Global economy – a two-speed recovery

Real GDP Growth: Emerging Markets growing faster than Mature Markets

- India
- Brazil
- S. Korea
- South Africa
- Russia
- China
- EU 27
- US
- Japan
New vehicle sales – a similar picture

**New Vehicle Sales: Emerging Markets growing faster than Mature Markets**

- Russia
- China
- India
- Indonesia
- South Korea
- Brazil
- South Africa
- Japan
- United States
- W. Europe

US motor vehicle output and sales

- **Real Motor Vehicle Output (SAAR, Mil.Ch.2005$)**
- **Total Vehicle Sales (SAAR, Mil.Units)**

Sources: Bureau of Economic Analysis /Haver Analytics
Auto spending – remain at record low

Spending on New Vehicle as % PCE

Source: Haver Analytics

Key drivers of auto sales

Vehicle Sales and Employment

Employment Change

Vehicle Sales and Gas Prices

Vehicle Sales and Housing Starts

Vehicle Sales and Consumer Credit

Credit (Bil. $)
Employment recovery – still slow

But with hope

Private Employment Recovery from the end of recessions
There are early signs

Average Weekly Hours

NFIB: Percent Planning to Increase Employment
Net (SA, %)

Housing – still depressed

Housing Starts and Housing Permits
Credit markets - in the mend

FRB Sr Officers Survey: Banks Willingness to Lend to Consumers

FRB Sr Off Survey: Banks Reporting Stronger Demand for Consumer Loans –

Sources: Federal Reserve Board /Haver Analytics

Overall – we are turning corners

Change in Private Employment

Consumer Sentiment and Business Sentiment

Single-Unit Housing Starts and Home Sales

Flow of Consumer Credit

98 99 00 01 02 03 04 05 06 07 08 09 10

Sources: Federal Reserve Board /Haver Analytics
Auto sales – trend and cycles

![Graph showing U.S. Auto Industry trend](image)

Consumers holding vehicles longer

![Graph showing Vehicle Parc - Actual and Estimated](image)
During difficult economic times

Holding Time and Employment Change

Vehicle age - old

Distribution of Vehicle in Operation as of Q2 2010
However it seems to have peaked now

Average Trade-In Age

Pent-up demand – being built

Source: Federal Highway Administration, Census, GM Scrappage Model
Population growth - steady

Share of licensed drivers - stable
Historically more drivers more vehicles

Auto recovery - key driver of the US recovery

Note: 2010 is based on information as of first three quarters of the year