Slow Normalization or No Normalization?

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Introduction

Slow normalization …

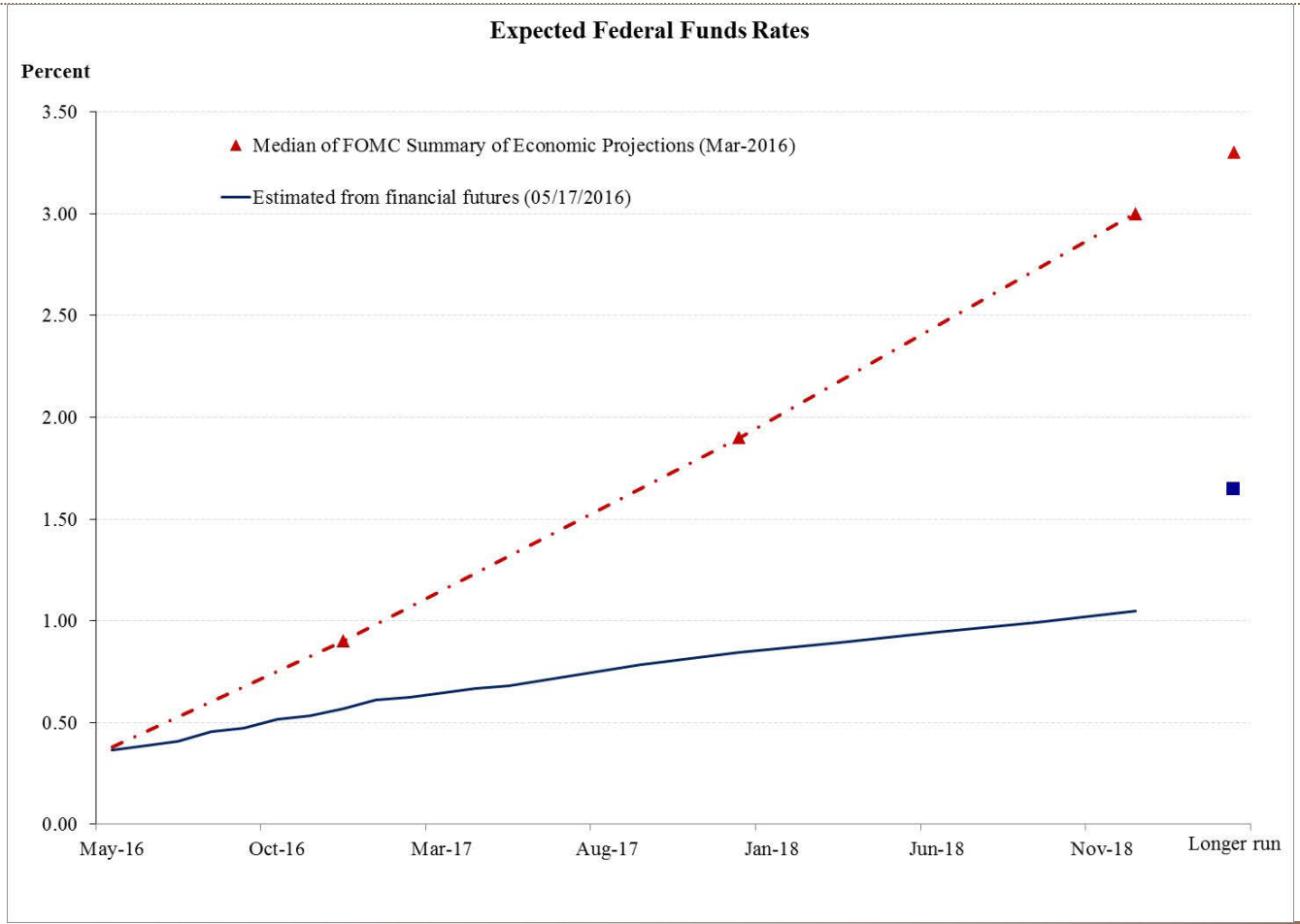
- Recent U.S. monetary policy discussions have been dominated by issues surrounding the possible pace of increase in the Federal Open Market Committee's (FOMC's) policy rate.
- The FOMC has laid out, via the Summary of Economic Projections (SEP), a data-dependent "slow normalization," whereby the nominal policy rate would gradually rise over the next several years provided the economy evolves as expected.

… or no normalization?

- Market-based forecasts of FOMC policy, in contrast, envision "almost no normalization," whereby the policy rate would be changed only a few times in the next several years.

- Which of these two views is more nearly correct?

Two views of the expected federal funds rate path



Source: March 2016 Summary of Economic Projections, Bloomberg and author's calculations.
Last observation: May 17, 2016.

These remarks

- In these remarks I will briefly compare and contrast these two views.
- In favor of the FOMC scenario:
  - Relatively strong U.S. labor markets.
  - U.S. inflation measurements that are closer to 2 percent.
  - Waning international headwinds.
- In favor of the market-based scenario:
  - Slow U.S. real GDP growth.
  - Low U.S. inflation expectations.

Strong U.S. Labor Markets

At or beyond full employment

- U.S. labor markets are at, or possibly well beyond, reasonable conceptions of full employment.
- In short, labor markets are relatively tight.
- This may put upward pressure on inflation going forward.

Some indicators of strong U.S. labor markets

- Job openings per available worker are at a cyclical low.
- Unemployment insurance claims relative to the size of the labor force are at a multi-decade low.
- Nonfarm payroll employment growth has been well above longer-run trends.
- The level of a labor market conditions index, which aggregates many measures of labor market performance into a single index, is well above historical averages.*

* *See* H. Chung, B. Fallick, C. Nekarda and D. Ratner, 2014. "Assessing the Change in Labor Market Conditions." *Board of Governors of the Federal Reserve System* FEDS Notes.

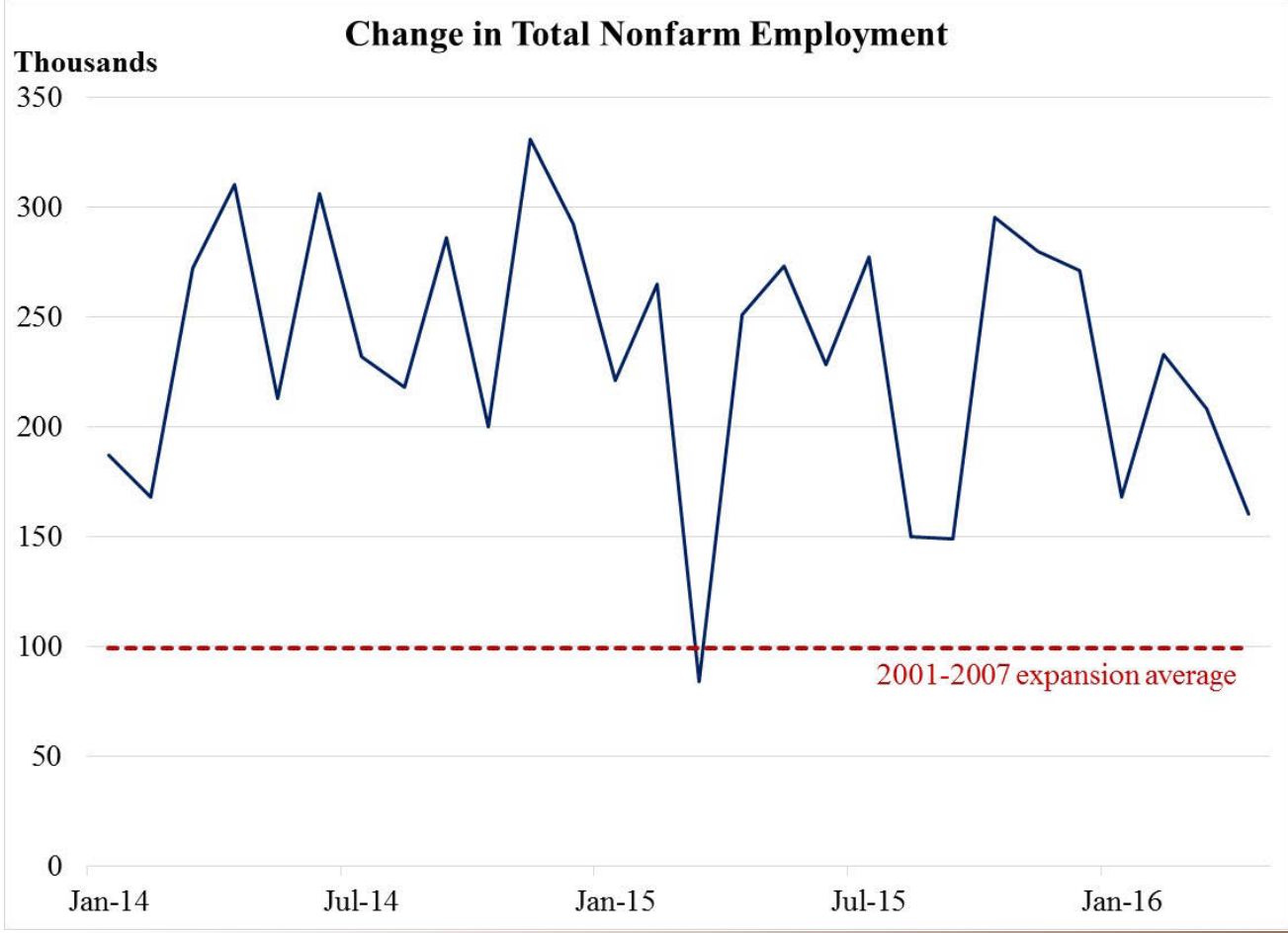
Unemployed persons per job opening are extremely low

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

Unemployment insurance claims are at a historical low

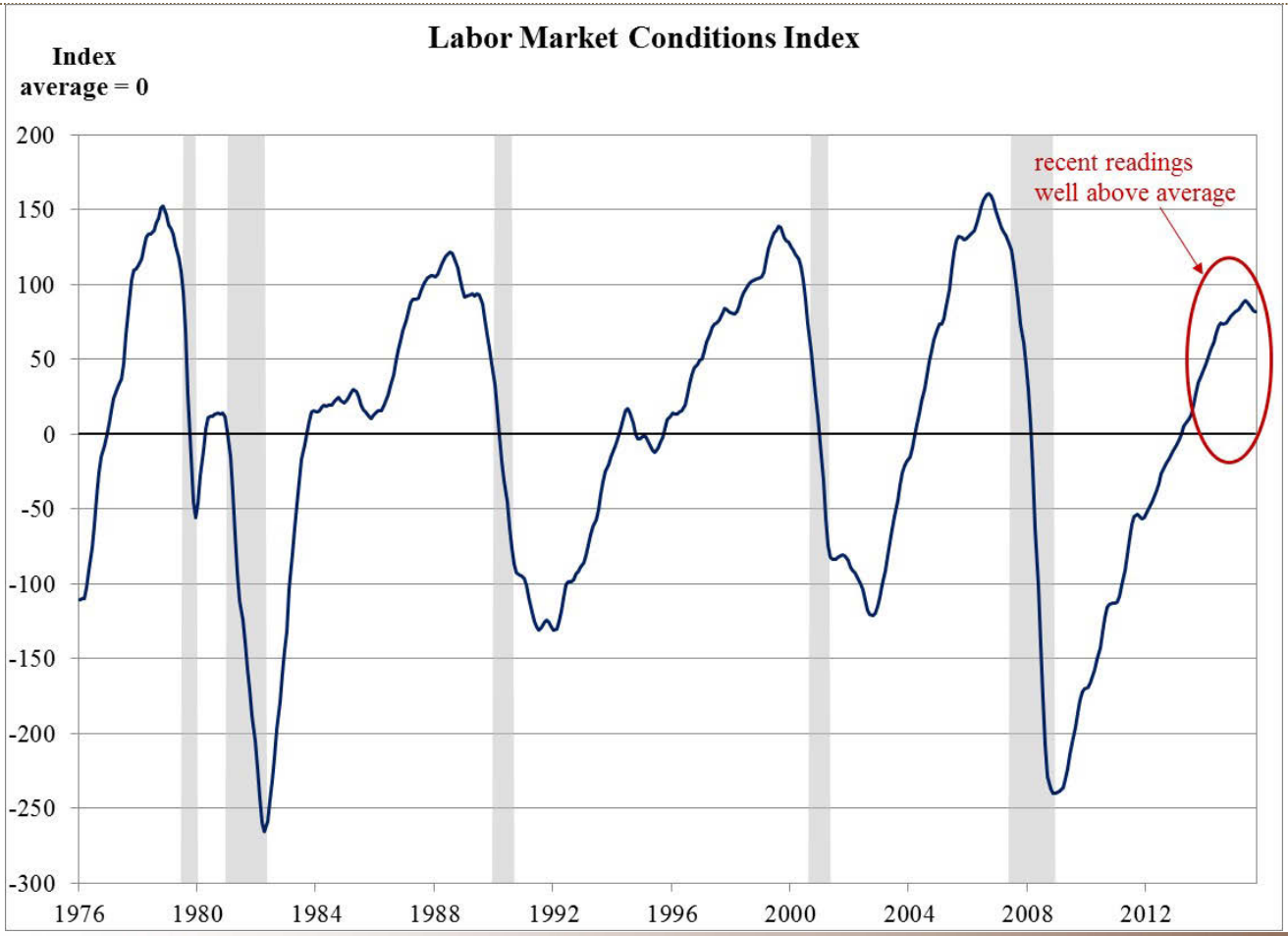
Source: Bureau of Labor Statistics and author's calculations. Last observation: April 2016.

Employment growth remains impressive



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

Labor market conditions are well above average



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

Bottom line for U.S. labor markets

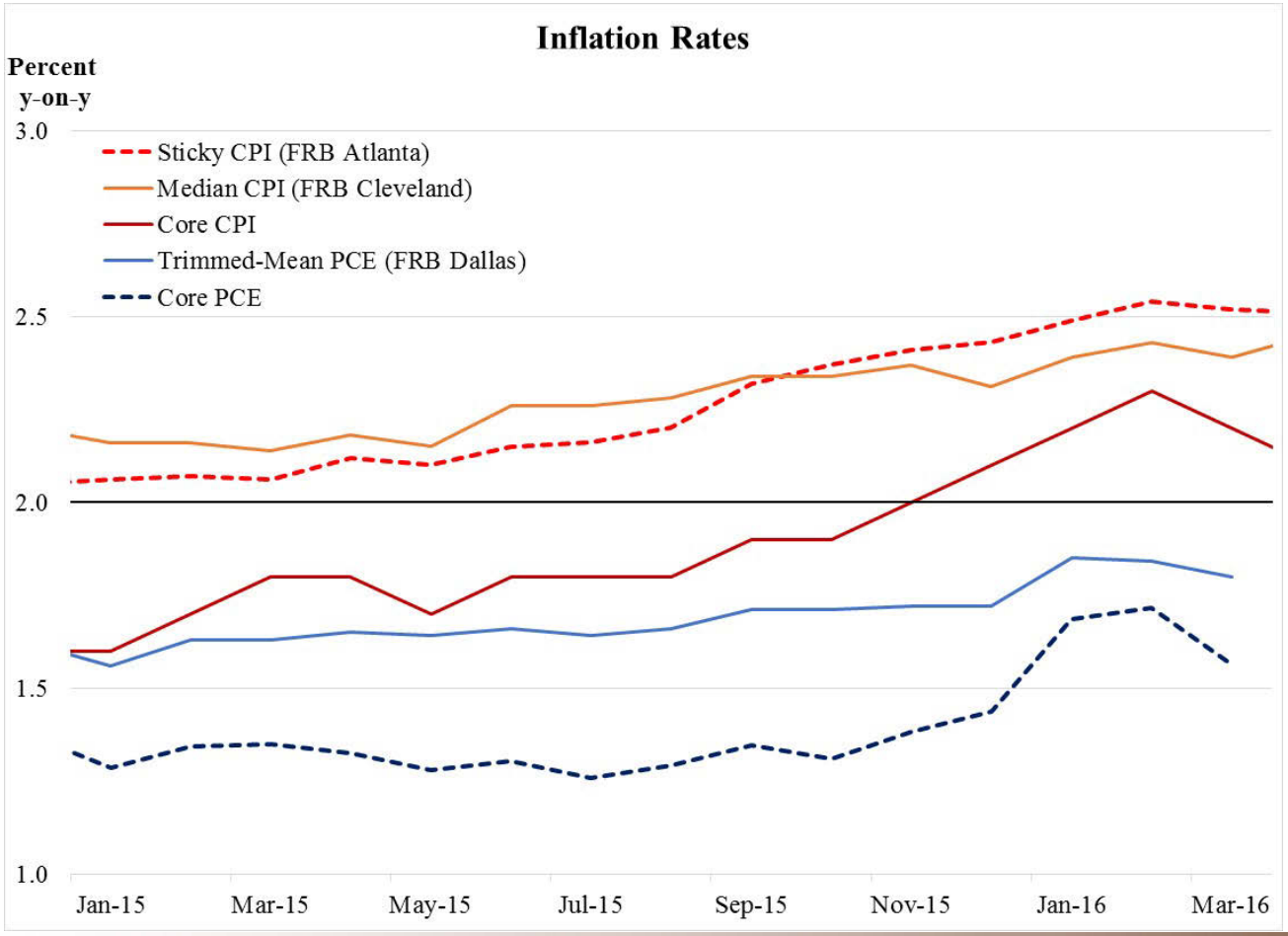
- U.S. labor market performance has been very good.
- By nearly any metric, U.S. labor markets are at or beyond full employment.
- Phillips curve models based on labor market tightness suggest that strong labor markets will push U.S. inflation higher over the forecast horizon.
- This is an important factor supporting the FOMC view on the expected path of the policy rate.

U.S. Inflation Closer to 2 Percent

U.S. inflation closer to 2 percent

- Inflation has been relatively low in the U.S. during the last several years.
- Large movements in oil prices have had a major impact on headline inflation.
- Measures intended to give an indication of inflation movements net of oil price effects have been trending somewhat higher.

Smoothed measures of U.S. inflation closer to 2 percent



Source: Bureau of Labor Statistics, FRB Cleveland, FRB Atlanta, Bureau of Economic Analysis, FRB Dallas.
Last observations: March 2016 (PCE) and April 2016 (CPI).

By the numbers: U.S. inflation closer to 2 percent

	Apr-15	Apr-16	Change
Sticky CPI	212	251	+39
Median CPI	218	245	+27
Core CPI	180	210	+30
	Mar-15	**Mar-16**	**Change**
Trimmed Mean PCE	163	180	+17
Core PCE	135	156	+21

All values are year-over-year percent changes in basis points.

Source: Bureau of Labor Statistics, FRB Cleveland, FRB Atlanta, Bureau of Economic Analysis, FRB Dallas.
Last observations: March 2016 (PCE) and April 2016 (CPI).

Bottom line for U.S. inflation

- The FOMC, through the SEP, has predicted a slow rise in U.S. inflation as the effects of a stronger dollar and a drop in oil prices wear off.
- This appears to be happening, as smoothed measures of inflation have been rising over the last year.
- This is another important factor supporting the FOMC view on the expected policy rate path.

International Headwinds Waning

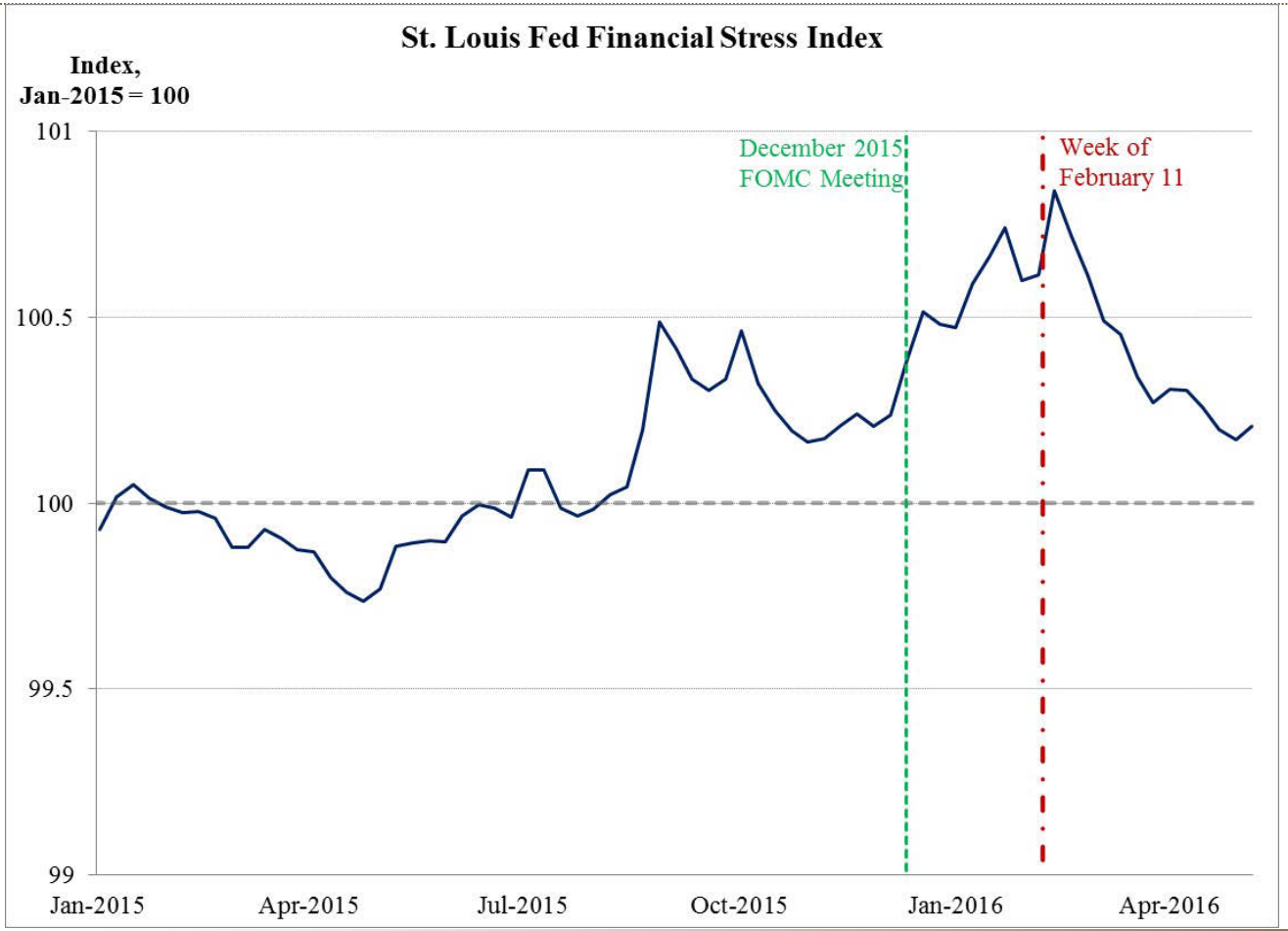
International headwinds waning

- International headwinds affecting the U.S. economy have been widely discussed in global financial markets during the last several years.
- I will consider two factors that have been widely cited: global financial stress and the negative impact of a stronger dollar on U.S. GDP growth.
- These factors appear to be waning during the first half of 2016.

The evidence on waning international headwinds

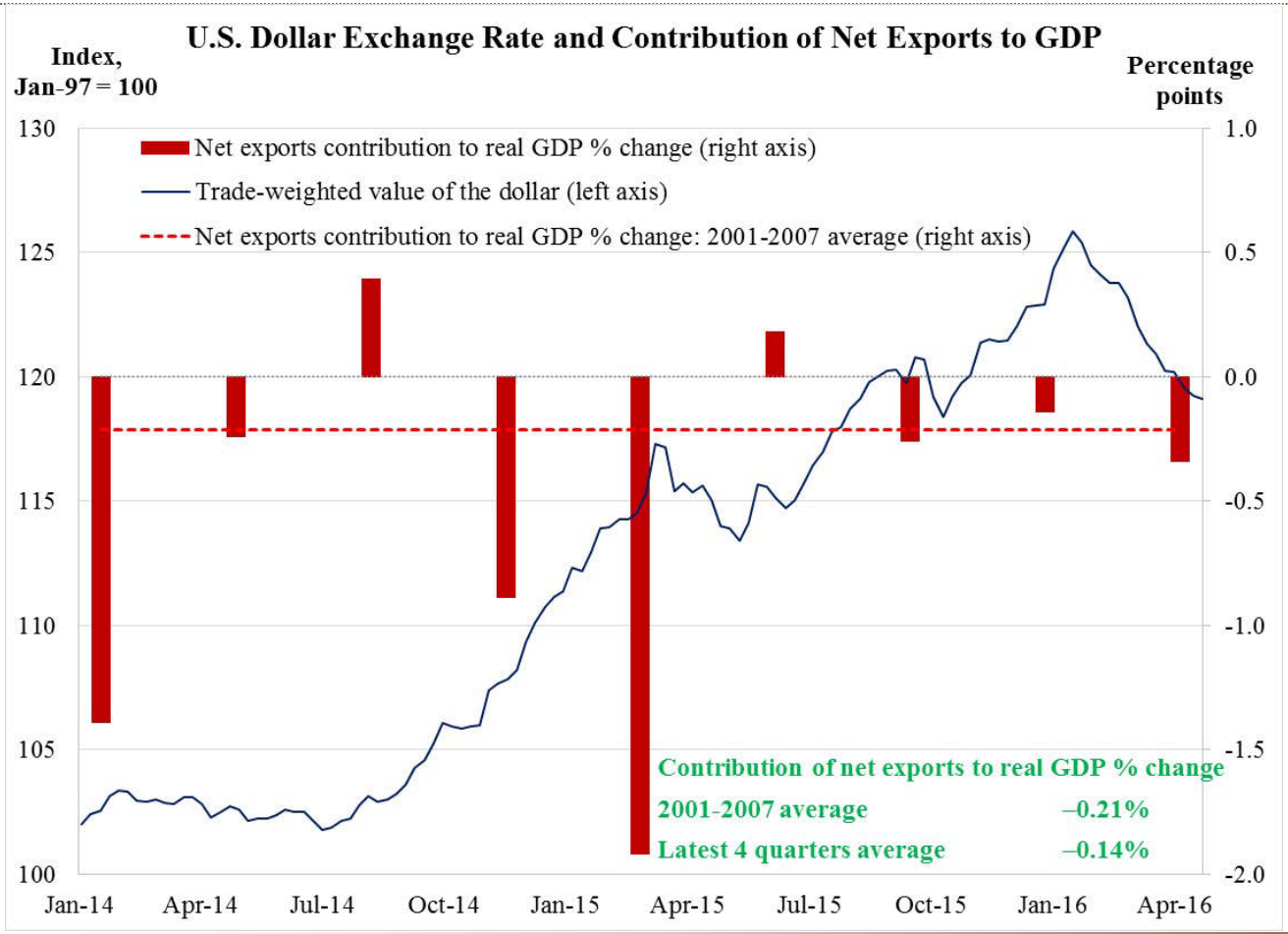
- Measures of U.S. financial stress indicate that stress has fallen off its peak earlier this year.
- The dollar appreciated mostly during the second half of 2014 during the run-up to the European Central Bank quantitative easing.
- This appeared to have had a substantial effect on the net exports contribution to U.S. GDP growth during the winter of 2014-2015.
- Since then, however, the effects of a stronger dollar appear to be waning.

Financial stress has subsided



Source: Federal Reserve Bank of St. Louis and author's calculations. Last observation: week of May 6, 2016.

Waning effects of a stronger dollar



Source: Bureau of Economic Analysis and Federal Reserve Board.
Last observation: 2016-Q1 and week of May 13, 2016.

Bottom line for international influences

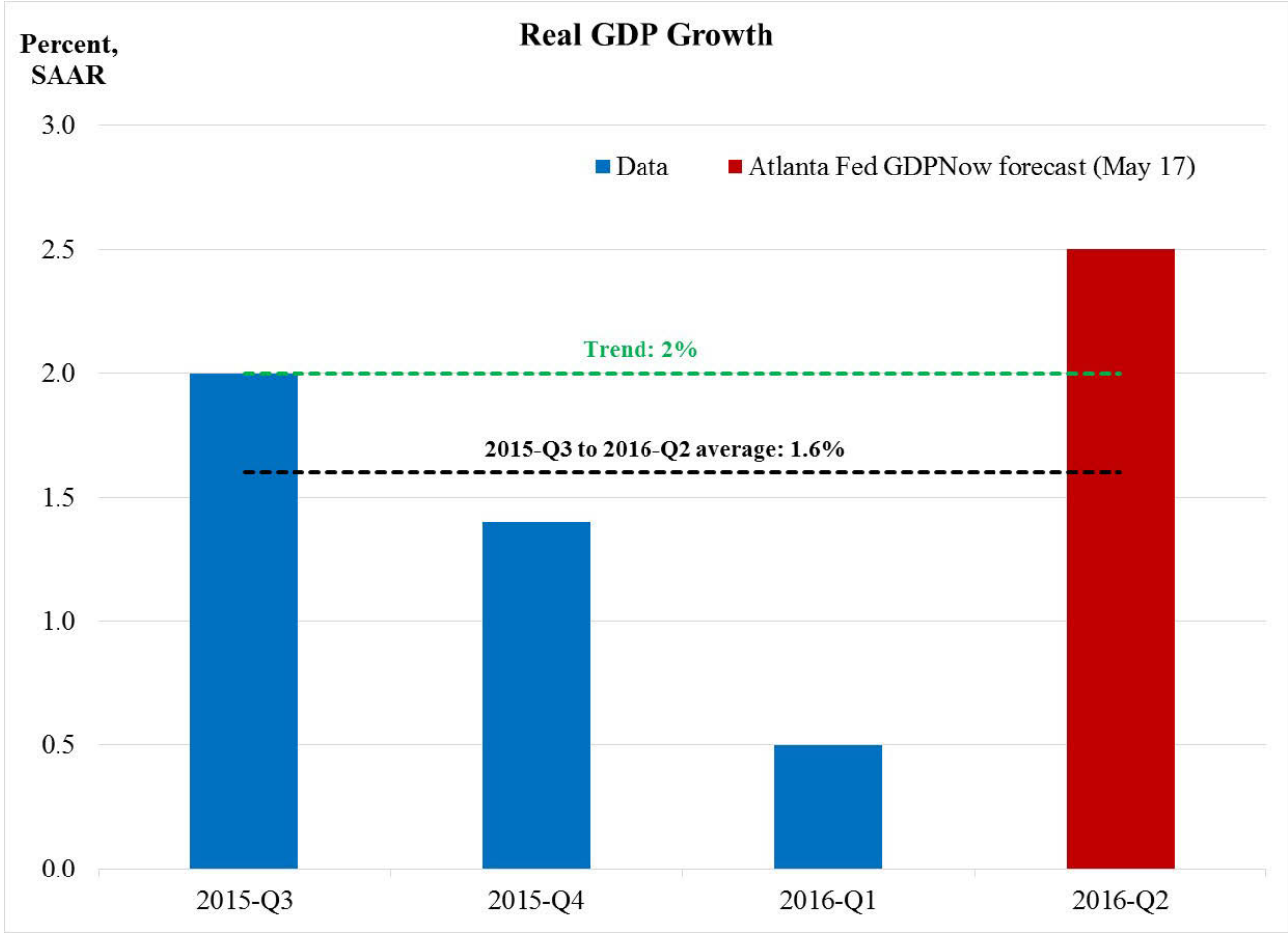
- Recent negative international influences on the U.S. economy appear to be waning.
- This too is an important factor in favor of the FOMC view of the expected path of the policy rate.
- I will now turn to two factors that do not support the FOMC view.

Real GDP Growth Below Trend

Real GDP growing at a below-trend pace

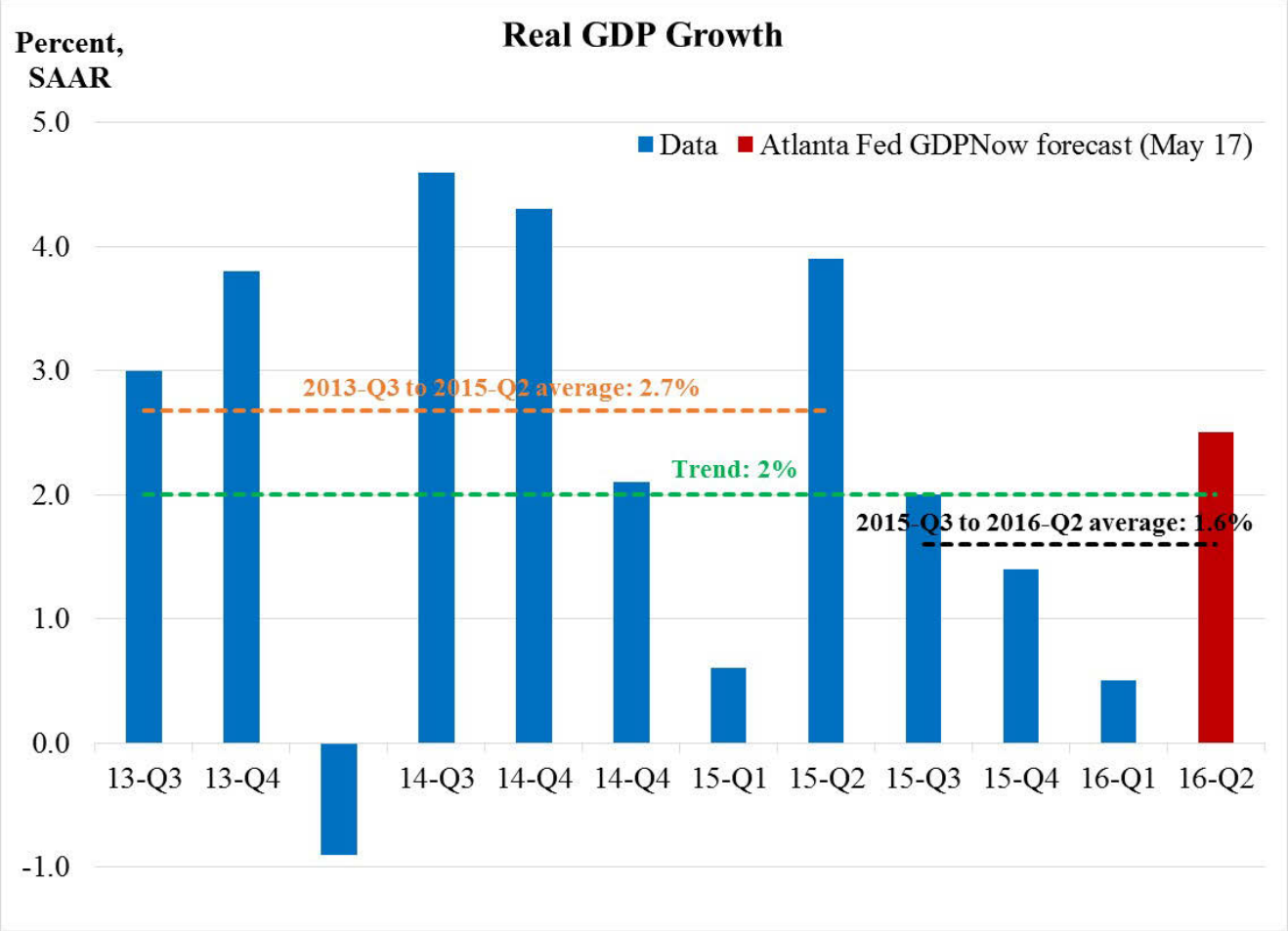
- U.S. real GDP growth has been slower than trend in recent quarters.
- First-quarter 2016 real GDP growth was at an annual rate of just 0.5 percent, according to the most recent estimate.
- This estimate may be influenced by the "residual seasonality" issue: First-quarter real GDP has been low since 2009.
- Still, combining actual data from the second half of 2015, the first quarter of 2016, and tracking estimates for the current quarter, the suggestion is that the U.S. is growing below a trend pace of 2 percent.

Below-trend real GDP growth



Source: Bureau of Economic Analysis and Federal Reserve Bank of Atlanta. Last observation: 2016-Q1.

Slowing GDP growth



Source: Bureau of Economic Analysis and Federal Reserve Bank of Atlanta. Last observation: 2016-Q1.

Bottom line for U.S. real GDP growth

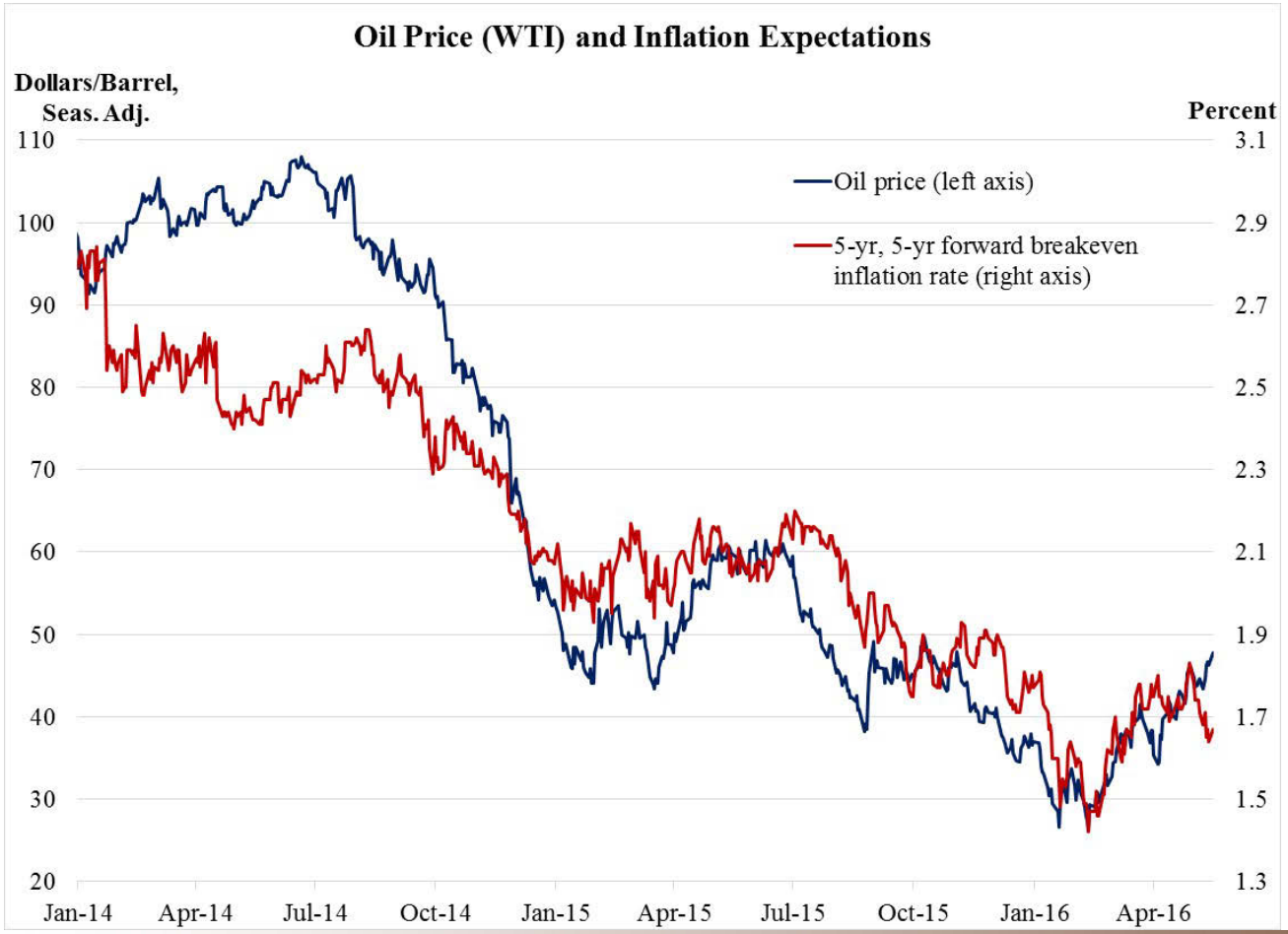
- U.S. real GDP growth appears to have slowed to a below-trend pace in the most recent four quarters, including tracking estimates for the current quarter.
- The four-quarter and eight-quarter averages shown in the previous slides should smooth out any "residual seasonality" effects thought to be influencing the data.
- The slower, below-trend pace of recent U.S. growth is inconsistent with a slowly rising path for the policy rate.
- This factor supports the market view of almost no normalization of the U.S. policy rate.

Inflation Expectations Still Too Low

Inflation expectations

- Market-based measures of U.S. inflation expectations were relatively satisfactory during the summer of 2014.
- These expectations fell in tandem with oil prices during 2014 and renewed a downward trend beginning in late 2015.
- Recently, market-based inflation expectations have recovered somewhat.
- However, expectations remain low compared with the levels observed in the summer of 2014.

Inflation expectations recovered with oil prices …



Source: Energy Information Administration and Federal Reserve Board. Last observation: May 16, 2016.

… but remain uncomfortably low

	07/01/2014	12/15/2015	02/11/2016	05/11/2016
2-year *	188	94	95	164
5-year **	200	122	94	153
10-year **	226	148	118	159
5-year forward **	252	174	142	165

* Inflation compensation: continuously compounded zero-coupon yields (basis points).
** Breakeven inflation rates (basis points).

Source: Haver Analytics and Federal Reserve Board. Last observation: May 11, 2016.

Market-based inflation expectations: CPI vs. PCE

- Market-based measures of inflation expectations are based on consumer price index (CPI) inflation.
- The FOMC's preferred inflation measure is based on personal consumption expenditures (PCE) inflation.
- A rule of thumb for translating between the two indexes is to subtract 30 basis points from CPI inflation to get to PCE inflation.
- Using this rule of thumb and the data in the previous table—and not making any further adjustment for liquidity or risk premia—markets can be interpreted as expecting just 1.29 percent PCE inflation over the next 10 years.

Bottom line for U.S. inflation expectations

- Market-based measures of inflation expectations remain quite low, even after a recent rebound.
- Current readings on TIPS-based inflation compensation are difficult to reconcile with credible longer-run FOMC policy to maintain an inflation target of 2 percent PCE inflation.
- This factor supports the market view of almost no normalization of the policy rate.

Conclusions

Conclusions

- The FOMC median projection for the policy rate suggests a gradual pace of rate increases over the next several years.
- The market-based expectation for the FOMC policy rate is much shallower, implying only a few increases over the forecast horizon—almost no normalization.
- U.S. evidence from labor markets, actual inflation readings and global influences suggests the FOMC median projection may be more nearly correct.
- U.S. evidence from recent readings on GDP growth and market-based inflation expectations suggests the market view of the path of the policy rate may be more nearly correct.

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