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# Economic Outlook and Monetary Policy

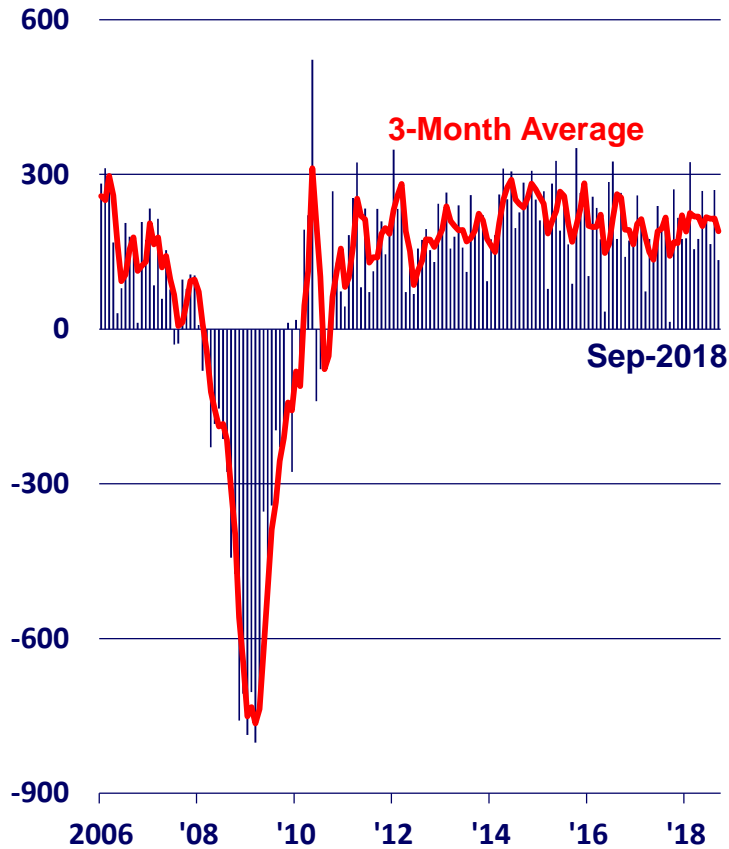
Federal Reserve Bank of Chicago  
Academic Advisory Council Meeting  
October 19, 2018

Spencer Krane  
*Senior Vice President*  
Federal Reserve Bank of Chicago

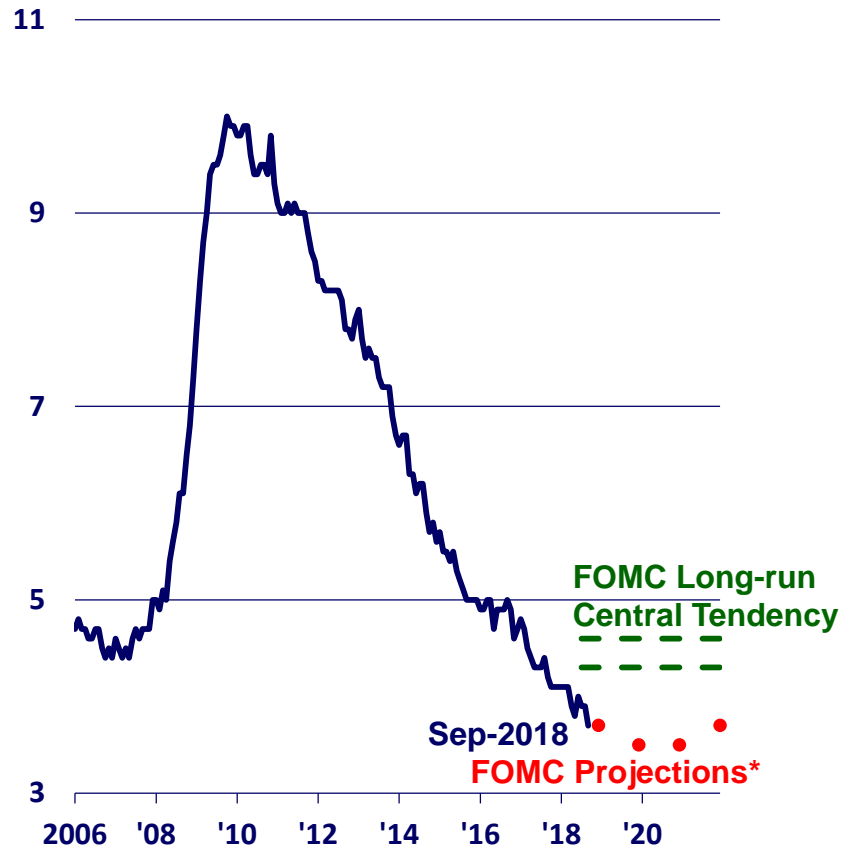
*The views I express here are my own and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or within the Federal Reserve System.*

# Labor Markets

## Monthly Payroll Employment Change (thousands)



## Unemployment Rate (percent)

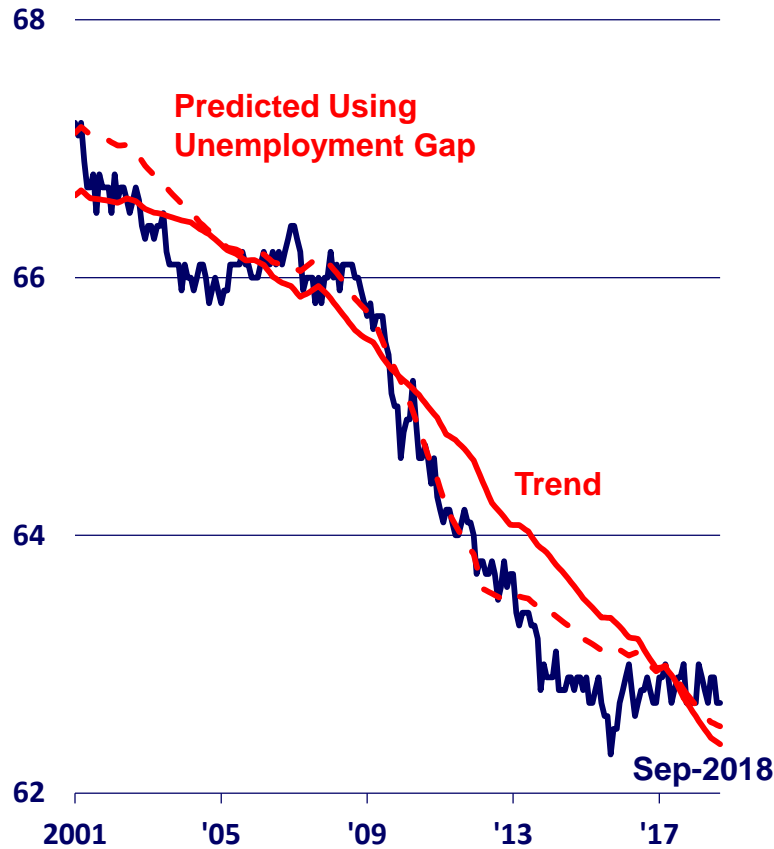


\*Median of projections from the September 2018 SEP

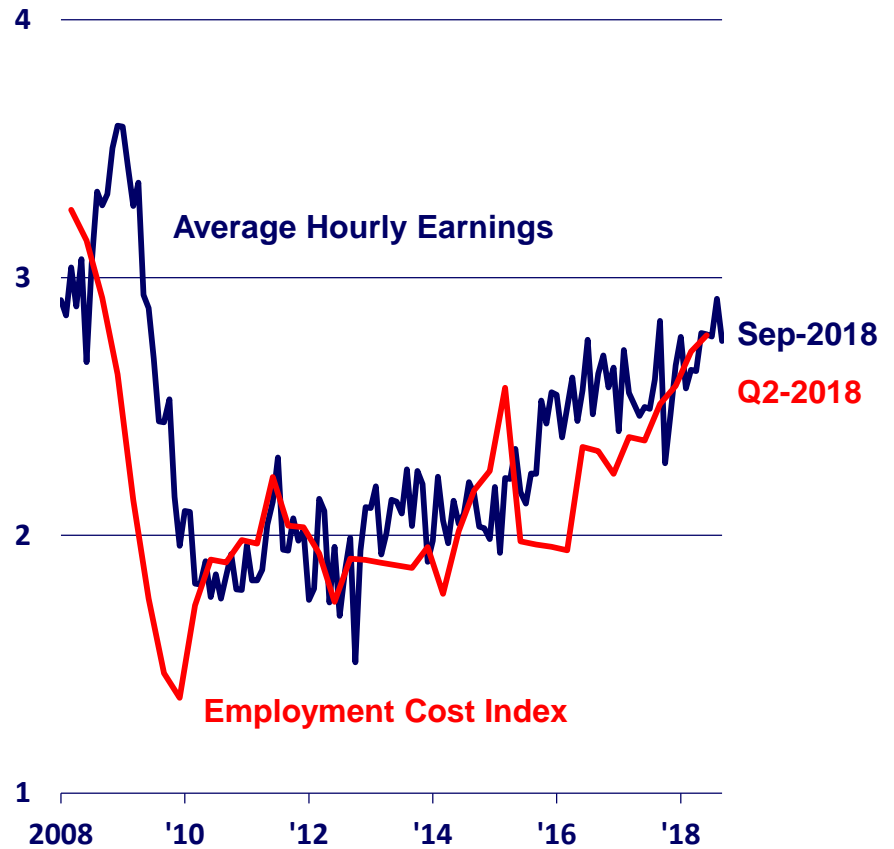
Source: Bureau of Labor Statistics and Federal Reserve Board from Haver Analytics

# Labor Force Participation Rate and Wages

## Labor Force Participation Rate (percent)



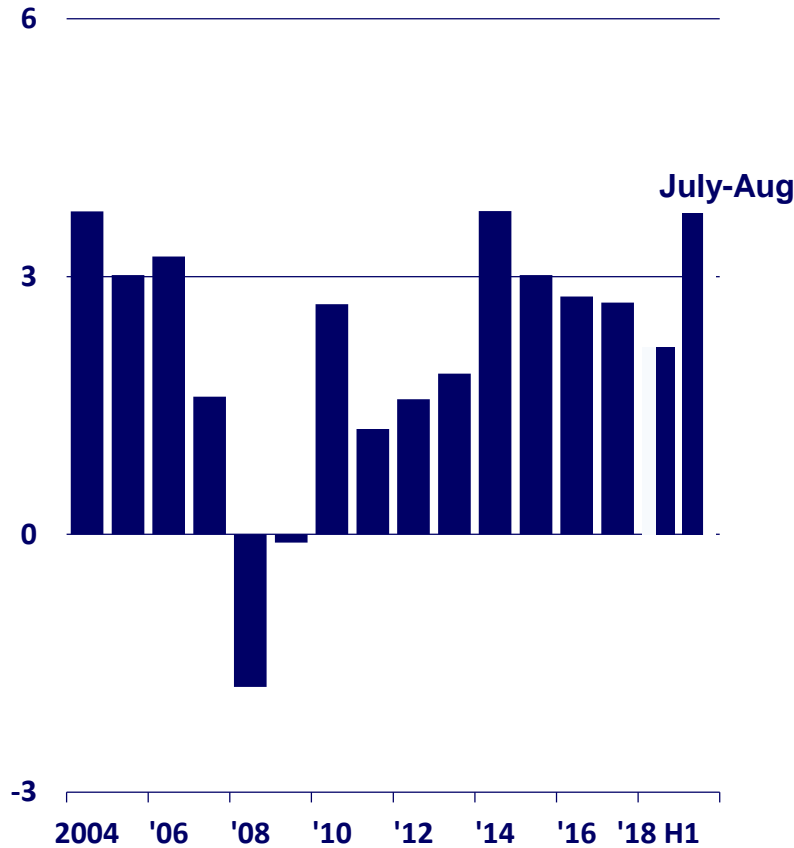
## Wage Growth (year over year percentage change)



*Trend estimates from Chicago Fed staff calculations  
Source: Bureau of Labor Statistics from Haver Analytics*

# Household Sector

**Real Personal Consumption exp.**  
(Q4/Q4 percentage change)



**Personal Saving Rate**  
(% of disposable personal income)

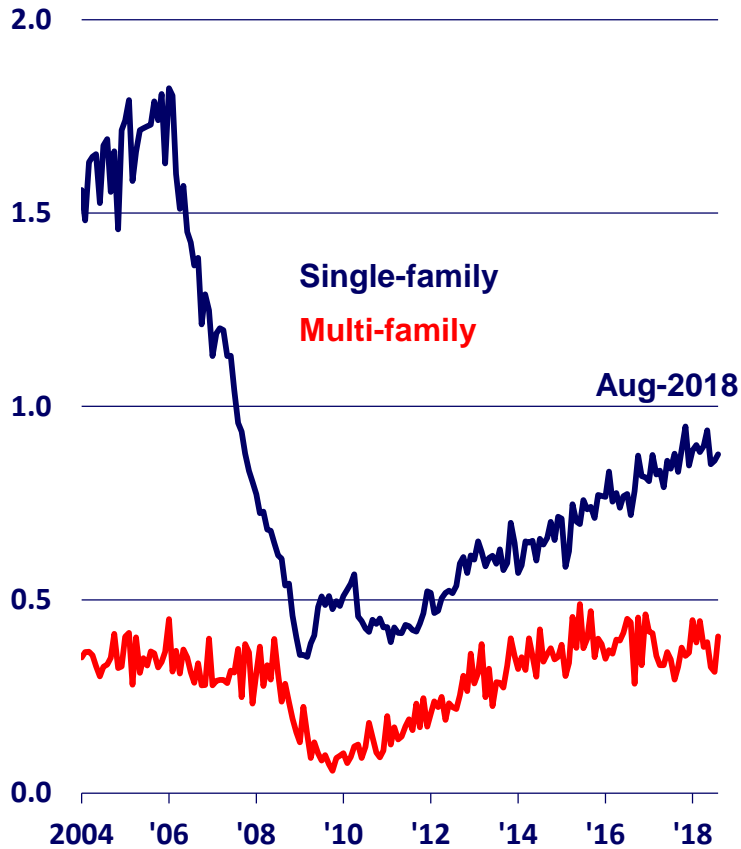


Source: BEA from Haver Analytics

# Household Sector

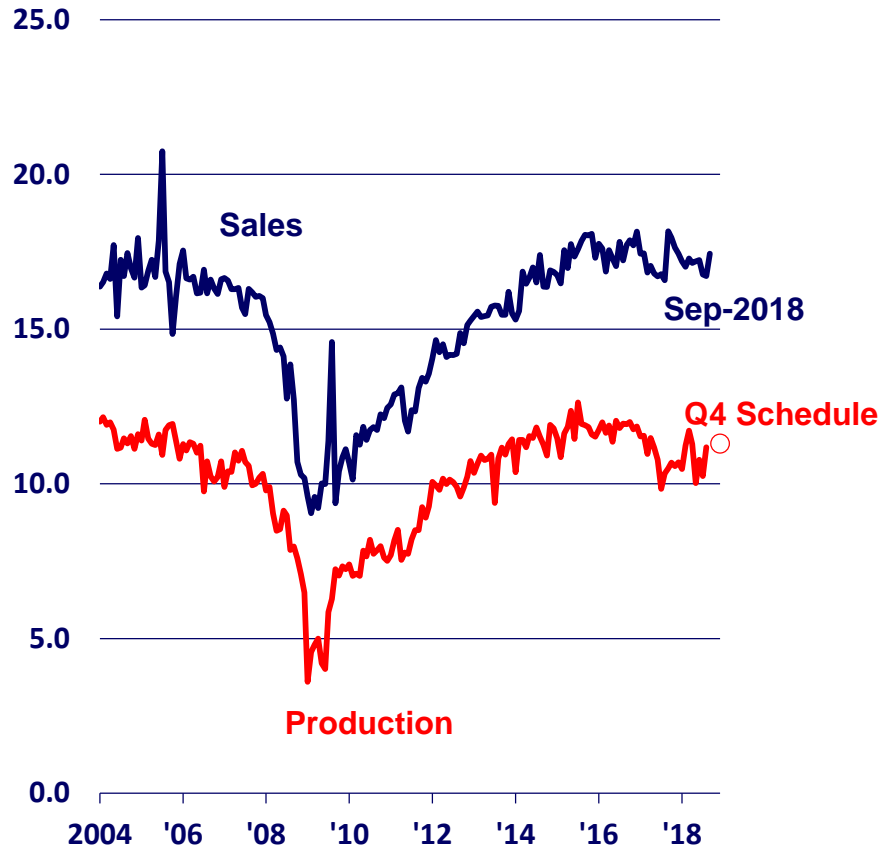
## Housing Starts

(millions of units, annual rate)



## Light Vehicle Sales & Production

(millions of autos and light trucks, SAAR)



Source: BEA, Census Bureau, and Federal Reserve Board from Haver Analytics

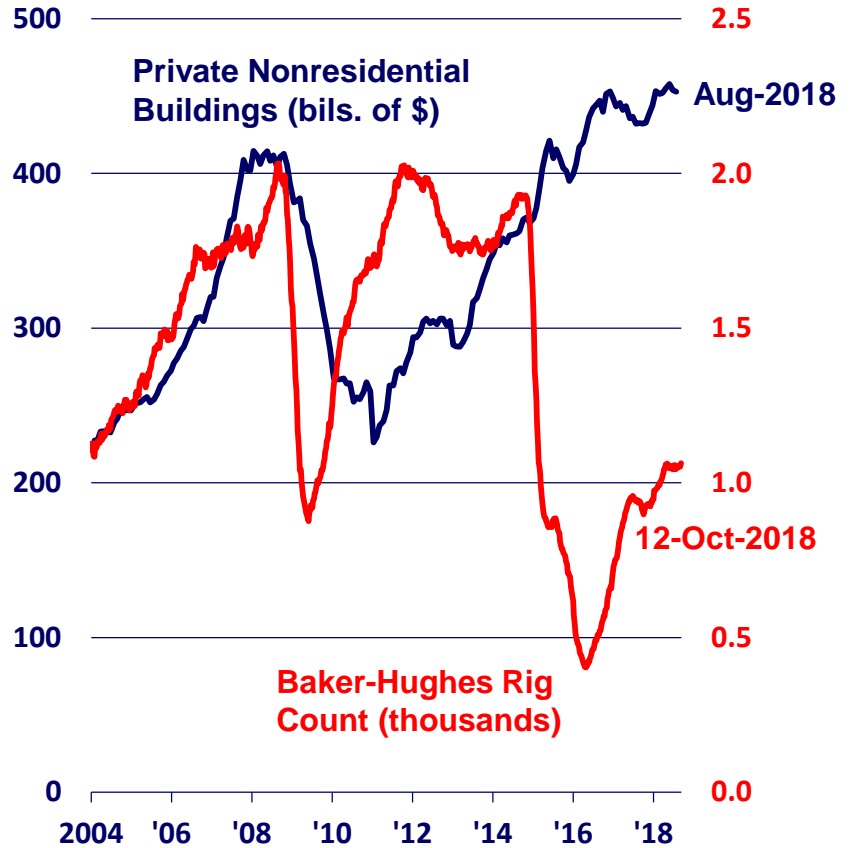
# Investment Indicators

## Core Capital Goods

(nondefense capital good ex aircraft; billions of \$, saar)



## Nonresidential Structures

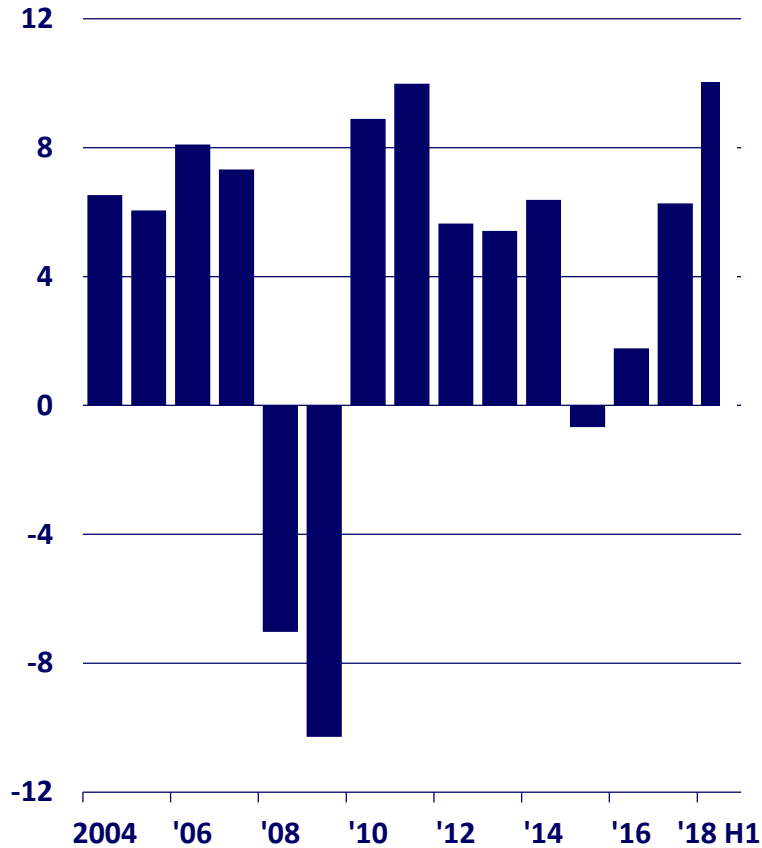


Source: BEA and Census Bureau from Haver Analytics; Baker-Hughes

# Business Sector

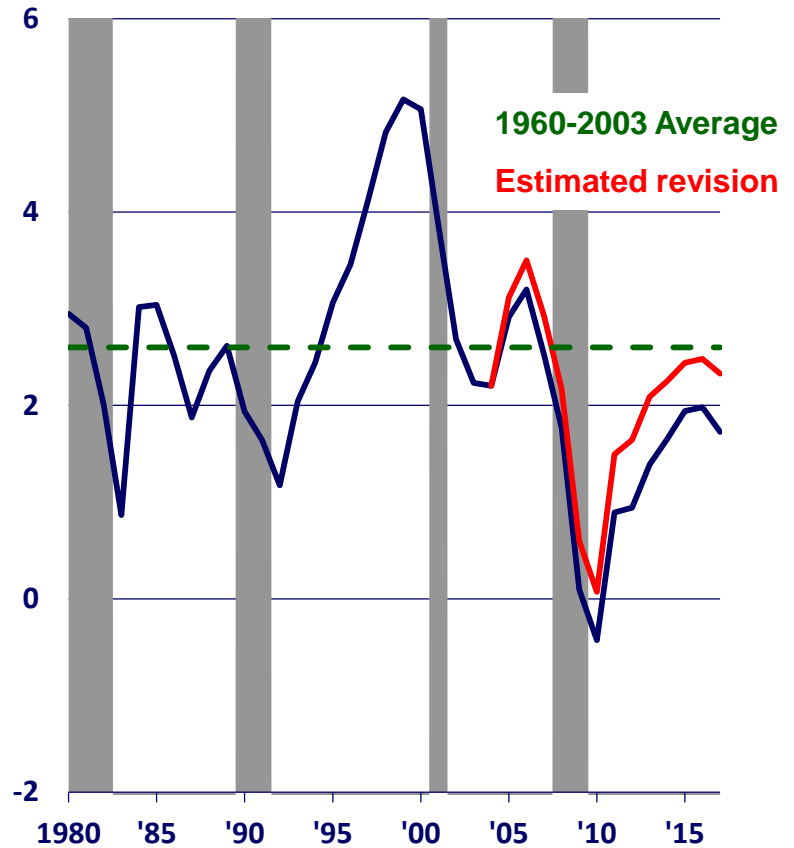
## Business Fixed Investment

(Q4/Q4 percentage change)



## Capital Deepening

(percent change in input of capital services to trend hours)



*Estimated revision for capital services calculated from Chicago Fed staff estimates*  
*Source: BEA and BLS from Haver Analytics*



# 2018 Growth Forecasts

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	Q1	Q2	Q3	Q4	Year
<b>Actual</b>	<b>2.2</b>	<b>4.2</b>			
<b>Macroadvisers</b> (Oct 15)			<b>3.6</b>	<b>2.7</b>	<b>3.2</b>
<b>Blue Chip</b> (Oct 10)			<b>3.3</b>	<b>2.8</b>	<b>3.1</b>
<b>GDPNow</b> (Oct 15)			<b>4.0</b>		





# FOMC Forecasts

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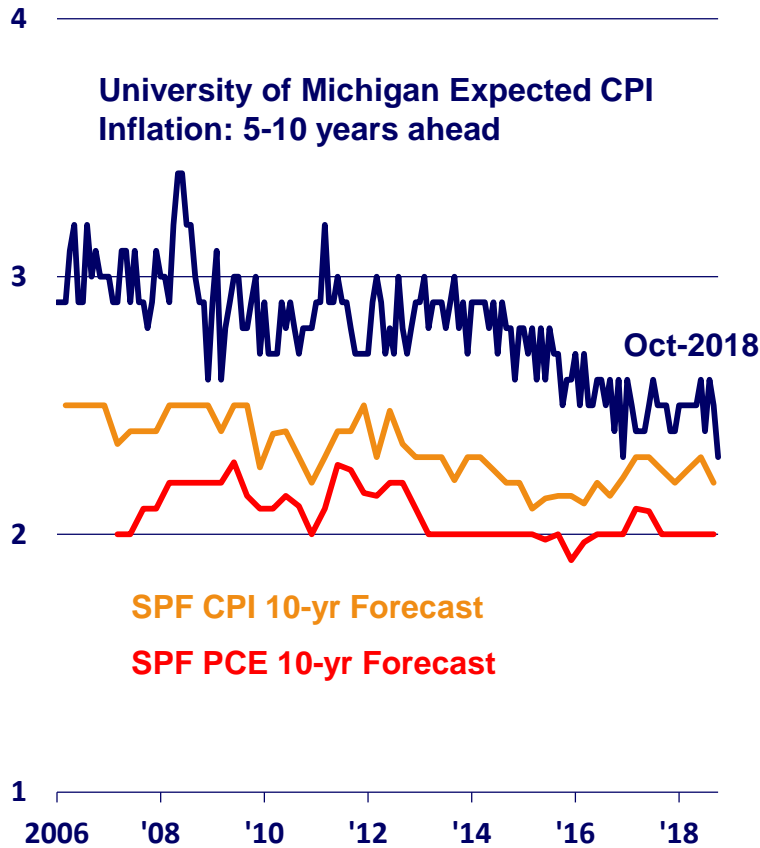
Median forecast, September 2018 Summary of Economic Projections

<b>Variable</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>LR</b>
<b>GDP<sup>1</sup></b>	<b>3.1</b>	<b>2.5</b>	<b>2.0</b>	<b>1.8</b>	<b>1.8</b>
(central tendency)	(3.0-3.2)	(2.4-2.7)	(1.8-2.1)	(1.6-2.0)	(1.8-2.0)
<b>Unemployment<sup>2</sup></b>	<b>3.7</b>	<b>3.5</b>	<b>3.5</b>	<b>3.7</b>	<b>4.5</b>
(central tendency)	(3.7)	(3.4-3.6)	(3.4-3.8)	(3.5-4.0)	(3.5-4.0)

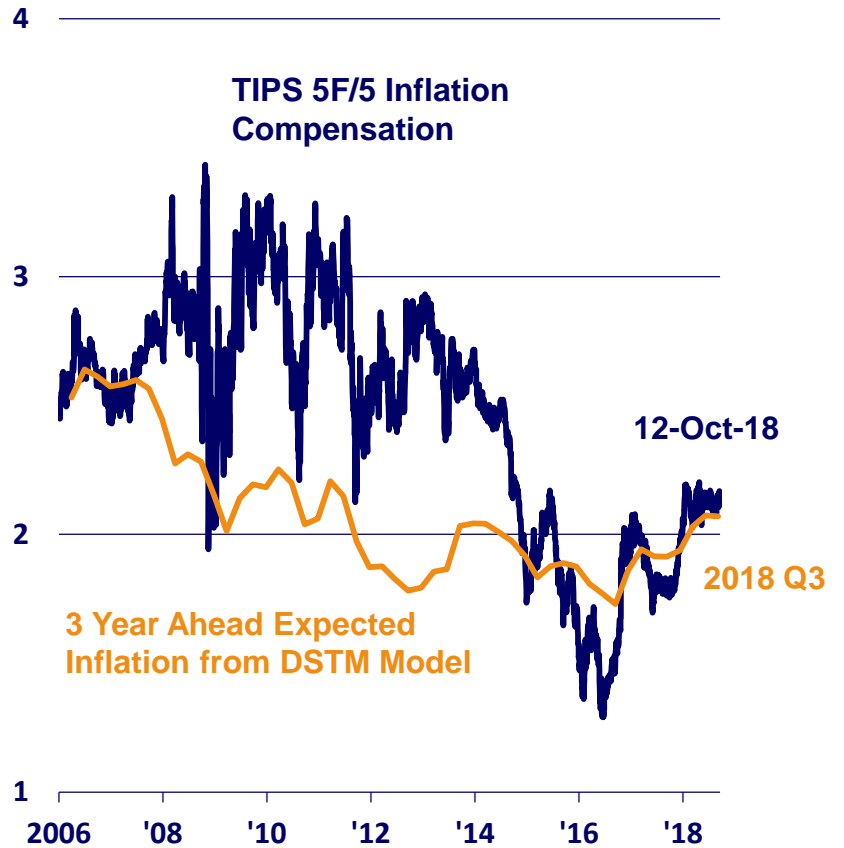
1. Q4-to-Q4 percent change
2. Q4 Average

# Inflation Expectations

## Inflation Surveys (percent)



## Market Pricing (percent)



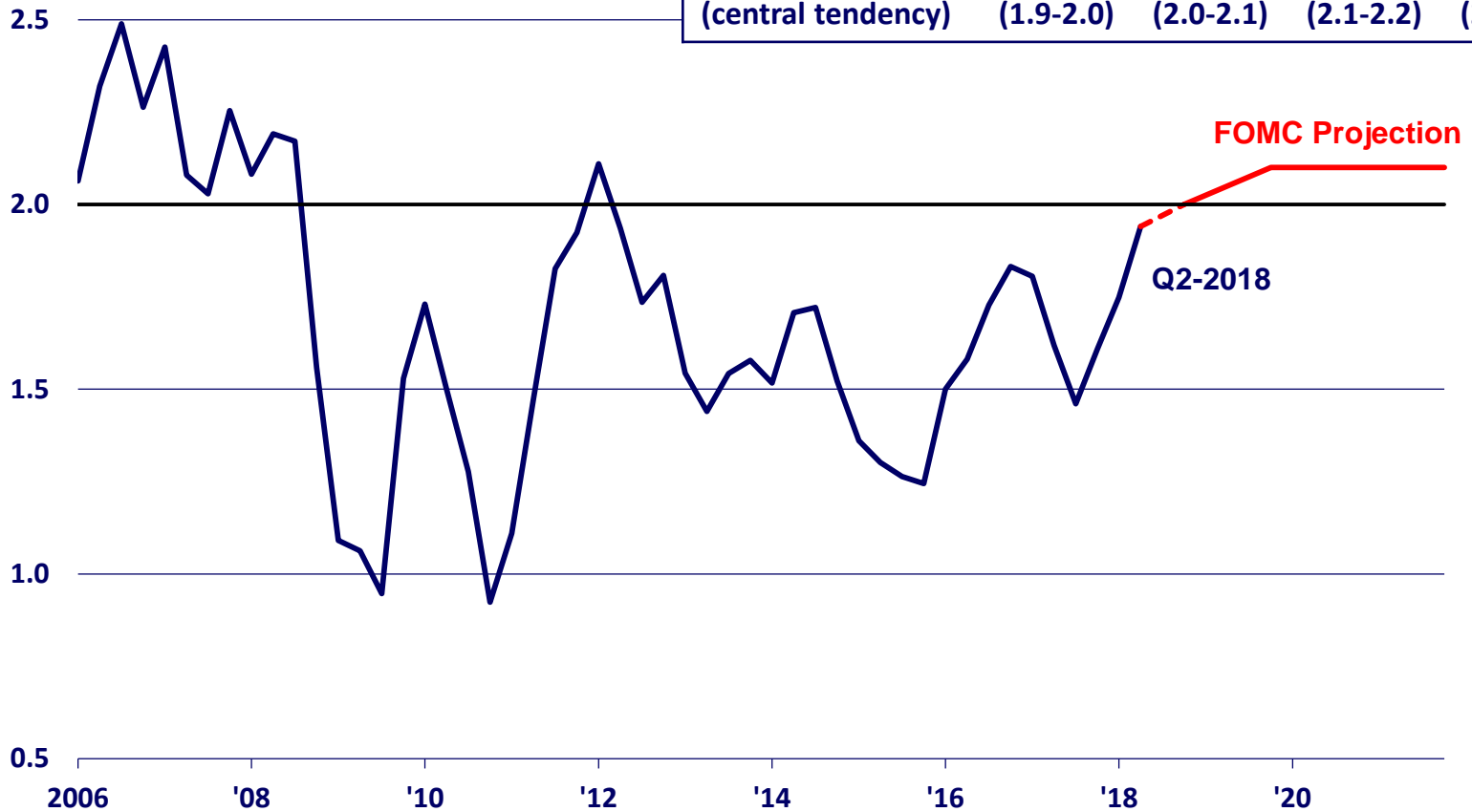
Source: University of Michigan, Survey of Professional Forecasters, Federal Reserve Bank of Chicago, and Federal Reserve Board

# Inflation Forecast

## Core PCE Inflation

(year-over-year percentage change)

FOMC Forecast	2018	2019	2020	2021
Core PCE (central tendency)	2.0 (1.9-2.0)	2.1 (2.0-2.1)	2.1 (2.1-2.2)	2.1 (2.0-2.2)



*FOMC projections are the median values for core PCE inflation as reported from the September 2018 release of the SEP.*



# Treasury Rates

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## 10 Year Treasury (percent)



Source: Federal Reserve Board from Haver Analytics



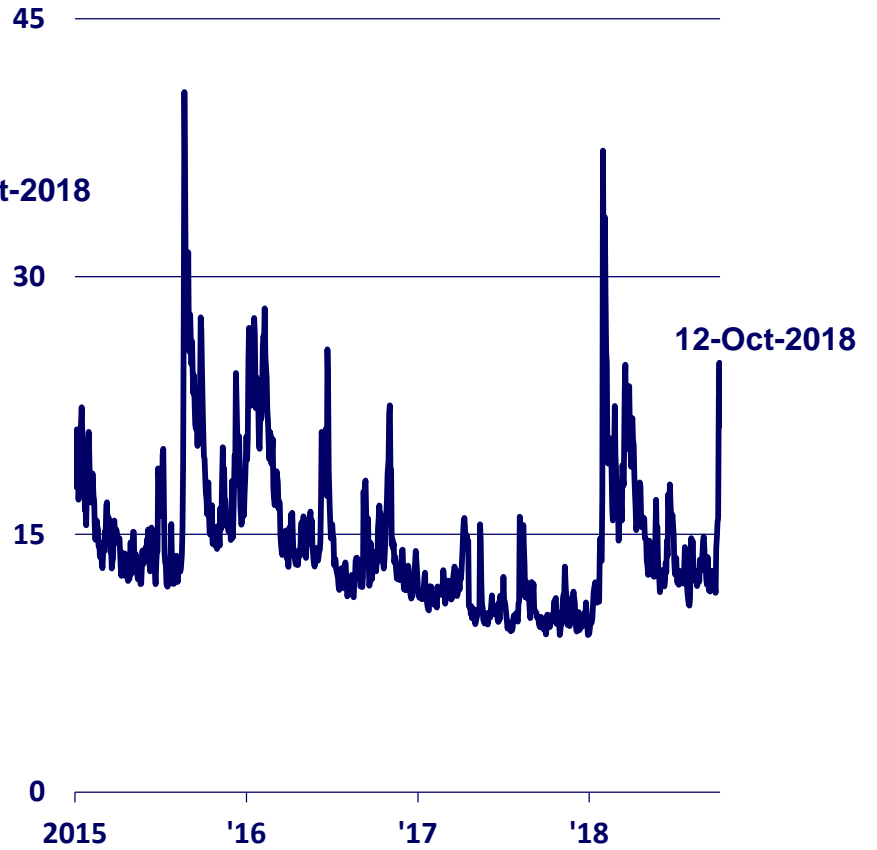
# Stock Market

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## S&P 500



## VIX

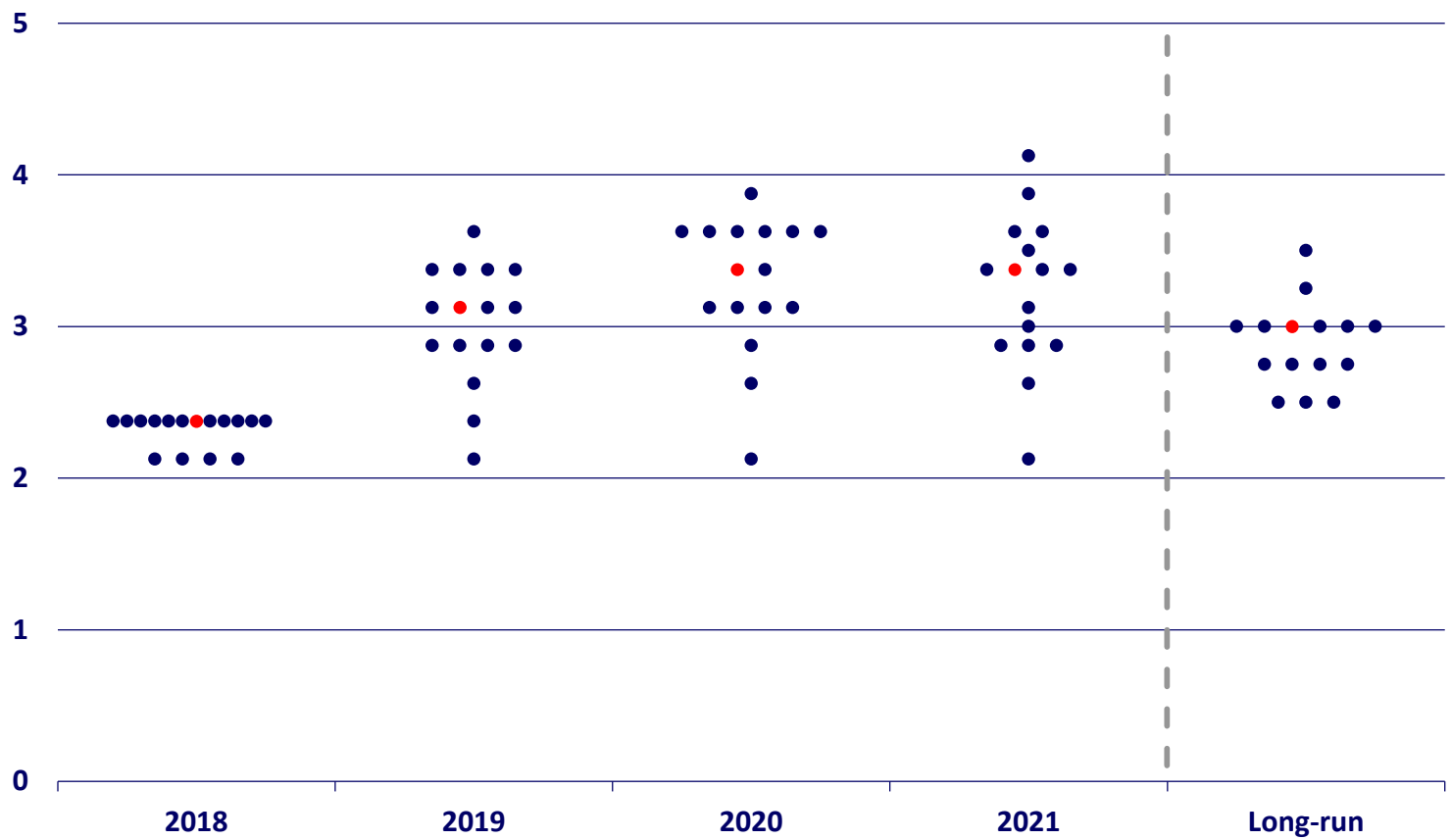


Source: Wall Street Journal from Haver Analytics



# Monetary Policy

**Target Federal Funds Rate at Year-End; September Summary of Economic Projections**  
(percent)





# FOMC Statements – “Accommodative” Gone

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## August 1, 2018

Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. Risks to the economic outlook appear roughly balanced.

In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1-3/4 to 2 percent. The stance of monetary policy remains accommodative, thereby supporting strong labor market conditions and a sustained return to 2 percent inflation.

In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

## September 26, 2018

Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective over the medium term. Risks to the economic outlook appear roughly balanced.

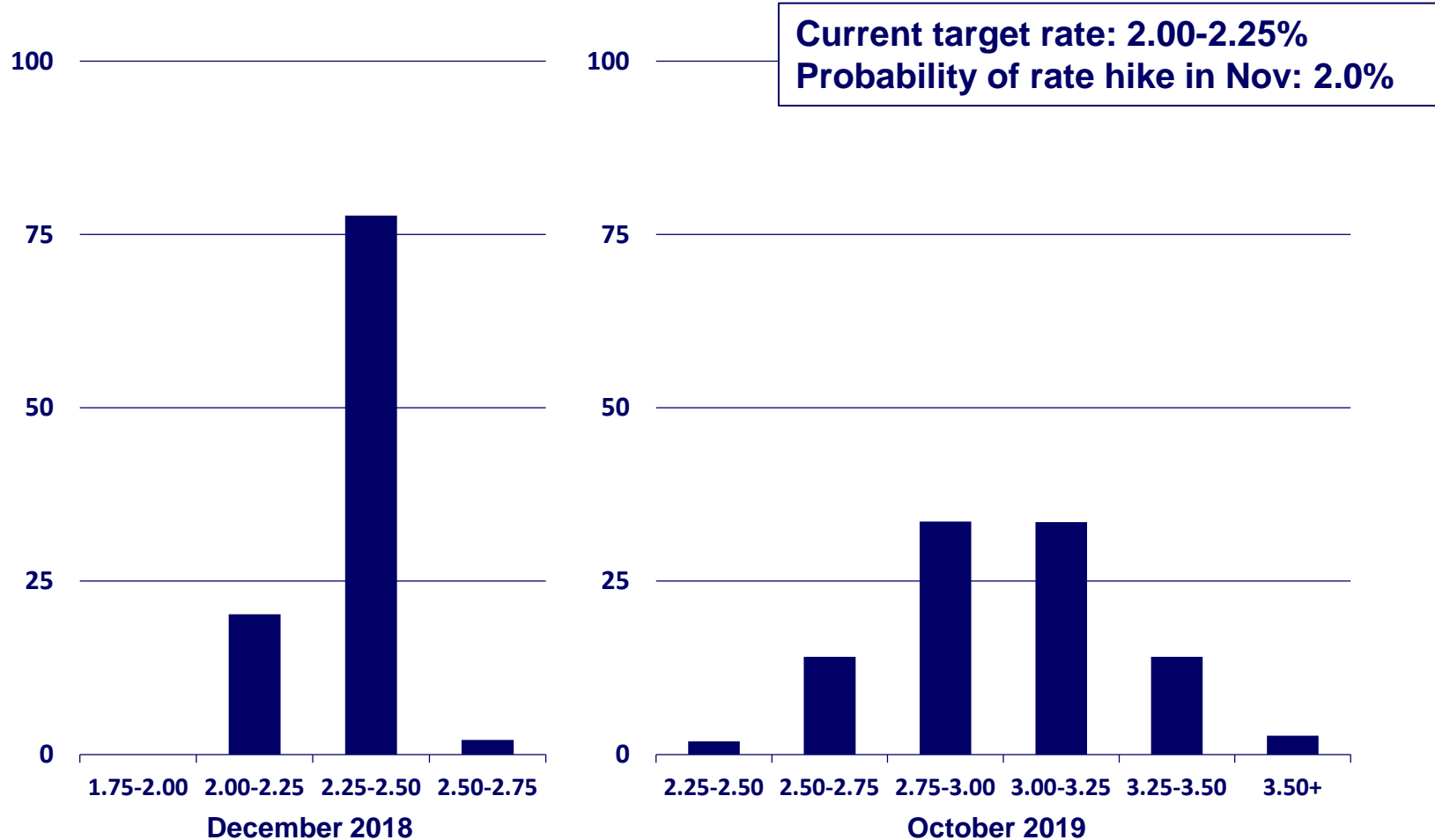
In view of realized and expected labor market conditions and inflation, the Committee decided to raise the target range for the federal funds rate to 2 to 2-1/4 percent.

In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

# Monetary Policy

## Distribution of Target Federal Funds Rate Priced in Futures Markets

(percent)



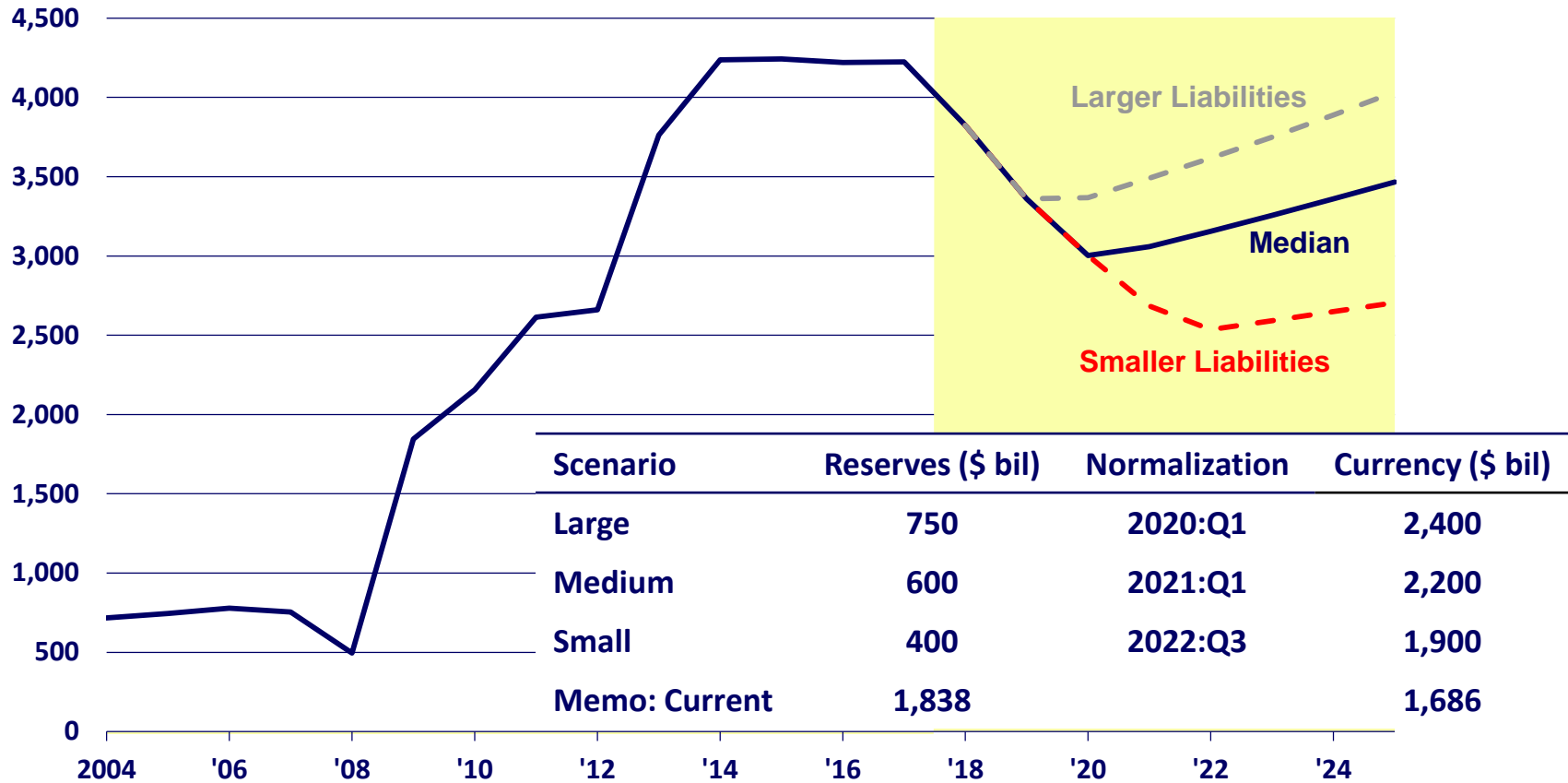
*Expectations for year-end are derived from CME contracts as of October 12, 2018*

*Source: CME FedWatch*



# Gradual Balance Sheet Normalization

**Projected SOMA Domestic Securities Holdings: Alternative Liabilities Scenarios**  
(billions \$)



Source: Federal Reserve Bank of New York 2017 Open Market Annual Report, published in April 2018



# Policy Implementation: August FOMC Minutes

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- **“A couple of participants commented on issues related to the operating framework for the implementation of monetary policy, including ... the demand for reserves and for the size and composition of the Federal Reserve’s balance sheet....**
- **The Chairman suggested that the Committee would likely resume a discussion of operating frameworks in the fall.”**