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VEHICLE SALES OUTLOOK

20th Annual Automotive Outlook Symposium

Federal Reserve Bank of Chicago

C. Jenny Lin

May 31, 2013

BUSINESS ENVIRONMENT OVERVIEW

Global

- **Global economic growth in the 2% – 3% range in 2013**
- **Major central banks undertaking a policy of low interest rates and asset purchases**
- **Japan's government and central bank targeting a weak yen to stimulate the economy**

Americas

- **U.S. economic growth in 2% – 2.5% range this year supported by housing recovery**
- **U.S. fiscal policy drag restraining growth in 2013; housing sector recovery a major offset to budget cuts**
- **Sub-par economic performance in Brazil; elevated risks in Argentina and Venezuela**

Europe

- **Euro Area recession to continue in 2013; some early signs of stabilization are beginning to emerge**
- **Policy actions have contained the crisis, but unemployment remains high**

Asia Pacific Africa

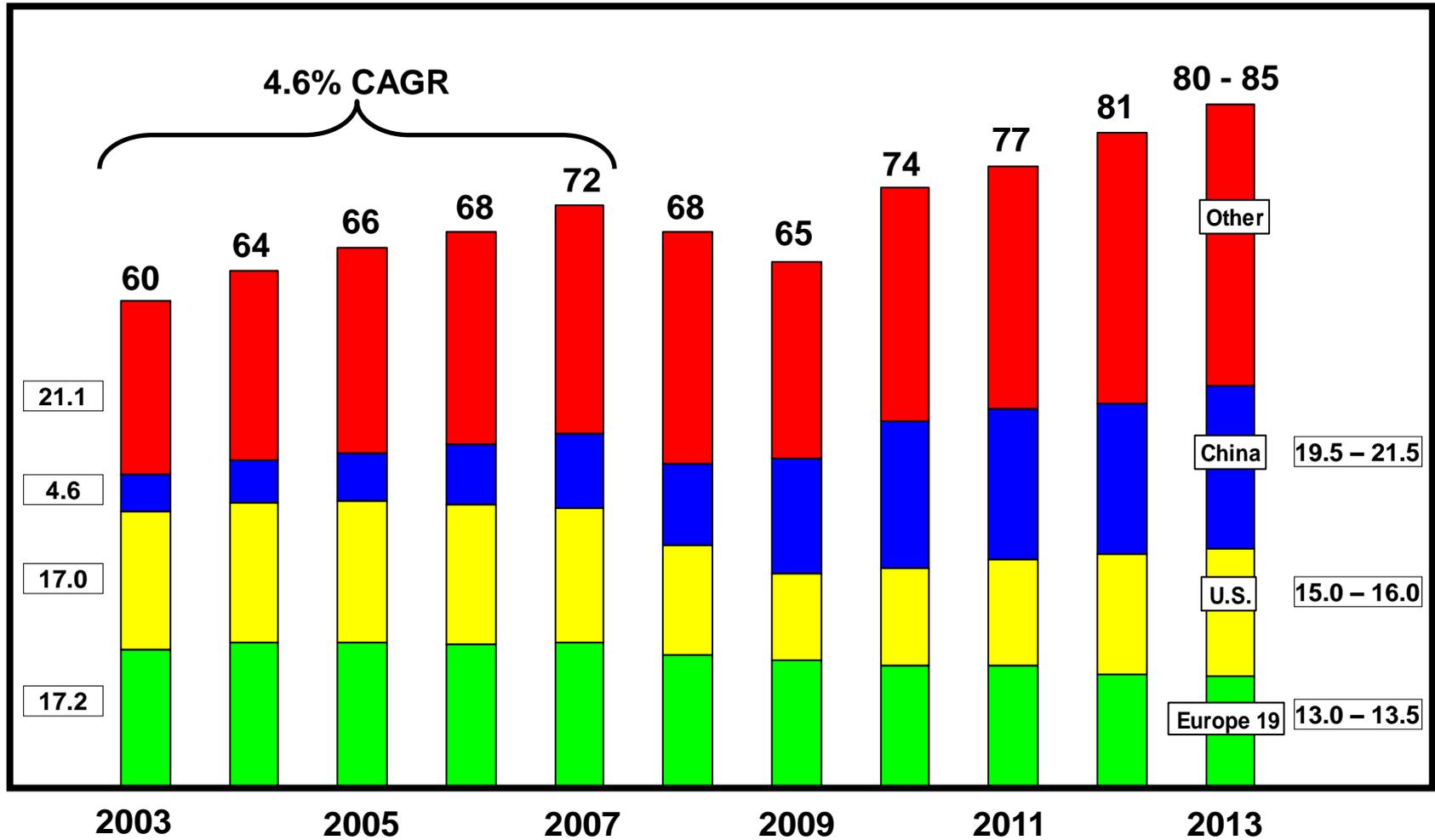
- **Economic recovery in China in the 7.5 – 8% range; India's growth remains significantly below trend**
- **Good potential for growth in ASEAN markets supported by domestic demand**

Global Economic Recovery Hampered By European Downturn

GLOBAL INDUSTRY SALES



Mils. Units



2013 Global Volume Of 80 - 85 Million Units

U.S. SALES FUNDAMENTALS



Near-Term Factors

- **Modest economic growth in 2 – 2.5% range**
- **Slowing manufacturing expansion**
- **Wide swing in consumer sentiment**
- **Favorable credit conditions and improving household balance sheet**
- **Continued improvement in employment and income dynamics**
- **Fuel pricing influences segment choice**
- **Low interest rates**

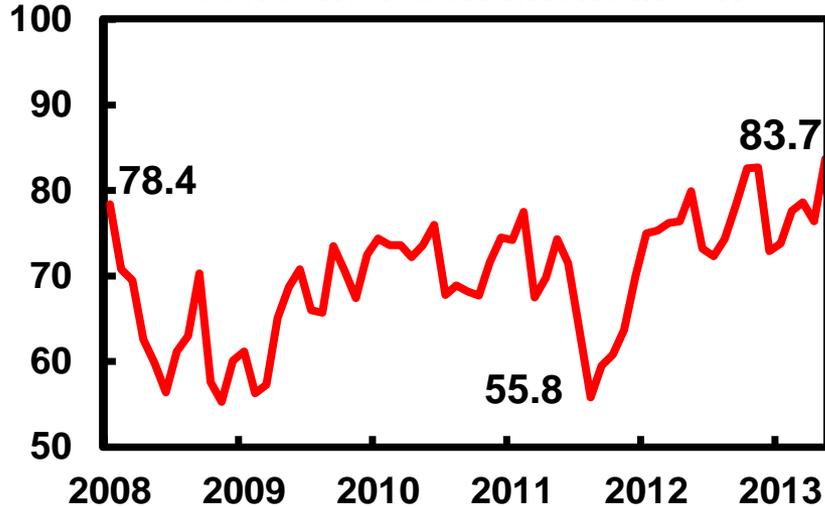
Long-Term Factors

- **Vehicle stock age -- above 11 years**
- **Number of new drivers -- over 2 million in 2011**
- **Household formation by mid-decade**

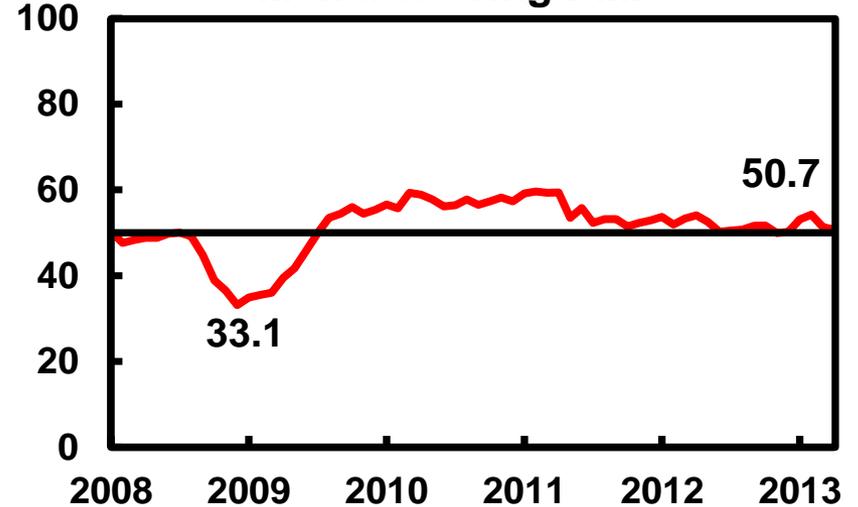
U.S. KEY ECONOMIC INDICATORS



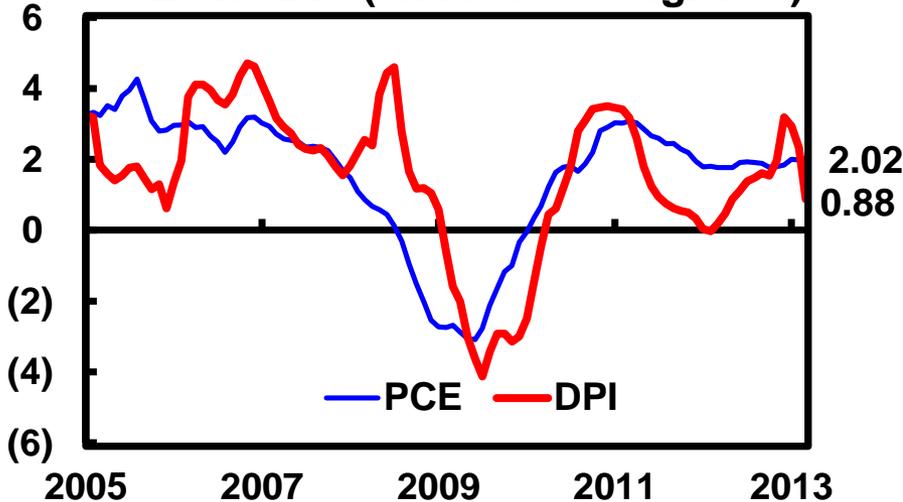
Consumer Sentiment Index



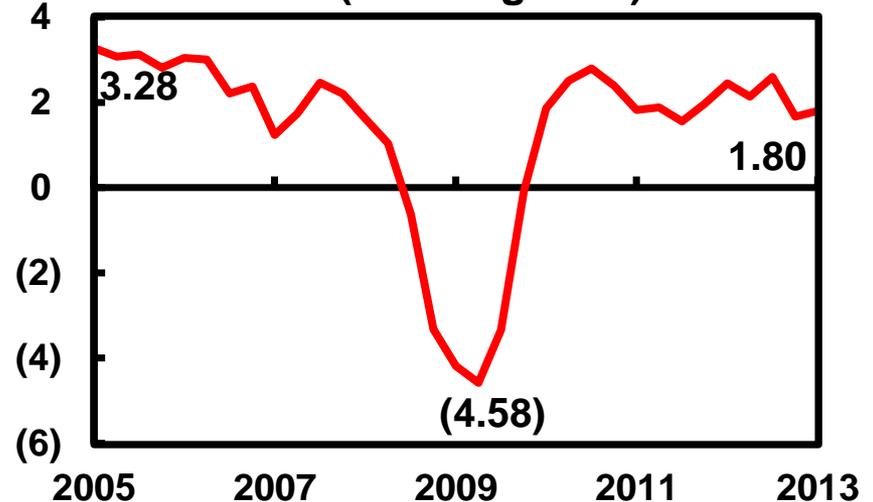
Manufacturing PMI



PCE and DPI (3mma Pct. Chg. YoY)



GDP (Pct. Chg. YoY)

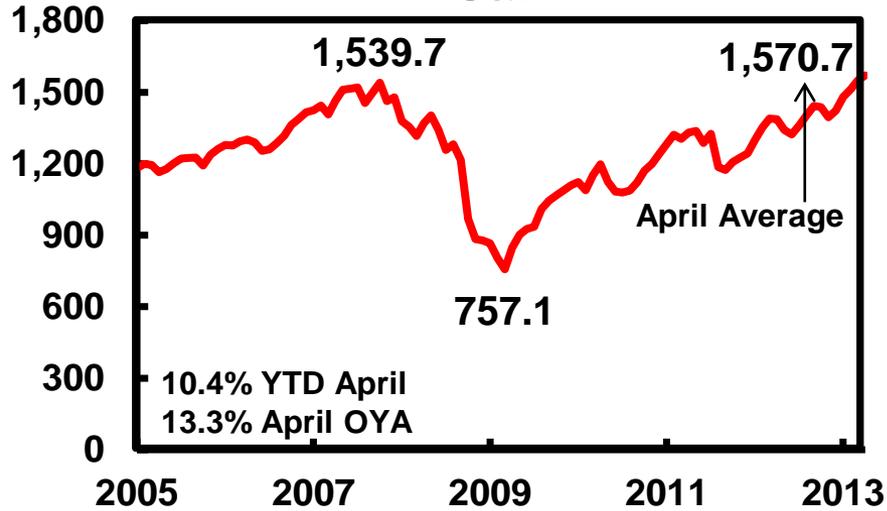


PCE: Personal Consumption Expenditure
 DPI: Disposable Personal Income

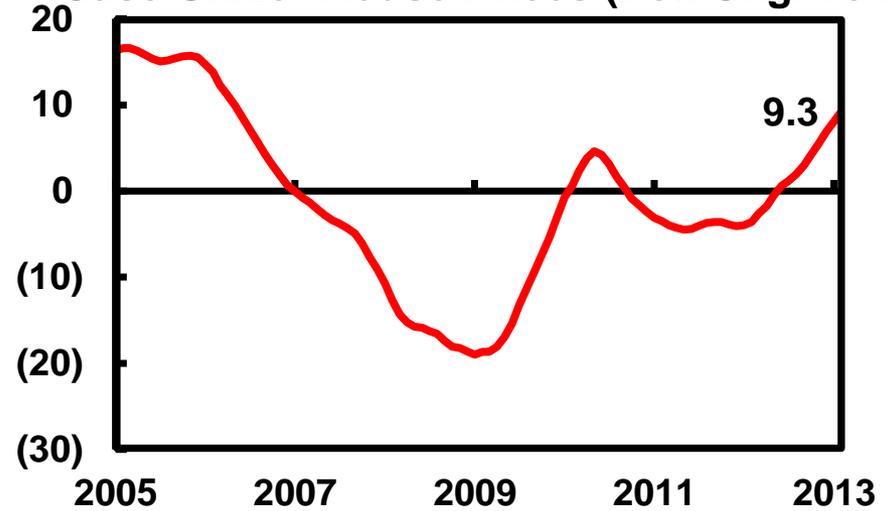
U.S. KEY ECONOMIC INDICATORS



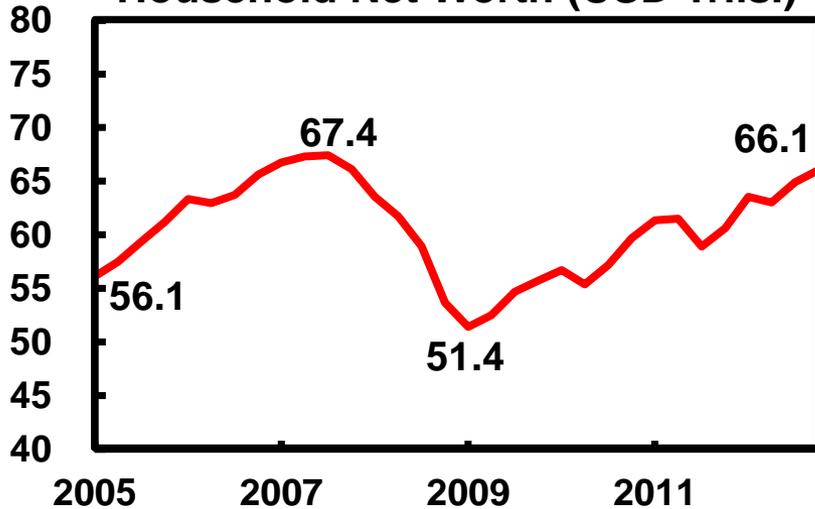
S&P



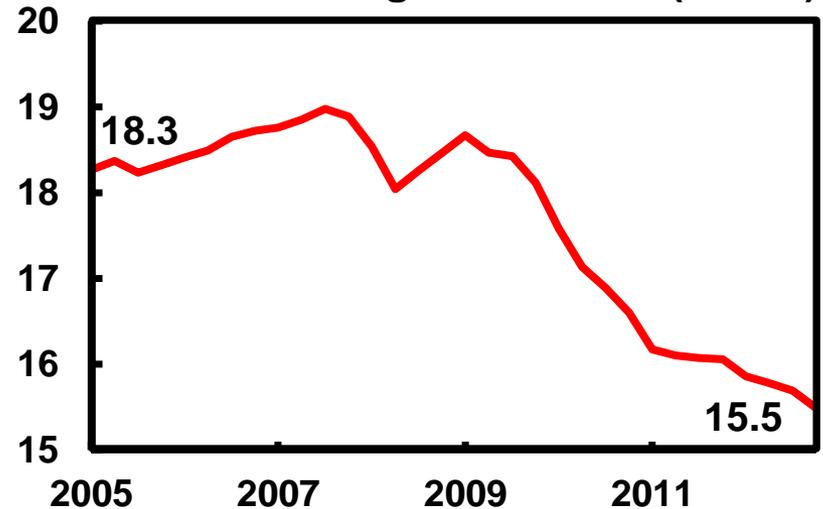
Case-Shiller House Prices (Pct. Chg. YoY)



Household Net Worth (USD Trils.)



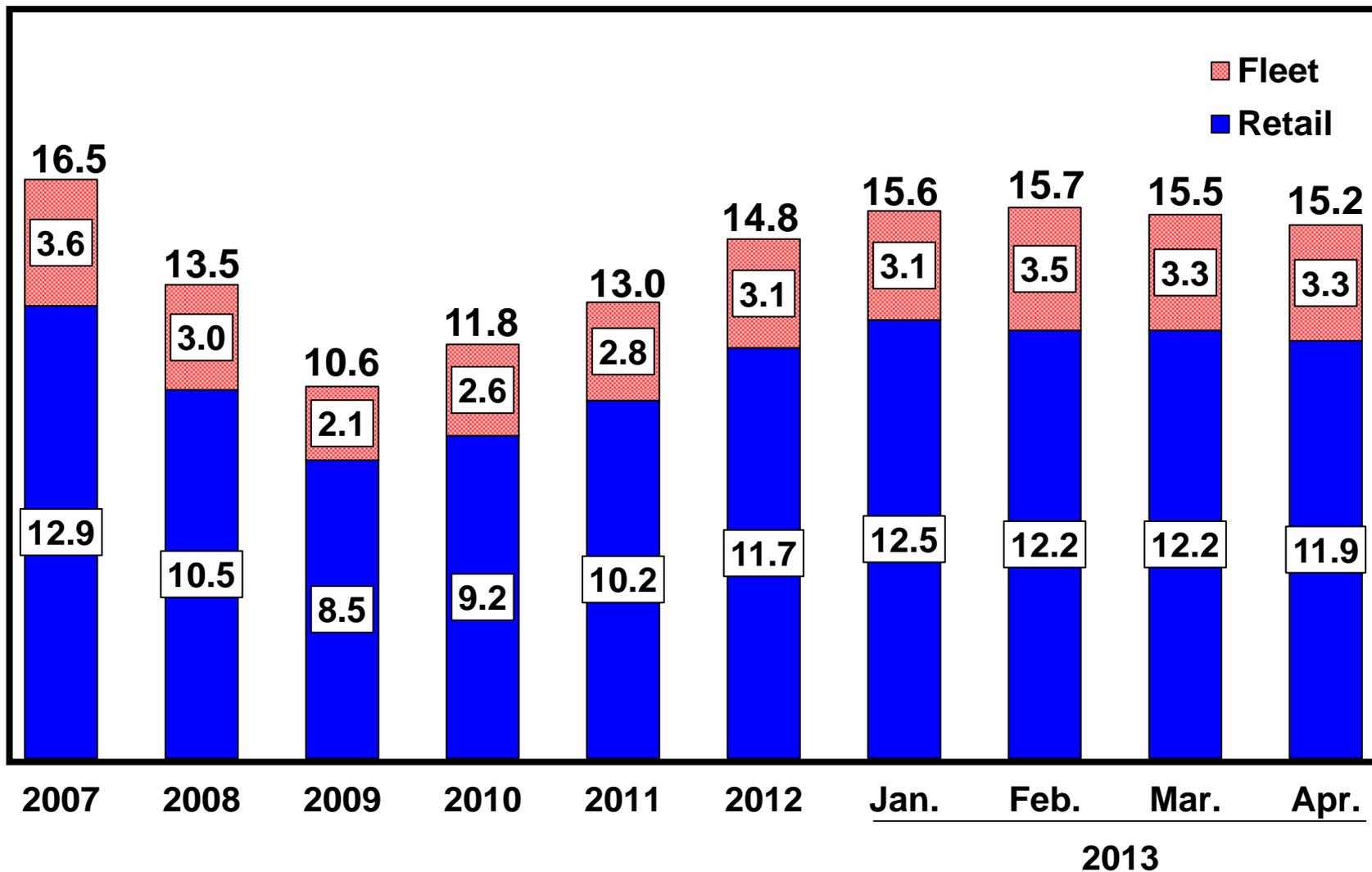
Financial Obligations Ratio (% DPI)



U.S. TOTAL NEW VEHICLE SALES



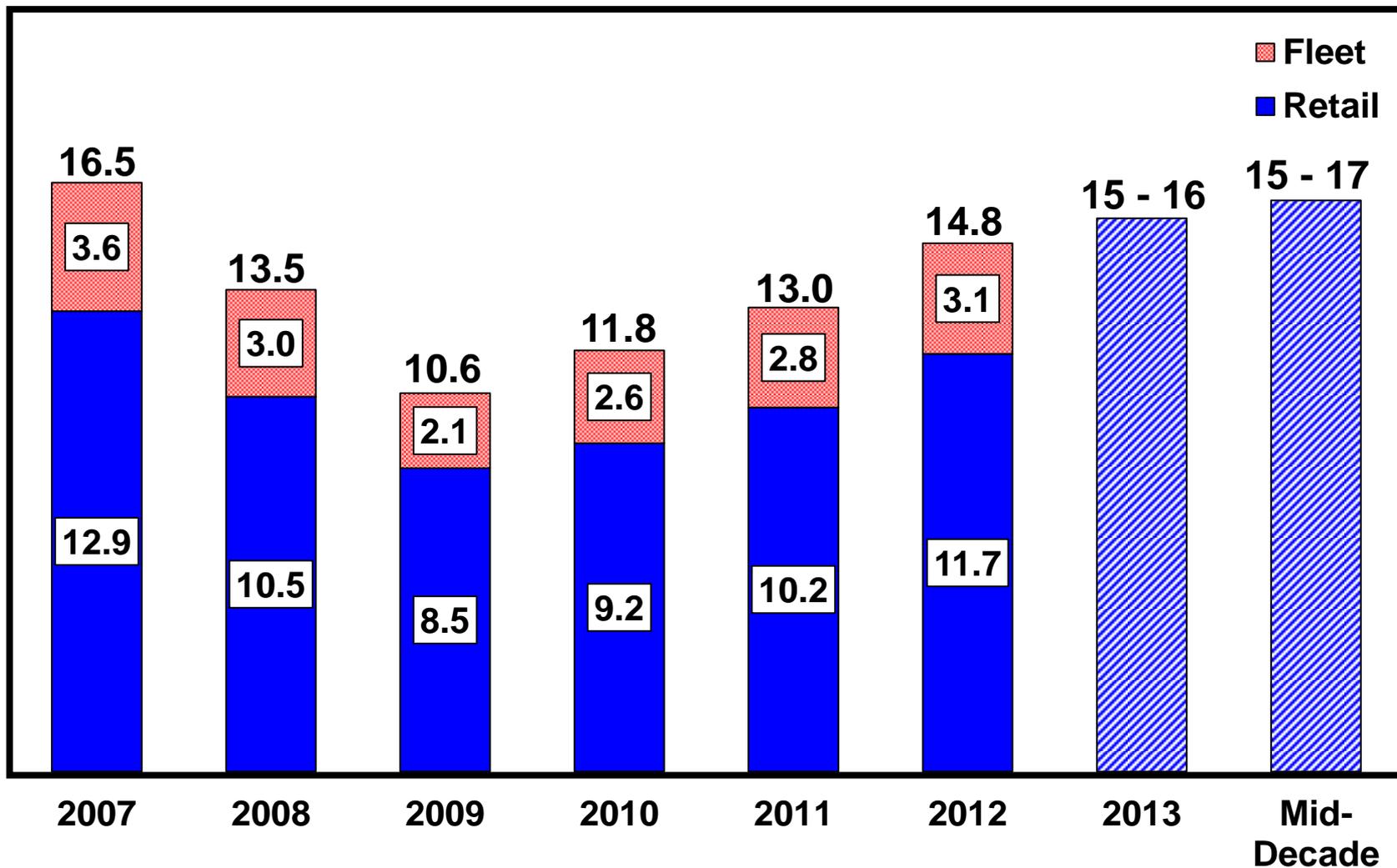
Mils. Units, SAAR



U.S. TOTAL NEW VEHICLE SALES



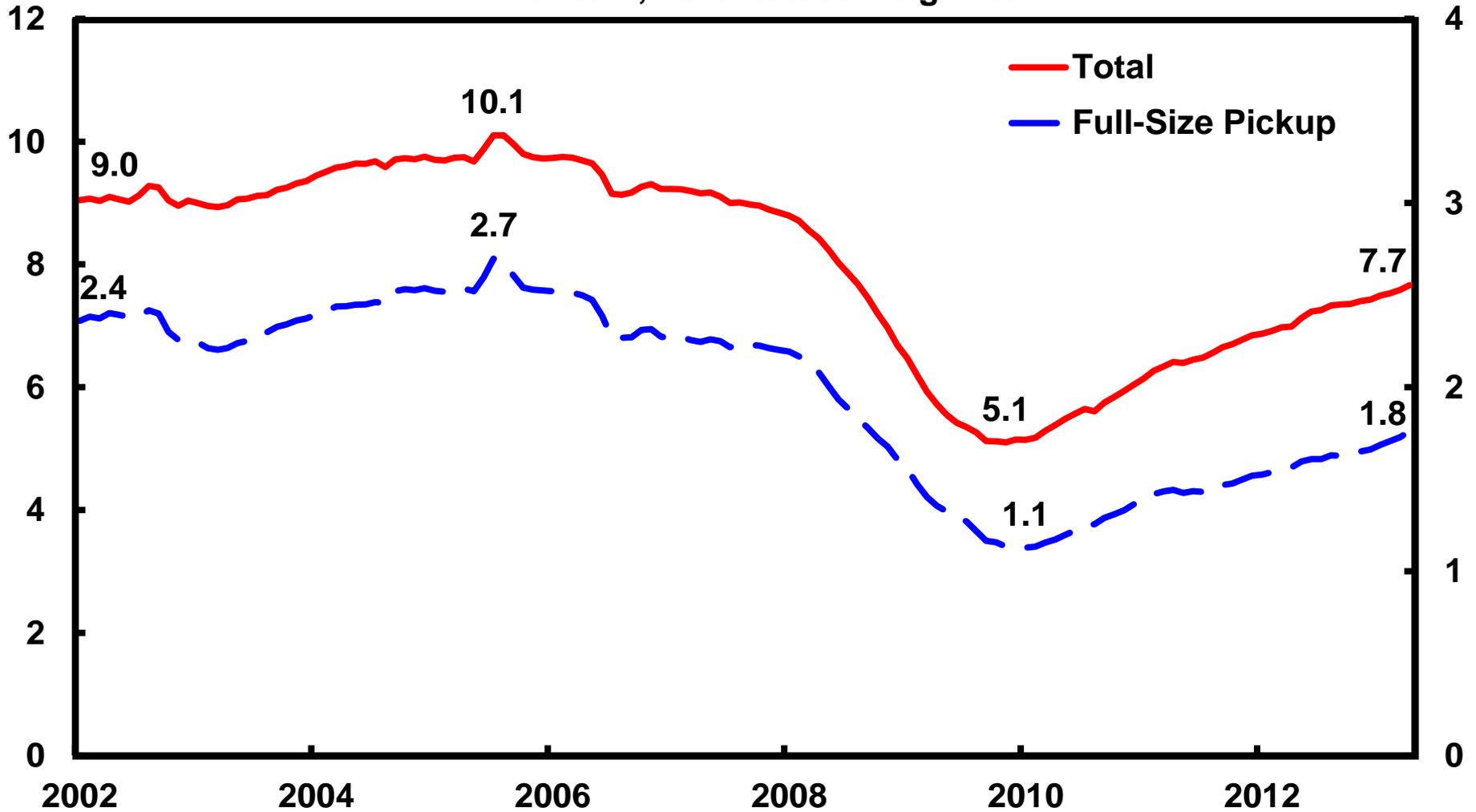
Mils. Units



U.S. MONTHLY TRUCK SALES



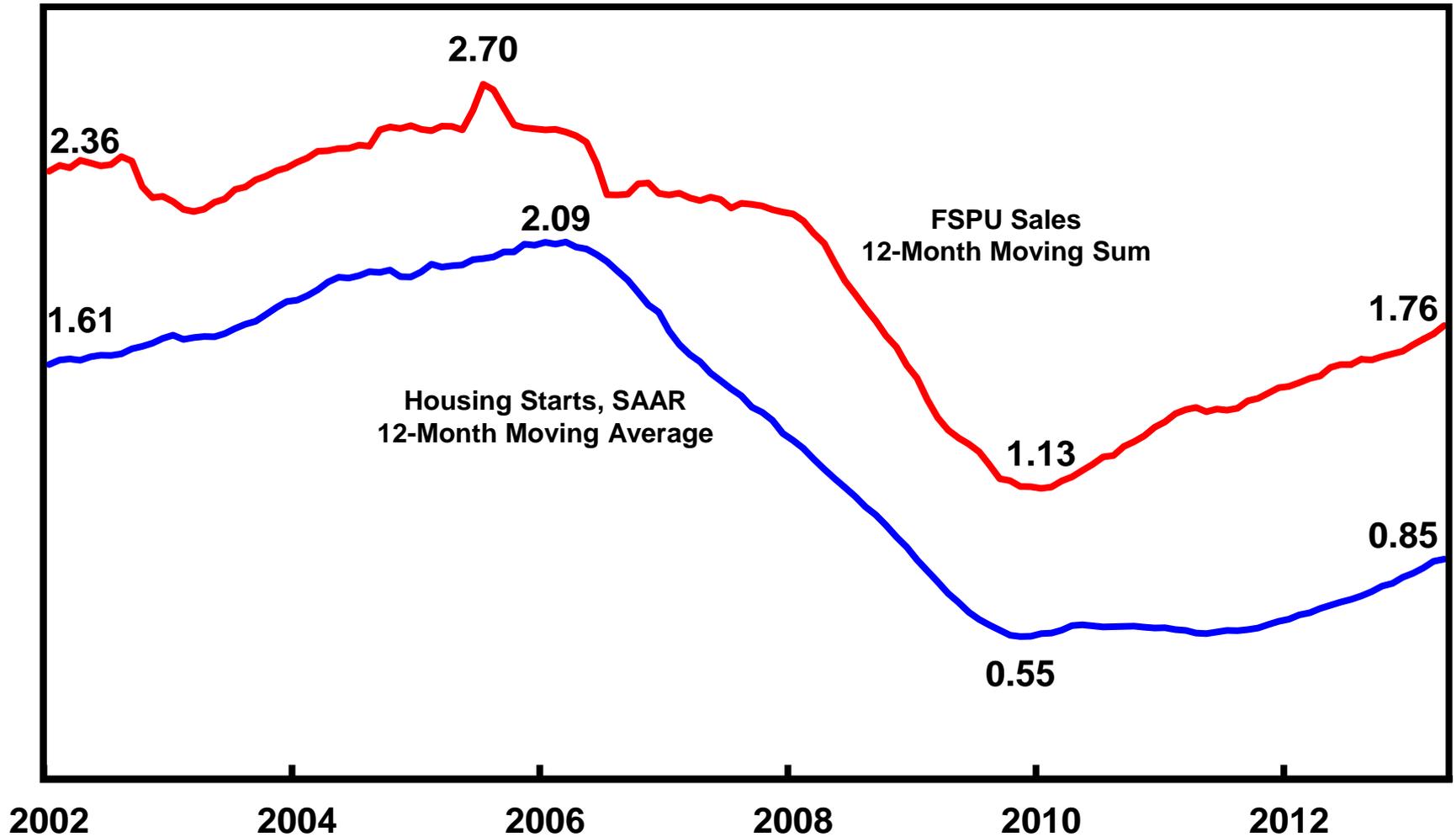
Mils. Units, 12-Month Moving Sum



U.S. FULL-SIZE PICKUP SALES AND HOUSING STARTS



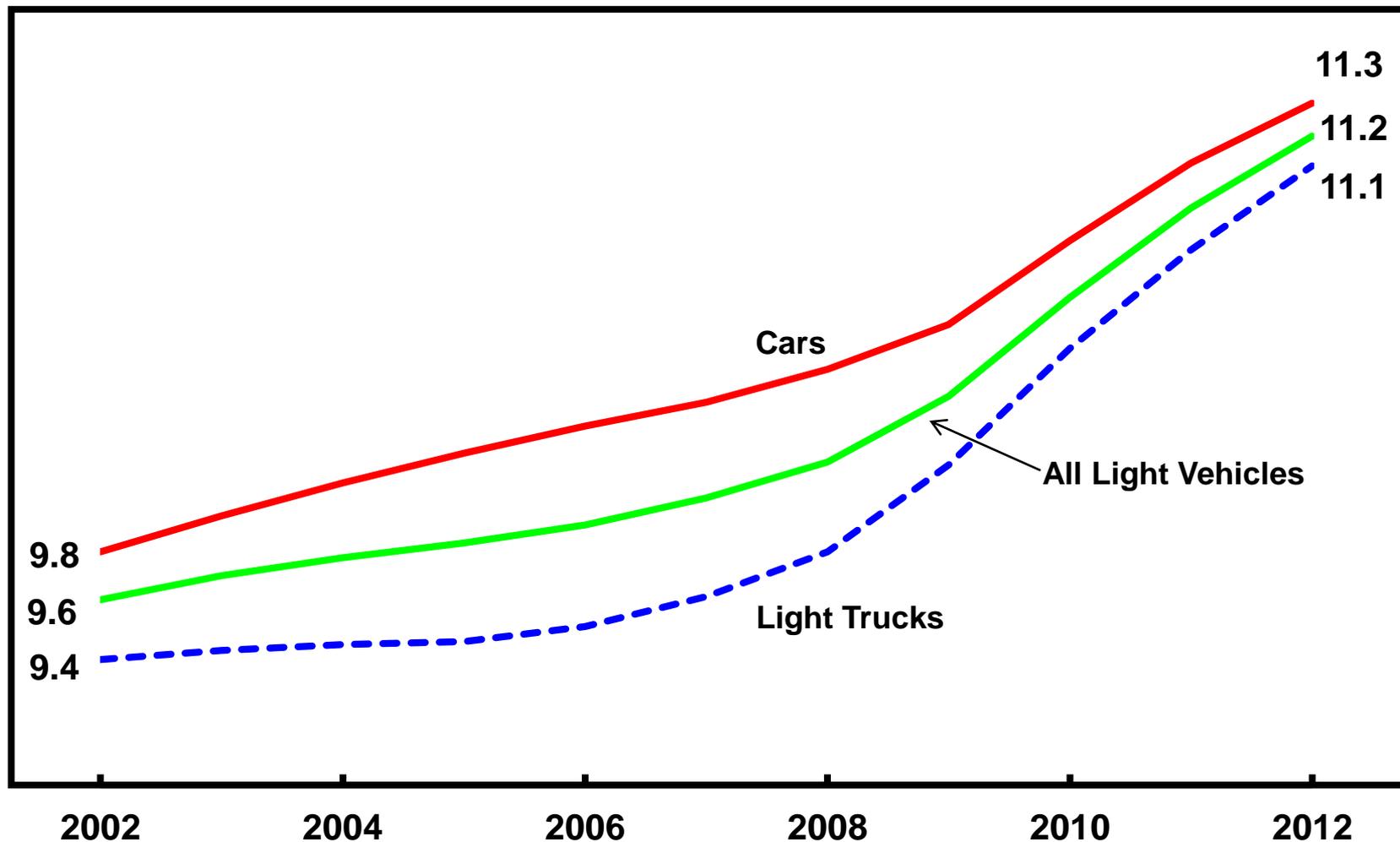
Mils. Units



U.S. AVERAGE AGE OF CARS AND TRUCKS



Years



Source: R. L. Polk

SUMMARY



- **U.S. industry sales recovery continues, reaching 15 – 16 million units in 2013**
 - **Housing sector advances**
 - **Household balance sheet repairs**
 - **Interest rates remain low**
 - **Job market improves**
- **Near-term risks center around restrictive and uncertain fiscal policy**
- **Long-term industry sales supported by household formation, population growth, and replacement demand returning to trend**

BACKUP

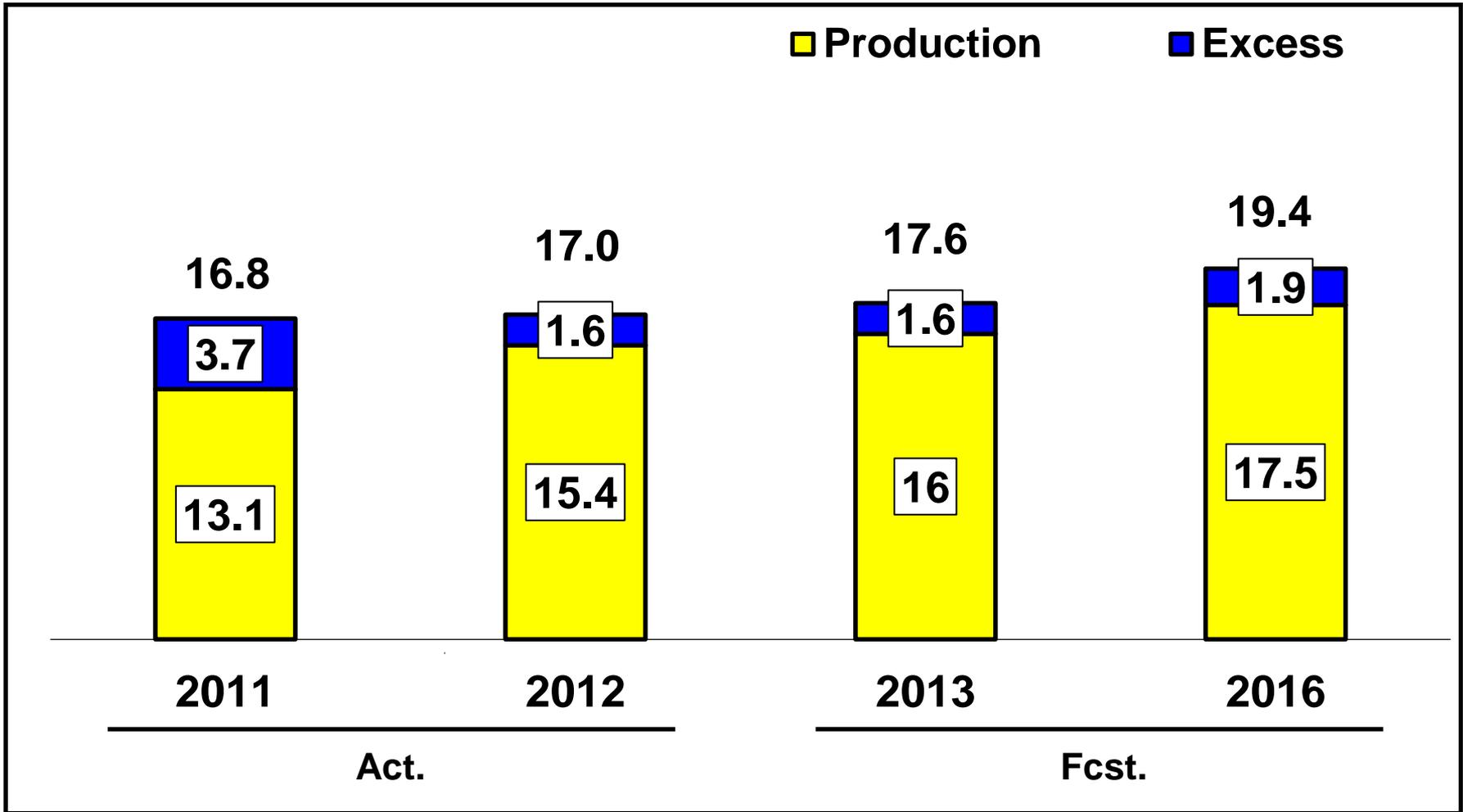
NORTH AMERICA PRODUCTION AND CAPACITY



Mils. Units

■ Production

■ Excess



Memo: Excess as Pct. of Production

28%

10%

10%

11%