



Truckers Buy Trucks: A look under the hood of commercial vehicle demand

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Automotive Outlook Symposium
May 29, 2015

Overview

- Positive side of slow, gradual *expansion*:
 - Still upside for manufacturing & retail at mid-cycle
- Freight situation solid; West Coast agreement helps
- Profitability is very good – corporate and transportation
- Commercial vehicle production & sales –
 - Class 8 on 2nd best ever trajectory
 - Class 5-7 steady slow improvement - but no records
- 2015 critical in determining stability or overheating

2015 & 2016 = good years ahead

Mostly happy – main problems are offshore

Happy

- Business/consumer confidence
- Job creation
- Oil prices (consumers)
- Stock markets
- Corporate Cash Flow & Profitability
- Fed policy
- Beltway scene is not terrible

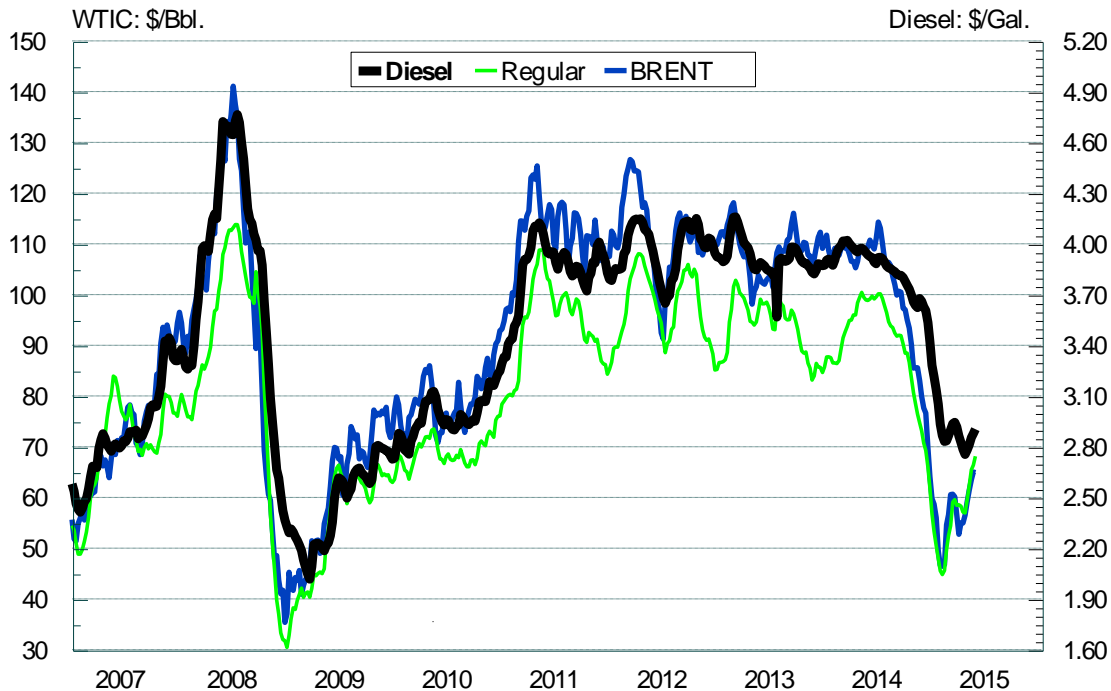
Not-so-happy

- Rest-of-world economic growth
- US\$ impact on exports
- Oil prices (producers)
- Global gov't finance
 - U.S. Federal
 - Europe
- China slowdown
- Geopolitics (nothing new)

~\$200b Windfall

Diesel Fuel & Crude Oil Prices

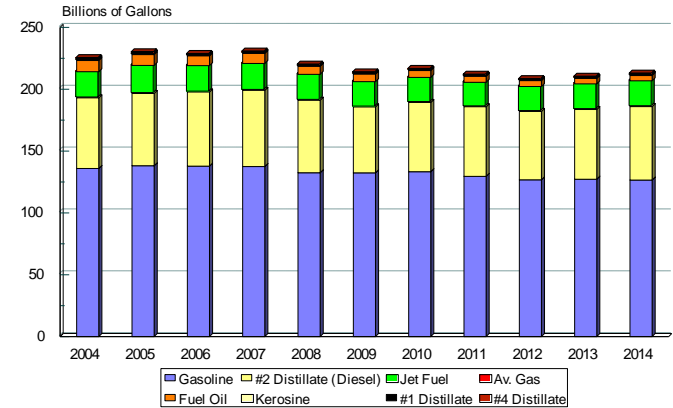
2007-2015 (Week 20)



Source: EIA, ACT Research Co., LLC: Copyright 2015

U.S. End-User Petroleum Consumption

2004-2014

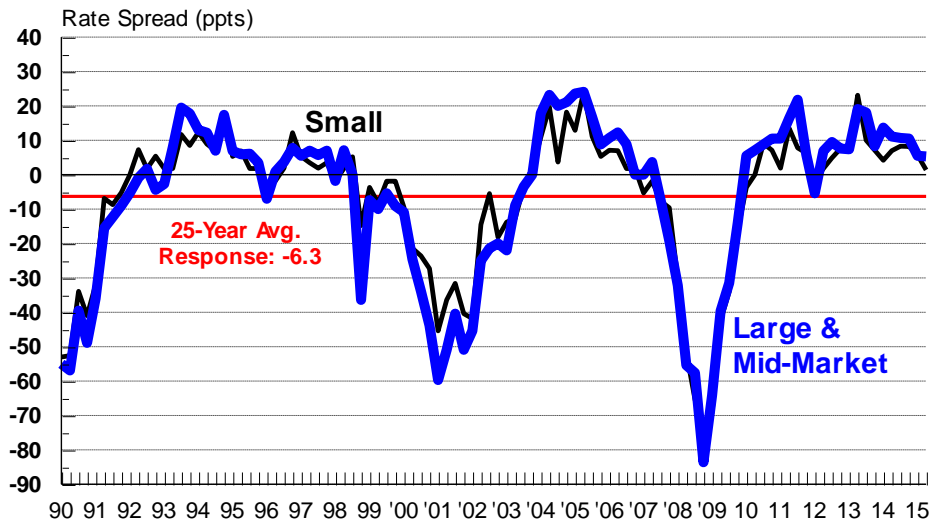


Source: EIA, ACT Research Co., LLC: Copyright 2015

**Price declines free up discretionary dollars:
1 cent (annual) = ~\$2B**

No Recession in Sight

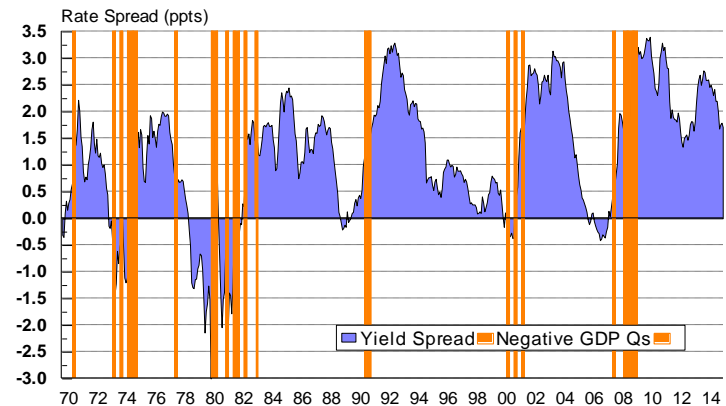
U.S. Federal Reserve Senior Loan Officers' Survey: Bank Lending
 Net % easing less tightening standards – C & I loans
 Q1'90 - Q2'15



Source: Federal Reserve Board, ACT Research: Copyright 2015

- *Yield curve spread wide = low recession risk*
- *Credit (relatively) easy to get*

YIELD CURVE
 1-Year and 10-Year Treasuries
 January 1970 - April 2015

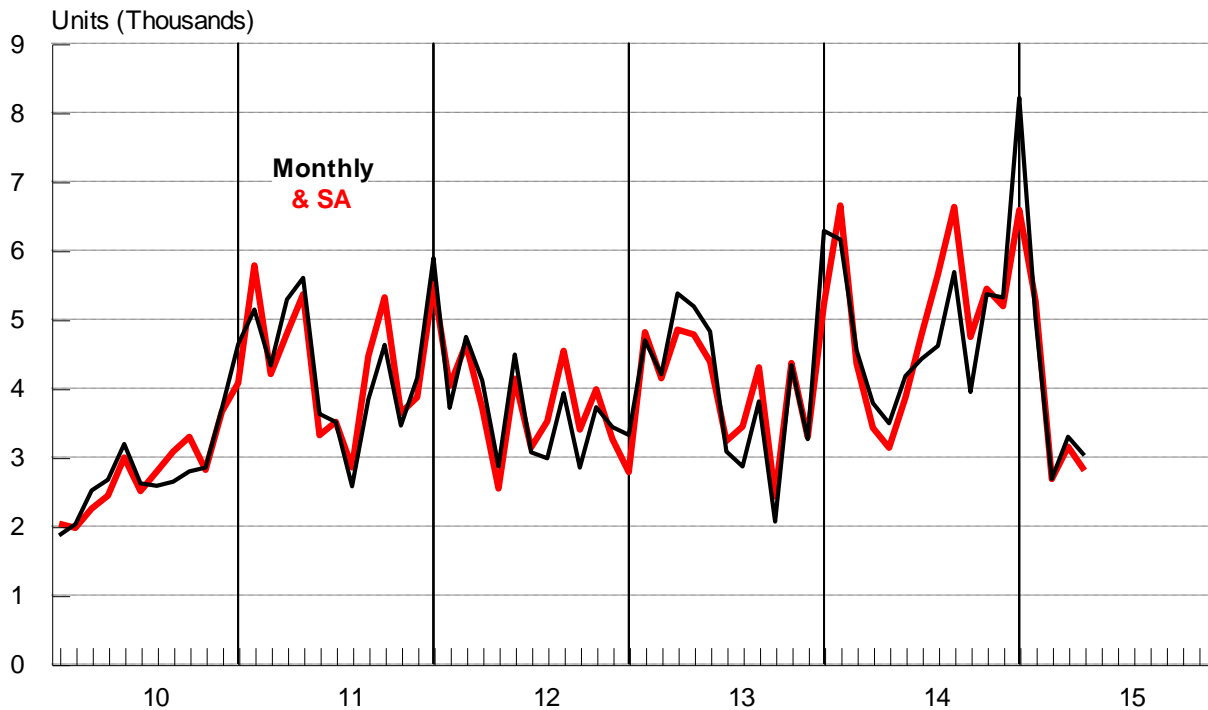


Source: Federal Reserve Board, ACT Research: Copyright 2015

FX Pinching NAFTA Demand

Canada & Mexico Aggregate: CLASS 8 NET ORDERS

January '10 - April '15



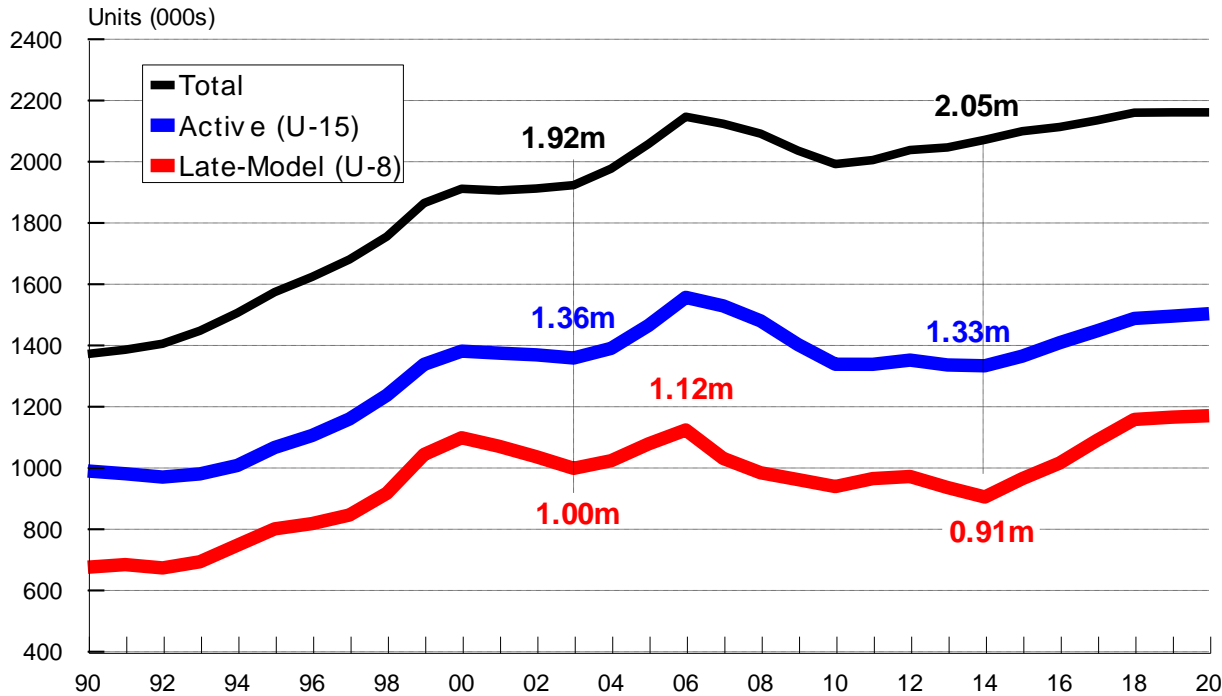
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Deferred impact of stronger US\$ on Class 8 orders relates to pricing practices: Prices adjusted on a quarterly basis.

Class 8 Population Metrics

U.S. Class 8 Population: Tractors/Artics-Only

1990 - 2020

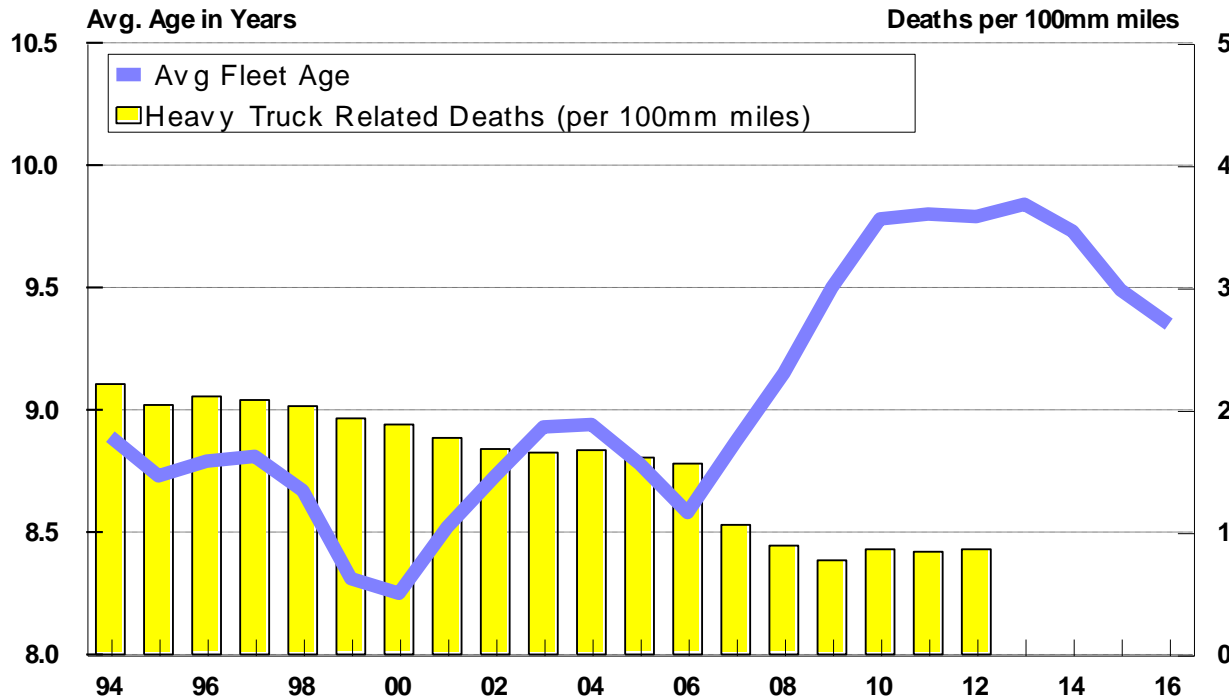


Despite 28% *GDP growth*, there were fewer “Active” Class 8 tractors at the end of 2014 than there were in 2003

Expensive Trucks = Old Fleet

U.S. Class 8 Population Model Outputs: Average Age, TRACTOR Population

1995 - 2015



Strong tractor sales from 2014-2016 finally start moving the needle on fleet age

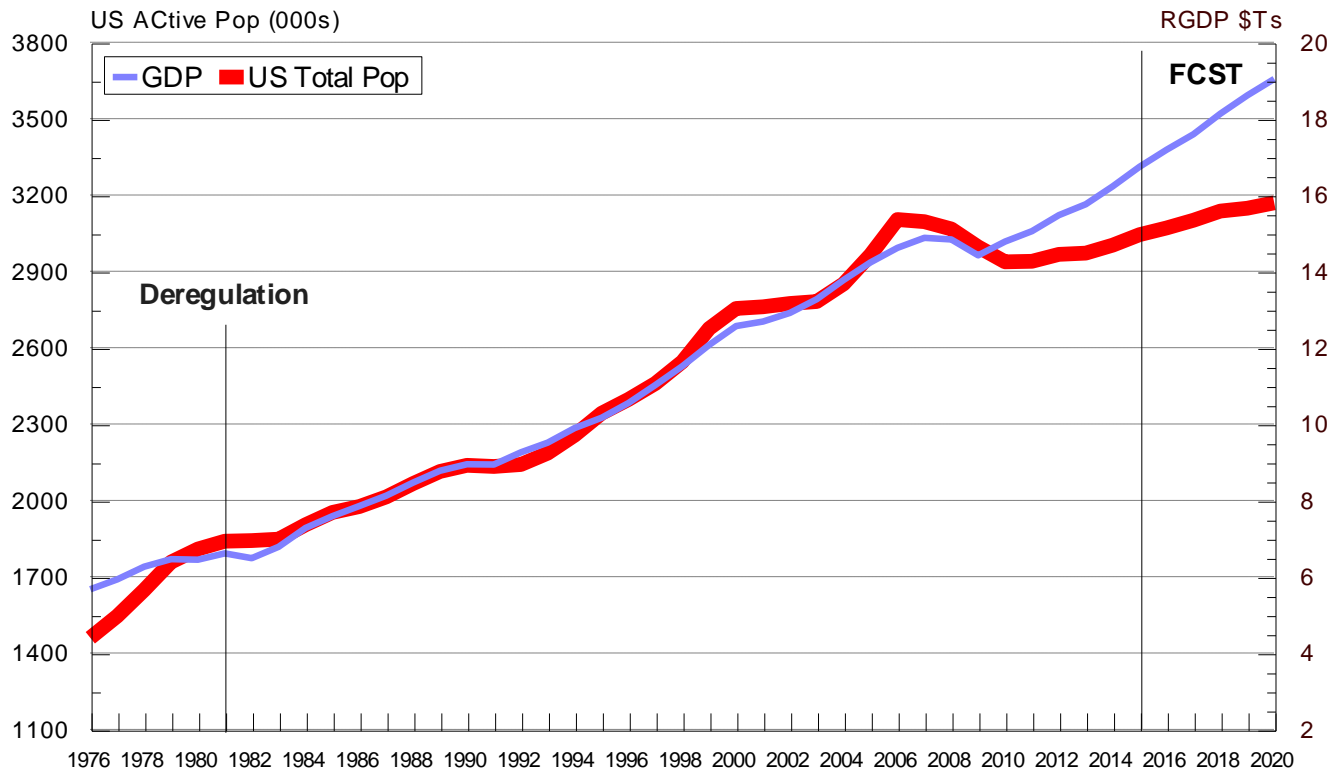
Implied with strong sales, more fleets with monthly payments

Productivity: Defining the Cycle

- Rapid rise in transportation inflation '03-'08 triggered shipper focus on cost control
 - Equipment, driver, & diesel inflation
 - Overall costs of regulatory compliance
- Simultaneously, boost in tech & competition
 - Technology made for real-time communications linking shippers to under-utilized capacity
 - RRs spent \$ billions on expanding IM offerings and improving service
- When do outsized productivity gains ebb?
 - Our work suggests peak occurred in 2013

Paradigm Shift

Class 8 Total Population & U.S. Real GDP 1976 - 2020f



Broadly higher transportation costs and new technology trigger behavior changes by shippers and truckers through increased freight density and improvements in utilization

Regulatory Calendar

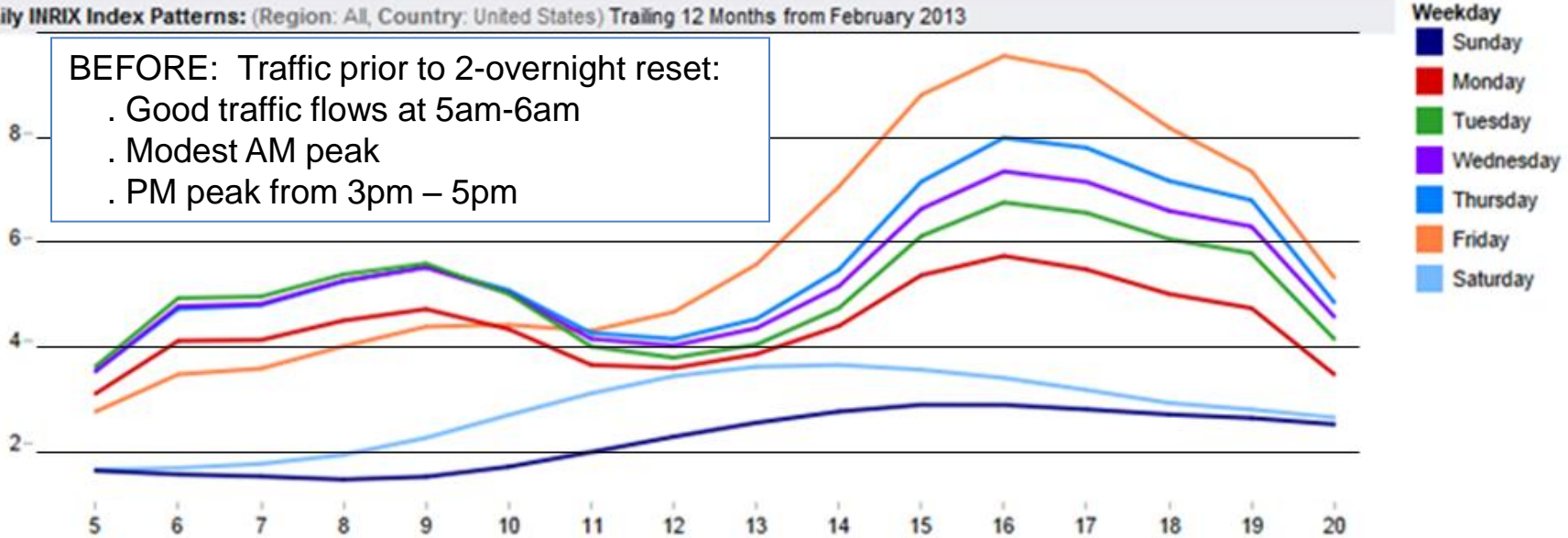
- By late Q2, the EPA is expected to announce targets for Phase 2 of the GHG standard
 - Compliance phase-in anticipated in 2021, 2024, 2027
- Expectation that by late 2015, FMCSA will introduce a defensible ELD rule
 - Full ELD compliance 2 years after should be very good for capacity owners
 - Anywhere from a minimum of 2% to 5-6% capacity hit
- Rules surrounding driver health and fitness
 - Medical examiners certificate
 - Drug & alcohol clearinghouse
 - Higher fleet insurance premiums, follicle level testing, etc., still under consideration
- Will current 34-hour reset make it into next highway bill?

Impact of HOS 34-Hour Reset

Daily INRIX Index Patterns: (Region: All, Country: United States) Trailing 12 Months from February 2013

BEFORE: Traffic prior to 2-overnight reset:

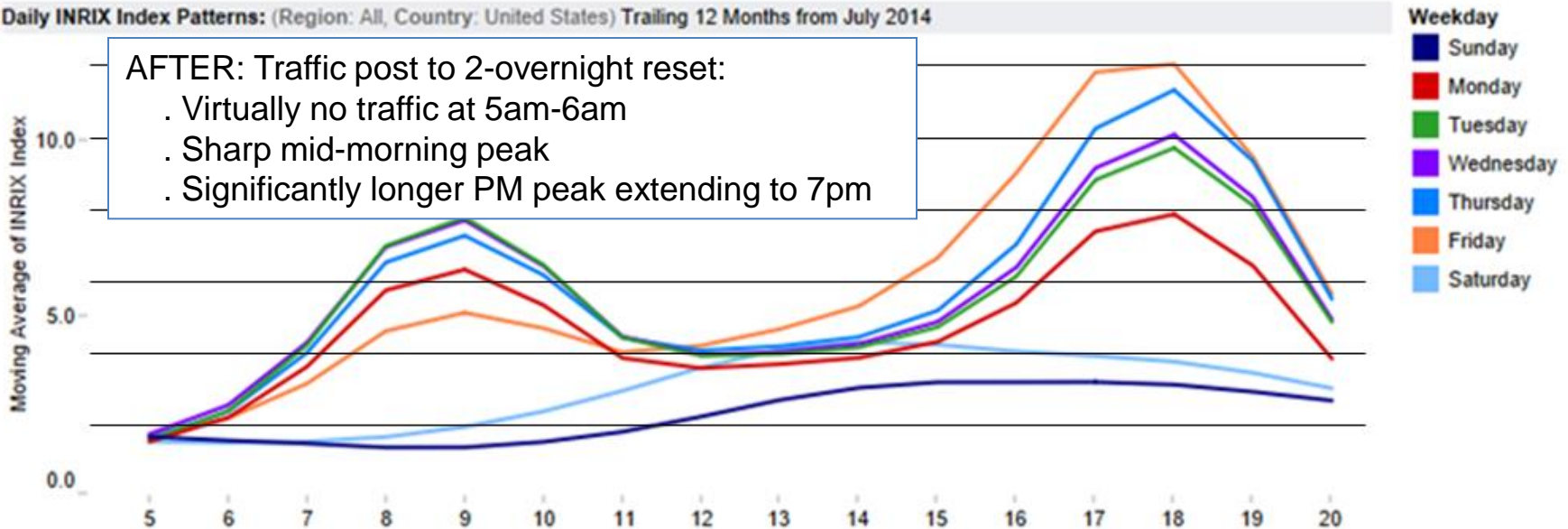
- . Good traffic flows at 5am-6am
- . Modest AM peak
- . PM peak from 3pm – 5pm



Daily INRIX Index Patterns: (Region: All, Country: United States) Trailing 12 Months from July 2014

AFTER: Traffic post to 2-overnight reset:

- . Virtually no traffic at 5am-6am
- . Sharp mid-morning peak
- . Significantly longer PM peak extending to 7pm



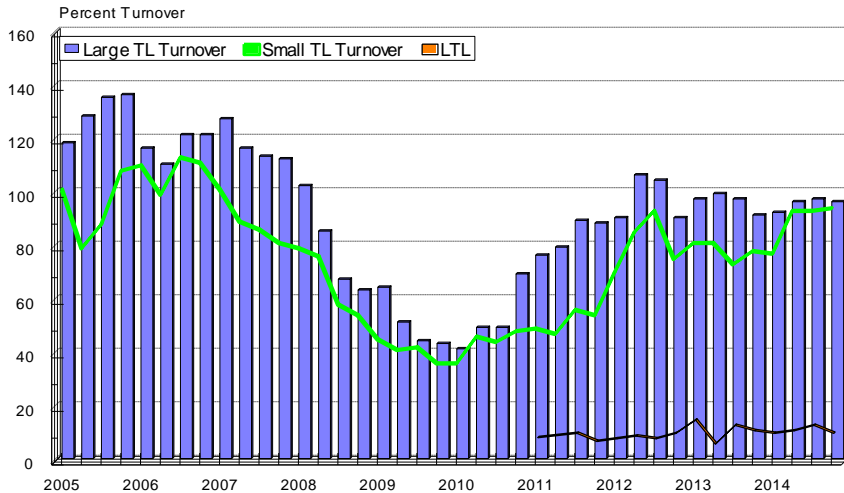
Driver [Pay] Shortage

- **The freight will get delivered**
 - Freight determines driver demand, not the reverse
 - Problem of prosperity – what is worse:
No freight (2008-09) or no drivers (2014)?
- **There is no substitute mode for most heavy truck freight**
- **Unlike freight and fuel, it is an internal issue**
 - Retention/recruitment are actionable
 - Driver shortage does not preclude profitability
 - *Shortage strongly correlated with profits and Class 8 orders*
- **There is no “easy button”**

Who's Delivering Your Freight?

ATA: For-Hire TL Carrier Driver Turnover

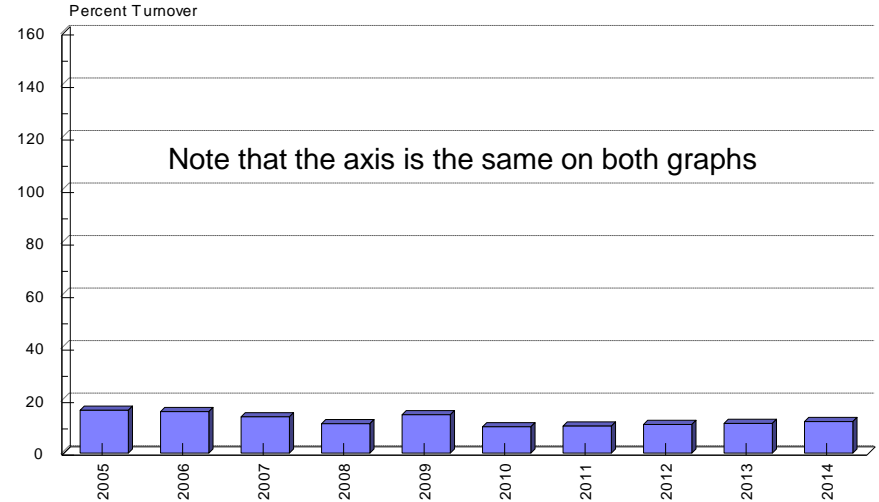
2005 - 2014 Q4



American Trucking Associations, ACT Research Co., LLC: Copyright 2015

NPTC Benchmark Survey: Private Fleet Driver Turnover

2005 - 2014



National Private Truck Council, ACT Research Co., LLC: Copyright 2014

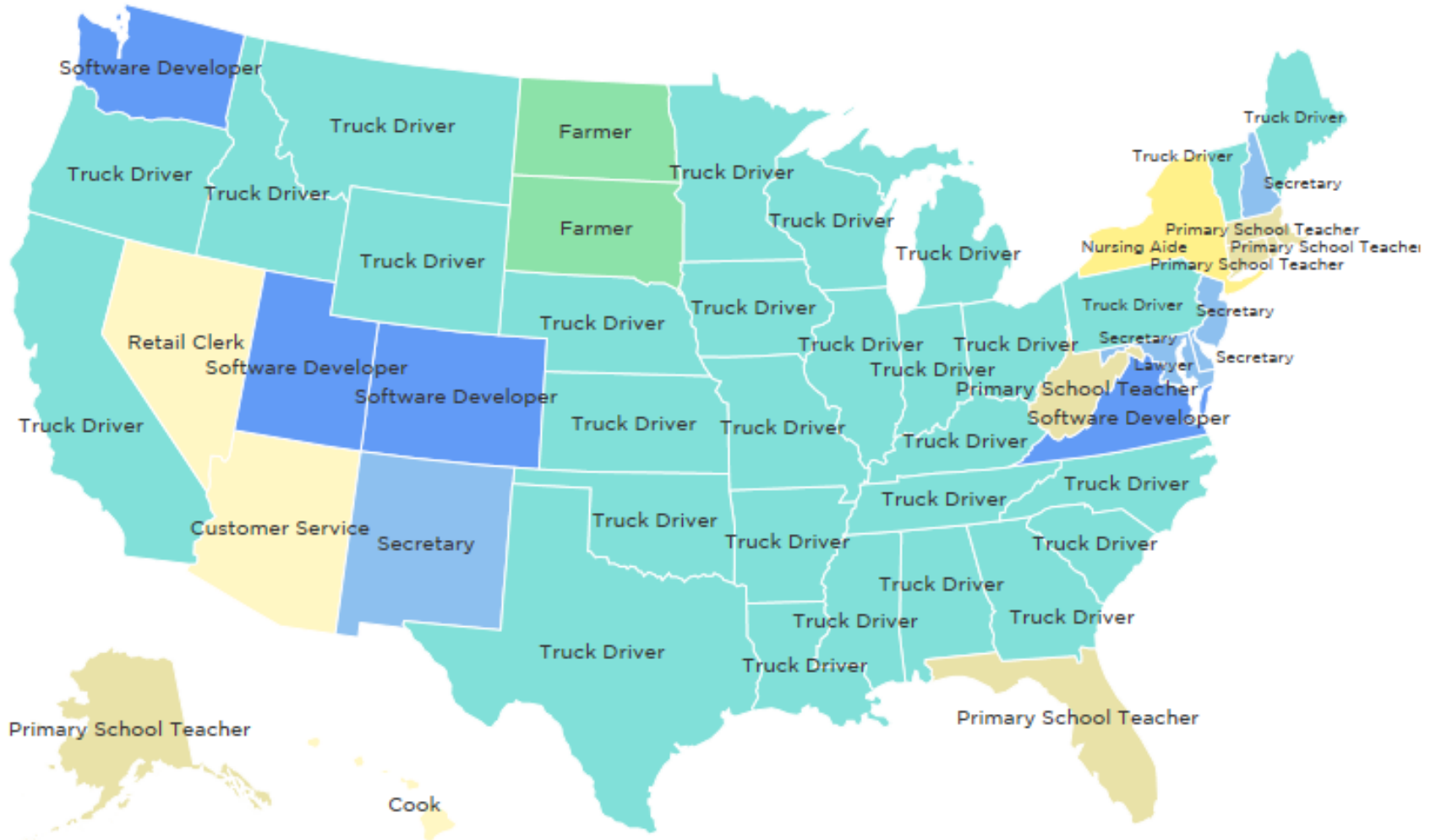
Note that the axis is the same on both graphs

Not surprisingly, private fleet drivers make \$20k-\$25k more per year on average than for-hire drivers and they also get home more regularly!

From NTI (Klemp):

For-hire median @ ~\$46k, Private fleet median @ ~\$68k

Most Common Job by State

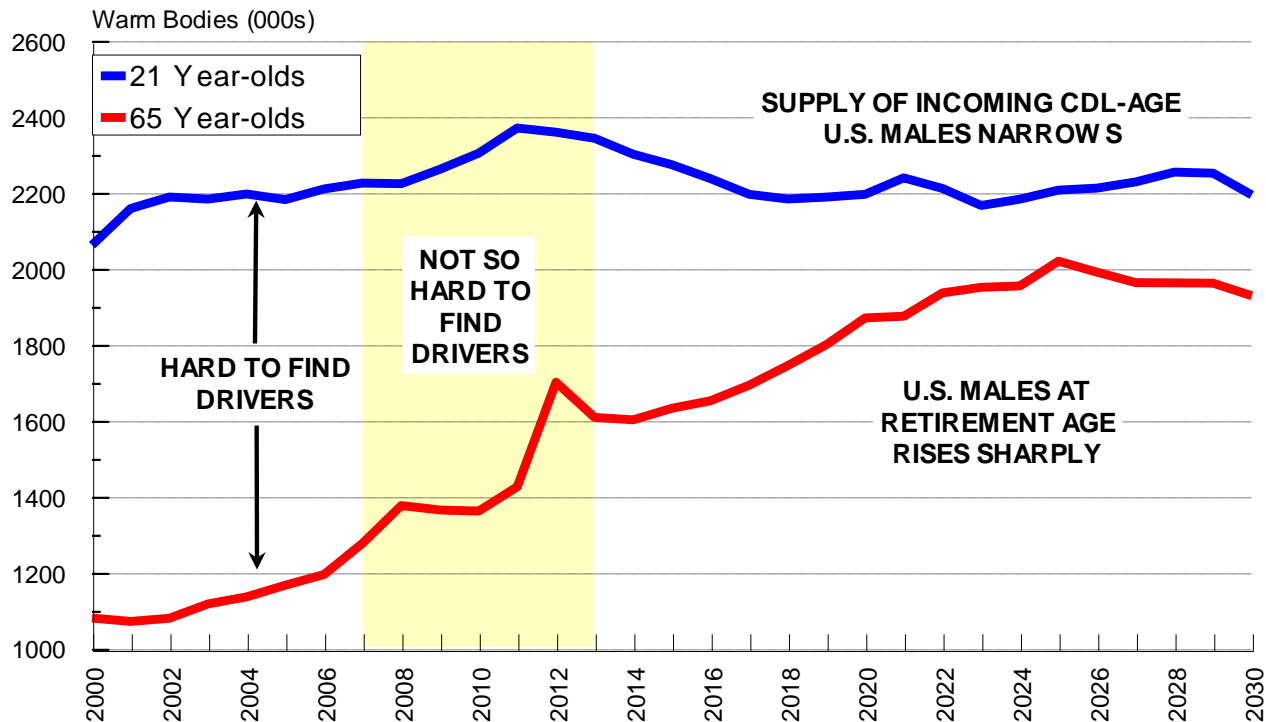


Source: NPR's Planet Money

Unfriendly Demographics

DRIVER SUPPLY: U.S. MALES Potential Hires & Impending Retirees

2000-2030



Source: U.S. Census Bureau, ACT Research Co., LLC: Copyright 2015

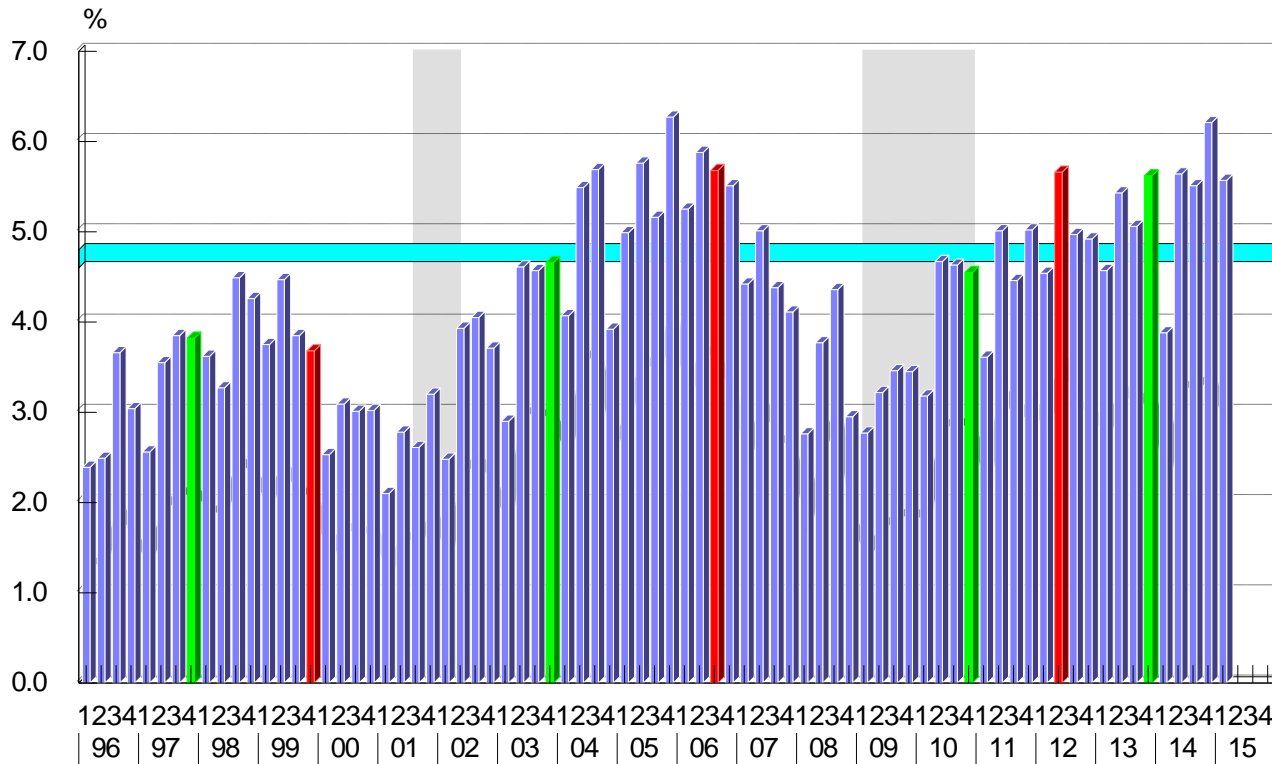
HD Market Conditions

- Rising expectations for economic activity
- Strong, positive alignment of HD Class 8 and Trailer demand drivers
 - Economic velocity, trucker profits, pent-up demand, fleet age, new truck MPG, driver shortage, used valuations, etc.
- Maxim:
 - Fleets use trucks to haul freight,**
 - Fleets buy trucks to make money**

Carriers Buy Trucks to Make Money

TL Carrier Database: Net Profit Margin

Q1'96 - Q1'15

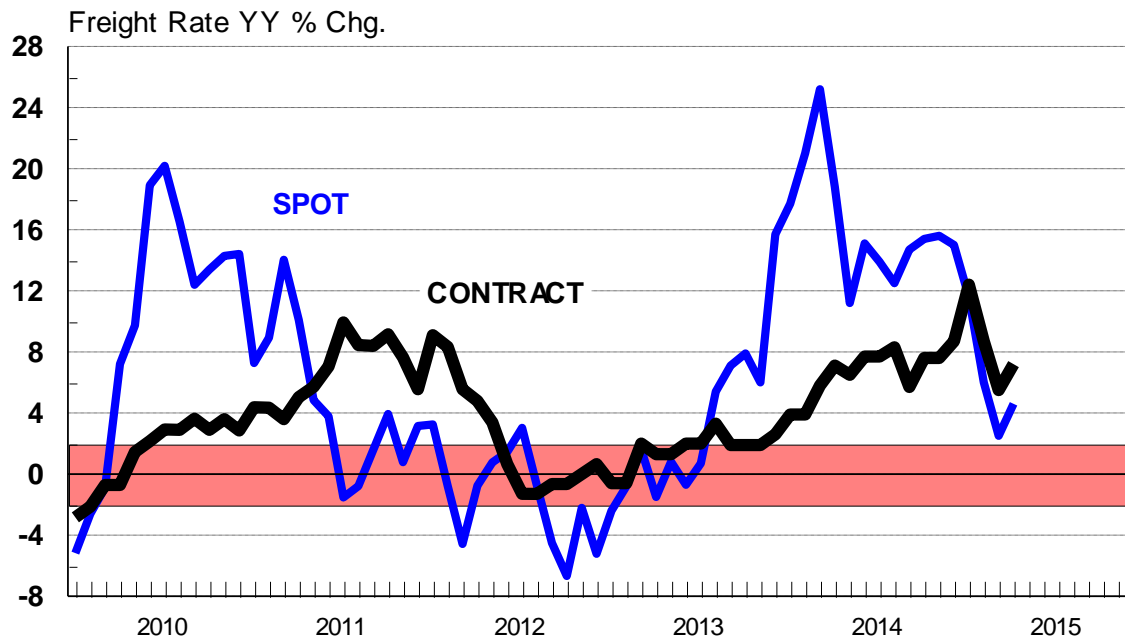


Paired orange bars are the two quarters immediately preceding the last 4 significant upwards swings in orders

Freight Rate Rise Slowing

DAT Trendlines: Dry Van Revenue per Mile (exFSC) Year over Year % Change

January '10 - April '15 (2000=100)



Source, Transcore Commercial Technology Group, ACT Research Co., LLC: Copyright 2015

With new capacity additions accelerating, and freight slowing in Q1, rate growth decelerates rapidly.

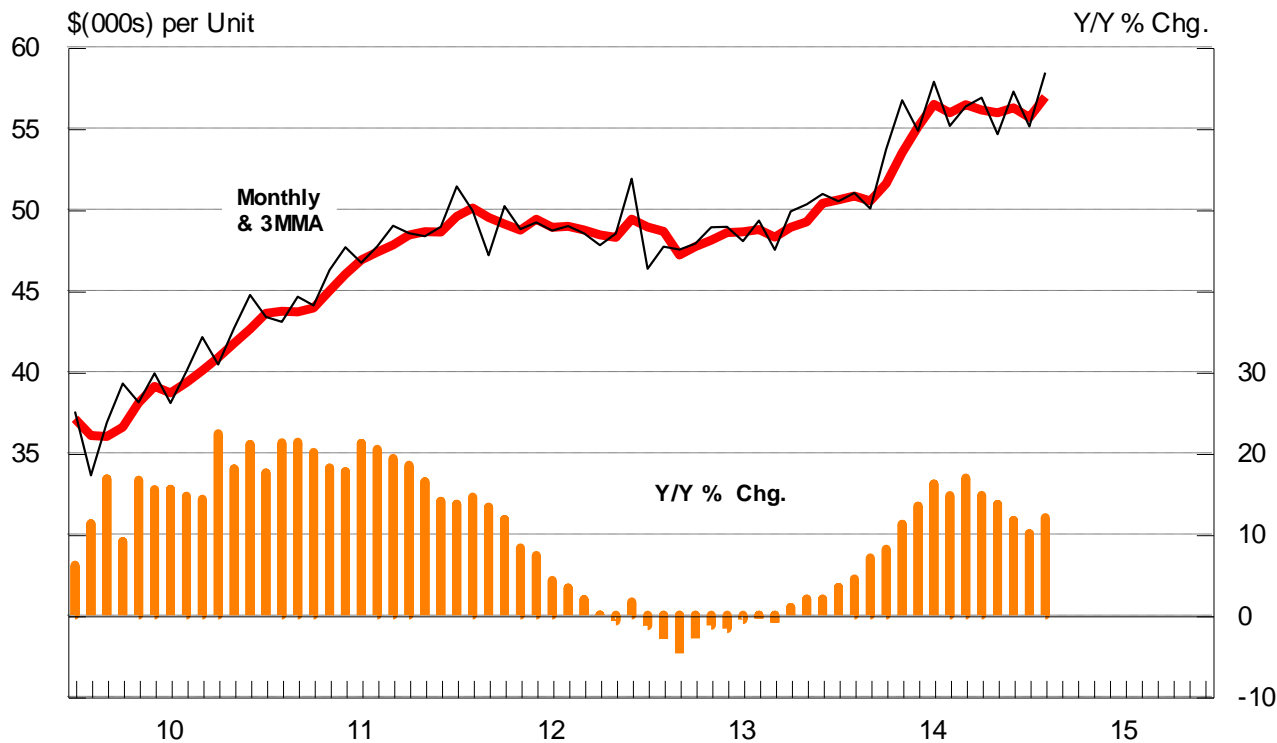
Some reacceleration expected as WC Ports freight and pent-up manufacturing demand unlimber

From mid'13 to early '15, for-hire spot and contract rates (ex FSC) up 19% and 12%, respectively

Record Used Valuations

Used Class 8: Average Retail Selling Price

January '10- February '15



ACT Research Co., LLC: Copyright 2015

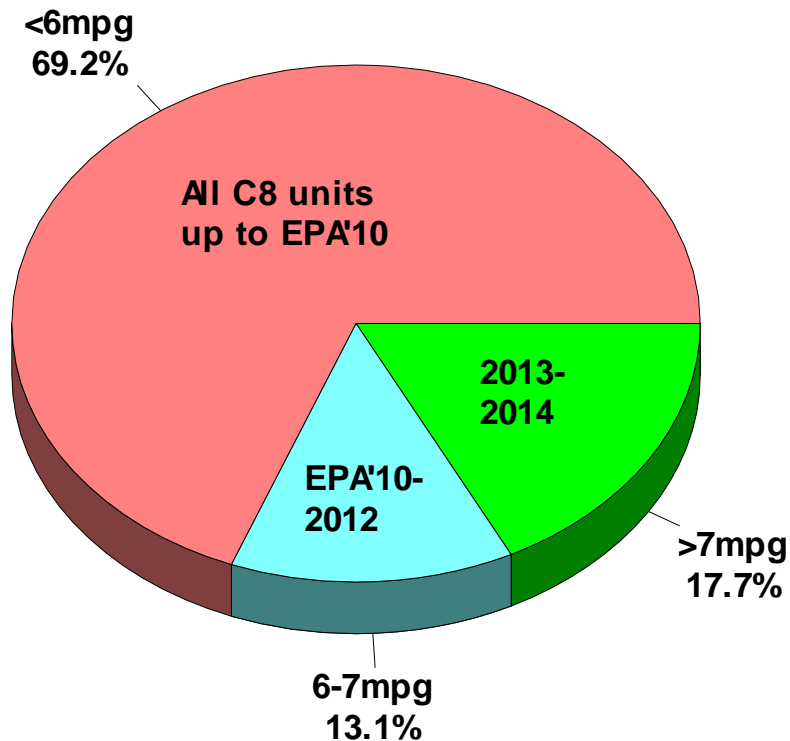
Planning Ahead:

Strong new Class 8 retail sales from 2014 to 2016 suggest a glut of late model Class 8 equipment and falling prices are likely by 2018

Bonus Demand Driver: Fuel Economy

U.S. Class 8 Fleet Fuel Economy

2014-Ending U-15 Population



U-15 Fleet:

Pre EPA'10: 1.62mm

EPA'10-'12: 0.31mm

CAFE'14 ('13): 0.41mm

Orders: US\$ Strength Impacting Demand

(Data through **April**, annualized)

(000s)	US 8 (SAAR)	CAN 8 (SAAR)	MEX 8 (SAAR)
Past 12	311	37	20
Past 6	310	34	17
Past 3	266	20	14

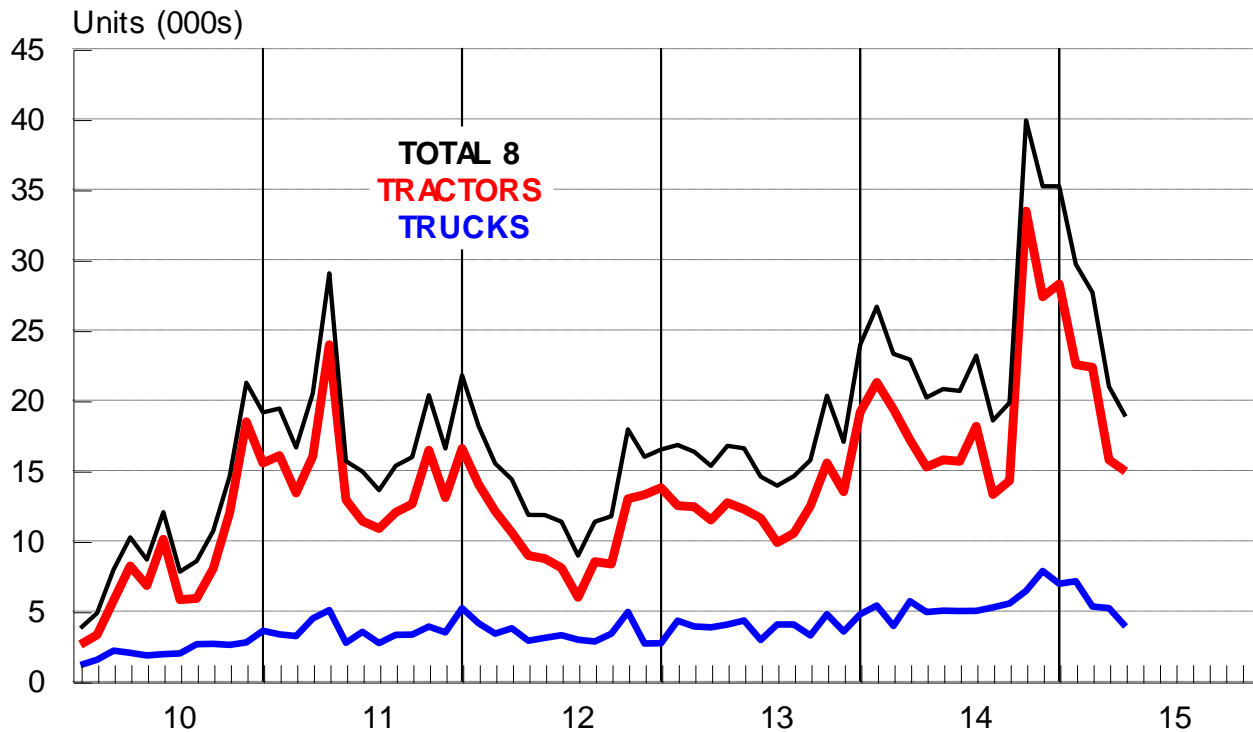
Knowing a price hike was immanent, Canadian truckers & dealers got a lot of orders booked from November to January.

Mexican truckers are placing orders month to month

Tractors Primary Market Drivers

U.S. CLASS 8: NET ORDERS

January '10 - April '15



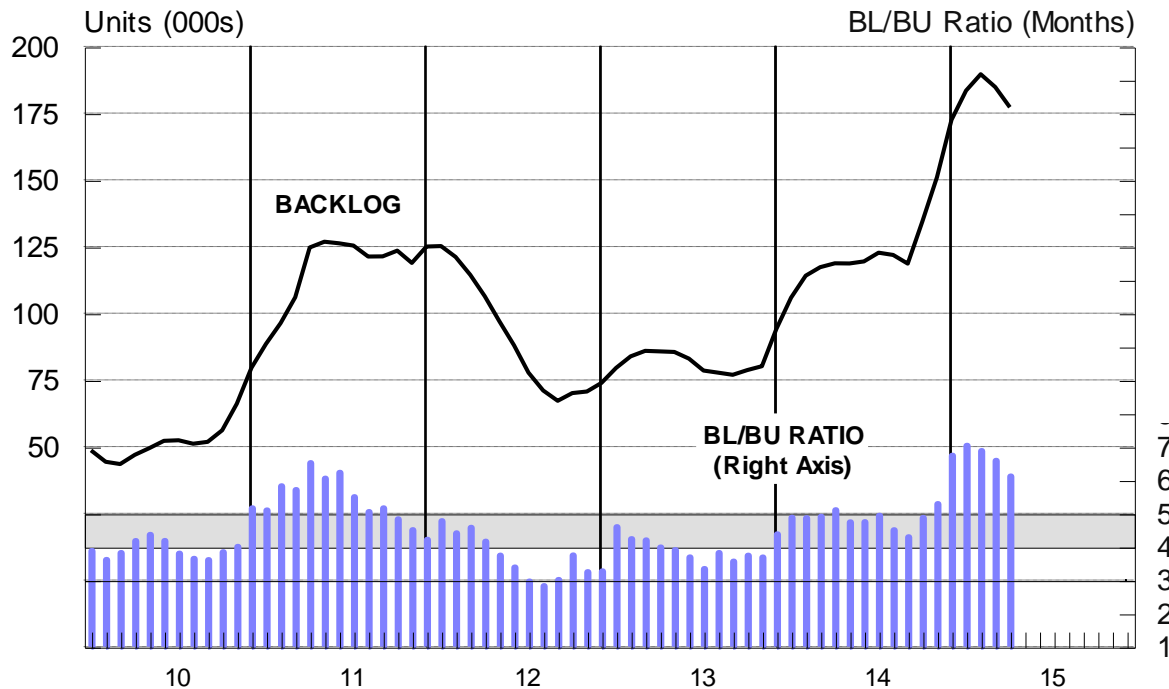
Recent pullback in orders primarily related to paucity of available build slots in 2015

ACT Research Co., LLC: Copyright 2015

Long Lead-Times Continue

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

January '10 - April '15



Not All Backlogs
Created Equal:
April ending BL/BUs:

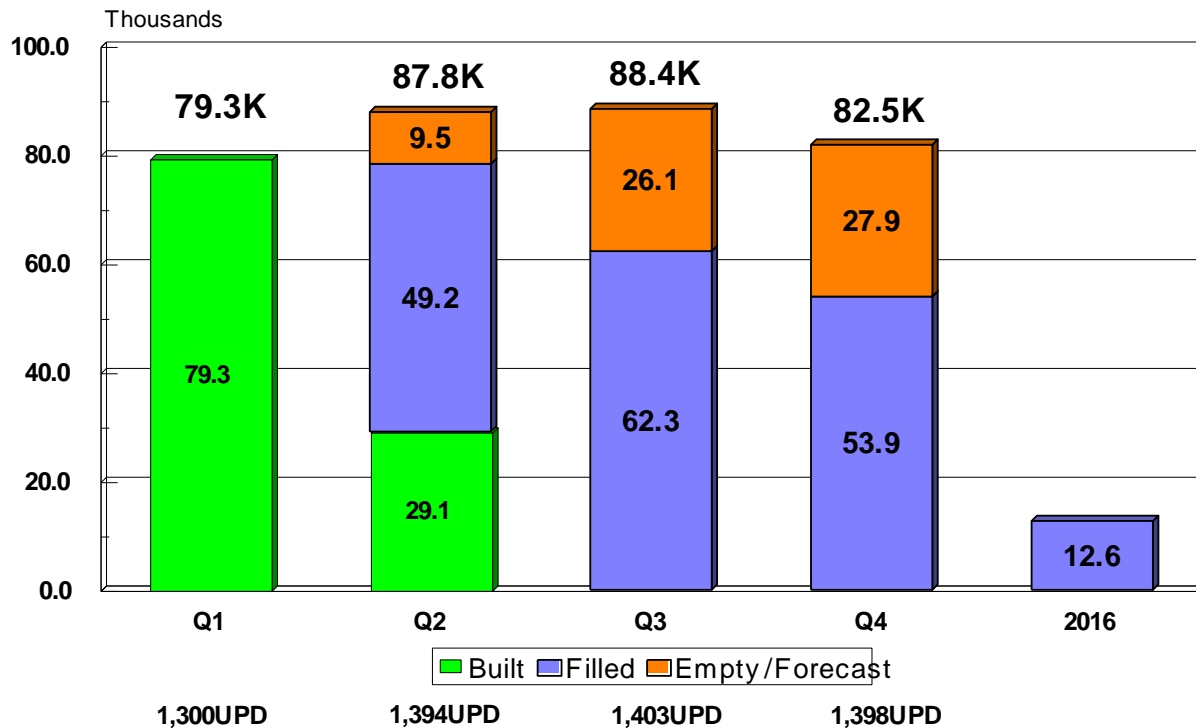
U.S.	6.4 mos.
Canada	5.5 mos.
Mexico	2.4 mos.
Export	5.5 mos.

ACT Research Co., LLC: Copyright 2015

Don't Wait! Supplies are Limited

Class 8 Backlog Fill

Estimated April 2015 Ending



Strong backlog filling through balance of 2015:

At the end of April, ACT estimates 64k open build slots in 2015 (at ACT's ~338k NABU forecast)

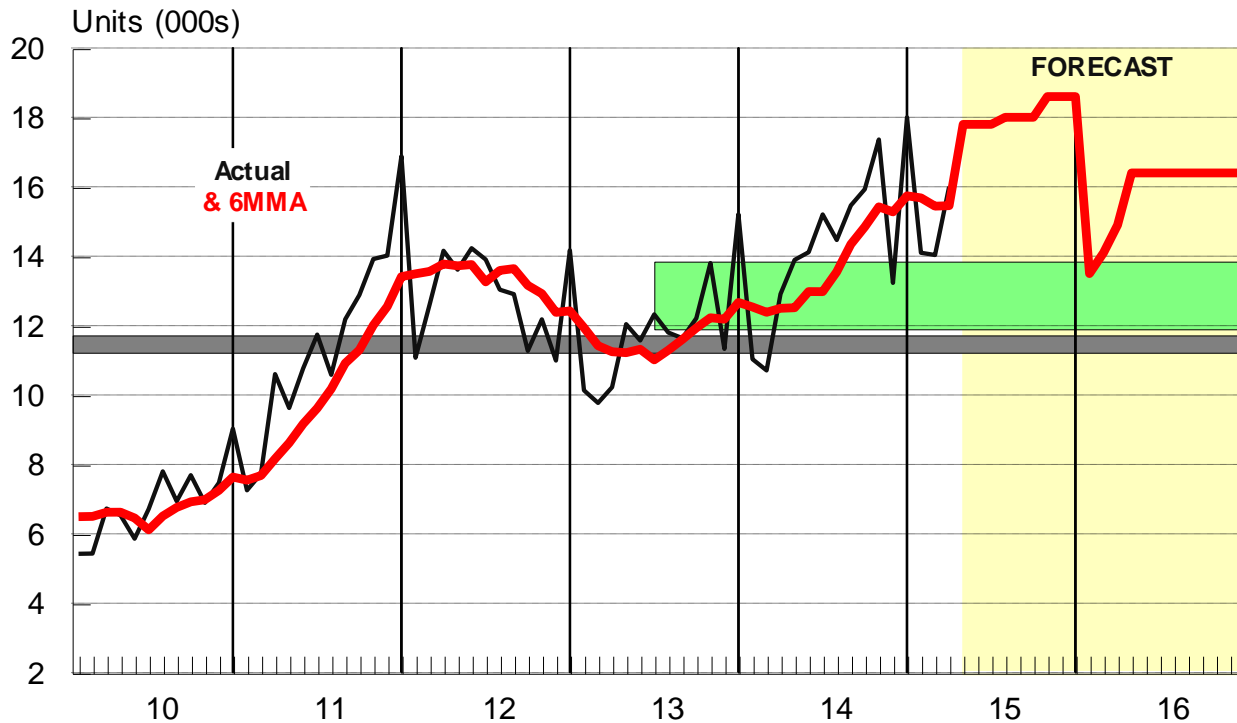
Tractor Capacity Outlook

- It's not units purchased, but units purchased relative to freight growth
 - 2015 to mid 2016: Spot capacity is expected to remain tight, upwards pressure on contract rates
 - 2H'16; Spot market likely to ease as strong tractor capacity additions continue
 - 3 years of capacity boosting sales set the stage for balanced tractor capacity and freight in 2017
 - The full implementation of the ELD mandate suggests by the end of 2017, capacity situation is likely to tighten rapidly

Record U.S. Tractor Sales in 2015

U.S. CLASS 8 TRACTOR RETAIL SALES

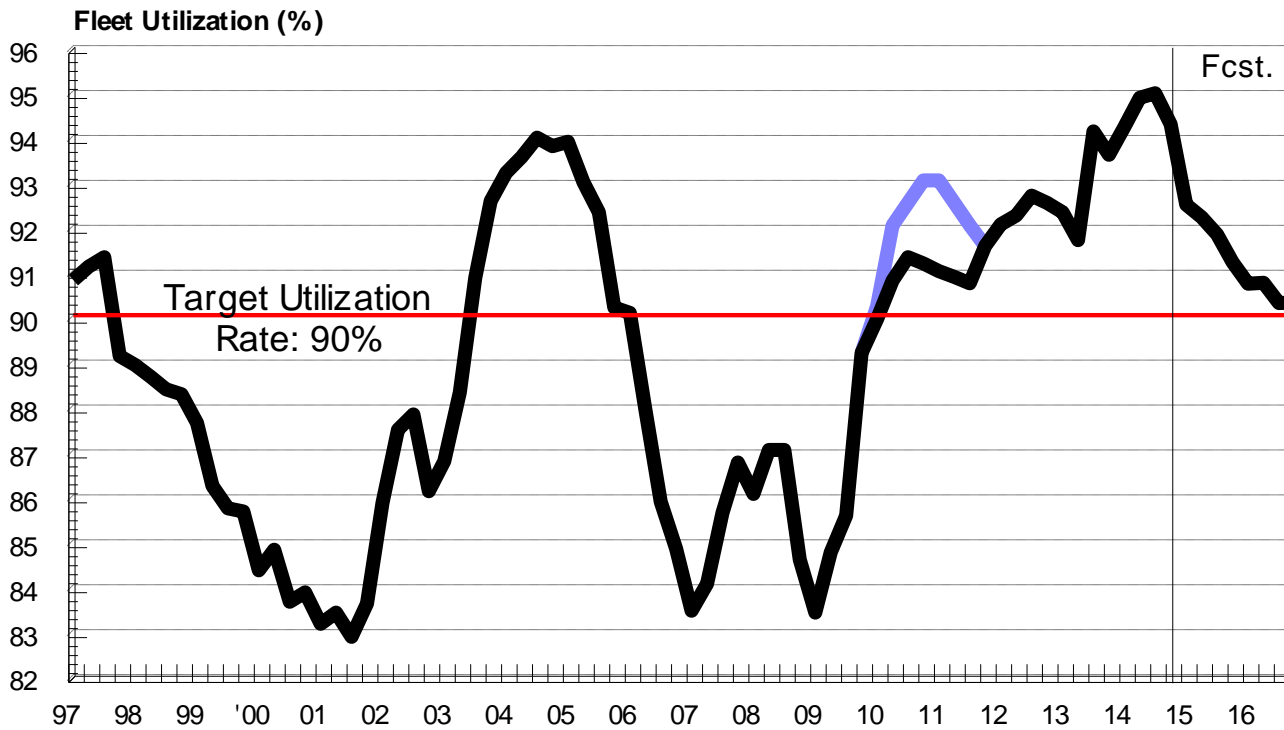
January '10 - March '15



Sales above ~13,800 units/month represent U.S. tractor fleet growth above replacement + economic demand

More Capacity = More Competition

U.S. Class 8 Implied Tractor Fleet Utilization Rate 1997 - 2016



More fleets driving more new trucks suggests a less-lucrative for-hire market in 2017.

Or will it be drivers who dictate capacity this cycle?

N.A. Classes 5-7 Order Distribution

(Data through April 2015, annualized)

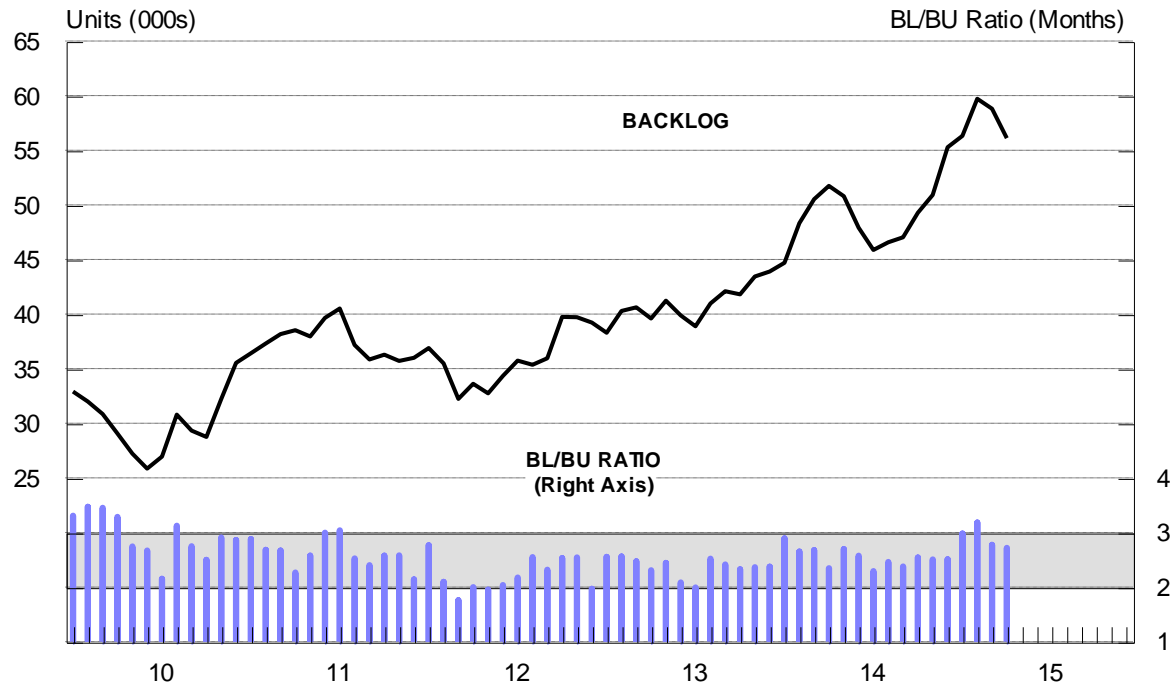
<u>Classes 5-7 Orders</u>	Truck (000s)	Bus (000s)	RV (000s)	Total* (000s)
Past 12 Mo.	164.1	37.9	15.5	223.7
Past 6 (AR)	172.2	37.6	16.3	233.0
Past 3 (AR)	160.0	46.7	14.7	233.4
Apr. (AR)	147.0	47.8	14.7	212.9

* Total includes Step Vans

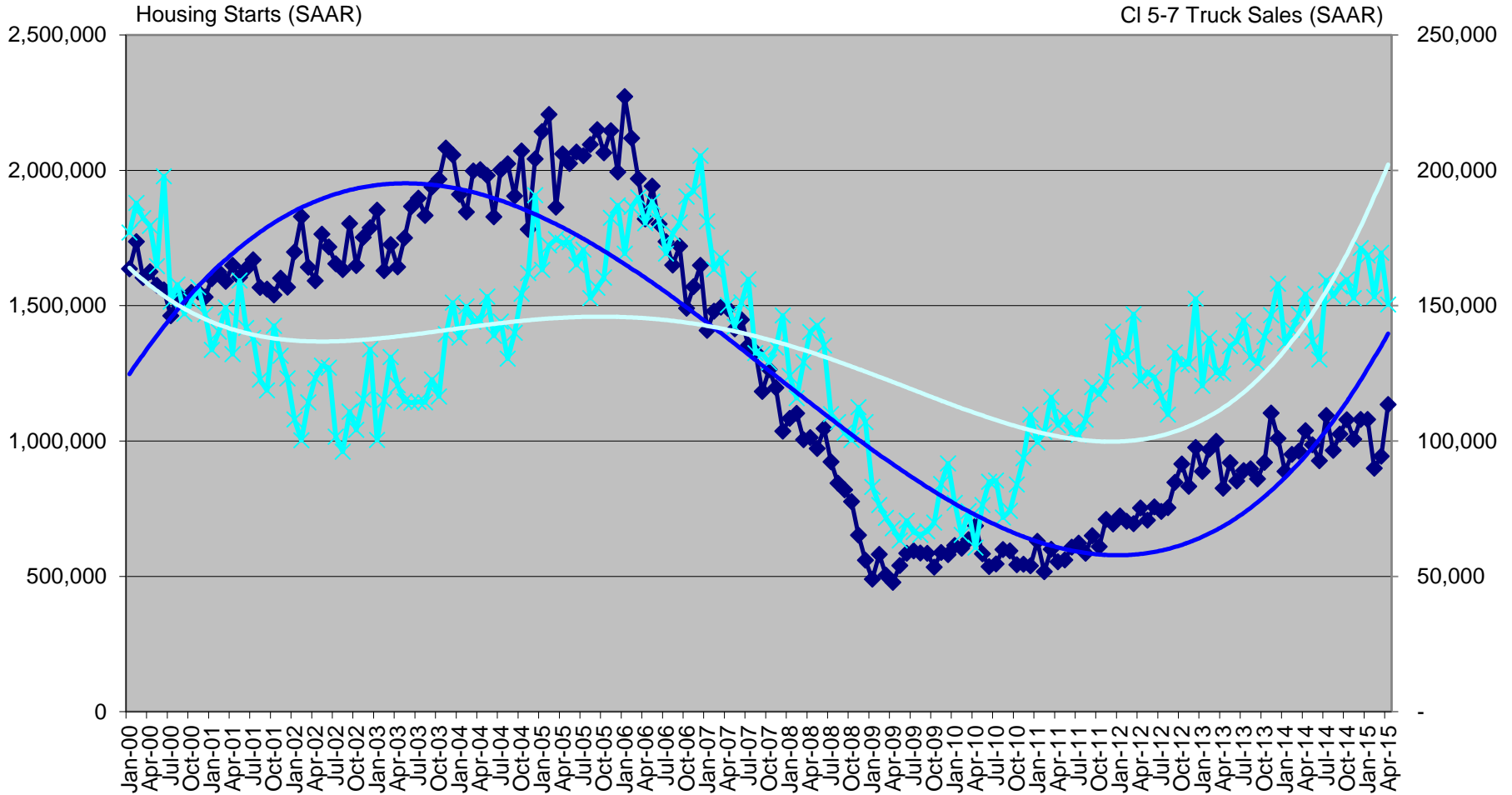
Backlog Rolls Over (on cue)

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

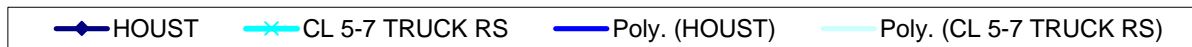
January '10 - April '15



Housing Starts vs. CI 5-7 Truck Sales



Source: ACT Research Co., LLC, US DOC Census Bureau



Summary

- 2015 another good year for freight & fleet profits
 - Better economic growth in key freight sectors
 - Still tight capacity, rising rate environment
 - Lower energy prices likely to persist
 - Favorable business conditions into 2016 (possibly beyond)
- For equipment demand, solid underlying support
 - An old fleet (maintenance & downtime issues)
 - Healthy used values
 - Value in new equipment
- If economy keeps a slow but sustained pace . . .
 - Potential for several more years of stability and profitability
 - ***Strong case to be made for stronger longer***

Forecasts

	2013	2014	2015	2016
NA Class 8 BU (000s)	245.5	297.1	338.0	306.0
Memo: US C8 RS (000s)	187.6	224.0	267.0	246.0
NA C5-7 RS (000s)	190.6	212.3	221.2	232.5
U.S. Trailer FS (000s)	236.7	268.7	305.0	295.4



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