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The St. Louis Fed's New Approach to the U.S. Economic Outlook and Fed Normalization

Presentation to the Arkansas CFA
Society

Little Rock, Arkansas

Kevin L. Kliesen

Federal Reserve Bank of St. Louis

November 16, 2016

Not an official document

Disclaimer

The views I will express are my own and do not necessarily reflect the positions of the Federal Reserve Bank of St. Louis or the Federal Reserve System.

The Big Picture

- The economy is likely to see above-trend growth over the second half of the year.
- New President, new policies—but until they are enacted, it's difficult to know their economic effects.
- The labor market is healthy, interest rates have popped, and inflation expectations are rising.
- Market-based expectations for a rate hike in December are very high, but monetary policy will likely remain very easy for the foreseeable future.

What We Thought We Knew.

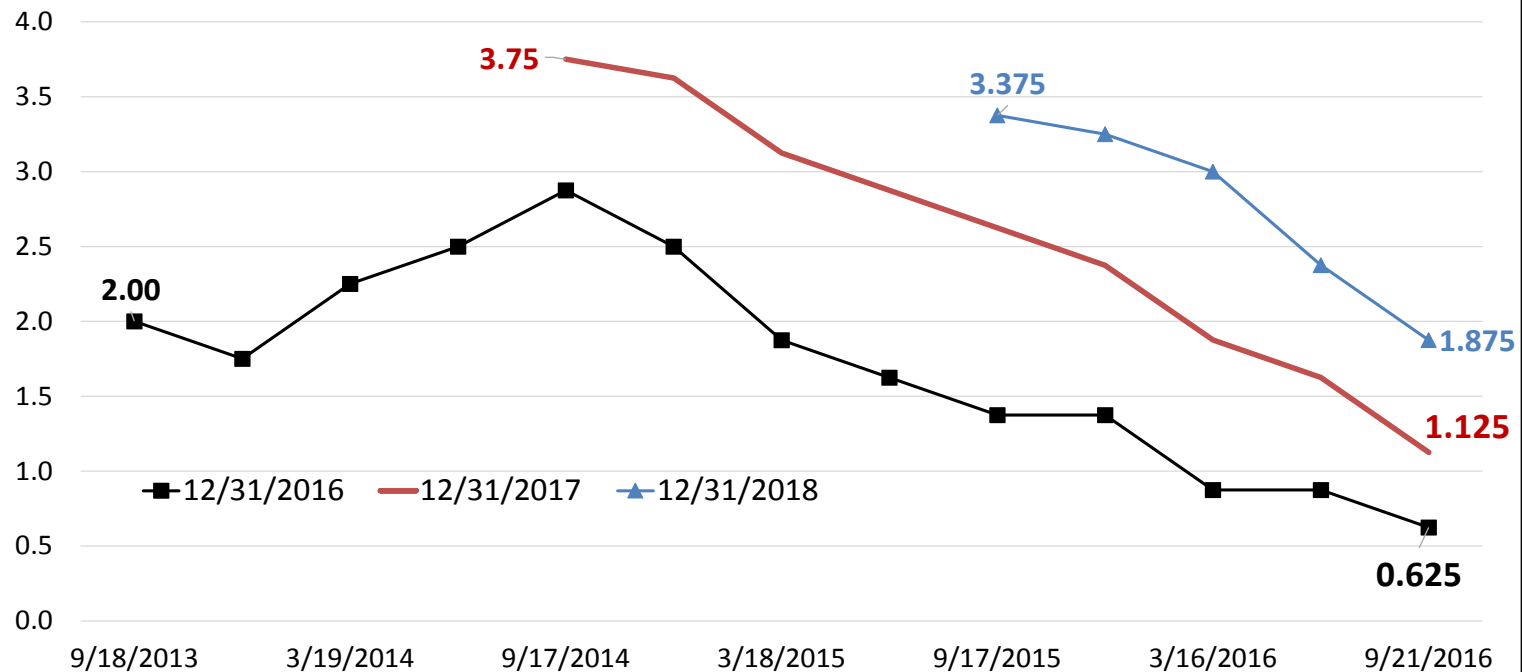
- Like most forecasters, we assumed that the economy would steadily converge to our long-run projections.
- But over the short run, we thought that there would be a burst of above-trend growth that would drive the unemployment rate lower than most expected.
- We also thought that inflation would temporarily overshoot the 2% target.
- Under this scenario, the policy rate would steadily rise.

A Towel-Throwing Exercise!

- We got the unemployment projection right, but . . .
- An oil shock temporarily pushed inflation below the Fed's target.
- There was a burst of strong real GDP growth over the second half of 2013 and in the middle of 2014.
- Result: The economy's cyclical dynamics have played out and we have a policy rate near zero.

FOMC Participants keep marking down their fed funds rate target projections.

Historical Projections for the FOMC's Federal Funds Target on Dec. 31, 2016, Dec. 31, 2017, and Dec. 31, 2018 According to the Median FOMC Participant Percent



SOURCE: Federal Reserve Summary of Economic Projections.

Fearless Forecast for the next 3 Years.

- Projected averages, 2016 to 2019:
 - Real GDP growth: Around 2%
 - Unemployment rate: About 4.75%
 - Headline inflation: 2%
 - Policy rate: Around 0.75%
- Punchline: More of the same—unless something unexpected happens!

**FIVE THINGS YOU NEED
TO KNOW ABOUT THE U.S.
ECONOMY AND THE FED'S
NORMALIZATION
PROCESS**

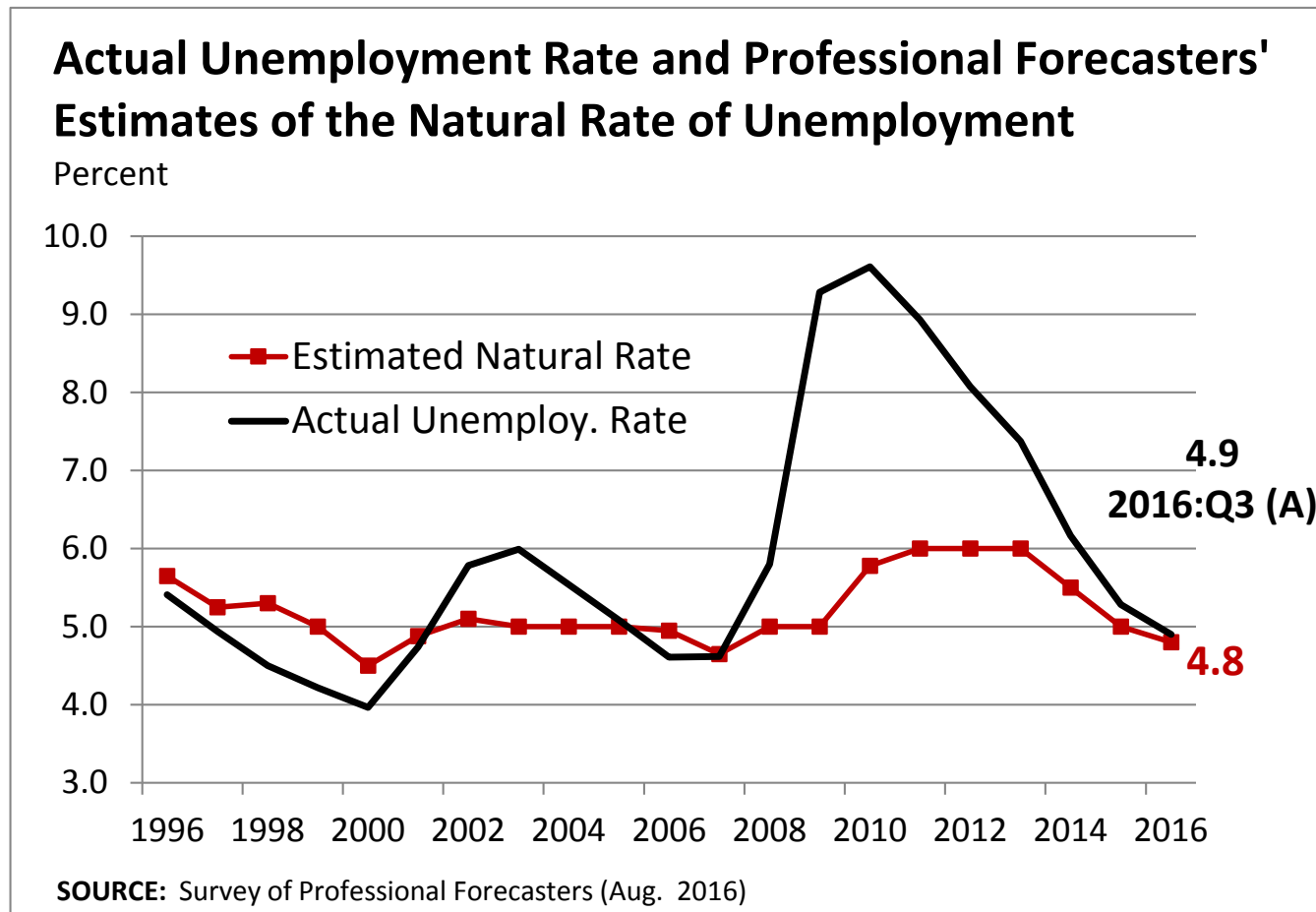
The Five Things You Need To Know

1. The economy is basically at full employment.
2. We're in a period of slow real GDP growth.
3. Labor productivity growth stinks—and that's a problem!
4. Low inflation seems likely for the forecastable future (2-3 years).
5. The real rate of return on “safe” financial assets is negative—and this has huge implications.

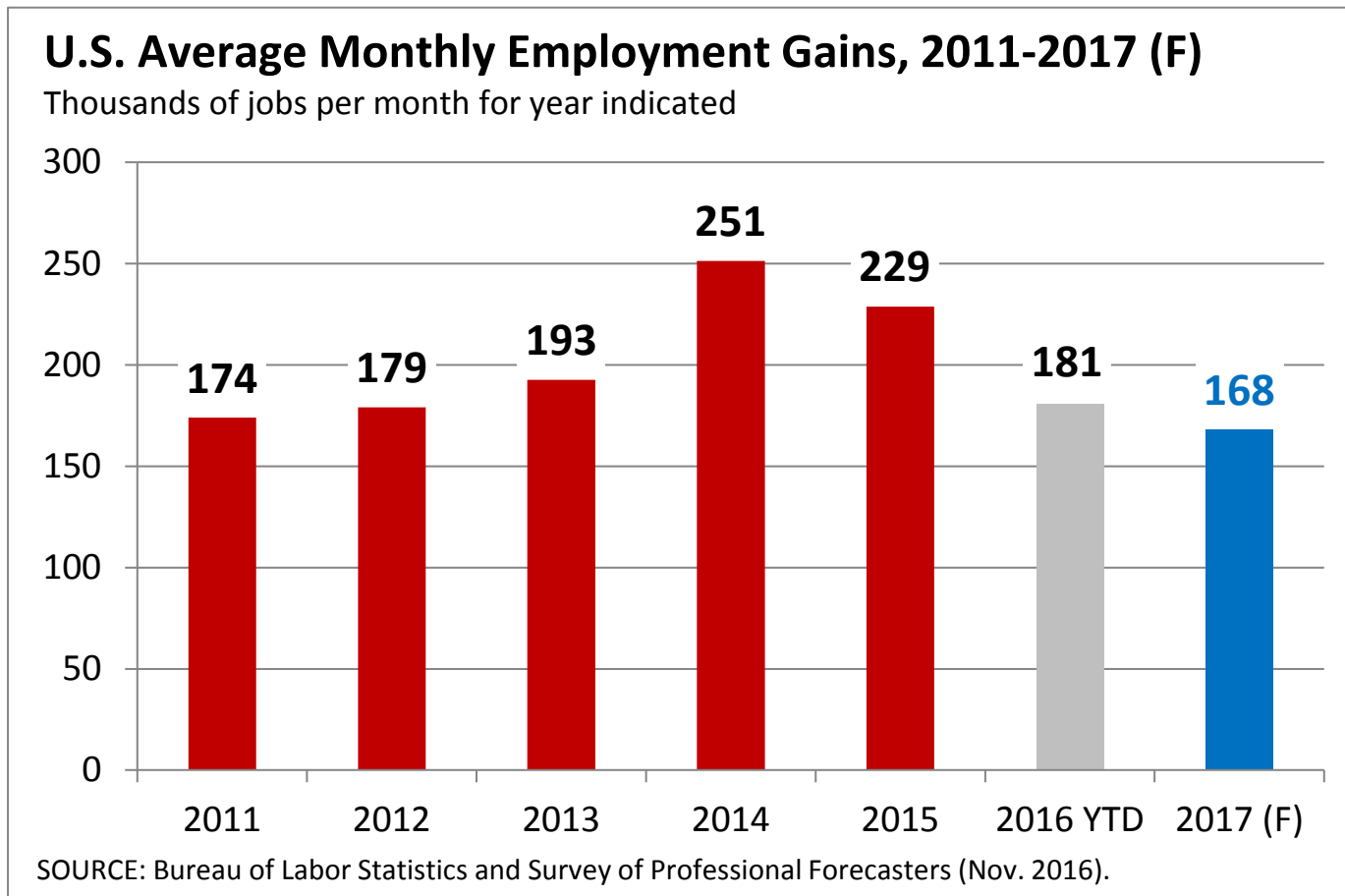
#1: We're at Full Employment

- In the aftermath of the Great Recession, the U.S. unemployment rate peaked at 10% in October 2009.
- The recession was particularly difficult for some workers (e.g., the less-educated and those employed in the housing, finance, and manufacturing industries).
- But now we're into the eighth year of the expansion, and the unemployment rate is basically at its natural rate and job growth is well-above trend estimates.

Professional forecasters: The economy is basically at full employment.



For the past several years, average monthly job gains have been brisk.



Estimates of the economy's trend job growth are well under 100,000/month.

Estimates of the Long-Run Trend in Monthly Jobs Growth

	Lower Bound	Upper Bound	Mid-Point
Atlanta Fed (2016)*	40,000	140,000	80,000
SF Fed (2016)	50,000	110,000	80,000
Aaronson, et. al. (2014)	50,000	75,000	62,500
Chicago Fed (2016)	2015	2016	2020
Time-Varying	60,000	50,000	70,000
	<u>Avg., 2021-2026</u>		
CBO (Aug. 2016)	64,000		

*Atlanta Fed mid-point is their baseline estimate reported on their Macroblog from July 15, 2016.

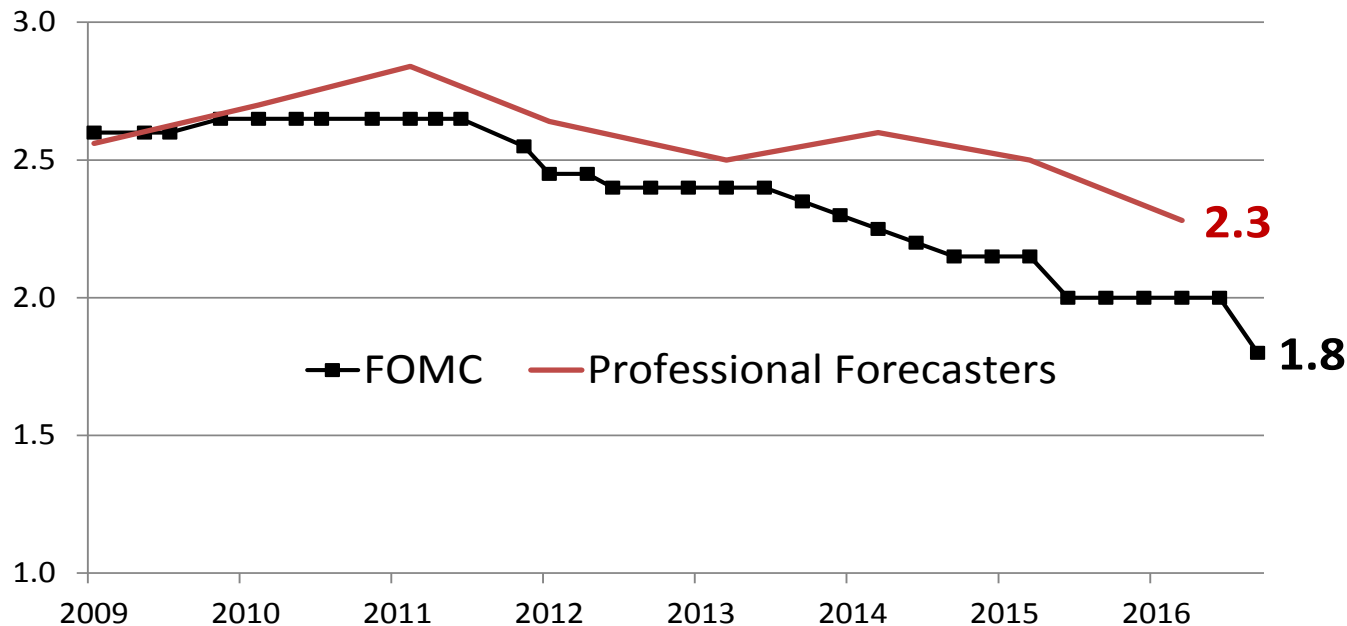
#2: U.S. GDP Growth has the Slows

- During this expansion, real GDP growth rate has averaged about 2%—the weakest since the 1930s.
- Prior to the Great Recession and financial crisis, real GDP growth averaged 3% per year.
- Many aspects of our future society depend crucially on how high the sustainable growth rate of real GDP turns out to be:
 - Labor market conditions, business opportunities, and tax revenues to finance govt. programs, etc.

Do professional forecasters have rose-colored glasses or is the Fed too bearish?

Projected Long-Term Real GDP Growth According to Professional Forecasters and FOMC (Fed) Policymakers

Percent changes



SOURCE: Survey of Professional Forecasters and Federal Reserve Summary of Economic Projections.

So, what explains the slowdown in the economy's sustainable rate of real GDP growth?

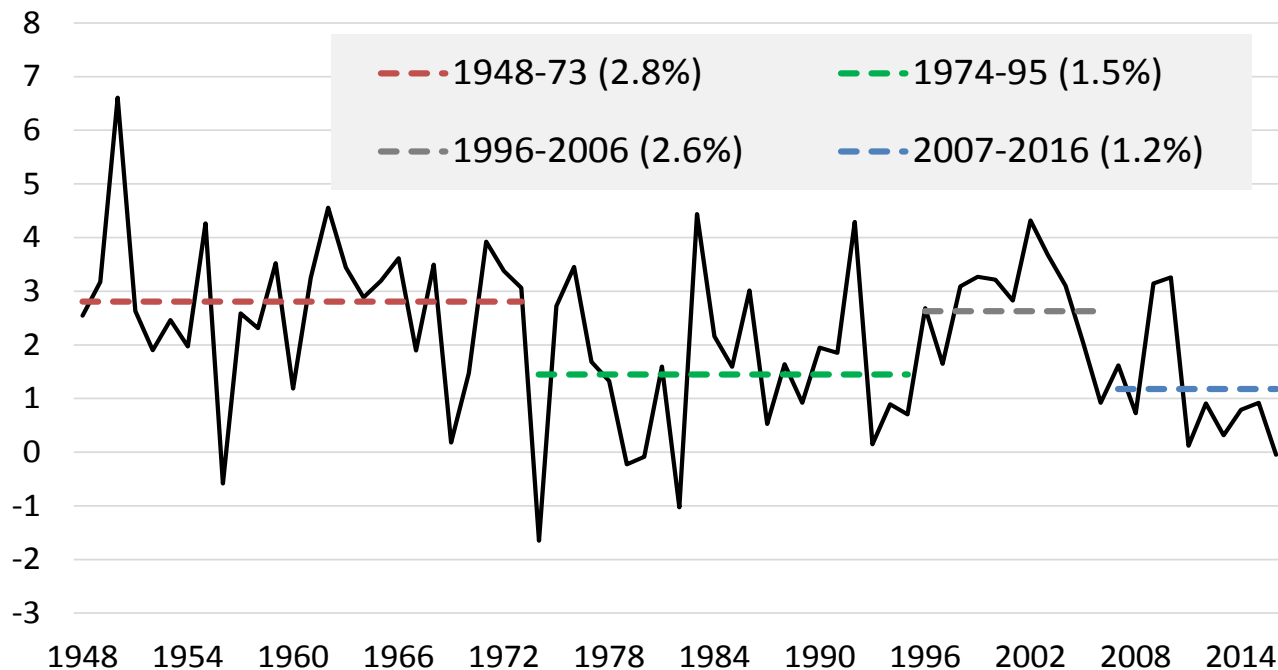
#3: Labor Productivity Growth Stinks

- Labor productivity is the value of output produced (real goods and services) divided by hours worked.
- Few metrics in macroeconomics are more important than the growth rate of productivity.
- Productivity depends on many things: skill levels, technology, investment rates, government policies.
- **IMPORTANT!** Faster productivity growth = faster real GDP growth = faster growth of real wages = rising living standards.

Labor productivity growth volatile and the trend (regime) shifts over time.

Growth of Labor Productivity, 1948 to 2016

Percent change, annual data



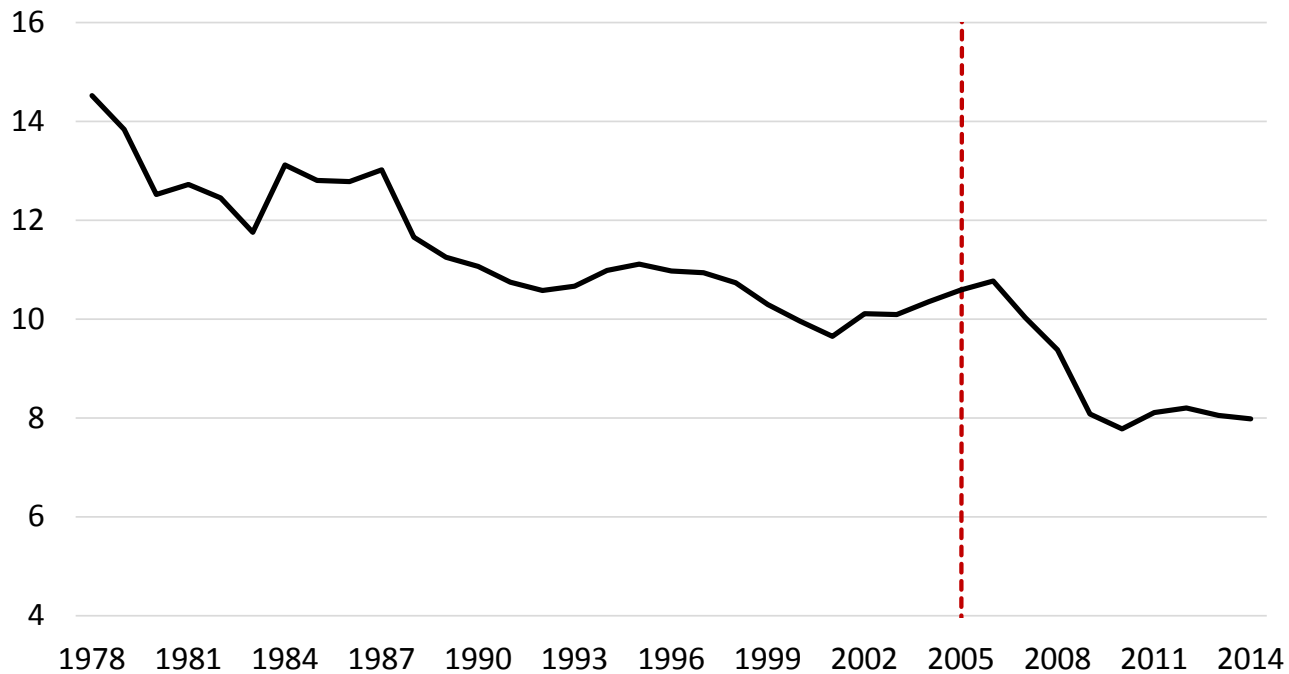
NOTE: Labor productivity is output per hour in the nonfarm business sector.

The Modern Growth Model

- Long-run growth arises from a discovery of new ideas according to Fernald and Jones (AER, 2014).
- Four factors underpin the growth model:
 - Capital-output ratio
 - Educational attainment (human capital)
 - R&D intensity (search for new ideas)
 - Number of people in the economy
- F&H argue that the second and third factors explain about 80% of economic growth from 1950 to 2007.

Business dynamism (new startups) has declined sharply since 2006.

The Percentage of U.S. Firms One-Year Old or Less as a Percent of Total Firms, 1977-2014



SOURCE: U.S. Census Bureau

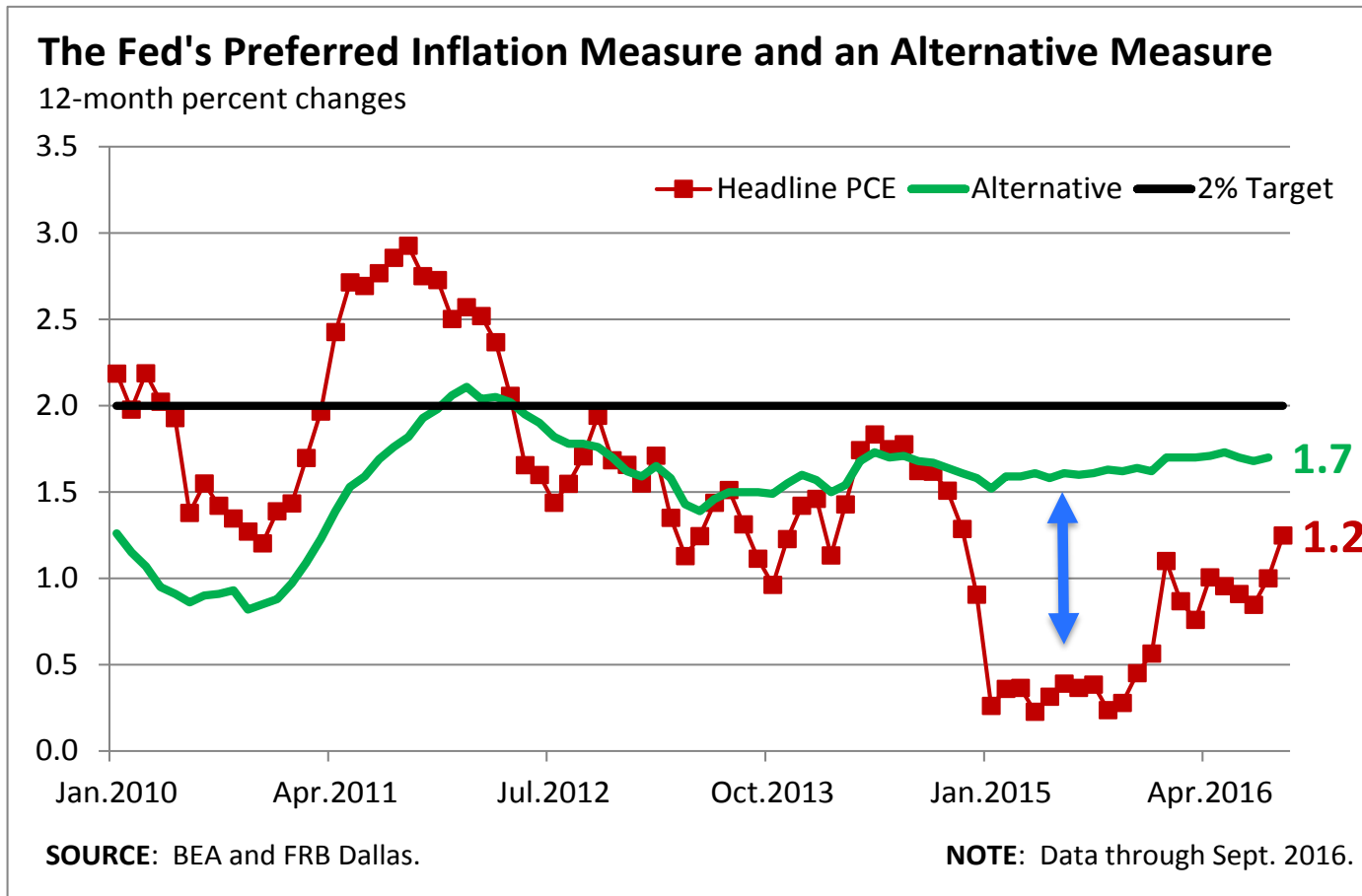
Possible explanations for the marked slowdown in labor productivity growth .

1. We've run out of new "big ideas"—i.e., all the low-hanging fruit has been picked.
2. It's a head-fake: bad data or we can't measure new innovations accurately.
3. Government policies are hindering not helping.
4. Demographics—the boomers are retiring.
5. It's being delayed—just wait!

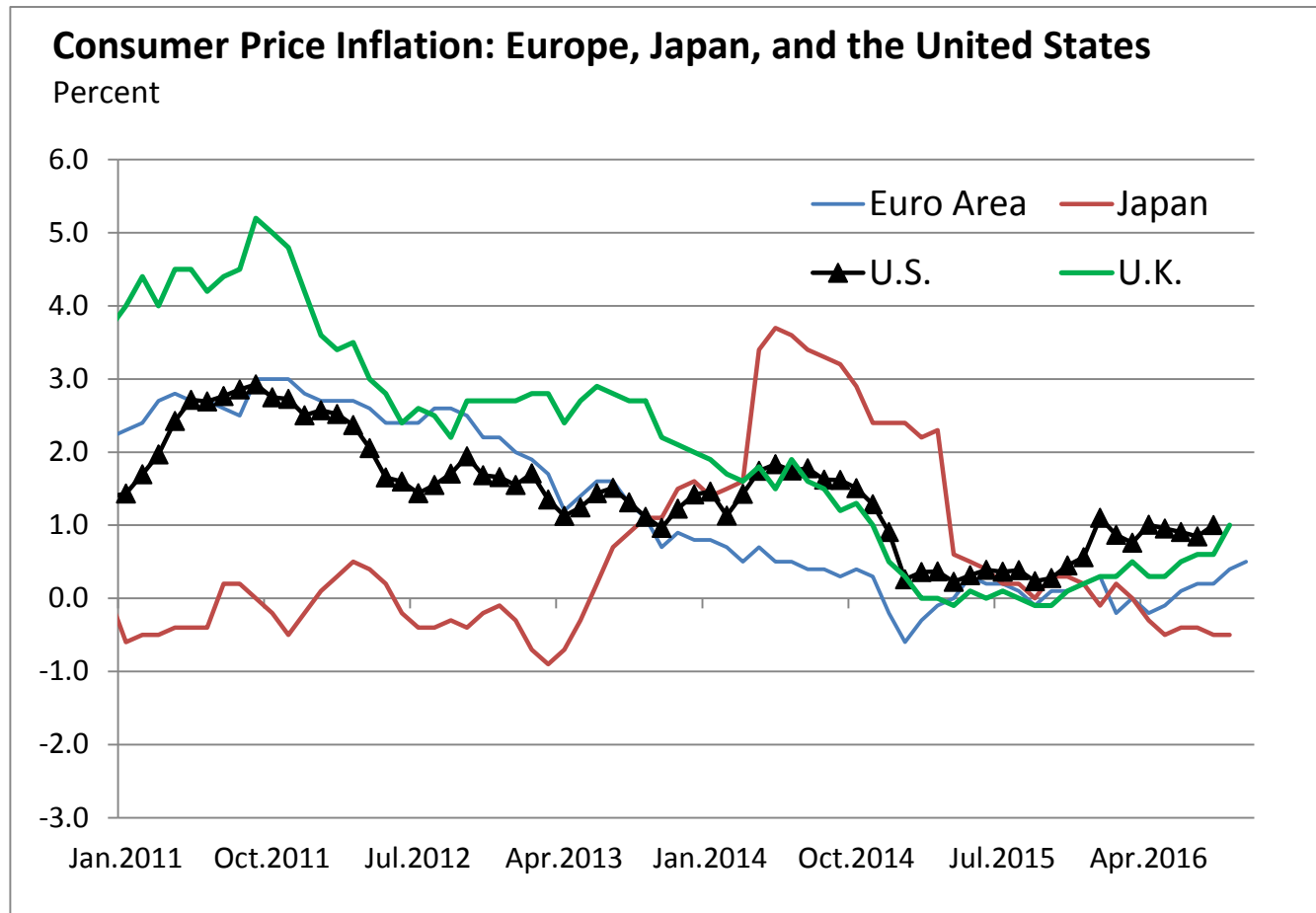
#4: Low Inflation is the New Normal

- The Fed's preferred inflation measure has been below the 2% target rate since mid-2012.
- A key tenet of central bank practice is that an inflation target anchors inflation expectations.
- If the target is viewed as credible by the public, then inflation should deviate very little from the target.
- There may be periods when sharp changes in some prices cause inflation to deviate from the target.

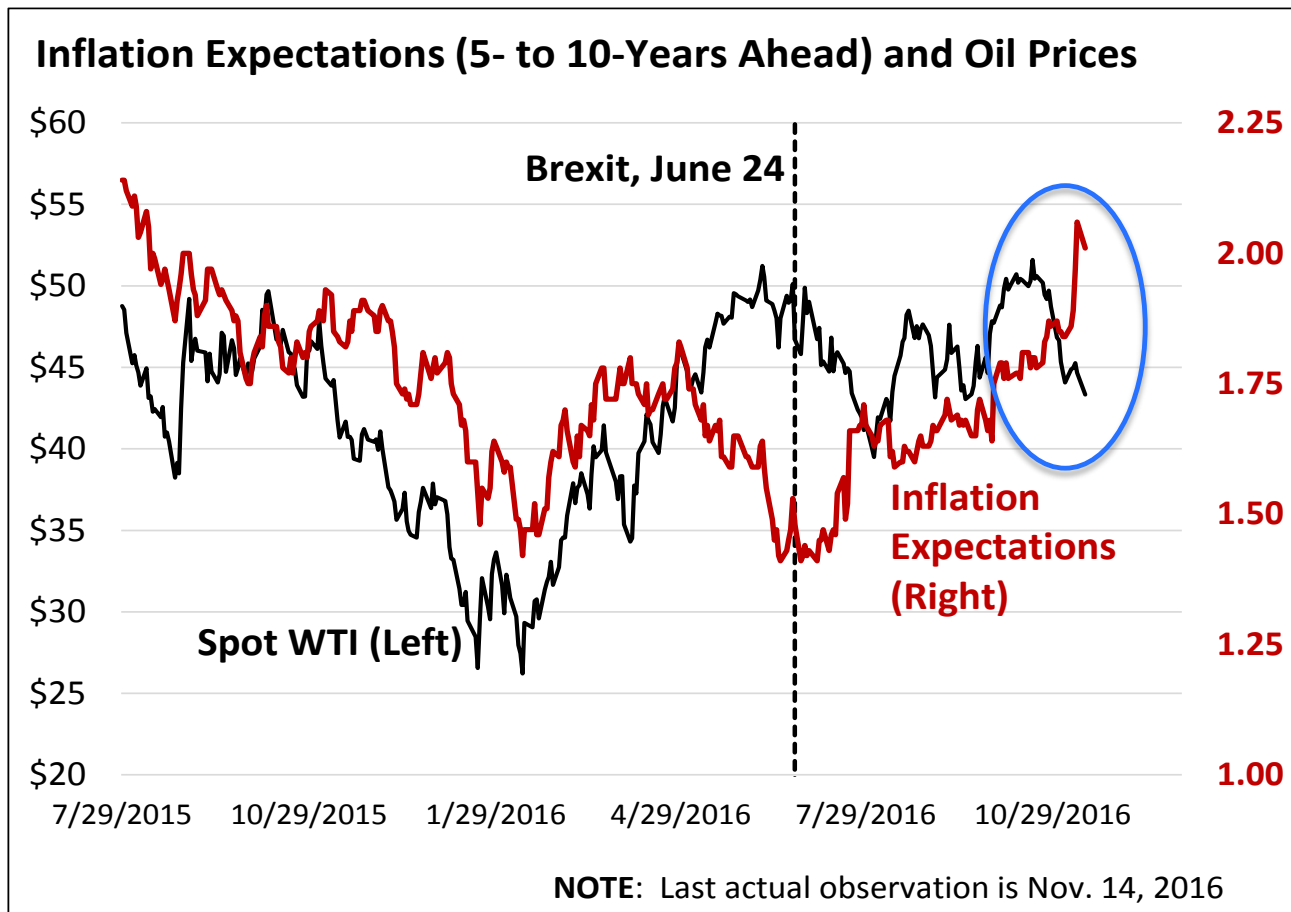
Falling oil prices lowered headline inflation but not many other prices.



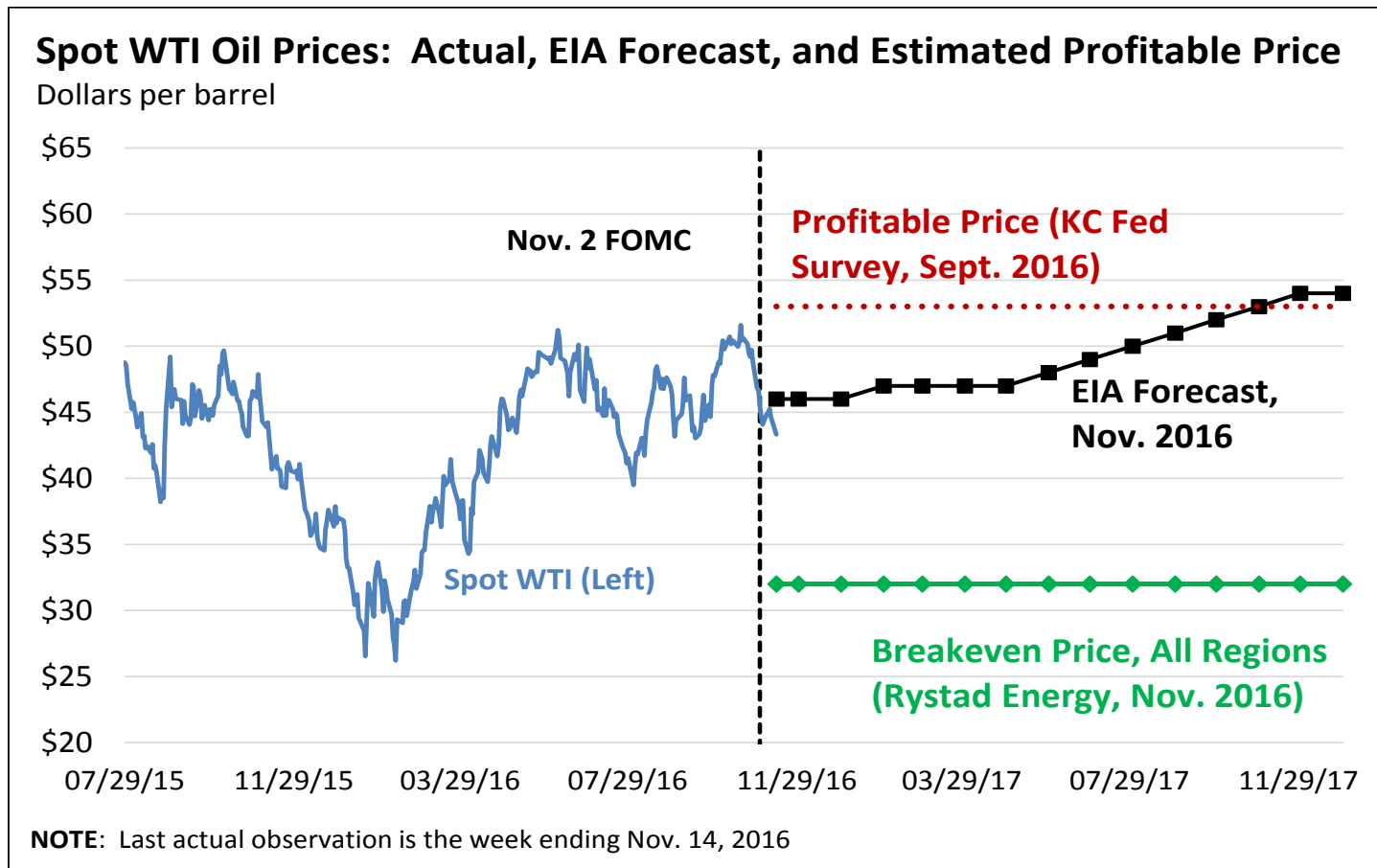
Low inflation is a feature of the largest, most developed economies.



The bond market's inflation fear gauge is ignoring the drop in oil prices!



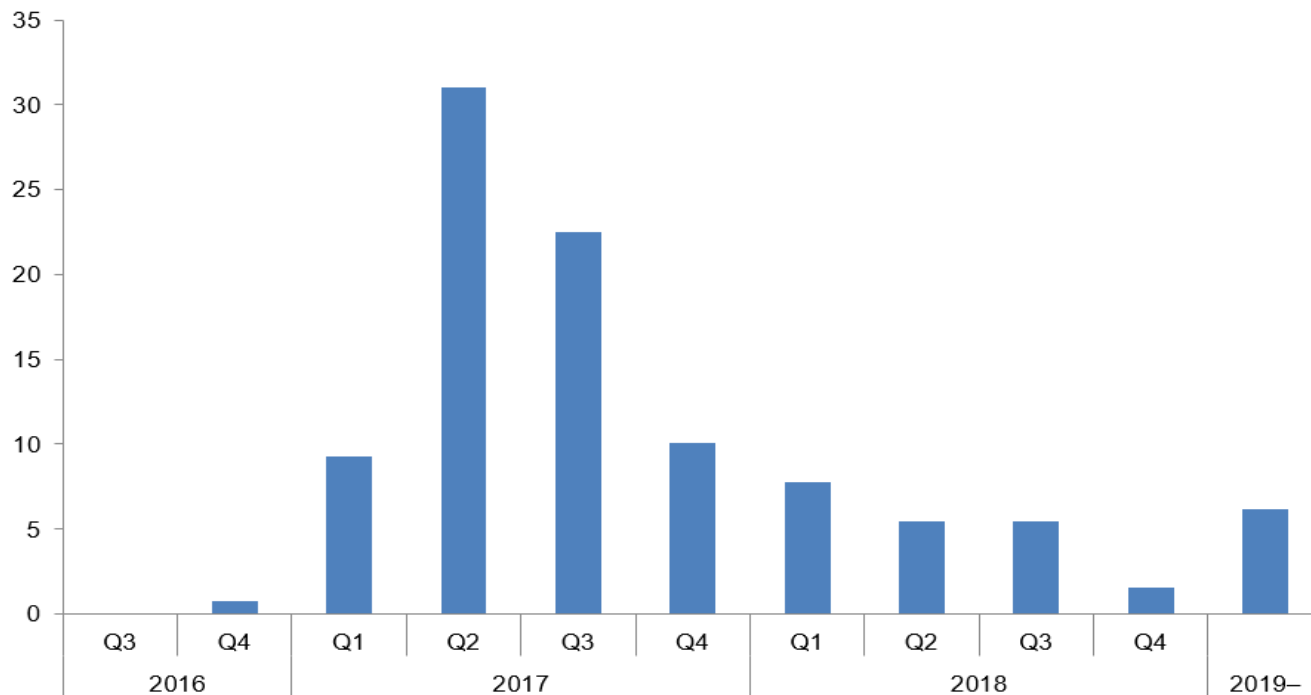
The EIA forecasts that spot WTI crude oil prices will tread water until spring 2017.



The majority of oil producers project a rebound in drilling activity next summer.

When do you expect U.S. crude oil drilling activity to substantially increase?

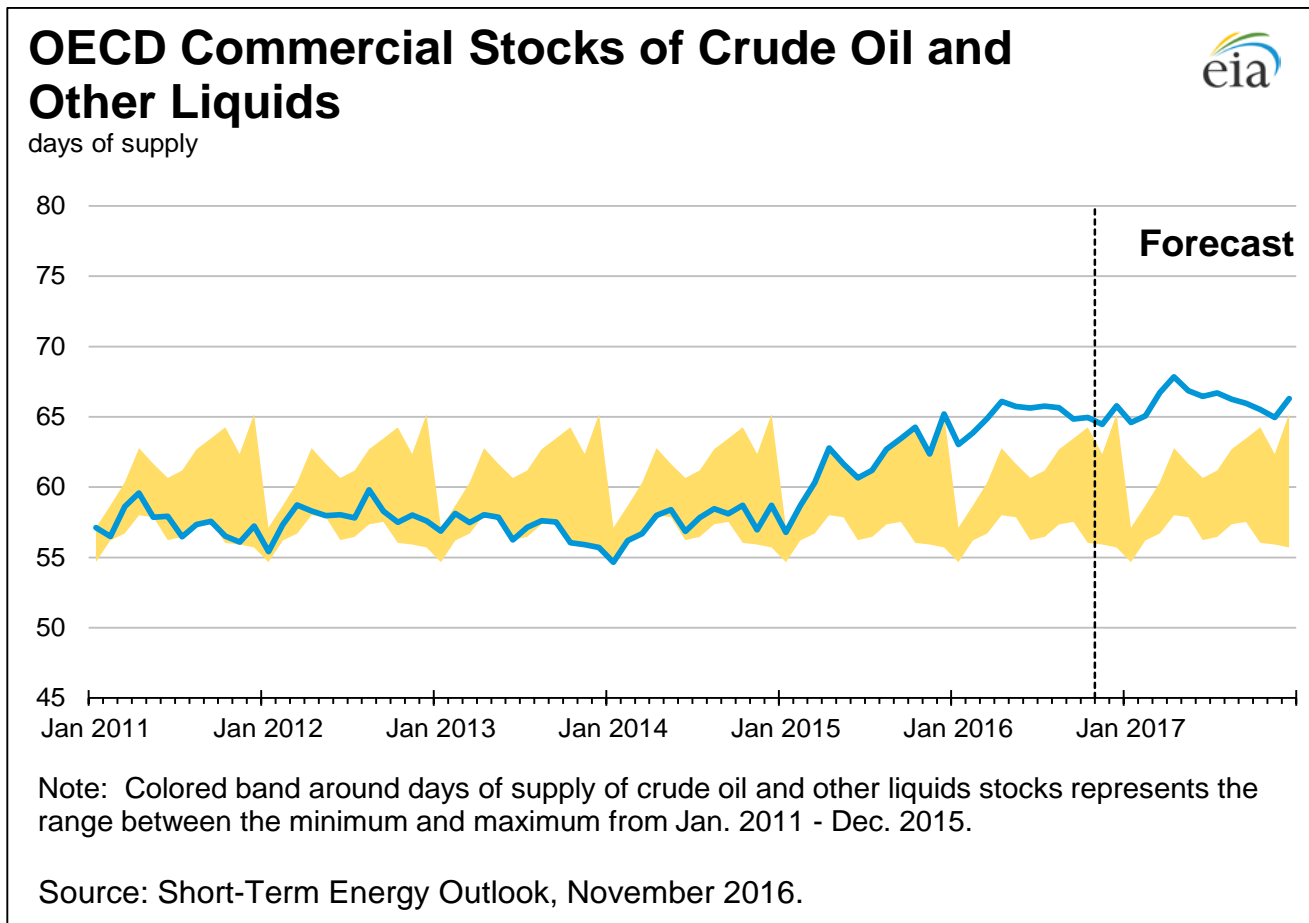
Percent reporting



NOTE: One hundred twenty-nine oil and gas firms answered this question from Sept. 14–22, 2016.

SOURCE: Federal Reserve Bank of Dallas.

The EIA continues to project that crude oil stocks will run well-above normal.



#5: A Low Real Short-Term Interest Rate

- Monetary policymakers use the real rate to help set the fed funds target rate (e.g., Taylor-type rules).
- A Taylor-type rule has four key variables:
 - The Fed's inflation target (currently 2%);
 - The gap between actual inflation and the inflation target;
 - The gap between actual unemployment rate and the estimate natural rate of unemployment;
 - The real interest rate—sometime called the equilibrium real rate.

#5: A Low Real Short-Term Interest Rate

- The Taylor rule can thus be written as:

$$- FFR = r^{\dagger} + \pi^* + IR_gap + UR_gap$$

- I am arguing that the inflation and unemployment rate gaps are zero. Thus, the rule condenses to:

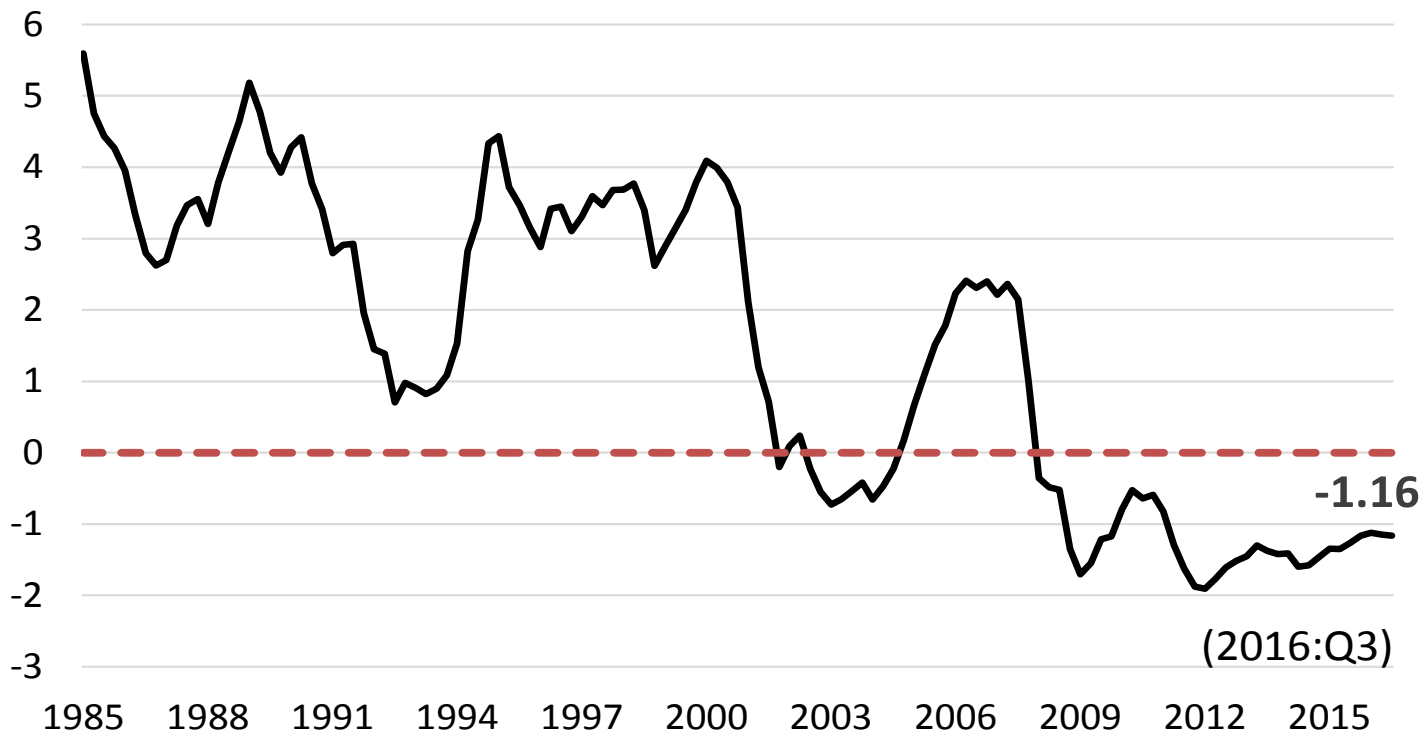
$$- FFR = r^{\dagger} + \pi^*$$

- But we know that the inflation rate target is 2%.
- So all we need to know is r^{\dagger} to get FFR .

Our measure of r^{\dagger} is negative!

The Real Rate of Return on Government Debt

Percent



Note: Interest rate on the 1-year Treasury bill less the Dallas Fed's trimmed-mean PCE inflation rate over the past 12 months. Author's calculations using public data.

The Implication is a Low Fed Funds Rate

- So, if the inflation target is 2% and the real interest rate is -1.16%, then:

$$- FFR = -1.16\% + 2\%$$

- That means that:

$$- FFR = 0.84\%$$

- What are the implications of this? Only one or two additional moves by the end of 2019!

To Sum Up

- We believe that the economy's near-term outlook and thus the Fed's normalization process is a function of the following facts:
 - Low productivity growth → low, but positive, economic growth;
 - Inflation at target and the unemployment rate at its natural rate → no recession.
 - Low real short-term interest rate → low, but positive, fed funds policy rate.

Risks to the Forecast

- Part and parcel of prudent policymaking.
- Some potential risks: inflation or inflation expectations could move sharply in either direction; unsustainable increases in financial asset prices; a productivity boom; consumers hunker down.
- If the fundamental factors change, this will change our baseline forecast.
- **KEY:** If the economic environment changes, then monetary policy will respond accordingly.

Questions?

For More Information

“The St. Louis Fed’s New Characterization of the Outlook for the U.S. Economy”

<https://www.stlouisfed.org/~media/Files/PDFs/Bullard/papers/Regime-Switching-Forecasts-17June2016.pdf>