

# Economic Update

## Birmingham Bloomfield Chamber

**Federal Reserve Bank of Chicago**  
January 19, 2018

**Paul Traub**  
Senior Business Economist



# Main Economic Indicators

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## Year-over-year Comparison

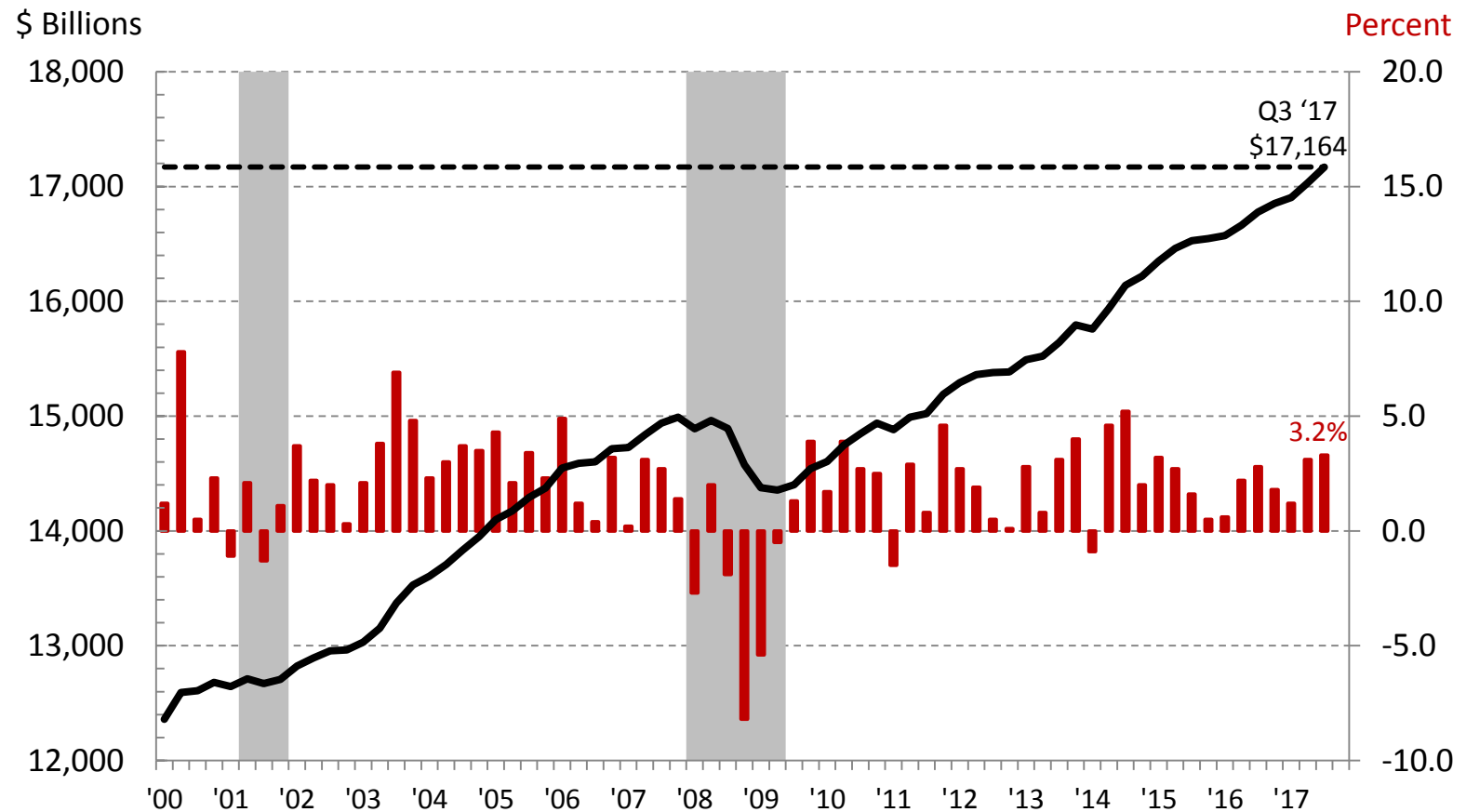
	<u>2015</u>	<u>2016</u>	<u>2017</u>
GDP – Annual Growth Rate <sup>1</sup>	2.0%	1.8%	2.3%
Unemployment Rate <sup>2</sup>	5.3%	4.9%	4.4%
Participation Rate <sup>2</sup>	62.7%	62.8%	62.8%
Nonfarm Job Growth <sup>3</sup>	226.1	186.7	171.3
PCE Core Inflation Yr. / Yr. <sup>4</sup>	1.3%	1.8%	1.5%

1. Year-over-year - 2015 & 2016 Q4/Q4, 2017 Q3/Q3
2. Annual Average
3. Average Monthly Job Growth in Thousands- SA
4. Percent Change Year-over-year PCE Core – Annual Average & November 2017 YTD

Source: U.S. Bureau of Economic Analysis, Census Bureau and Bureau of Labor Statistics

# U.S. Real GDP

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

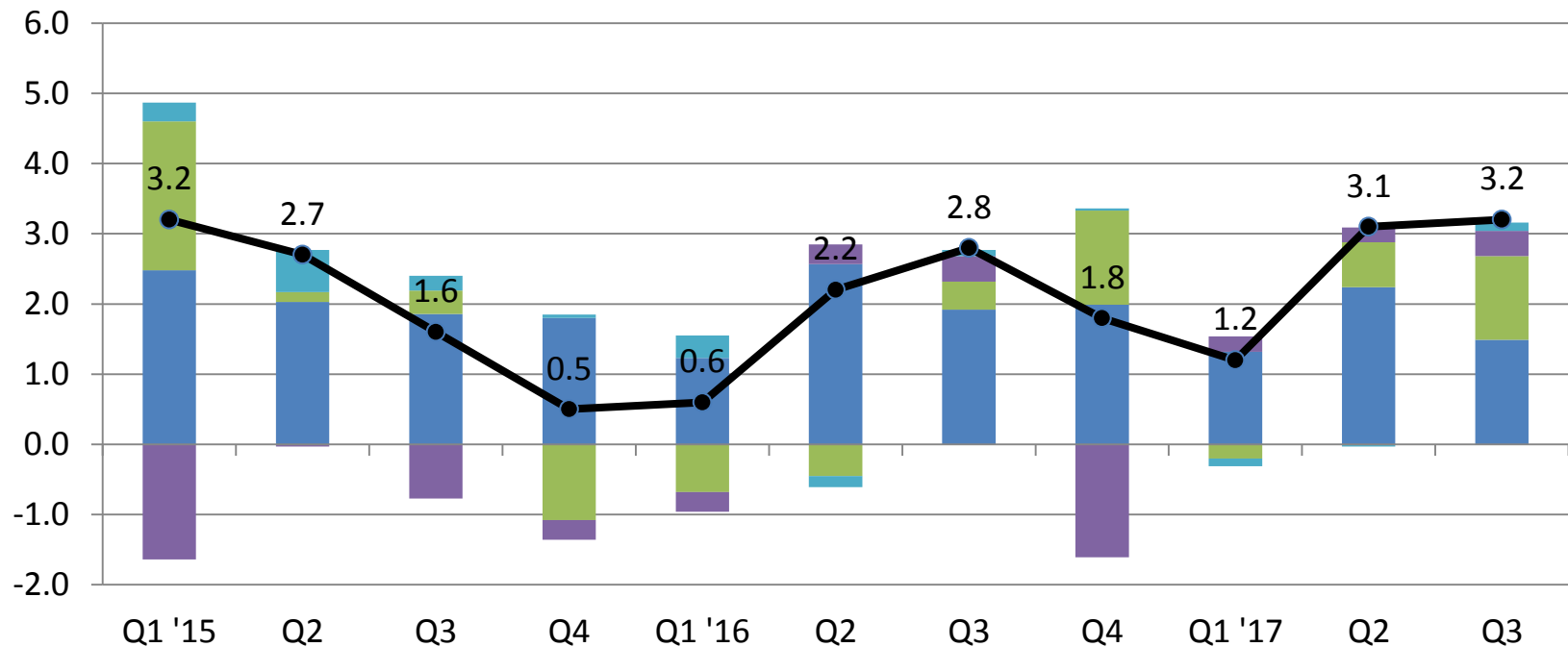


Source: U.S. Bureau of Economic Analysis

# U.S. Real GDP

## GDP and Contribution to Percent Change, Q/Q at SAAR

Percent

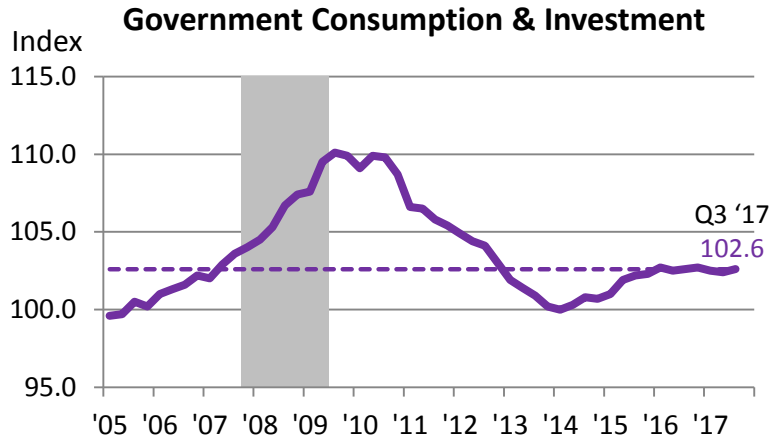
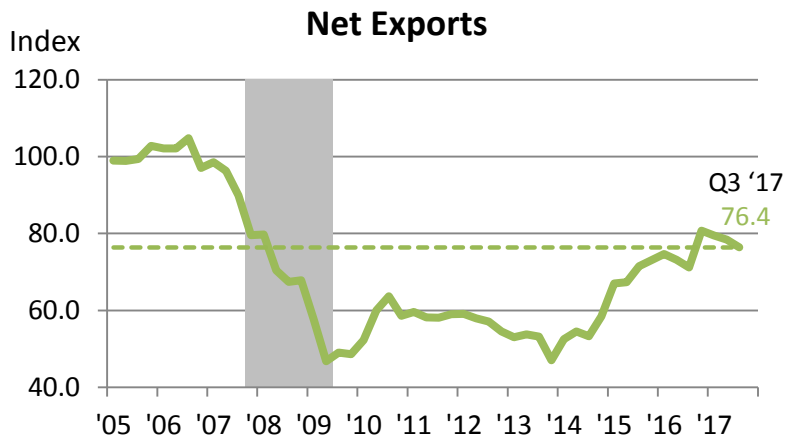
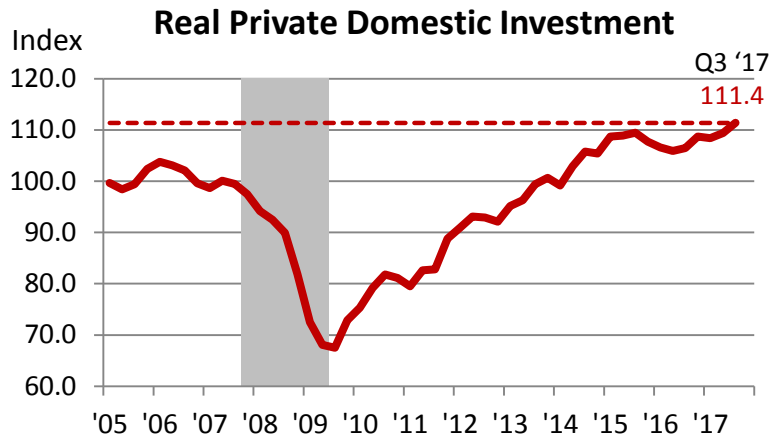
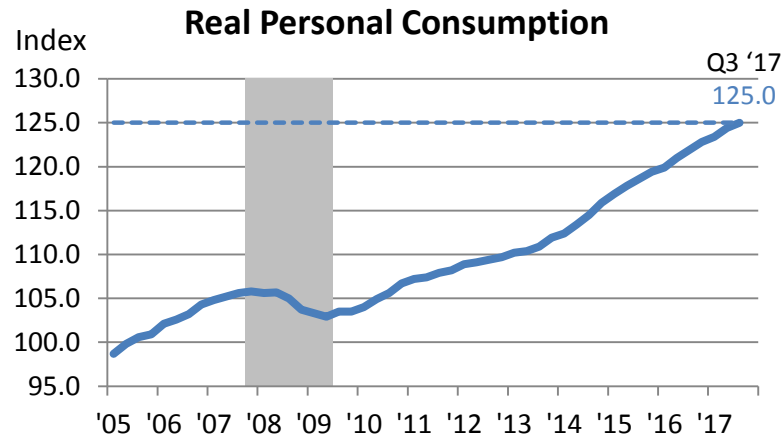


	PCE	Private Investment	Net Exports	Government	GDP
Q3 2017 Contribution	1.5%	1.2%	0.4%	0.1%	3.2%
Share of GDP	69.4%	17.3%	-3.5%	16.9%	

Source: U.S. Bureau of Economic Analysis, and FRB of St Louis FRED database.

# Real GDP by Sector

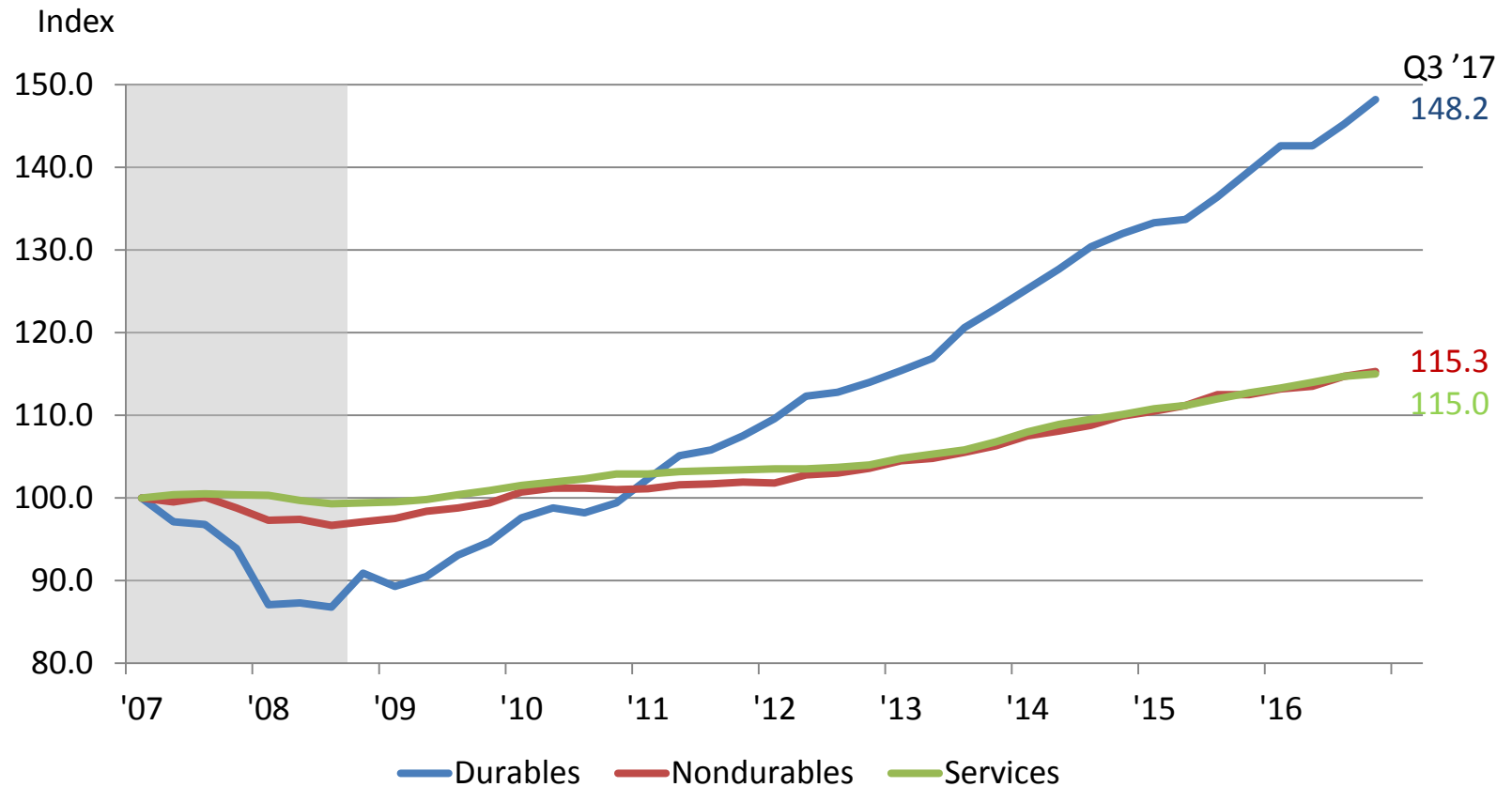
C + I + G + Nx, Index – 2005 = 100



Source: Author's calculations using U.S. Bureau of Economic Analysis data.

# Real Personal Consumption Expenditures

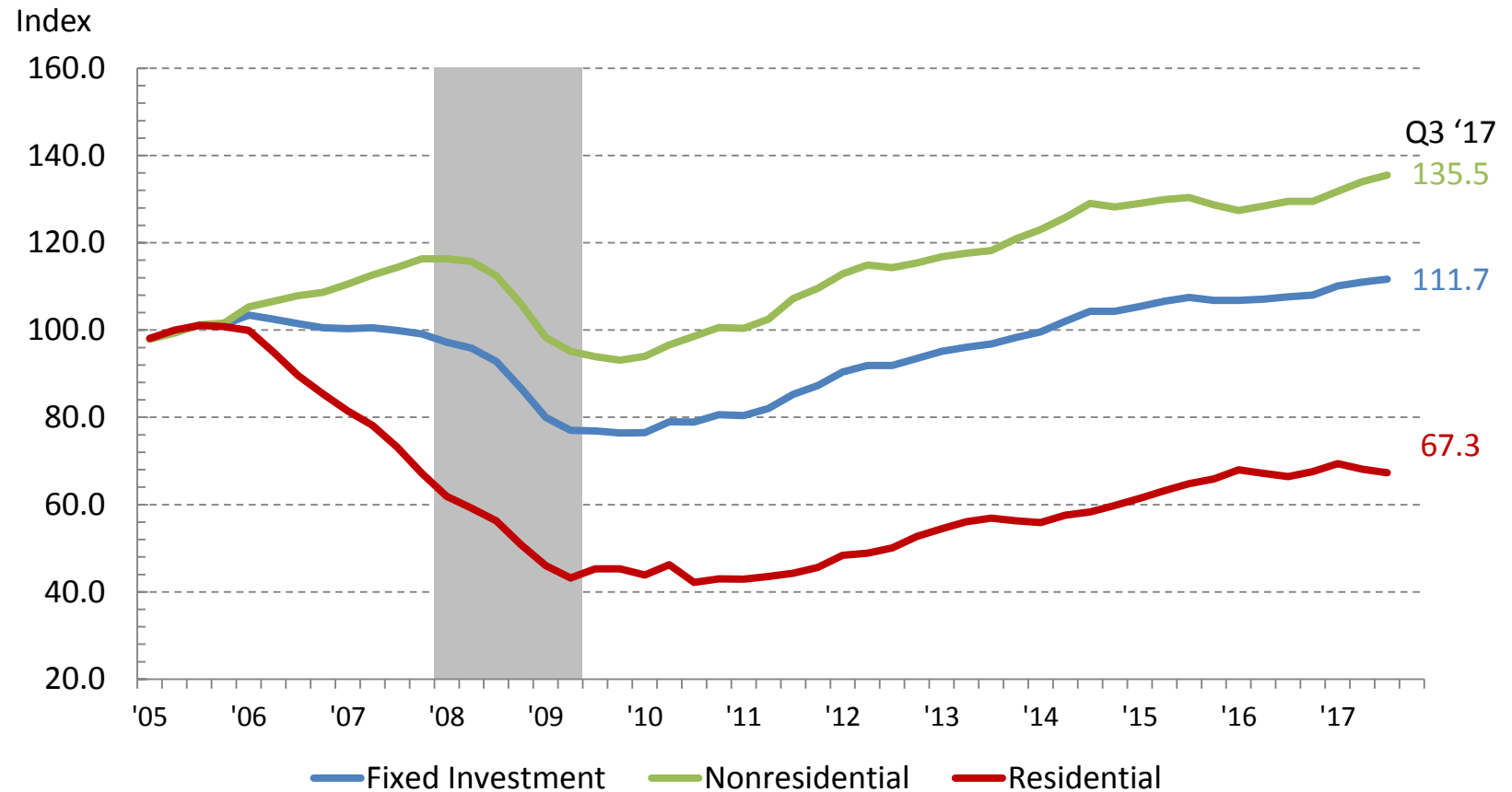
Index, Q4 2007 = 100



Source: Author's calculations using data from the BEA

# Real Private Fixed Investment

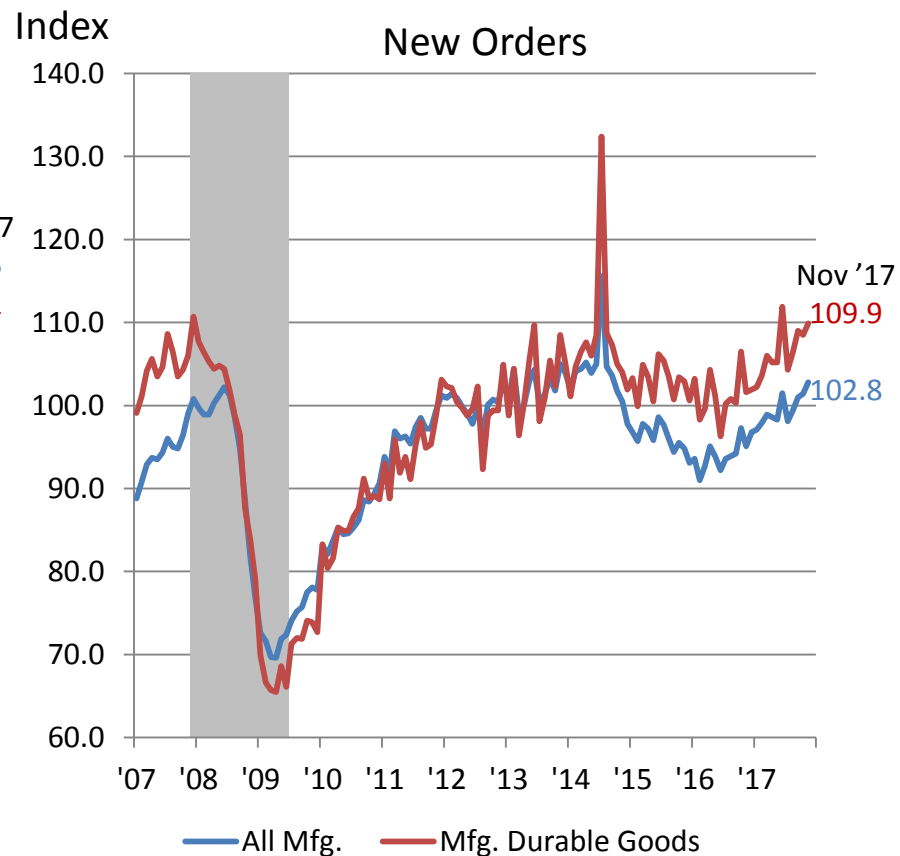
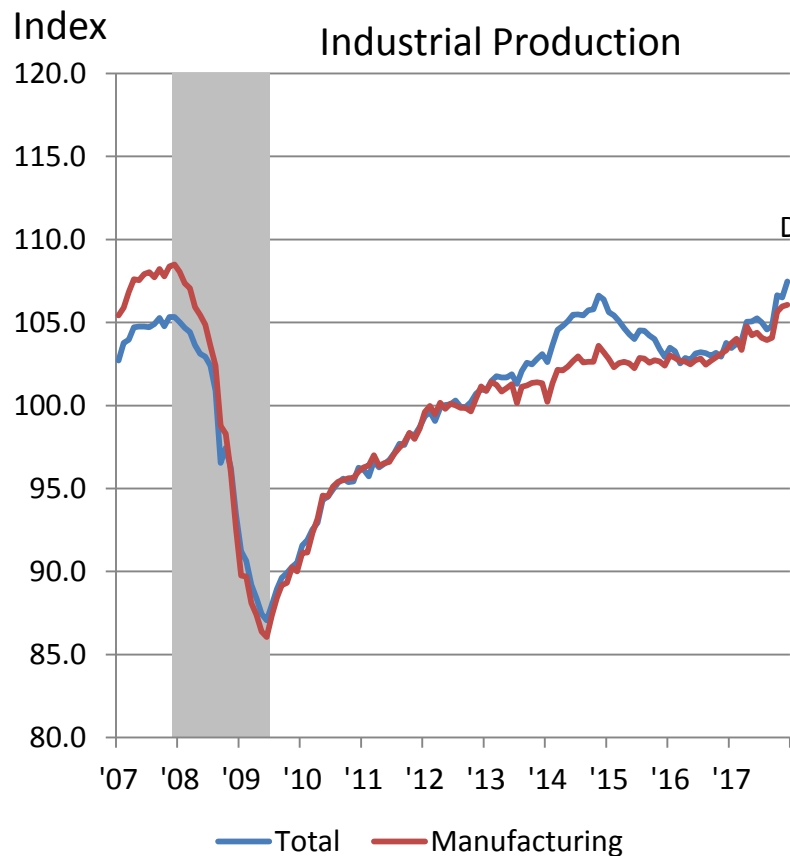
Billions Chained \$2009, Index – 2005 = 100



Source: U.S. Bureau of Economic Analysis

# Industrial Production & New Orders

Index, 2012 = 100

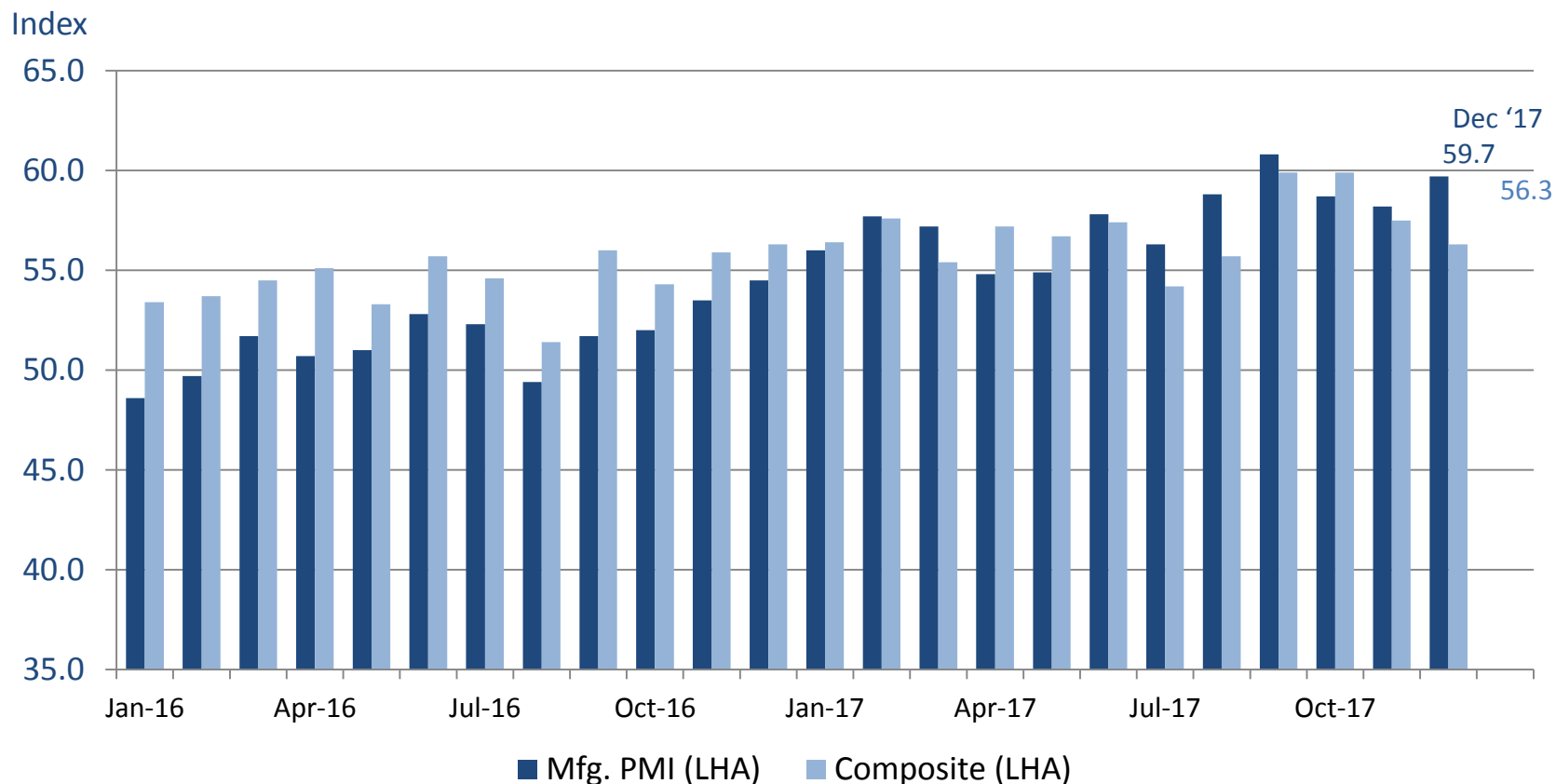


Source: Board of Governors, Federal Reserve and U.S. Census Bureau



# ISM Purchasing Managers Index

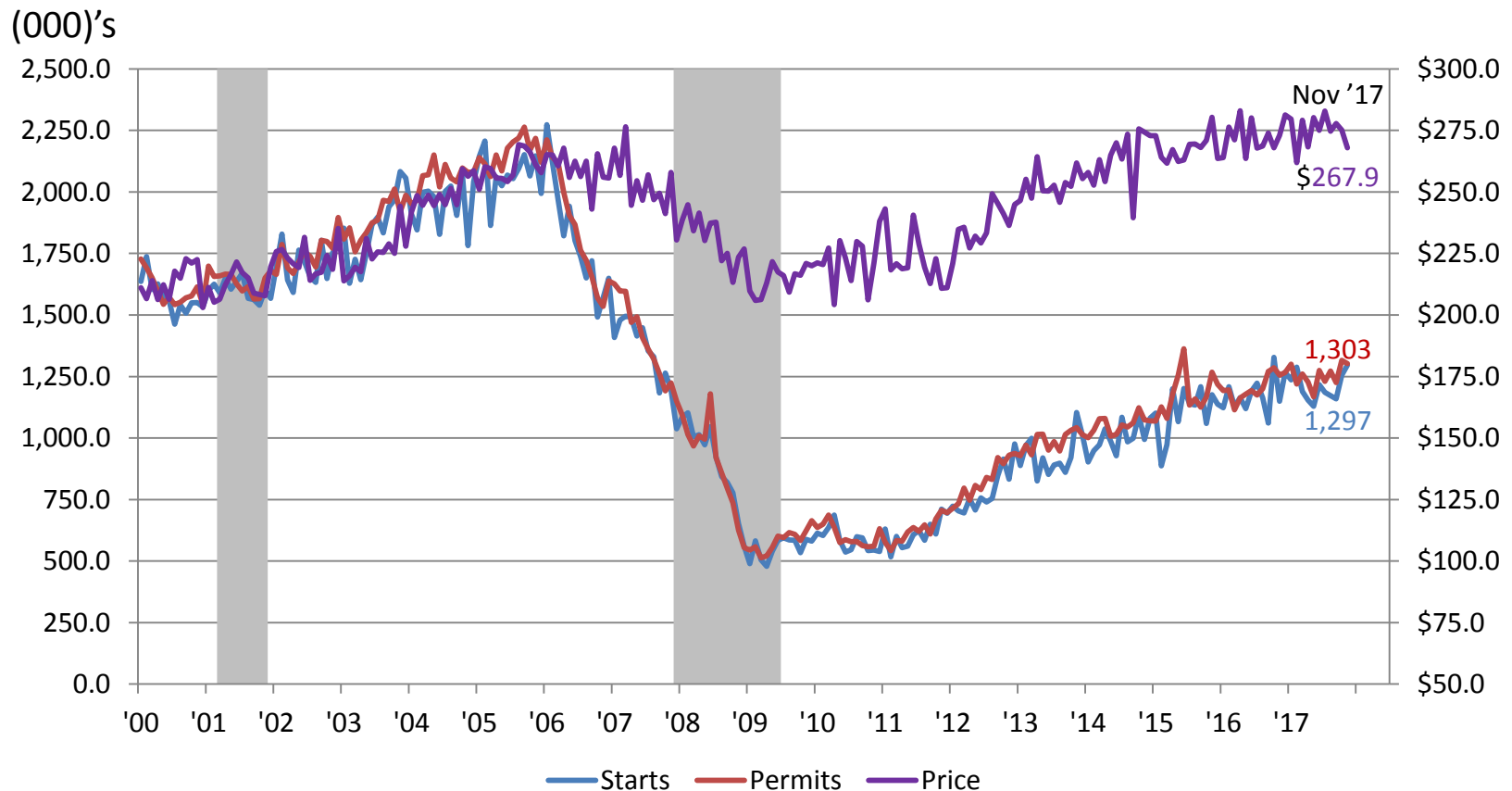
Manufacturing & Composite, SA - Greater than 50 = Expansion



Source: Institute for Supply Management , Haver Analytics and FRED

# New Private Housing

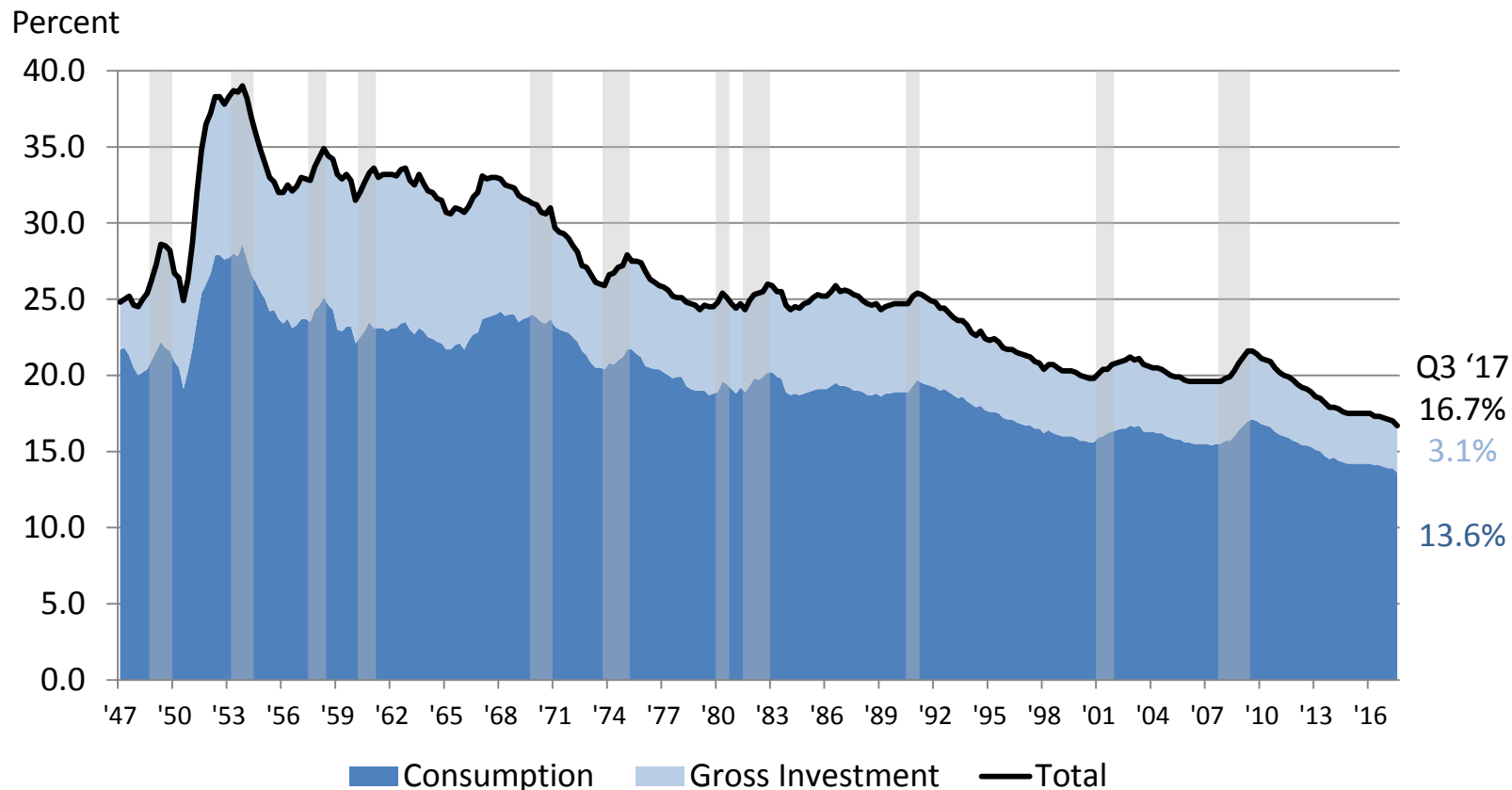
Starts, Permits & Real Median Sales Price – Units (SAAR) / \$2009



Source: Board of Governors, Federal Reserve and U.S. Census Bureau

# Real Government Consumption & Gross Investment

Percent of Total Real GDP - \$2009



Source: Author's calculations using U.S. Bureau of Economic Analysis data.

# The U.S. Dollar and Trade Deficit

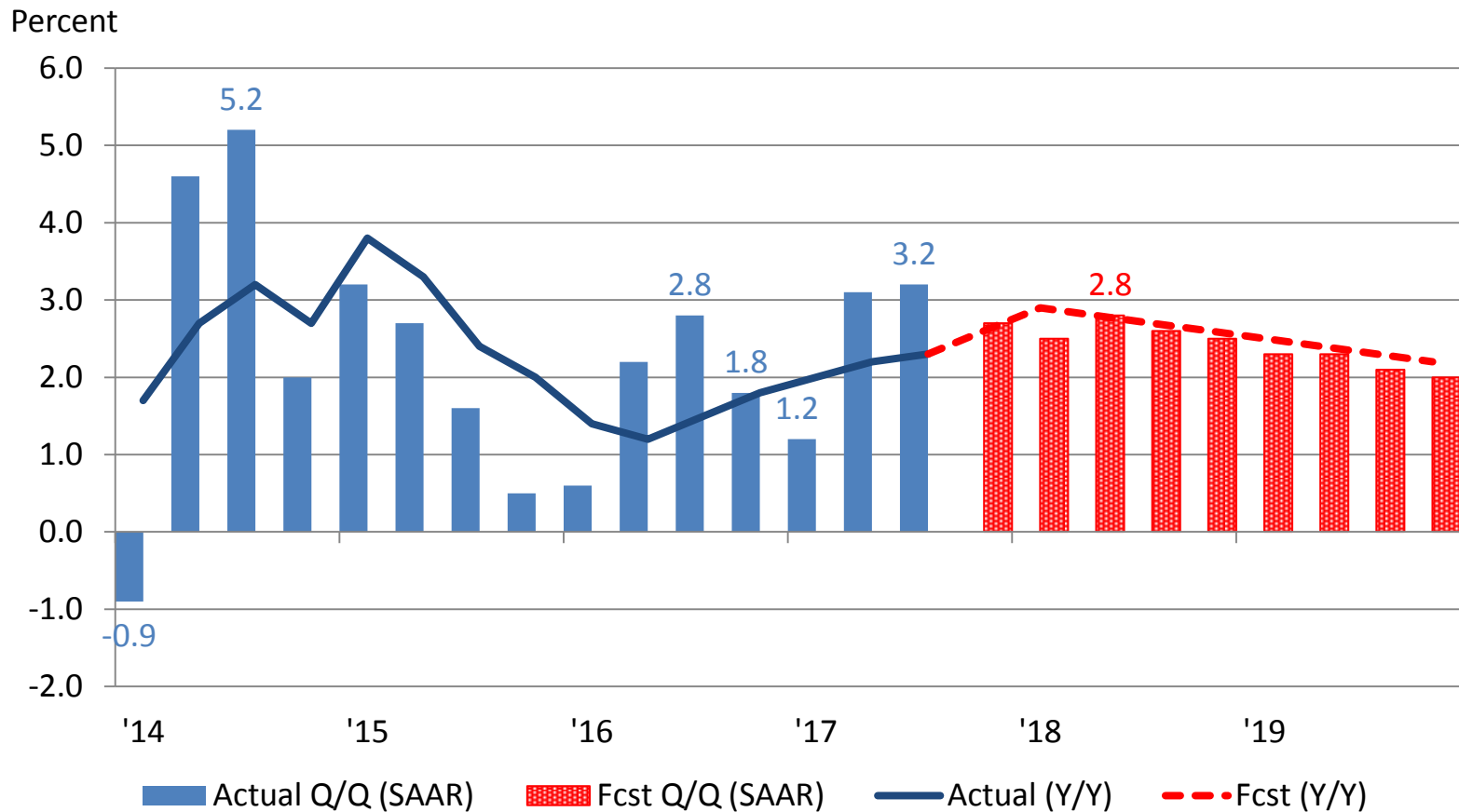
U.S> Dollar & Import Prices - Index 2012 = 100



Source: Board of Governors, Federal Reserve and Bureau of Labor Statistics.

# U.S. Real GDP Blue Chip Forecast

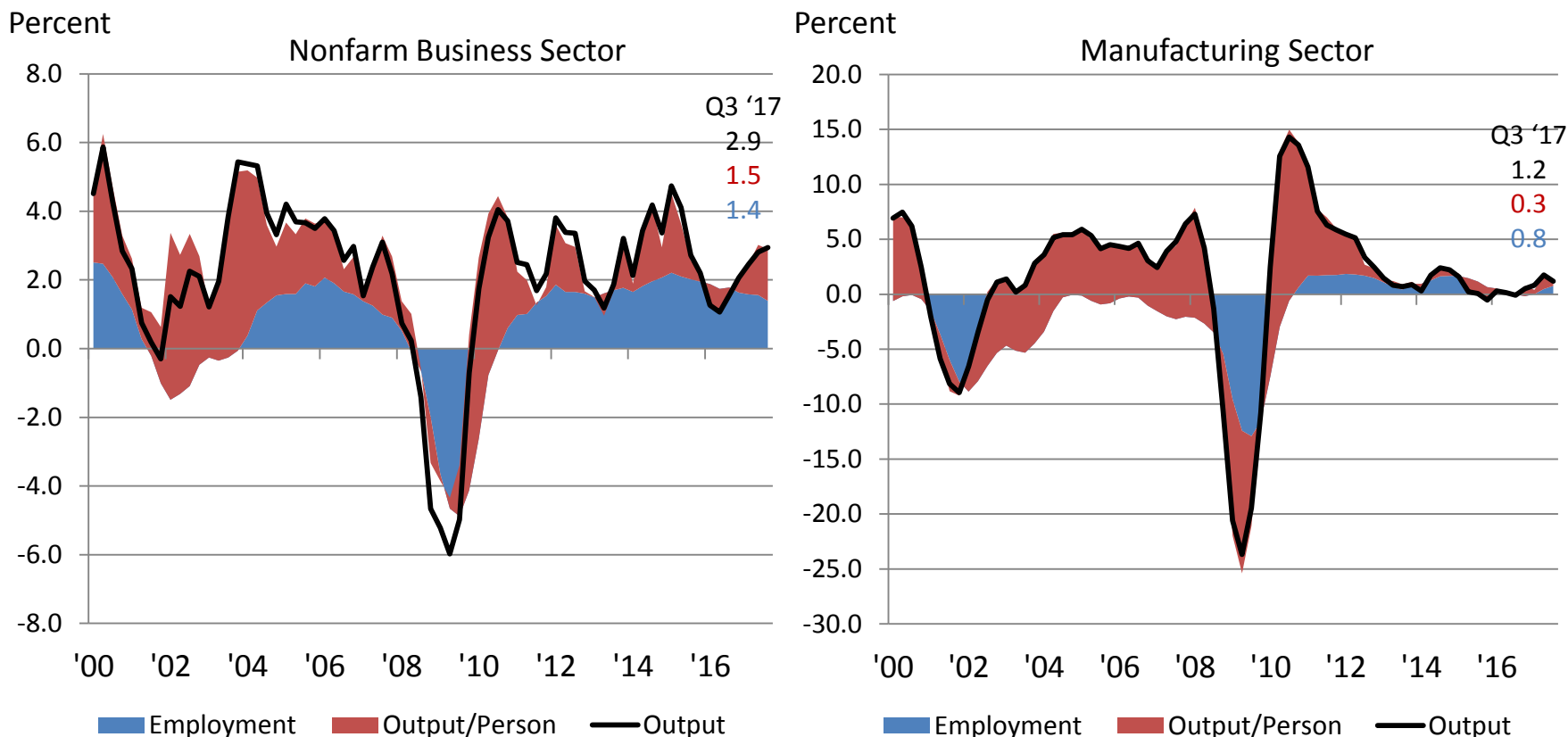
Percent Change – Billions of Chained \$2009



Source: BEA and January 2018 Blue Chip Economic Indicators

# Employment, Productivity, and Output

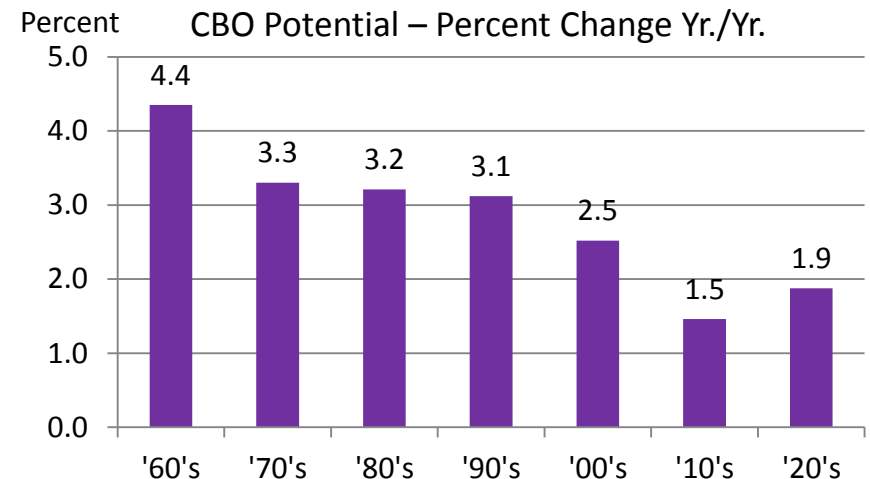
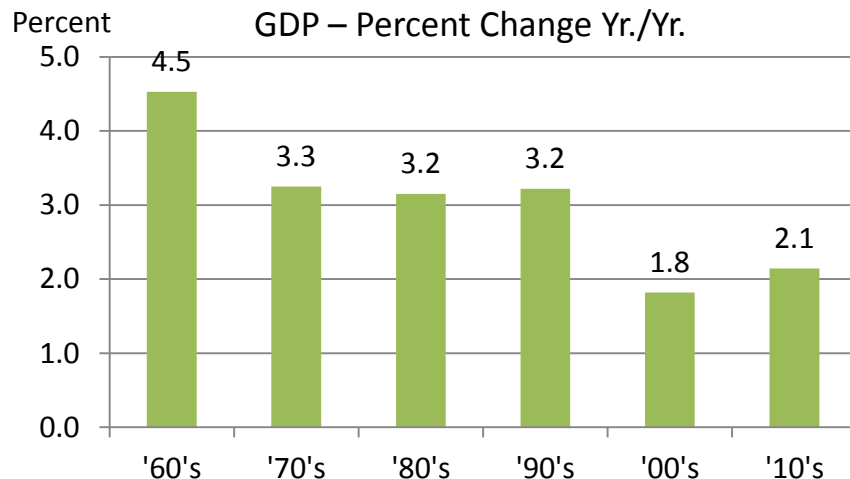
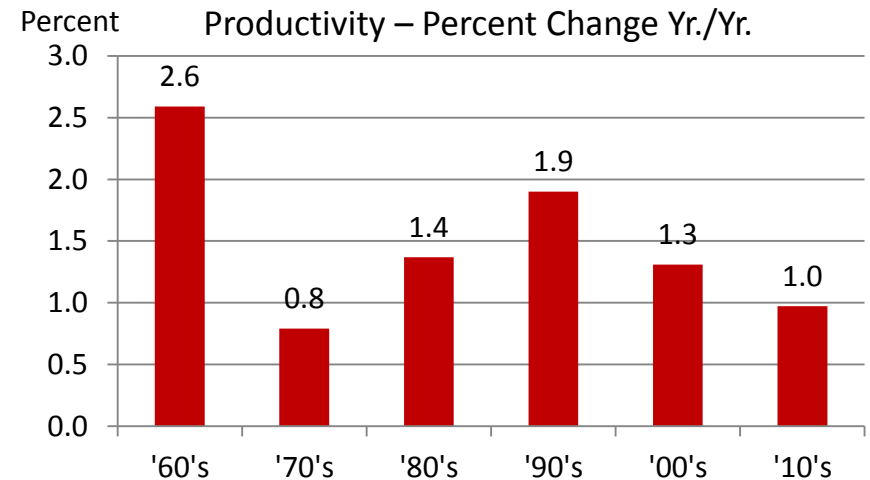
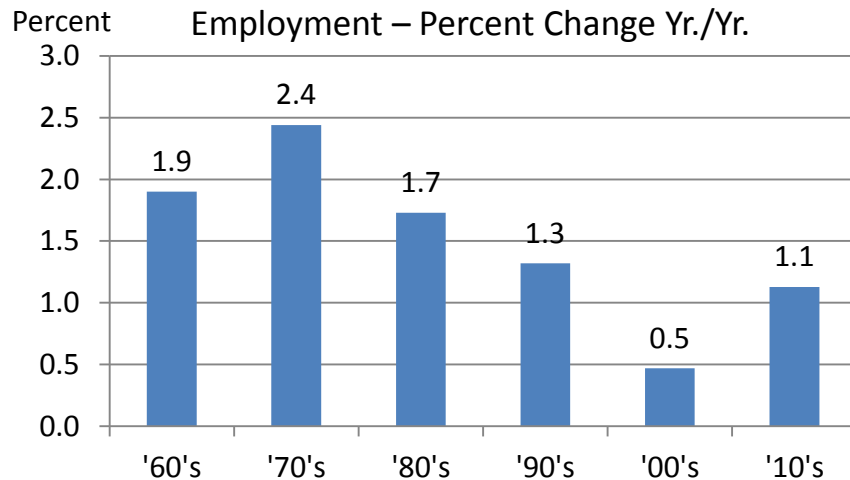
## Nonfarm and Manufacturing – Percent Change Yr./Yr.



Source: Author's calculations using U.S. Bureau of Labor Statistics data.

# Employment, Productivity, and GDP Growth

## Percent Change Yr./Yr.



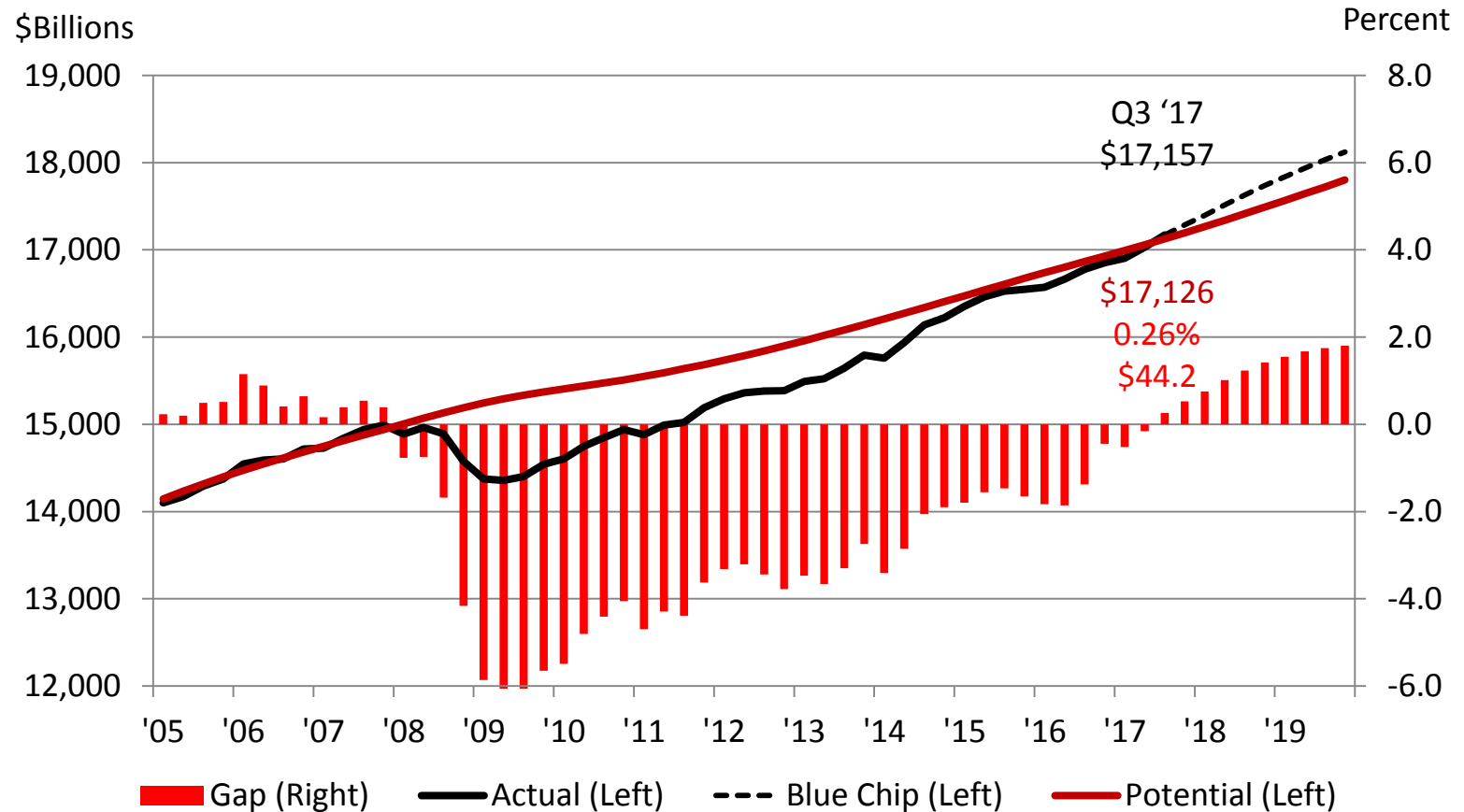
Source: Author's Calculations using BEA, BLS, and Fed data.

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# U.S. Real GDP – Actual and Potential

Billions Chained \$2009 and Percent H/L than Potential



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

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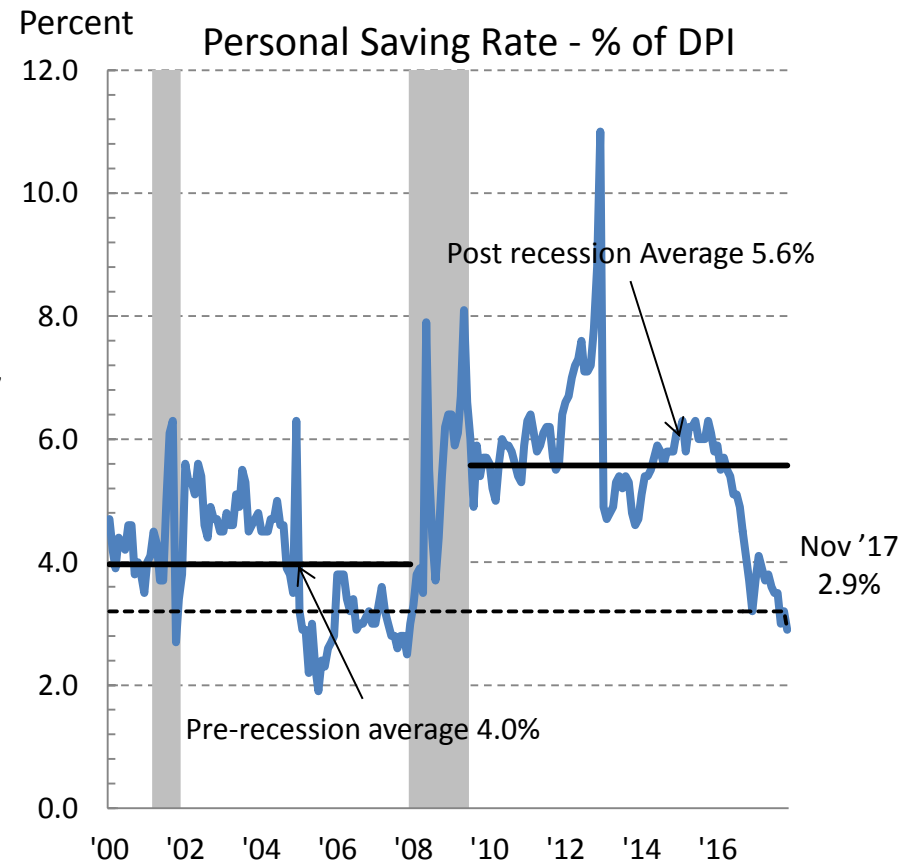
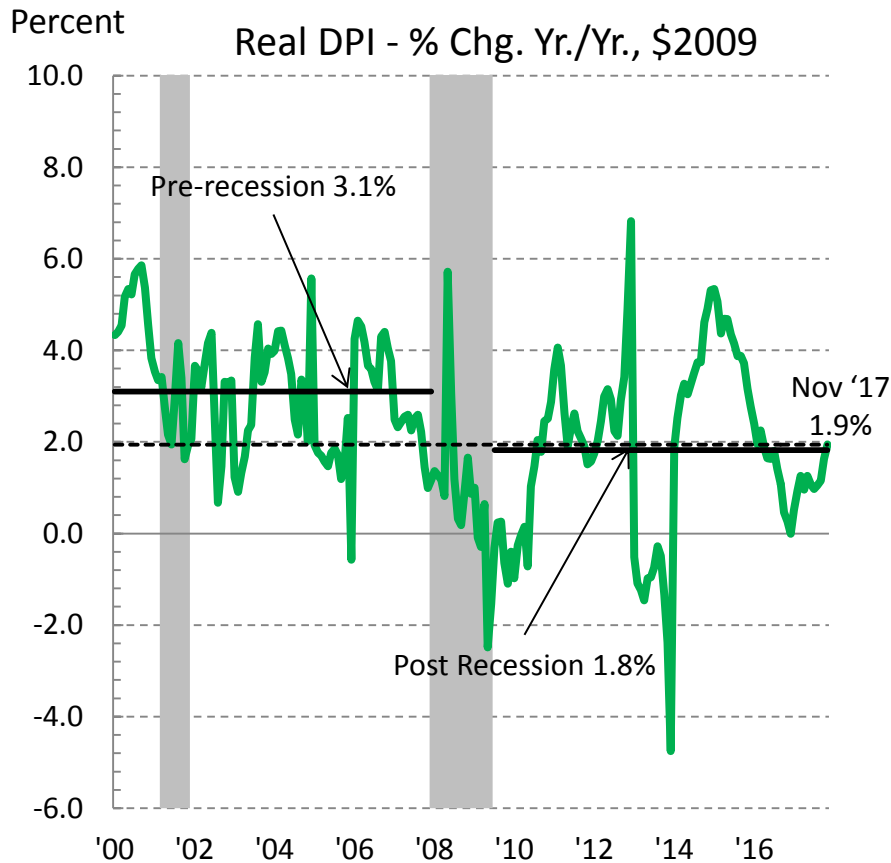
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# U.S. Consumer

# Income and Savings Rate

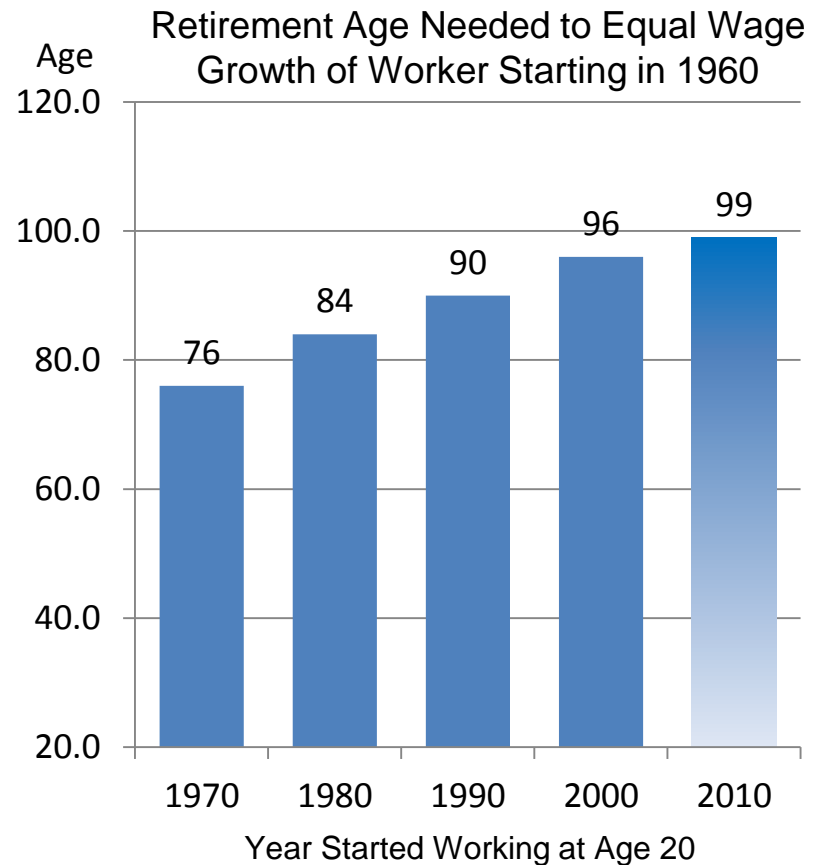
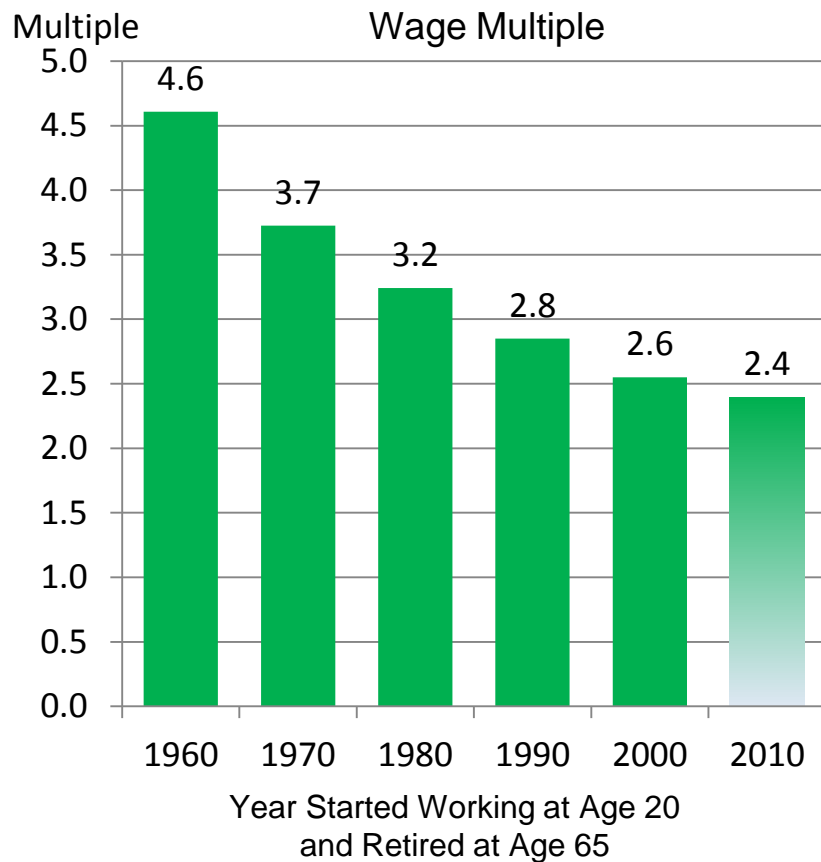
## Percent Change and Percent of DPI



Source: U.S. Bureau of Economic Analysis

# Real Disposable Income Growth

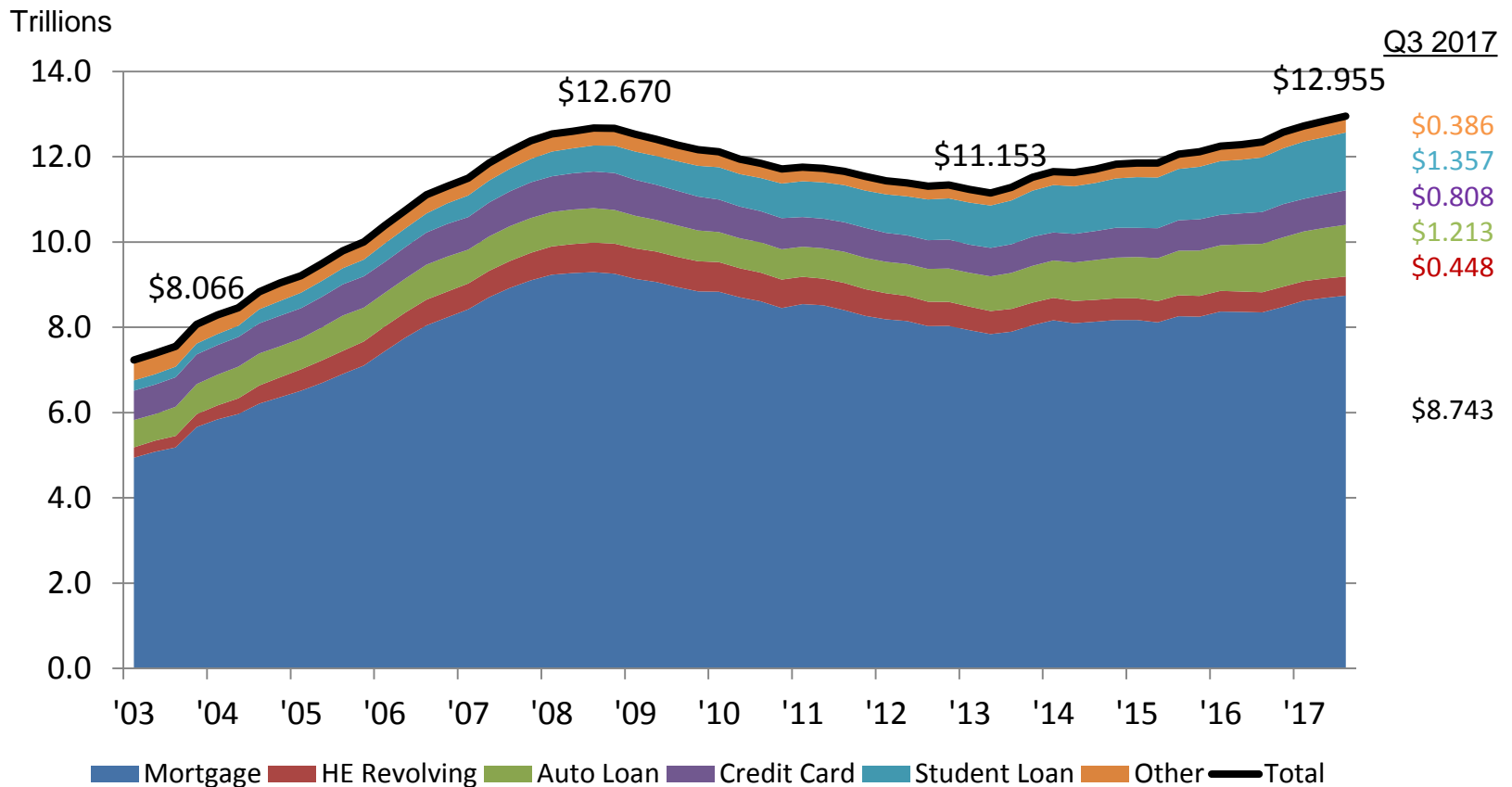
## Real DPI Multiple and Retirement Age



Source: Author's calculations using U.S. Bureau of Economic Analysis data.

# Total Consumer Debt by Composition

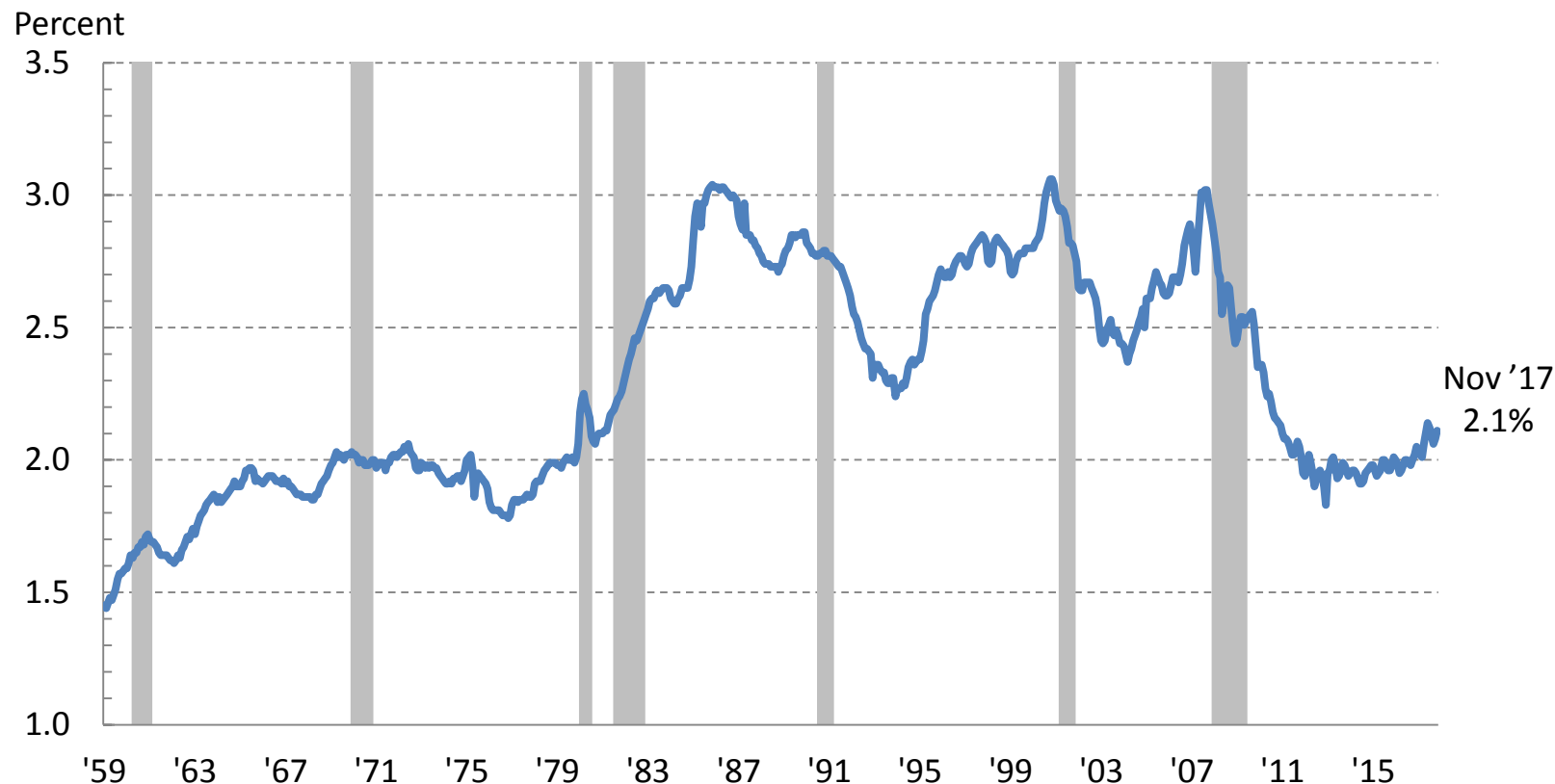
Trillions of Dollars



Source: Federal Reserve Bank of New York and Equifax

# Interest Payments

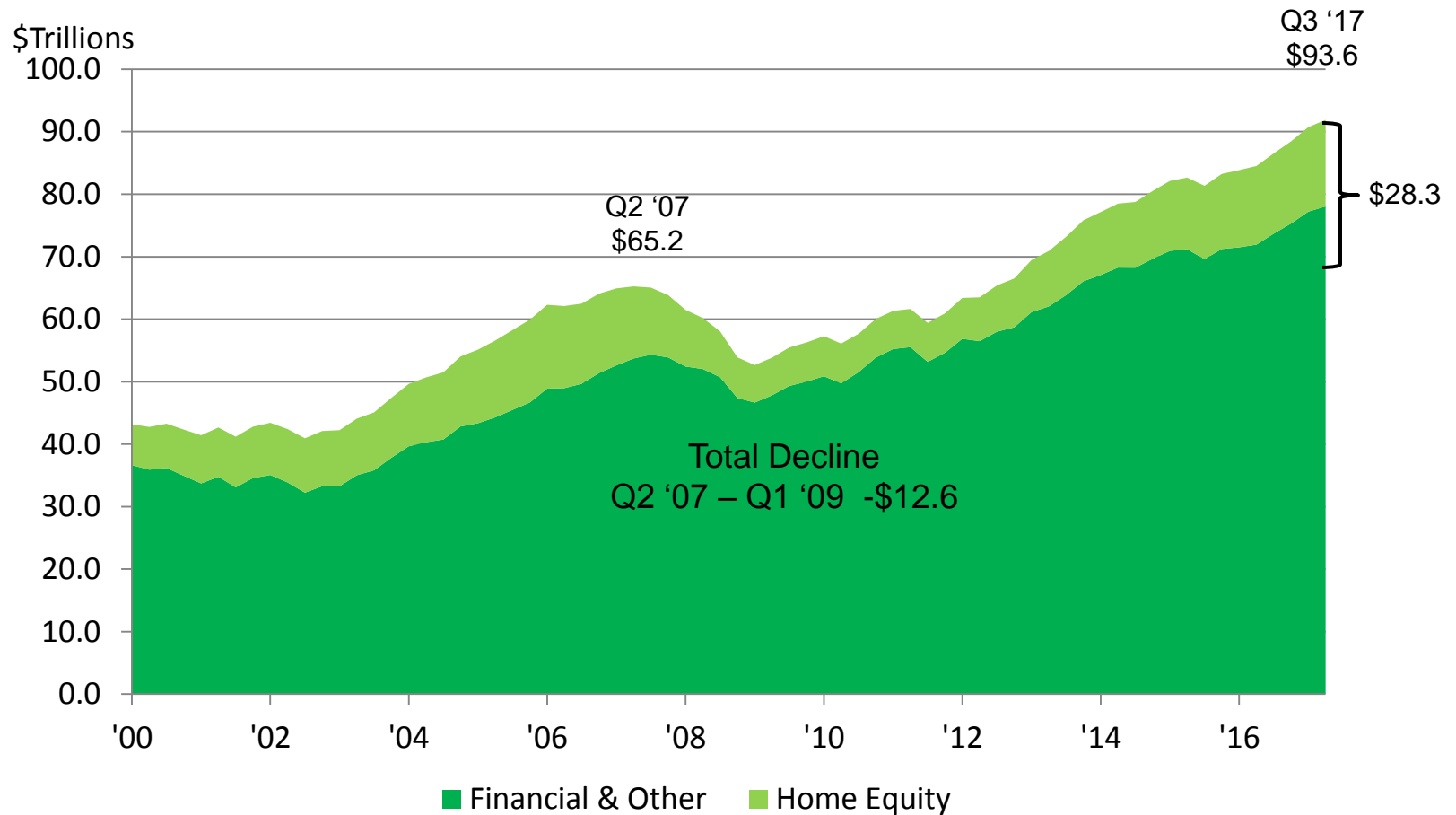
## As a Percent of Disposable Personal Income



Source: Federal Reserve Bank - Board of Governors

# Household Net Worth

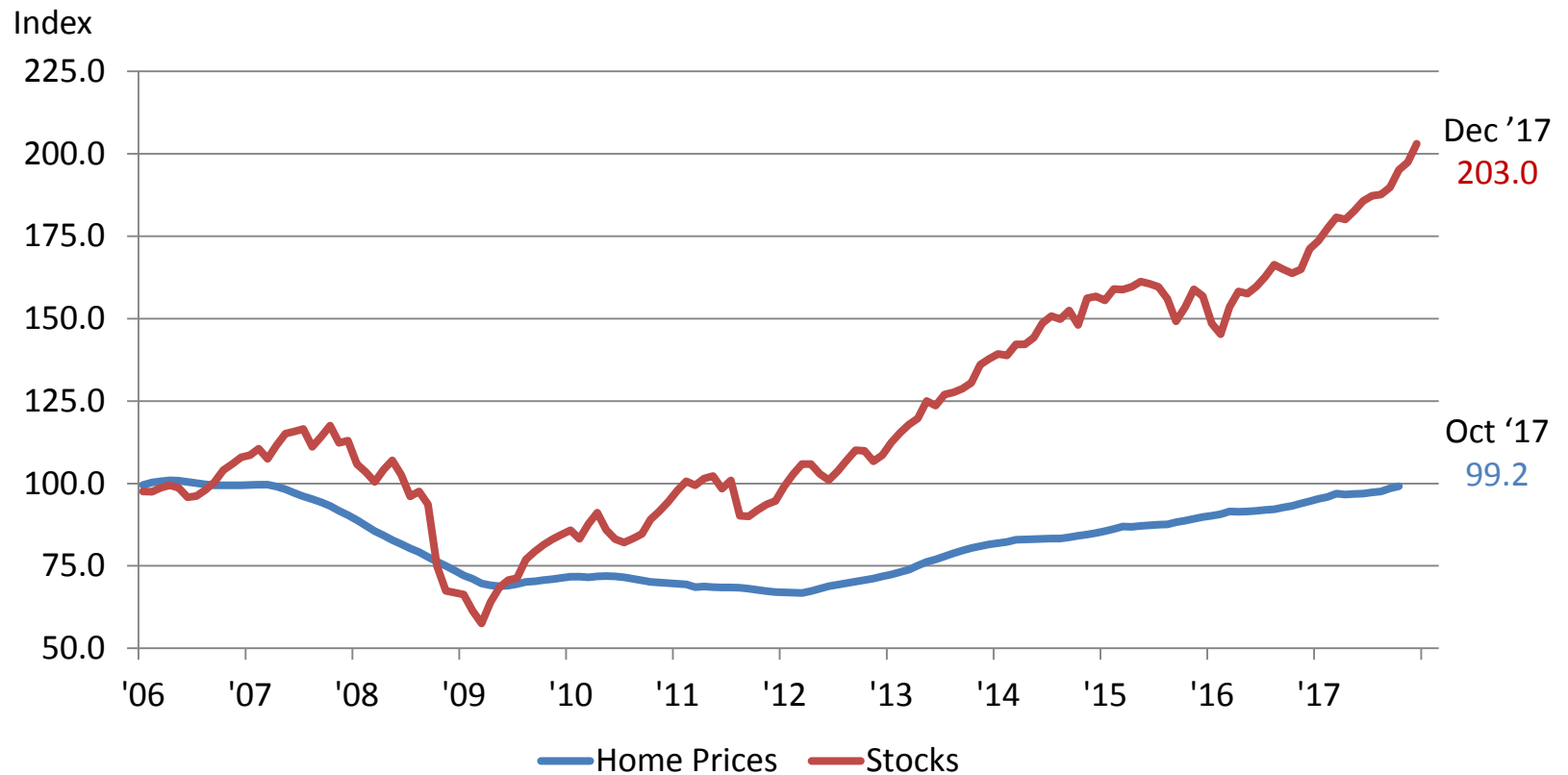
Trillions of Current Dollars, Q1 '00 to Q1 '17



Source: Federal Reserve Z.1 Statistical Release ,Table B100, Households and Nonprofit Organizations

# Stock Market and Home Prices

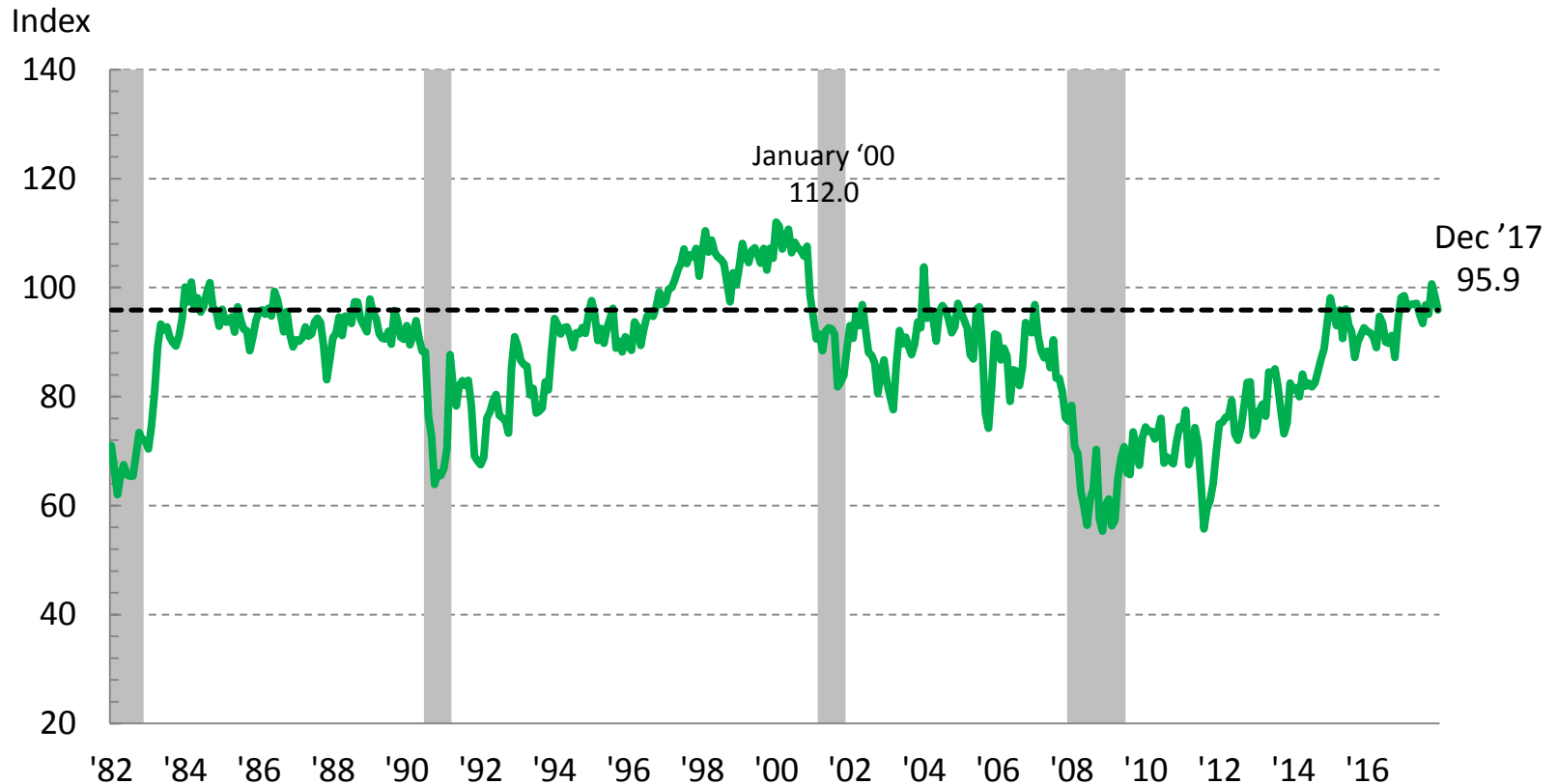
S&P 500 and S&P Case Shiller Composite, Index 2006 = 100



Source: Author's calculations using Financial Times and S&P Case Shiller data.

# Consumer Sentiment

University of Michigan



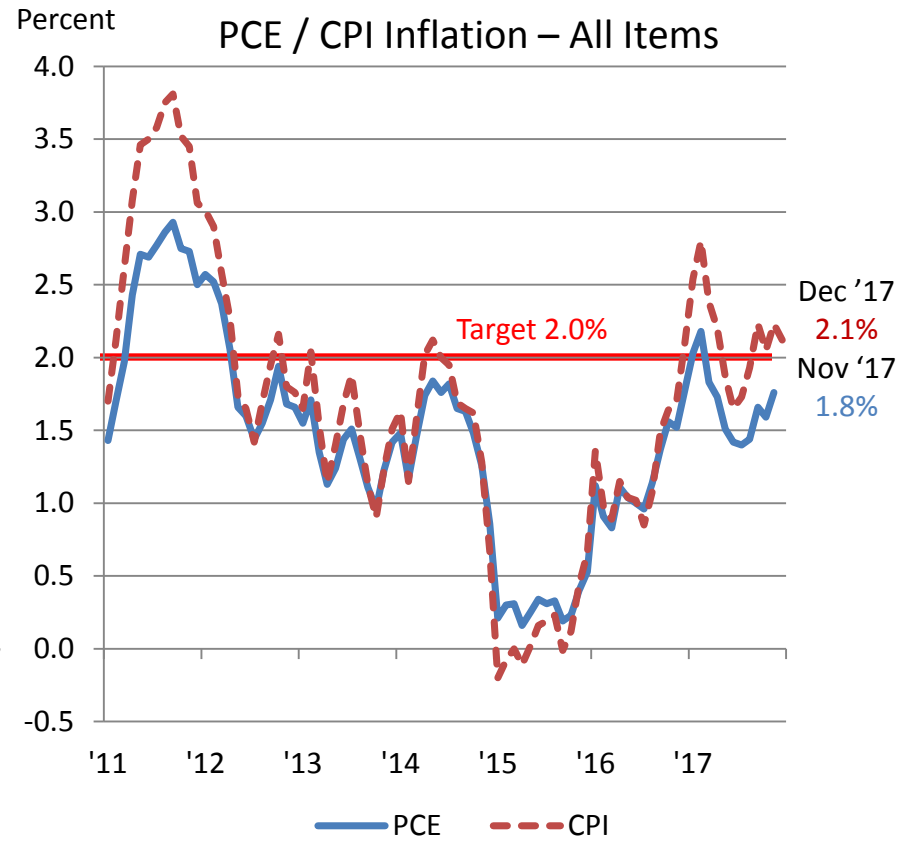
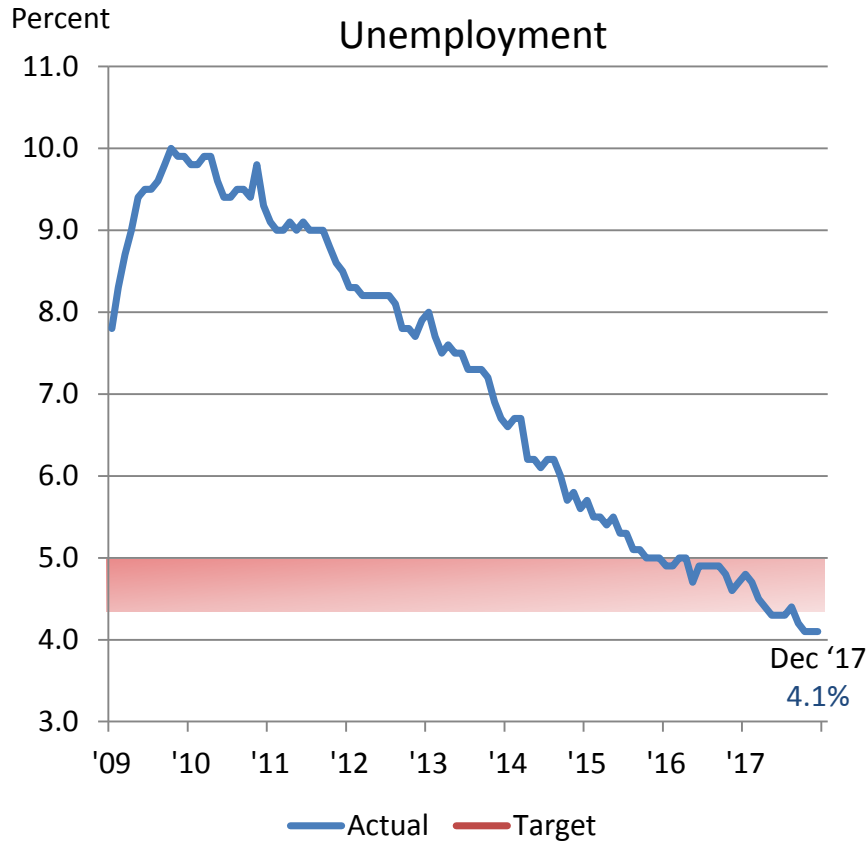
Source: Thomson Reuters / University of Michigan



# Monetary Policy

# Unemployment Rate & Prices

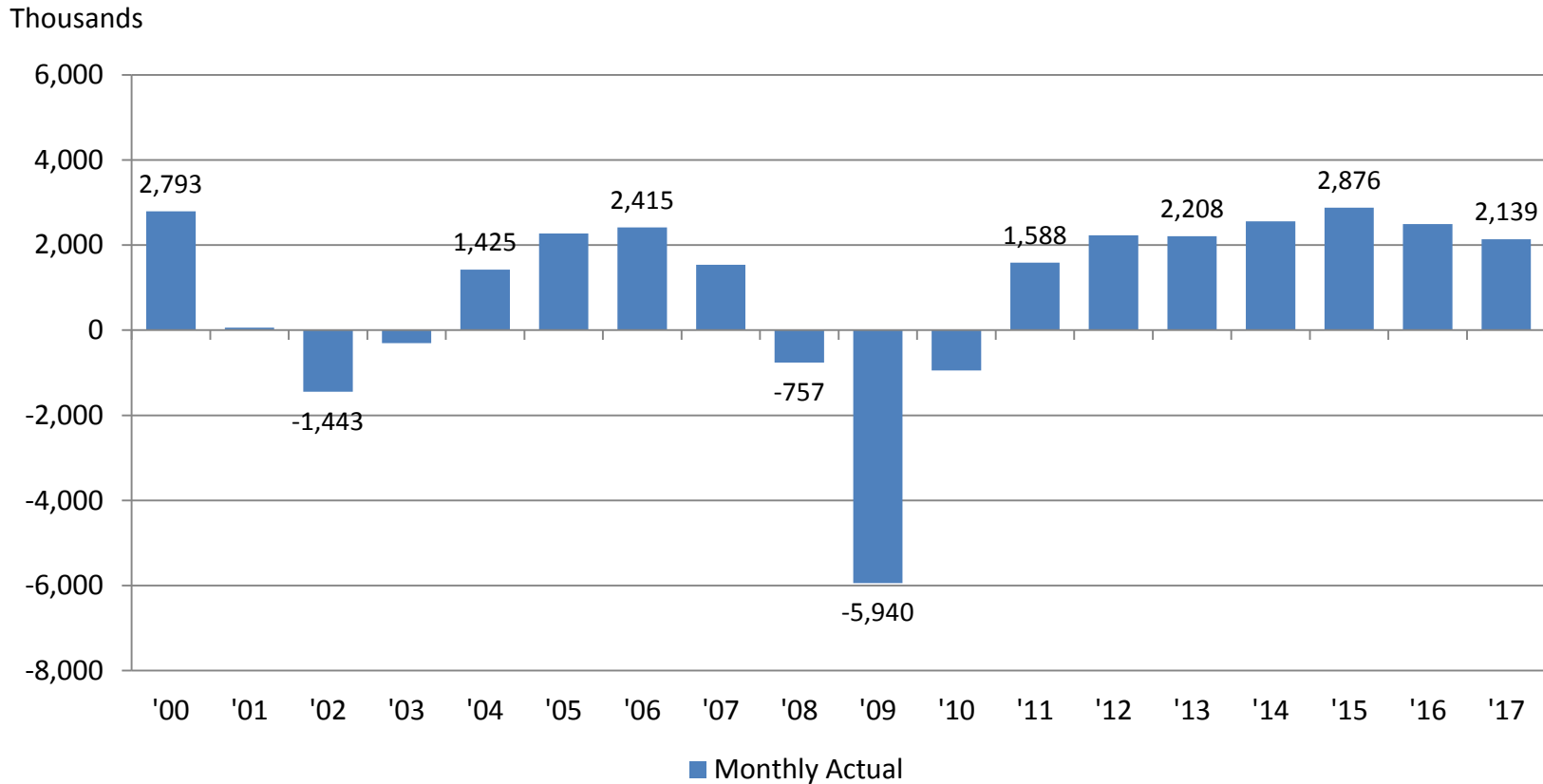
Percent Unemployed, PCE / CPI % Change Yr./Yr.



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

# U.S. Nonfarm Payrolls

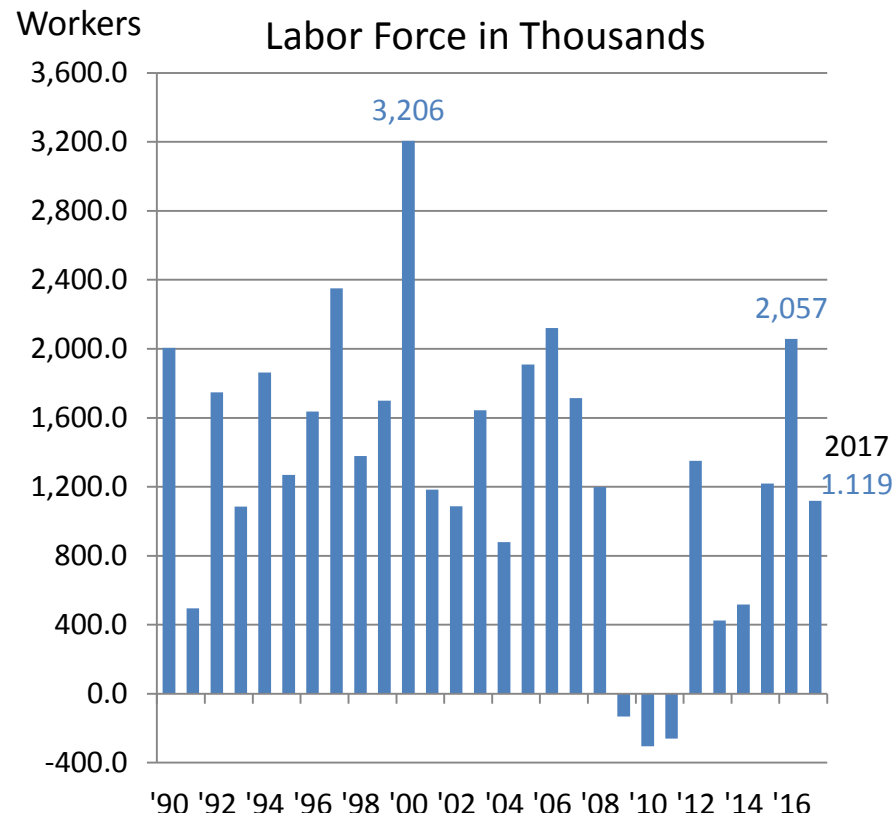
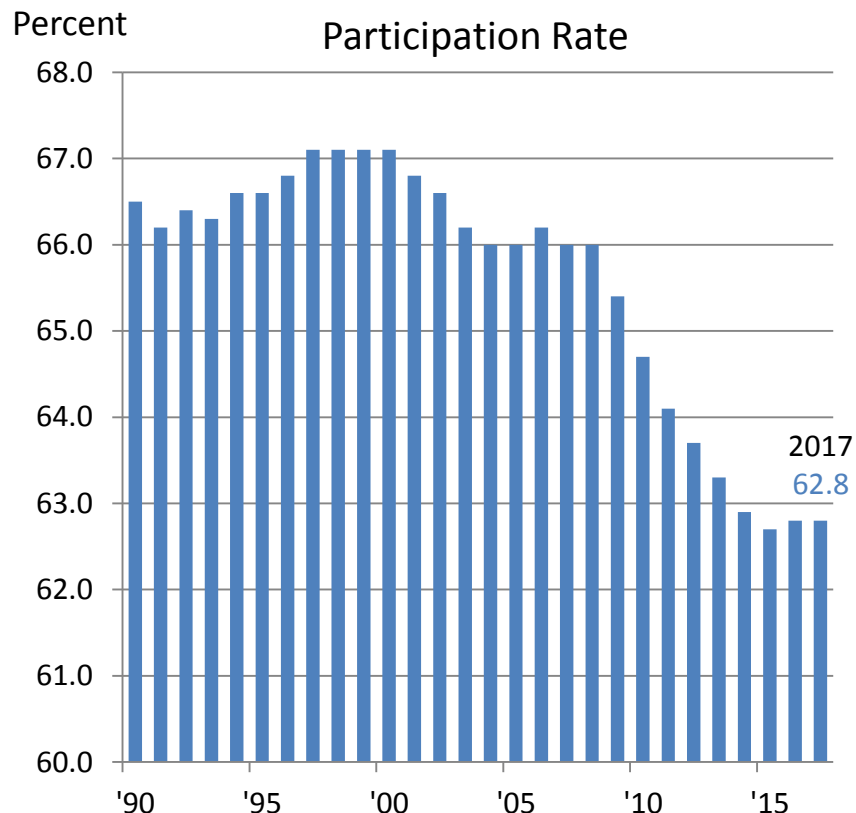
## Monthly and Annual Average Job Change – In Thousands



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

# Civilian Labor Force Growth

Annual Average Percent and Annual Average Change by Year

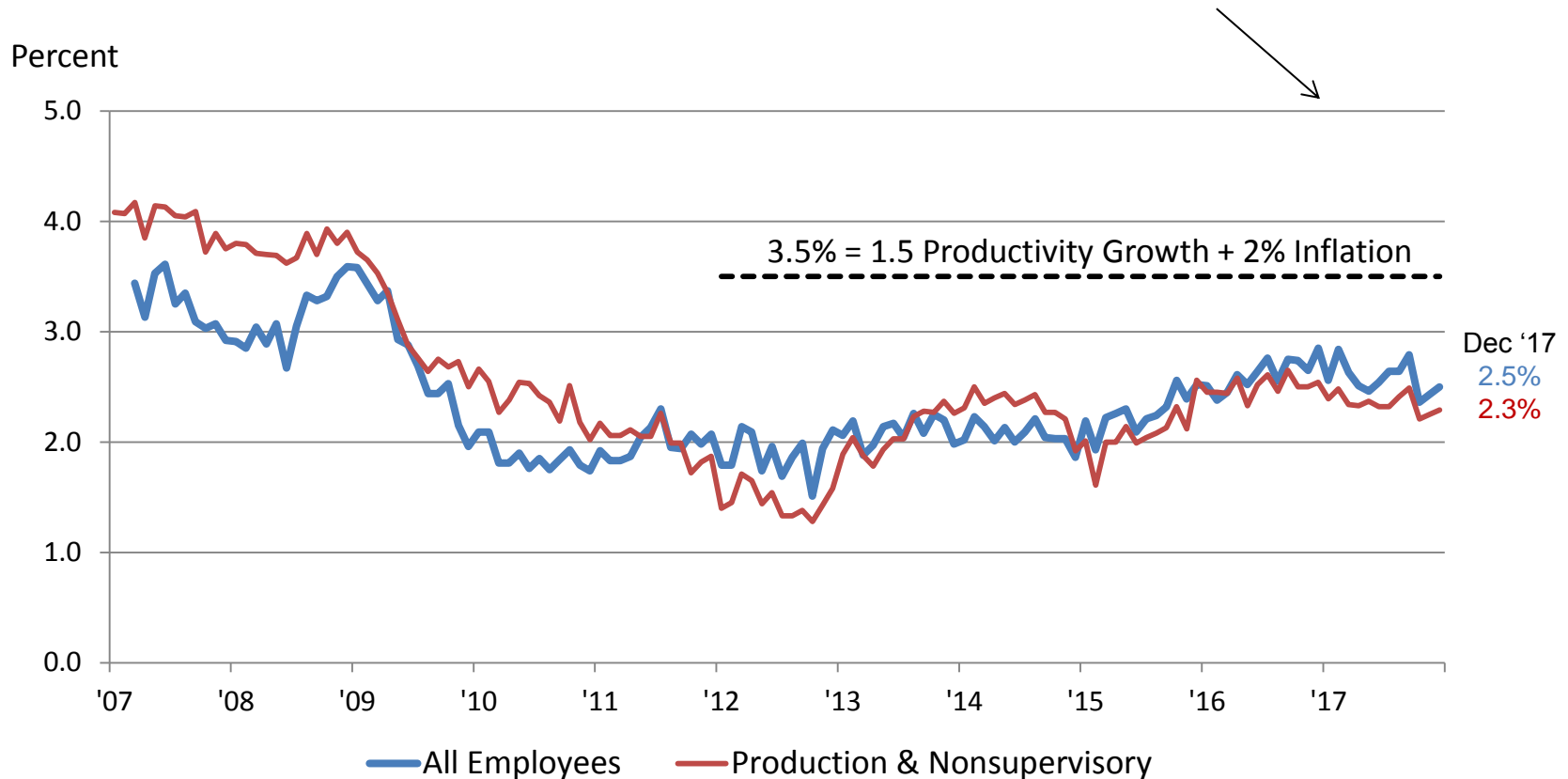


Note: Current noninstitutionalized civilian population is 255.4 million people.

Source: U.S. Bureau of Labor Statistics & U.S. Census Bureau

# Average Hourly Earnings – Private Employees

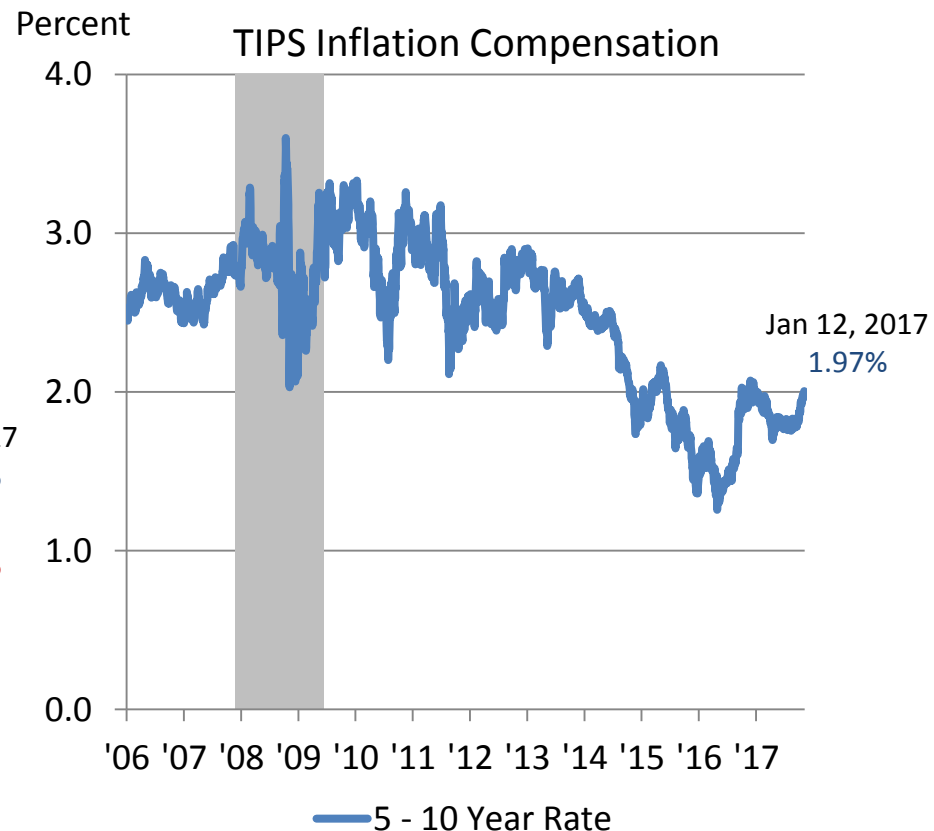
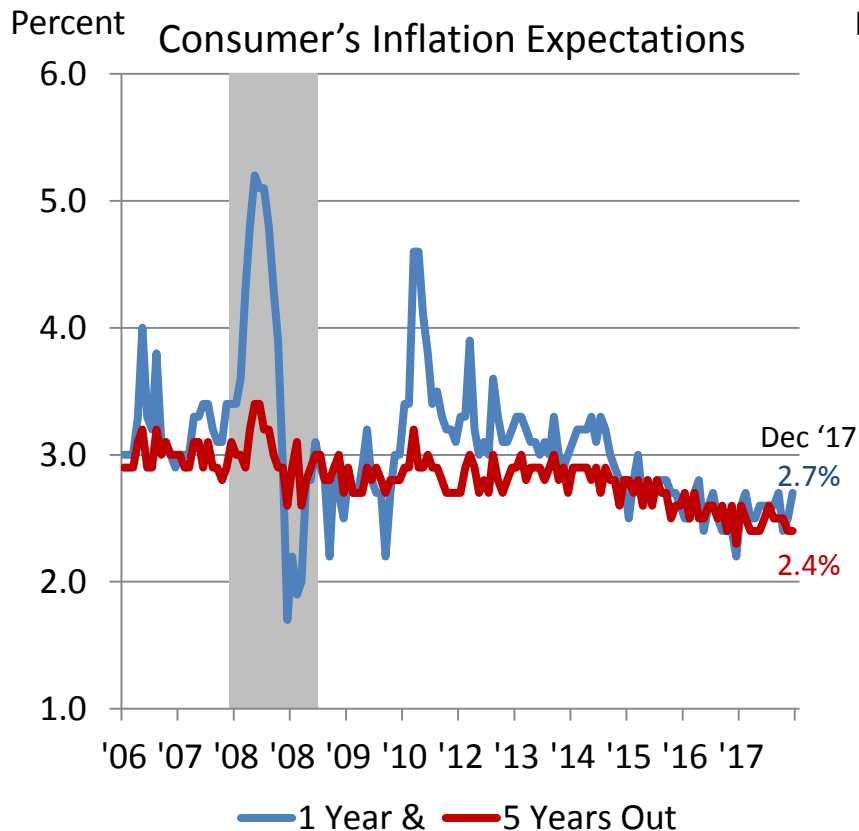
Percent Change Year / Year



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

# Inflation Expectations

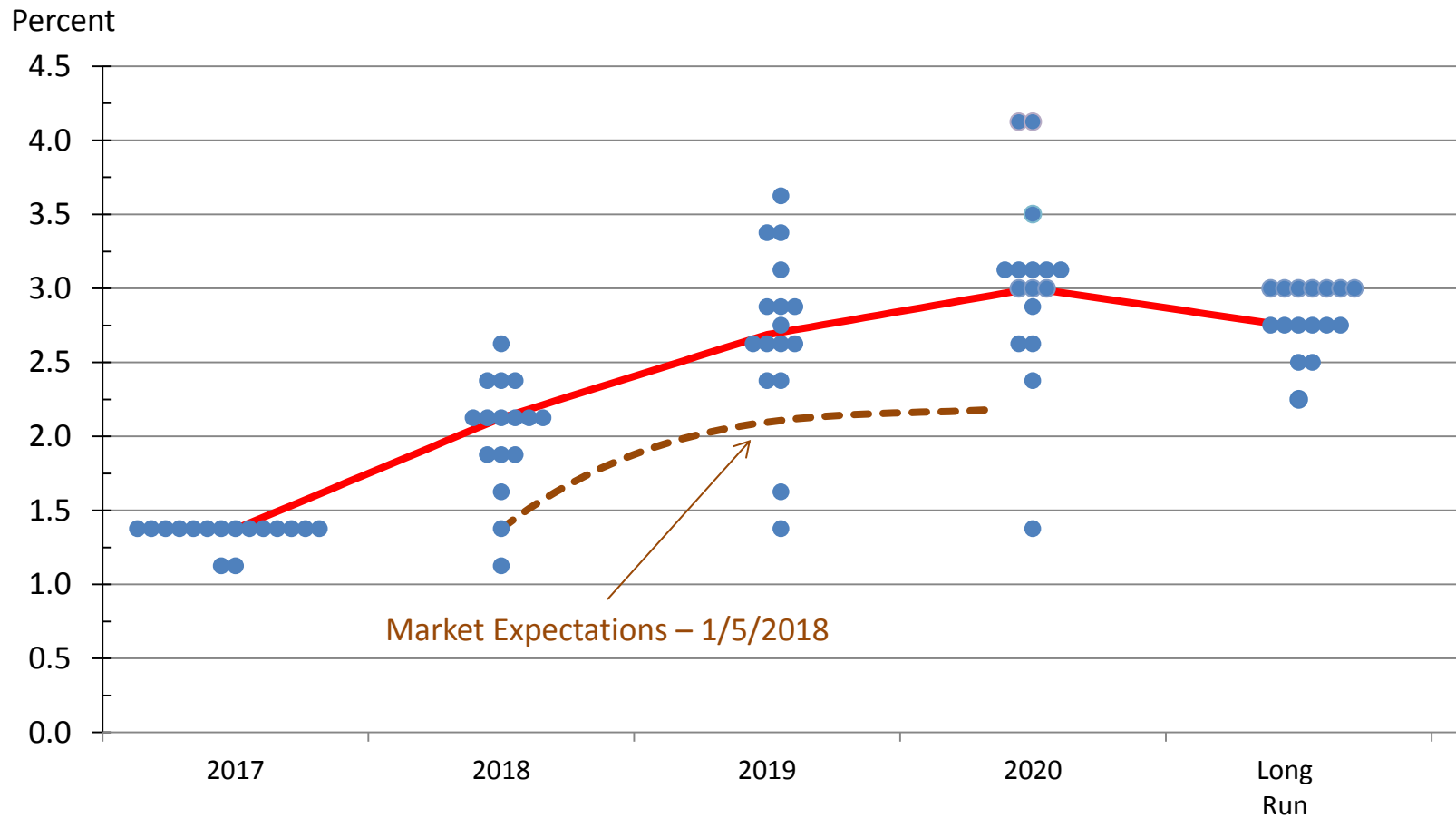
## 1-5 Year and 5-10 Year Inflation Expectations



Source: Survey of Consumers – University of Michigan and Federal Reserve Board

# Appropriate pace of policy firming

## Fed Funds Rate – Year End Projections

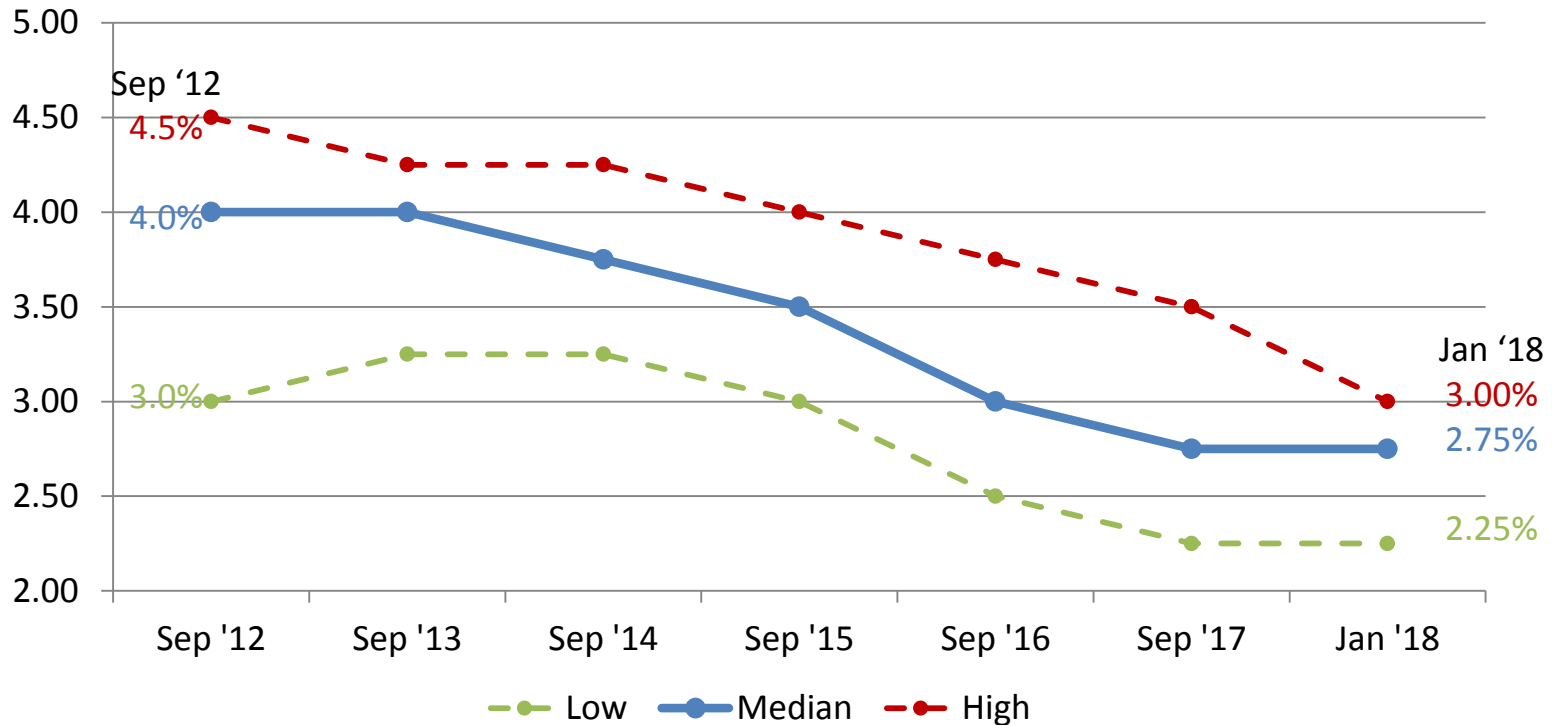


Source: Federal Reserve - F.O.M.C. participants, September 20, 2017

# Target Federal Funds Rate

## Long Run Projections

Percent



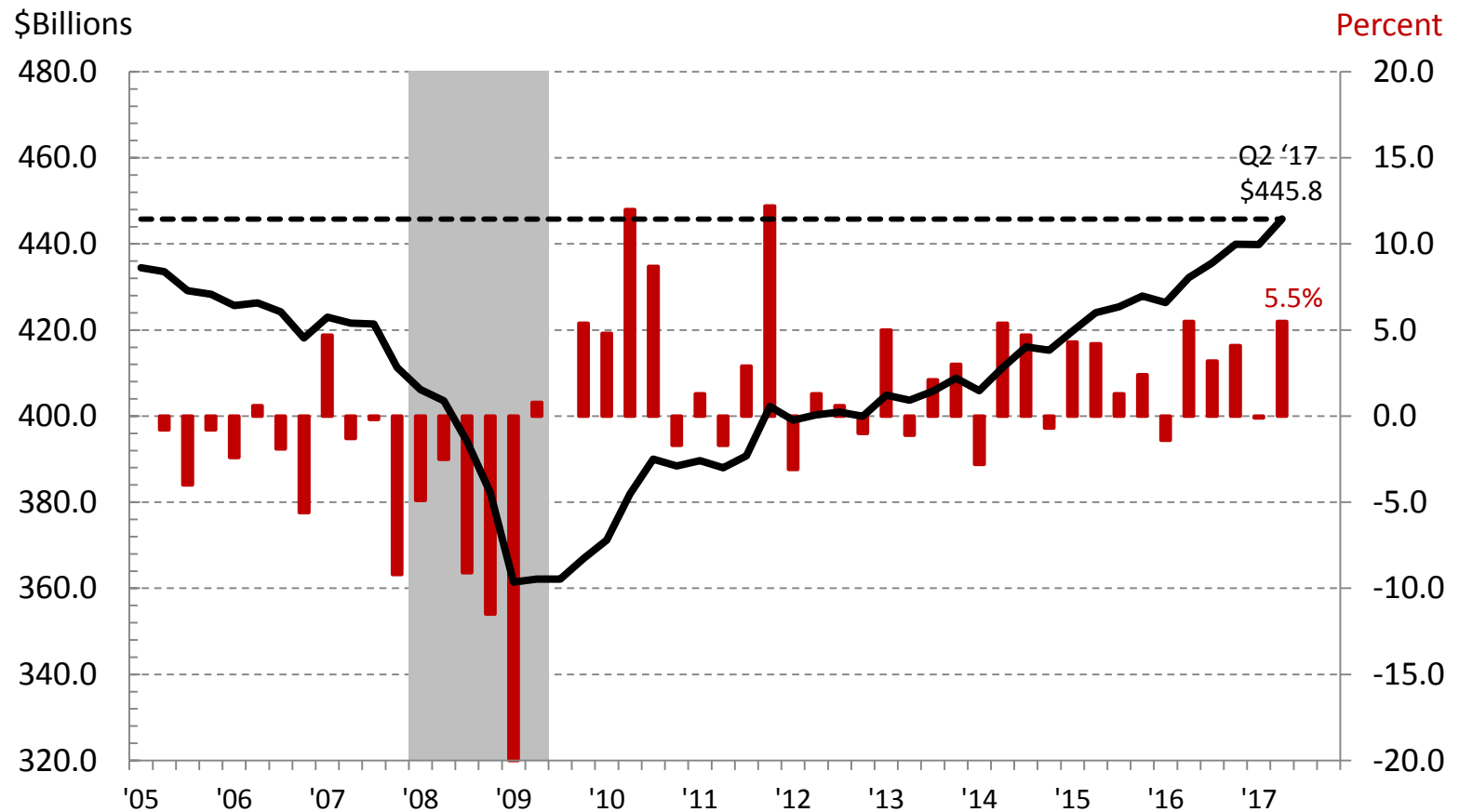
Source: Federal Reserve - F.O.M.C. participants projections.



# Michigan Economy

# Michigan Real GSP

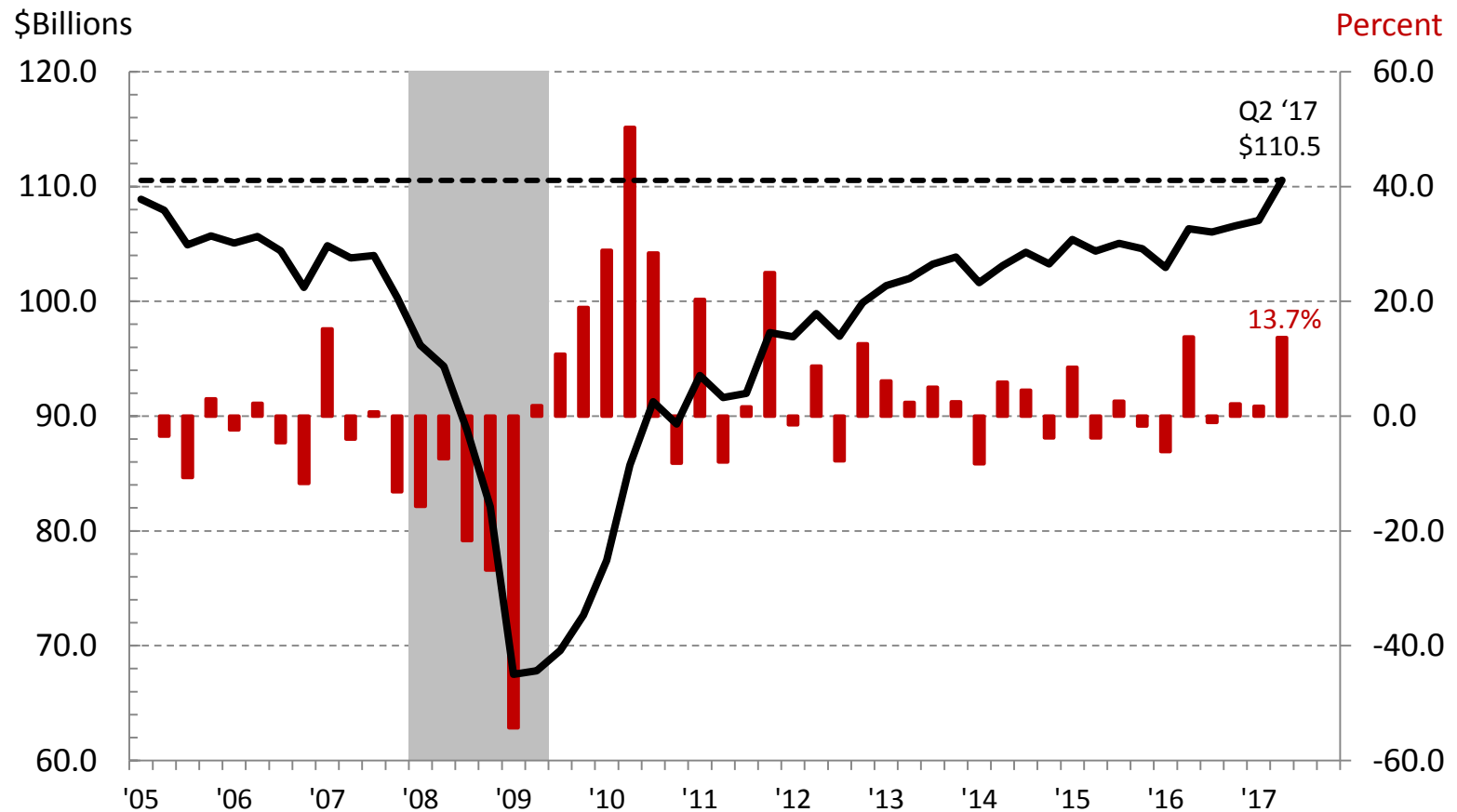
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

# Michigan Private Goods Producing

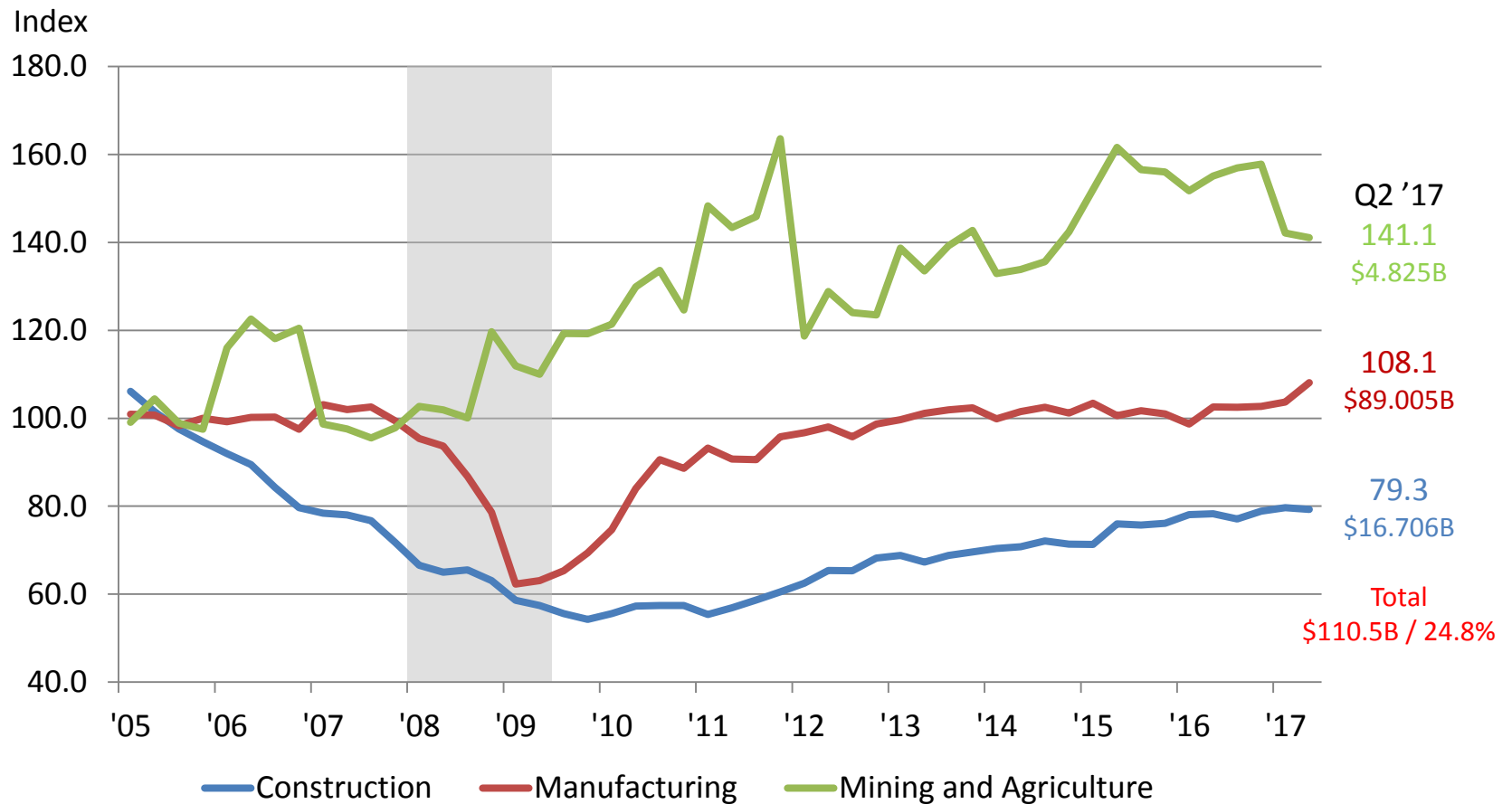
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

# Michigan Private Goods Producing

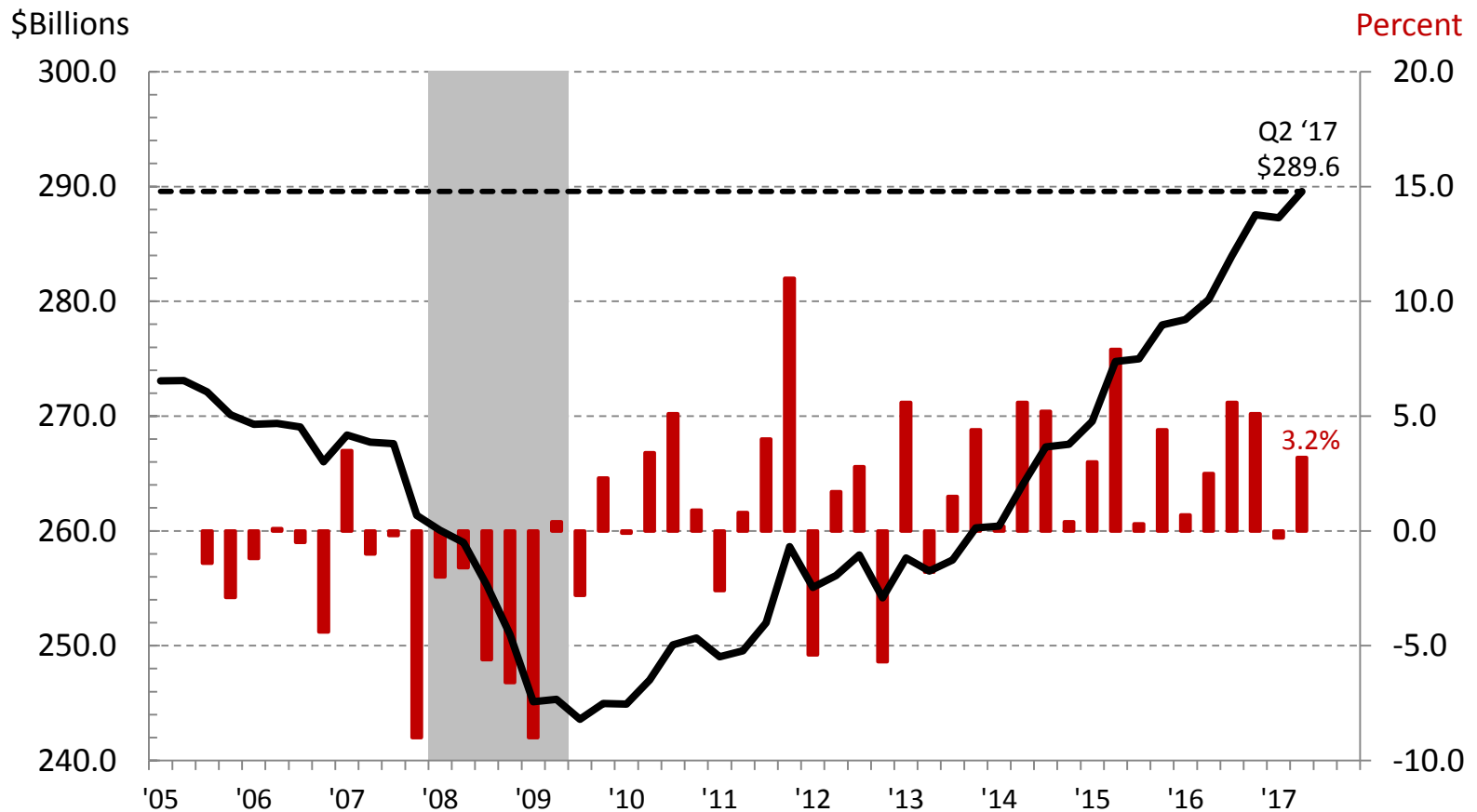
Index, 2005 = 100



Source: Author's calculations using data from the BEA

# Michigan Private Service Providing

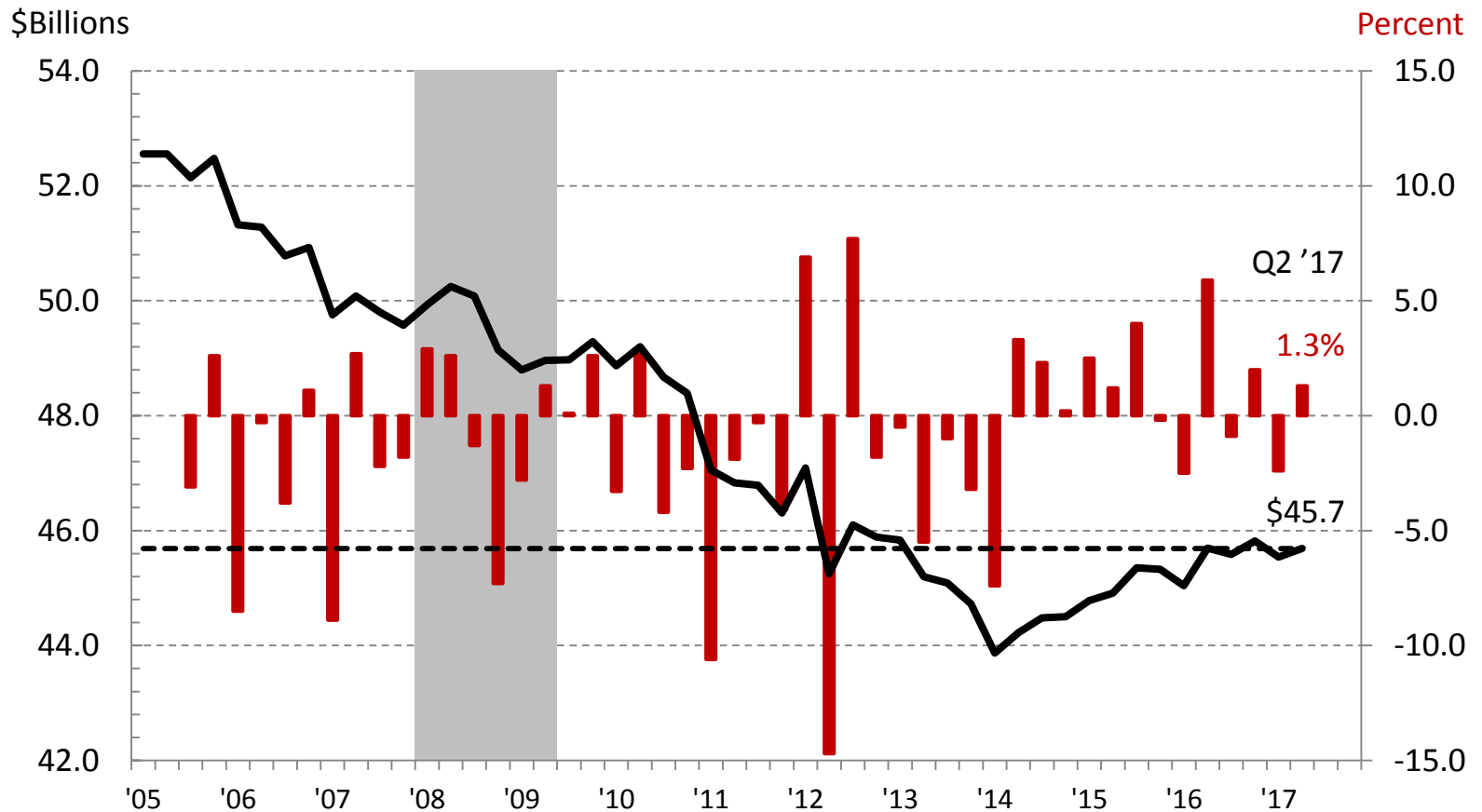
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

# Michigan Government Consumption & Investment

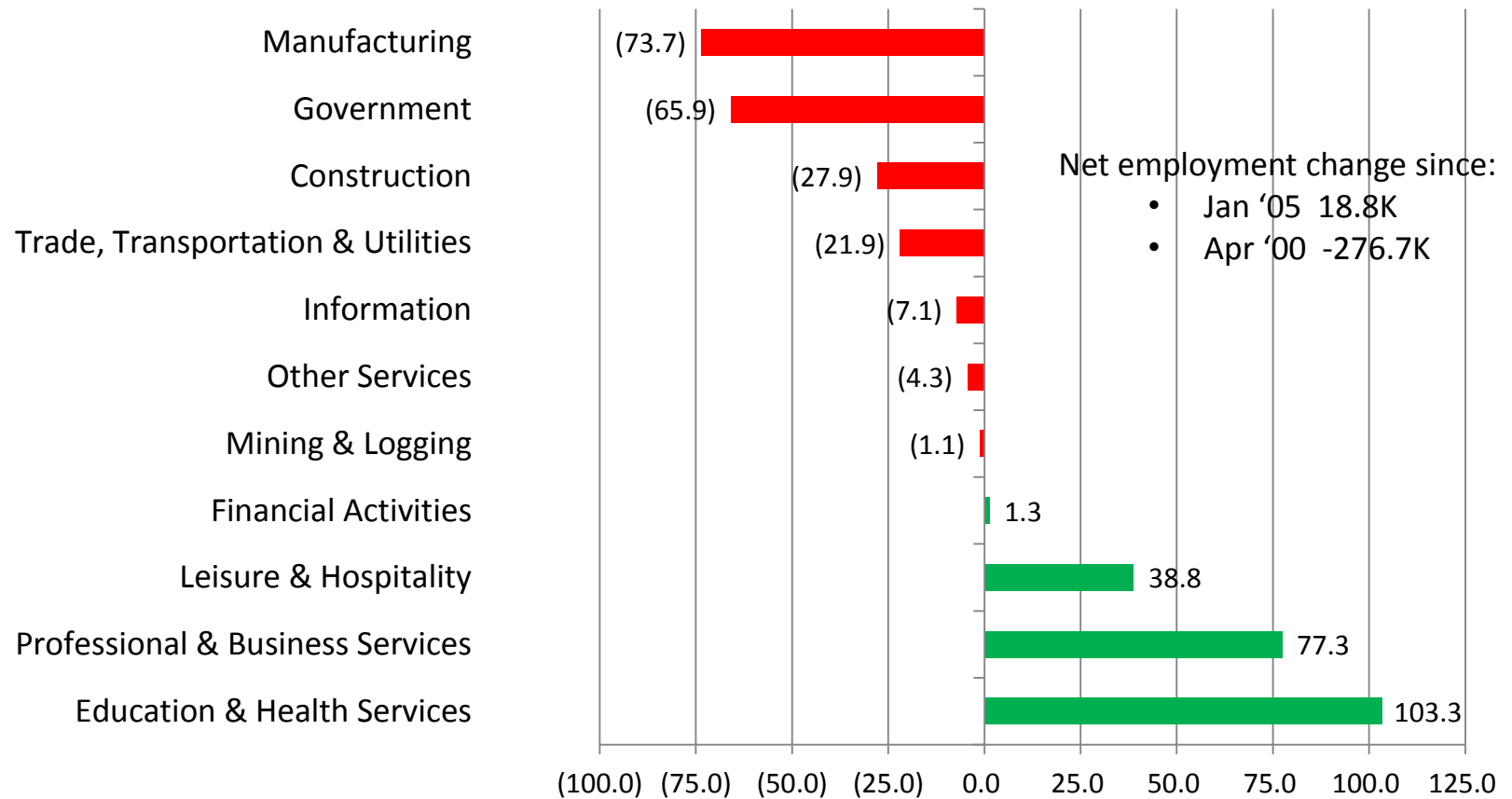
Billions Chained \$2009, % Change Q/Q at SAAR



Source: U.S. Bureau of Economic Analysis

# Michigan Nonfarm Payroll Employment by Sector

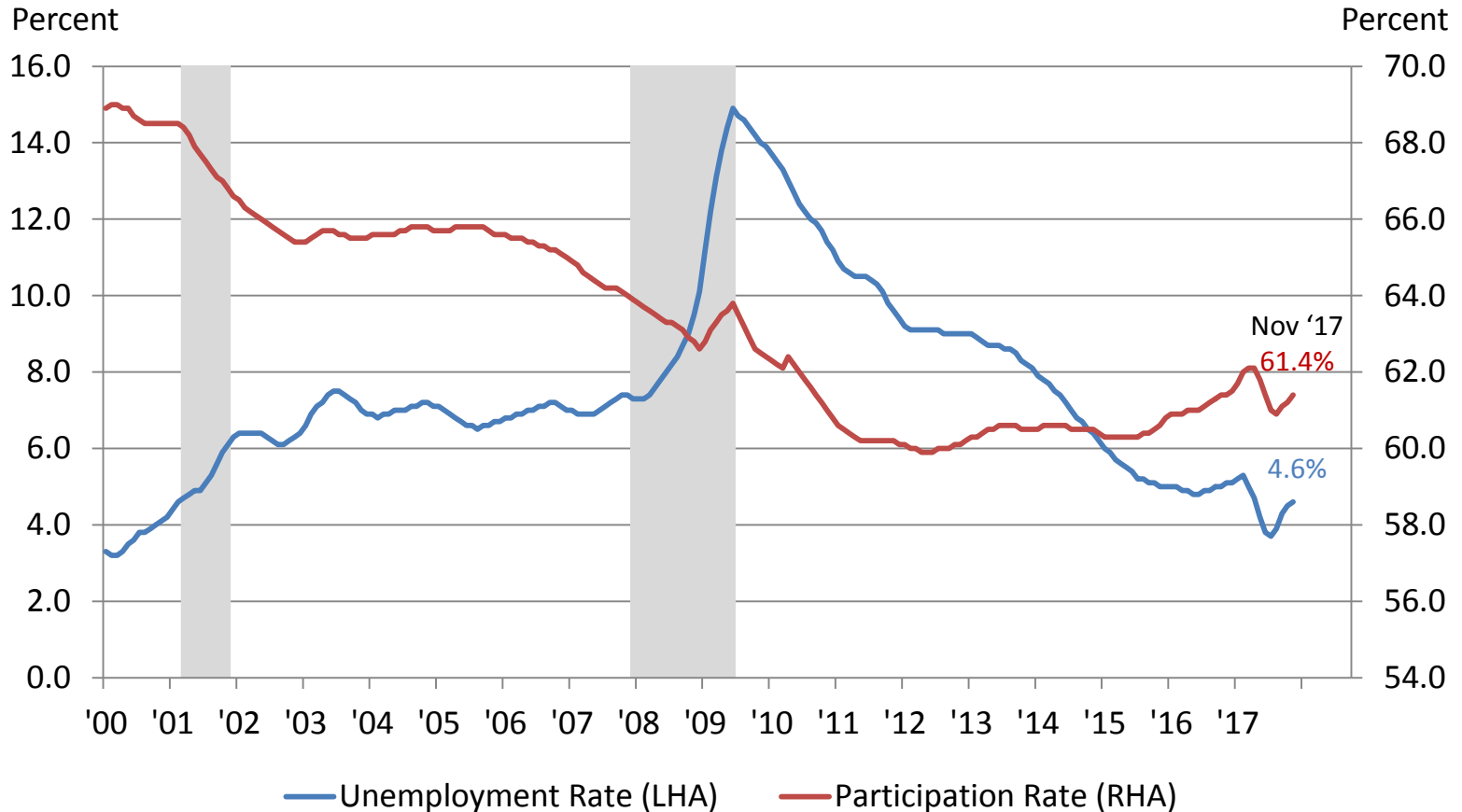
Employment Change Jan '05 – November '17, In Thousands



Source: U.S. Department of Labor

# Michigan Unemployment & Participation

## Percent of Labor Force and Civilian Population- SA

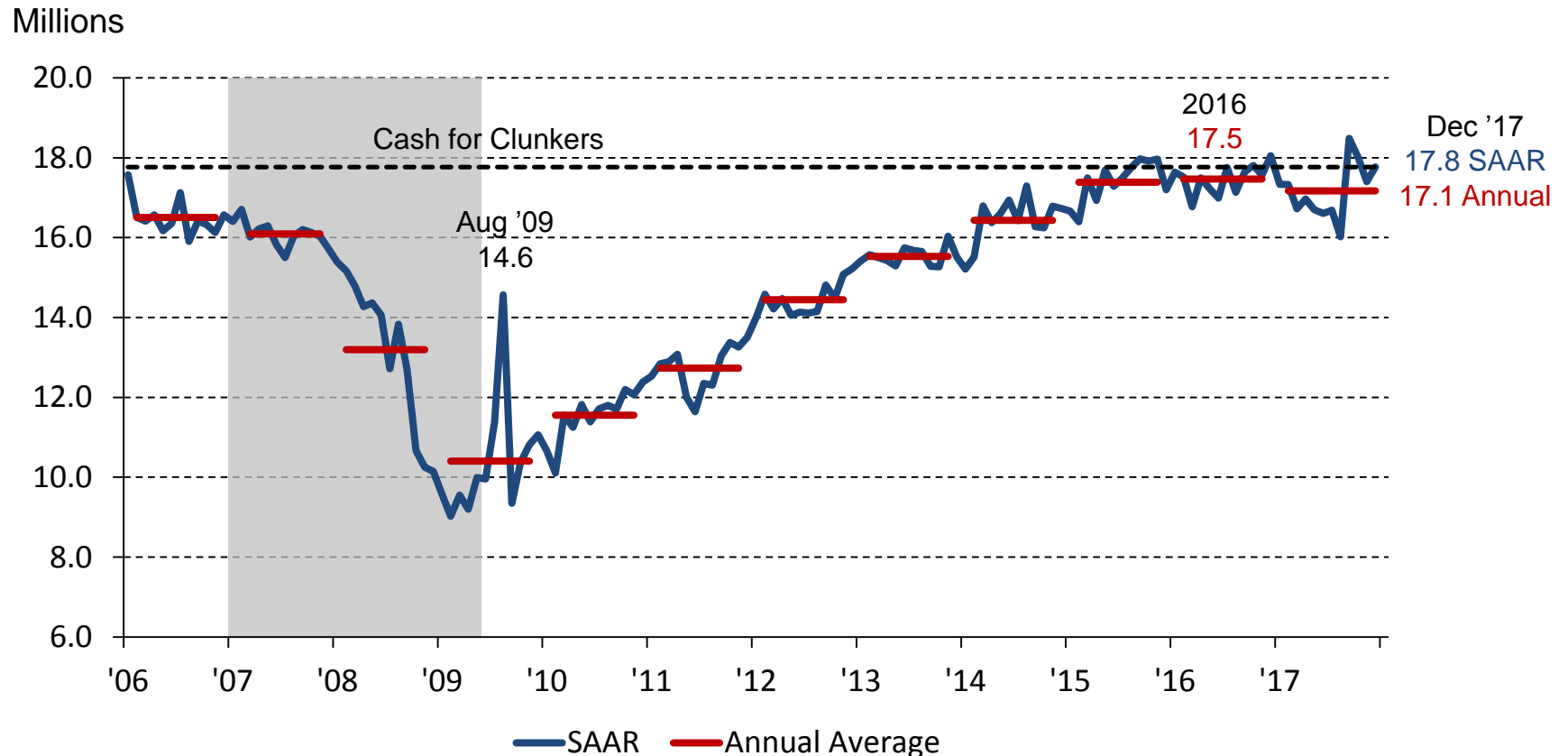


Source: U.S. Bureau of Labor Statistics



# U.S. Light Vehicle Sales

S.A.A.R – Millions of Units

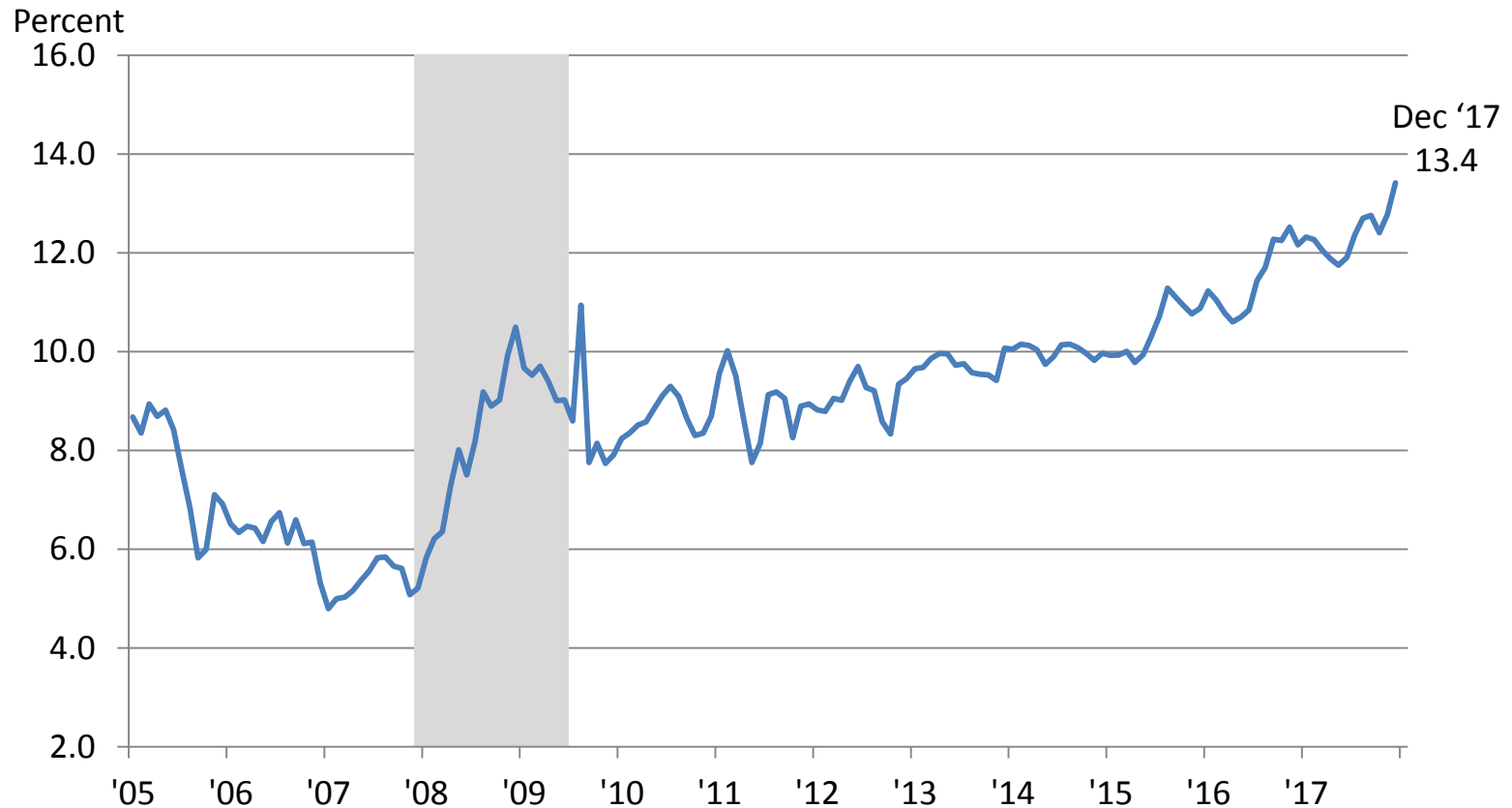


Note: Total 2016 Light Vehicle Sales: 17,465,020 / Including M/H: 17,866,260.

Source: Ward's Automotive and BEA

# Vehicle Incentives

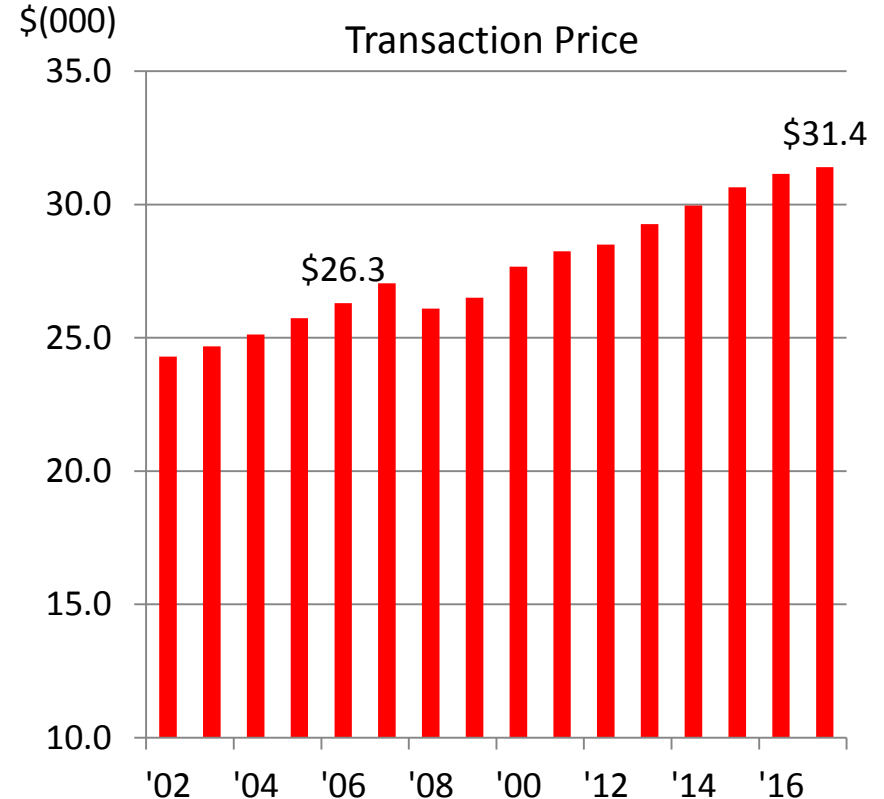
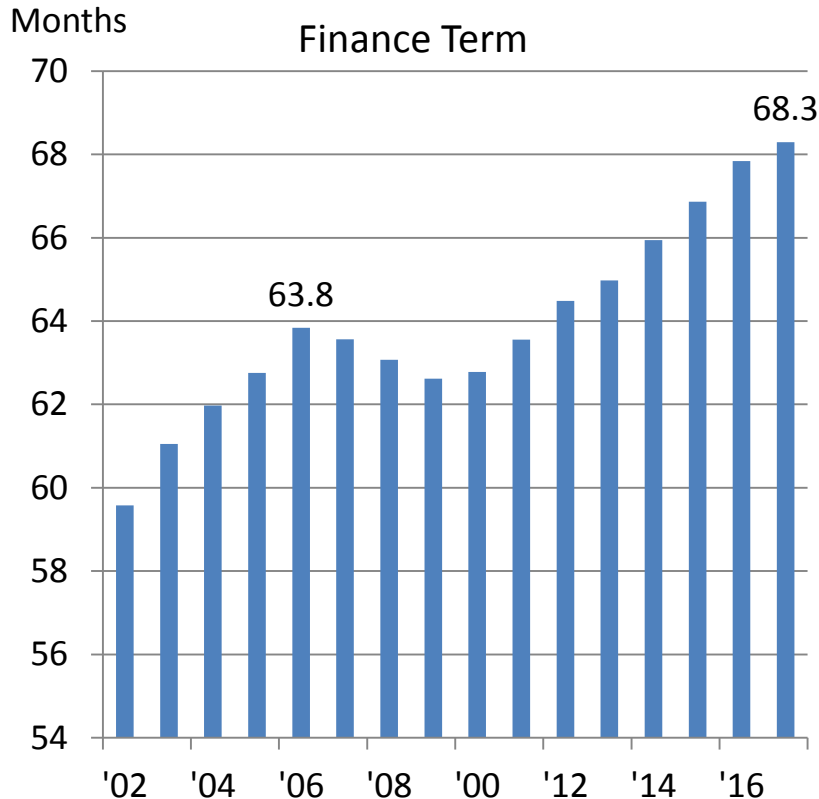
As Percent of Transaction Price - SA



Source: Author's calculations using FOMC Board of Governors and J.D. Power data.

# Average Finance Term & Transaction Price

## Months to Term and Annual Average Transaction Price



Note: 2017 data is September year-to-date.

Source: J.D. Power data.

# Sales Weighted Vehicle Age

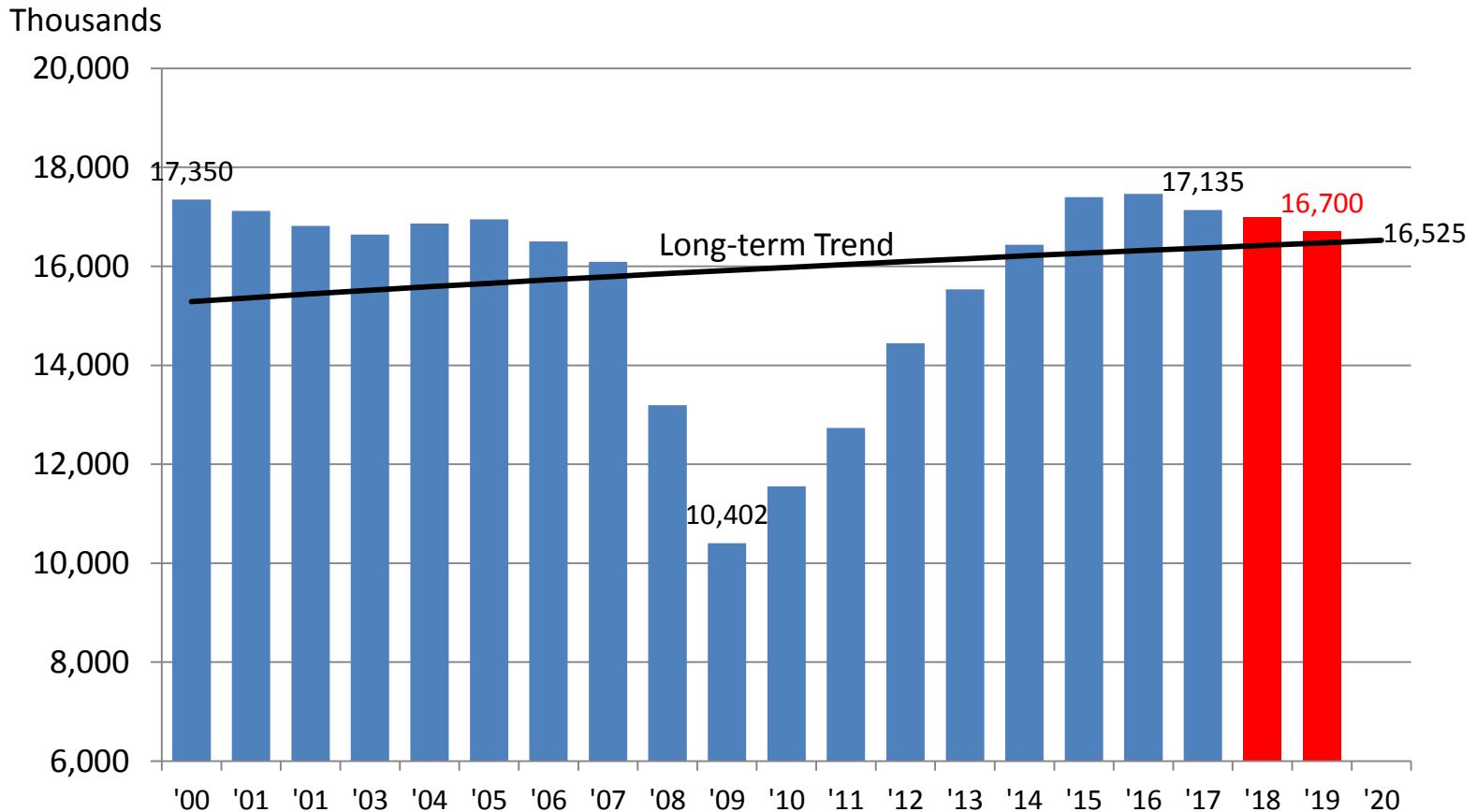
## 10 Year Moving Average



Source: Author's calculations using WardsAuto data.

# U.S. Light Vehicle Sales

Calendar Year Sales – Millions of Units



Source: WardsAuto and Blue Chip Consensus.

*Thank You!*

