



# **A Different Set of Problems: Trucking & Heavy Equipment Demand Shift Into High Gear**

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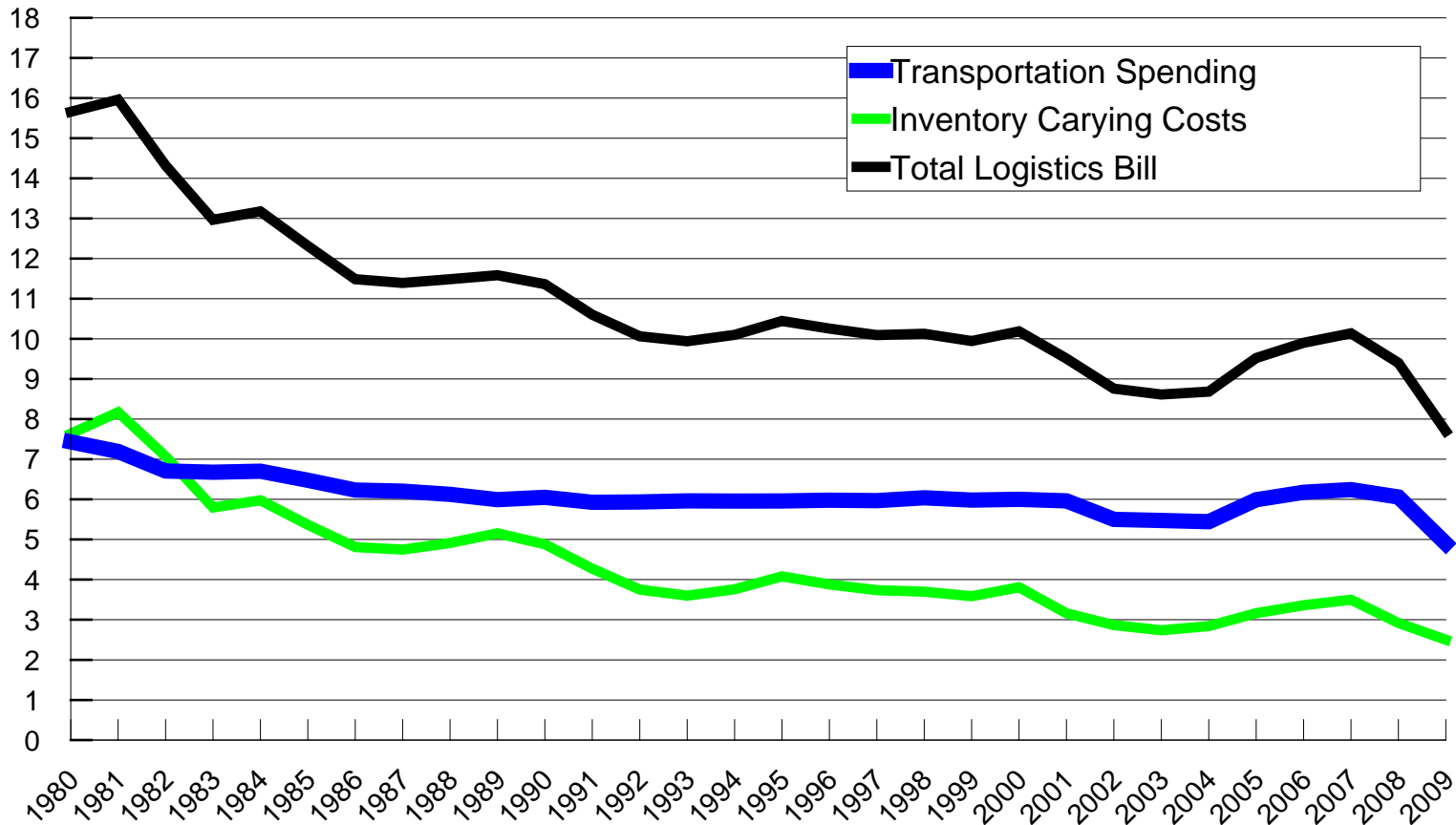
**Federal Reserve Bank of Chicago  
Automotive Outlook Symposium  
June 3, 2011**

# It's NOT Different This Time

- Thesis: We have experienced a deep correction, rather than a fundamental shift in the relationship between freight and the trucks needed to haul it.
  - As freight and business fundamentals normalize, so too will commercial vehicle demand

***There is nothing to replace heavy trucks in the U.S. or global economies***

# U.S. Logistics Spend as a Percentage of GDP 1980 - 2009



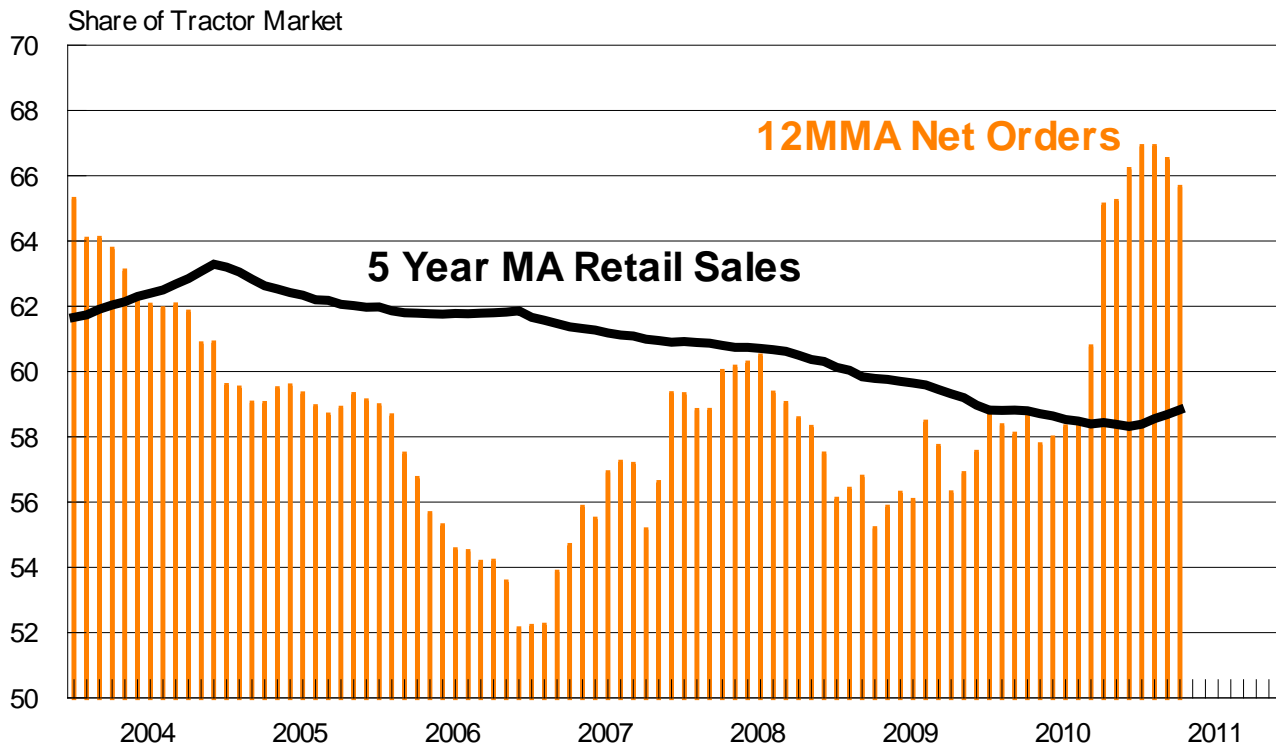
Council for Supply Chain Management Professionals, ACT Research Co., LLC: Copyright 2010

# Marginal Demand Considerations: Evolution not Revolution

Detracting from Demand	Accretive to Demand	Trend Period
Packaging evolution	Population Growth	20 year
Retail Consolidation	Internet Shopping	20+ years
Electronics Miniaturization	Ubiquitousness of electronics	20+ years
Intermodal		20 year
JIT Operations	JIT Operations	20 year
	Mfg. On-shoring (Mex.)	Now/Coming

# Changing Freight Patterns I

## U.S Tractor Market: Sleepers as a Percentage of Total Tractor Sales

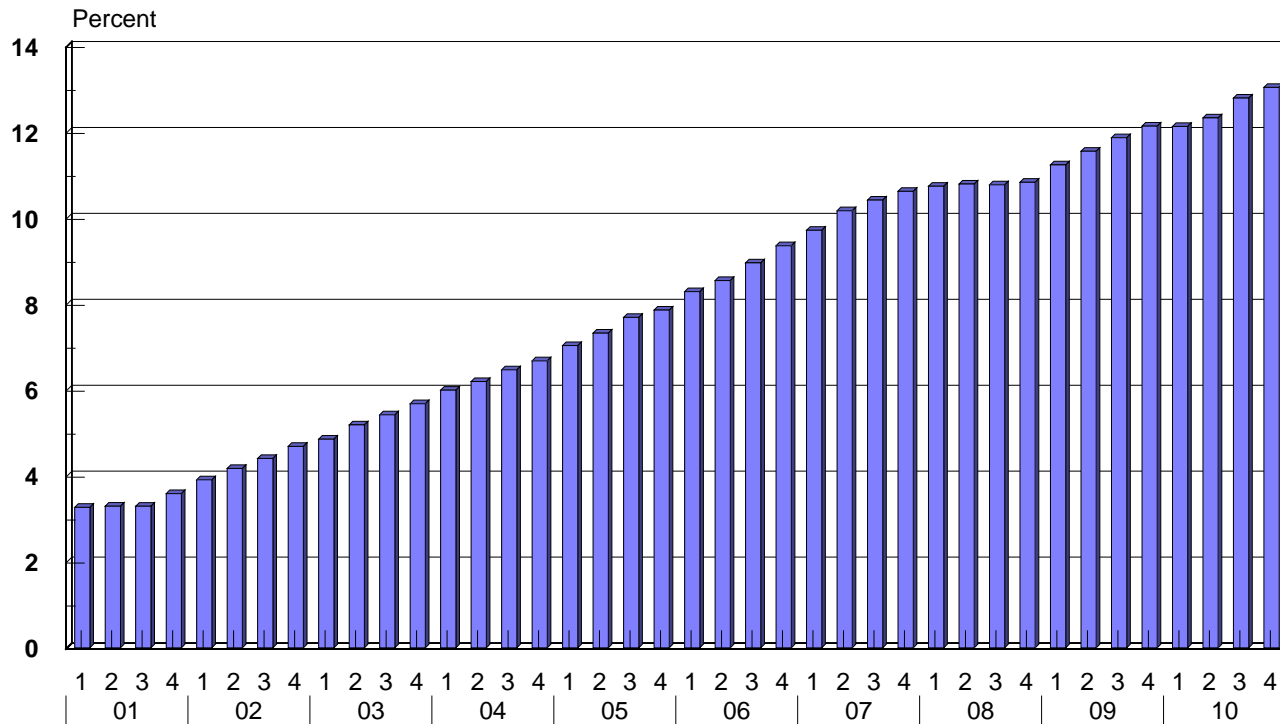


ACT Research Co., LLC: Copyright 2011

# Changing Freight Patterns II

## E-Commerce as a Percentage of Retail Sales (excluding food service)

Q1'2001 - Q4'2010



Source: Federal Reserve Board, ACT Research: Copyright 2011

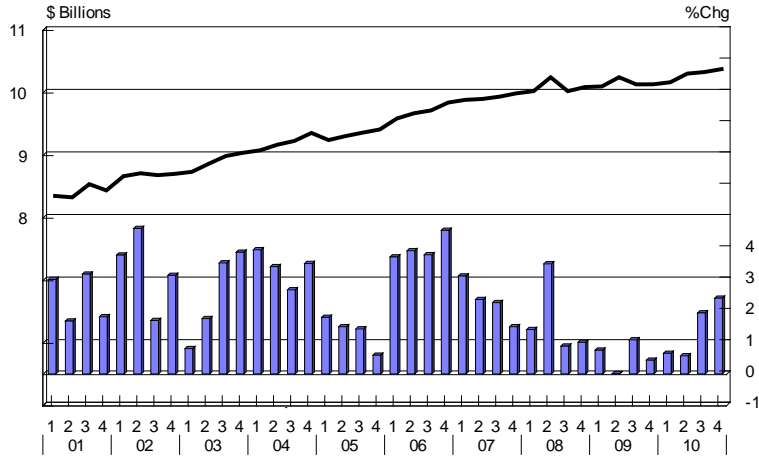
# Economic Summary

- Recovery appears to be self sustaining.
  - Strong tailwinds
    - Consumers are well positioned
      - QE2, December Stimulus
    - Manufacturing continues at robust levels
      - Business investment strong
      - Inventories low relative to sales
  - Rising headwinds
    - External:
      - “Arab Spring”
      - Japan (short term),
      - Eurozone debt
    - Internal: State & local tax receipts, fixing budgets w/o breaking recovery

# Consumer Fundamentals Have Firmed

## Real Disposable Personal Income

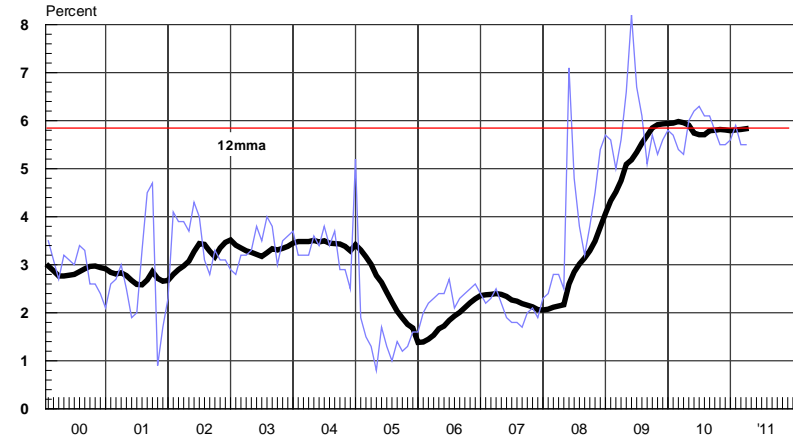
Actual and Y/Y % Change  
Q1'01 - Q4'10



Source: BEA, ACT Research Co., LLC; Copyright 2011

## Personal Savings Rate

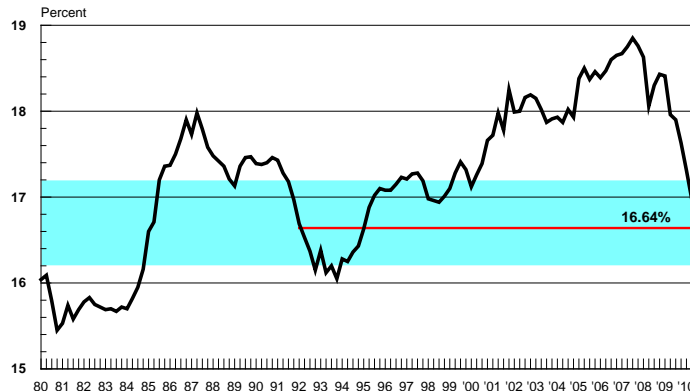
January 2000 - March 2011  
Percent-SAAR



Source: BEA, ACT Research; Copyright 2011

## Household Financial Obligations as % of Disposable Income

Q1'90 - Q4'10



Source: Federal Reserve Board, ACT Research; Copyright 2011

1ppt = ~\$100b





# Ramp-Up Issues

- Supply-chain constraints
  - Tires
  - Wiring harness connectors
  - Small engines
  - Axles (maybe bearings)
  - Coming
    - “Castings”
- Commodity inflation:
  - Between demand and input inflation, truck & trailer manufacturers are getting pricing/instituting surcharges

# This Cycle Looks Familiar

- Supply-demand between freight and trucks has tilted in truckers' favor
- Trucker profits have rebounded
- Used equipment prices are rising
- Credit availability/worthiness improving
- Two years of deferred capex has created pent-up demand – and a really old fleet
- Rising trucker confidence
- Regulatory/driver shortage issues should negatively effect productivity, positively influencing new vehicle demand

# Rhymes with History

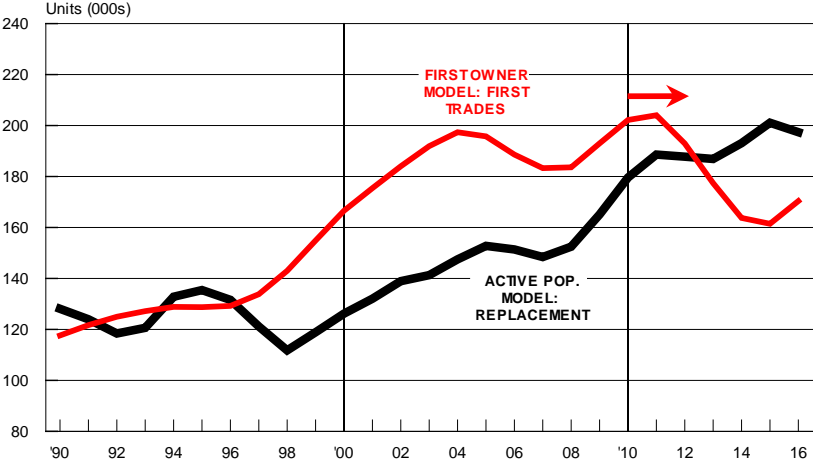
## – Class 8 Orders

<b>Period</b>	<b>August</b>	<b>Following March</b>	<b>% Chg.</b>
<b>'93-'94</b>	<b>17.1k</b>	<b>32.6k</b>	<b>+91%</b>
<b>'96-'97</b>	<b>11.1k</b>	<b>23.3k</b>	<b>+110%</b>
<b>'01-'02*</b>	<b>9.0k</b>	<b>29.1k</b>	<b>+233%</b>
<b>'03-'04</b>	<b>15.1k</b>	<b>33.5k</b>	<b>+122%</b>
<b>'10-'11</b>	<b>12.4k</b>	<b>29.2k</b>	<b>+135%</b>

# Time to replace some trucks

## U.S. Class 8 Replacement & Trade-In Models

1990 - 2016



ACT Research Co., LLC: Copyright 2011

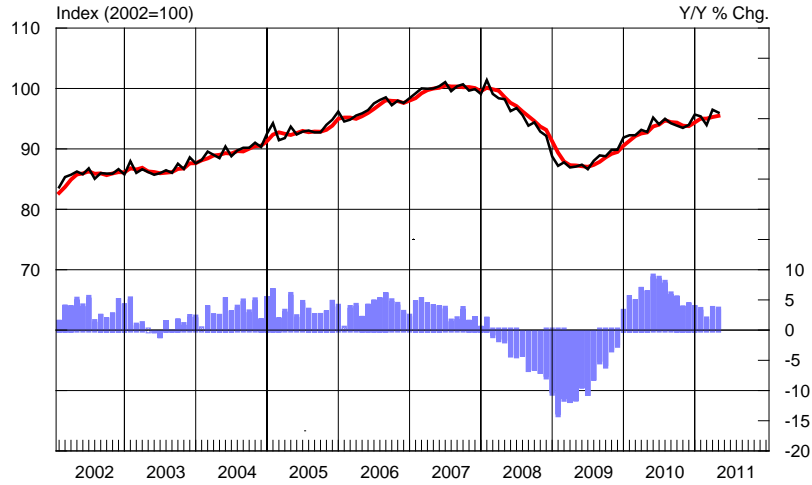
## Years of Service

<u>Date Sold</u>	<u>USC8RS</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
<b>2003</b>	146,143	8	9	10	11	12
<b>2004</b>	208,820	7	8	9	10	11
<b>2005</b>	257,847	6	7	8	9	10
<b>2006</b>	289,656	5	6	7	8	9
<b>2007</b>	157,565	4	5	6	7	8



## Ceridian-UCLA Pulse of Commerce Index

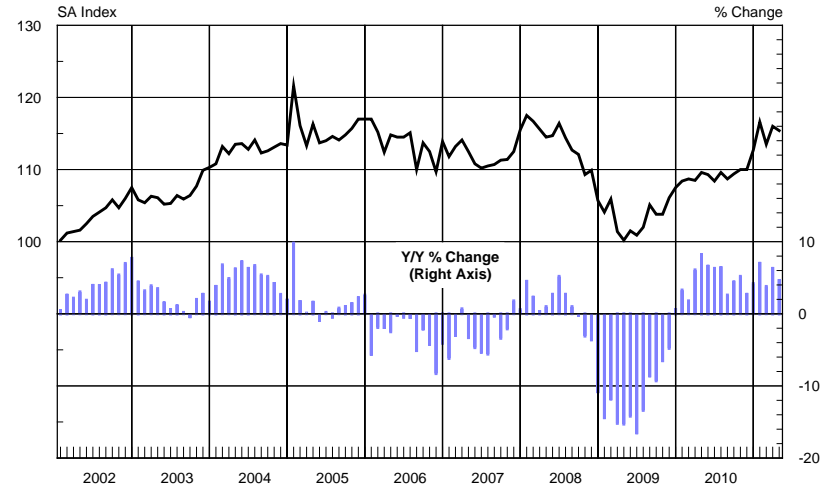
January 2002 - April 2011



Source: Ceridian, UCLA, ACT Research Co., LLC: Copyright 2011

## ATA Monthly Truck Tonnage Index (SA)

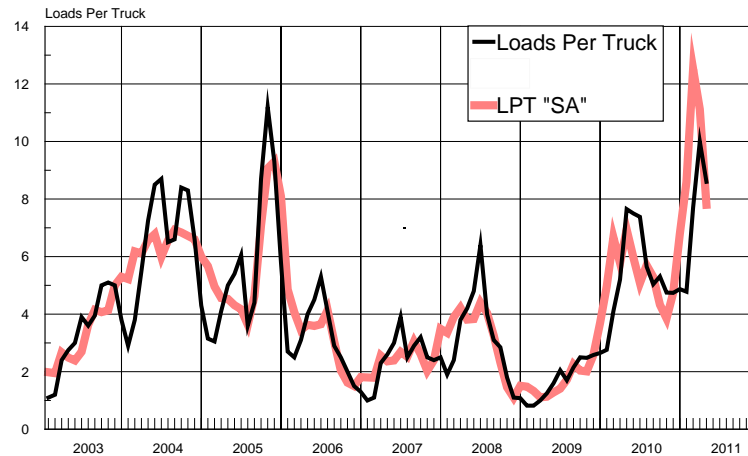
January '02 - April '11 (2000=100)



Source: American Trucking Association, ACT Research Co., LLC: Copyright 2011

## Transcore Loadboard Data

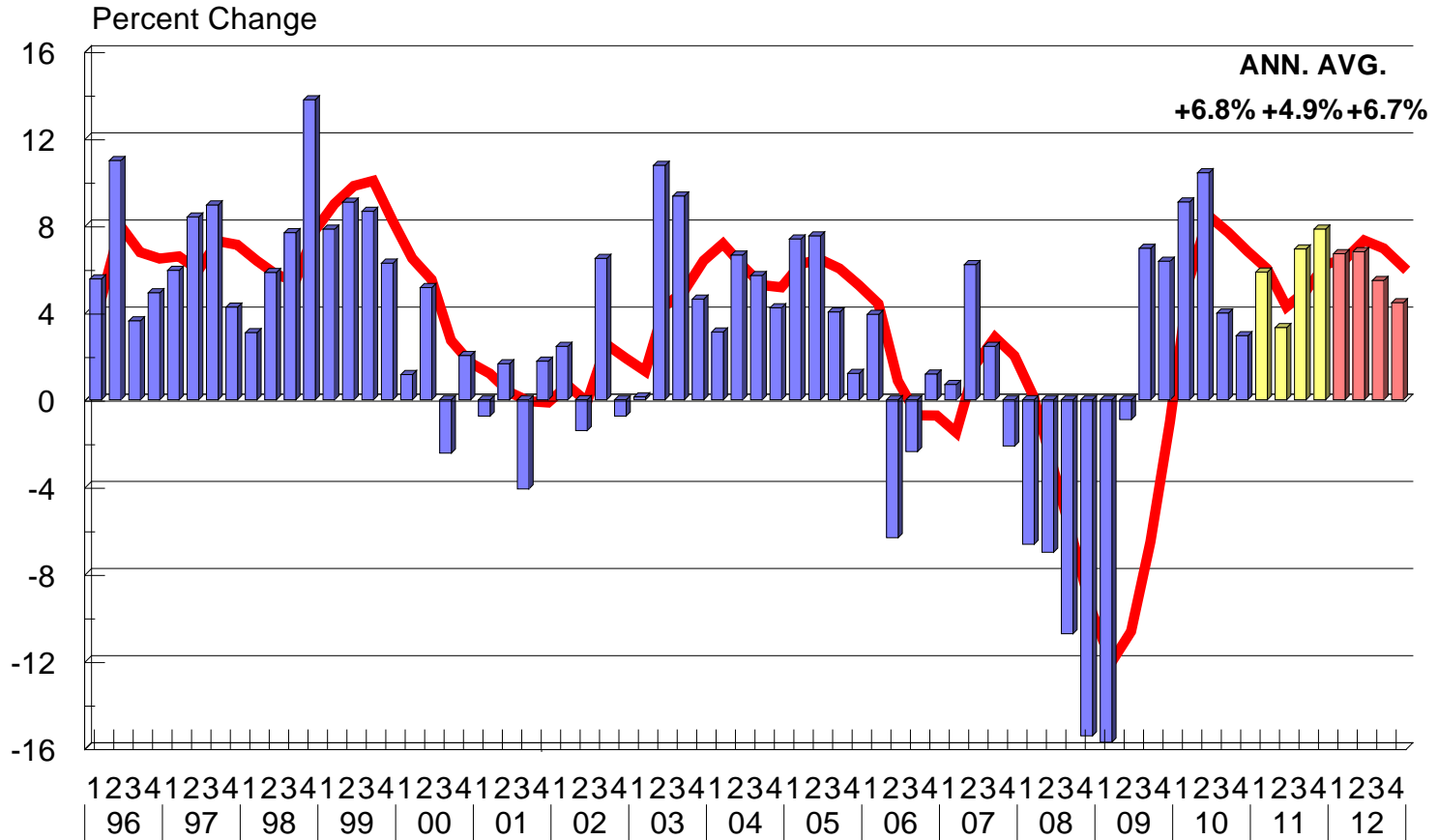
January '03 - April '11 (2000=100)



Source: Transcore Commercial Technology Group, ACT Research Co., LLC: Copyright 2011

# ACT U.S. Freight Composite

Q/Q at SAAR, Y/Y  
Q1'97 - Q4'12 (Actual through Q4'10)

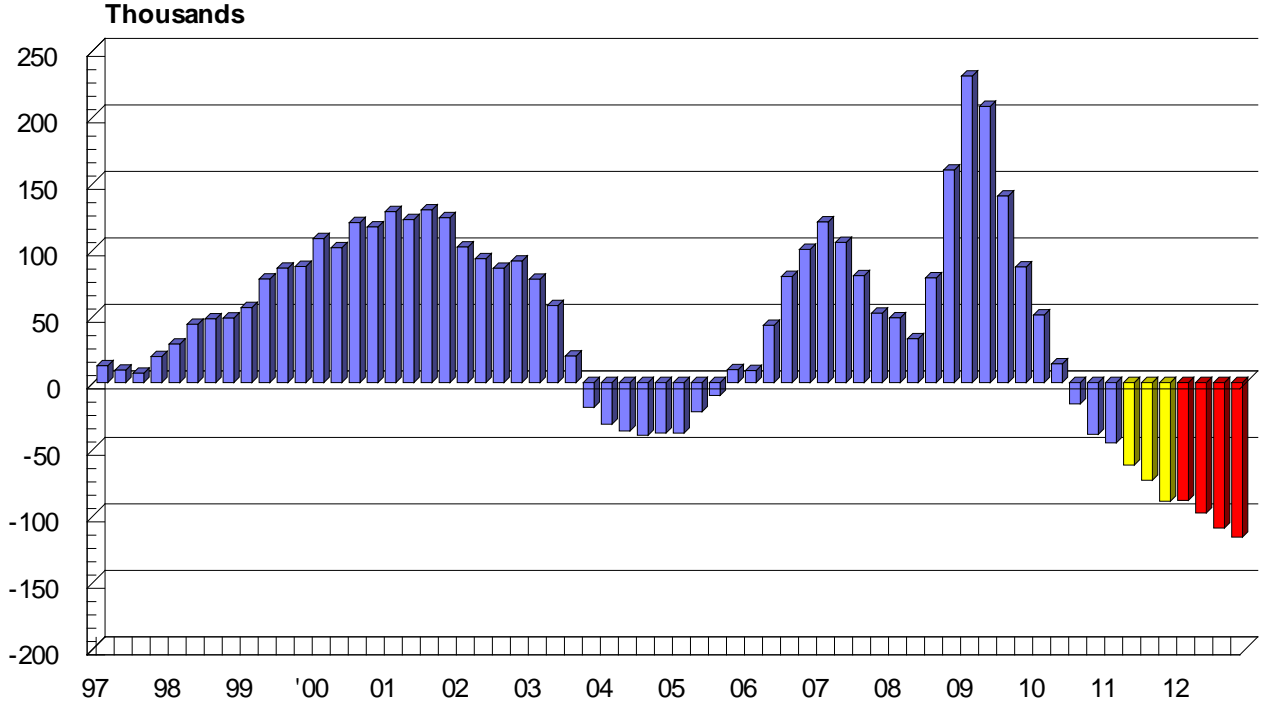


Source: ACT Research Co., LLC: Copyright 2011

# Tight Capacity Favors Truckers

## U.S. Class 8 Supply & Freight Demand Overbuy:Underbuy

1997 - 2012



ACT Research Co., LLC: Copyright 2011

# Not A New Phenomenon

*The Traffic World* (part of *Journal of Commerce*)

Dec. 12, 1914

## The Truck Driver Problem

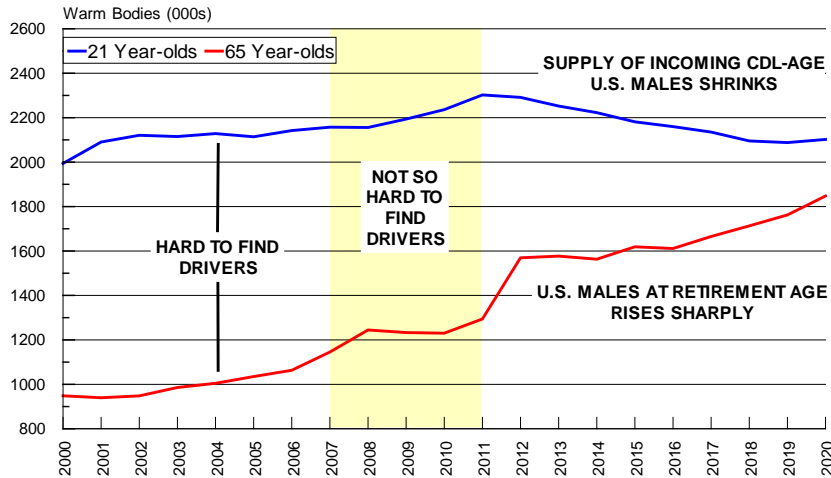
- “Practically every truck manufacturer and nearly all ***employers complain of the great difficulty of securing drivers who are competent*** and who will work handling freight aside from those who drive horses. They are agreed that the profit or loss from truck transportation is largely dependent upon the drivers, ***and yet a majority of truck owners will hire the men who will work cheapest,*** entrusting valuable property in their keeping...)



# The Root of the Problem

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

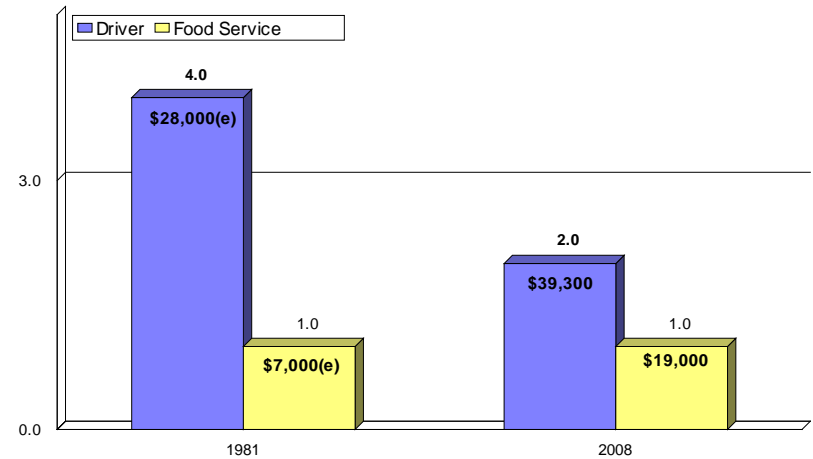
2000-2020



Source: U.S. Census Bureau, ACT Research Co., LLC: Copyright 2010

## The Root of the Driver Shortage

Driver Wages Relative to Food Prep Workers



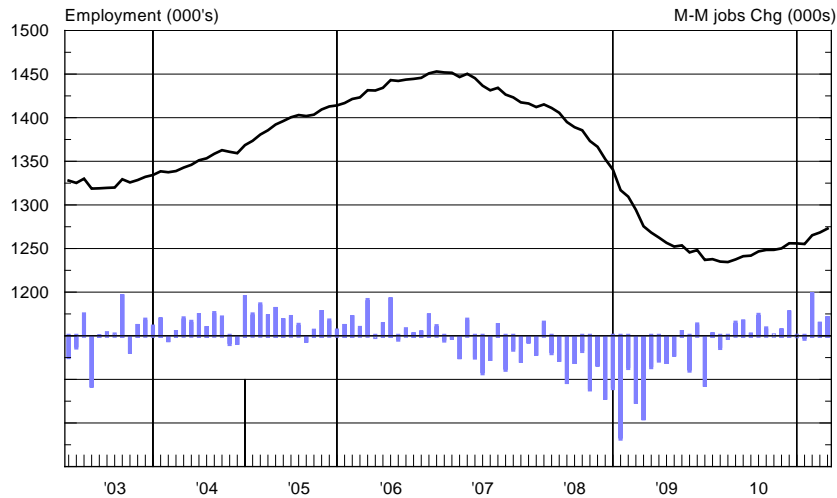
BLS OES, ACT Research Co., LLC: Copyright 2010

- When the supply-gap disappears, wages are going to rise rapidly
  - A check at MATS indicated long-haul TLs wages are still ~\$35-\$40k/year
- **At 4:1, drivers would be making ~\$75k**
- A tight driver supply will accelerate fleets' moves to replace old units with newer models so as to attract new/retain existing drivers.

# Workers to Spare?

## Truck Transportation Employment

January 2003 - April 2011 (Seasonally Adjusted)



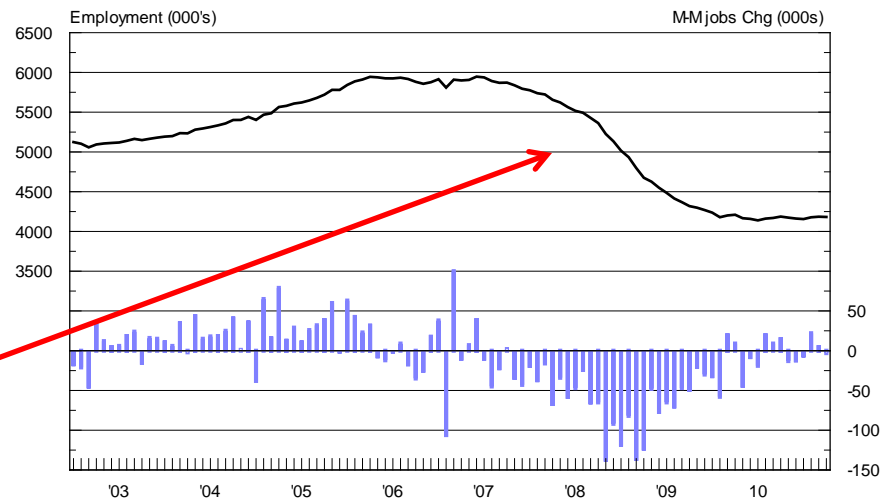
Source: BLS, ACT Research: Copyright 2011

**Incremental 1.7 million  
NOT working  
construction!**

**Incremental 200k not  
trucking (for-hire fleets)**

## Construction Employment: Production & Nonsupervisory

January 2003 - April 2011 (Seasonally Adjusted)

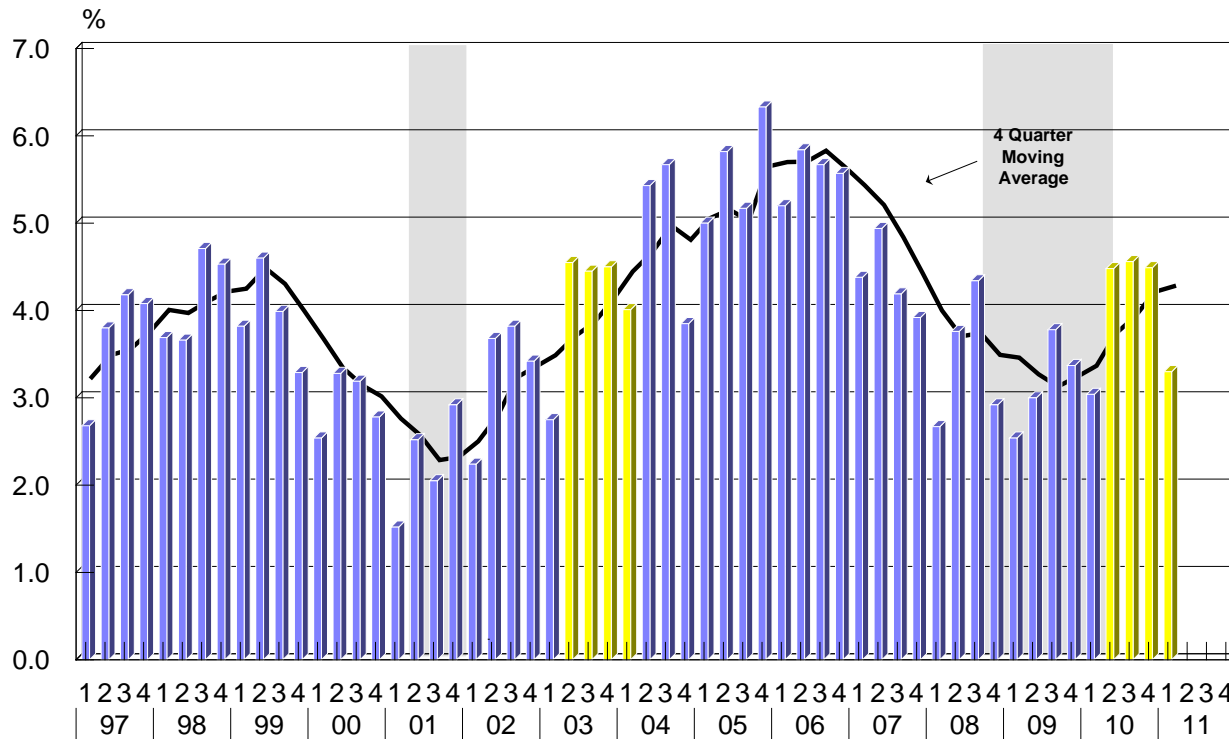


Source: BLS, ACT Research: Copyright 2011

# Weather, Fuel Bite in Q1

## TL Carrier Database: Net Profit Margin(excl. SWFT)

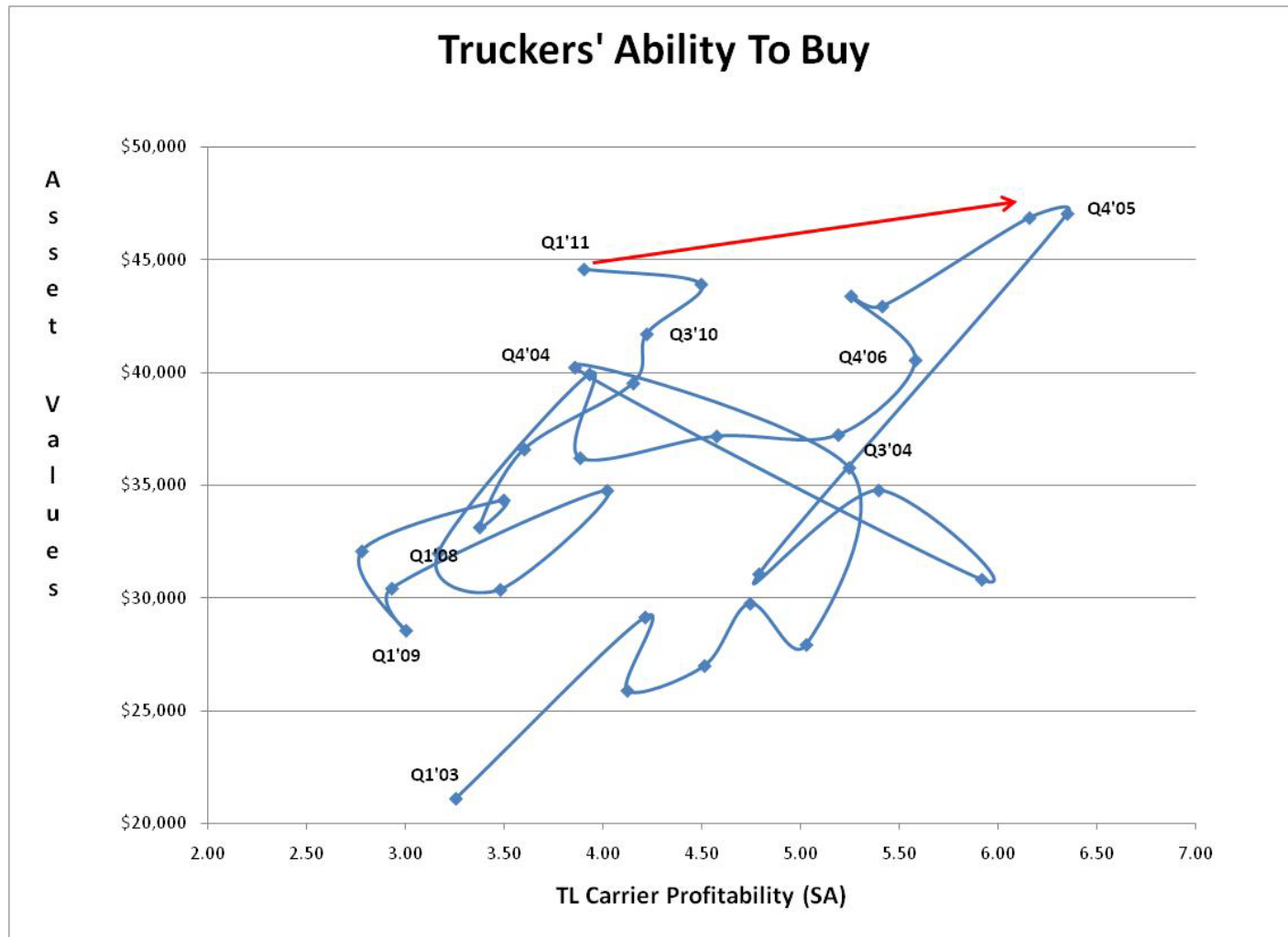
Q1 '97 - Preliminary Q1 '11



ACT Research Co., LLC: Copyright 2011

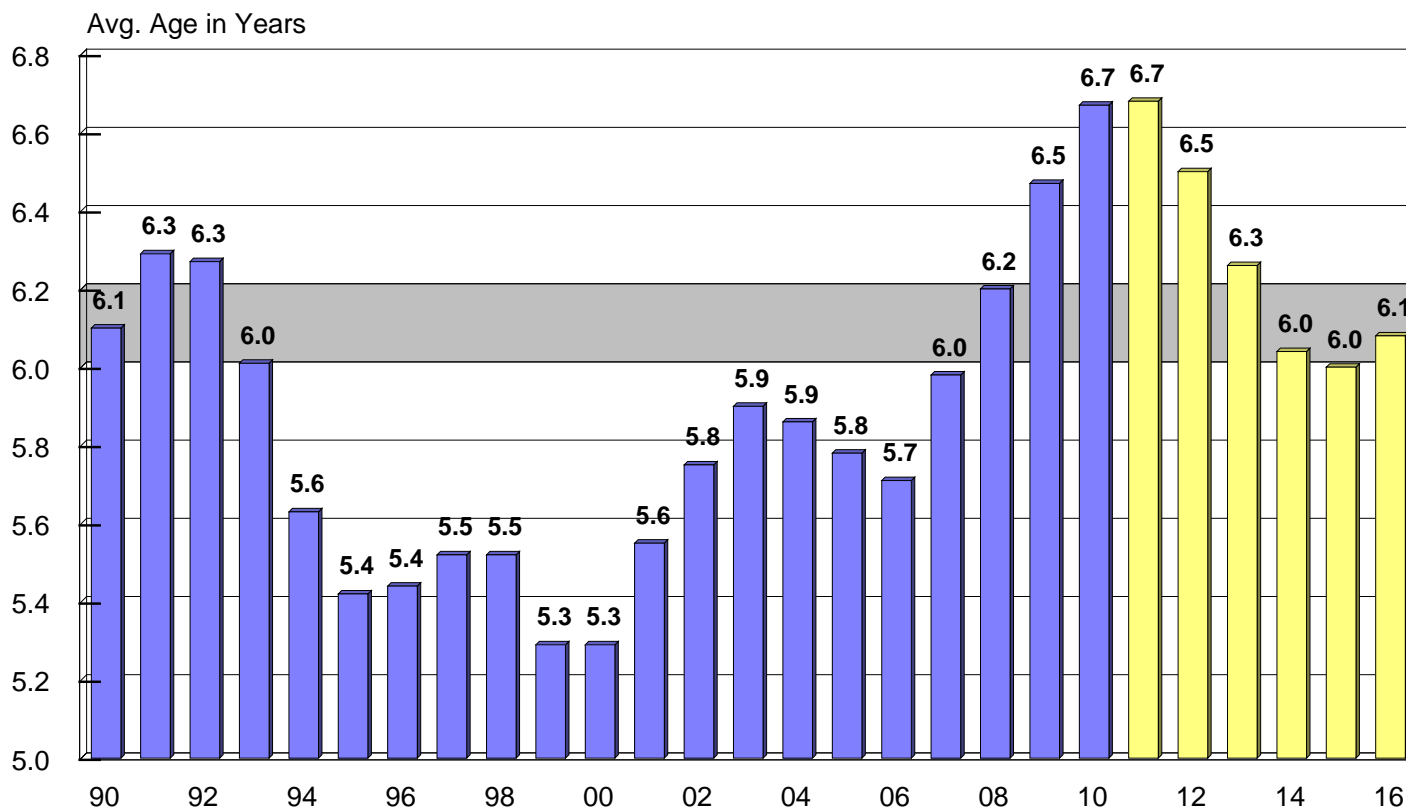
ACT Research Co., LLC, Copyright 2011

# Into the Preferred Quadrant



# AVERAGE AGE: U.S. Class 8 Active Population

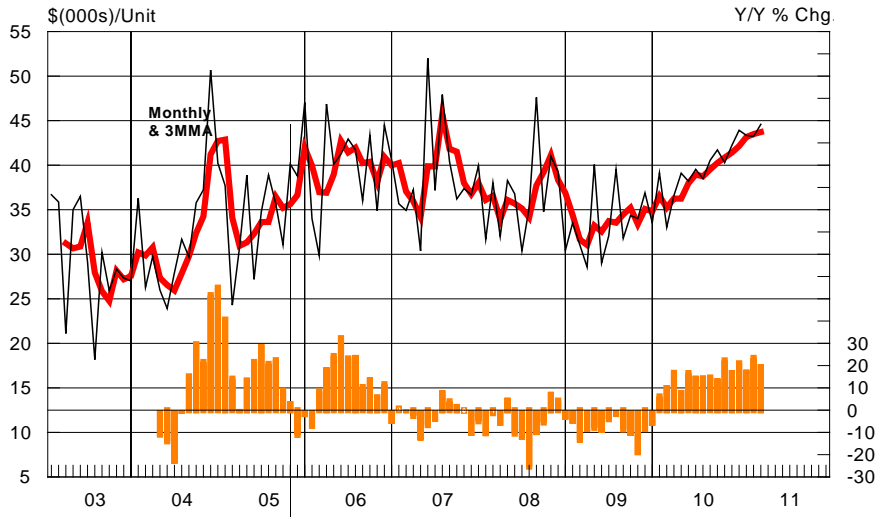
1990 - 2016



ACT Research Co., LLC: Copyright 2011

## Used Class 8: Average Retail Selling Price

January '03 - March '11



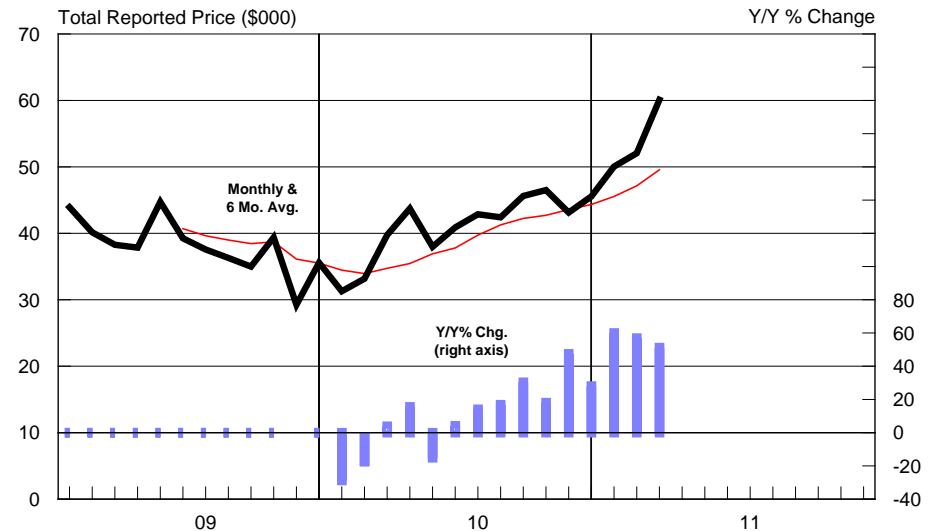
ACT Research Co., LLC: Copyright 2011

**Jumped to \$68.8k in April**

**Slipped to \$42.3k in April**

## CLASS 8: U.S. USED TRUCK AVERAGE SALE PRICE

4 to 5 years old, 400-500,000 miles  
January '09 - Preliminary March '11  
Same Dealer Sales



ACT Research Co., LLC: Copyright 2011

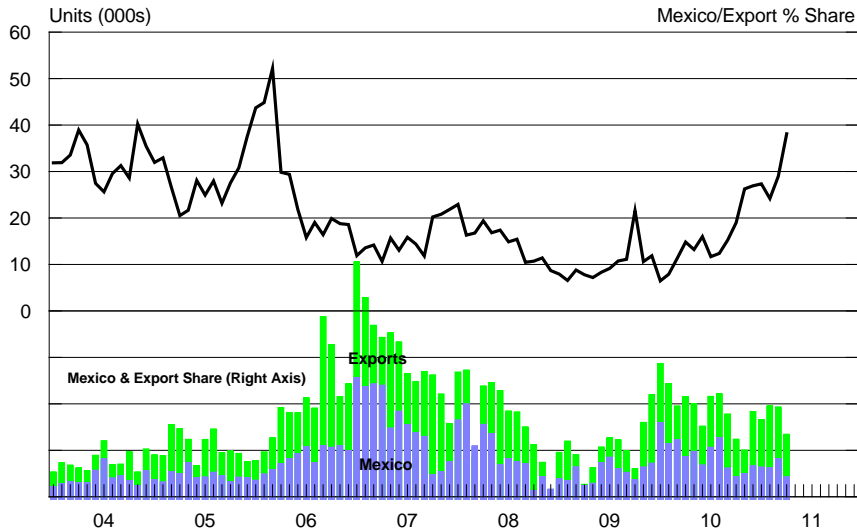
# Current Demand Environment: Class 8 & Trailers

- Indicators generally pointing in the right direction
  - Orders: Rise sharply in Q4-Q1
    - » Rise to 5-plus year highs in March-April
    - » Orders continue to be placed close-in
    - » Breadth of demand expanding
  - Backlogs: Rising since September
  - Build: Build rates are following Orders higher
    - » Rising BL/BU ratios will support higher build rates
  - Retail Sales: Trending higher
    - » Have been close to two-year highs for several months
  - Inventory: Not an impediment to build
    - » Likely accretive into 2013

# On Fire

## TOTAL CLASS 8: N.A. NET ORDERS

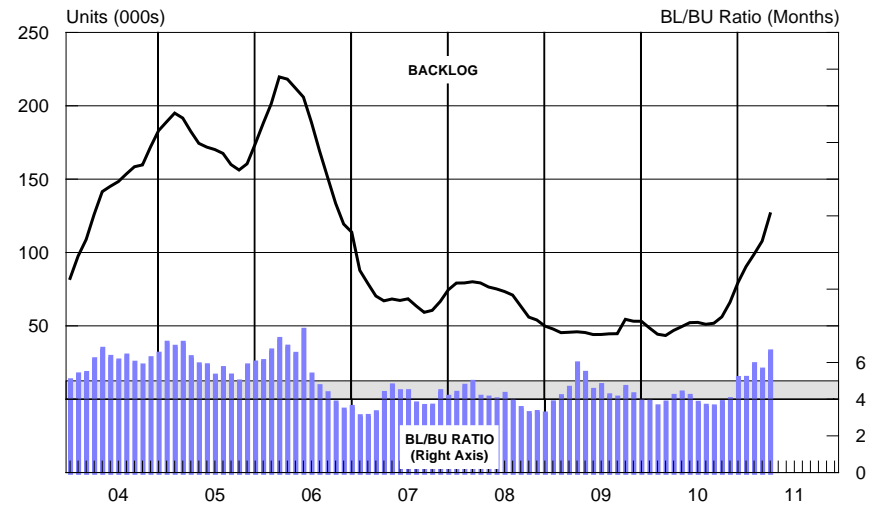
January '04 - April '11 (Not SA)



ACT Research Co., LLC: Copyright 2011

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

January '04 - April '11 (Not Seasonally Adjusted)



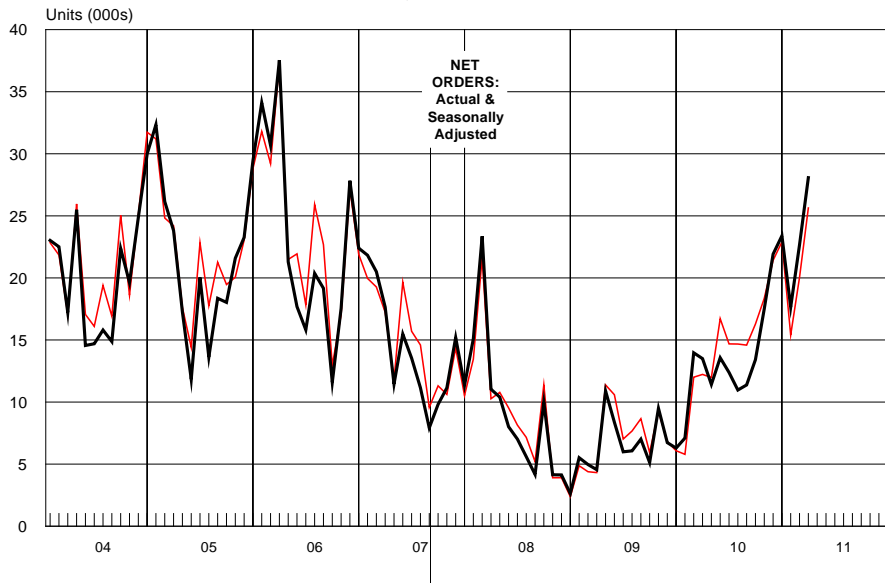
ACT Research Co., LLC: Copyright 2011



# Also On Fire

## TOTAL TRAILERS: NET ORDERS

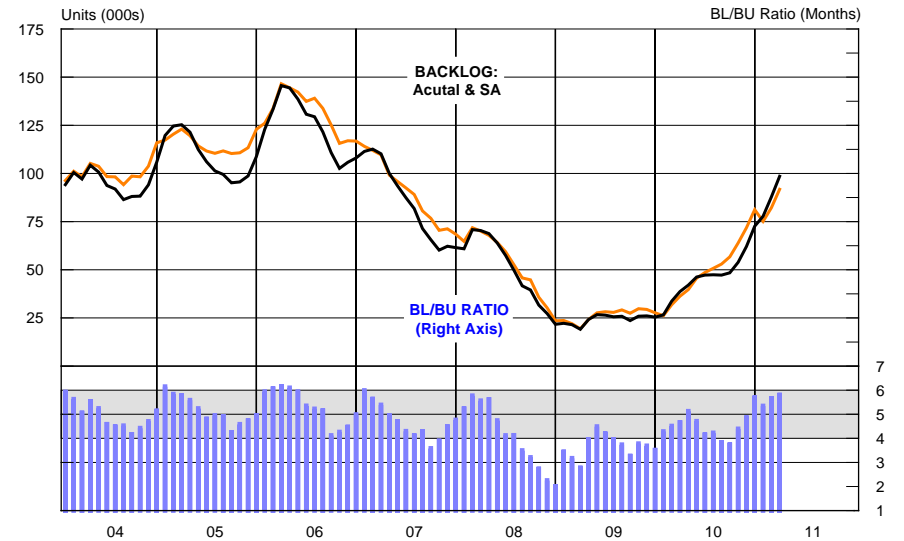
January '04 - March '11



ACT Research Co., LLC: Copyright 2011

## TOTAL TRAILERS BACKLOG & BACKLOG/BUILD RATIO

January '04 - March '11

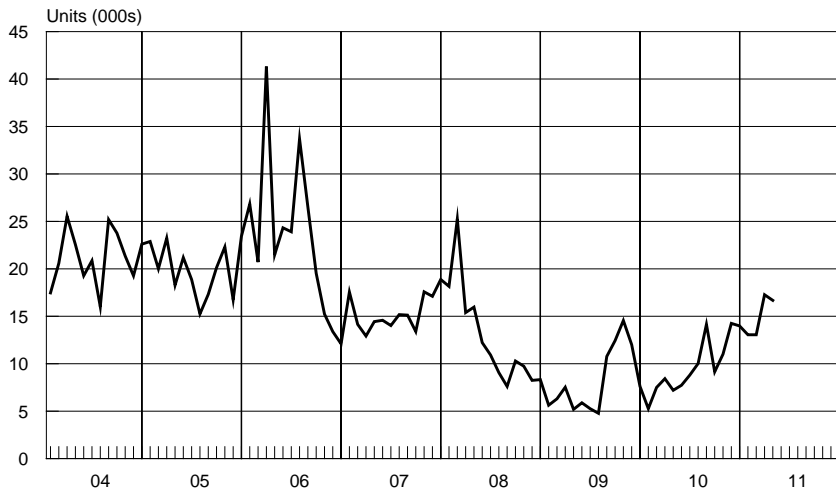


ACT Research Co., LLC: Copyright 2011

# Warming Trend

## TOTAL CLASSES 5-7: N.A. NET ORDERS

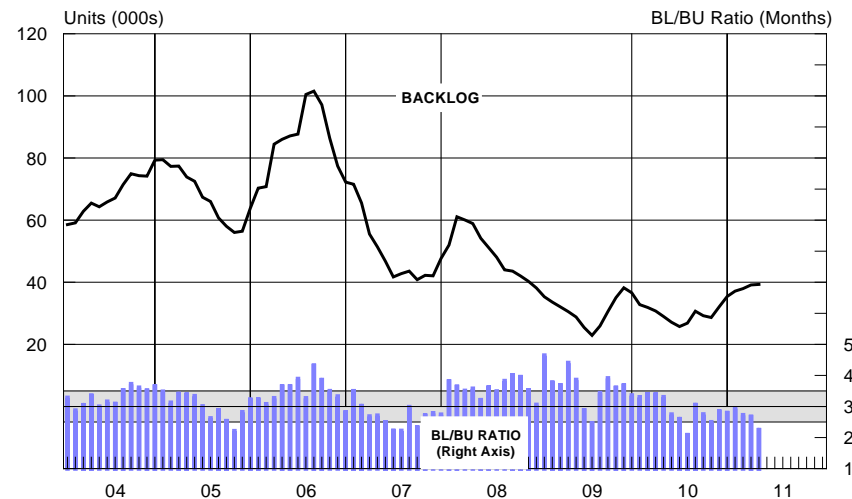
January '04 - April '11 (Not Seasonally Adjusted)



ACT Research Co., LLC: Copyright 2011

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

January '04 - April '11 (Not Seasonally Adjusted)



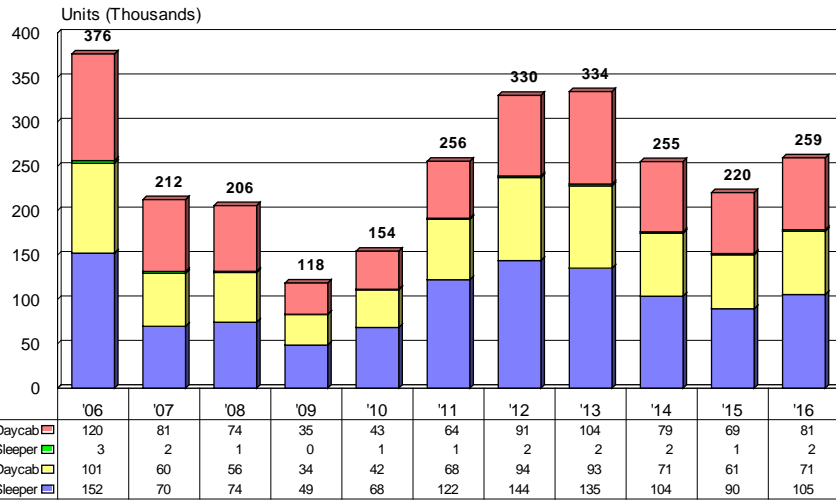
ACT Research Co., LLC: Copyright 2011

# BROAD-BASED

(Data through April 2011, annualized)

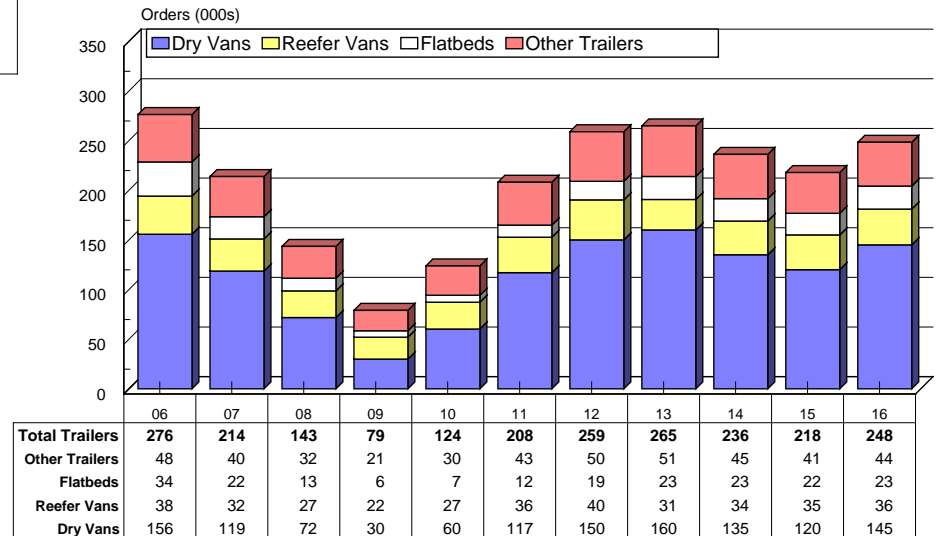
<u>Class 8 Orders</u>	U.S. (000s)	Canada (000s)	Mexico (000s)	Exports (000s)	Tot NA (000s)	NA SAAR
Past 12	188.3	21.8	17.6	25.7	259.3	
Past 6	251.8	36.4	21.0	34.4	343.7	<b>328.3</b>
Past 3	264.6	38.4	22.4	39.8	365.2	<b>345.2</b>
April	348.2	47.3	19.9	42.1	457.5	<b>444.3</b>

## N.A. Class 8 Production 2006-2016



ACT Research Co., LLC: Copyright 2011

## U.S. TRAILER FACTORY SHIPMENTS 2006-2016



ACT Research Co., LLC: Copyright 2011

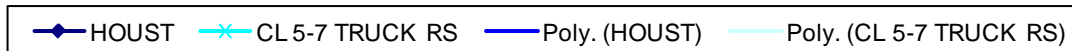
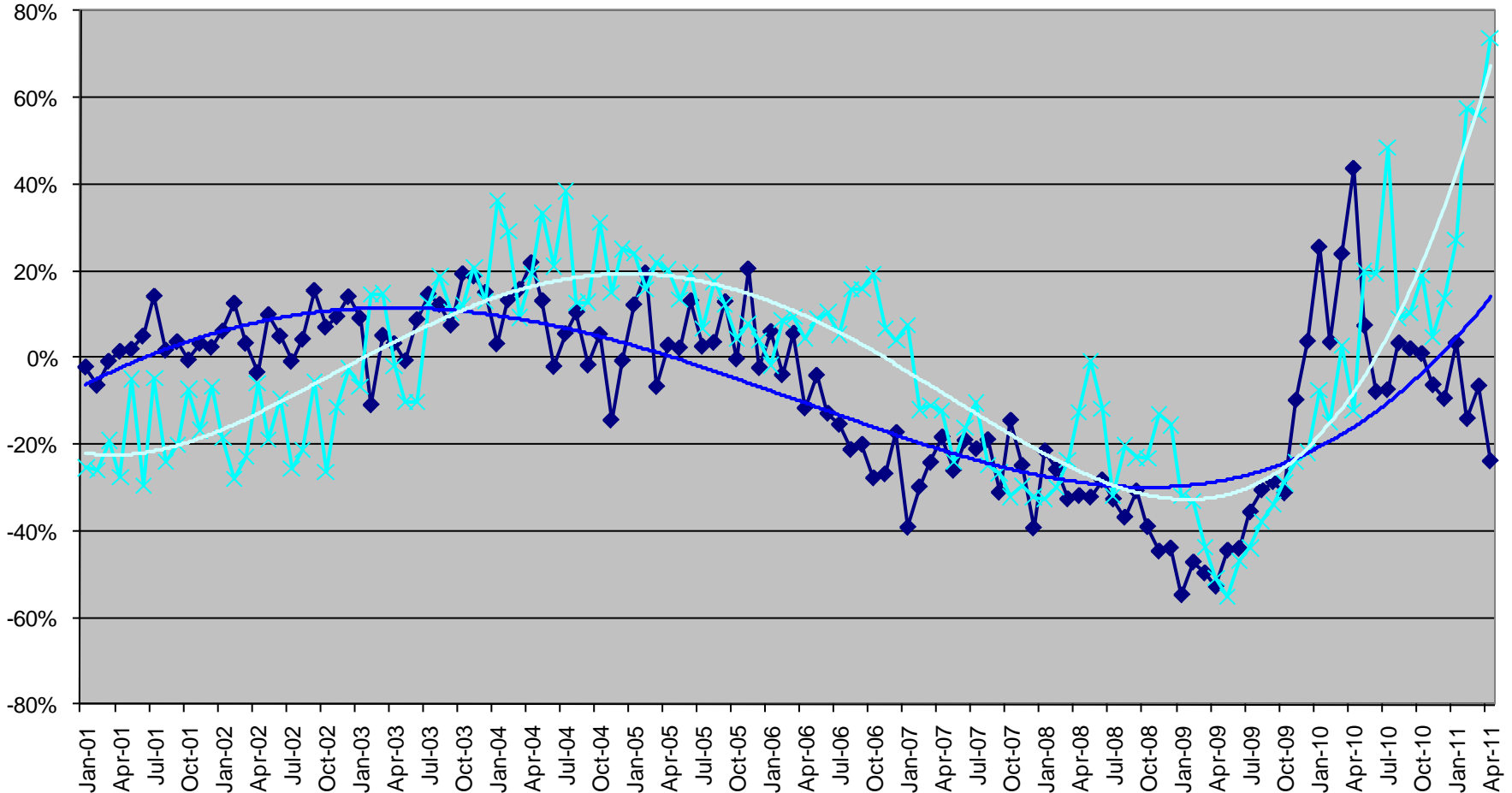
# N.A. Classes 5-7 Order Distribution

(Data through April 2011, annualized)

<u>Classes 5-7 Orders</u>	Truck (000s)	Bus (000s)	RV (000s)	Total (000s)
Past 12 Mo.	109.6	23.4	13.8	148.8
Past 6 (AR)	136.4	23.0	12.9	172.3
Past 3 (AR)	139.9	26.8	13.7	180.4
April	151.6	25.2	22.9	199.7
Apr. (SAAR)				214.9

# Housing Starts vs. CL 5-7 Truck Sales

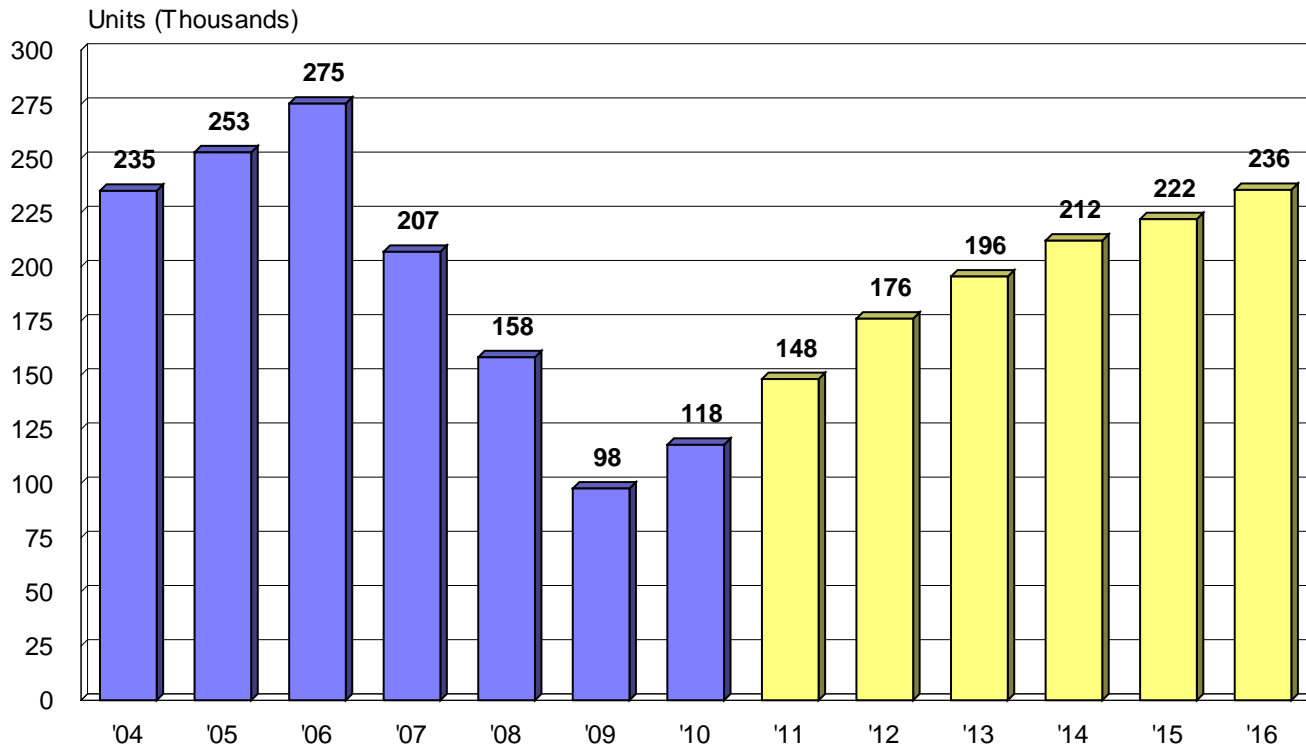
Y/Y % Change of SAAR



# Add 25k to 2011-2013 Forecasts - Probably

## N.A. Classes 5-7 Production

2004 - 2016





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