



Time Consistency and Fed Policy

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AMERICA'S
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March 24, 2016

New York, N.Y.

Any opinions expressed here are my own and do not necessarily reflect those of the Federal Open Market Committee.

Introduction

The policy rate path

- The FOMC releases a “Summary of Economic Projections” (SEP) once per quarter.
- The SEP outlines economic projections for key macroeconomic variables, combined with a projected path for the policy rate.
- One could interpret the projected median path for the policy rate as the one that is likely to be adopted, provided that the economy evolves as expected.
- The December 2015 SEP suggested four 25 basis point policy rate increases during 2016.

A possible inconsistency

- The state of the U.S. economy as of the March 2016 FOMC meeting was arguably consistent with December 2015 SEP projections.
- Yet, the Committee did not increase the policy rate at the March meeting.
- This state of affairs might be viewed as “time inconsistent” in the macroeconomics literature.
 - Financial markets may have trouble interpreting Fed behavior in the future if this is the case.

Time consistency

- Time consistency, as defined in macroeconomics, means that an action contemplated for a future date and state of the world is actually implemented when that date and state of the world occur.
- Time inconsistency means the action is not implemented.
- Why is this significant?
 - Expectations are quite important in macroeconomics. An announcement that certain policy actions are likely to follow in certain states of the world has an impact on the economy.
 - Not following through on a proposed action can damage a policymaker's credibility.

Was the December-March episode time-inconsistent?

- The key issue in this talk is whether the recent December-March episode was an example of time-inconsistent policymaking.
- The bulk of the presentation will provide a comparison of the state of the economy as of the December FOMC meeting to the state of the economy as of the March FOMC meeting.
- The key question is whether the Committee needed to follow through in March with the December SEP policy path in order to remain time-consistent.

Main conclusions

- I will conclude that the Committee did not have to move in March to remain time-consistent.
 - There were some key, although minor, changes to the SEP projections.
 - The difference in macroeconomic outcomes between moving at one meeting versus another is currently small.
- The relatively minor downgrades contained in the March SEP suggest that the next rate increase may not be far off provided the economy evolves as expected.

Comparing December to March

Information in the SEP

- The SEP contains Committee participant projections for real GDP growth, unemployment, headline and core PCE inflation.
- It also contains Committee participant projections for the policy rate path.
- There may be other pieces of important information not in the SEP that may influence Committee decision-making above and beyond expected effects on the real economy and inflation.

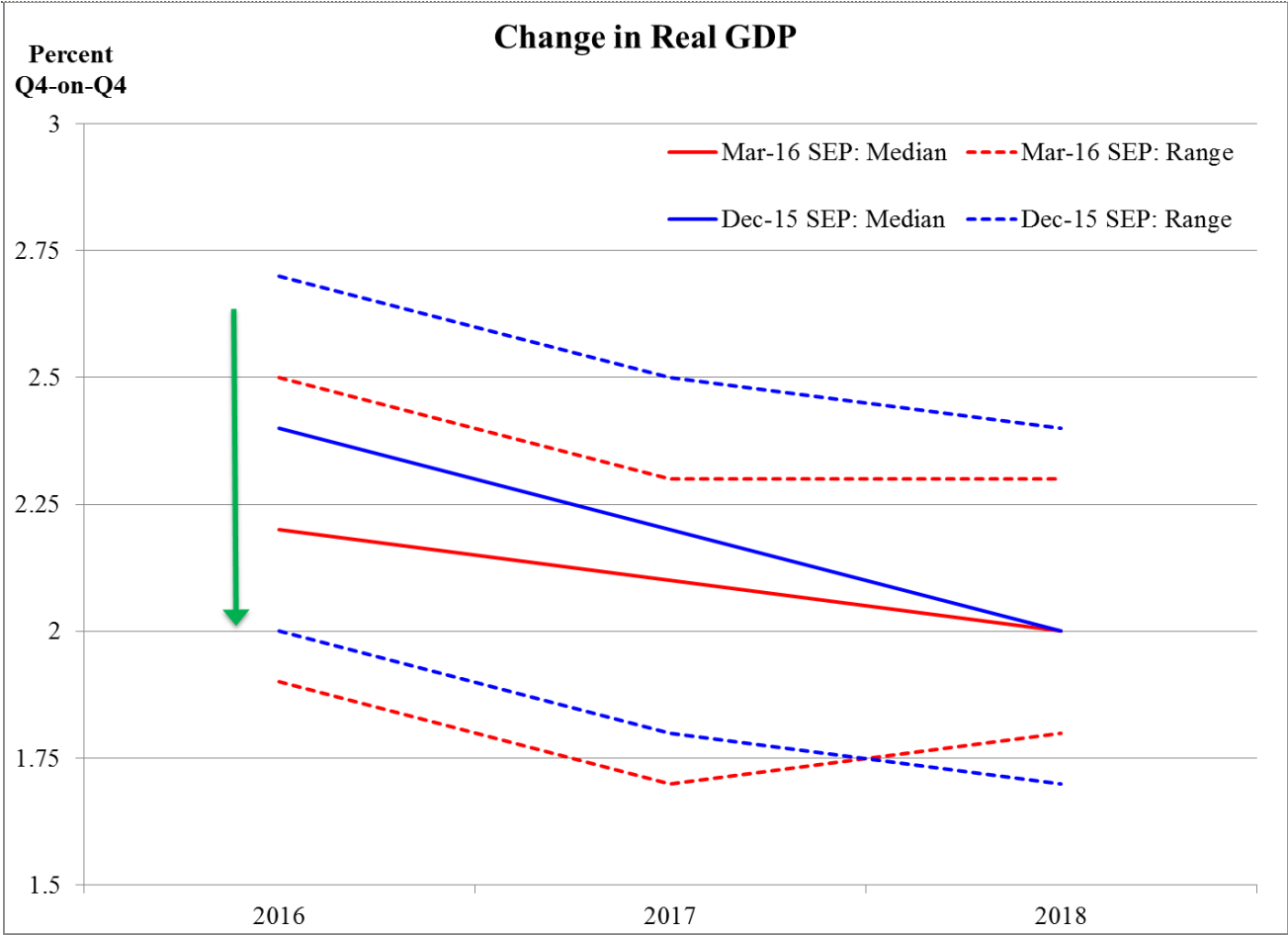
Other information not in the SEP

- Here, I will focus on three variables which are not part of the SEP.
- With these three variables I will try to capture some of the additional information sometimes referenced in Committee communications:
 - a U.S. financial conditions index,
 - a global real GDP growth outlook and
 - TIPS-based measures of inflation expectations.
- We could look at many other variables, but I want to keep this manageable.

The real GDP growth outlook

- Let's begin with the December versus March SEP real GDP growth outlook.
- Throughout we will consider the median of the SEP, along with the range from low to high.

The real GDP growth outlook



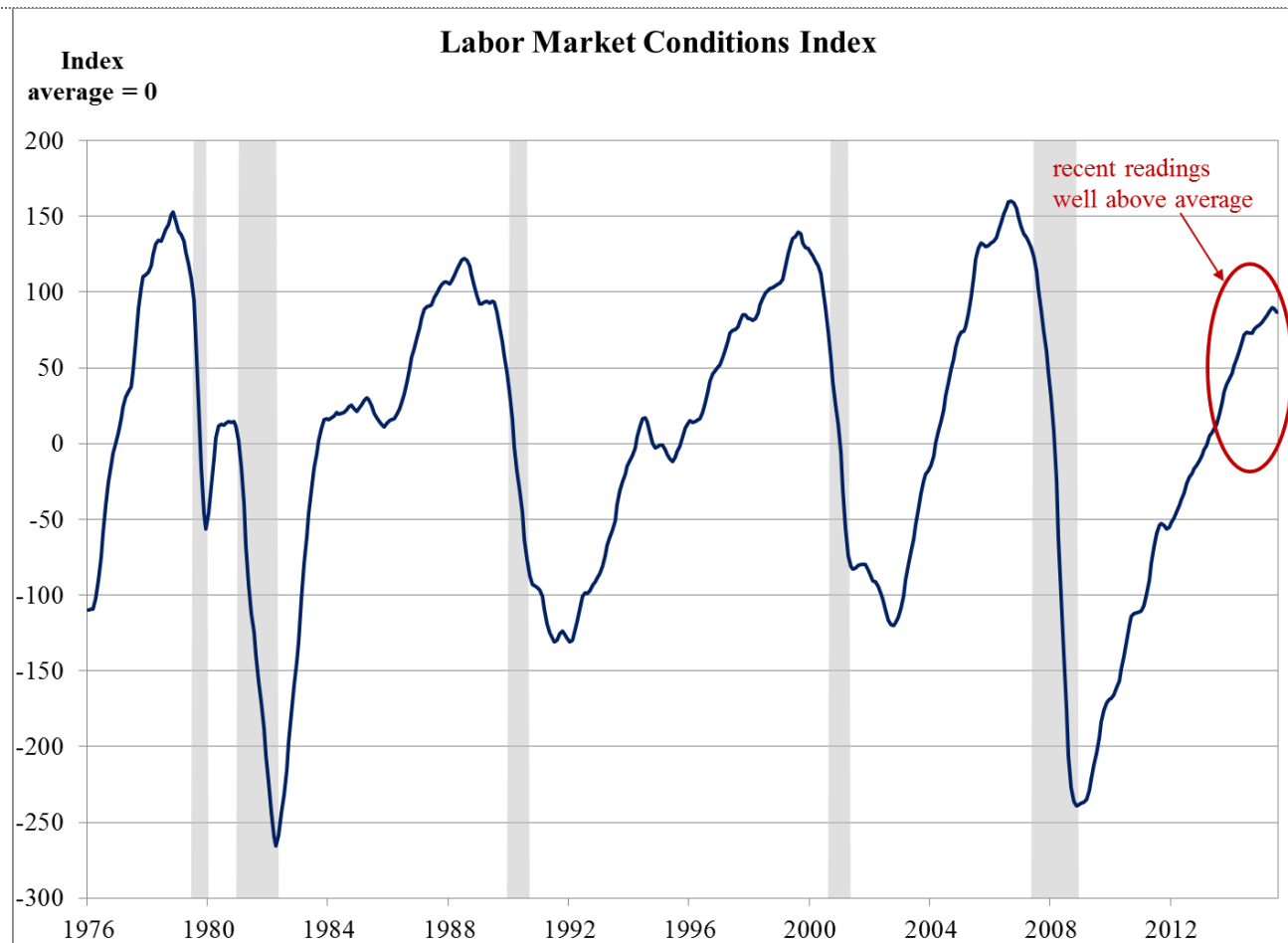
December to March outlook: summary of changes

- Real GDP growth outlook: downgraded somewhat.

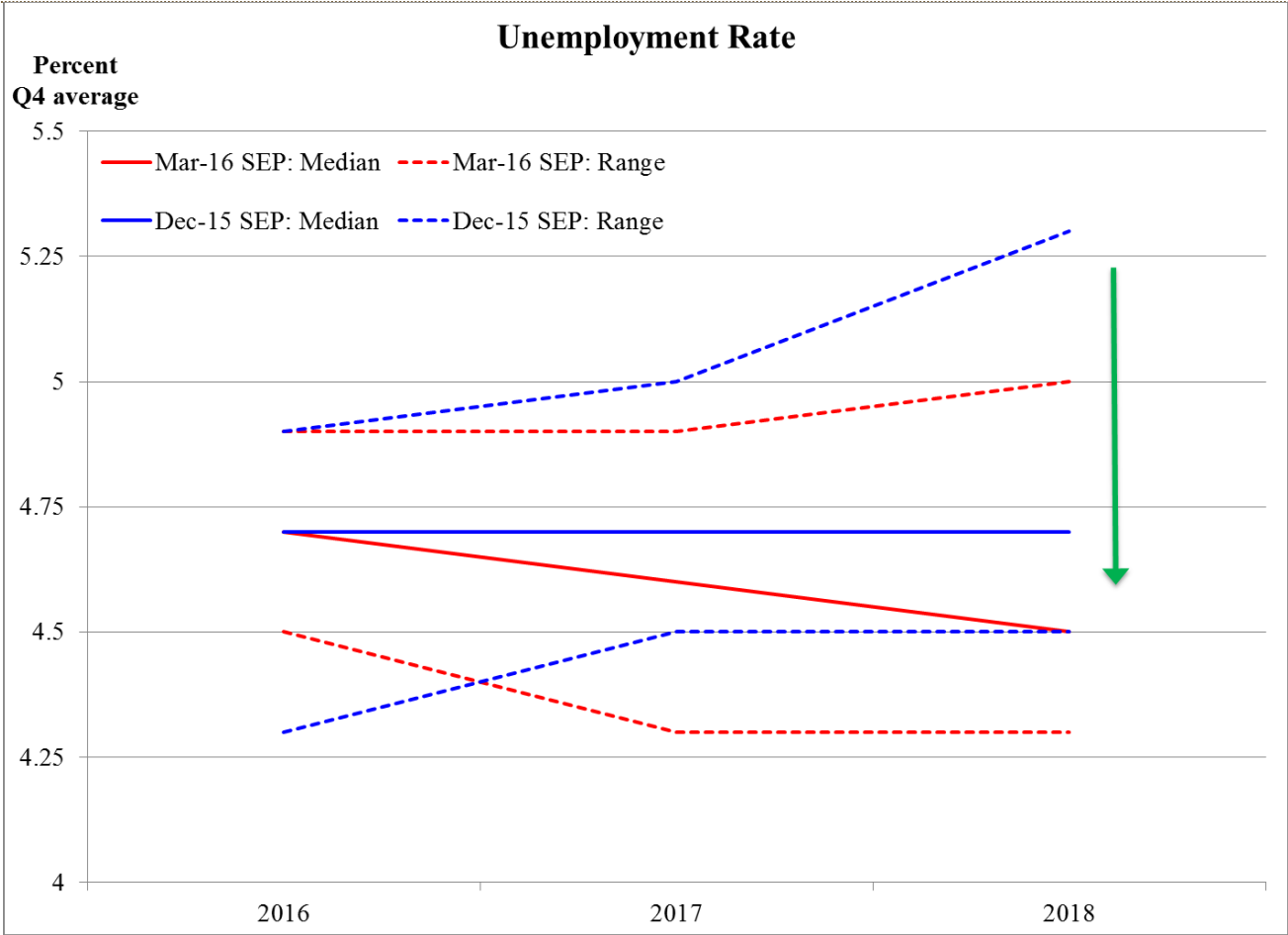
The labor market outlook

- The SEP includes projections for unemployment, but a great deal of discussion in financial markets and policy circles involves many other indicators of labor market performance.
- One way to get a handle on the state of the labor market, taking into account all elements of available data, is to consider a labor market conditions index (LMCI).
- The St. Louis Fed has calculated the level of a well-known LMCI.†
- Such an index indicates today's labor market is well above the average performance level since 1976.

The state of the labor market according to a LMCI



The labor market outlook



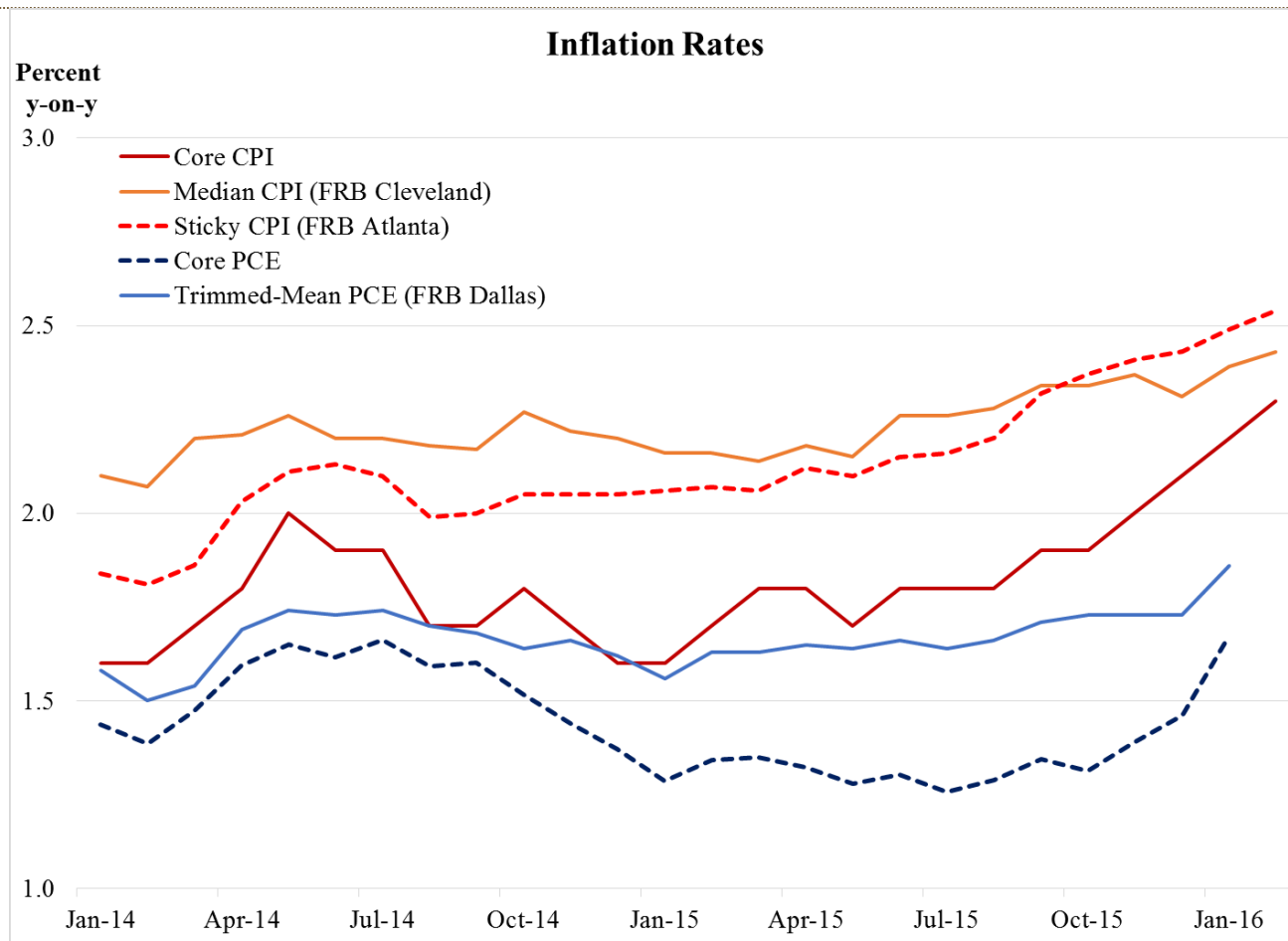
December to March outlook: summary of changes

- Real GDP growth outlook: downgraded somewhat.
- Labor market performance: upgraded somewhat.
 - According to a LMCI, performance levels are quite strong.
 - Labor market reports received between the December and March meetings were generally very good.
 - The Committee adjusted its projections for unemployment downward.

The inflation outlook

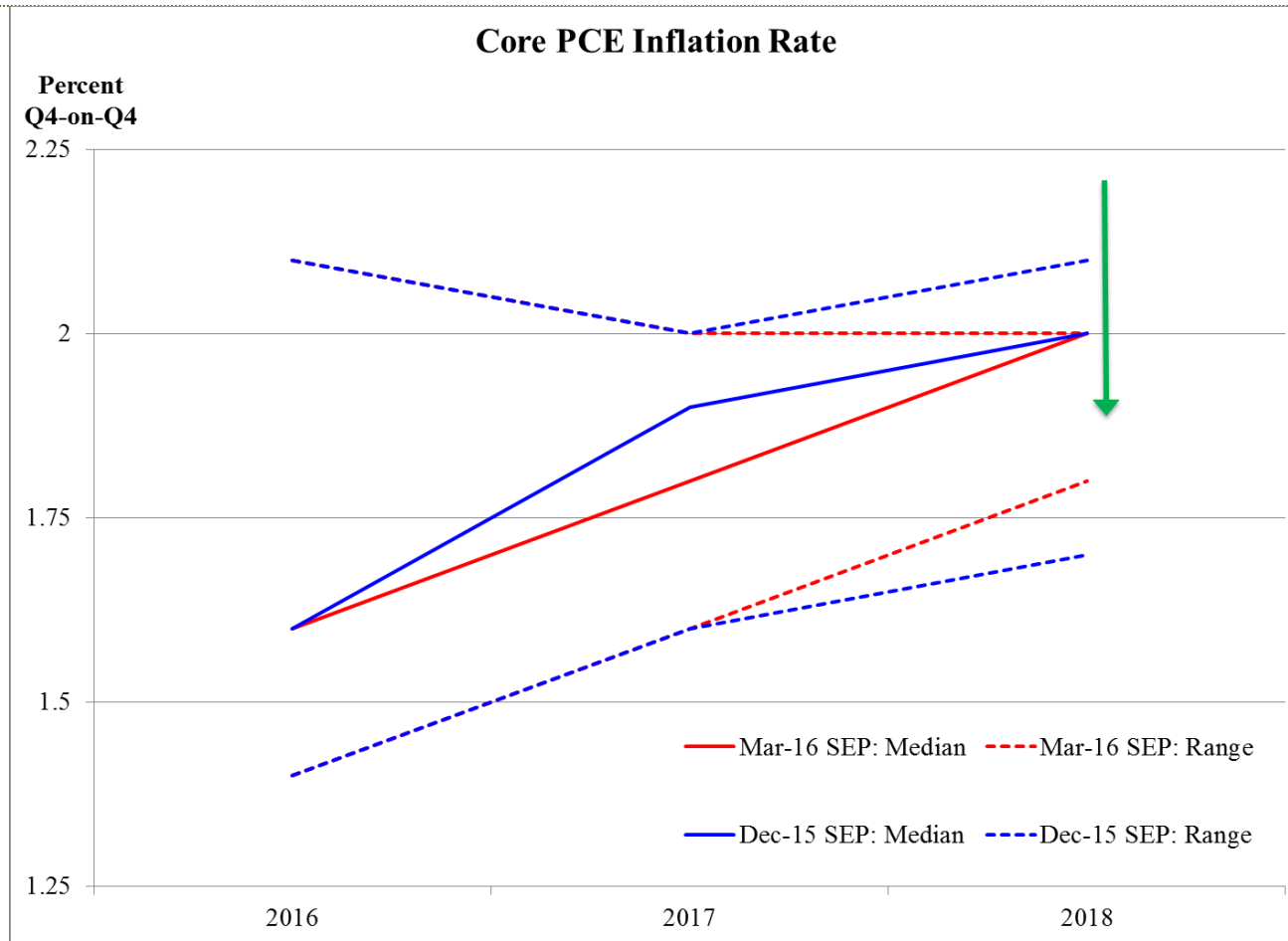
- Next, let's consider the inflation outlook.
- The Committee provides projections of both headline and core inflation.
- Information on actual inflation between FOMC meetings showed somewhat higher readings on a year-over-year basis.
- Here I will focus on measures of core and smoothed inflation.

The inflation outlook according to various measures



Source: Bureau of Labor Statistics, FRB Cleveland, FRB Atlanta, Bureau of Economic Analysis, FRB Dallas.
Last observations: February 2016 for CPI inflation rates; January 2016 for PCE inflation rates.

The inflation outlook



December to March outlook: summary of changes

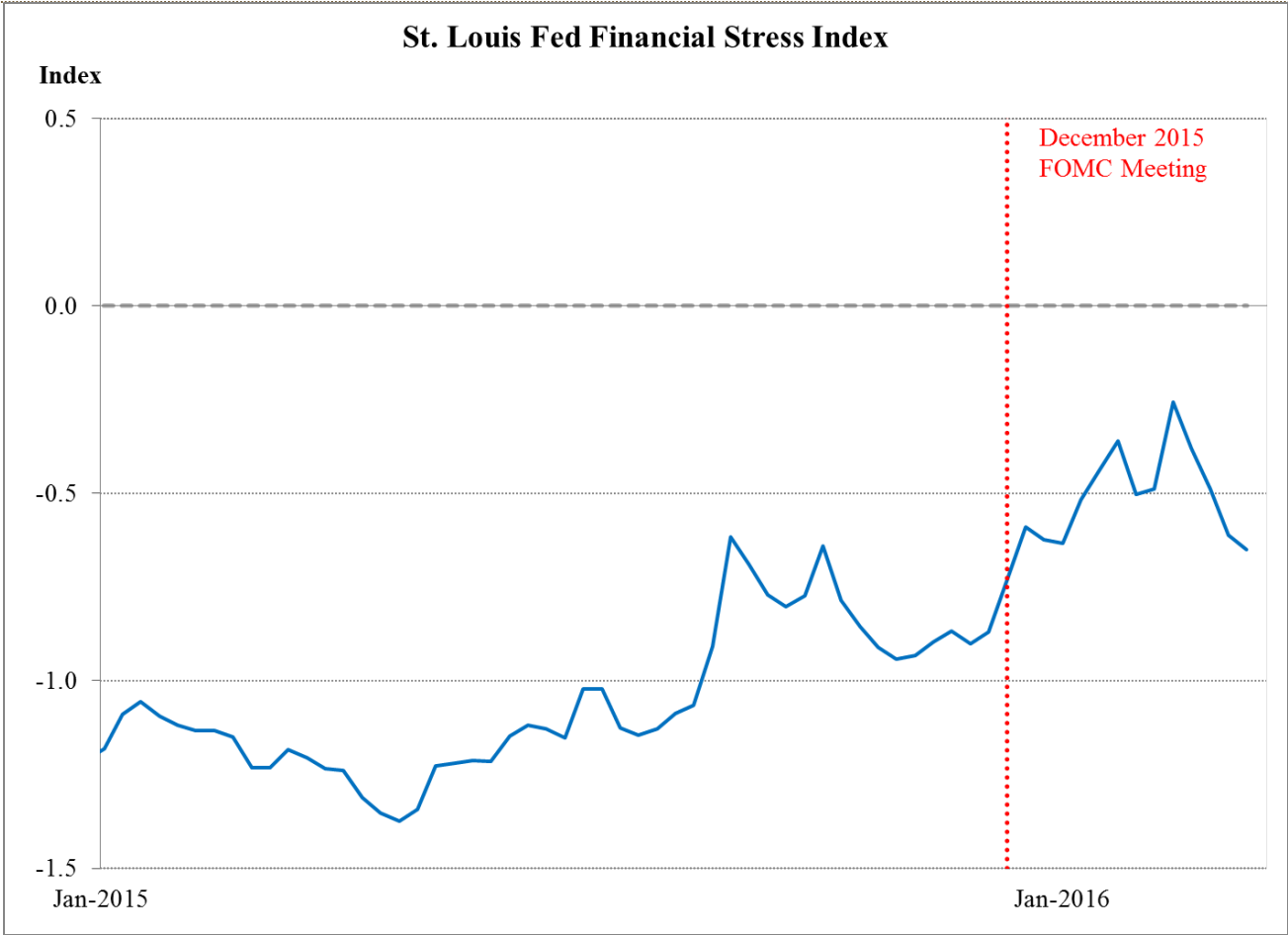
- Real GDP growth outlook: downgraded somewhat.
- Labor market performance: upgraded somewhat.
 - According to a LMCI, performance levels are quite strong.
 - Labor market reports received between the December and March meetings were generally very good.
 - The Committee adjusted its projections for unemployment downward.
- Inflation: largely unchanged, downgraded slightly for 2017 only.

Comparing December to March on Other Dimensions

Financial conditions

- Financial conditions are sometimes cited in commentary on Fed policy.
- How much did financial conditions change between the December FOMC meeting and the March FOMC meeting?
- Let's look at the St. Louis Fed Financial Stress Index (STLSFI).

Financial conditions



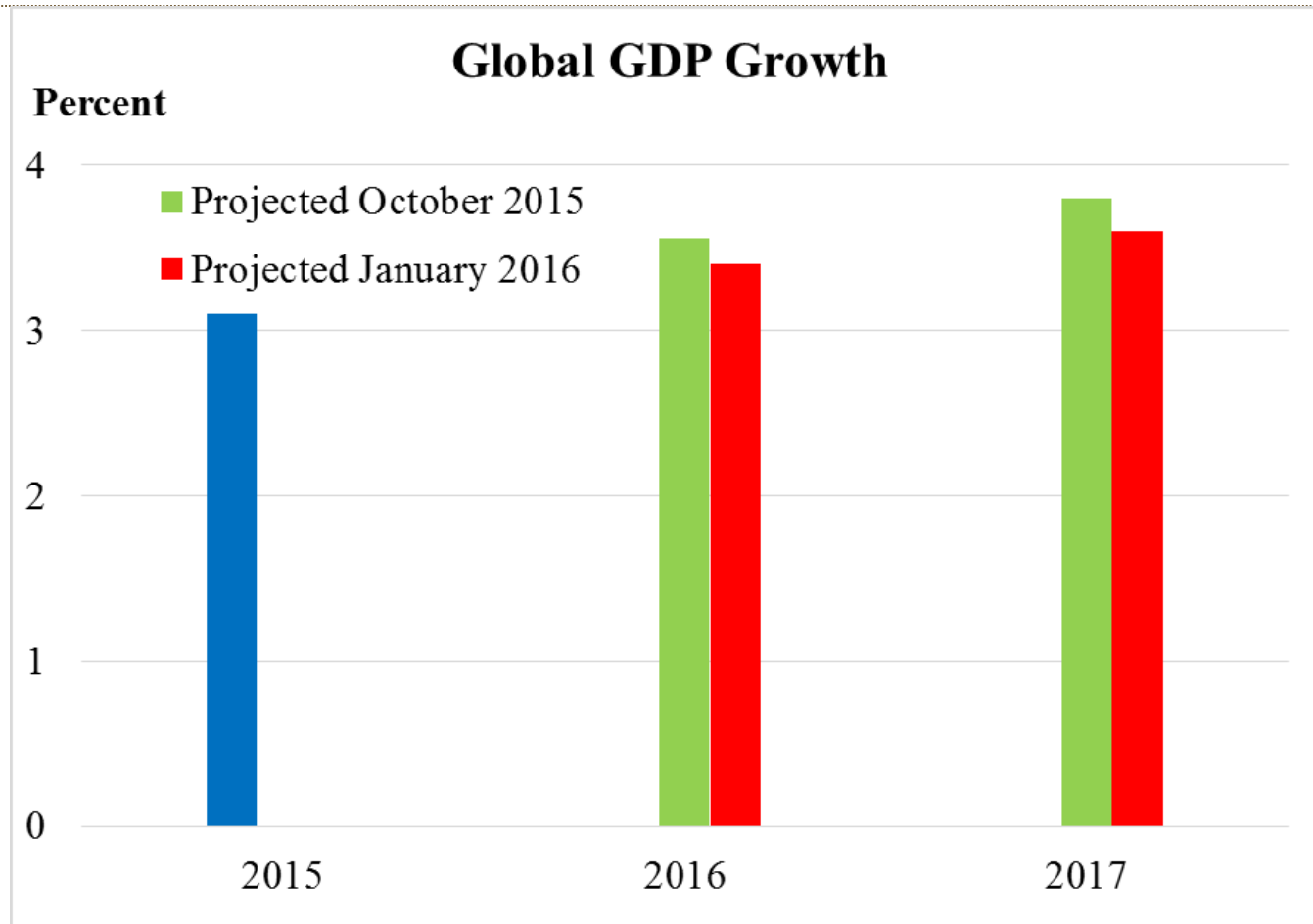
Outlook summary: other considerations

- Financial conditions: By the time of the March meeting, the STLFSI had returned to December levels.

Global real GDP growth

- Another aspect of the macroeconomic situation emphasized in financial markets and in policy circles is global economic growth.
- We can roughly look at whether the global growth outlook changed between the fall of 2015 and the beginning of 2016 by looking at changes in the IMF world economic outlook.

Global GDP growth according to the IMF



Outlook summary: other considerations

- Financial conditions: By the time of the March meeting, the STLFSI had returned to December levels.
- Global real GDP growth:
 - The IMF downgraded its forecast after the first of the year.
 - Real GDP growth is still expected to be higher in 2016 and 2017 than it was in 2015.

Inflation expectations

- Another variable widely cited in recent commentary is inflation expectations.
- I prefer market-based TIPS expected inflation measures.
- I regard the bulk of the movement in these expected inflation measures as a rough measure of Fed credibility with respect to its 2 percent inflation target.
 - I do not find analyses that suggest that much of the movement in inflation compensation is due to time-varying liquidity or risk premia very compelling.

Inflation expectations

	07/01/2014	12/15/2015	02/11/2016	03/15/2016
2-year *	188	94	95	146
5-year **	200	122	94	135
10-year **	226	148	118	150
5-year forward **	252	174	142	165

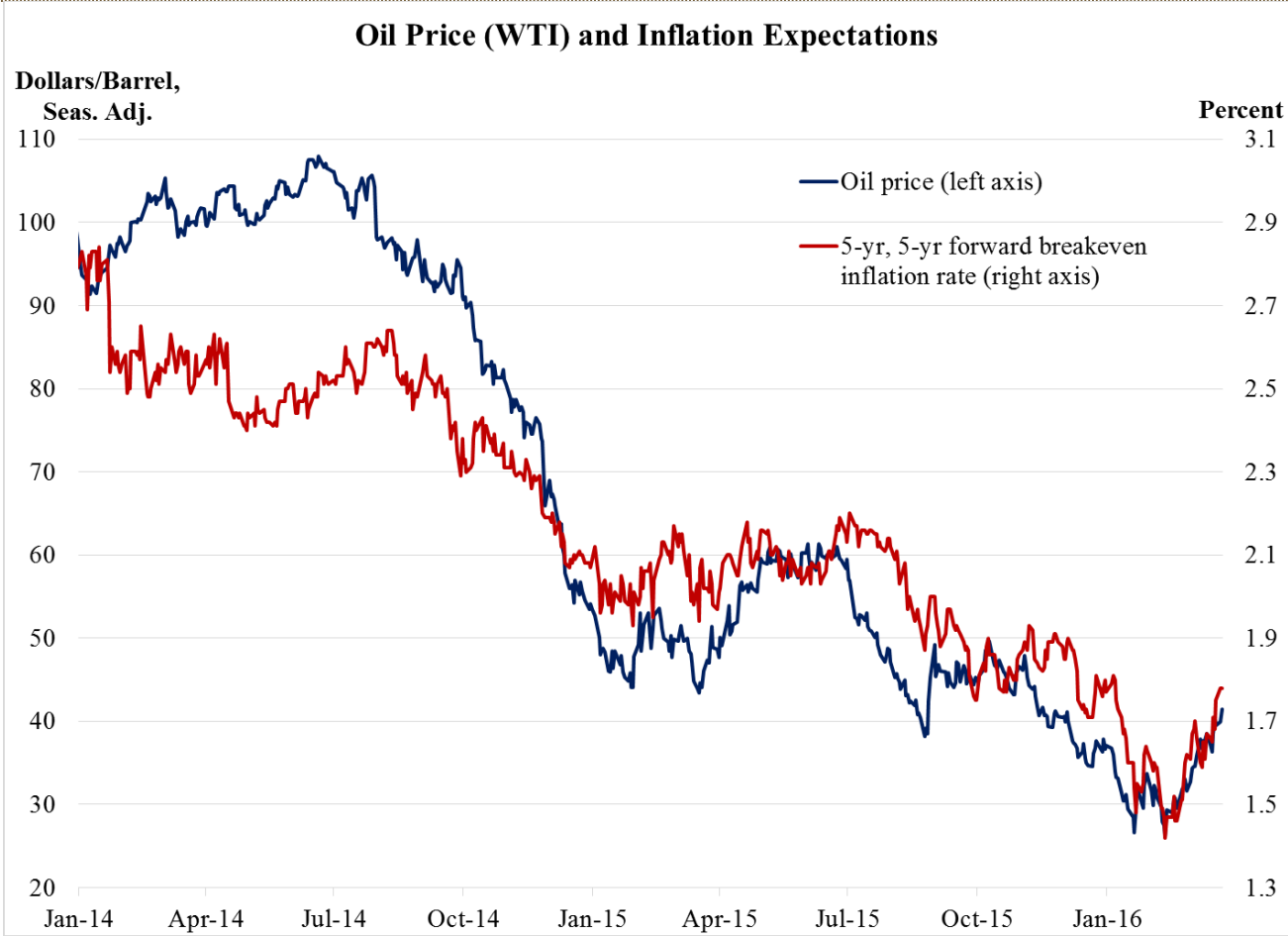
* Inflation compensation: continuously compounded zero-coupon yields (basis points).

** Breakeven inflation rates (basis points).

Outlook summary: other considerations

- Financial conditions: By the time of the March meeting, the STLFSI had returned to December levels.
- Global real GDP growth:
 - The IMF downgraded its forecast after the first of the year.
 - Real GDP growth is still expected to be higher in 2016 and 2017 than it was in 2015.
- Inflation expectations:
 - TIPS-based measures returned to their December levels, but remain low compared with July 2014.
 - The high correlation between oil price movements and longer-term TIPS-based inflation expectations remains puzzling.

Inflation expectations



Time-Inconsistent or Not?

December to March short form scorecard

- The short form of the scorecard reads as follows:
 - Growth outlook: downgraded somewhat.
 - Labor market outlook: upgraded somewhat.
 - Inflation outlook: about the same as December.
 - Financial conditions: about the same as December.
 - Global growth: IMF downgraded somewhat.
 - Inflation expectations: about the same as December.

December to March even shorter form scorecard

- The even shorter form of the scorecard reads:
 - U.S. and global growth outlook: downgraded somewhat.
 - U.S. labor market outlook: upgraded somewhat.
 - All else about the same as December.

Time-inconsistent policymaking?

- Certainly a case could be made that as of March, the economy had progressed about as had been expected in December. Therefore, the Committee might have been expected to follow through with its December policy rate projection at the March meeting.
- This would rely on a view that the labor market upgrade essentially offset the global and U.S. growth downgrade.
- As it turns out, the decision to pause seems to have put more weight on the global and U.S. growth downgrade.

Time-consistent after all

- On balance, I think it is reasonable to interpret the Committee as remaining time-consistent at the March meeting.
 - There were some key, although minor, changes to the SEP projections.
 - These were enough to justify a somewhat different policy stance than would otherwise have been warranted.
 - The difference in macroeconomic outcomes between moving at one meeting versus another is currently small.
- The relatively minor downgrades contained in the March SEP suggest that the next rate increase may not be far off provided that the economy evolves as expected.



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