

# The Role of the Federal Reserve

Metropolitan Research Group – UM-D

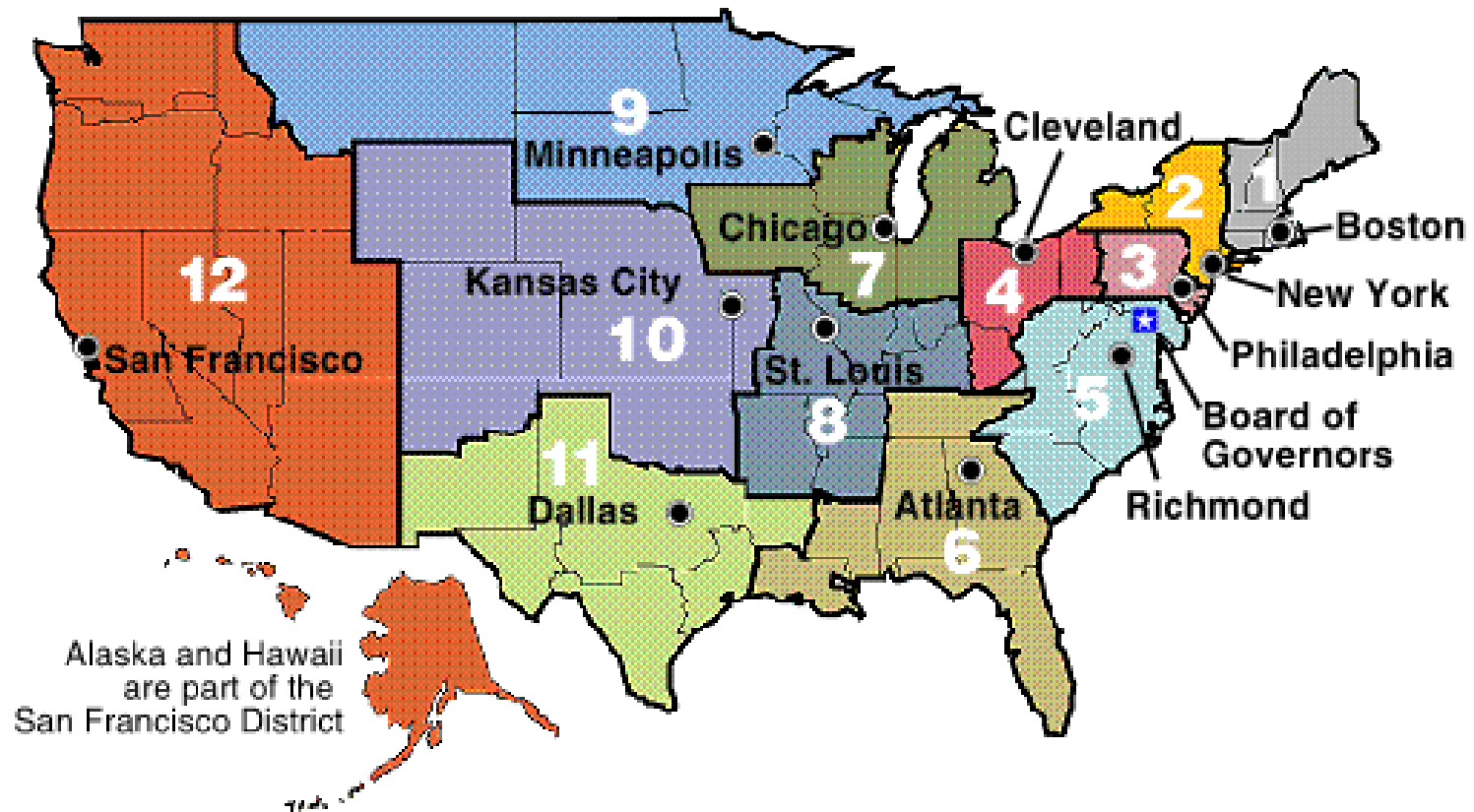
**Federal Reserve Bank of Chicago**  
January 24, 2017

**Paul Traub**  
Senior Business Economist



# The Federal Reserve System

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# Functions of the Federal Reserve

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- Financial services to the public, financial institutions, U.S. government, and foreign official institutions -- a major role in the payments system
- Supervising and regulating banking institutions to ensure safety and soundness of the banking system and to protect credit rights of consumers
- Conduct monetary policy

# The “Dual Mandate”

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- In 1977, Congress amended The Federal Reserve Act, stating the monetary policy objectives of the Federal Reserve as:

"The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices and moderate long-term interest rates."

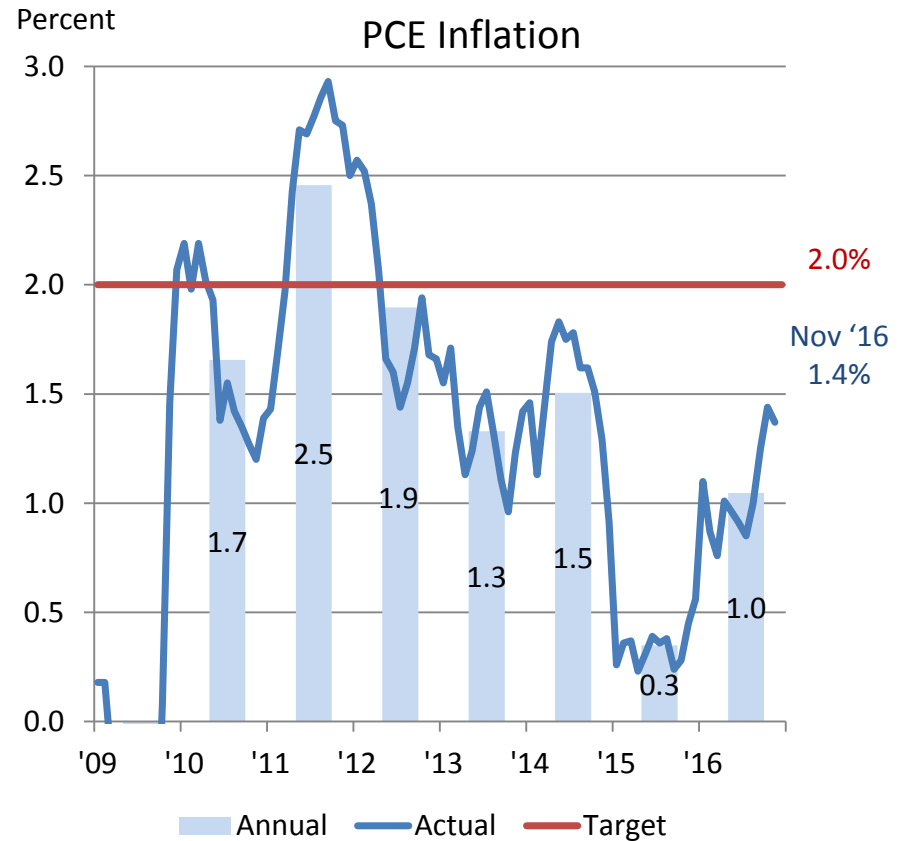
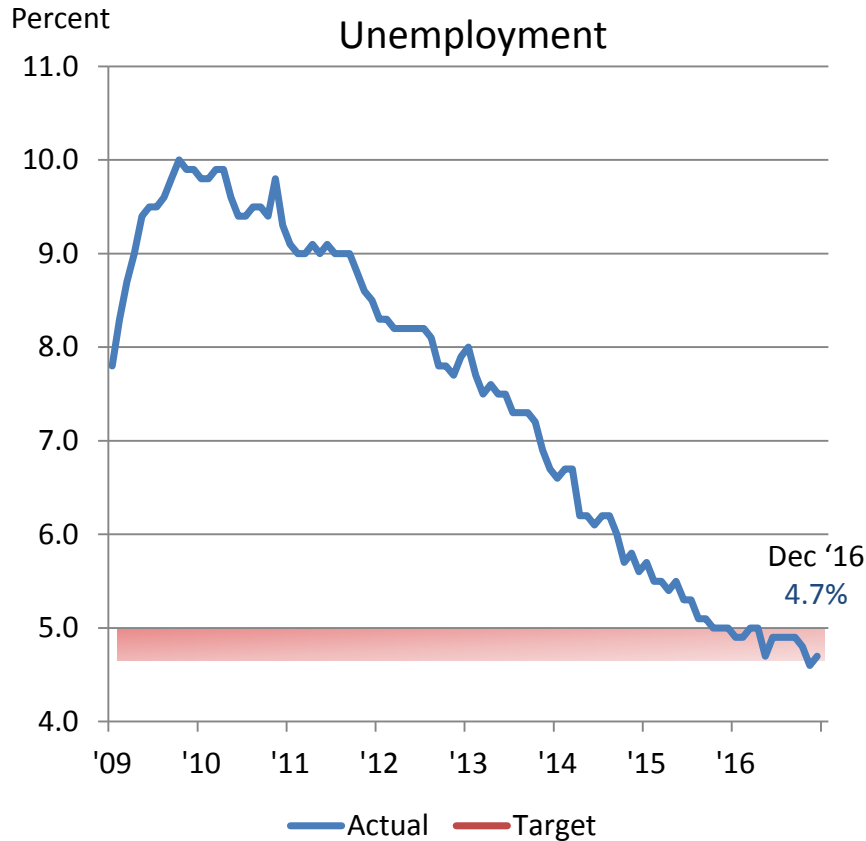
# Goals of Monetary Policy

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- Price stability
  - Since 2012, explicit 2% objective for PCE inflation
  - Target is for an average over medium term – it is not a ceiling
  - Explicit statement should help anchor expectations
- Full employment
  - The appropriate employment goal may change over time for nonmonetary reasons
  - Seek an economy operating at its level of potential output
  - June 2016 FOMC median projection: 4.8%
- Balanced approach
  - Take balanced approach when shocks push the economy away from objectives
  - Takes account of lags in effects of monetary policy and other limits

# Unemployment Rate & PCE Inflation

Percent Unemployed, PCE % Change Yr./Yr.



Source: U.S. Department of Labor: Bureau of Labor Statistics, Bureau of Economic Analysis and the Federal Reserve

# Importance of Price Stability

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- Price stability gets great emphasis
- Price stability improves the workings of the price system -- high and variable inflation disrupts the economy
- Price stability provides the environment necessary to meet all the other goals of monetary policy
- Price stability makes planning easier
- Price stability may also lower long-term interest rates by reducing uncertainty

# Sustainable Growth

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- The Federal Reserve can't make the economy grow faster than its potential in the long run
- Trying to over-stimulate the economy results in increasing inflation that contributes to short boom-bust cycles
- Steady, sustainable growth is the key to improved living standards



# Tools of Monetary Policy

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- Reserve requirements: funds that depository institutions must hold in reserve against deposits
- Discount Rate: the interest rate charged to commercial banks when they borrow reserves from a Federal Reserve Bank
  - Banks who are in better financial shape can borrow at the Primary Credit rate (currently at 100 basis points above the Fed Funds rate) and those that are not as solid can borrow at the Secondary Credit rate (currently 150 basis points above the Fed Funds rate)
- Open market operations: influencing the level of reserves by buying and selling U.S. government securities in the open market -- done by trading desk at the New York Fed
  - Currently the desk operates by targeting the interest rate on Federal Funds

# Importance of an Independent Fed

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- Policymakers, academics, and other informed observers around the world agree that the goals of monetary policy should be established by the political authorities, but the conduct of monetary policy in pursuit of those goals should be free from political influence.\*
- The Fed has congressionally mandated goals of price stability, maximum employment, and moderate long-term interest rates.
- Many studies support that central banks able to conduct day-to-day monetary policy operations free of political pressure tend to deliver better inflation outcomes, without compromising economic growth.
- Achieving monetary goals can at times take substantial time, this requires that monetary policy makers take a longer-term perspective when making their decisions.

\* Source: Board of Governors of the Federal Reserve

# Importance of an Independent Fed (con't)

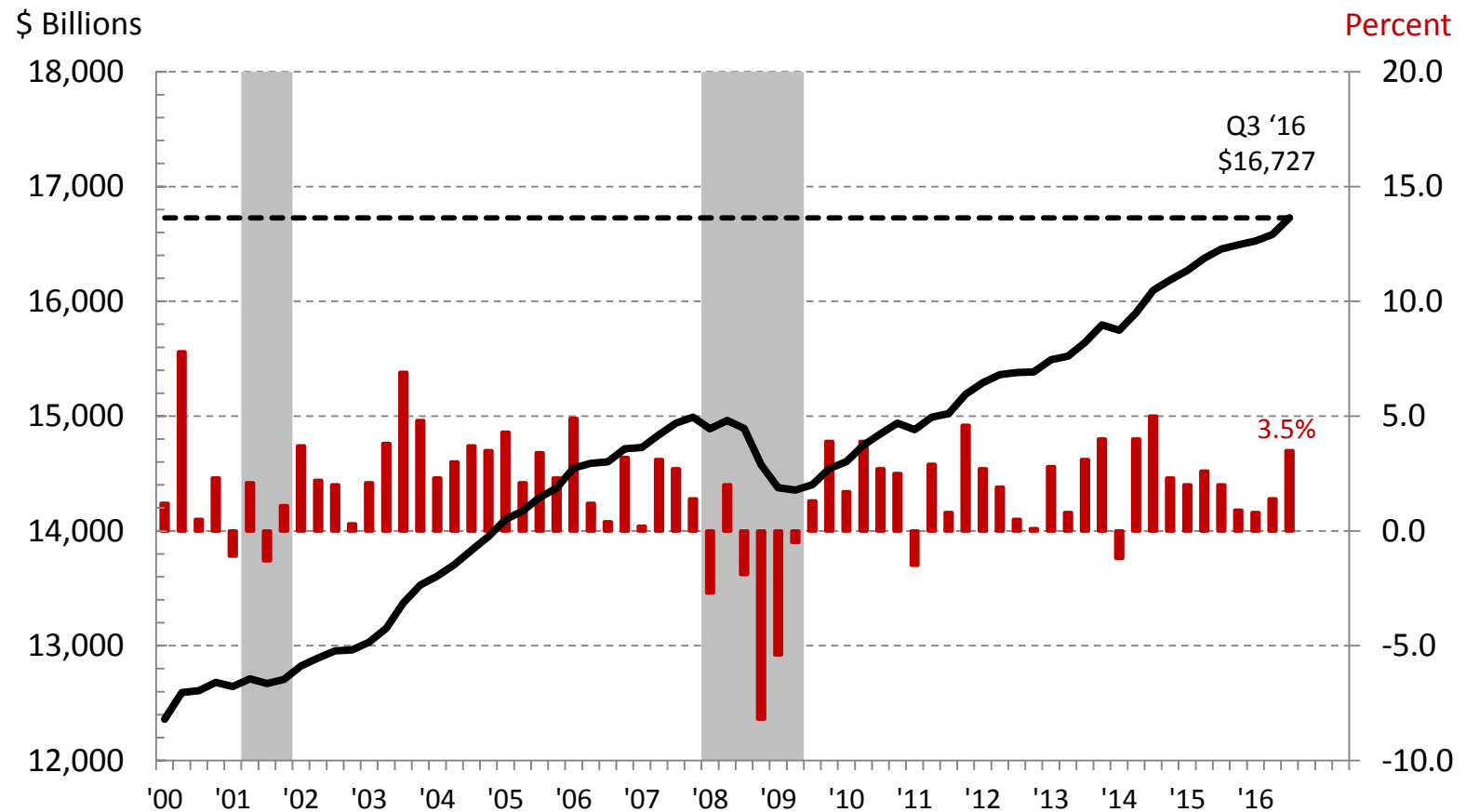
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- In contrast, short-term political influences may cause pressure to over stimulate the economy resulting in output and employment gains that exceed the economy's underlying potential.
- Such gains may look good at first, but they are not sustainable and will likely create an inflationary environment that is detrimental to longer-term economic growth.
- In short, monetary policy interference can generate boom-bust cycles with high inflation and less stable economic activity.
- Additionally, a government that controls the central bank could abuse the central bank's money-creation powers to help finance government budget deficits which would inevitably lead to high inflation and interest rates and a volatile economy.

# Current Economic Conditions

# U.S. Real GDP

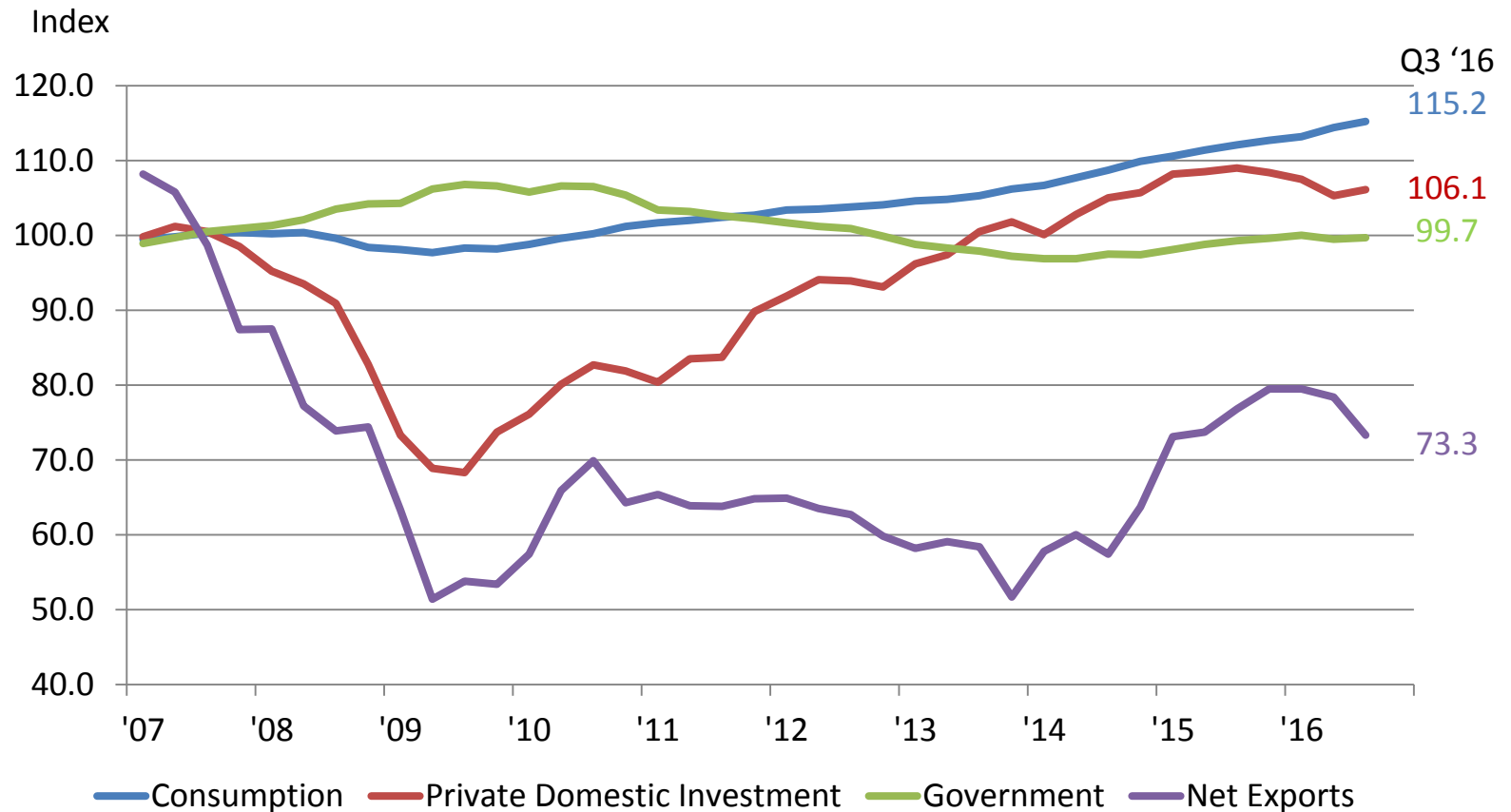
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

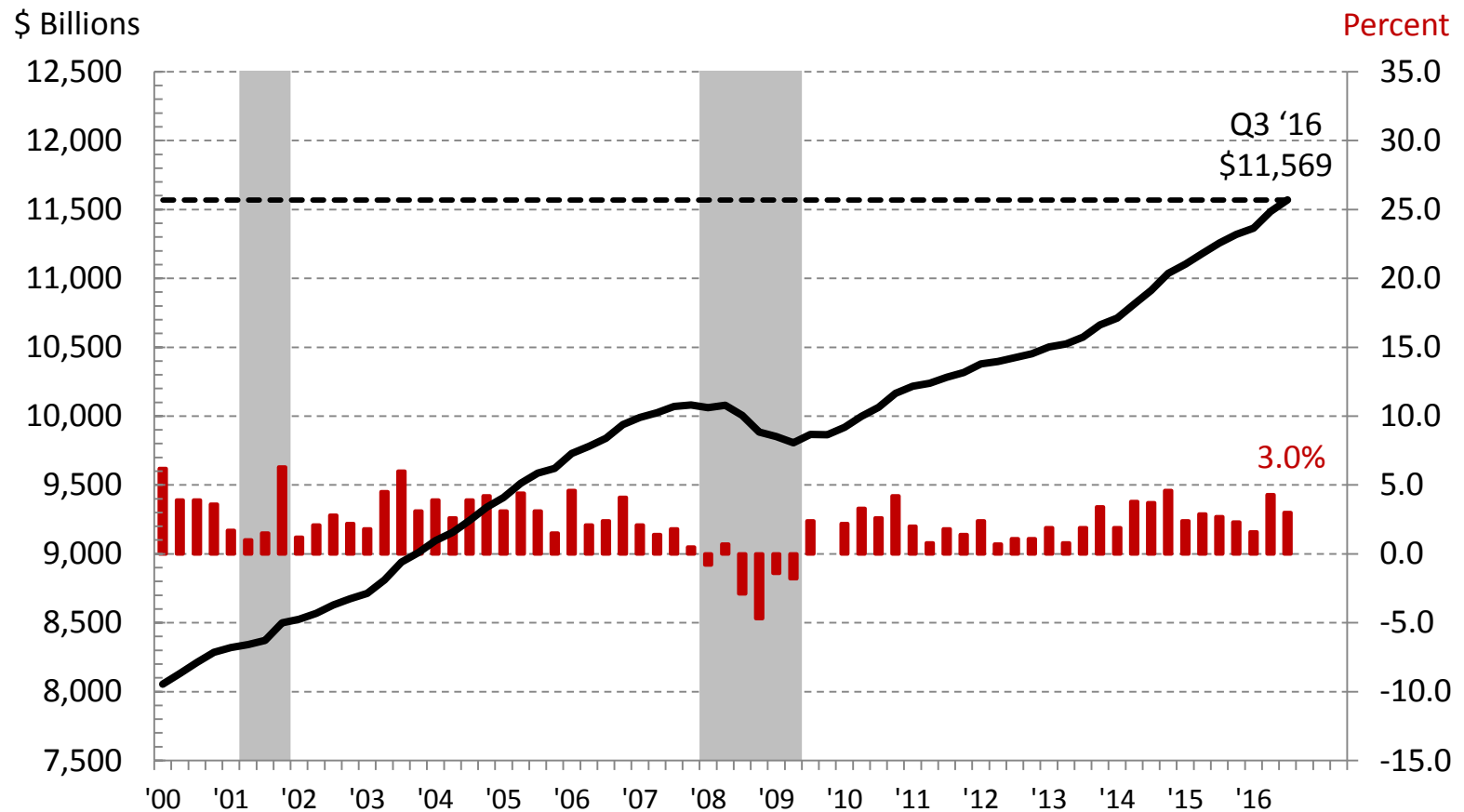
# U.S. Real GDP

Index - 2007 = 100 by Sector



# Real Personal Consumption Expenditures

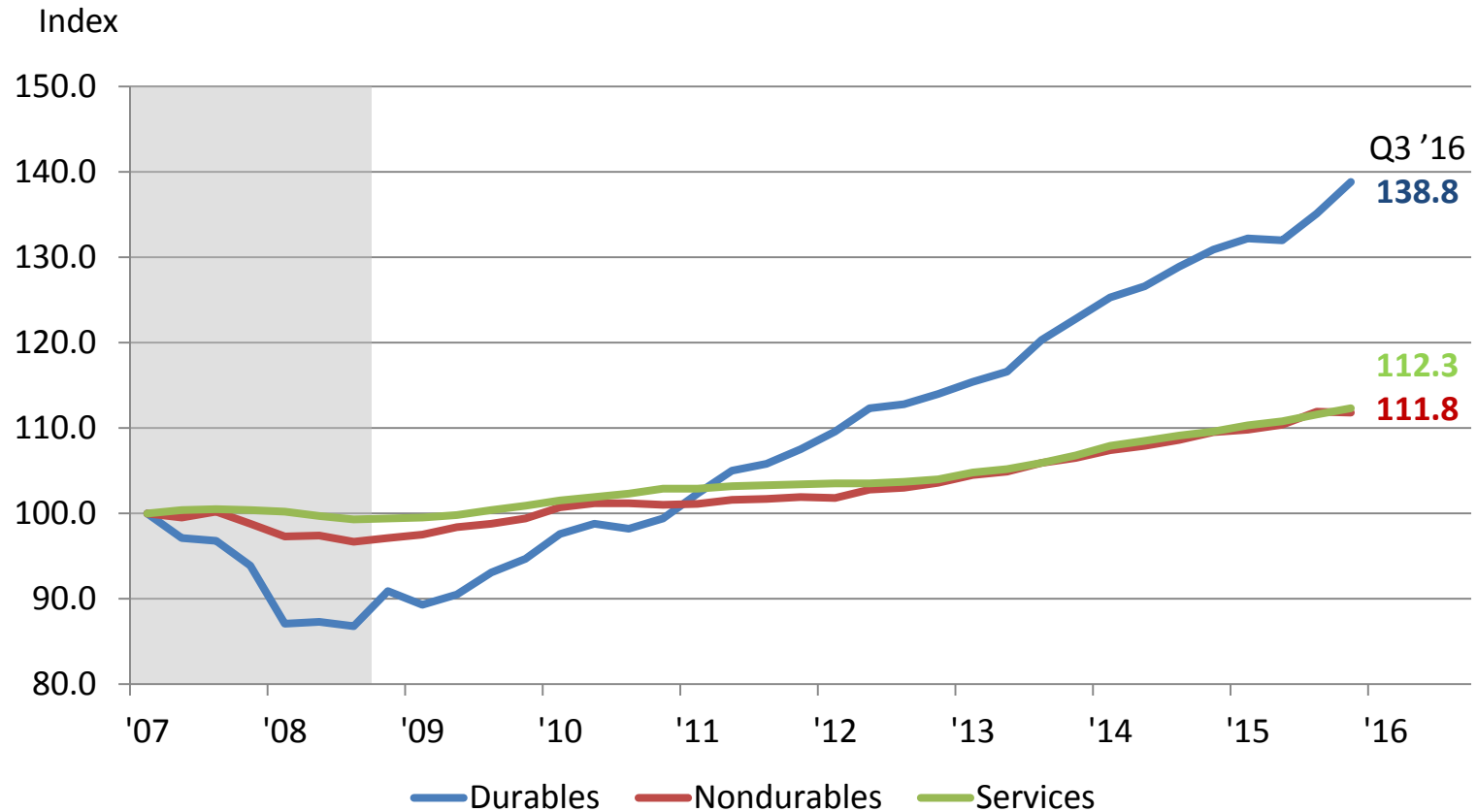
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

# Real Personal Consumption Expenditures

Index, Q4 2007 = 100

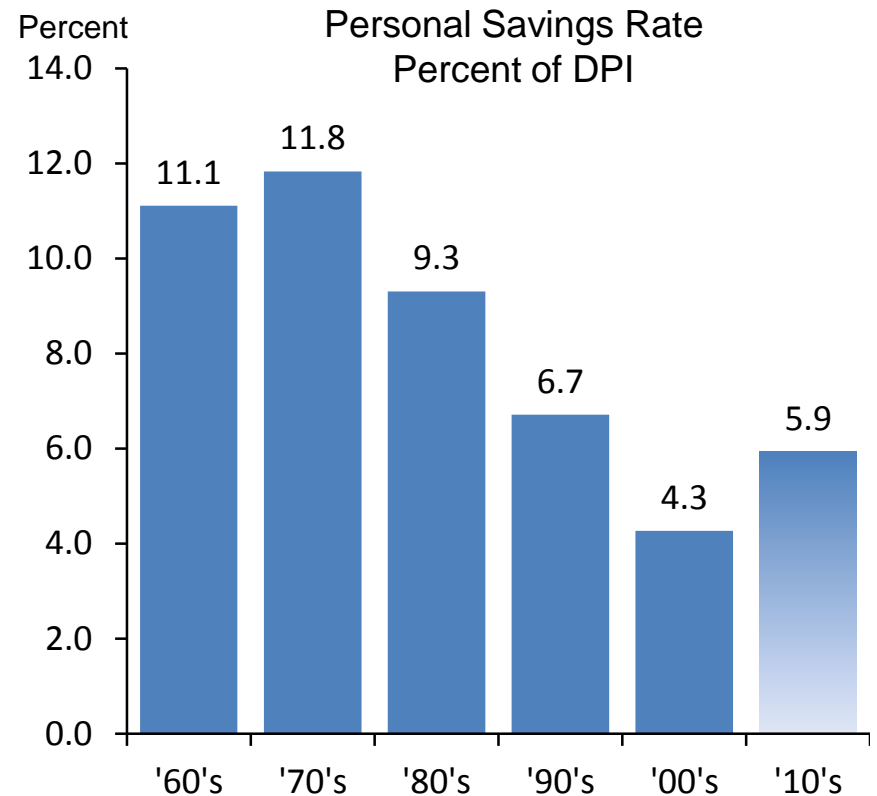
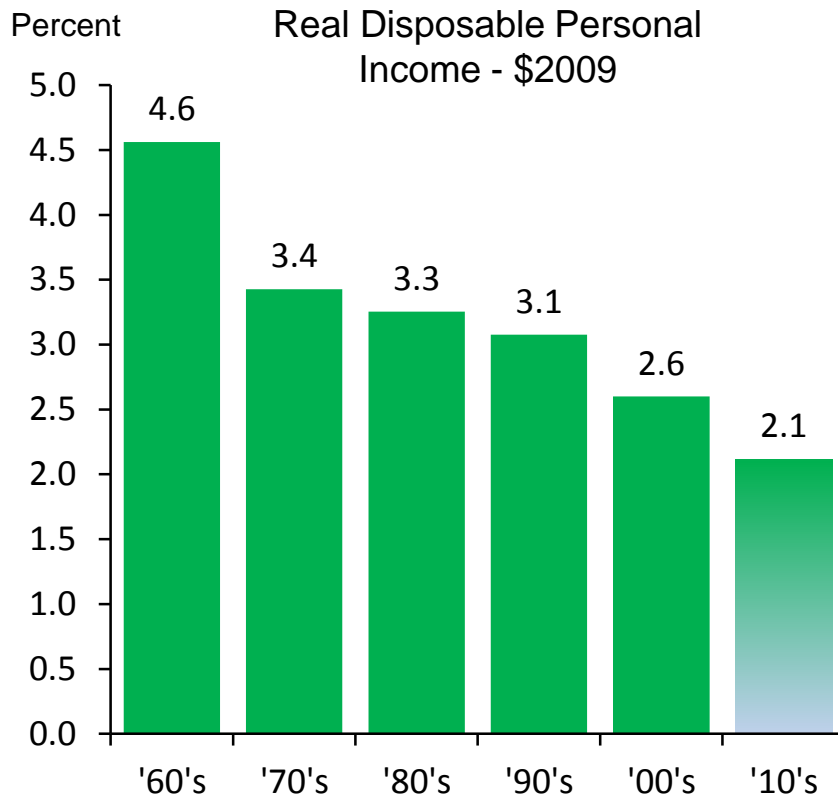


Source: Author's calculations using data from the BEA



# Real DPI & Personal Savings Rate

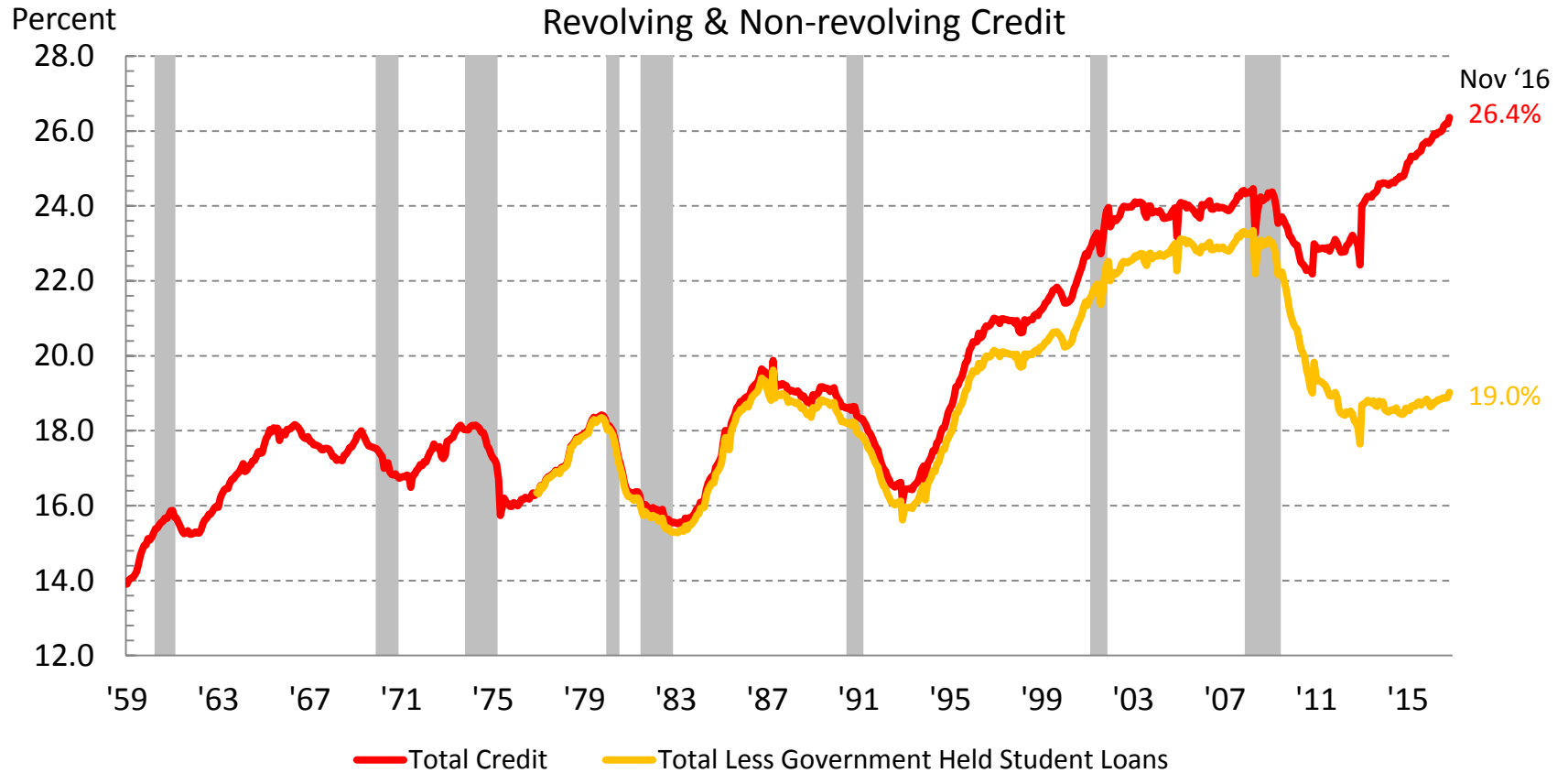
As Percent of Personal Income



Source: U.S. Bureau of Economic Analysis

# Consumer Credit and Interest Payments

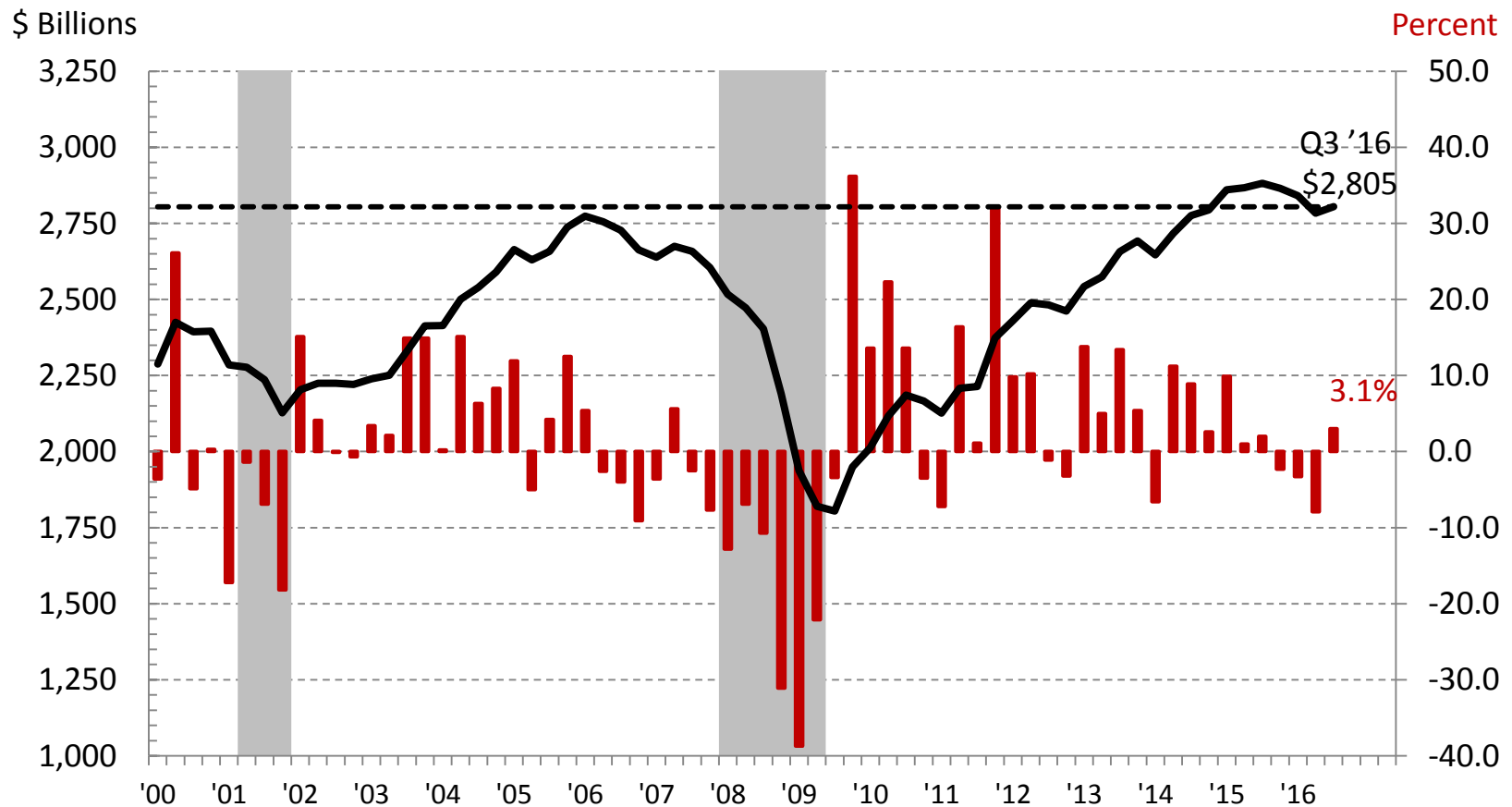
As a Percent of Disposable Personal Income



Source: Federal Reserve Bank - Board of Governors

# Real Gross Private Domestic Investment

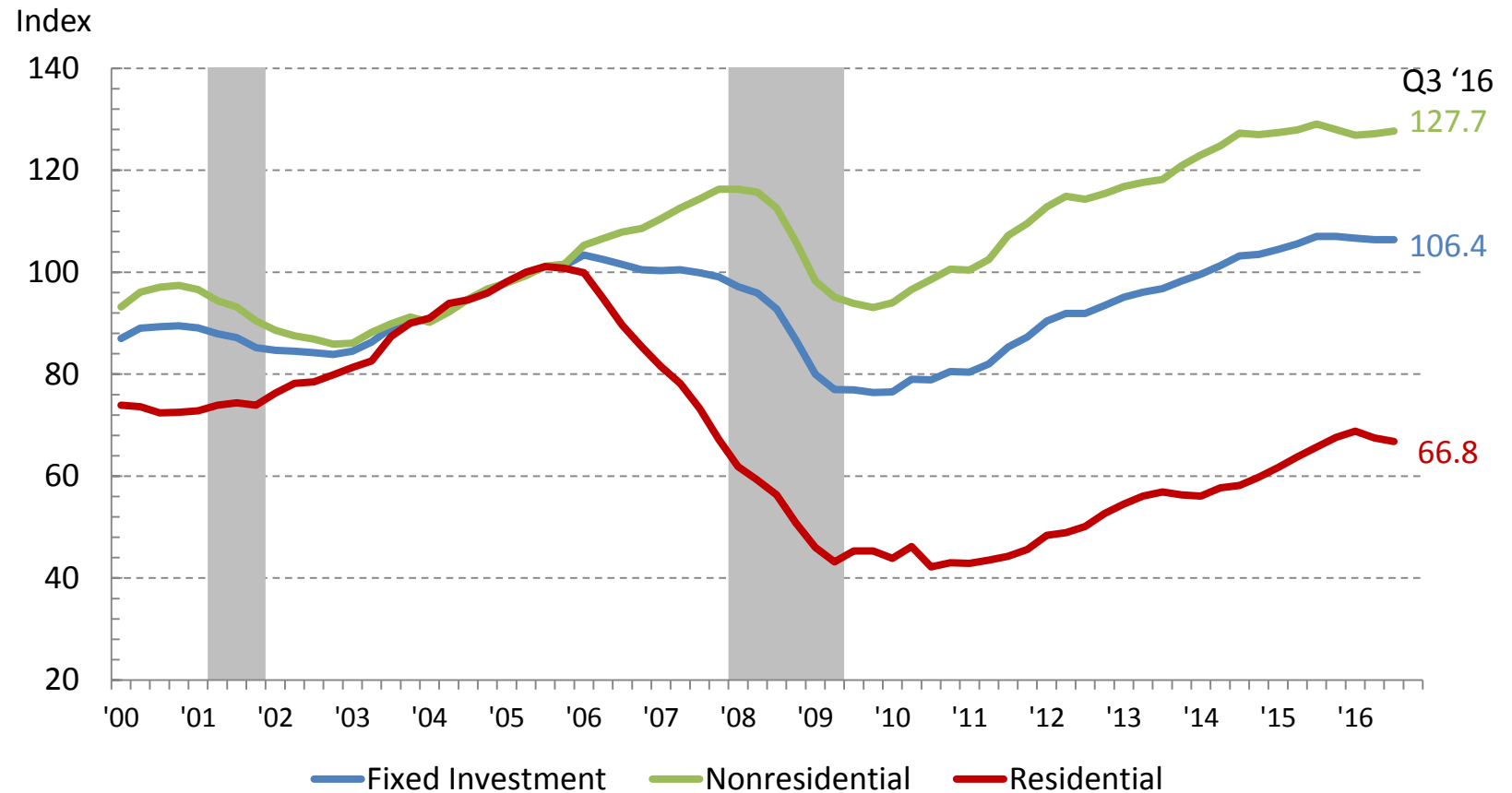
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

# Real Domestic Fixed Investment

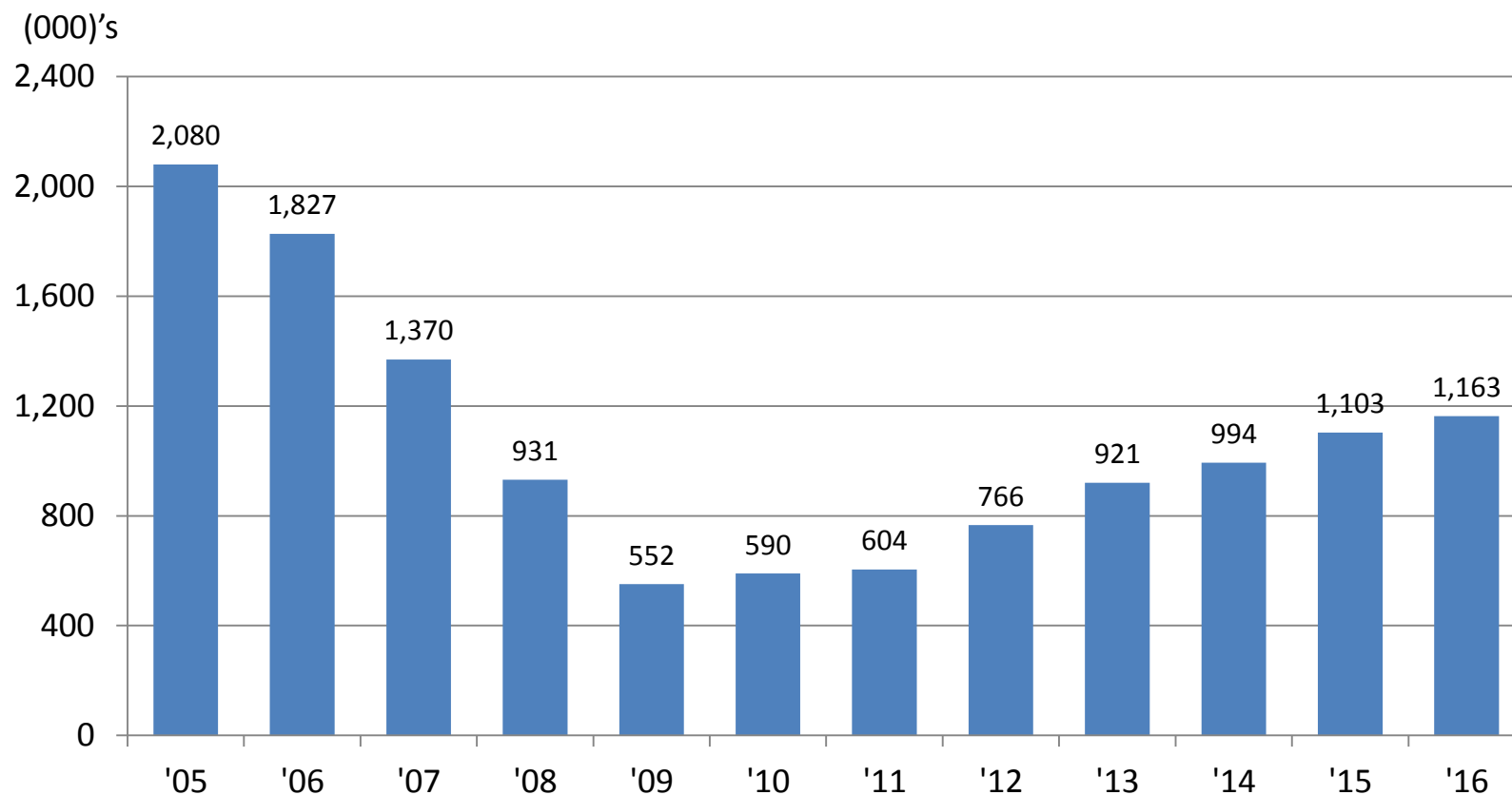
Billions Chained \$2009, Index – 2005 = 100



Source: U.S. Bureau of Economic Analysis

# U.S. Housing Starts

In Thousands of Units (SAAR) – November Average YTD Data

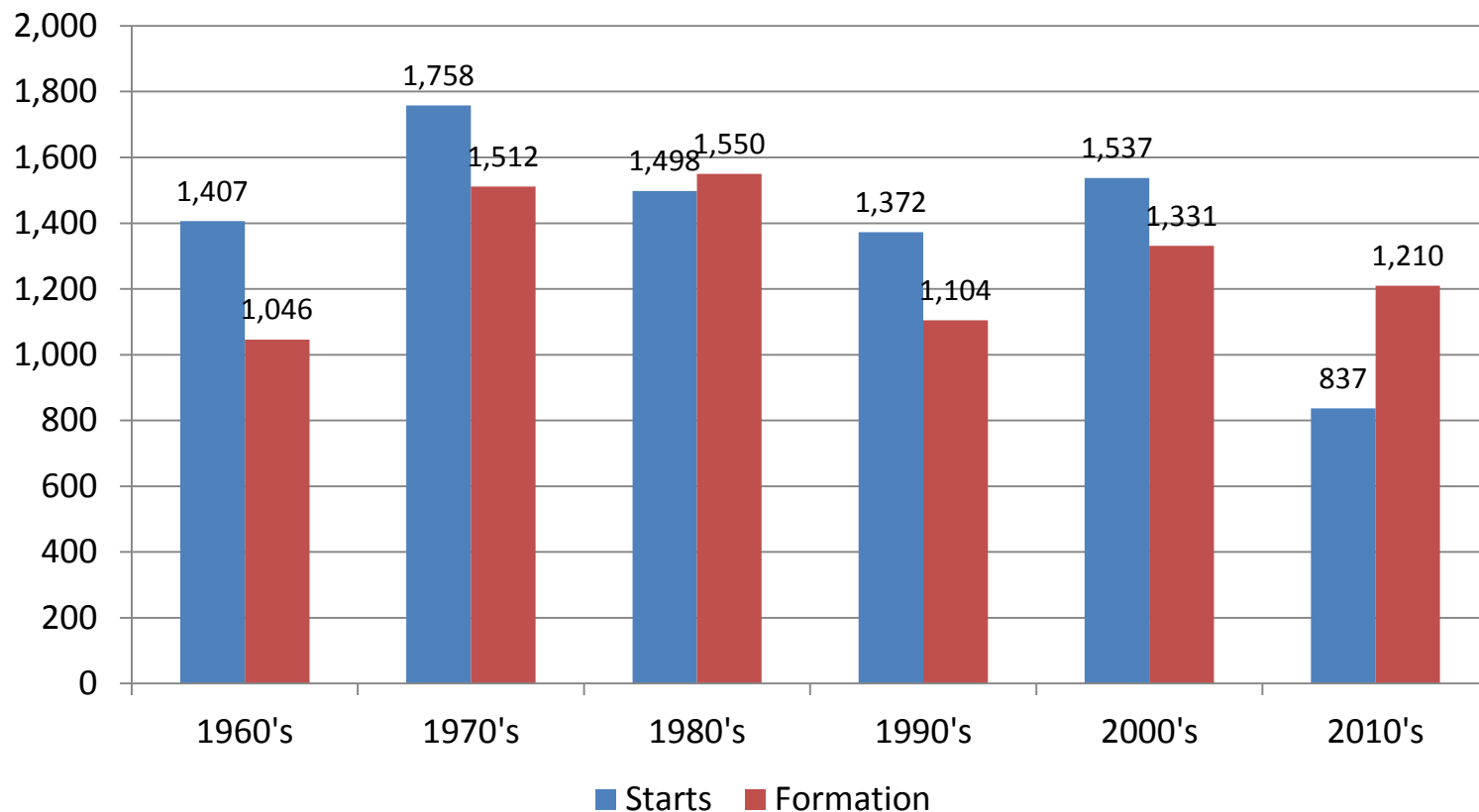


Note: The United States averaged 1.5 million housing starts per year 1990 to 2004.

Source: U.S. Census Bureau

# U.S. Housing Starts & Household Formation

In Thousands of Units – Averages by Decade



Source: U.S. Census Bureau – Single Family Starts and Households by Age

# The U.S. Trade Weighted Dollar

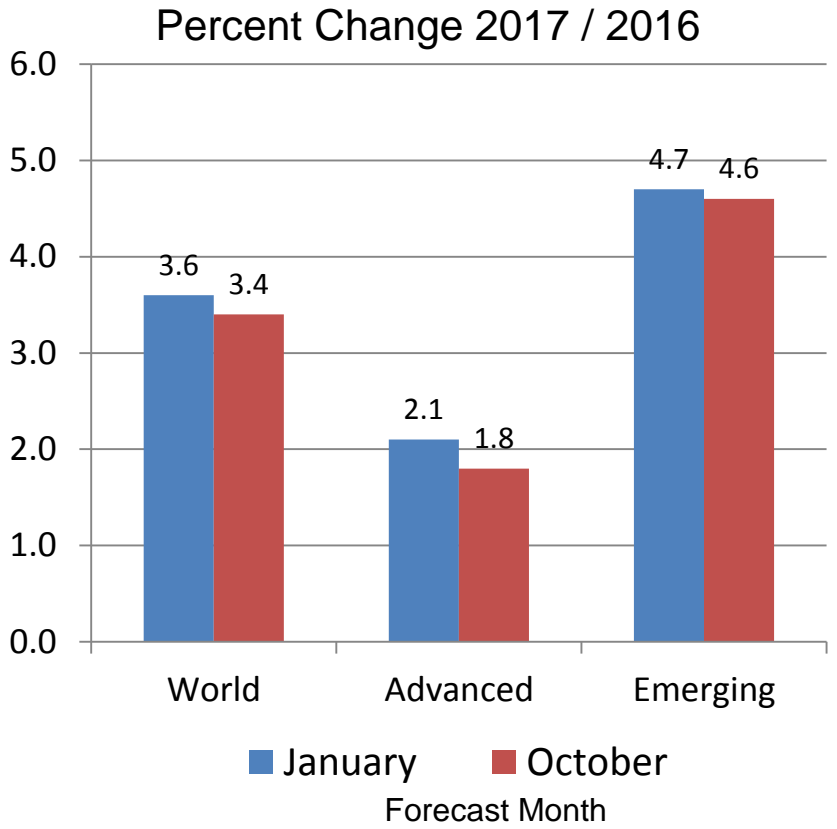
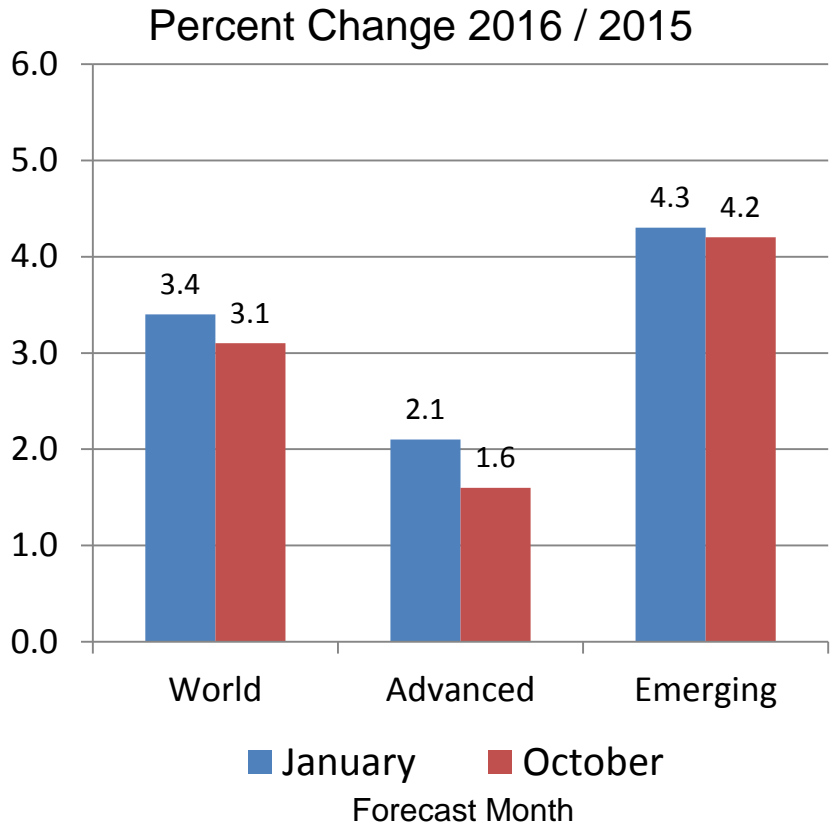
Index 2010 = 100



Source: Federal Reserve Board and Haver Analytics

# Global Outlook for 2016 & 2017

## IMF Forecast for Growth, % Chg. Yr./Yr.



Source: IMF World Economic Outlook



# Fiscal Stimulus Remains Uncertain

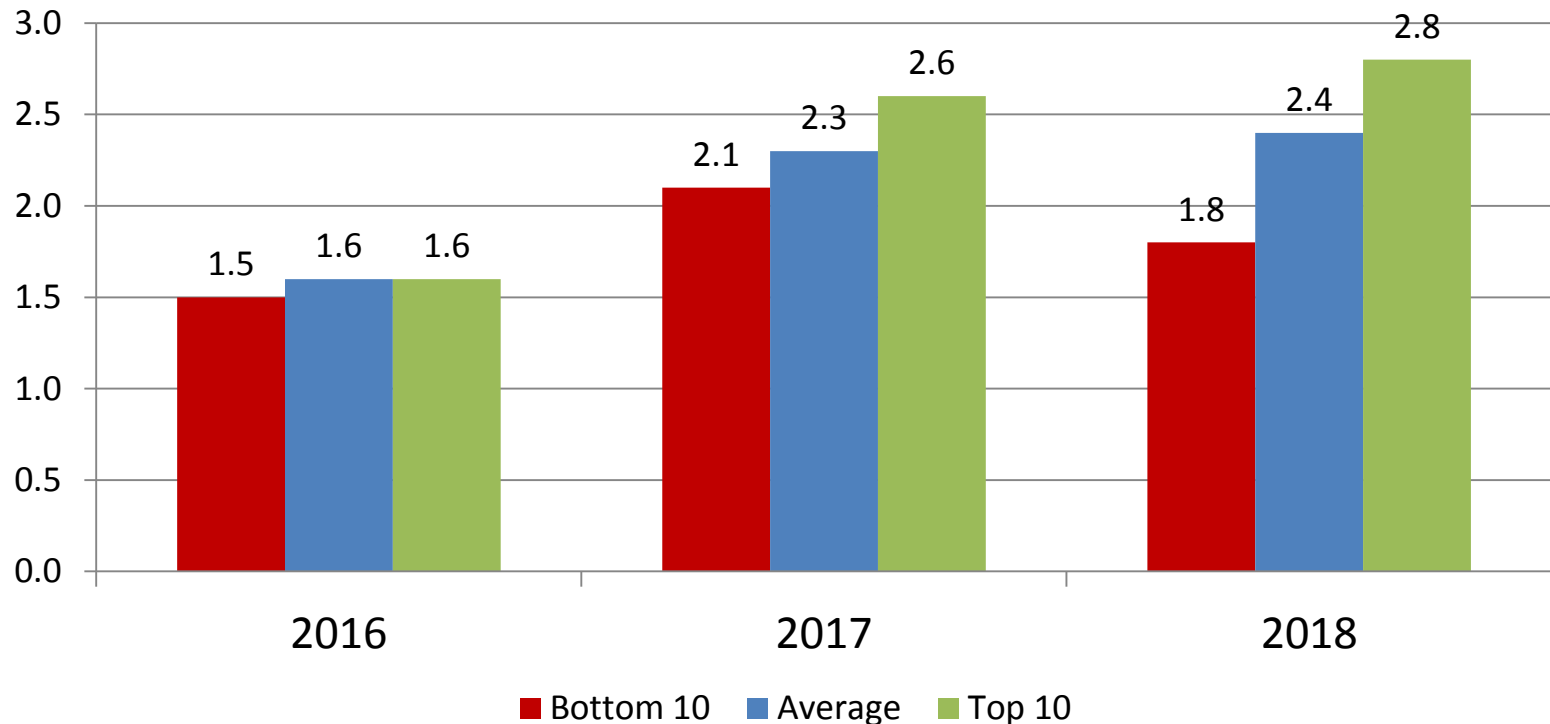
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- President elect's plan includes large tax cuts and increased spending
  - Details still lacking in many areas
  - Final package depends on Administration and Congressional priorities
- Estimates of fiscal impact range from 0.5 to 1.0 percent on level of GDP by end of 2018, falling to zero by 2020
- Potential offsets to long-run growth from other policies
  - Trade restrictions
  - Immigration legislation
  - Affordable Care Act
  - Federal Reserves response to stronger demand and higher inflation
- Some analysts have elected not to change previous projections

# U.S. Real GDP Blue Chip Forecast

Annual Percent Change – Chained \$2009

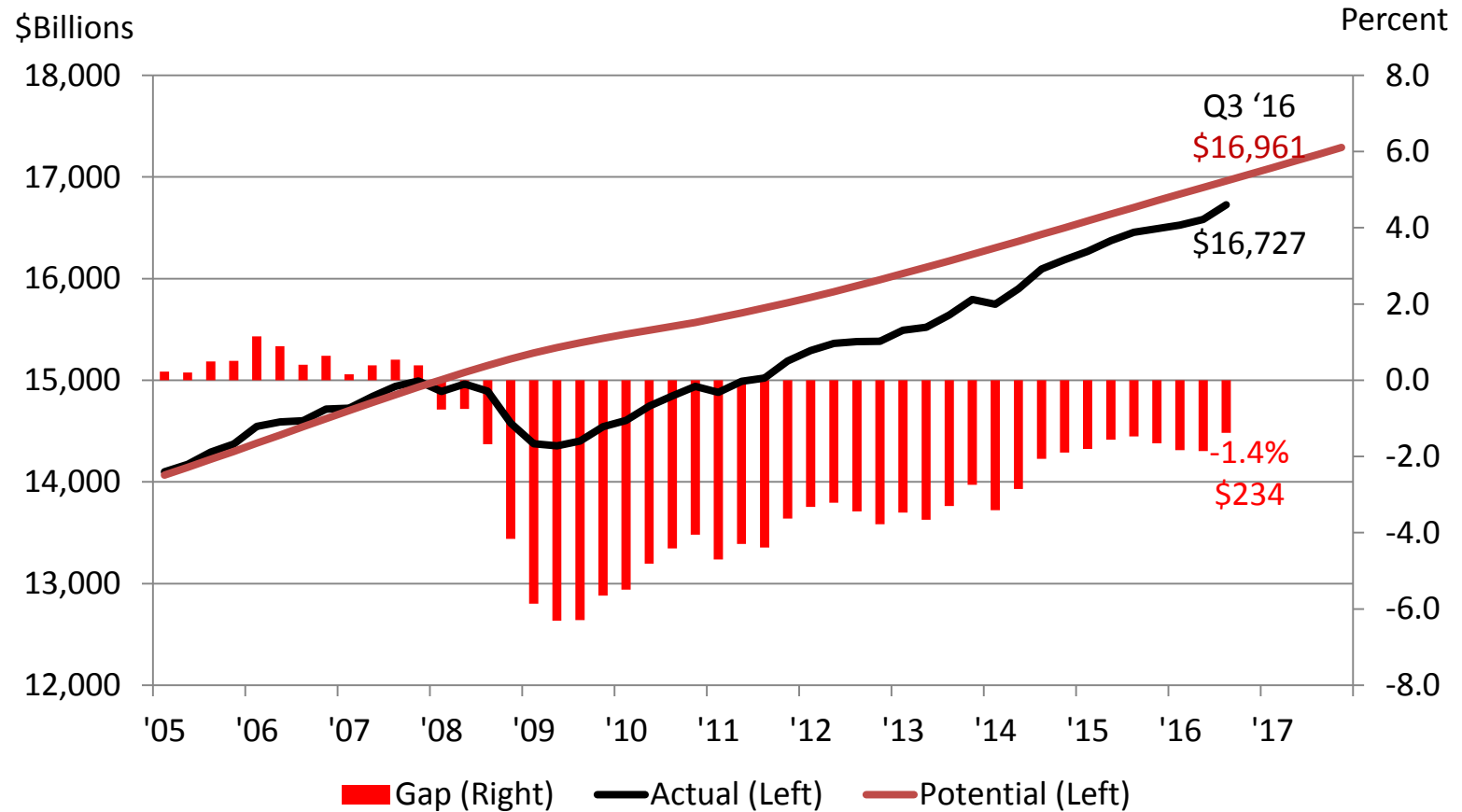
Percent



Source: January 2017 Blue Chip Economic Indicators

# U.S. Real GDP – Actual and Potential

Billions Chained \$2009 and Percent of Actual



Source: Bureau of Economic Analysis and the U.S. Congressional Budget Office

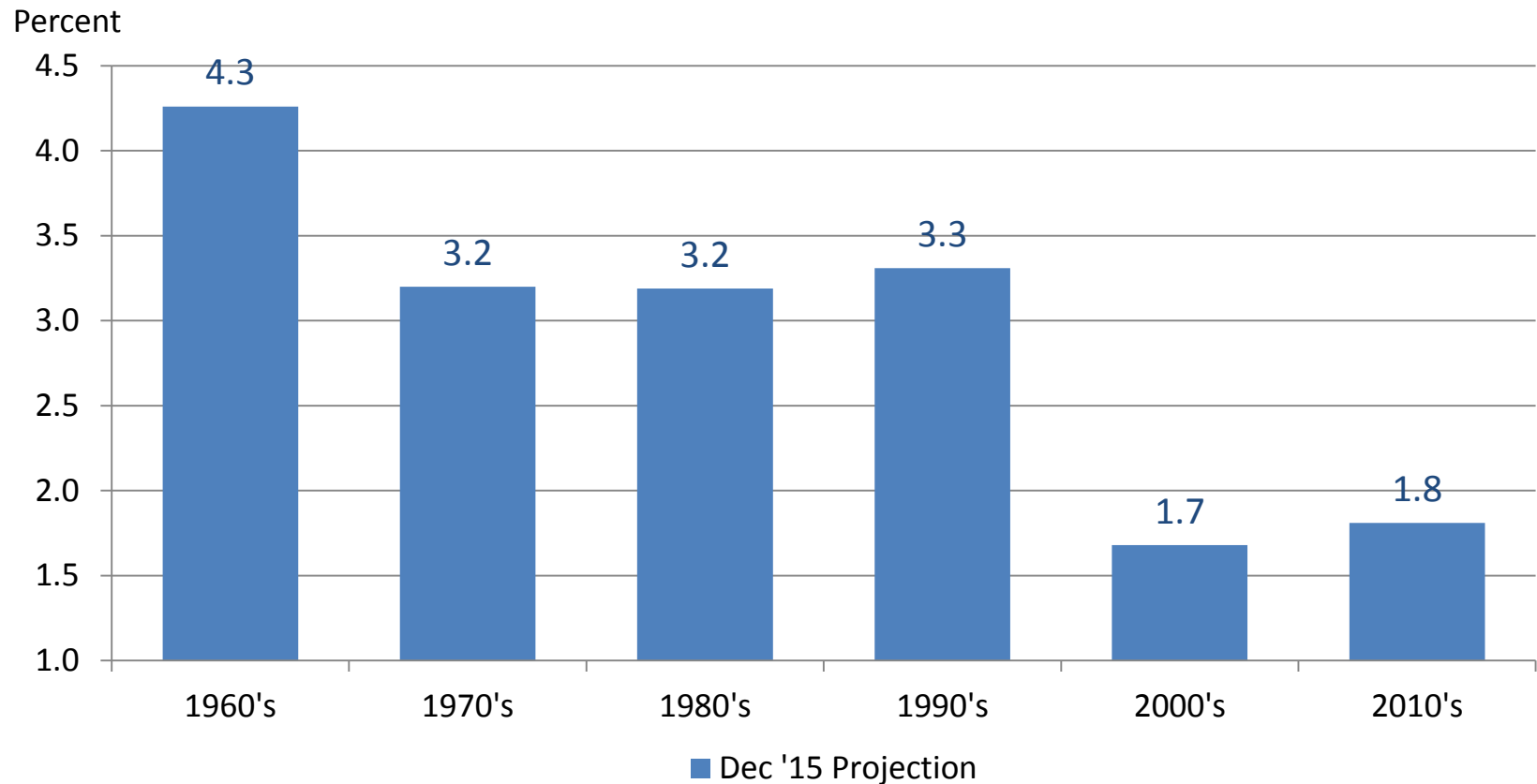
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# Economic Potential by Decade

## Real GDP Percent Change – Annual Average



Source: U.S. Congressional Budget Office

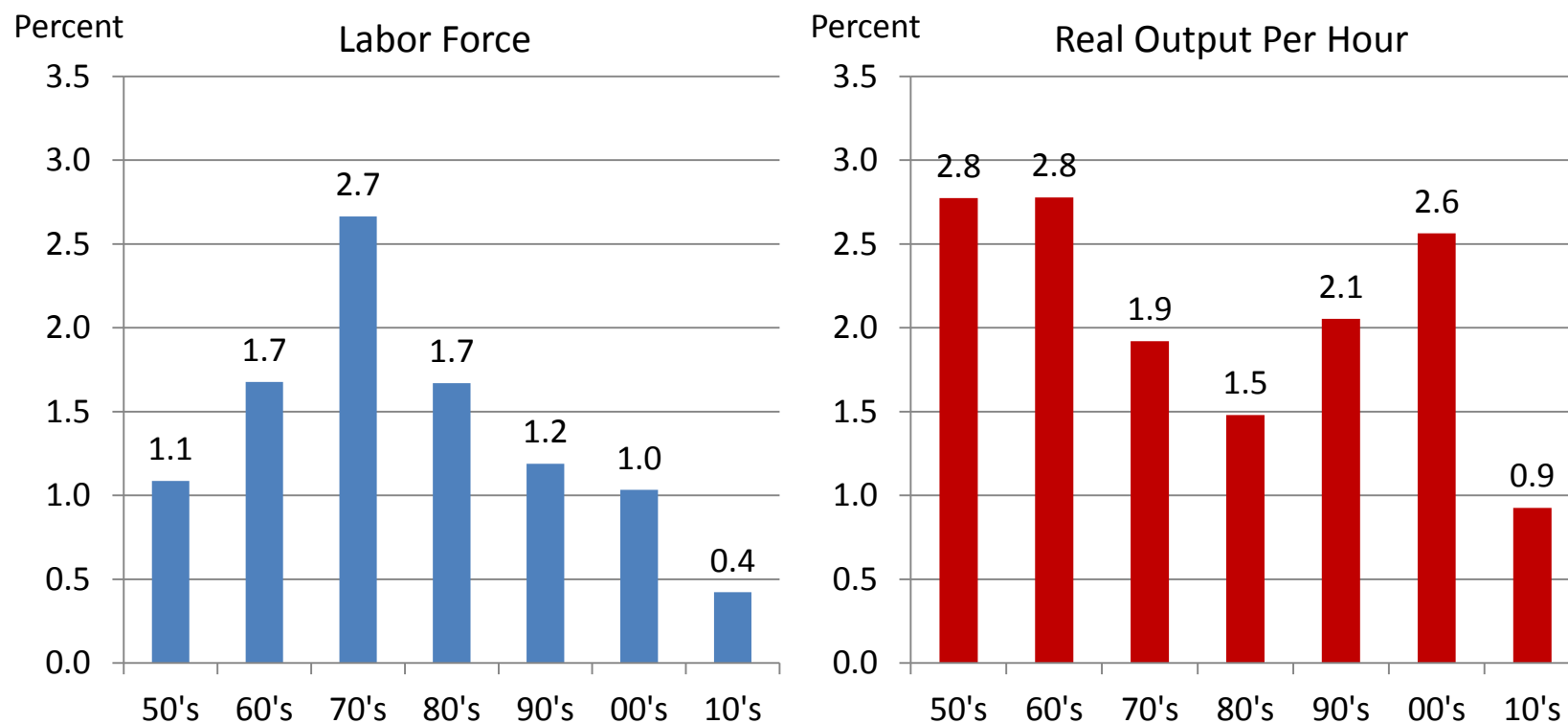
January 24, 2017

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# Labor and Productivity Growth

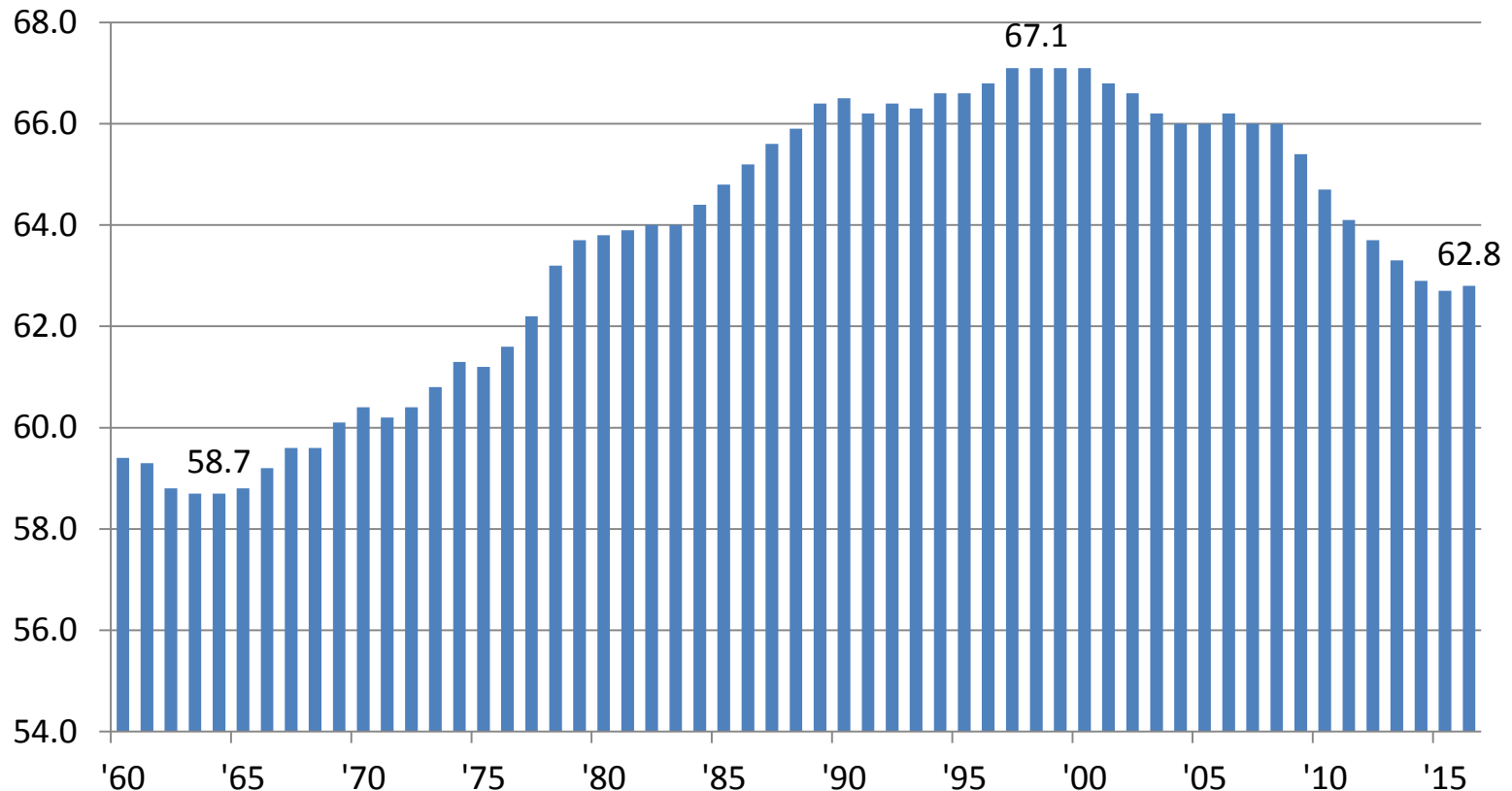
## Labor Force and Real Output Per Hour – Average Annual Growth



Source: U.S. Department of Labor: Bureau of Labor Statistics

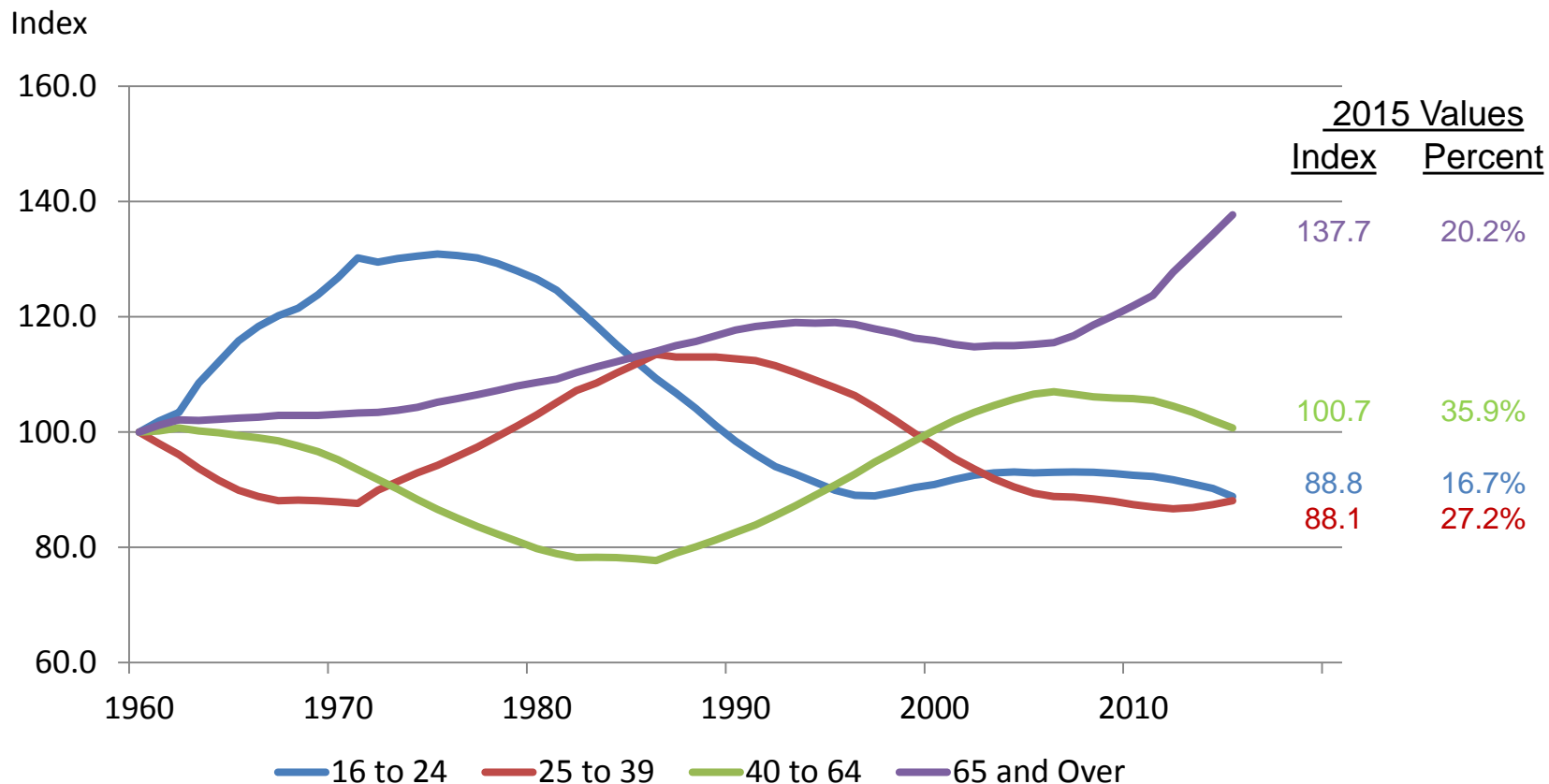
# Labor Force Participation Rate

Percent of Noninstitutionalized Civilian Population – Annual Average



# Working Age Population by Age

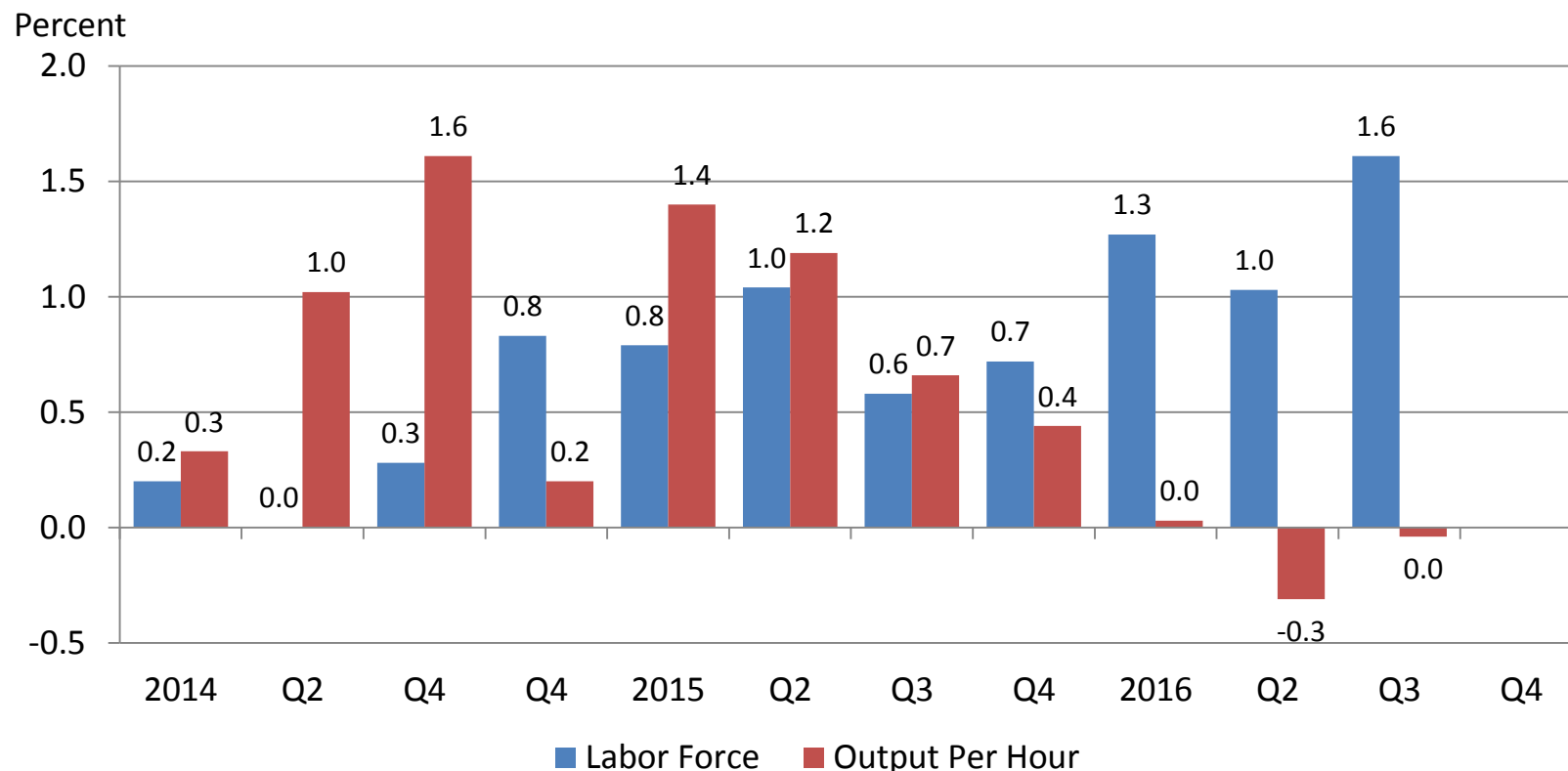
Select Age Categories, Percent of Total, Index – 1960 = 100



Source: U.S. Census Bureau – Table HH-3, Households by Age

# Labor and Productivity Growth

Labor Force and Real Output Per Hour – % Change Yr./Yr.



Source: U.S. Department of Labor: Bureau of Labor Statistics



# Federal Reserve Bank of Chicago

## Research Department

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## Research Department

- Economic Data
- Research Periodicals
- Working Papers
- Conferences and Seminars
- Research Economists
- Policy Professionals

# Federal Reserve Bank of Chicago

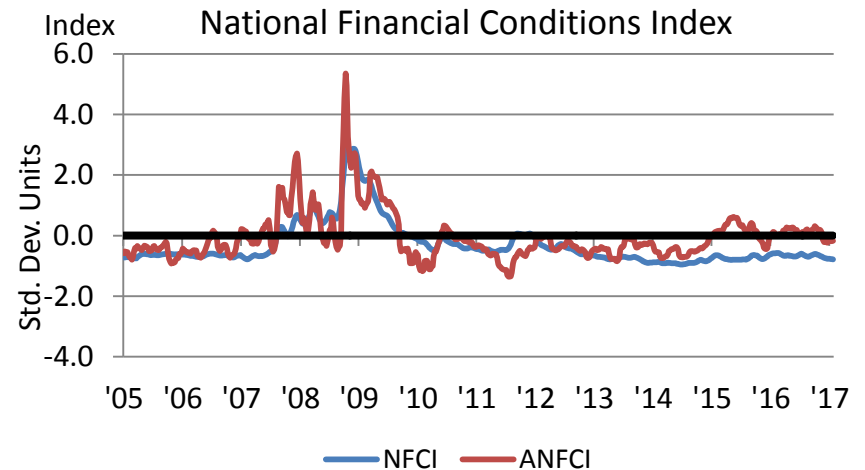
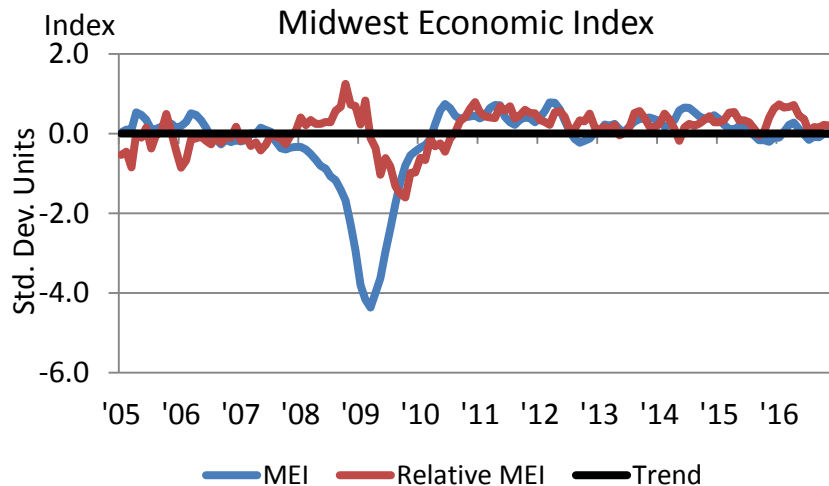
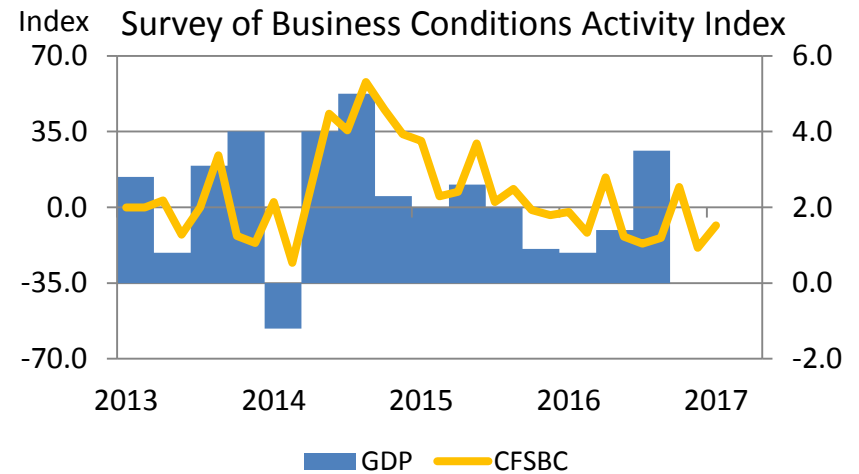
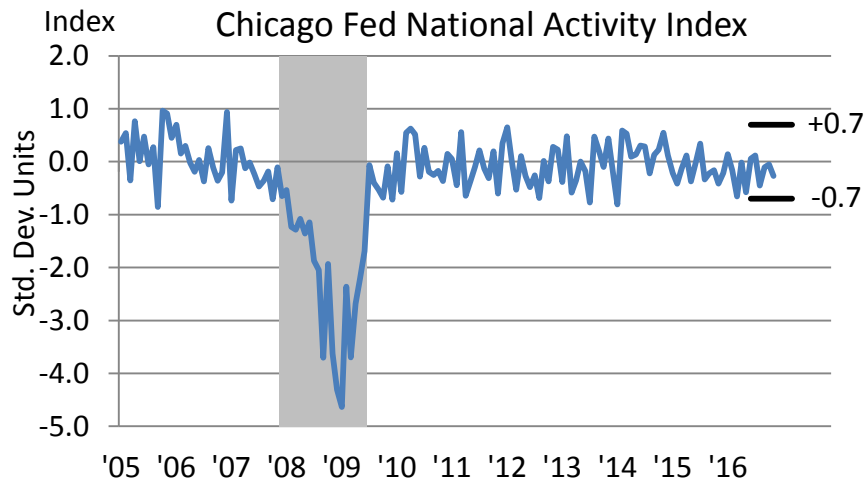
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## Economic Data

- Chicago Fed National Activity Index (CFNAI)
- Chicago Fed Survey of Business Conditions (CFSBC)
- Midwest Economic Index (MEI)
- National Financial Conditions Index (NFCI)
- *Detroit Economic Activity Index (DEAI)*
- *U.S. Light Vehicle Incentives Analysis*

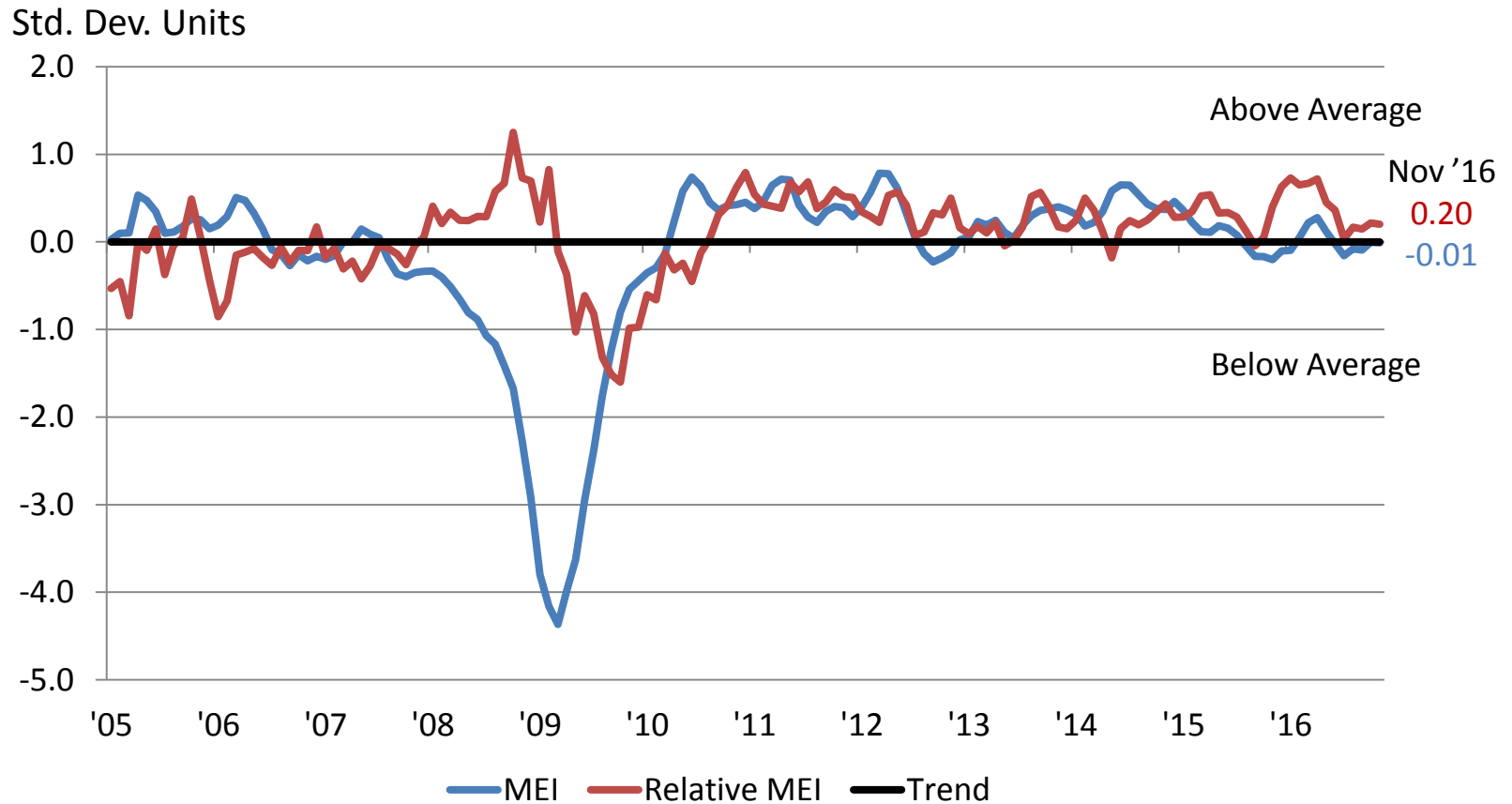
# Economic Data

<https://www.chicagofed.org/research/data/index>



# Midwest Economic Index

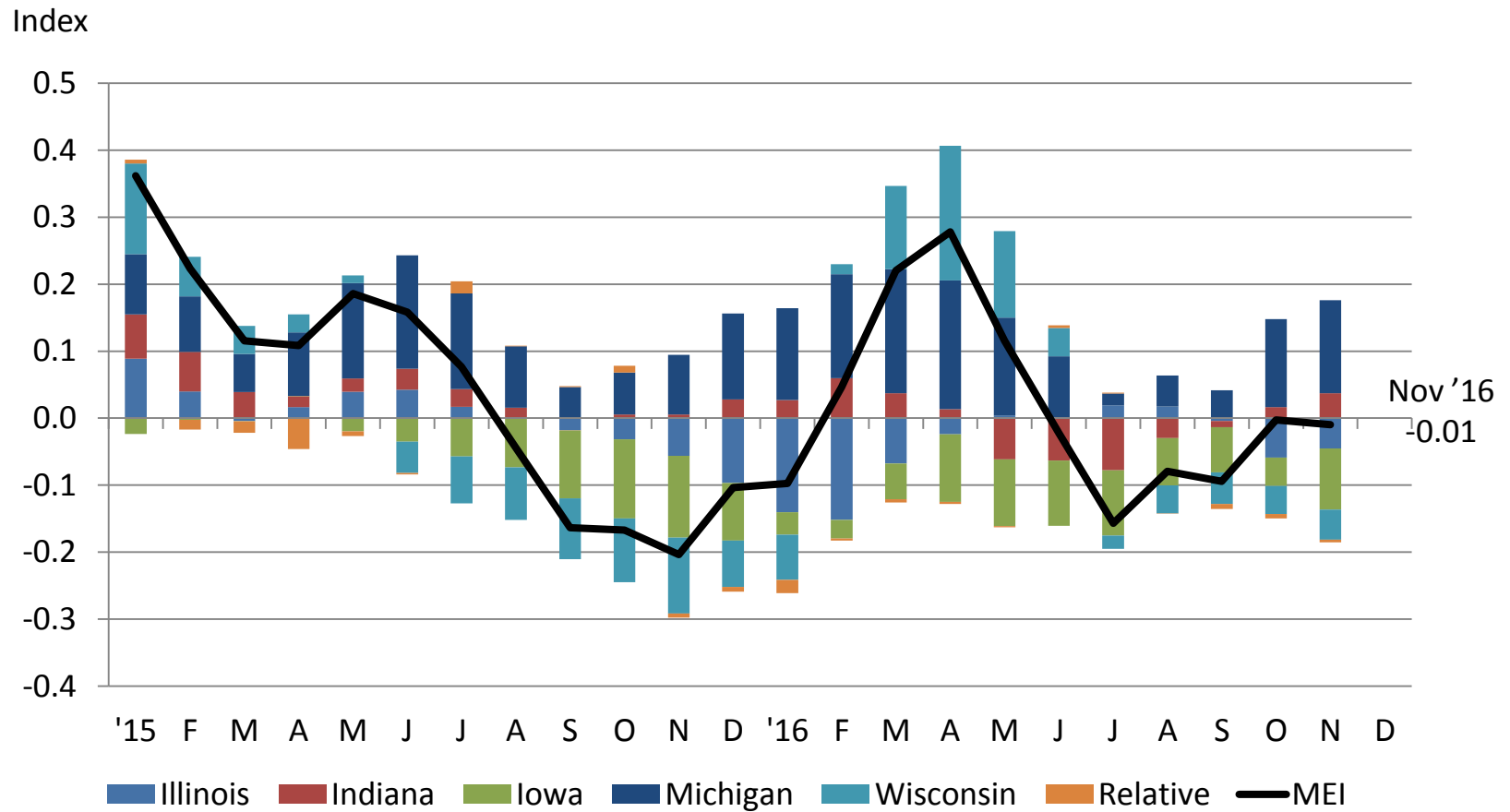
## MEI & Relative MEI



Source: Federal Reserve Bank of Chicago

# Midwest Economic Index

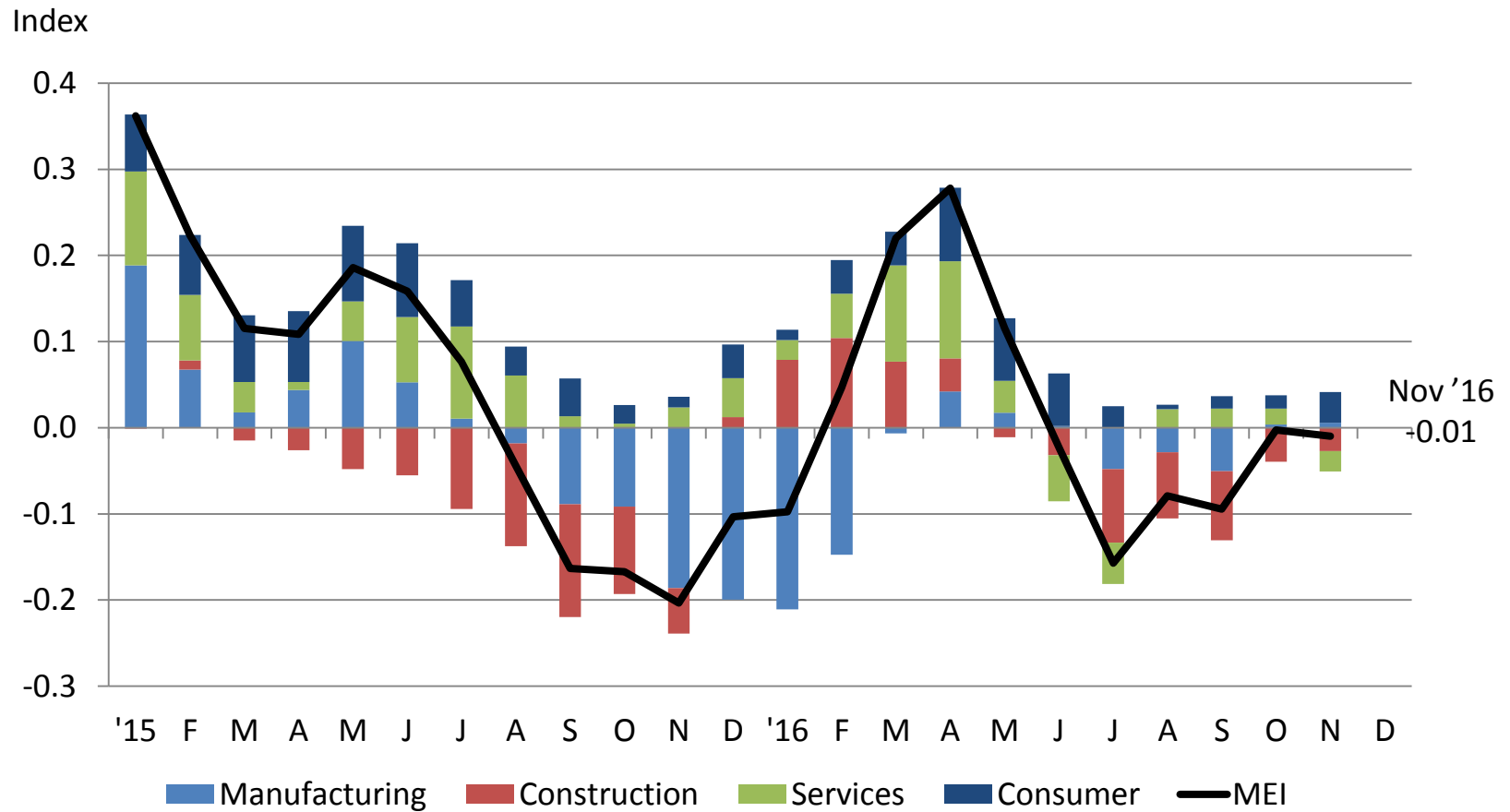
## Contribution by State



Source: Federal Reserve Bank of Chicago

# Midwest Economic Index

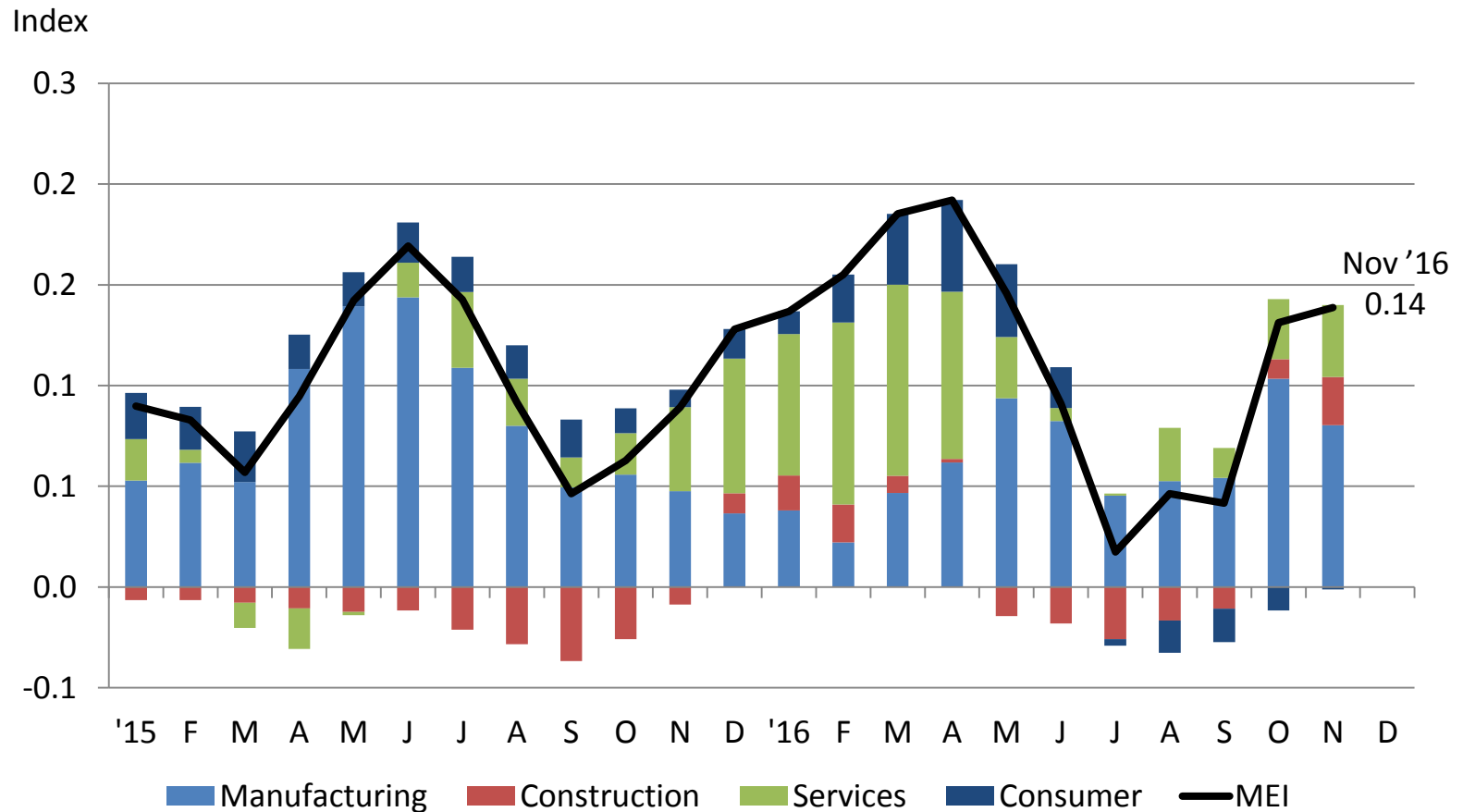
## Contribution by Sector



Source: Federal Reserve Bank of Chicago

# Midwest Economic Index

## Michigan's Contribution by Sector

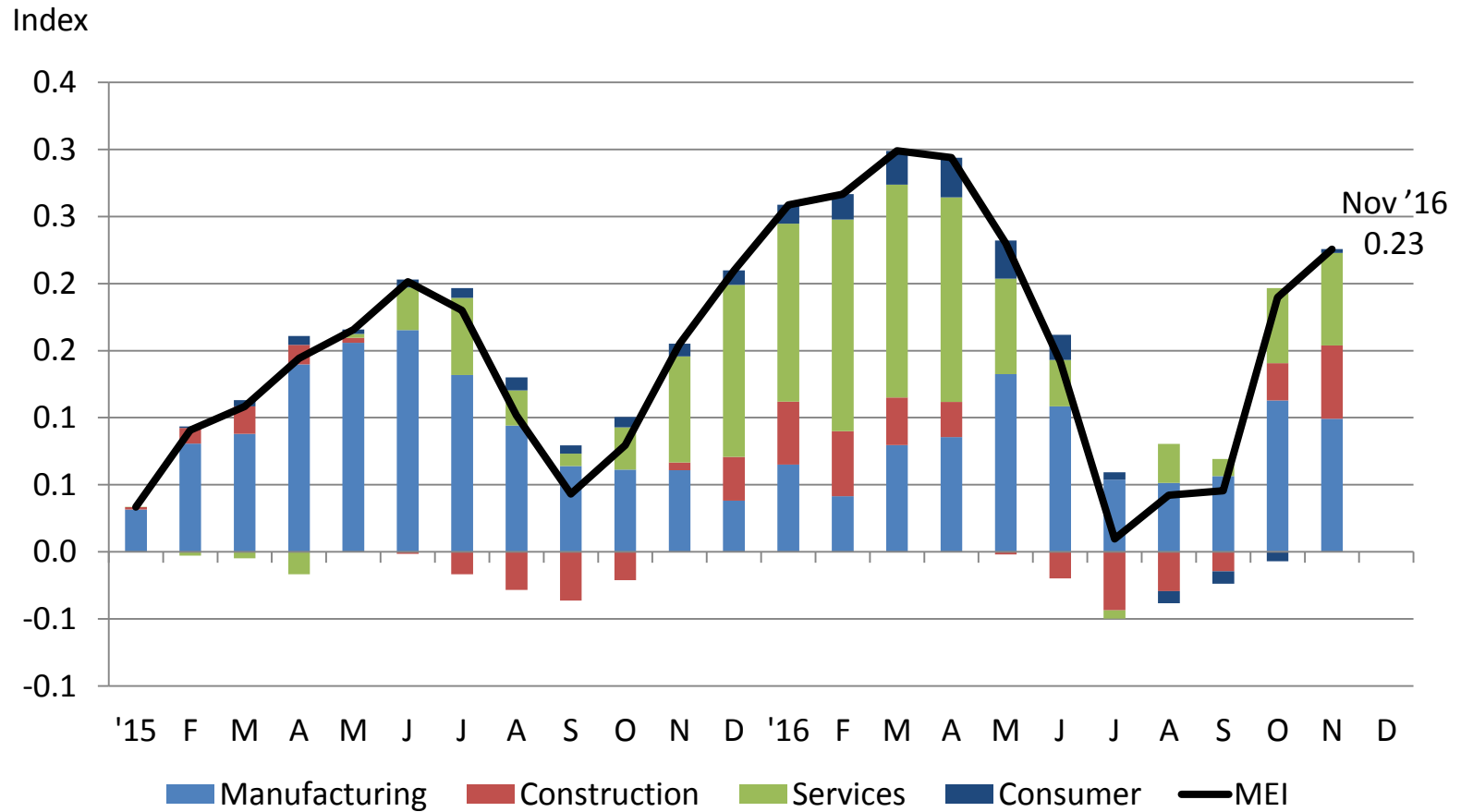


Source: Federal Reserve Bank of Chicago



# Relative Midwest Economic Index

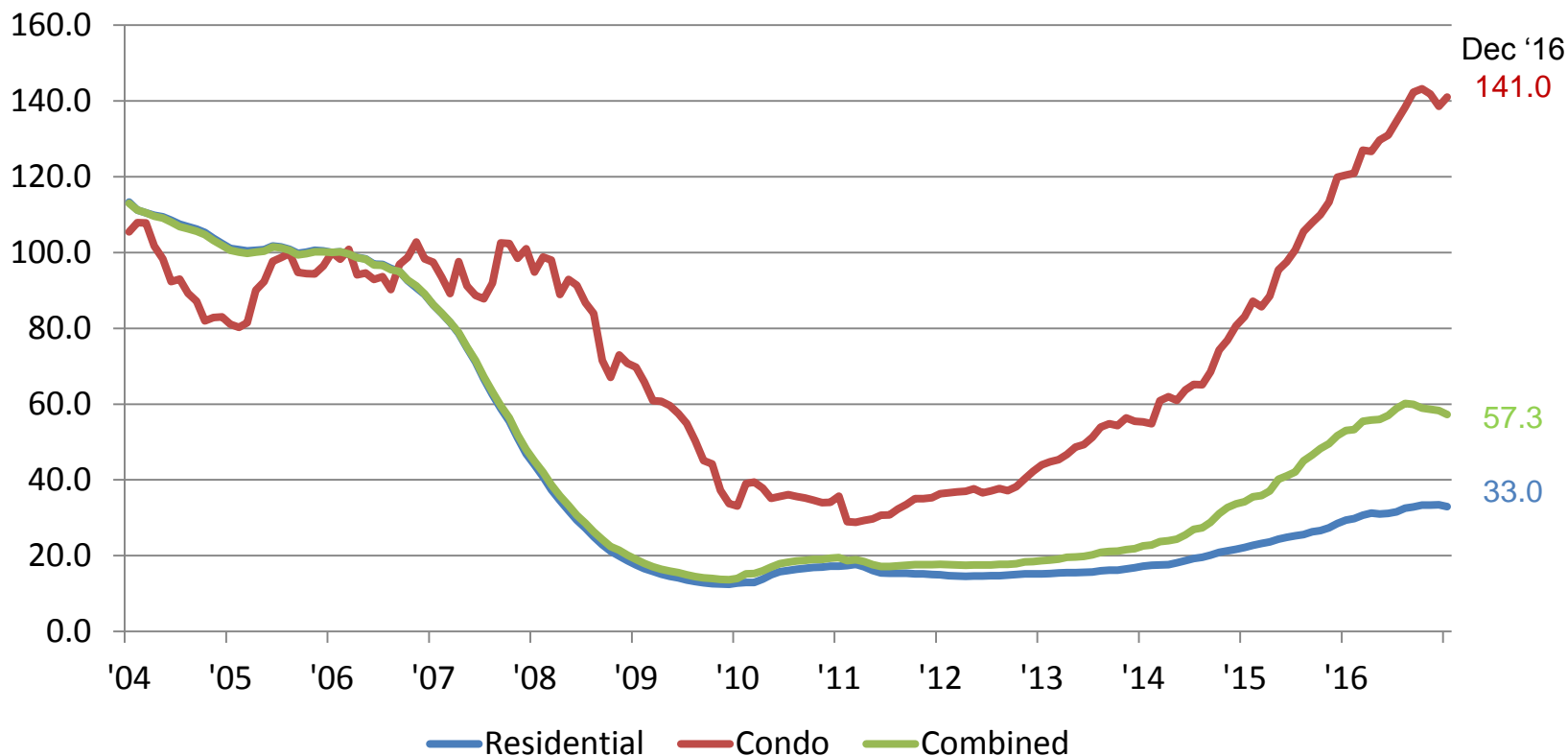
## Michigan's Contribution by Sector



Source: Federal Reserve Bank of Chicago

# Detroit Home Price Index

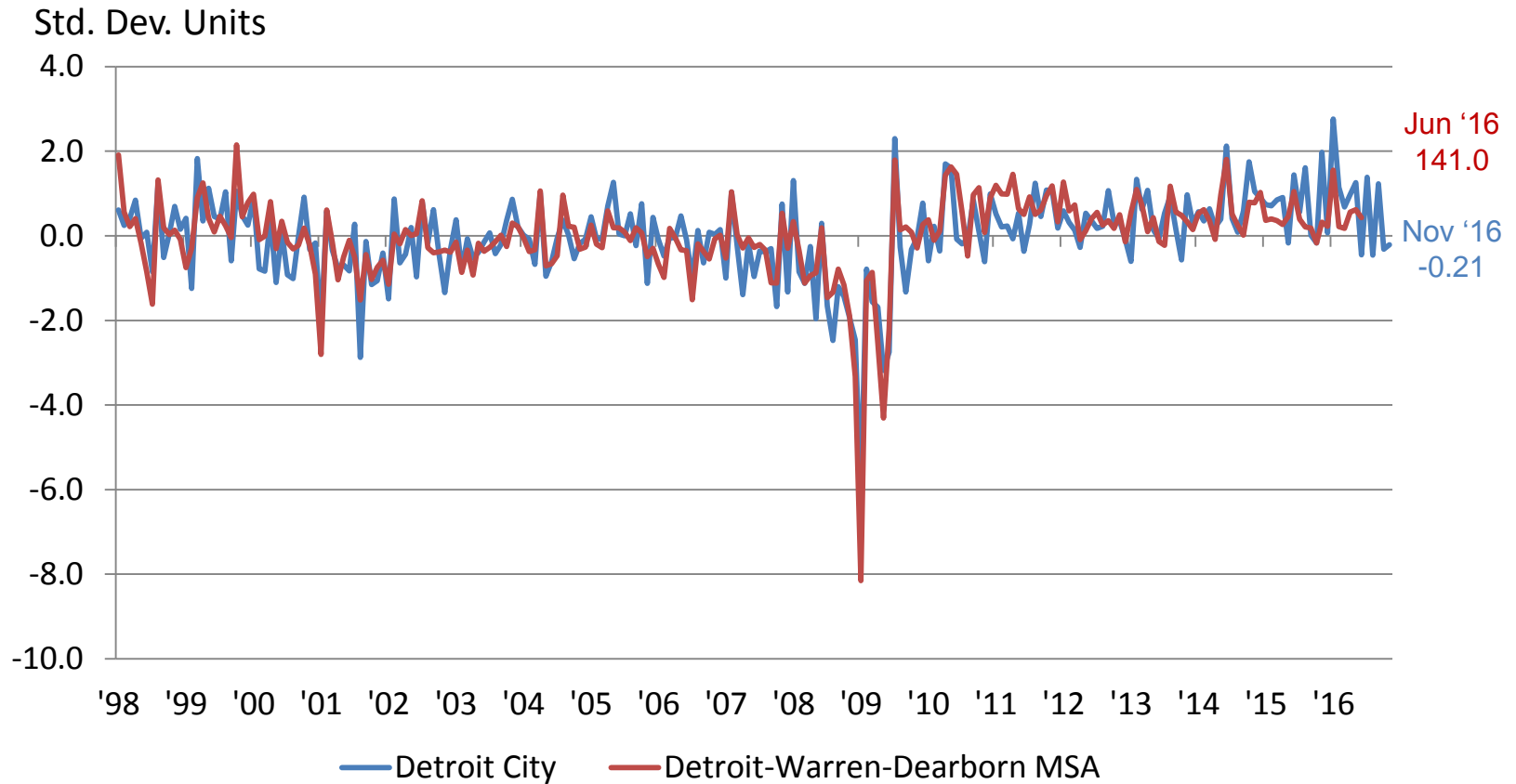
Median Price, Index – 2005 = 100, 12 MMA



Source: Author's calculations using RealComp II, LTD data.

# Detroit Economic Activity Index

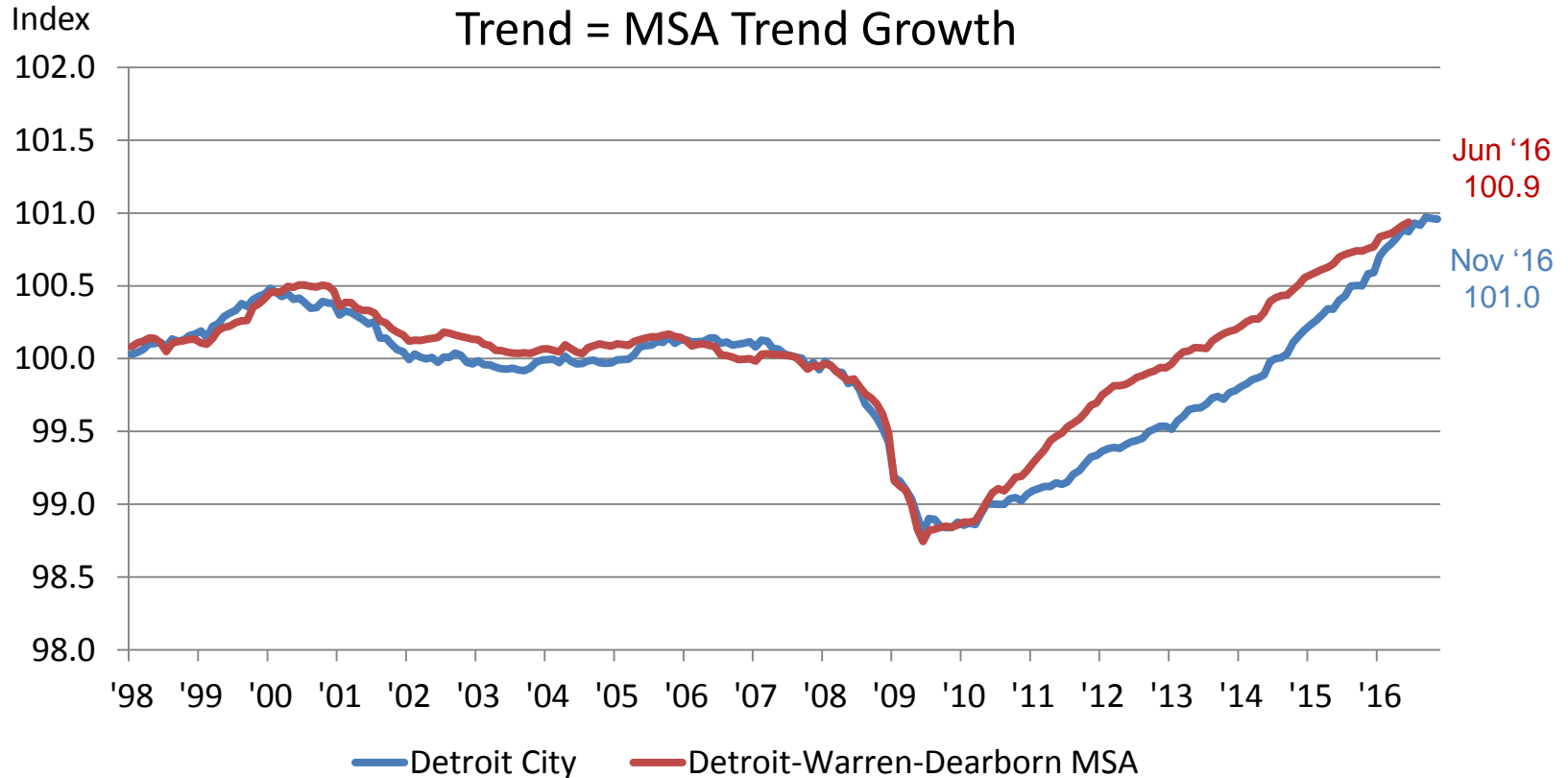
Index, Zero Equals Long-Term Trend Growth



Source: [Federal Reserve Bank of Chicago](#) / [Federal Reserve Bank of St. Louis](#).

# Detroit Economic Activity Index

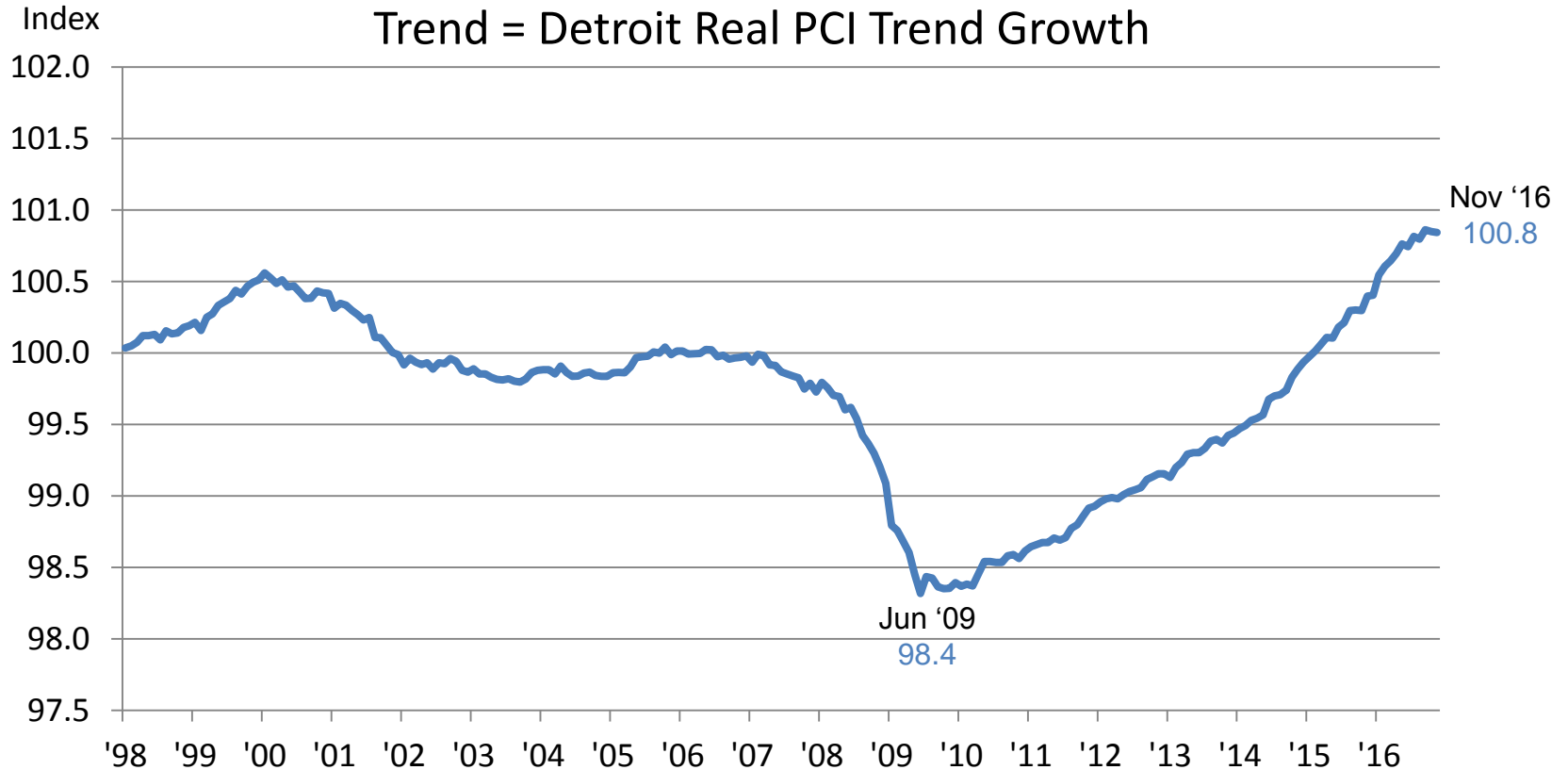
GMP Growth Rate, Index – December 1997 = 100



Source: [Federal Reserve Bank of Chicago](#) / [Federal Reserve Bank of St. Louis](#).

# Detroit Economic Activity Index

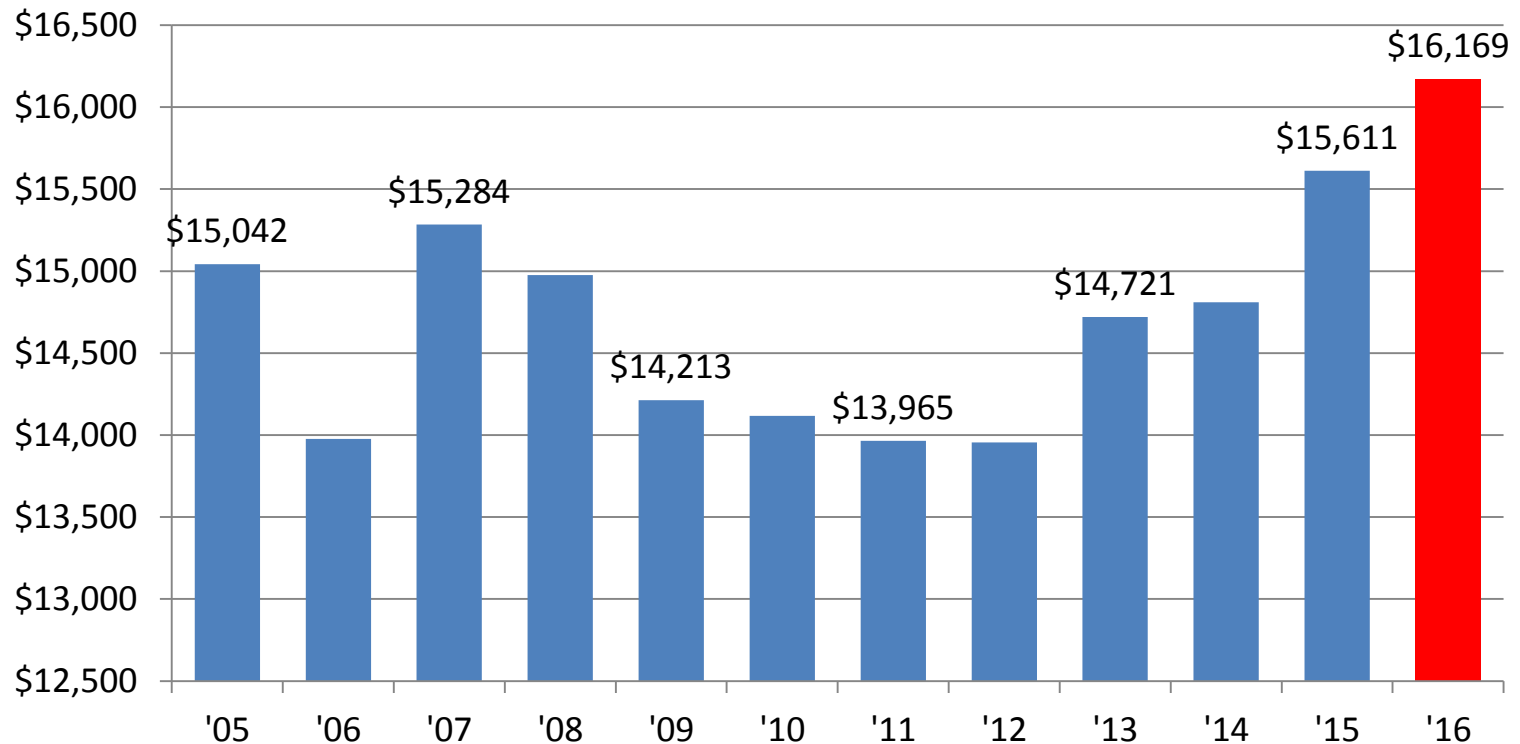
Based to Real Per Capita Income, Index – December 1997 = 100



Source: Federal Reserve Bank of Chicago and American Community Survey

# Detroit Real Per Capita Income

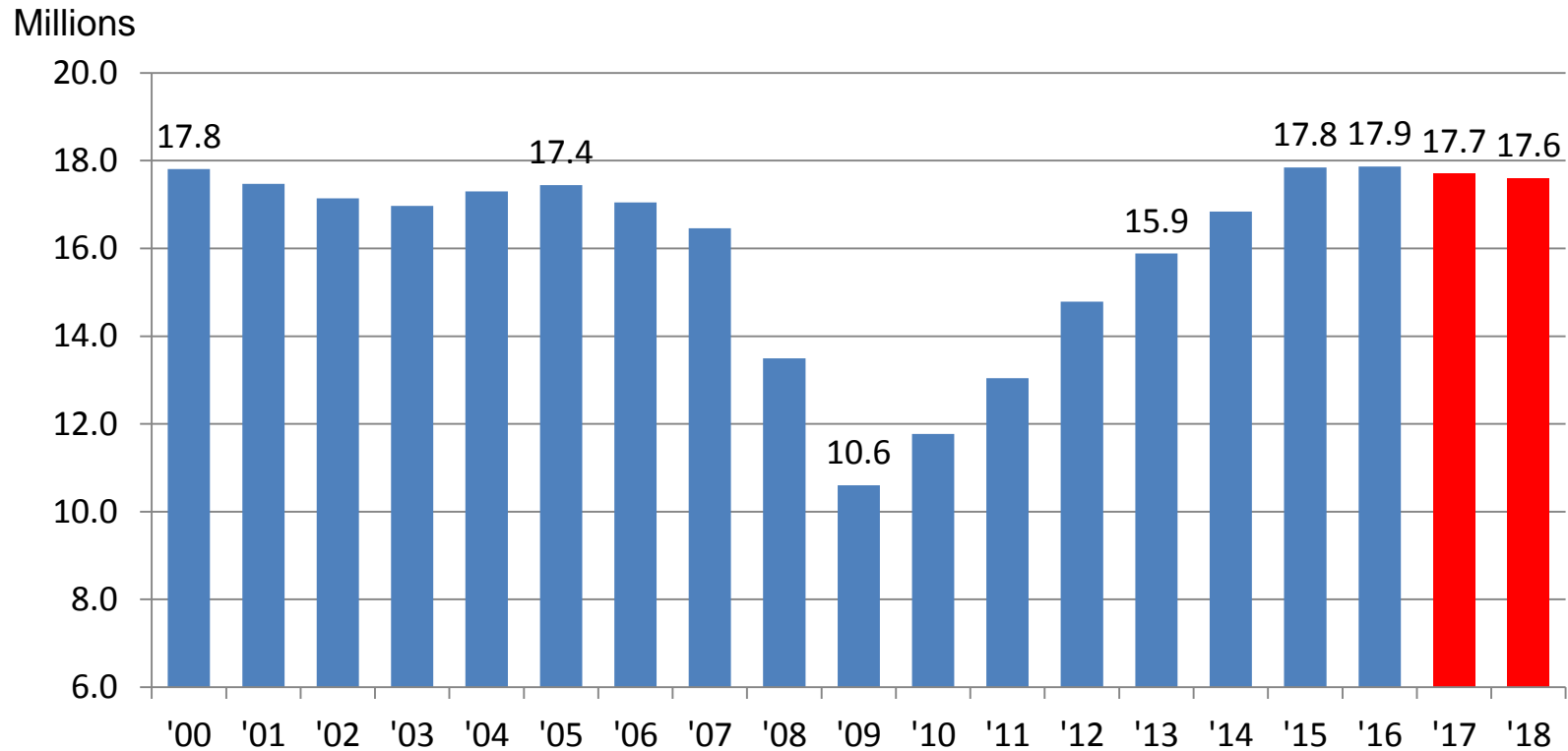
Inflation Adjusted \$2009



Source: Federal Reserve Bank of Chicago and American Community Survey

# U.S. Total Vehicle Sales

Millions of Units



Note: Total 2016 Light Vehicle Sales: 17,465,020 / Including M/H: 17,866,260.

Source: Ward's Automotive and BEA

# U.S. Light Vehicle Incentives

As Percent of Transaction Price - SA

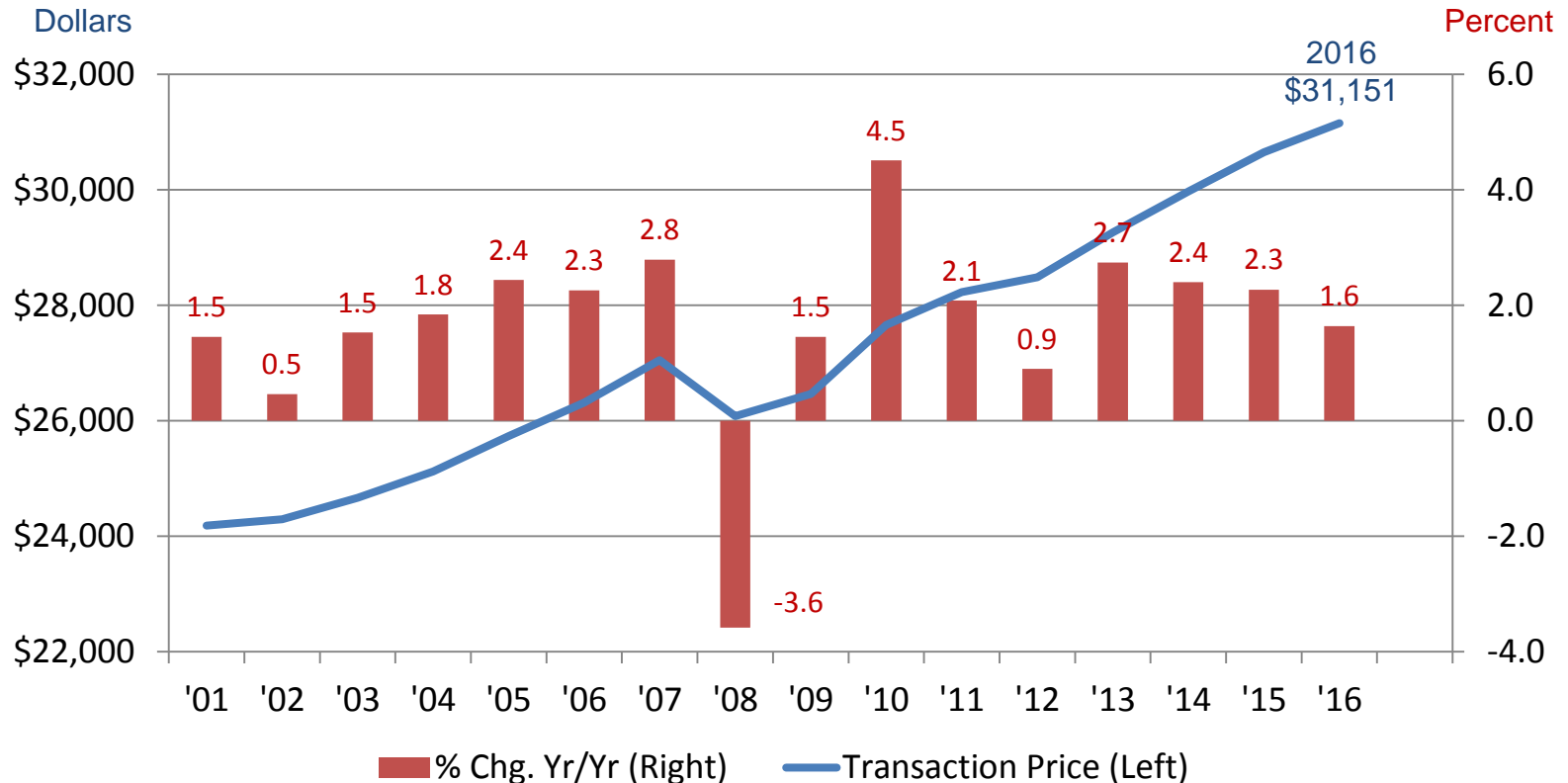


Source: Author's calculation using Ward's Automotive and J.D Power data.



# Light Vehicle Transaction Price

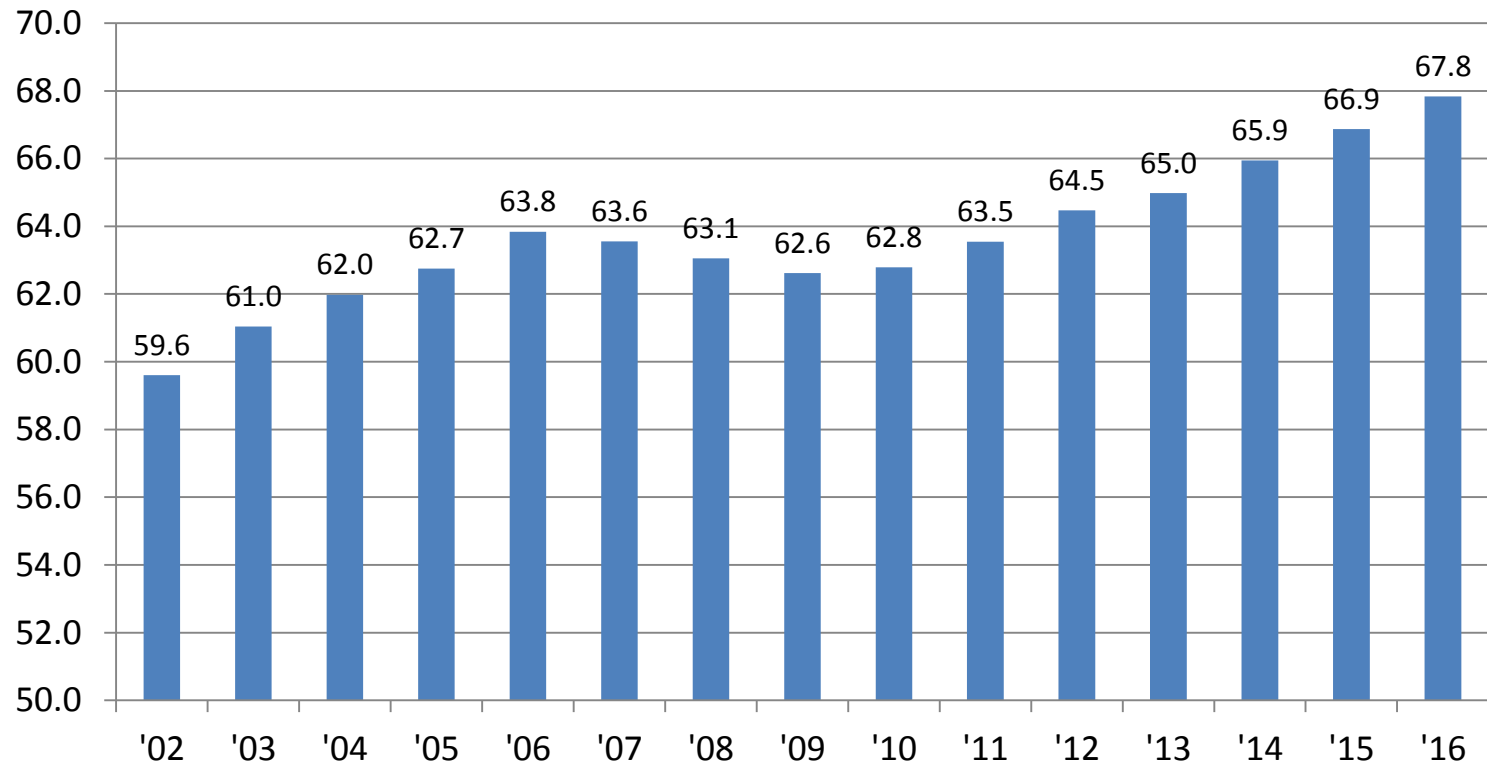
Annual Average & Percent Change Yr./Yr.



Source: Author's calculation using J.D Power data.

# Finance Term

## Length of Loan in Months

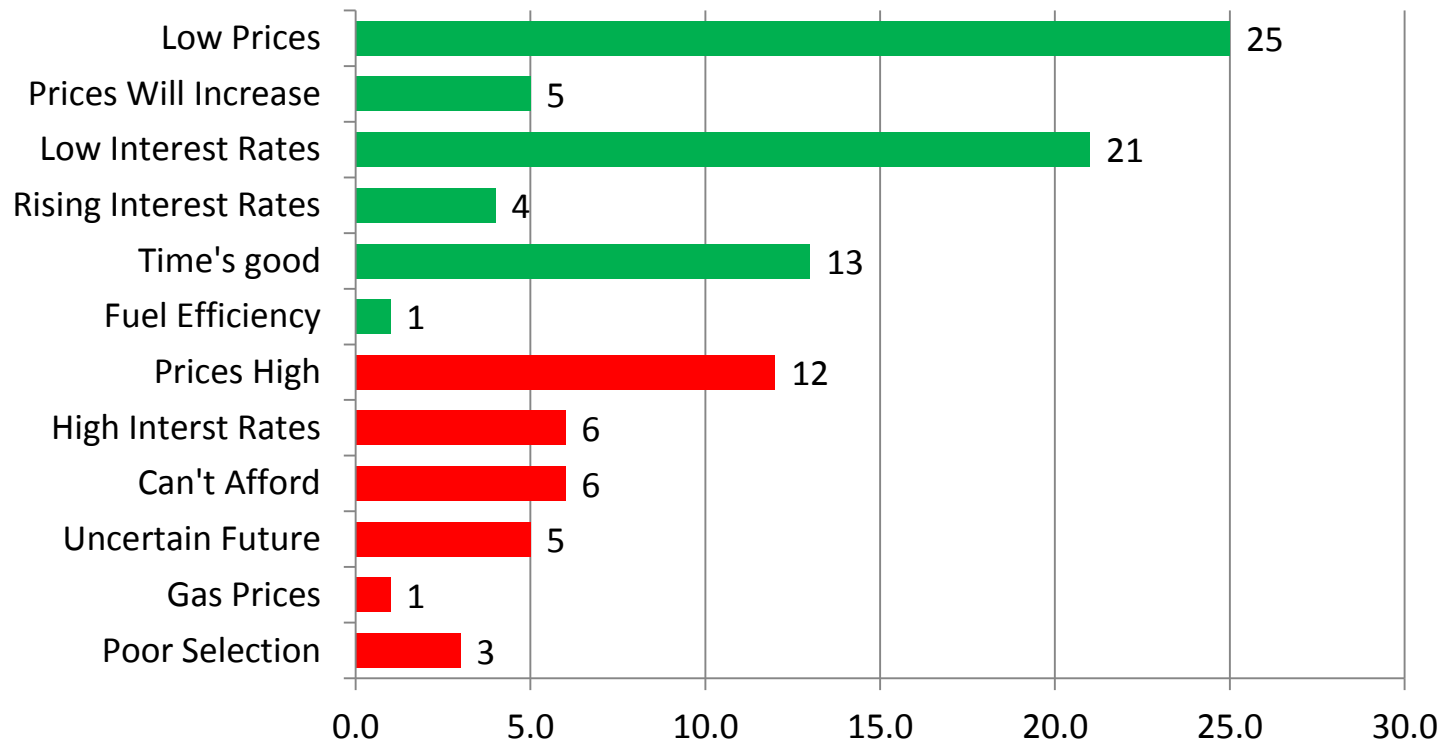


Source: J.D Power data.

# Reasons for Buying Conditions for Vehicles

University of Michigan

Good / Bad Reason: *Why do you say so?*



Note: May add to more than a 100 due to multiple mentions.

Source: University of Michigan Survey of Consumers

# Light Vehicle Trend

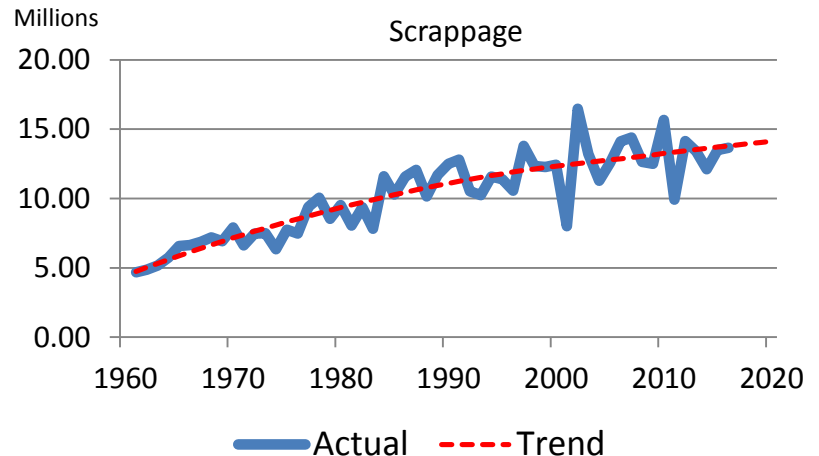
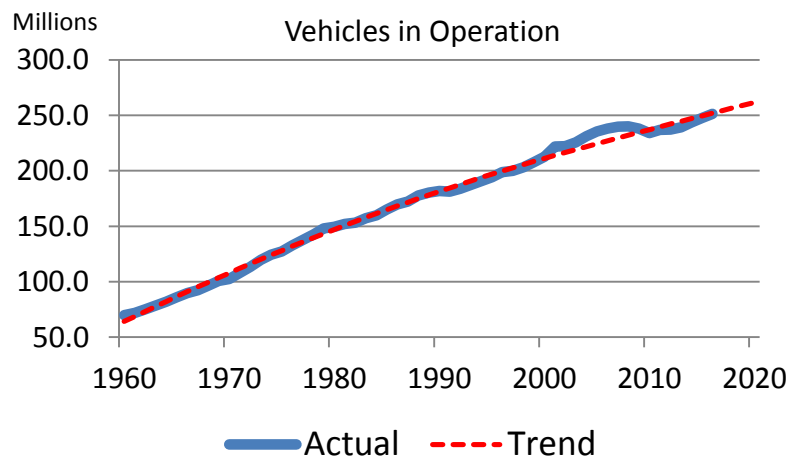
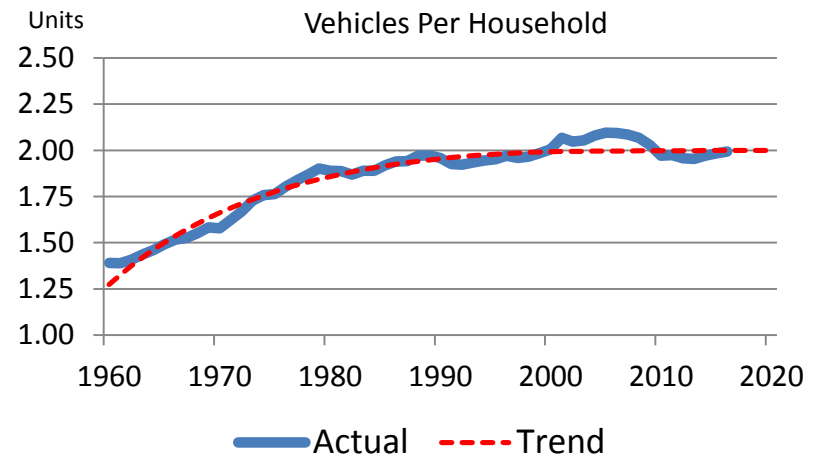
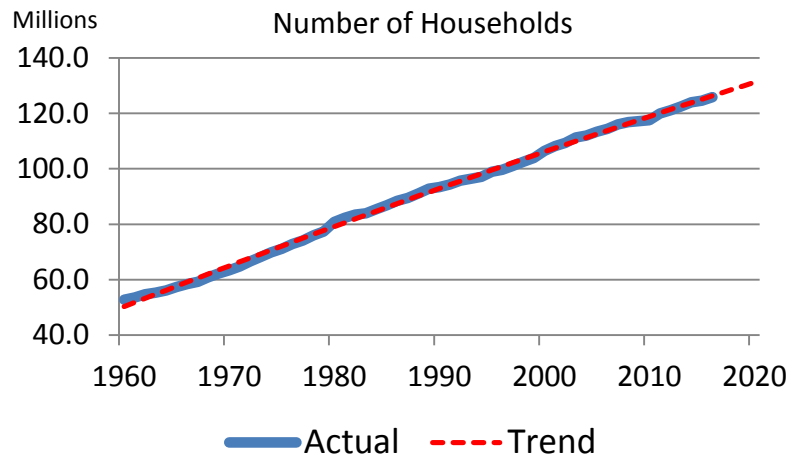
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## Stock Adjustment Model Drivers

1. Household Formation
2. Vehicles Per Household
3. Vehicles in Operation
4. Scrappage

# Light Vehicle Trend

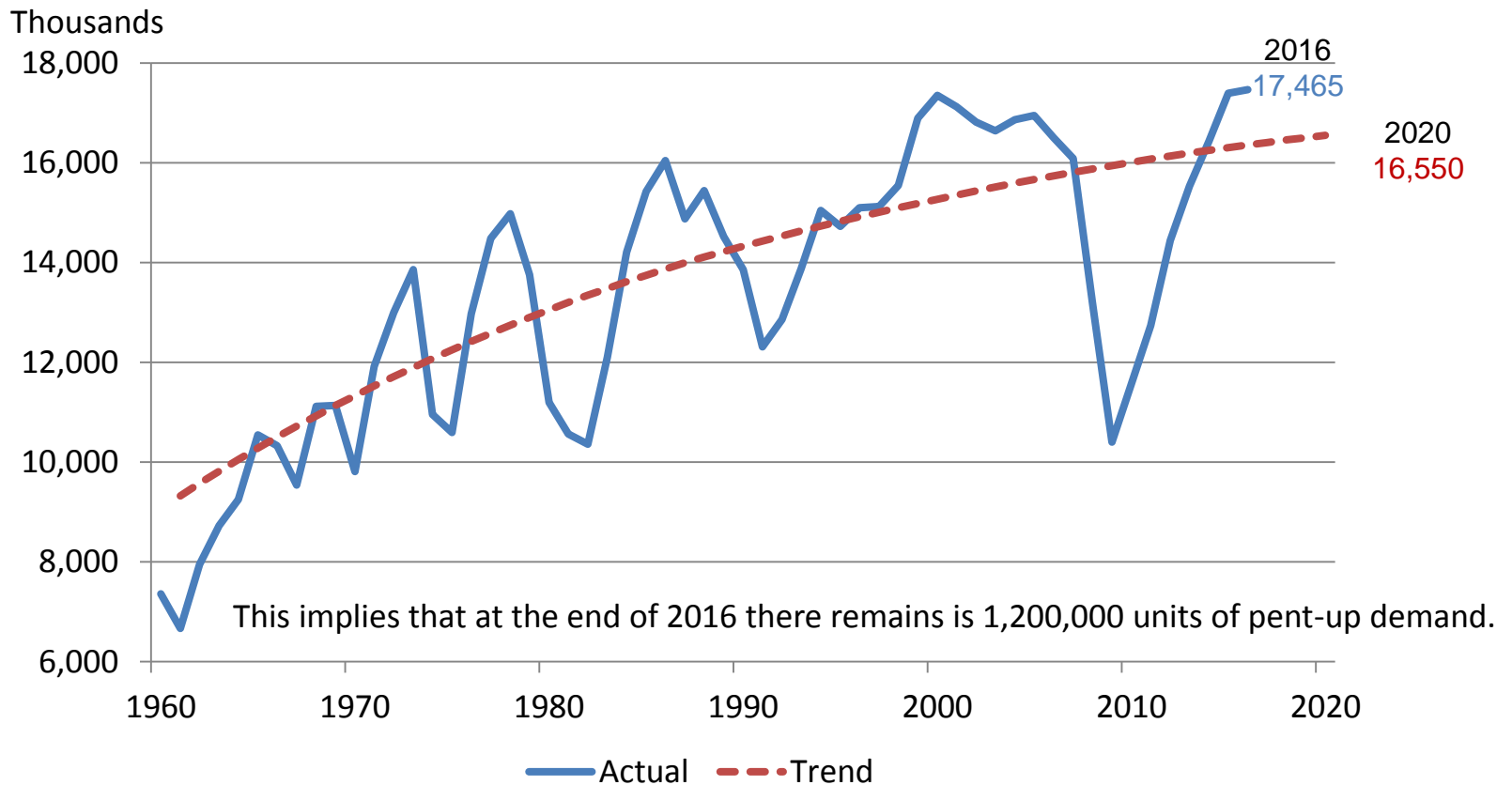
## Stock Adjustment Model Drivers



Source: Author's calculations using Wards, U.S. DOT, and U.S. Census Bureau.

# Light Vehicle Sales and Trend

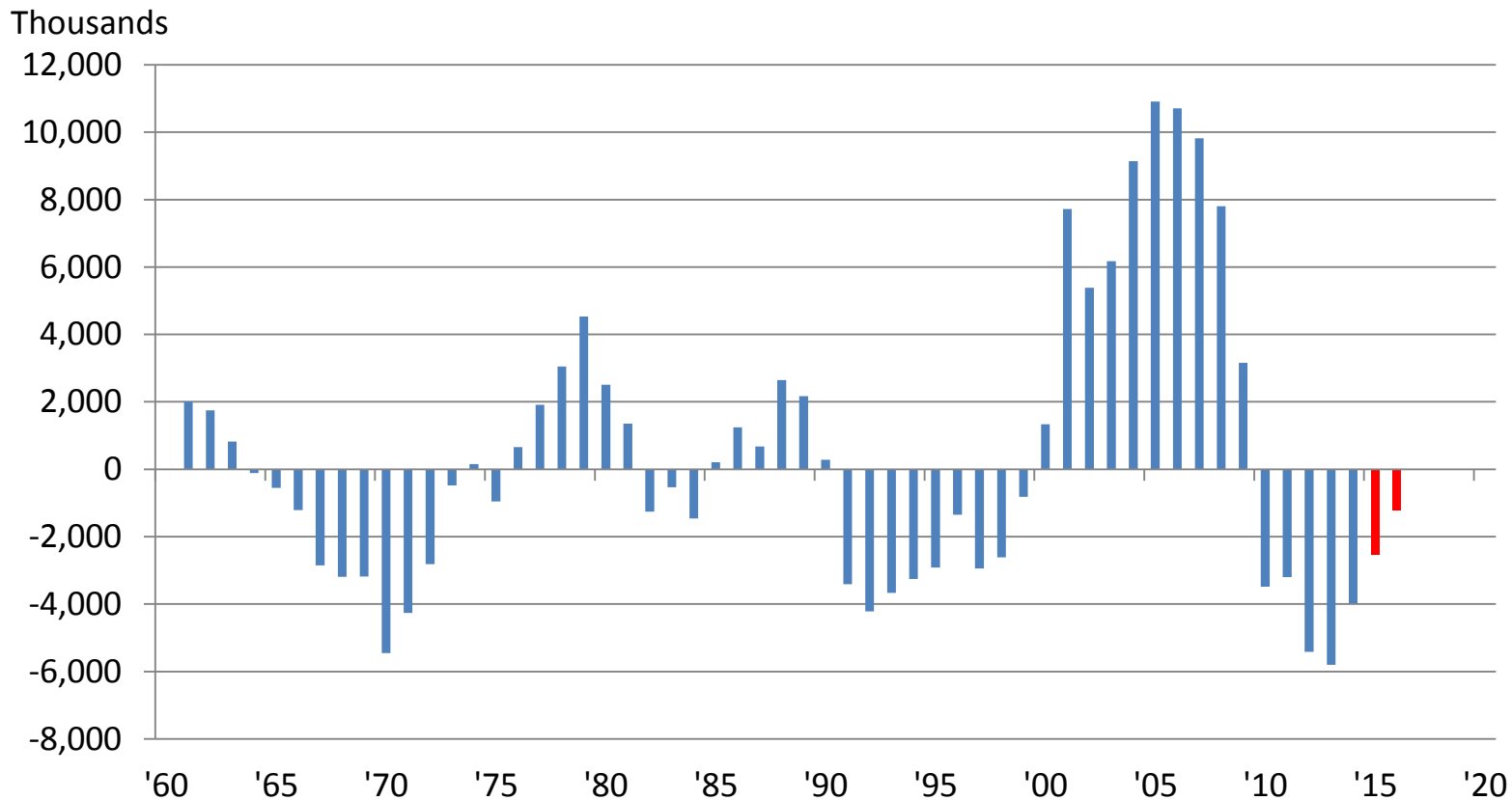
Thousands of Units



Source: Author's calculations using Wards, U.S. DOT, and U.S. Census Bureau.

# Light Vehicle Pent-up Demand

Thousands of Units



Source: Author's calculations using Wards, U.S. DOT.

*Thank You!*

