Automotive Outlook: When Do Better Times Return

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2010 Economic Outlook Conference

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Automotive Outlook:

What The @$#$%^&! Happened?

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

Will Better Times Ever Ever Return?
Presentation Outline

- Review of Current Economic Indicators
- Automotive Economics
- The Next Big Issue
- Summary
Life As An Automotive Economist In 2009

**COMPANY ECONOMIST**

IN 2010 THE ECONOMY WILL COLLAPSE AND THE WORLD WILL PLUNGE INTO DARKNESS.

**YOU WILL ALL BE EATEN BY CANNIBALS WHO WILL, IN TURN, DIE FROM THE DISEASES THAT RIDDLE YOUR BODIES.**

**PLEASE NEVER TALK AGAIN.**

**I GET THAT A LOT LATELY.**
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
- 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
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

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2009 © CSM Worldwide
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

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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
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

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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
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
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

Source: CSM Worldwide

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Cash for Clunkers caused large spike, but only temporary.

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
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

<table>
<thead>
<tr>
<th>Technology</th>
<th>Cost</th>
<th>Payback Years @ Fuel Price of:</th>
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<tr>
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<td>Downsizing via DI Gas &amp; Turbo with Stop/Start</td>
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<td>Micro Hybrid</td>
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- 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
Low Operating Costs

- 20,000 miles/yr
- 15,000 miles/yr
- 12,000 miles/yr

BUT...

Poor Consumer ROI

- 20,000 miles/yr
- 15,000 miles/yr
- 12,000 miles/yr

- 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

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
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