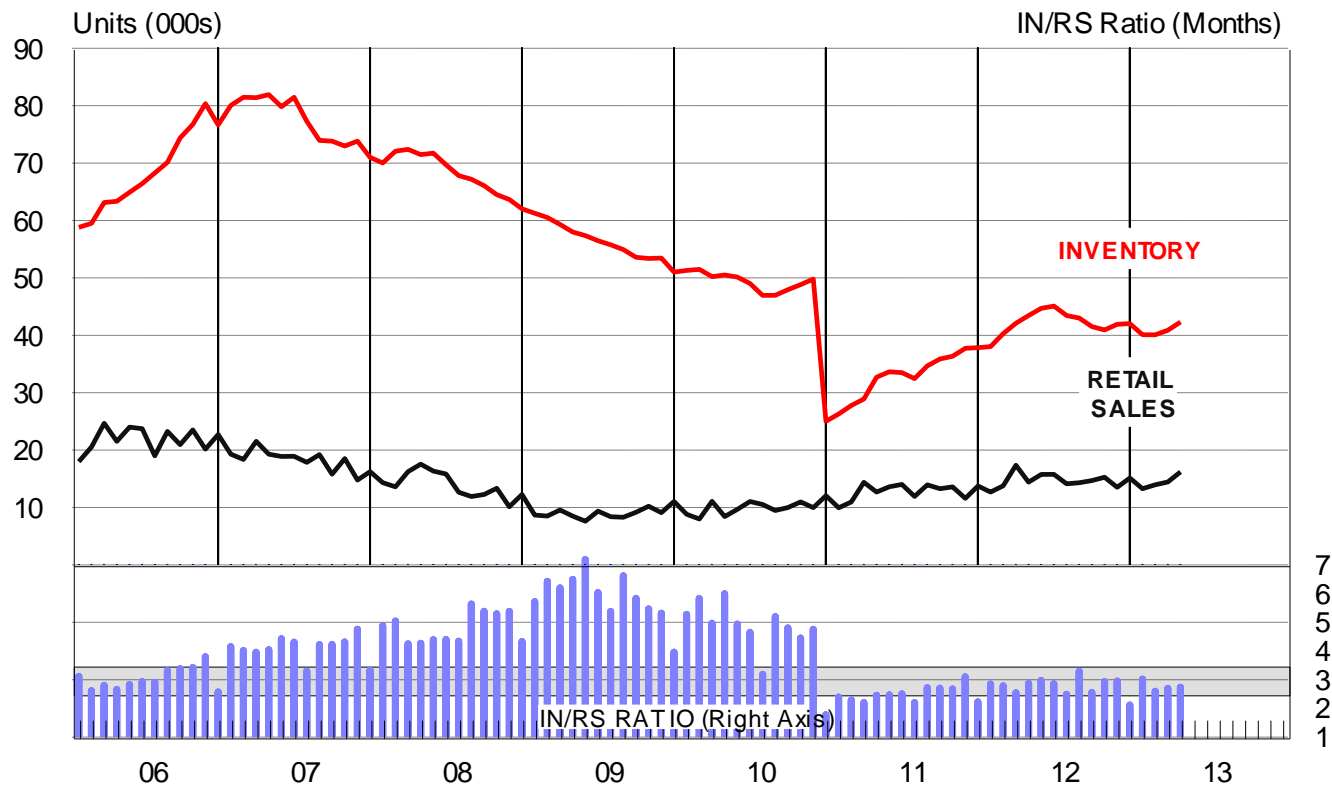


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IN/RS on Target

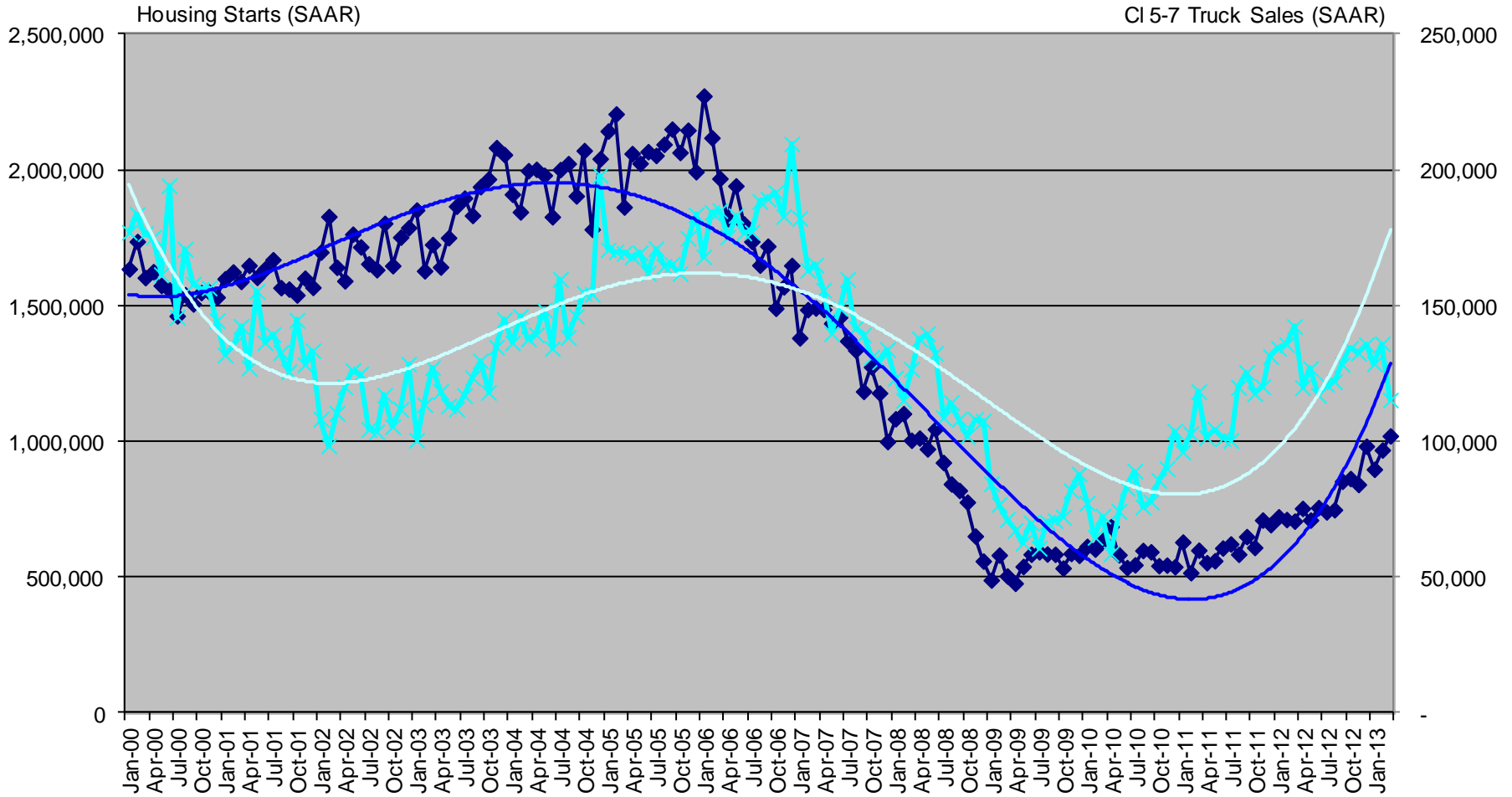
TOTAL CLASSES 5-7: N.A. INVENTORY/RETAIL SALES RATIO

January '06 - April '13 (Not Seasonally Adjusted)

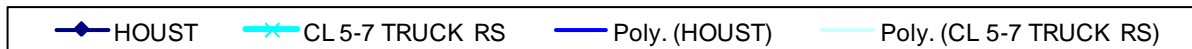


ACT Research Co., LLC: Copyright 2013

Housing Starts vs. CI 5-7 Truck Sales



Source: ACT Research Co., LLC, USDOC Census Bureau



Concluding

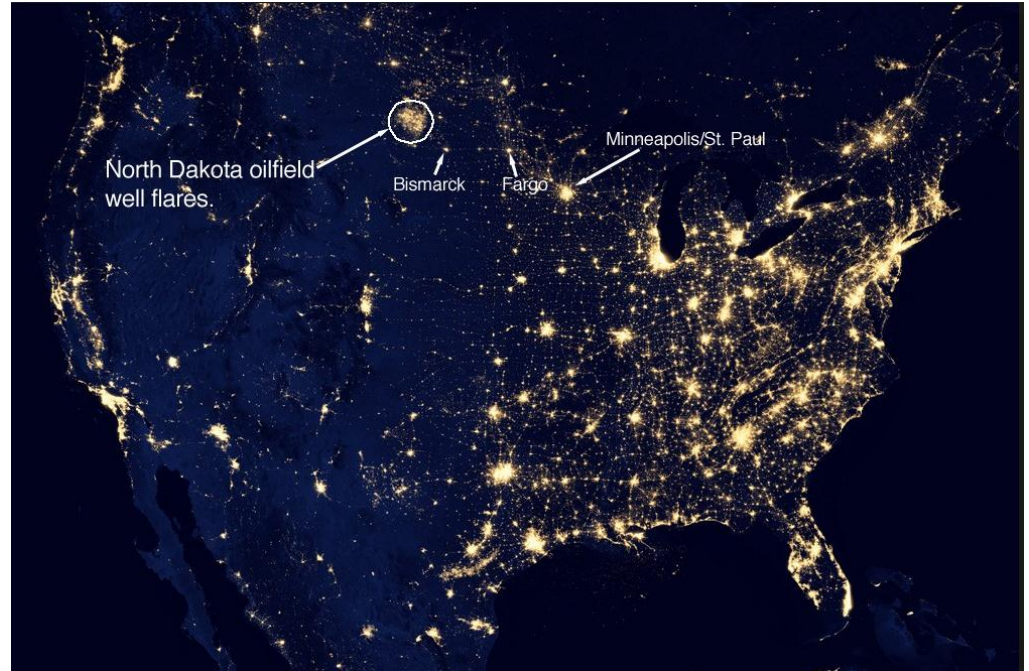
- Profit environment should improve into 2014
 - Growth in key freight sectors
 - Slowing rate of productivity growth
 - » HoS productivity restriction should prove positive
 - New equipment, while pricy, offers real MPG benefit
 - » Will help to pay-off that big loan
 - Improving margins will improve credit access
- Challenges remain
 - Rising demand for drivers
 - Keeping up with best practices
 - » Safety, regulation, technology

Forecasts

	2010	2011	2012	2013	2014
NA Class 8 BU (000s)	154.2	255.3	278.7	262.3	300.9
Memo: U.S. & CA Retail Sales	128.9	199.2	228.9	226.6	260.0
NA Classes 5-7 BU (000s)	117.9	166.8	188.4	197.6	213.7
U.S. Trailers FS (000s)	125.6	212.6	240.0	247.7	258.4

Natural Gas as CV Fuel

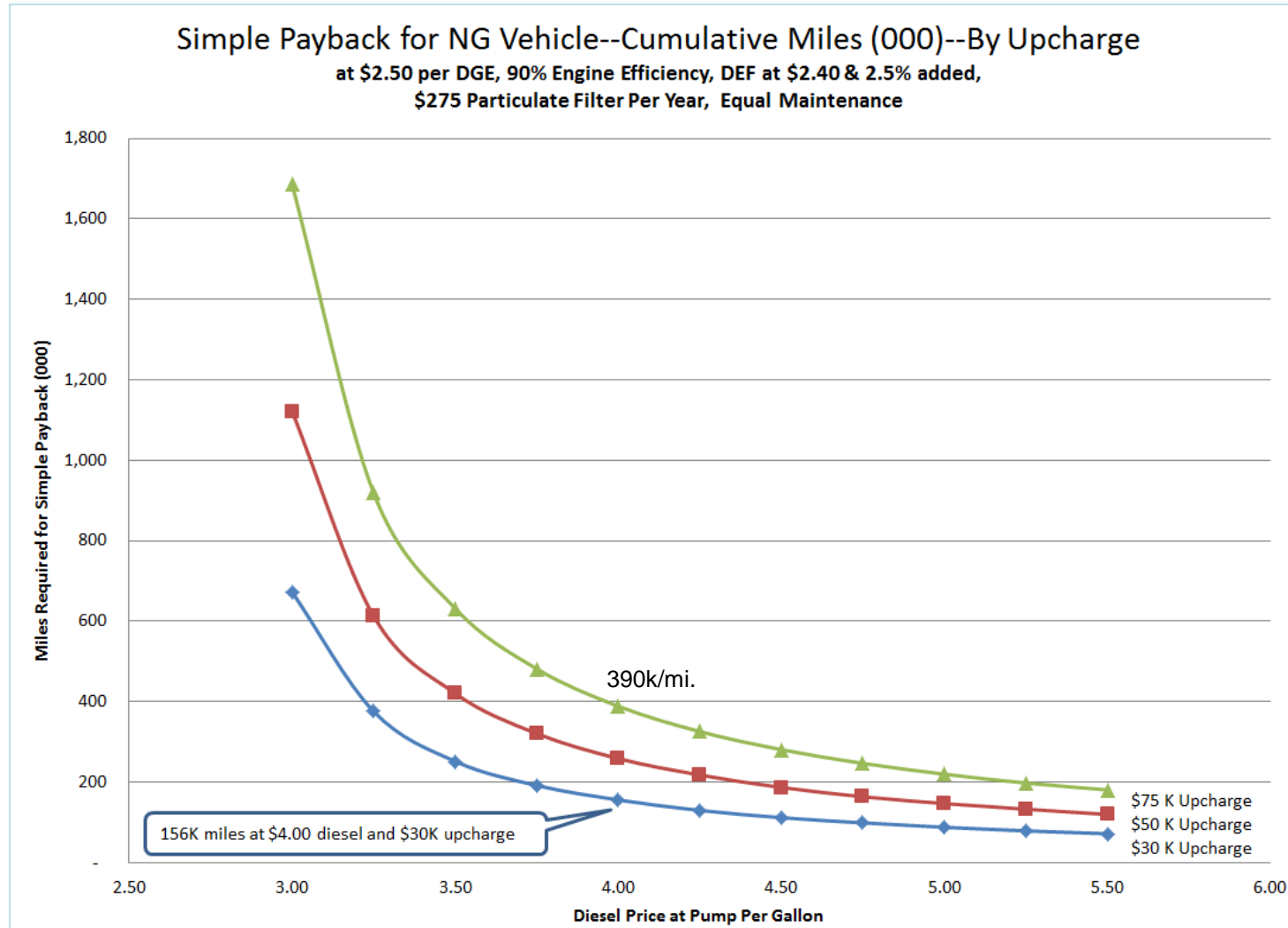
- Game changing
 - Plentiful
 - Inexpensive with low sensitivity to commodity cost changes
 - Environmentally friendlier
 - Chickens & Eggs:
No “Easy Button”
 - Few commercially available filling stations
 - First OTR engines just now available
 - **The NG-diesel engine price gap remains large**



DGE Math

- 7.2 Diesel Gallon Equivalents (DGE) per 1mm BTUs of Natural Gas
 - Cost of Natural Gas (\$4.00) ÷ 7.2: ~\$0.56
 - + Transmission costs ~\$1.50
 - + Taxes* ~ \$0.54
 - Total ~\$2.60/DGE
- Doubling the price of natural gas (\$8/mmbtu) increases the cost of a DGE by 56 cents
- *Taxes are all over the board
 - Measurement by gallon or BTU equivalence?
 - Assume that NG taxes ultimately need to mirror diesel taxes

Key to Conversion: Payback





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