A Tale of Two Narratives

James Bullard

President and CEO, FRB-St. Louis

St. Louis Gateway Chapter of the National Association for Business Economics (NABE)

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Introduction

Two narratives

- The St. Louis Fed recently changed its approach to near-term U.S. macroeconomic and monetary policy projections.
  - J. Bullard, "A New Characterization of the U.S. Macroeconomic and Monetary Policy Outlook," remarks delivered at the Society of Business Economists Annual Dinner, London, U.K. June 30, 2016.
  - J. Bullard, "The St. Louis Fed's New Characterization of the Outlook for the U.S. Economy," St. Louis Fed commentary. June 17, 2016.
- An older narrative has likely outlived its usefulness.
- A new narrative is replacing the old narrative.
- In this talk, I will describe in more detail the differences between the two narratives.

Nature of the old narrative

- In the old narrative, there is, axiomatically, a unique long-run steady state which is essentially an average of the past.
- The economy is converging—all values for key macroeconomic variables are tending toward steady state values.
- Inflation and unemployment gaps are near zero—business cycle dynamics have played out seven years after the end of the recession.*
- Implication: The policy rate would likely rise over the forecast horizon to be consistent with its steady state value.

* *For example, see J. Bullard, "Fed Goals and the Policy Stance," remarks delivered at the* Owensboro in 2065 Summit, *Owensboro, Ky. July 17, 2014.*

Nature of the new narrative

- In the new narrative, the concept of a single, long-run steady state is abandoned.
- Instead, there is a set of possible regimes that the economy may visit.
  - J.D. Hamilton, "A New Approach to the Economic Analysis of Nonstationary Time Series and the Business Cycle," *Econometrica*, March 1989, 57(2), 357-384.
  - C.-J. Kim and C.R. Nelson, *State-Space Models with Regime Switching*, MIT Press, 1999.

More on the nature of the new narrative

- Regimes are viewed as persistent, and switches between regimes are viewed as not forecastable.
- Optimal monetary policy is regime dependent.
- Implication: The policy rate would likely remain essentially flat over the forecast horizon to remain consistent with the current regime.

The forecast based on the new narrative

- A simple forecast over the next two and a half years:*
  - Real GDP growth 2 percent
  - Unemployment 4.7 percent
  - Trimmed-mean PCE inflation 2 percent
  - Policy rate 63 basis points
- Risks associated with this projected policy rate are likely to the upside.

** The June 2016 Summary of Economic Projections reported projections out to the end of 2018.*

Previous Narrative and the End of Its Usefulness

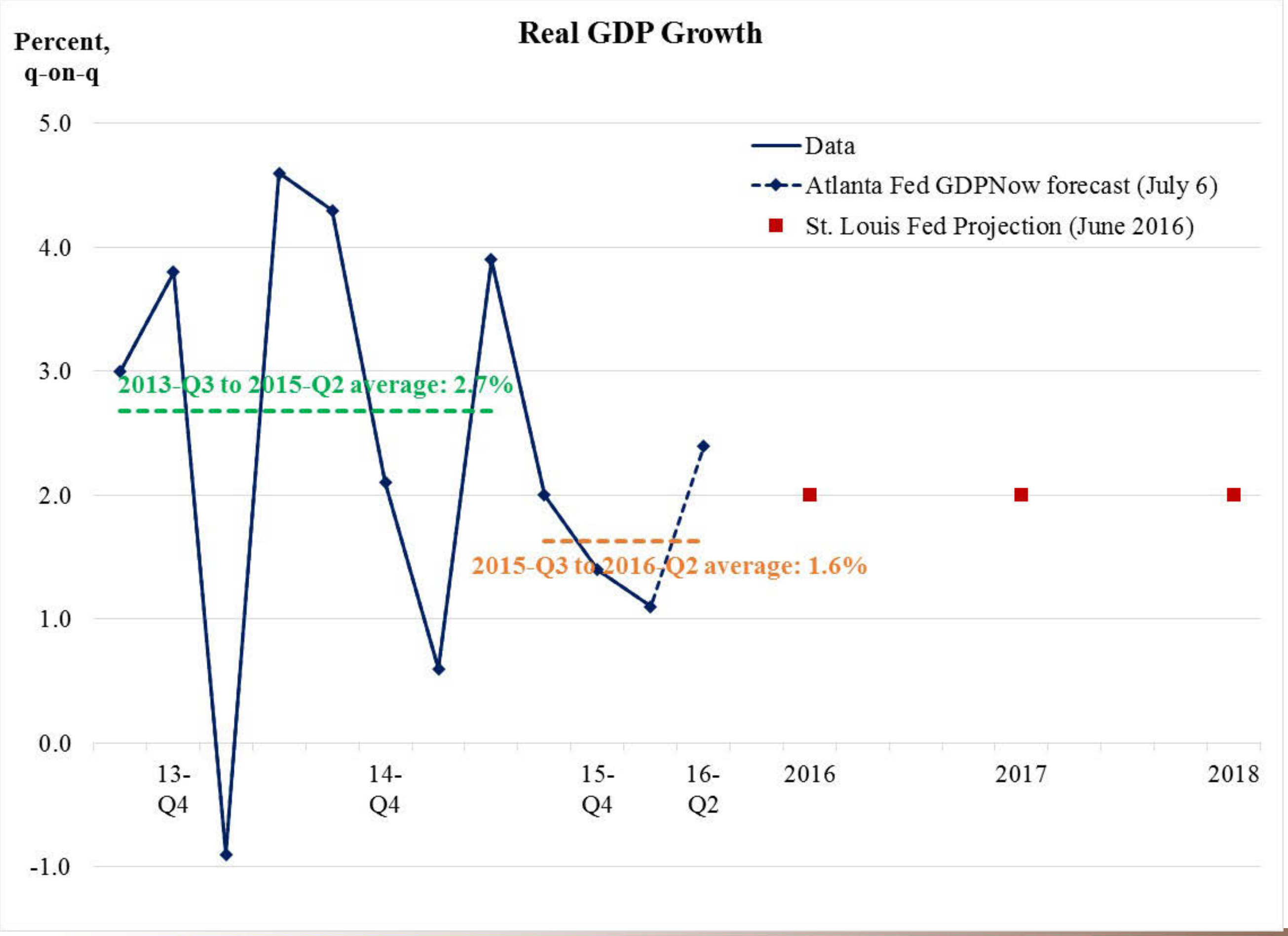
St. Louis Fed's previous narrative

- Typical medium-term forecast during the past several years:
  - Output growth above trend.
  - Unemployment declining.
  - Inflation (net of commodity-price effects) overshoots 2 percent.
  - Policy rate increases to be consistent with the unique steady state.
- Some aspects worked well from the second half of 2013 to the first half of 2015:
  - Average quarterly growth: 2.7% > 2% (trend).
  - Unemployment declined by 2 percentage points.
- However, inflation barely moved.

The end of the usefulness of the old narrative

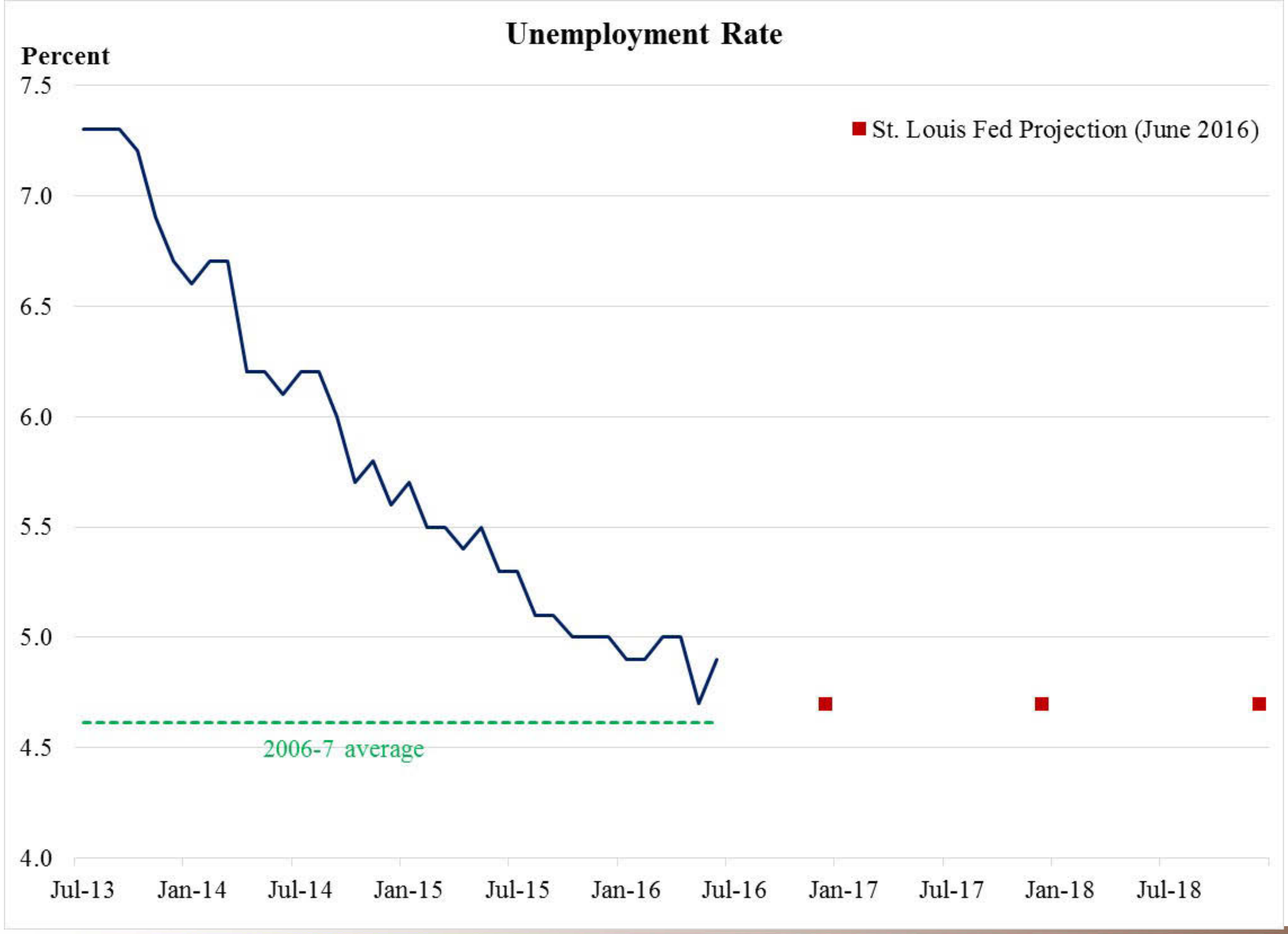
- The usefulness of our previous narrative may have come to an end:
  - Output growth has arguably slowed and is currently not far from a 2 percent trend.
  - Unemployment may not fall much below current values.
  - Trimmed-mean inflation is close to target but not rising rapidly.
- If there are no major shocks to the economy, this situation could be sustained over a forecasting horizon of two and a half years.

Real output growth has slowed



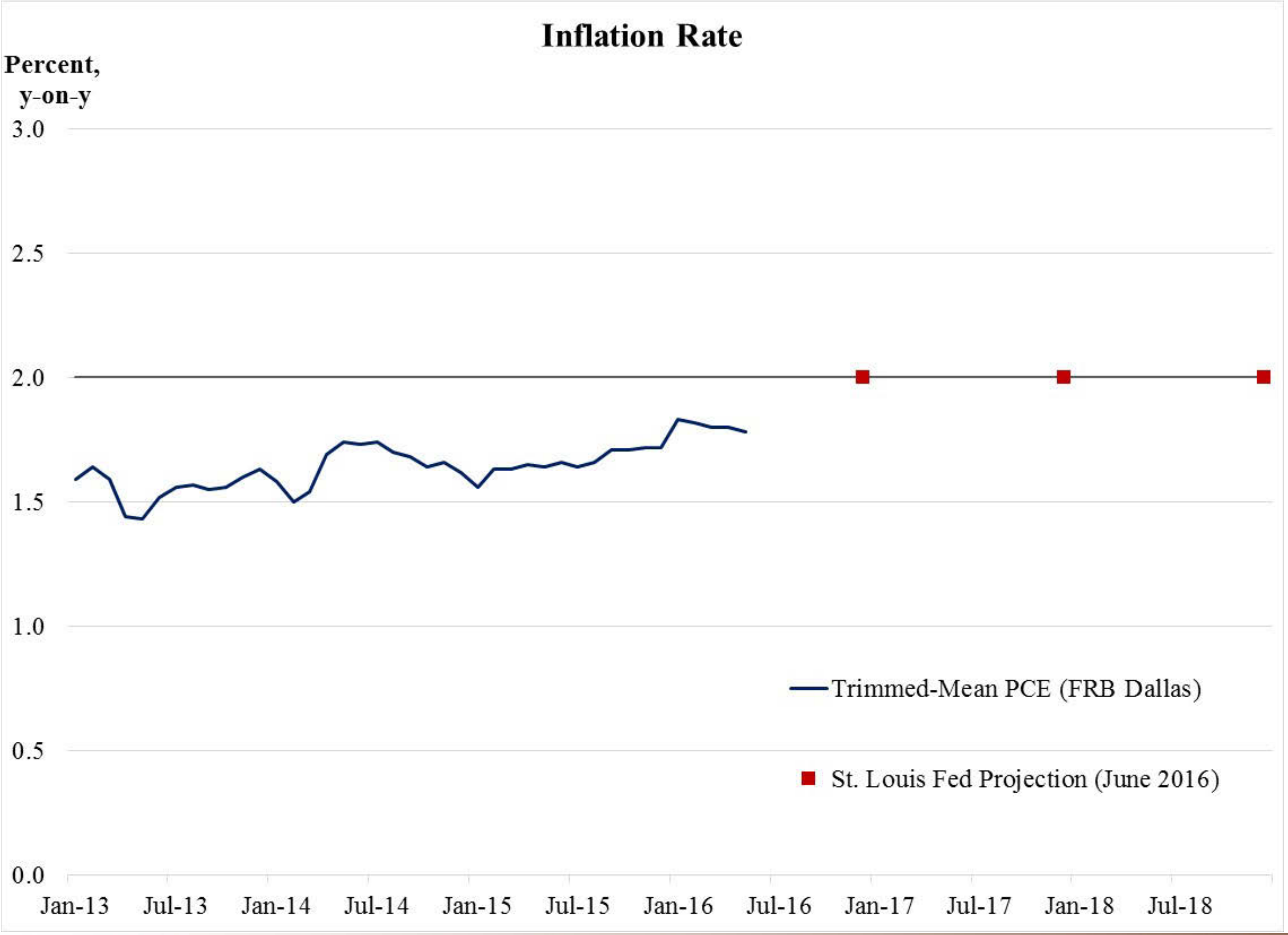
Source: Bureau of Economic Analysis, FRB of Atlanta and author's calculations.
Last observation: 2016-Q1.

Unemployment has fallen to a low level



Source: Bureau of Labor Statistics and author's calculations.
Last observation: June 2016.

Inflation is closer to target



Source: FRB of Dallas and author's calculations. Last observation: May 2016.

A New Narrative

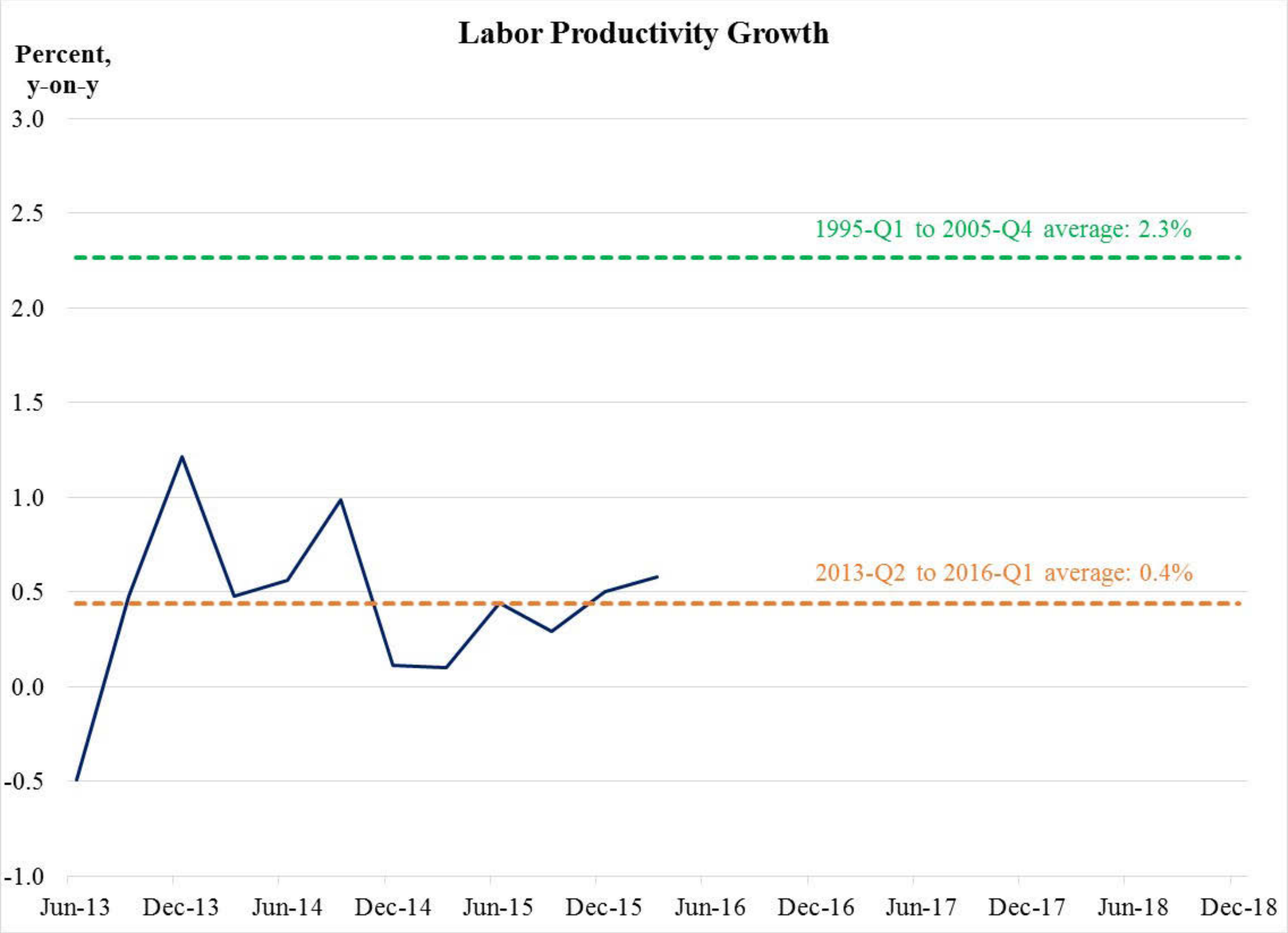
A new narrative based on regime switching

- New narrative: We want a manageable expression of the uncertainty surrounding medium- and longer-term outcomes.
- Fundamental factors determine the nature of the regimes:
  1. Productivity growth.
  2. Real interest rate on short-term government debt.
  3. State of the business cycle.
- Optimal monetary policy is regime dependent.
- Regime switches are not forecastable—viewed as "risks."
- Forecast limited to a horizon of two and a half years—no long-run projections.

Productivity regimes

- One important fundamental is productivity growth.
- Average labor productivity growth has been low since at least 2011, which we view as a "low-productivity-growth regime."
- We assume that we will remain in the low-productivity (and hence low-real-GDP-growth) regime through the forecasting horizon because regimes are persistent.
- Higher productivity growth was observed in the recent past.
- A switch back to a high-productivity-growth regime is an upside risk.

The low-productivity-growth regime



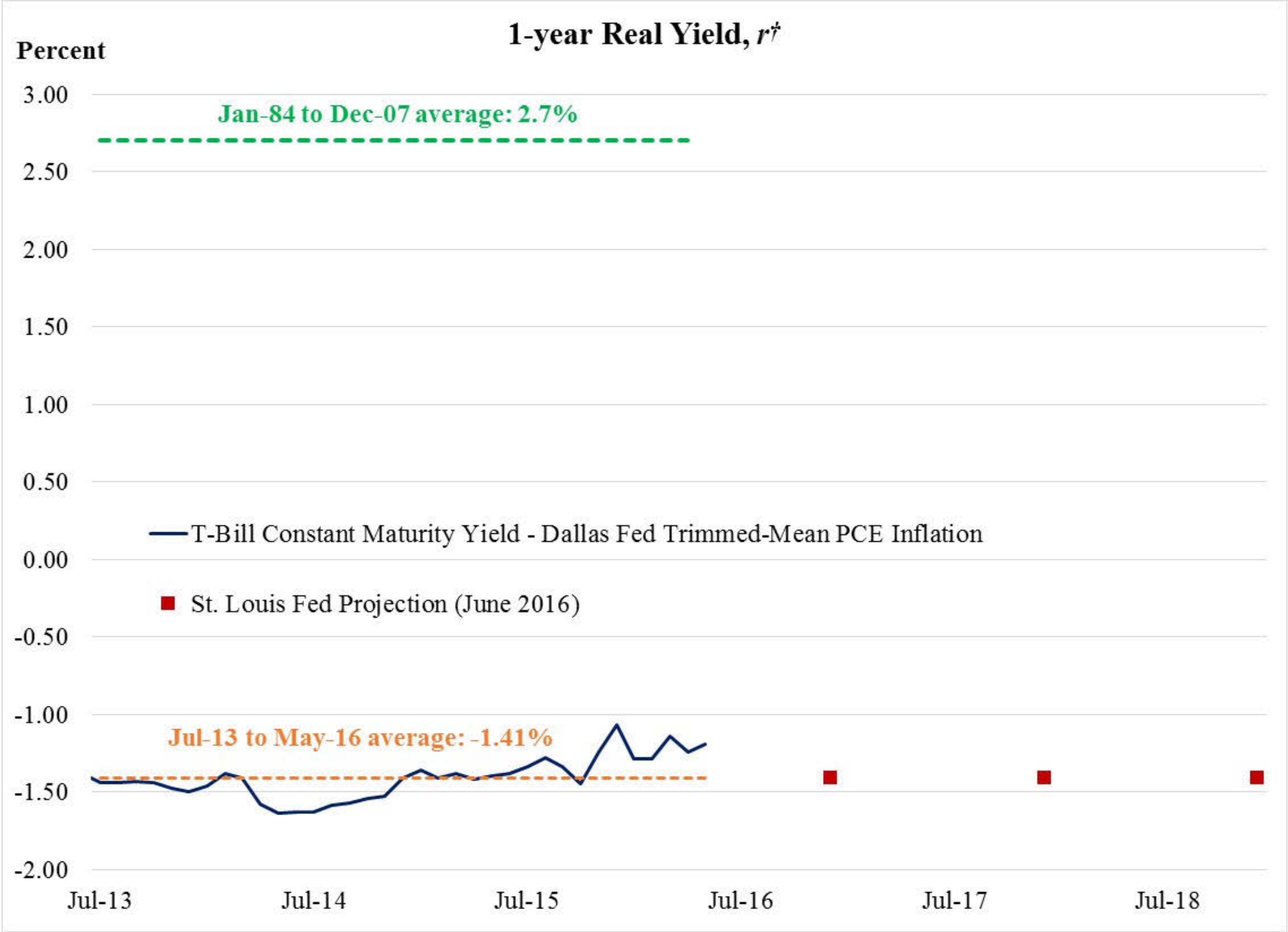
Source: Bureau of Labor Statistics, Bureau of Economic Analysis and author's calculations.
Last observation: 2016-Q1.

Real-interest-rate regimes

- The real rate of return on short-term government debt, $r^{\dagger}$, has been exceptionally low, which we view as a "low-real-rate regime."
  - Appears to be highly persistent.
  - For forecasting purposes, we assume that we will remain in the low-real-rate regime through the forecasting horizon.
- The alternative regime has a relatively high real rate.
  - A switch to a high-real-rate regime is viewed as a risk.
- Interpretation:
  - Abnormally high liquidity premium on government debt.
  - Real returns on capital are not low.*

* *See P. Gomme, B. Ravikumar and P. Rupert, "Secular Stagnation and Returns on Capital," St. Louis Fed* Economic Synopses, *August 2015, No. 19.*

Real rate of return on short-term government debt, $r^{\dagger}$

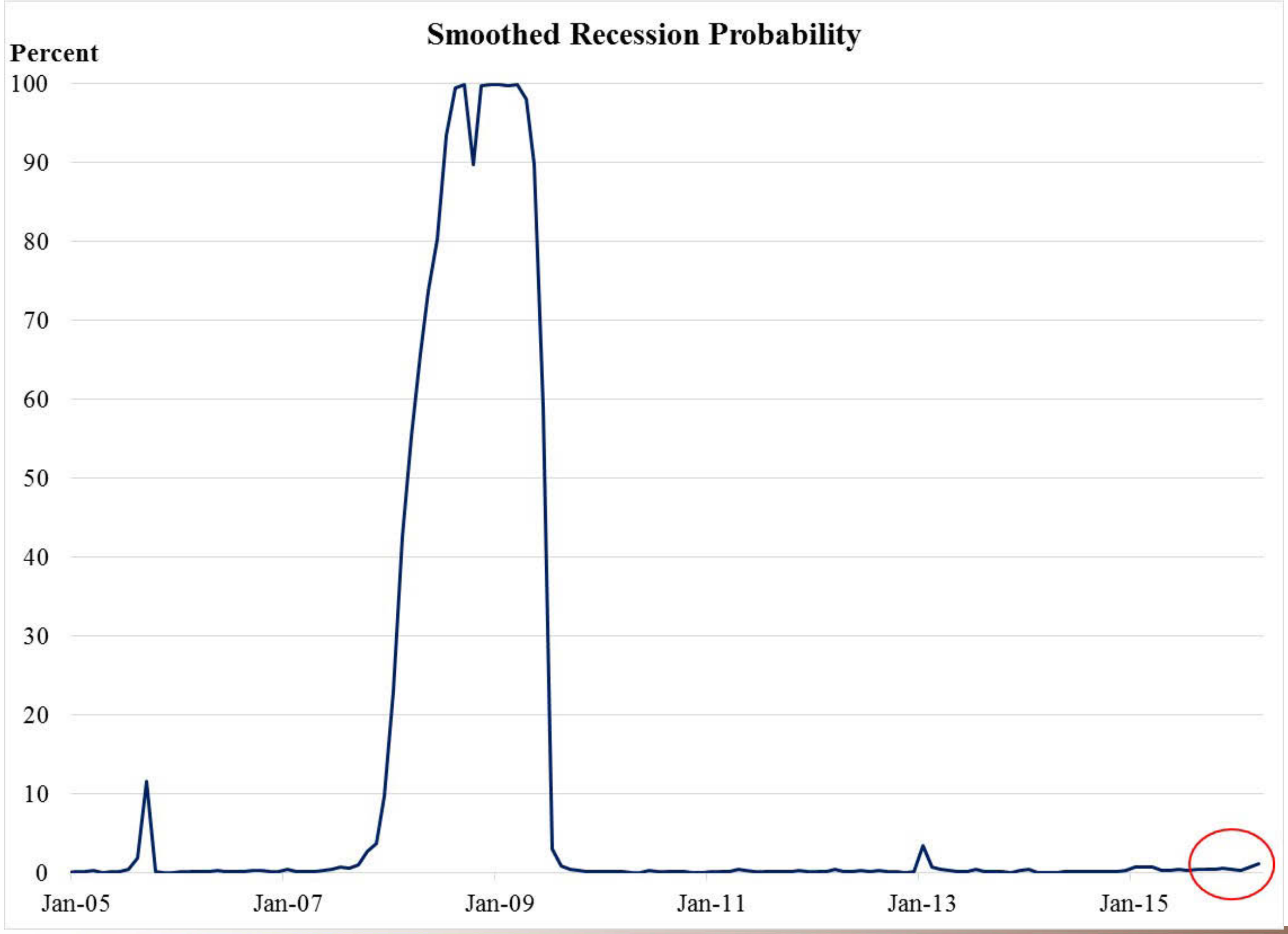


Source: Federal Reserve Board, FRB of Dallas and author's calculations. Last observation: May 2016.

State of the business cycle

- Another important fundamental is the possibility of recession.
- Currently we are in a "no-recession" regime, but it is possible that we could switch to a recession state.
- All variables would be affected, but most notably, the unemployment rate would rise significantly.
- We have no reason to forecast a recession given the current state of the U.S. economy.
- The possibility of a recession is a risk to the forecast.

Recession probability is low



Source: FRED, based on M. Chauvet and J. Piger, "A Comparison of the Real-Time Performance of Business Cycle Dating Methods," Journal of Business and Economic Statistics, *January 2008, 26(1), 42-49. Last observation: April 2016.*

The Policy Rate Path

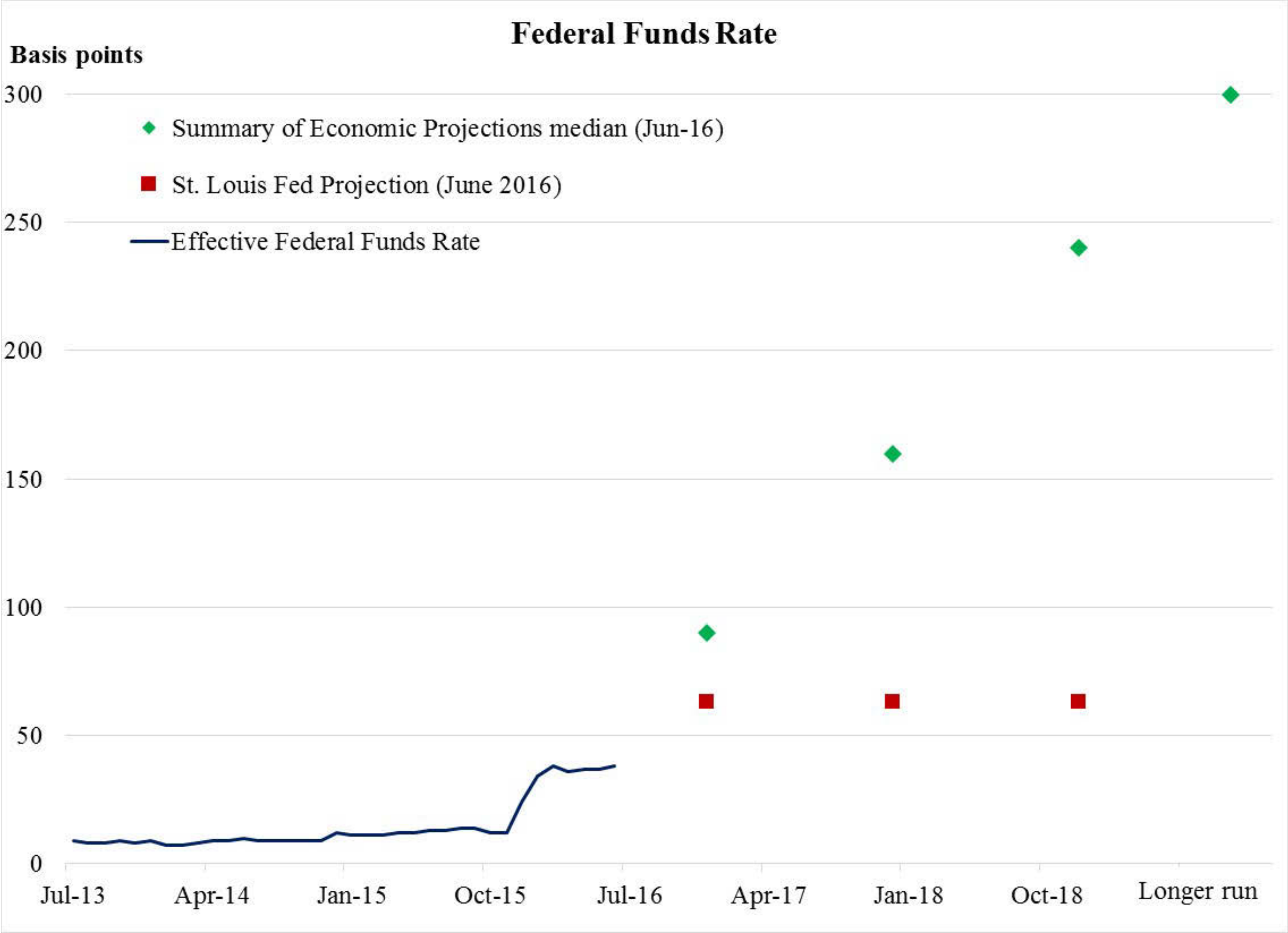
Policy rate path

- The policy rate path (63 basis points) supporting our output, unemployment and inflation forecasts is regime dependent.
- Unemployment and inflation gaps ≈ 0.
- A Taylor-type rule collapses to a Fisher equation

$$i = r^{\dagger} + \pi^{e} + \phi_{\pi} \pi^{GAP} + \phi_{u} u^{GAP} = r^{\dagger} + \pi^{e}$$

- $i = 0.63\%$ and $\pi^{e} = 2\%$ imply $(i - \pi^{e}) = -1.37\%$
- Very close to $r^{\dagger} = -1.41\%$, the one-year ex-post real interest rate on government debt.

Policy rate path



Source: Federal Reserve Board and author's calculations. Last observation: May 2016.

Risks to the forecast

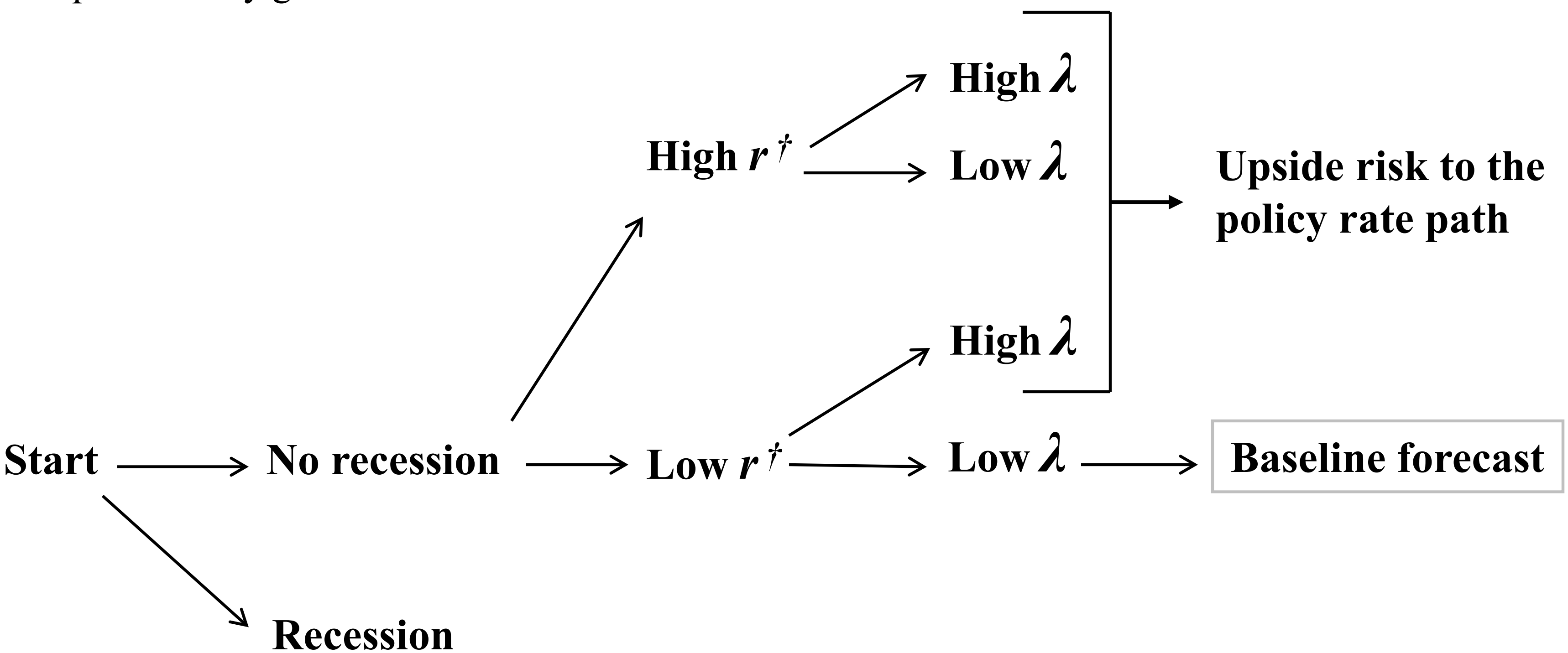
- Fundamental factors could switch into new regimes, in which case monetary policy would have to react.
- Phillips-curve effects:
  - In our narrative, a strong labor market (low unemployment) does not put significant upward pressure on inflation.
  - A risk is that Phillips-curve effects could reassert themselves and drive inflation higher.
- Inflation expectations:
  - Low market-based measures are at odds with our forecast.
- Asset price bubbles.

Conclusion

St. Louis Fed's characterization of the macro outlook

$r^{\dagger}$ = real rate of return on short-term government debt

λ = productivity growth



Conclusion

- The projected policy rate path is the main difference in the new approach.
- Old narrative:
  - Steep policy rate path, dictated by convergence to the single, long-run steady state.
- New narrative:
  - Flat policy rate path, conditional on the current regime.
  - If a regime switch does occur, the policy rate path would have to change appropriately—it is still data dependent.

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