



Automotive Outlook: When Do Better Times Return

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Automotive Outlook:

What The @#\$%&! Happened?

Who's To Blame For This @#\$%&! Collapse?

Will Better Times Ever Return?

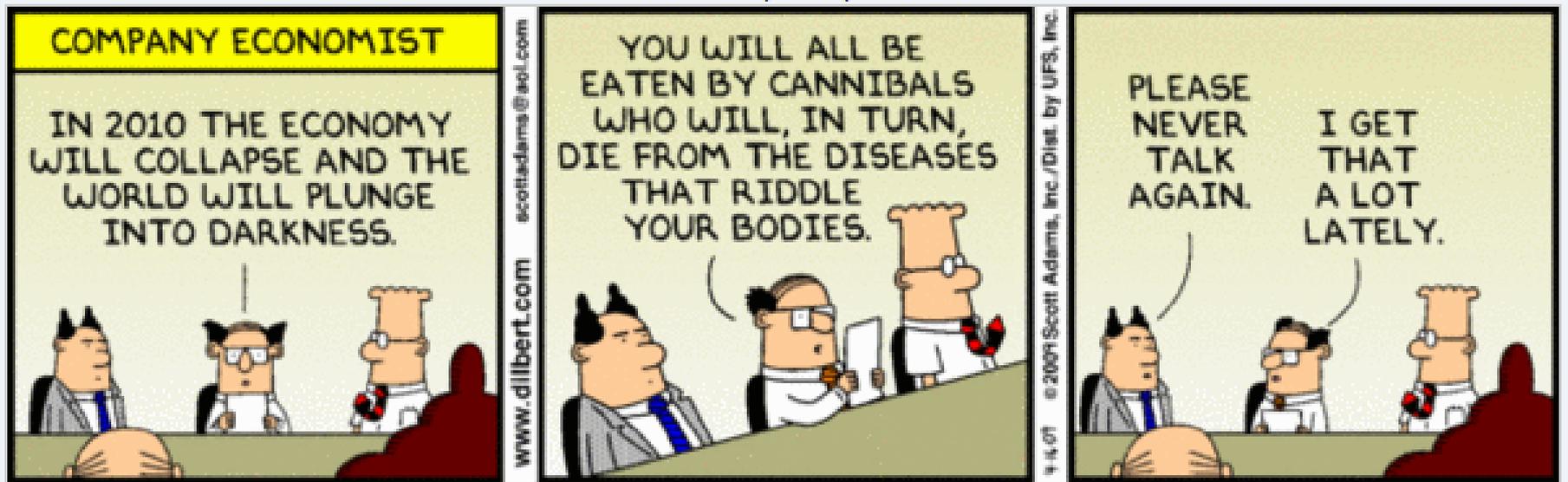


Presentation Outline

- Review of Current Economic Indicators
- Automotive Economics
- The Next Big Issue
- Summary

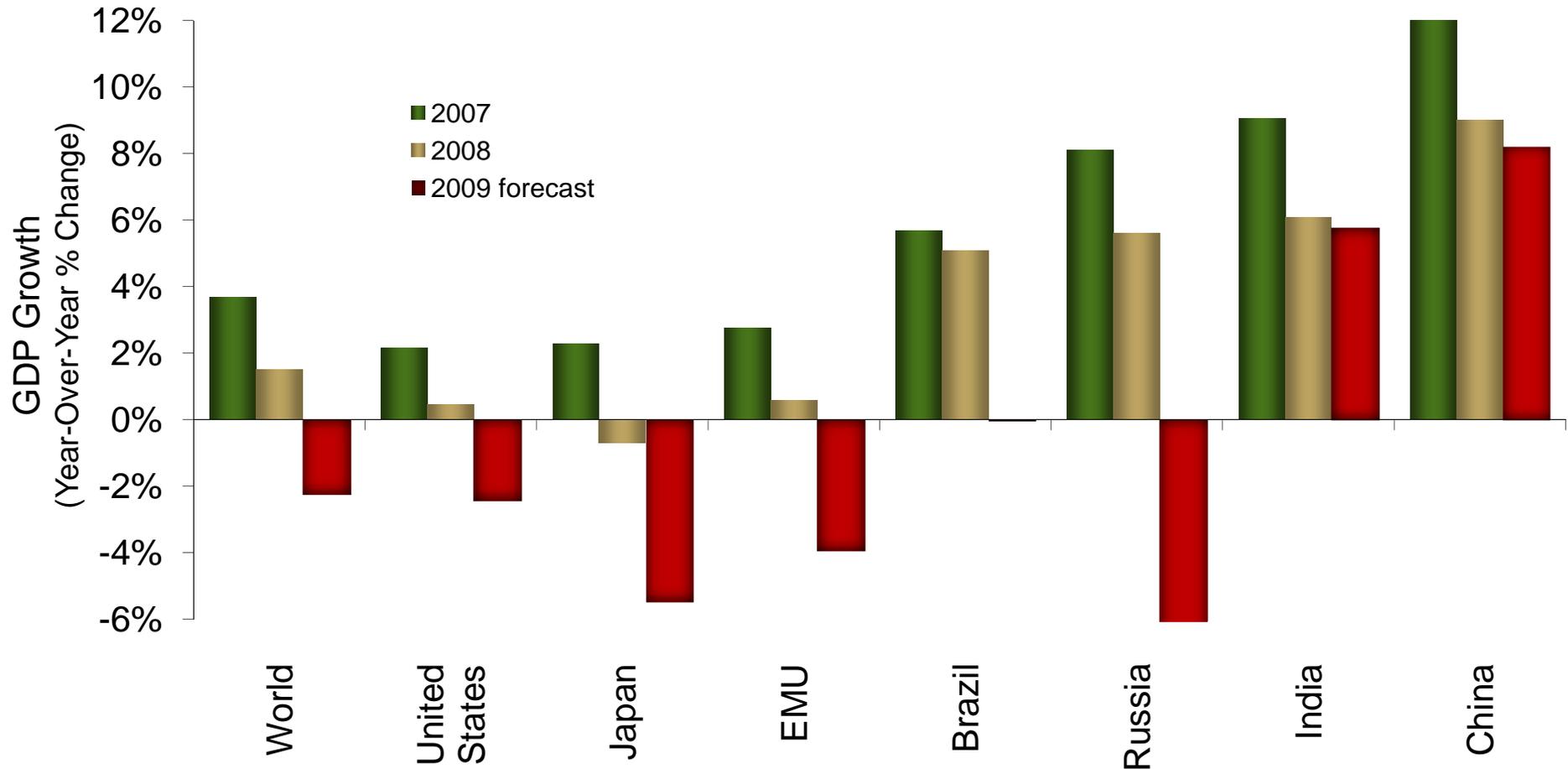


Life As An Automotive Economist In 2009





World: Gross Domestic Product In Decline

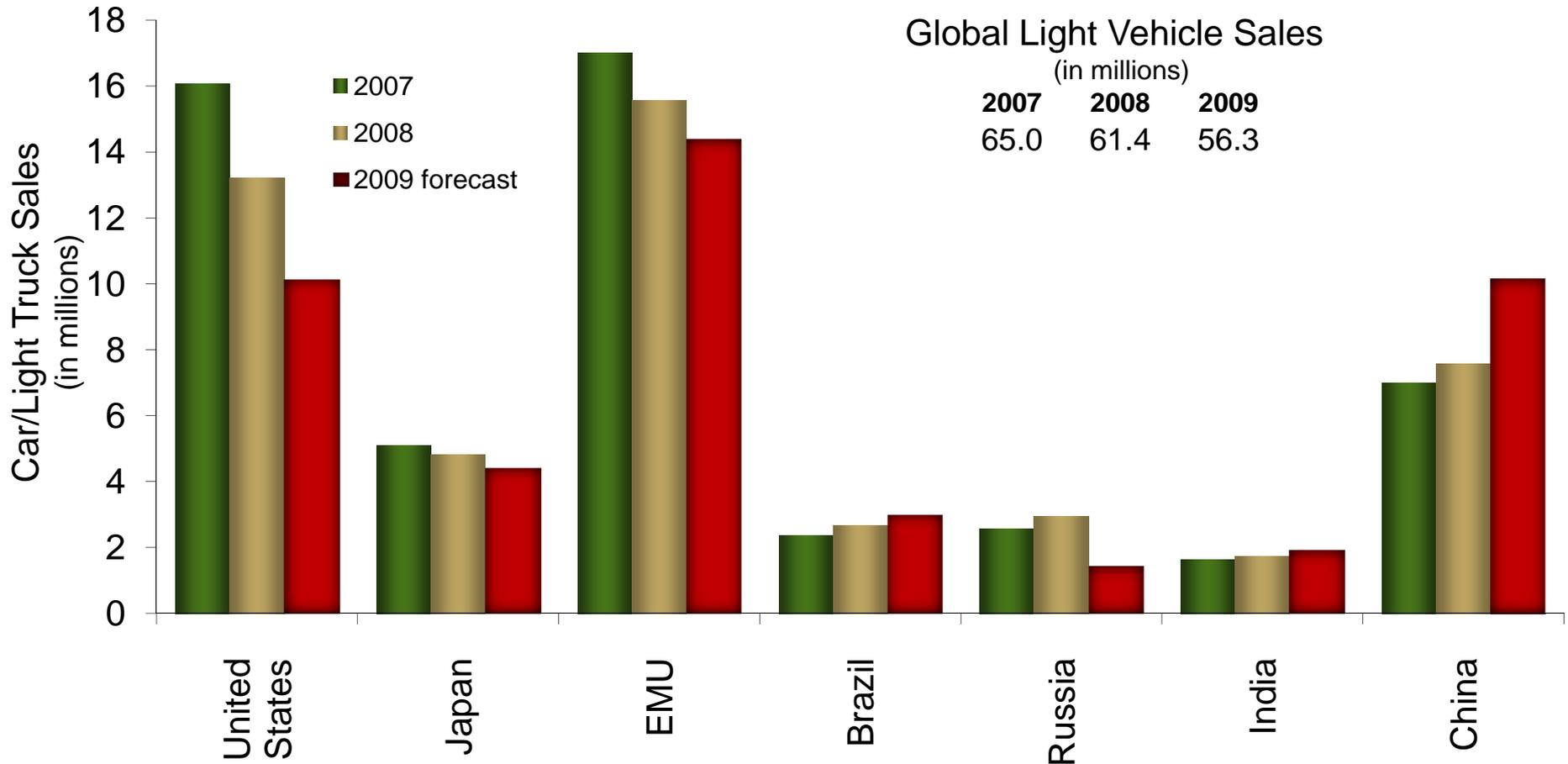


- Economic decline is truly global – all major automotive economies falling
- Modest rebound expected in 2010

Source: CSM Worldwide/FERI Financial Services AG



World: Light Vehicle Sales Falling, and Rising

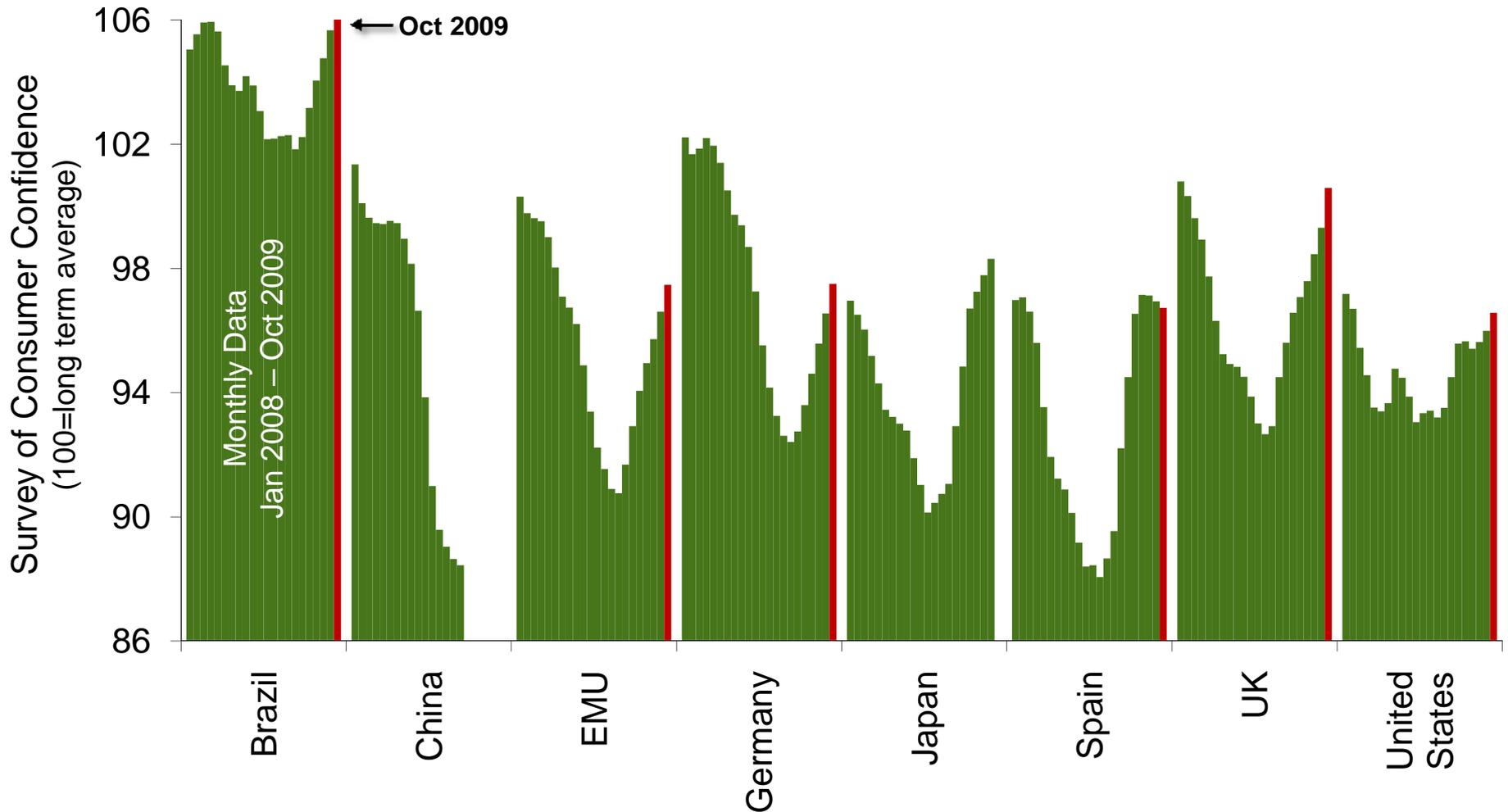


- Global sales down 8% from last year and down 13% from their 2007 peak
- Developing world still increasing: Brazil up 26% since 2007, India up 16%, China up 45%

Source: CSM Worldwide



World: Consumers' Confidence Rebounding

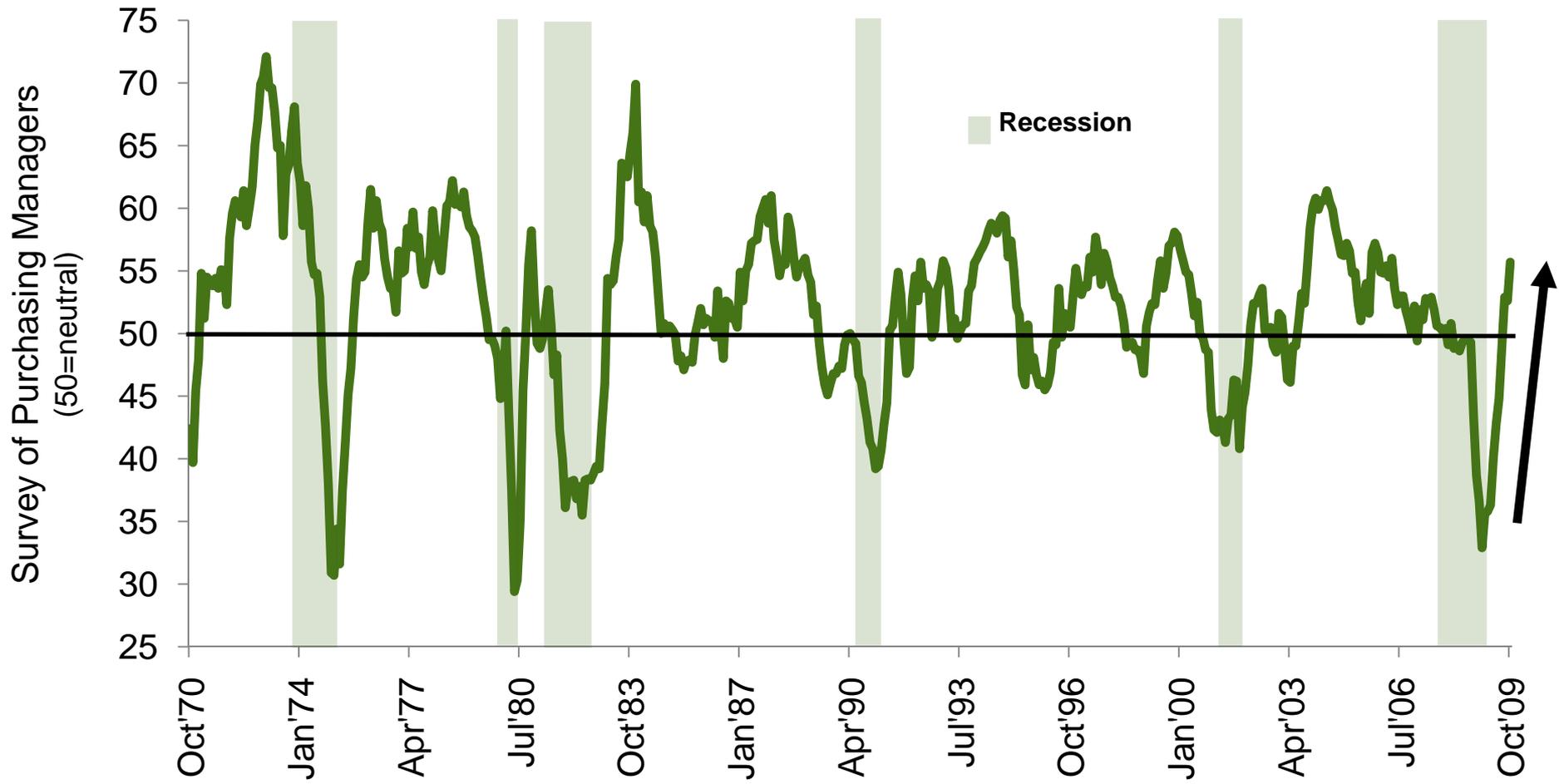


- Consumers' outlook improving; optimism will lead to auto sales

Source: OECD - Organization for Economic Cooperation and Development



US: Manufacturers' Confidence Rising

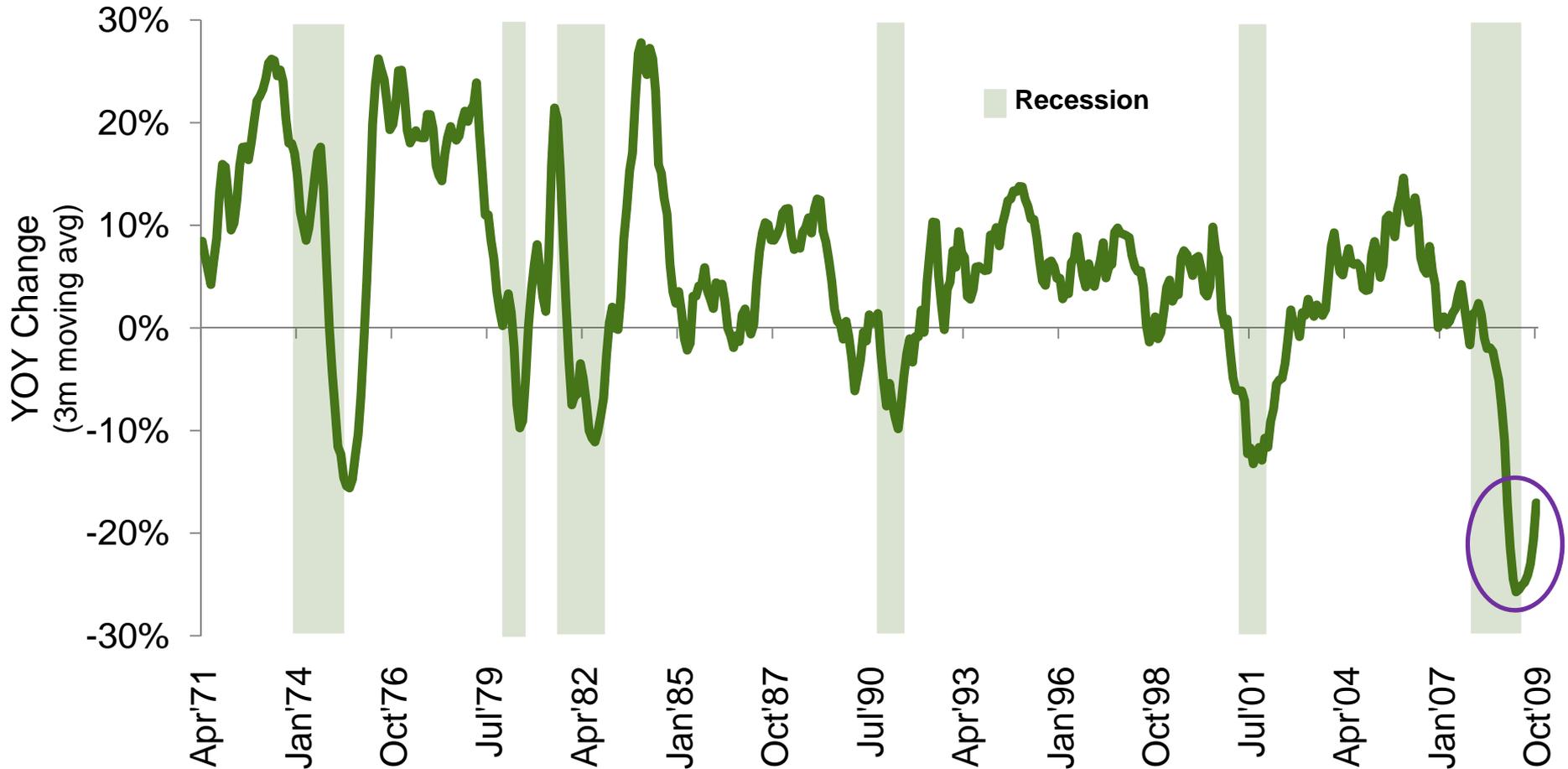


- Outlook significantly more optimistic
- Since Dec '08 Index has risen 69% - current level highest since April '06

Source: Institute of Supply Management - Manufacturing Purchasing Managers' Index



US: New Durable Goods Orders Collapse Over

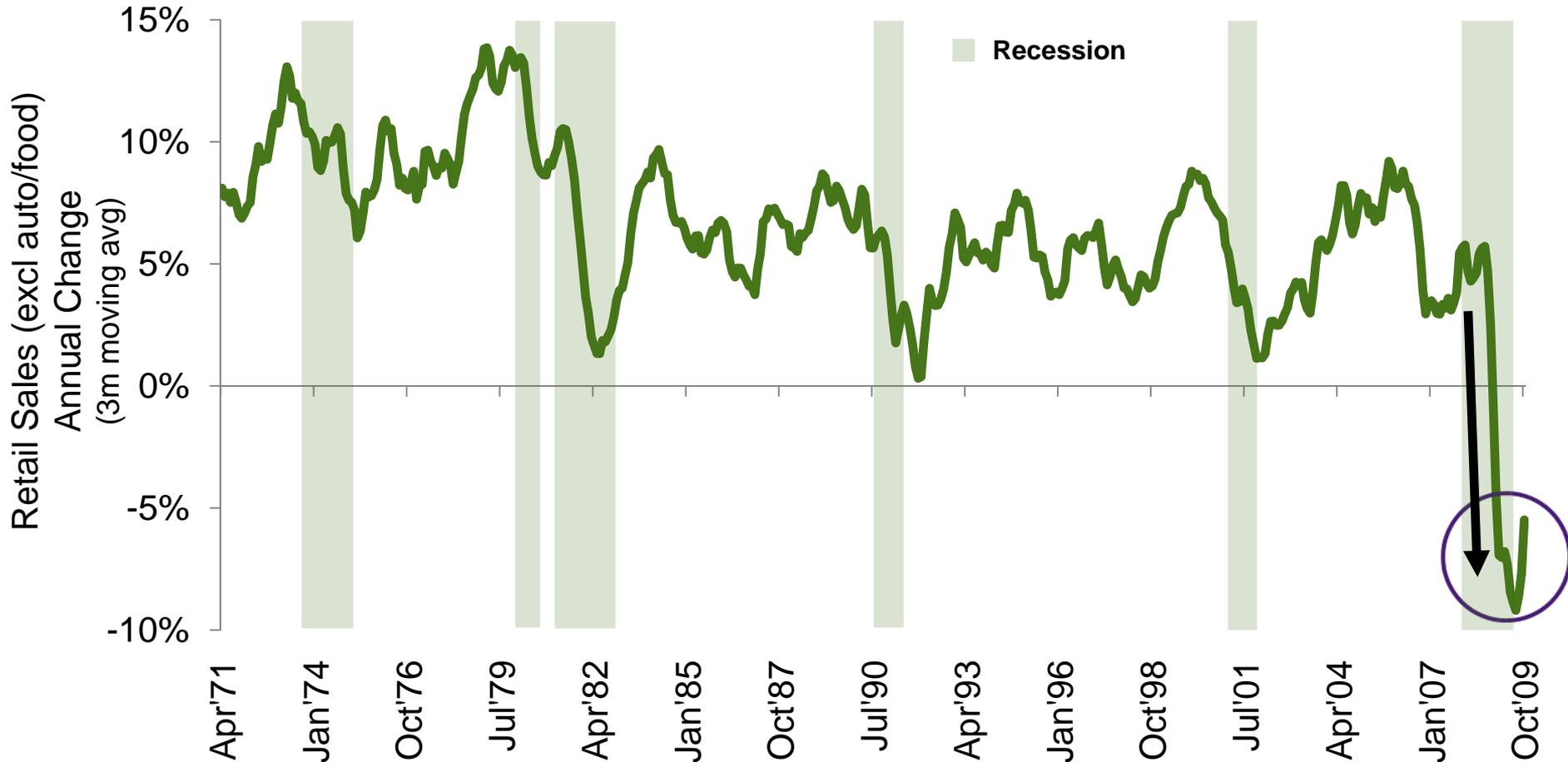


- Orders improving since March lows
- October's number still down 11% from last year – recovery has a long way to go

Source: US Dept of Commerce



US: Retail Sales Turning

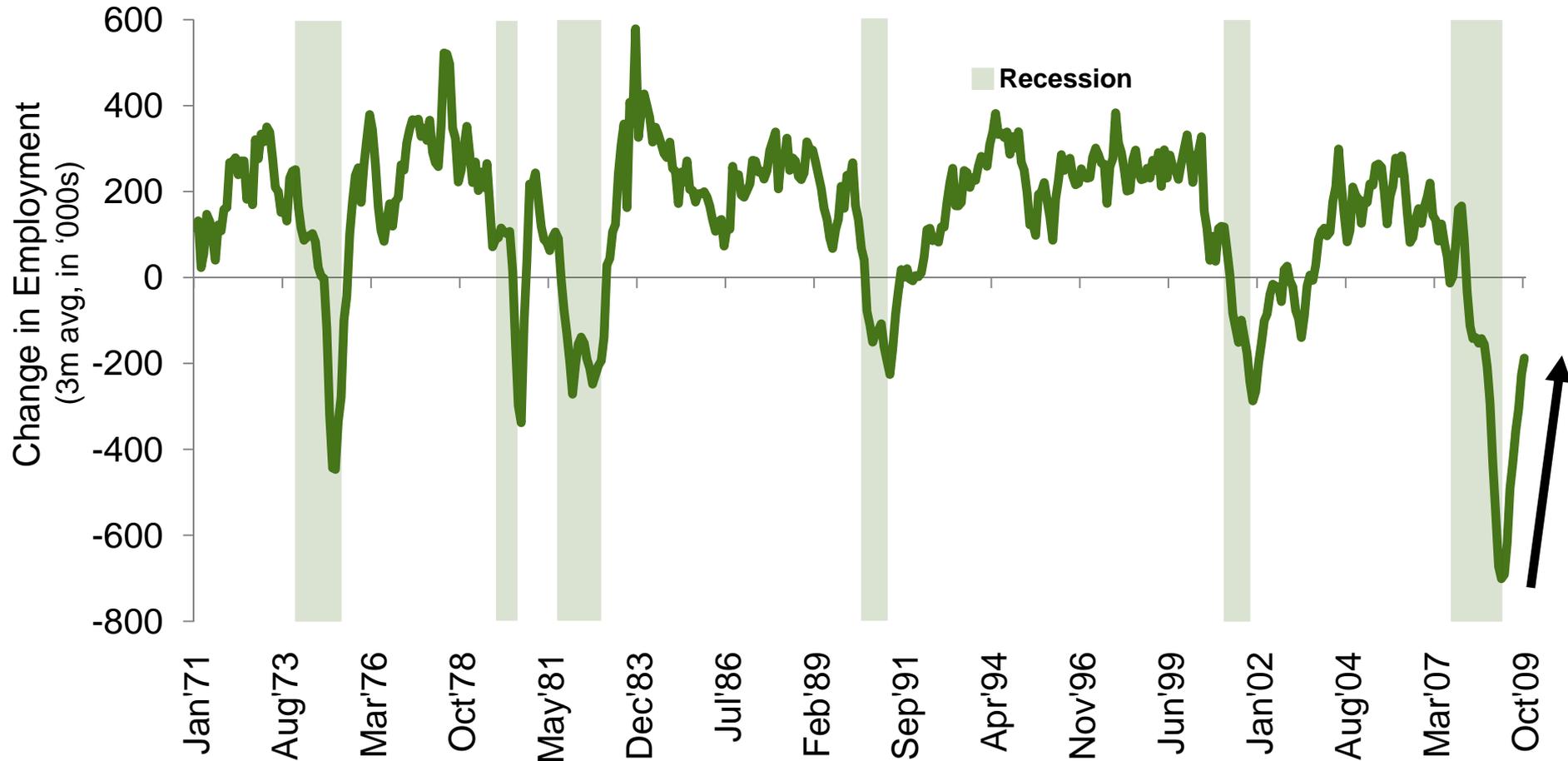


- Retail sales fall significantly during recessions
- Recent numbers suggest collapse is over, bottom likely reached

Source: US Dept of Commerce



US: No Jobs - Monthly Non-Farm Payroll Changes

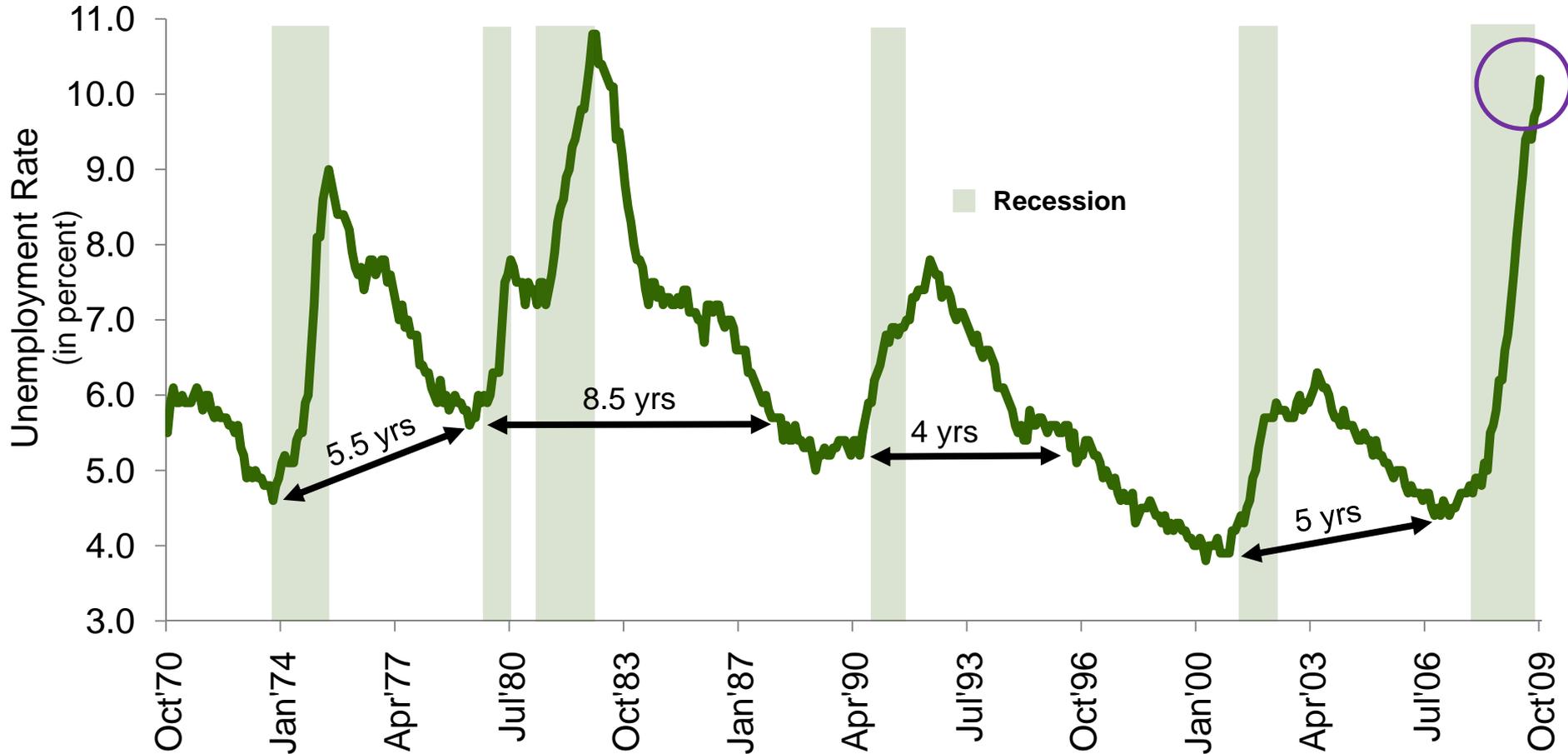


- Since Dec '07 economy has lost jobs every month
- Without job creation soon, confidence and vehicle sales recovery will be impacted

Source: Bureau of Labor Statistics



US: Unemployment Rate Still Climbing

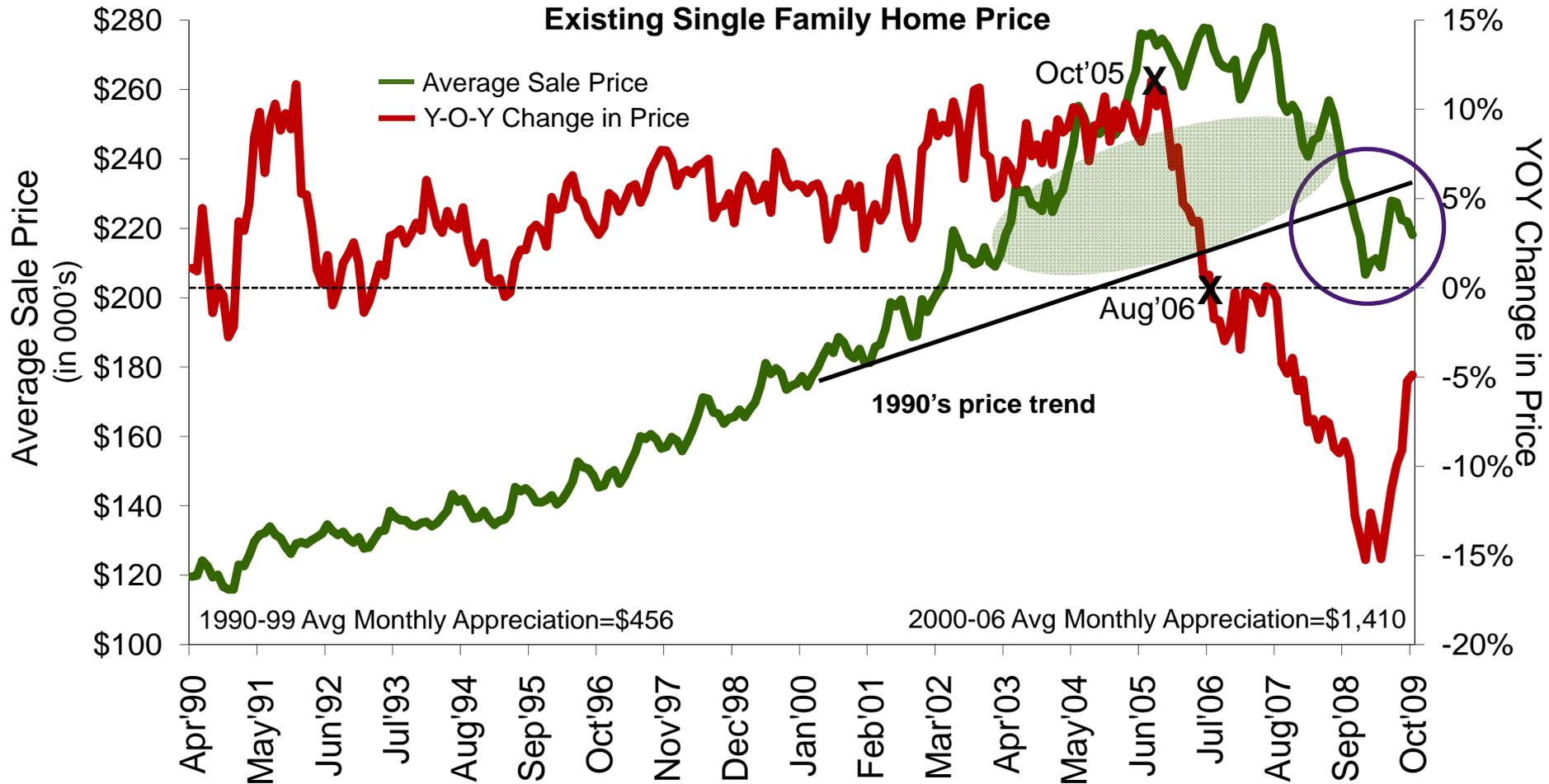


- October's unemployment rate 10.2% - highest in 26 years
- Unemployment expected to remain high for years

Source: Bureau of Labor Statistics



US: Housing Market Collapse Ending?

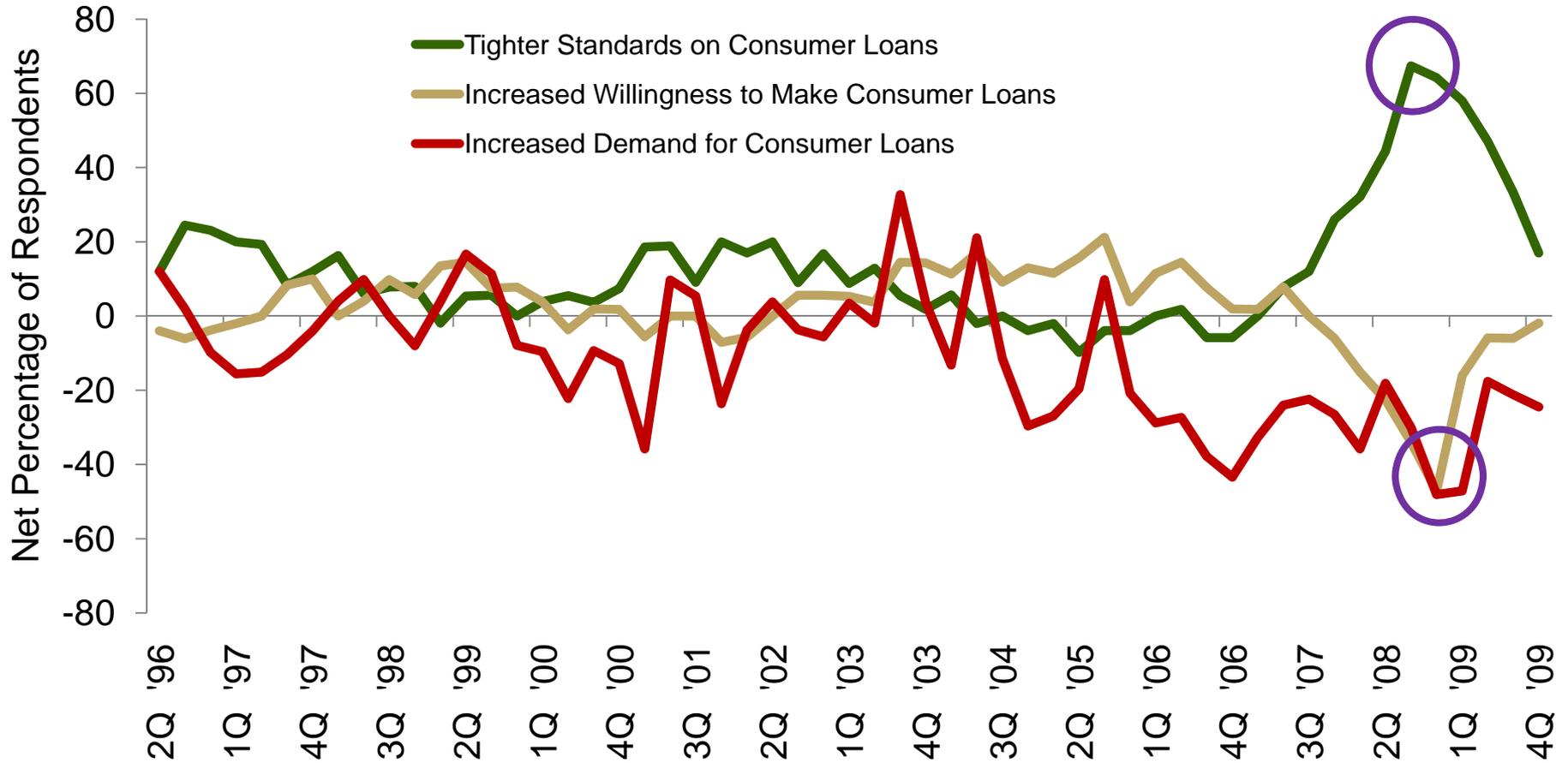


- Price collapse appears to be improving
- High unemployment and more foreclosures will dampen sector's recovery

Source: US Census Housing Statistics



US: Status of Consumer Credit



- A “perfect storm” in Q4 2008
- Situation now improving

Source: Federal Reserve Bank Loan Officer Survey - Consumer



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US Autos: Government Motors - 2009 Bailout

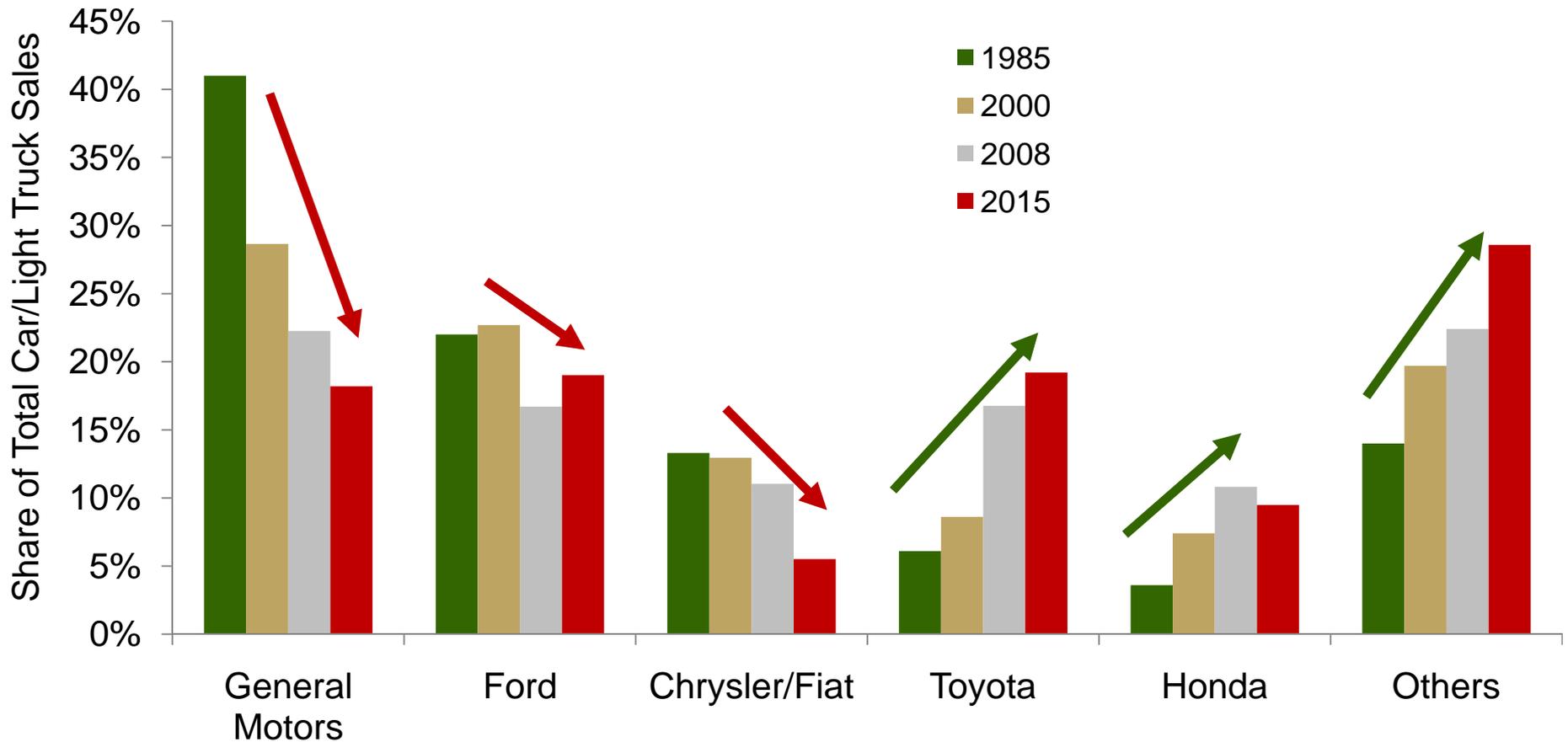


- **Close to \$120 Billion Provided to American Auto Industry – so far:**
 - GM - \$50 billion from US, Canada, wants \$5 billion more from EU
 - Chrysler - \$13 billion from US, Canada
 - GMAC - \$18 billion, includes \$6 billion in November
 - Advanced Technology Vehicle Manufacturing Program - \$25 billion, possibly \$25 billion more in coming years
 - Auto Suppliers - \$5 billion
 - Warranty Guarantee - \$1 billion
- Cash For Clunkers - \$3 billion
 - Big success - 700k vehicles sold, 84% of clunkers were trucks, dealer inventories cleared out, August SAAR highest in 15 months, 3,000 workers called back
 - Issues - 60% of purchases were Asian OEM products, Toyota/Honda have 80% loyalty so former US customers now gone, only pulled ahead sales – September SAAR down 35% from August
- Ownership: US government owns 20% of Chrysler, 61% of GM; Canadian government owns 5% of Chrysler, 12% of GM

Source: CSM Worldwide



US Autos: Market Share Changing Quickly



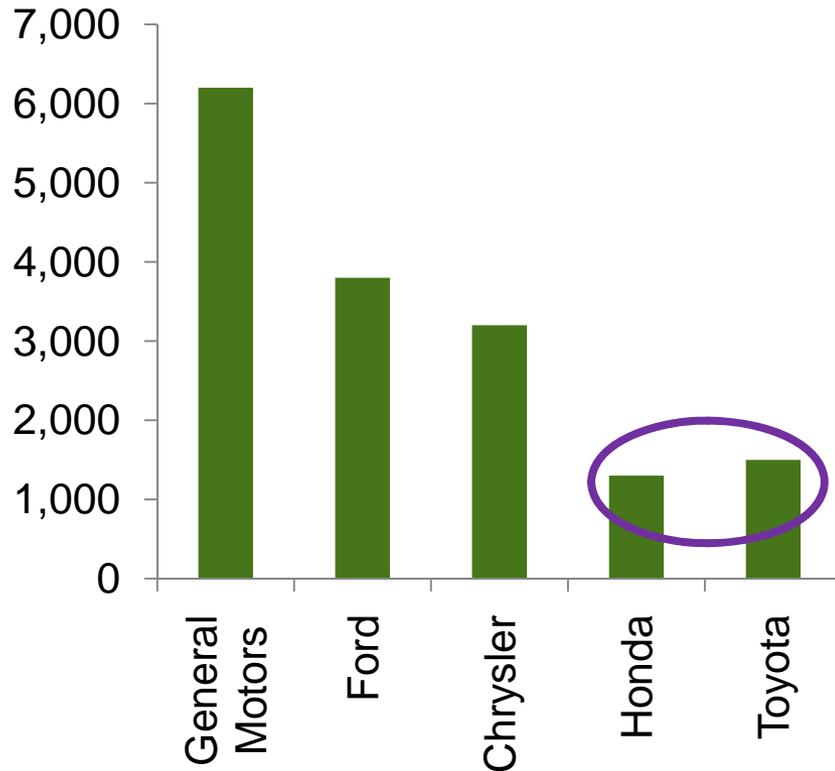
- Market Share for Detroit 3: 86% in 1985, 64% in '00, 50% in '08, 40% by '15
- Rise of Asian OEM quality and design, coupled with poor American OEM product planning, created huge shifts in consumer preferences

Source: CSM Worldwide

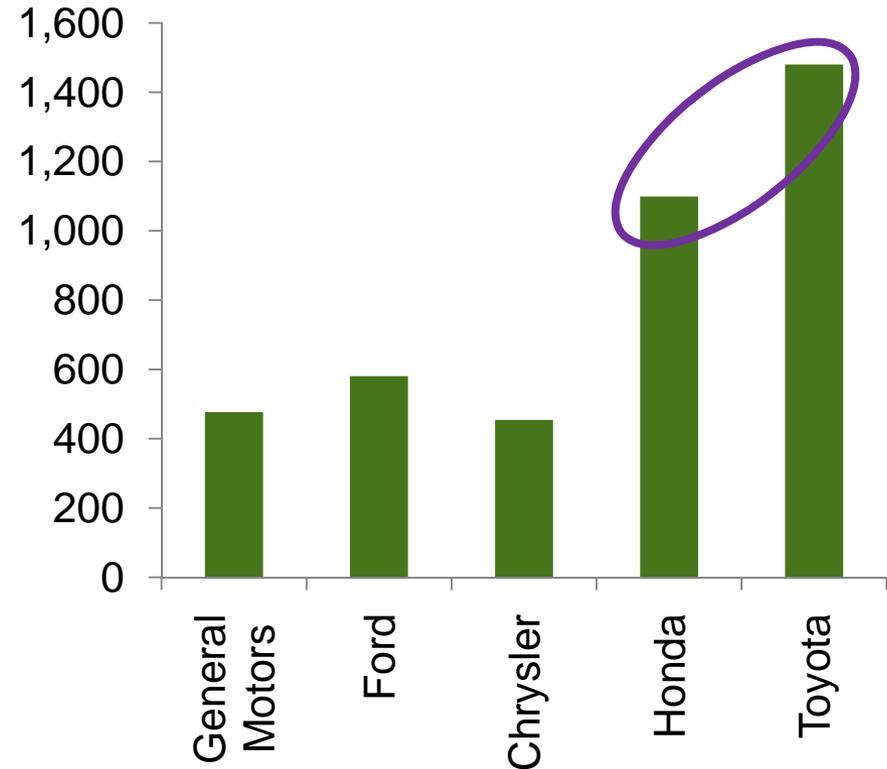
US Autos: Retailing Differences Prior Bailout



Number of Dealers



Sales Per Dealership

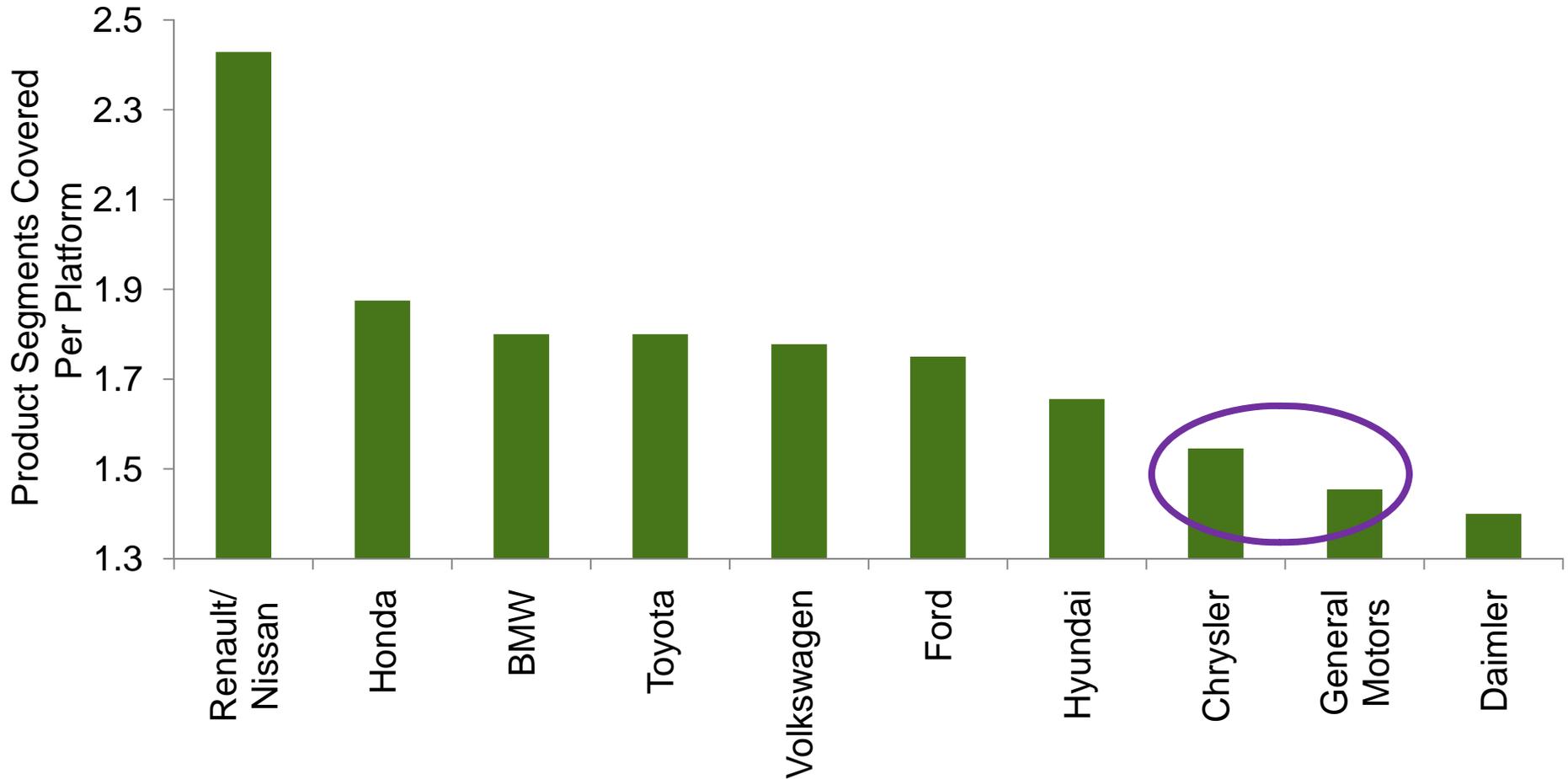


- Detroit 3 distribution network too large – not sized correctly for market share realities
- Smaller network for Honda/Toyota means stronger margins, better looking stores and lower marketing costs

Source: NADA



US Autos: Economies of Scale Differences



- Provides huge cost savings for supplied components, design engineers, plant flexibility
- Globally, scale even more important – Chrysler North America only

Source: CSM Worldwide

US Autos: Industry Consolidation Was Needed

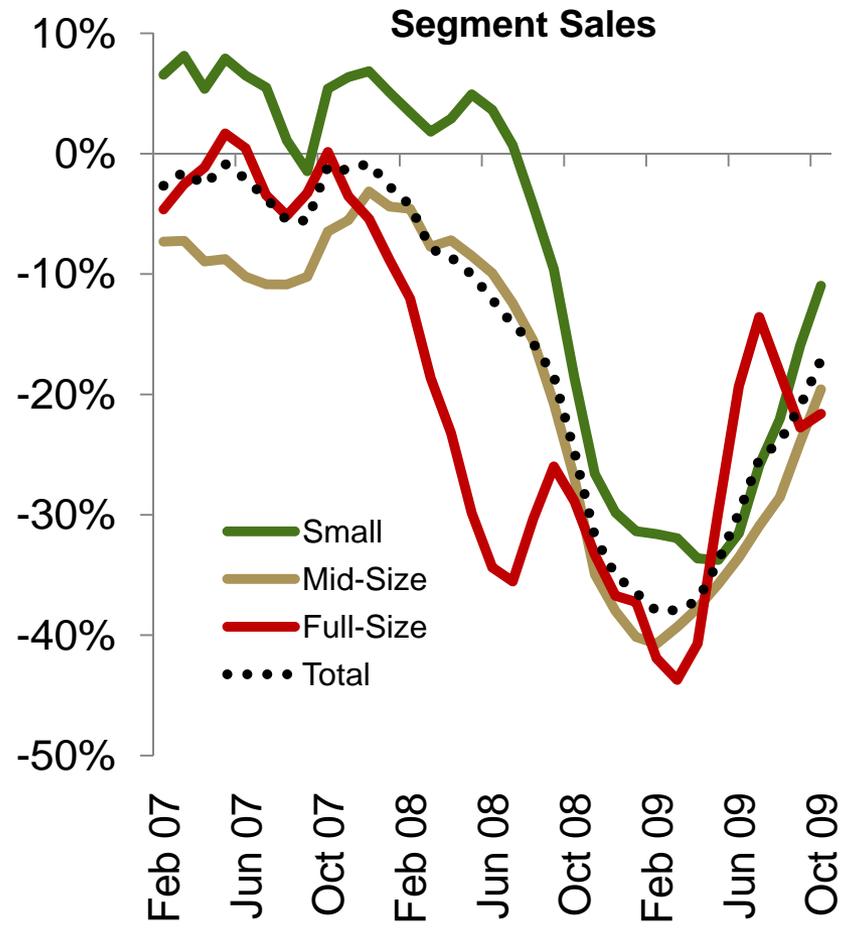
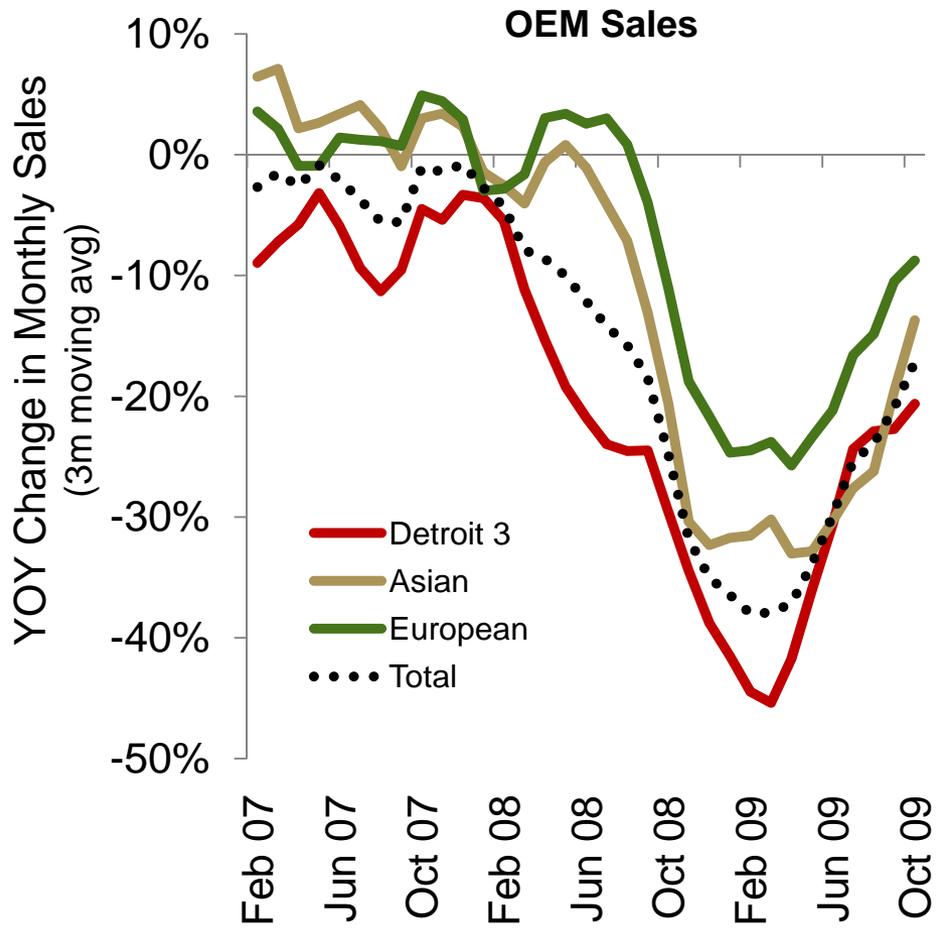


- **Too many brands/products**
 - 326 nameplates for sale in 2008 from 36 different brands
 - GM alone had 8 different brands, many selling the same vehicle with only slight variations
- **Too many suppliers**
 - Detroit 3 squeezed supplier margins for years – no cushion remains
- **Too many dealers**
 - Consumers price shopping among brand dealers - forcing dealers to compete with each other, not competitors
- **Too much capacity and output**
 - In early 2000s, high fixed labor costs forced over production – incentives used to move metal
 - New labor contracts allow Detroit 3 to focus on profits, not market share

Source: CSM Worldwide



US Autos: Sales During Recession



- Detroit 3 hit harder in recession – sales bottomed in the midst of bankruptcy/bailout talks
- Small car sales remained strong until Crude Oil bubble burst



US Autos: Car/Light Truck Monthly SAAR

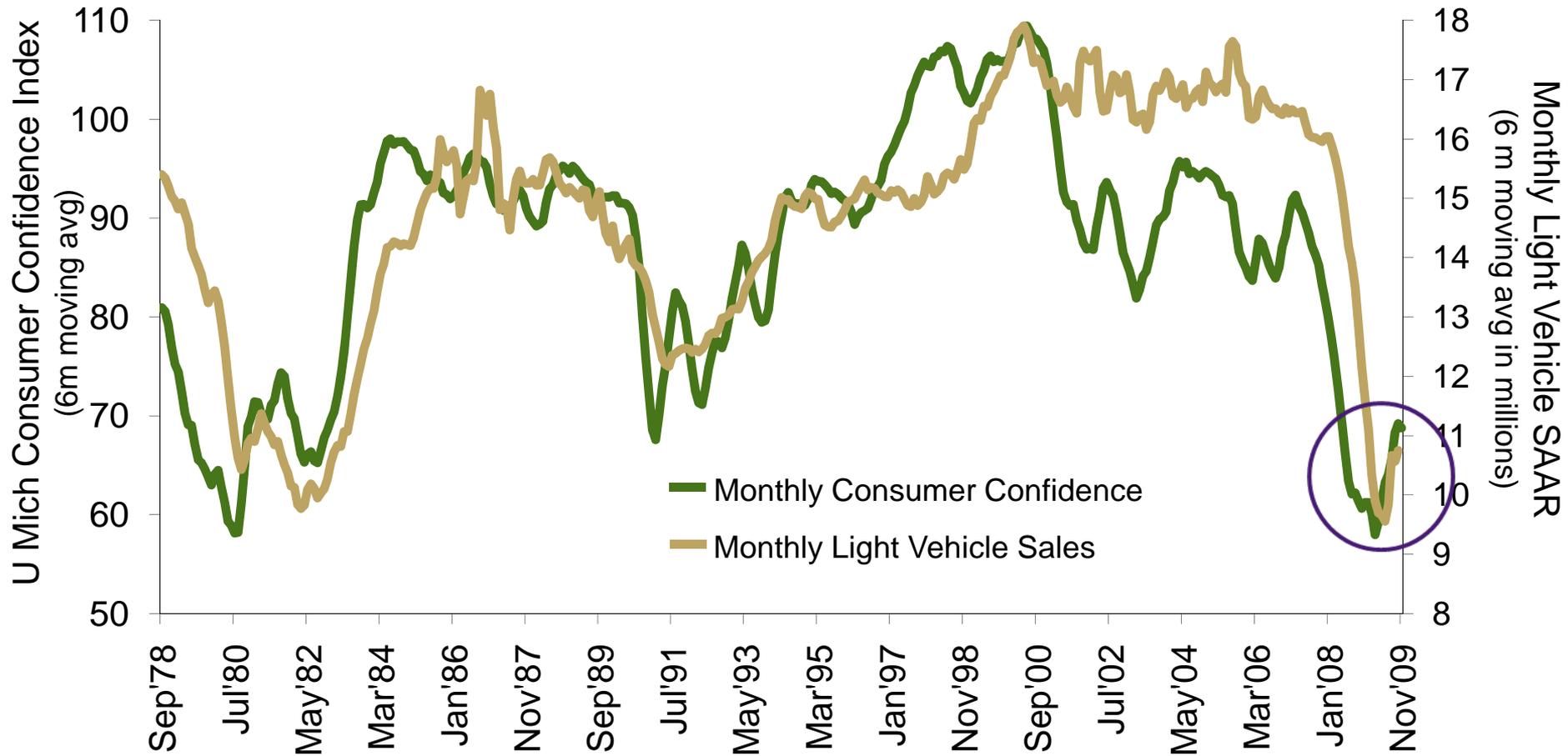


- Cash for Clunkers caused large spike, but only temporary
- Forecast sees improvement: 13.2 million in 2008, 10.1 in 2009, 11.8 in 2010

Source: CSM Worldwide



US Autos: Consumer Confidence and Sales

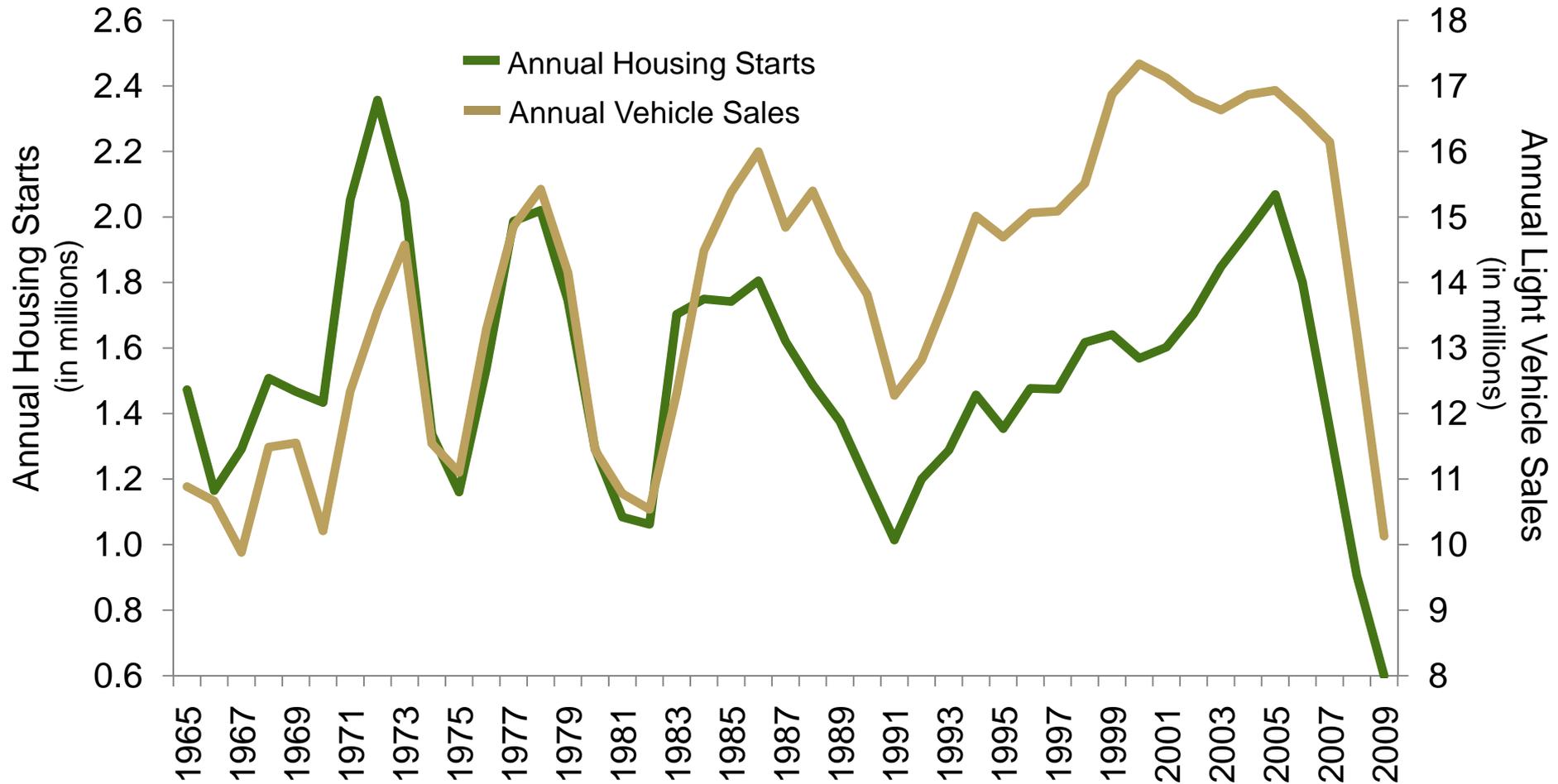


- Turnaround in vehicle sales not likely until consumers regain optimism
- Recent trend in confidence an indicator auto sales have bottomed

Sources: University of Michigan Consumer Confidence Index/CSM Worldwide



US Autos: Housing Starts and Sales

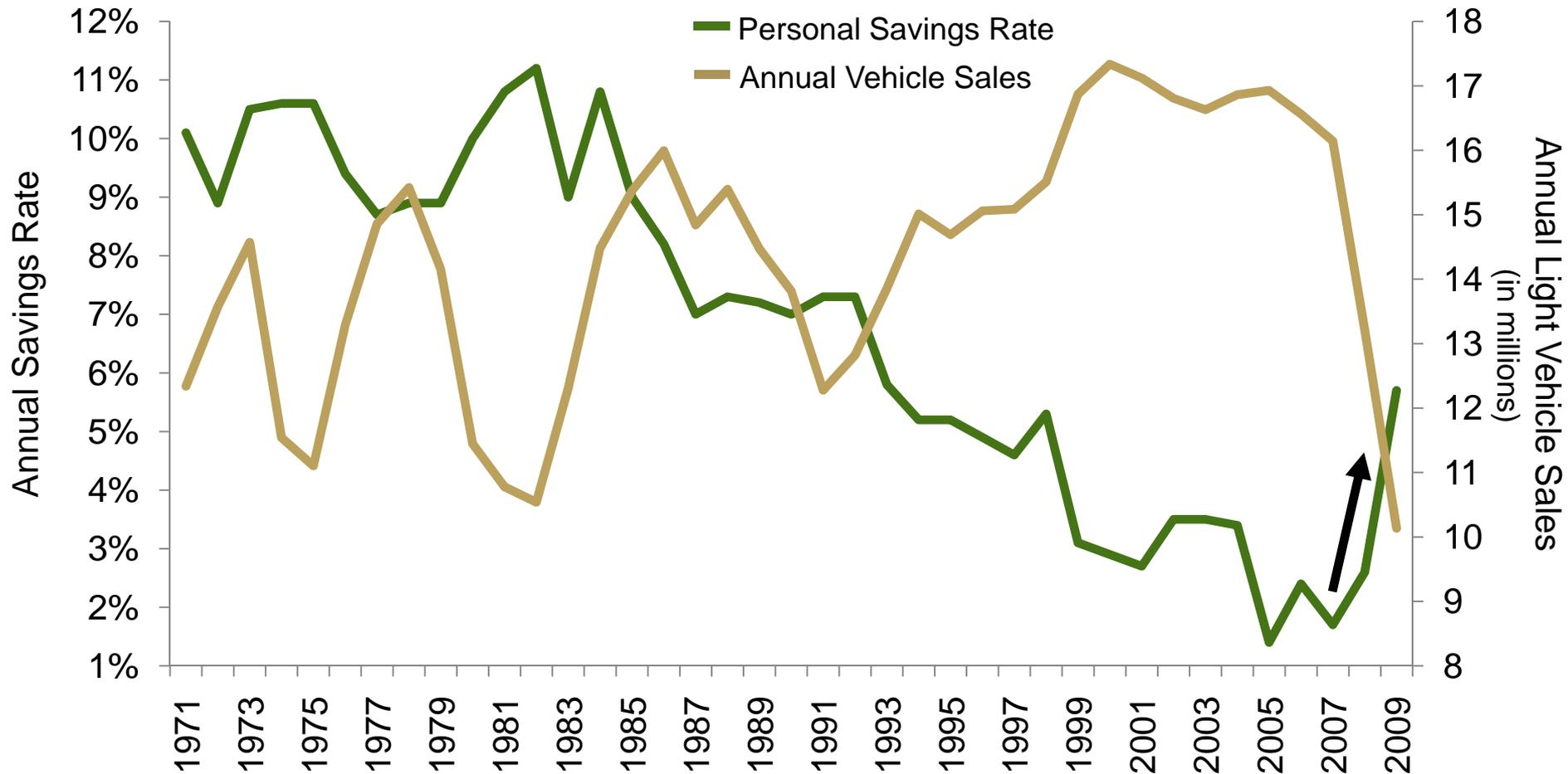


- Strong relationship between housing starts and auto sales
- Vehicle sales will closely follow housing sector out of recession

Sources: US Census Housing Statistics, CSM Worldwide



US: Personal Savings Rate and Sales

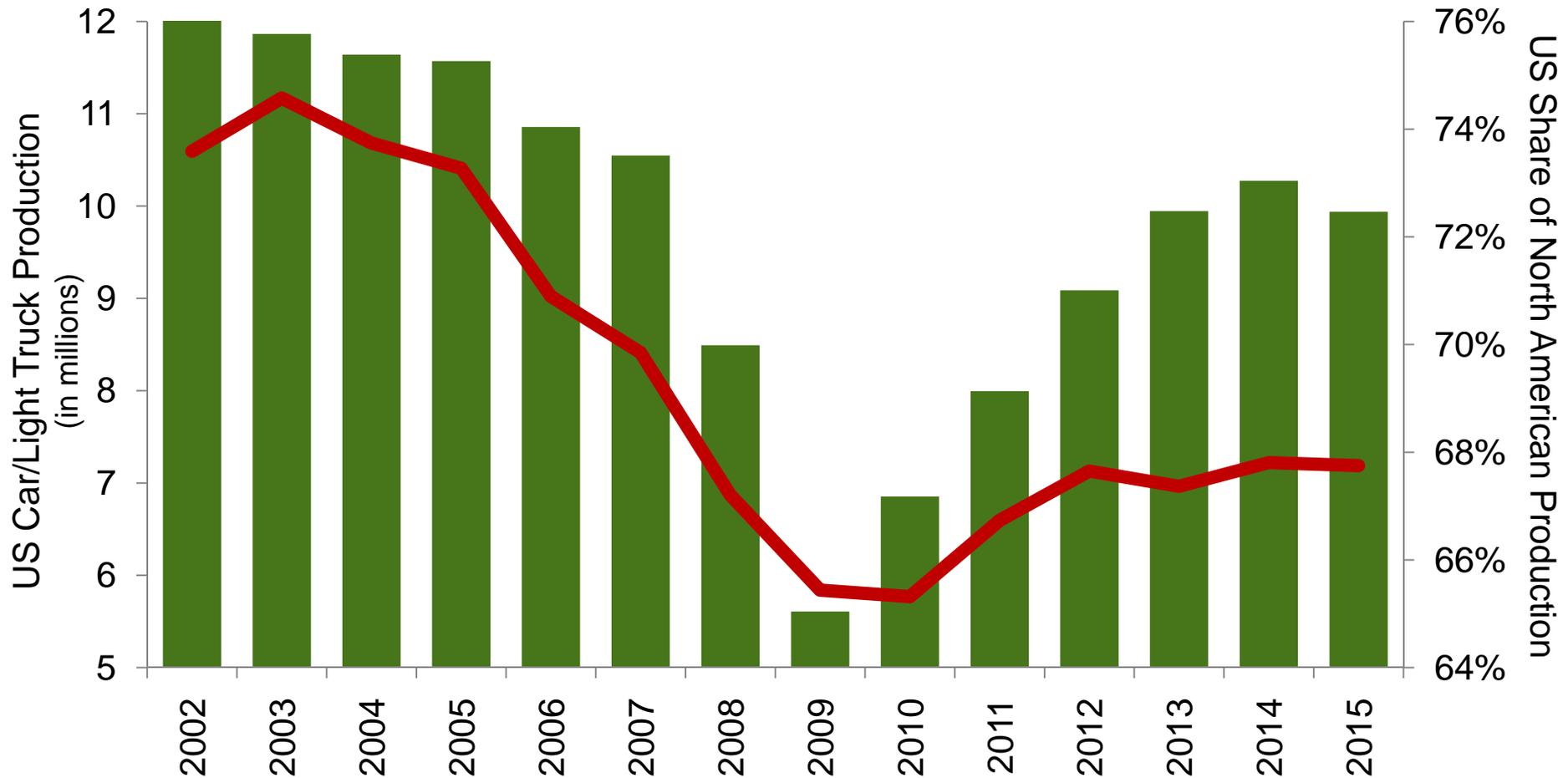


- Strong relationship between consumer savings rates and vehicle sales
- After collapse, consumers saving more – is this temporary or permanent?

Source: Bureau of Economic Analysis, CSM Worldwide



US Autos: Vehicle Assembly Changing

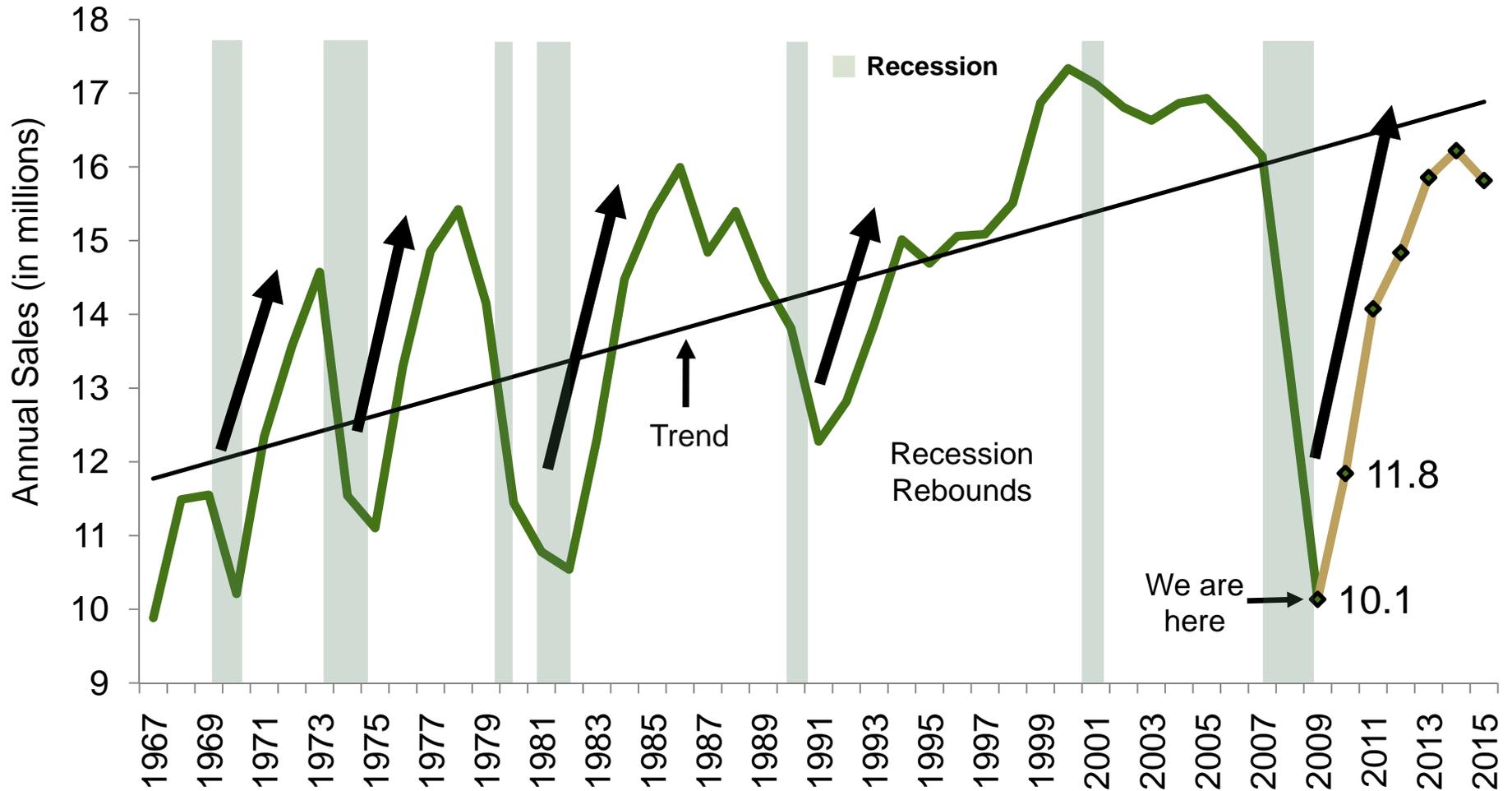


- US production falls below 6 million units in 2009, but rebounds in coming years
- US share of North American production doesn't rebound to previous levels

Source: CSM Worldwide



US: Today's Recession, Tomorrow's Opportunities



- Sales cycle: recessions create pent-up demand, leads to large rebounds
- Post recession, profitability returns: leaner industry will mean stronger margins

Source: CSM Worldwide



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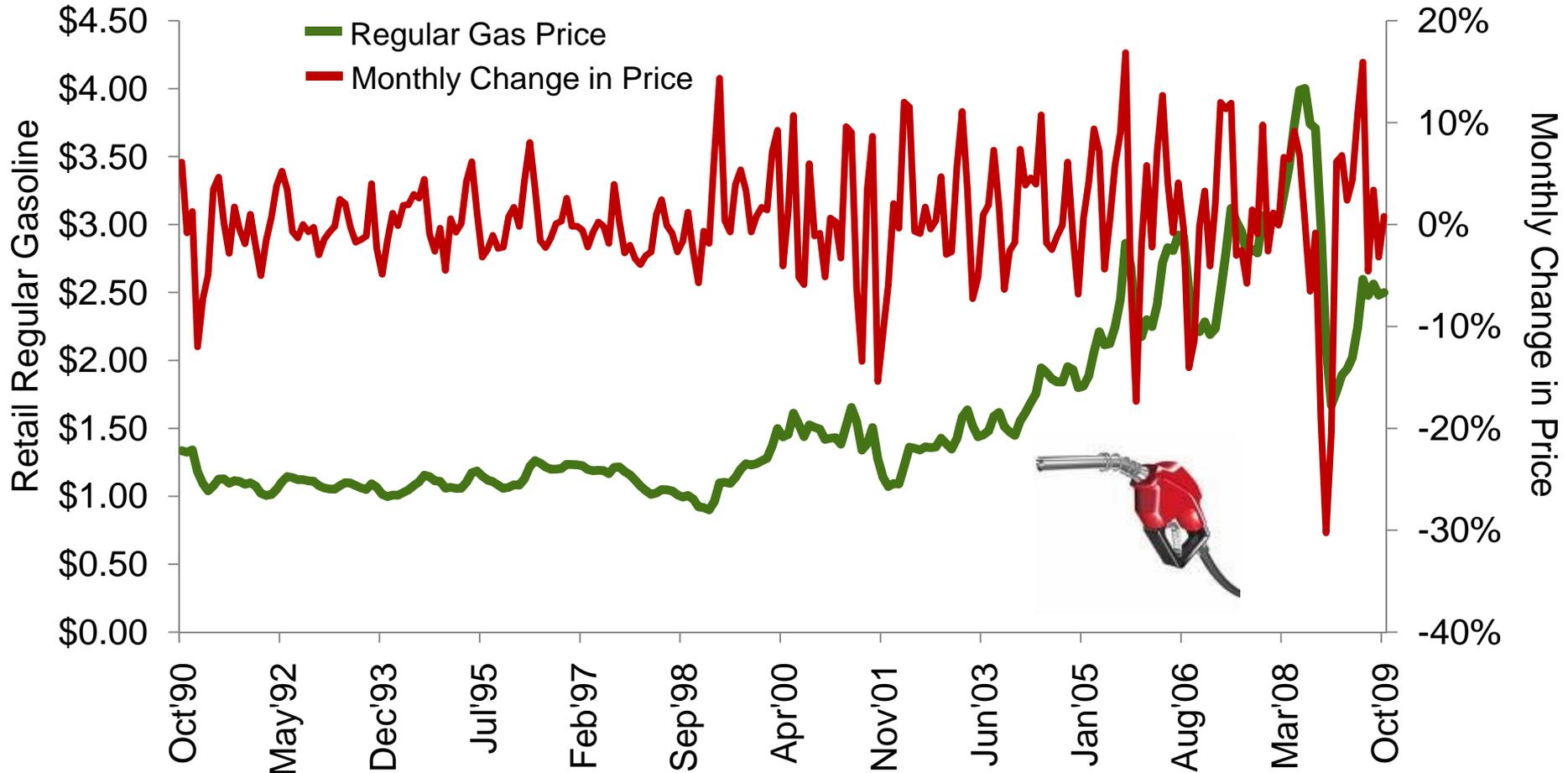
World: Developing Countries' Vehicle Demand

- China – Per Capita GDP up over 400% by 2030 to \$10,000
 - Similar wealth countries' vehicles in use: 250 per 1,000 people
 - Potential forecast: 300-350 million additional vehicles needed in next 20 years
 - Annual auto sales may continuously exceed US sales within next few years
- India – Per Capita GDP up over 205% by 2030 to \$2,500
 - Similar wealth countries VIU: 150 per 1,000 people
 - Potential forecast: 100-150 million vehicles needed over next twenty years
- **Possibly 400 – 500 million new vehicles needed in next 20 years in just these two counties**
- **US will need at least 60 million more vehicles by 2030**



Source: Assumes recent GDP growth rates and UN VIU statistics

US: Gas Prices and Volatility for Consumers

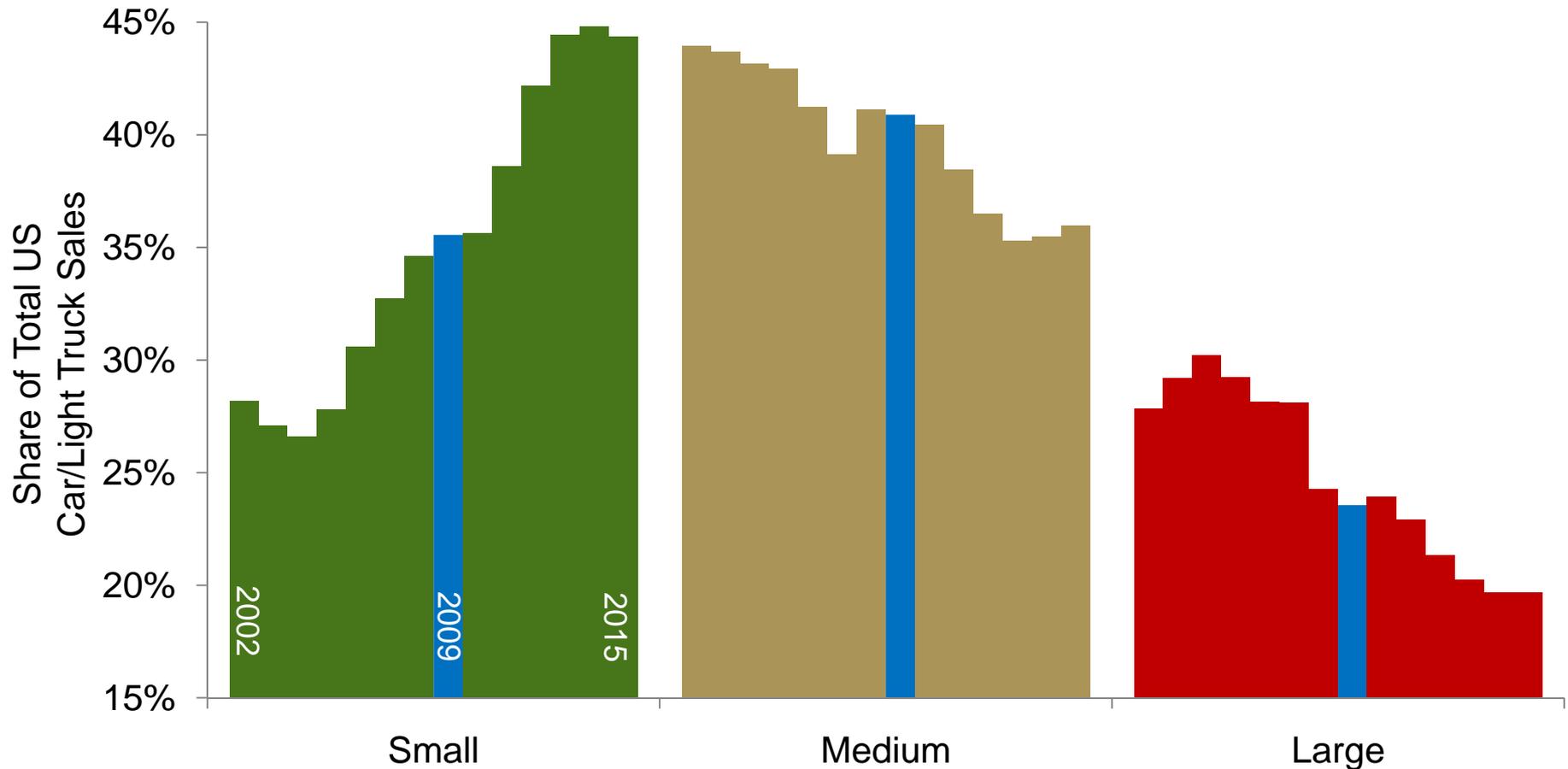


- Gas prices and volatility both increasing dramatically
- In 1990s, monthly change in prices averaged 2.3%; in 2000s - 5.7%, up 150%

Source: EIA Monthly US Retail Gasoline Price



US: Shift to Smaller Sized Vehicles Continues



- Demand - increases in gasoline prices and volatility accelerating consumer trends
- Supply - new EPA regulations will force manufactures to sell more small cars

Source: CSM Worldwide

US: Green Technology - All The Rage



Technology	Cost	Payback Years @ Fuel Price of:		
		\$2	\$3	\$4
Downsizing via DI Gas & Turbo with Stop/Start Micro Hybrid	MPG up 11% \$1,000	8.1	5.4	4.0
Parallel Hybrid	MPG up 25% \$3,000	12.3	8.2	6.1
EV With Range Extender Hybrid	40mi + 50 MPG \$10,000	10.6	6.4	4.6
Pure Electric Vehicle	\$0.34/mile \$20,000	27.0	14.7	10.1

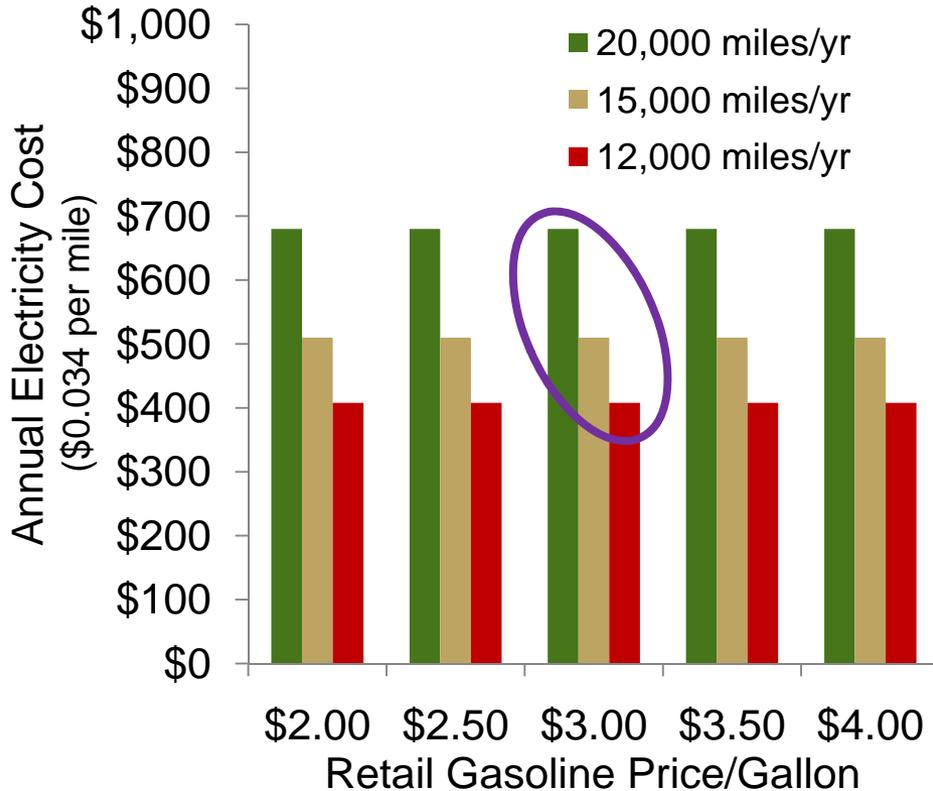
- With current gasoline prices, length of payback period for a significant consumer's technology investment is too long
- Auto manufacturers planning for fuel efficient vehicles, but ROI doesn't make sense

Assumptions: 15k miles/year, 24 mpg vehicle
Sources: CSM Worldwide, CALCARS.com



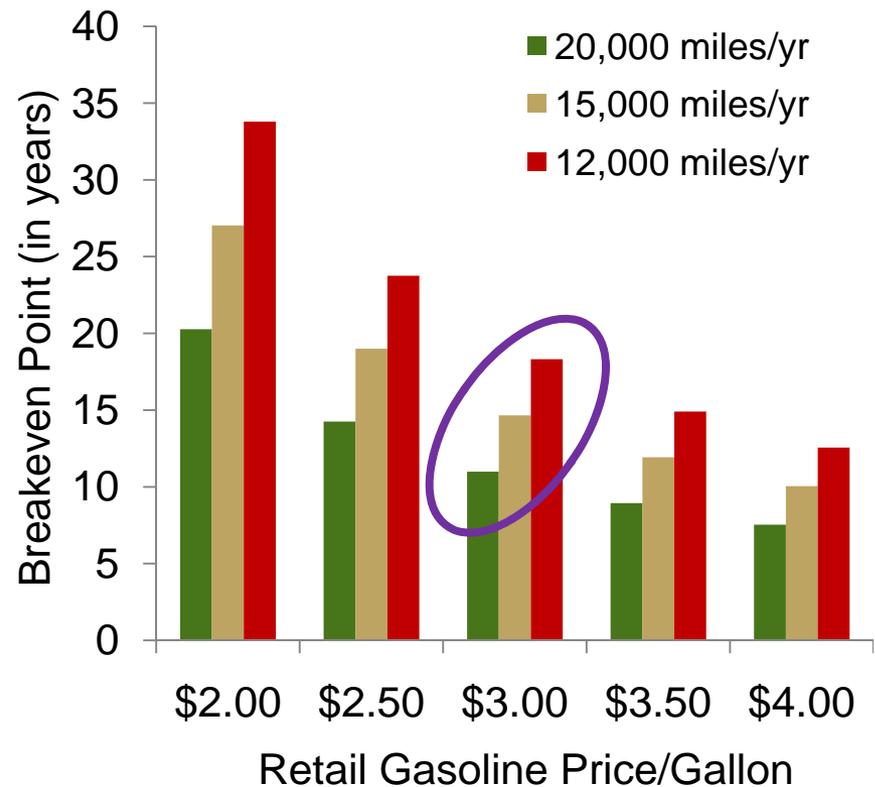
US: Electric Cars: Future Or Fiction?

Low Operating Costs



BUT...

Poor Consumer ROI



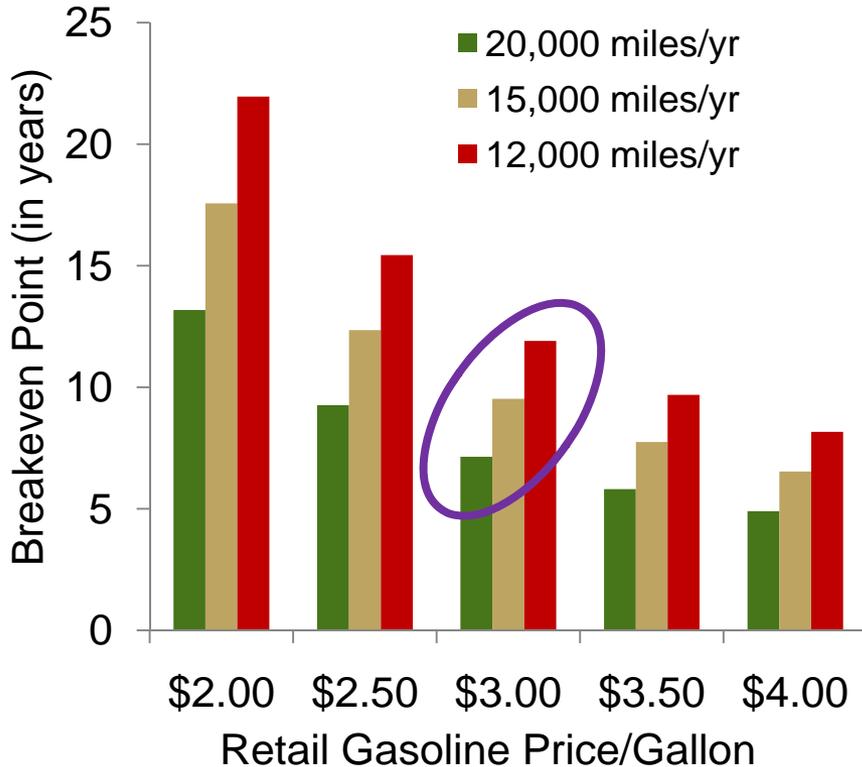
- Consumer/Manufacturers have a huge technology investment = \$20,000
- Operating costs low, but still not a rational choice for consumers to purchase electric

Sources: CSM Worldwide, CALCARS.com

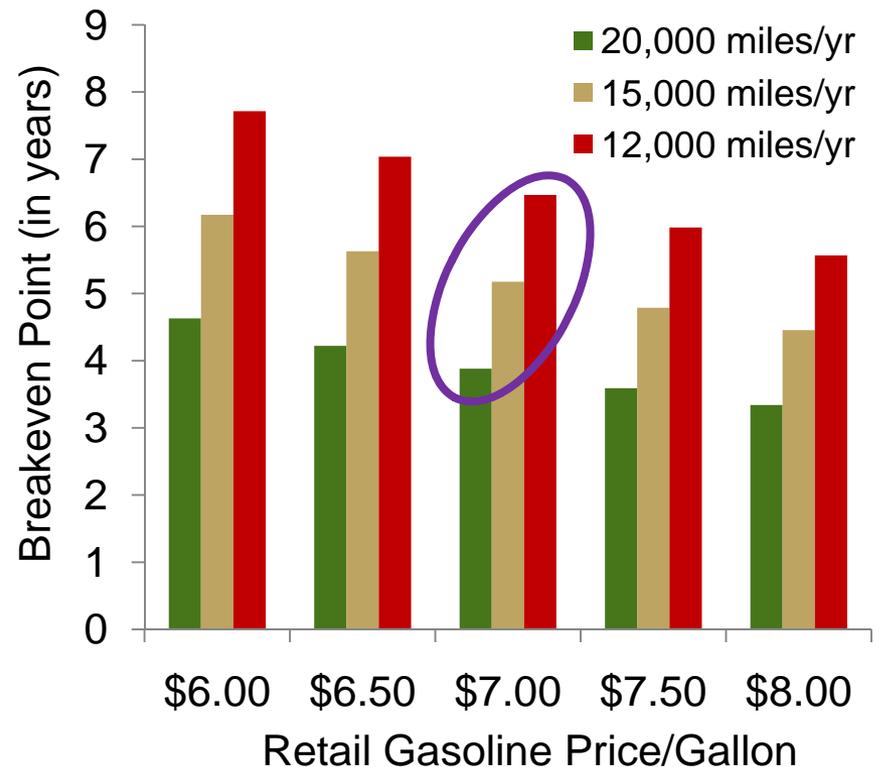


US: Impacting Rational Consumers' Choice

\$7,000 Gov't Subsidy



European/Japanese Gas Prices



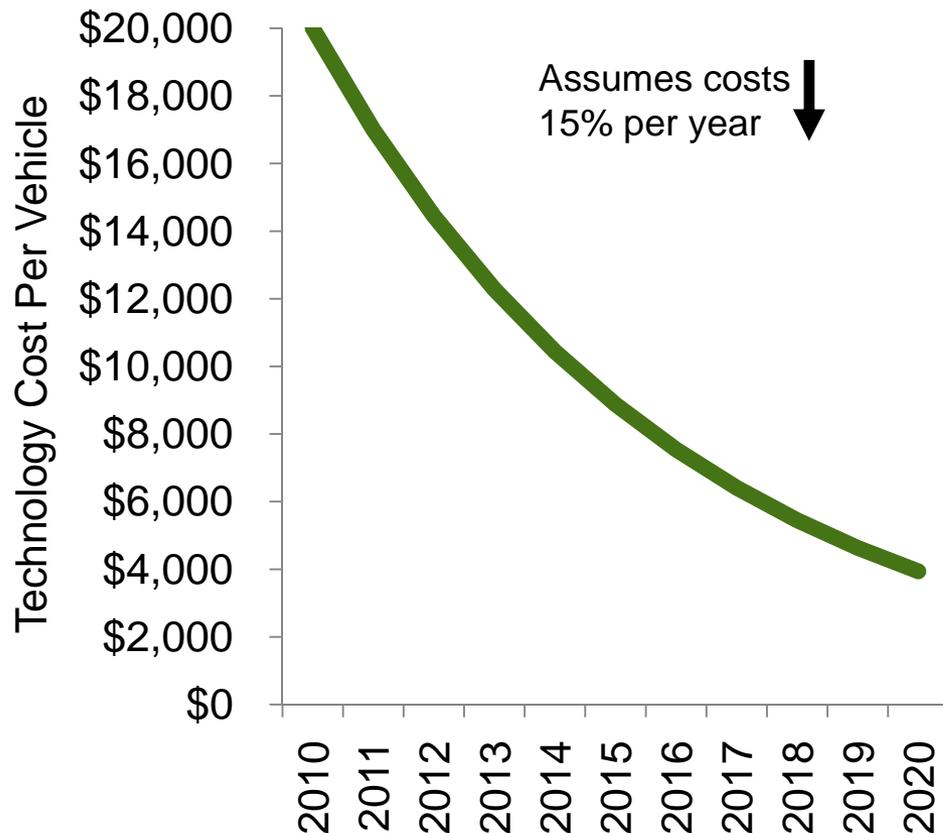
- Subsidy: With \$7,000 and \$3 gas, breakeven point for typical driver is 9 years
- Gas Tax: Higher taxes (Europe/Japan levels) significantly impact the consumers' ROI, but payback still takes too long, and is it politically viable?

Source: CSM Worldwide

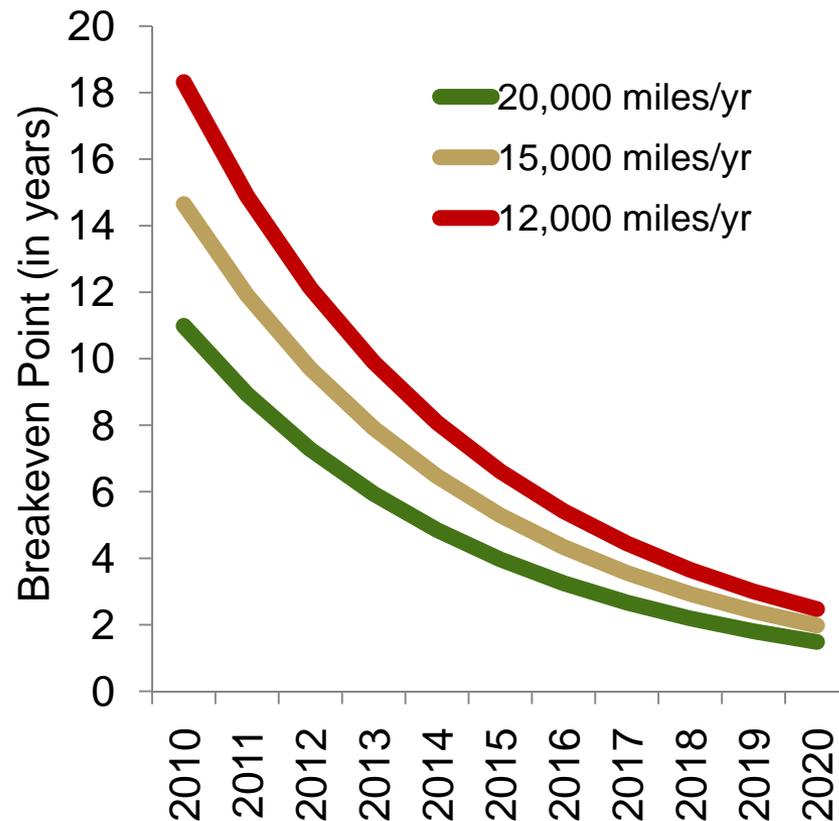
US: Viability - Innovation & Fuel Policy Needed



Manufacturer Investment



Consumer ROI



- By 2020, high mileage users breakeven in 18 months low mileage users in 30 months
- Technology cost must fall, and gas prices rise, for mass production/sales of electric cars to succeed – but neither is known today and OEMs must invest now

Sources: CSM Worldwide, Dept of Transportation NHTSA Study



Summary

- Economic recovery has begun, but strong auto sales not expected until late 2010
- Auto production will rebound, but US manufacturing will not return to previous levels
- Strong sales and profitability will return to the US auto industry by 2011 – the key question is who survives to enjoy it
- Electric cars make sense for many reasons, but consumer economics is not one of them – significant energy policy coordination is needed, and soon