Appendix 1: Materials used by Mr. Potter and Ms. Logan

Class II FOMC – Restricted (FR)

Material for Briefing on

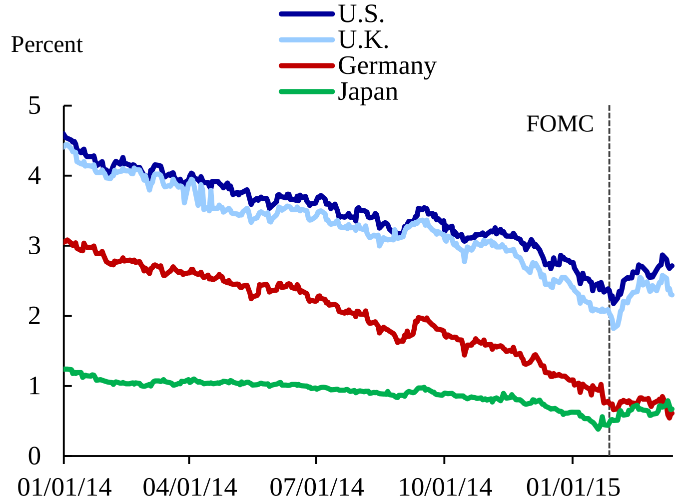
Financial Developments and Open Market Operations

Simon Potter and Lorie Logan

March 17, 2015

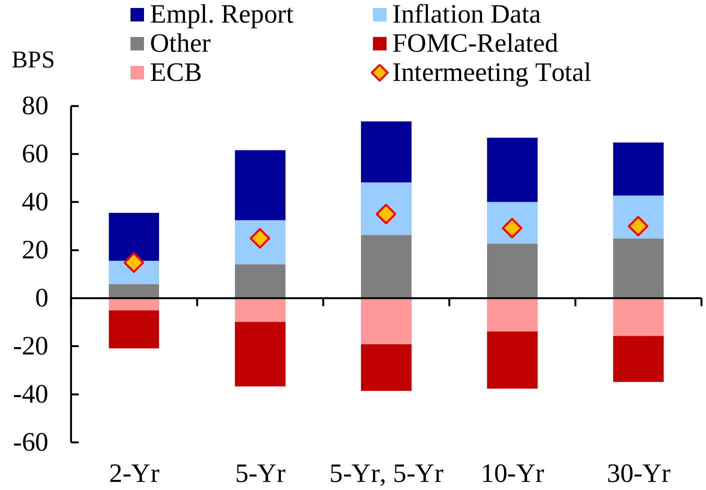
Class II FOMC – Restricted (FR) Exhibit 1

(1) Nominal Five-Year, Five-Year Forward Rates



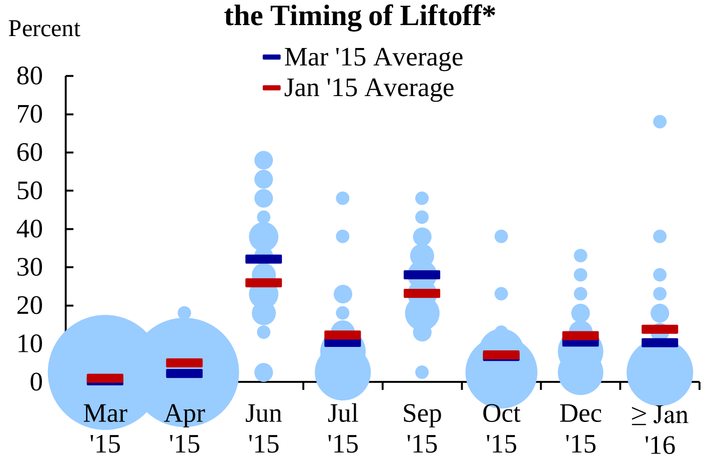
Source: Bloomberg

(2) Intermeeting Changes in Yields



Source: Bloomberg

(3) Distribution of Market Beliefs on the Timing of Liftoff*



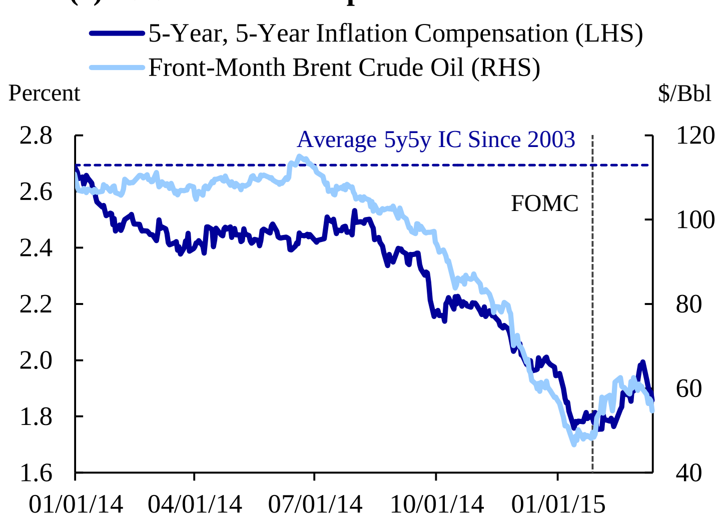
*Based on all responses from the Survey of Primary Dealers and Survey of Market Participants. Dots scaled by percent of respondents.
Source: Federal Reserve Bank of New York

(4) Expectations for Inflation at Liftoff*

Survey	Modal Expectation: 12m Headline PCE Inflation	Modal Expectation: Inflation 1-2 Years Ahead	Probability of Inflation 1-2 Years Ahead <1.75%: Dealers	Probability of Inflation 1-2 Years Ahead <1.75%: Buy Side
Mar '14	1.8%	2.0%	23%	28%
Apr '14	1.8%	2.0%	22%	26%
Jun '14	1.8%	2.0%	18%	21%
Jul '14	2.0%	2.2%	18%	22%
Sep '14	1.9%	2.1%	17%	25%
Oct '14	1.8%	2.0%	20%	24%
Dec '14	1.6%	2.0%	22%	29%
Jan '15	0.8%	2.0%	26%	40%
Mar '15	0.4%	2.0%	35%	42%

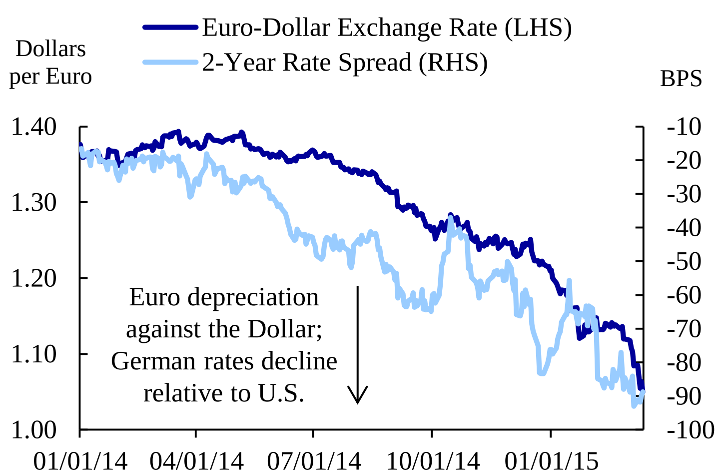
*Modal expectations are medians of all responses from the Survey of Primary Dealers and Survey of Market Participants; probabilities are averages of responses from each respective survey.
Source: Federal Reserve Bank of New York

(5) U.S. Inflation Compensation and Oil Prices



Source: Federal Reserve Board of Governors, Bloomberg

(6) Euro-Dollar Performance and Two-Year German-U.S. Rate Spread



Source: Bloomberg

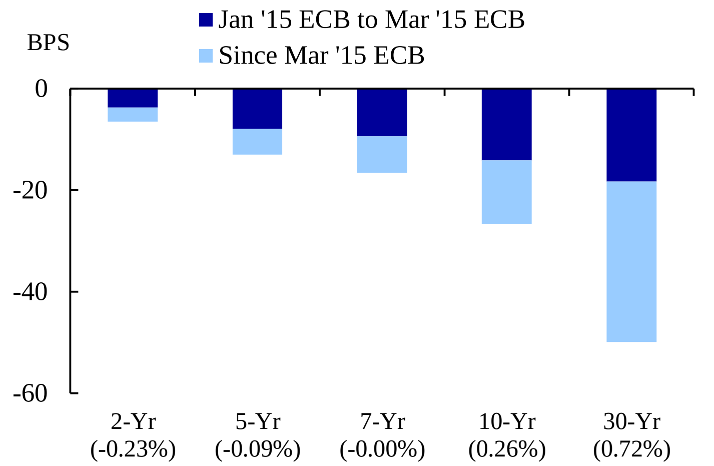
Class II FOMC – Restricted (FR) Exhibit 2

(7) Euro-Area Asset Price Developments*

	Since Mar '15 ECB	Since Jan '15 ECB
Changes in Percent		
EuroStoxx 50 Index	+2.0	+11.8
S&P 500 Index	-2.2	+1.0
Changes in Basis Points		
European High Yield OAS	+18	-32
Italian 30-Year Spread to Germany	-14	-68
Spanish 30-Year Spread to Germany	-13	-47
Euro-Area 5-Year 5-Year Inflation Swap	+1	+7

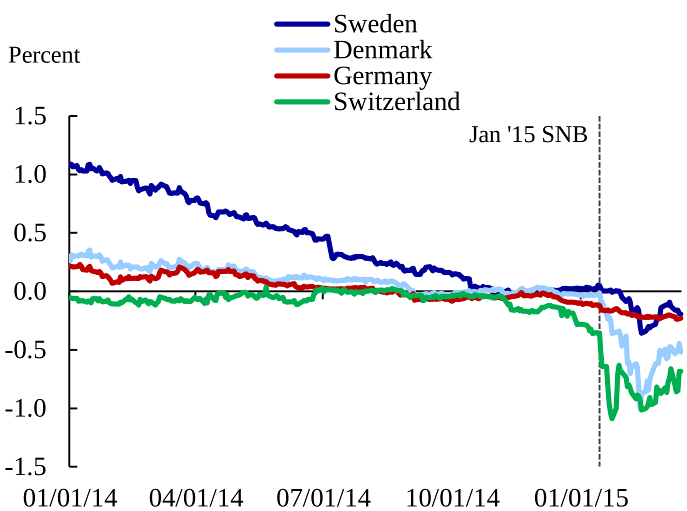
*Through 03/13/15.
Source: Bloomberg, Barclays

(8) Changes in German Sovereign Yields*



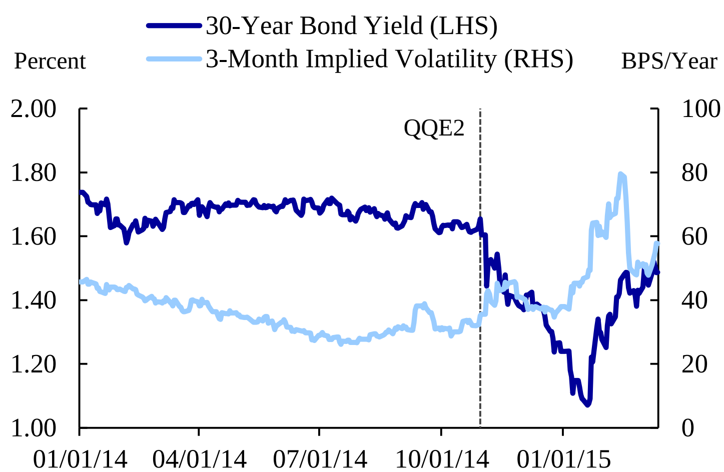
*Levels as of 03/13/15 in parentheses.
Source: Bloomberg

(9) Nominal Two-Year Rates



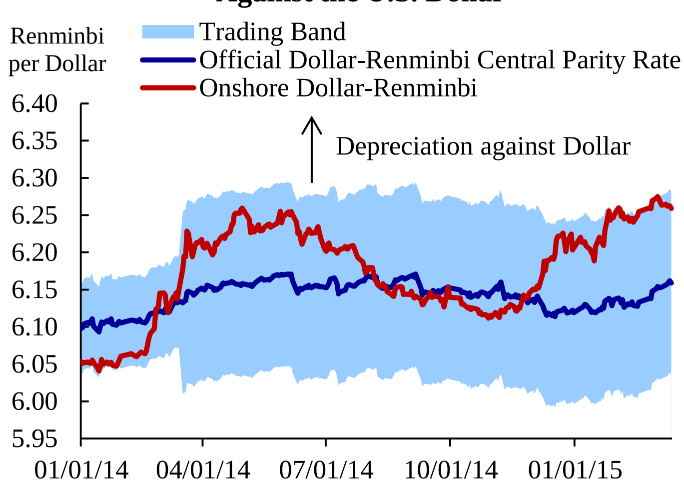
Source: Bloomberg

(10) Japanese Thirty-Year Bond Yield and Implied Volatility



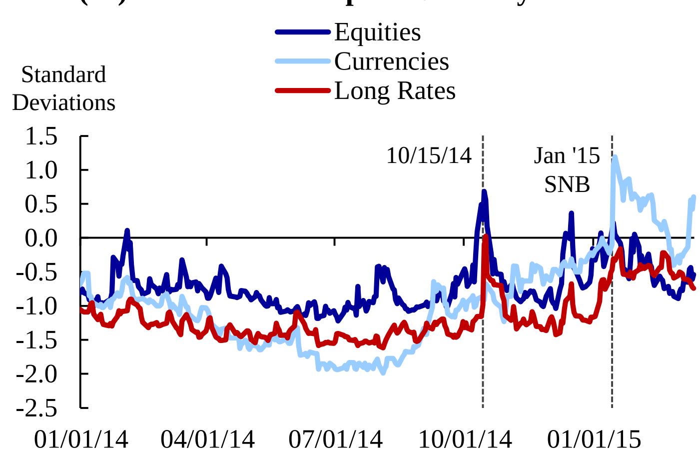
Source: Bloomberg

(11) Chinese Renminbi Performance Against the U.S. Dollar



Source: Bloomberg

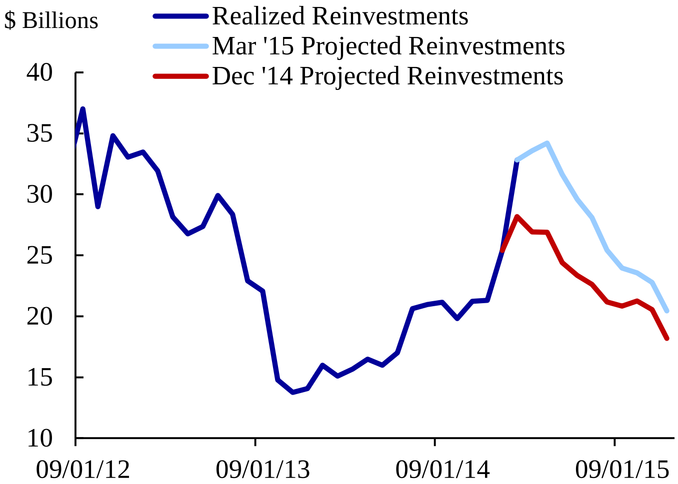
(12) Standardized Implied Volatility Indices*



*Standardized 1-month implied volatilities since June 1994.
Source: Bloomberg, CBOE, Deutsche Bank, Barclays, Federal Reserve Bank of New York Staff Calculations

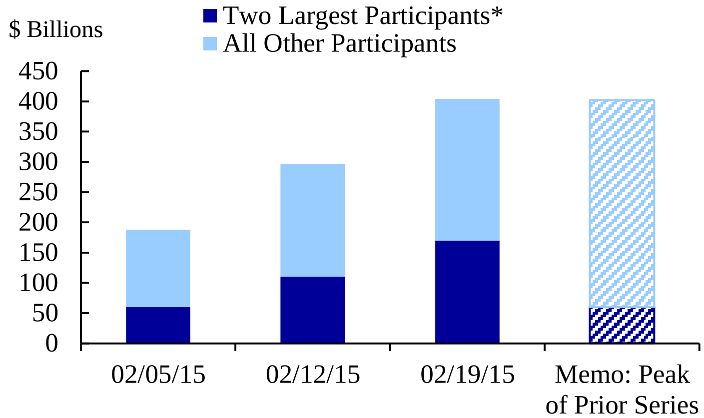
Class II FOMC – Restricted (FR) Exhibit 3

(13) Realized and Projected MBS Reinvestments



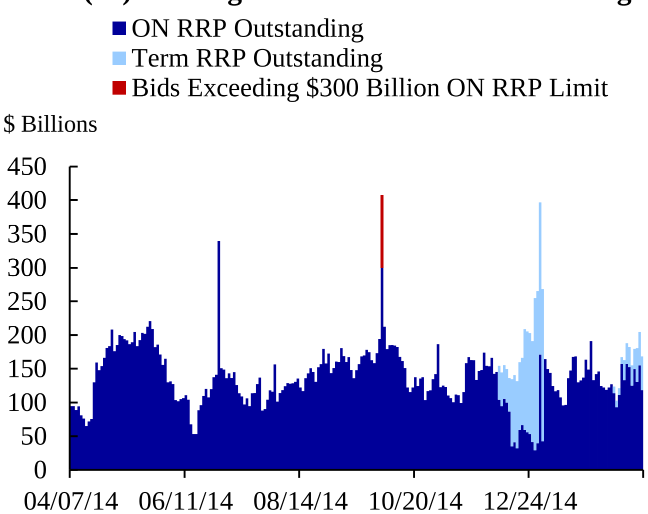
Source: Federal Reserve Bank of New York

(14) TDF Deposits Outstanding



*One of the two largest participants placed bids under two separate legal entities, allowing it to invest more than the $20 billion per counterparty limit per operation.
Source: Federal Reserve Board of Governors

(15) Overnight and Term RRP Outstanding



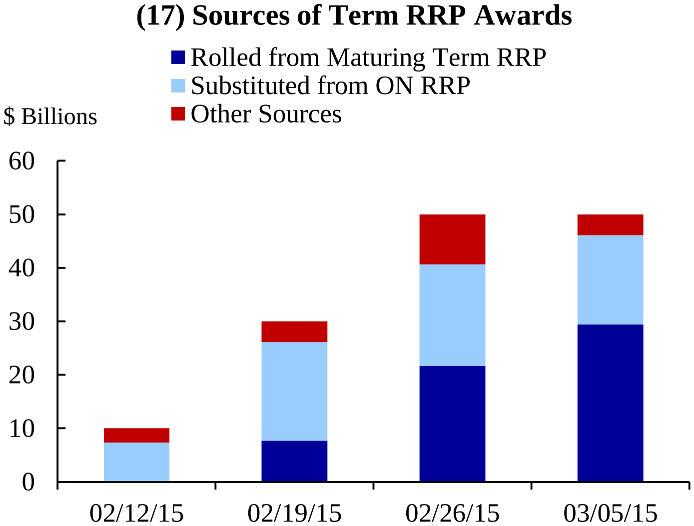
Source: Federal Reserve Bank of New York

(16) Term RRP Operation Results

	02/12	02/19	02/26	03/05
Offered ($ Billions)	10	30	50	50
Bids ($ Billions)				
Accepted	10	30	50	50
Submitted	**69**	**74**	**88**	**74**
Rates (BPS)				
Stop-out	**6**	**6**	**6**	**6**
High Bid	10	10	10	8
Low Bid	6	5	5	5
Maximum Bid Rate	10	10	10	8

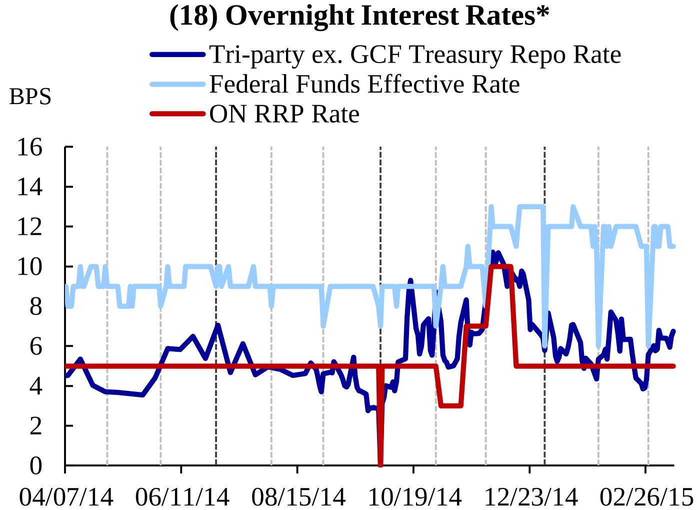
Source: Federal Reserve Bank of New York

(17) Sources of Term RRP Awards



Source: Federal Reserve Bank of New York

(18) Overnight Interest Rates*

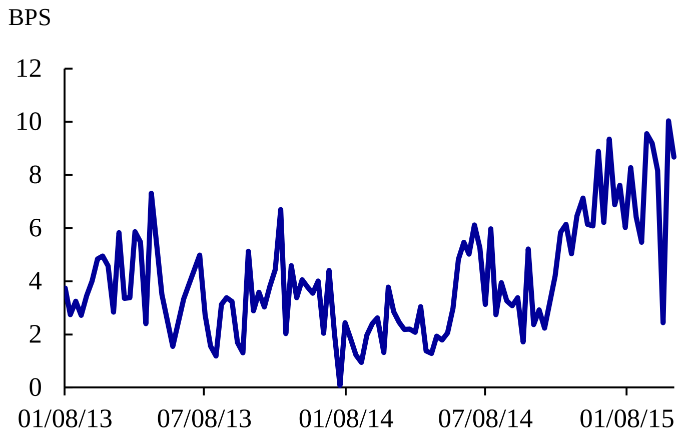


*Dark trip wires indicate quarter-ends, light trip wires indicate month-ends.
Source: Federal Reserve Bank of New York

Class II FOMC – Restricted (FR)

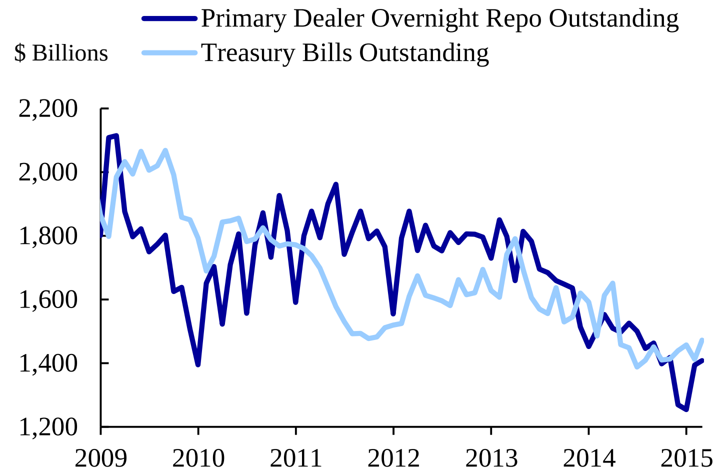
Exhibit 4 (Last)

(19) Spread Between Overnight Treasury GCF and Tri-party ex. GCF Repo Rates*



*Weekly data.
Source: Federal Reserve Bank of New York, Bloomberg

(20) Dealer Repo and Treasury Bills Outstanding*

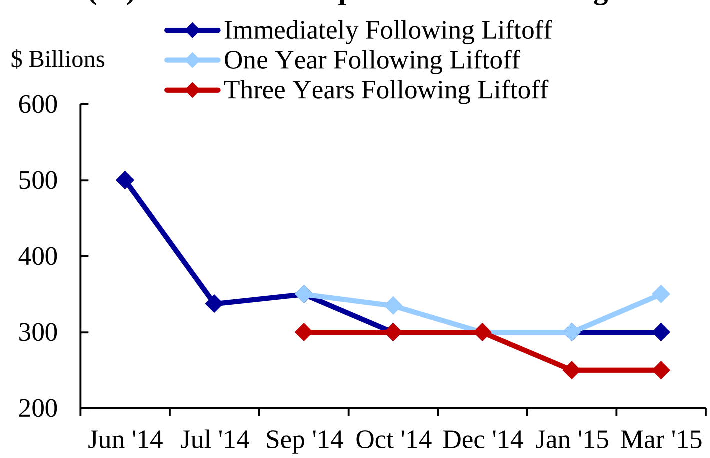


*Monthly data through February 2015.
Source: Federal Reserve Bank of New York, U.S. Treasury, Haver Analytics

(21) Foreign RP Pool

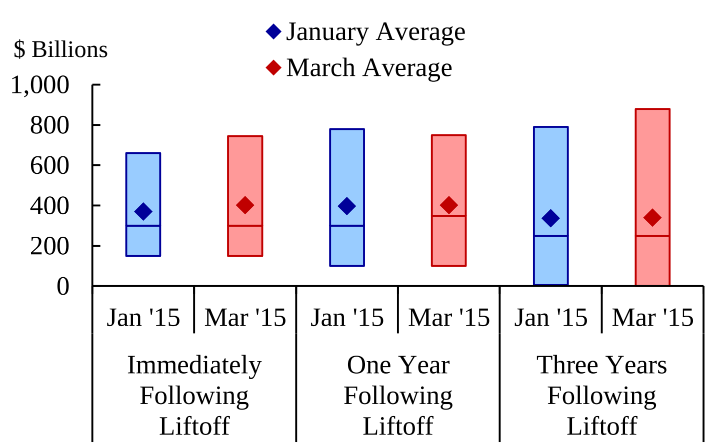
Source: Federal Reserve Board of Governors

(22) Evolution of Expected ON RRP Usage*



*Median of all responses from the Survey of Primary Dealers and Survey of Market Participants.
Source: Federal Reserve Bank of New York

(23) Distribution of Expected ON RRP Usage*



*Based on all responses from the Survey of Primary Dealers and Survey of Market Participants. Boxes show 10th-90th percentile ranges and medians.
Source: Federal Reserve Bank of New York

(24) Proposed Term RRP Resolution

- Could consider term RRP over future quarter-ends
  - Useful for operational readiness
  - May be helpful if liftoff occurs around quarter-end
    - Rates may trade soft if market uncertain about ON RRP cap
- Options for authorizing term RRP testing
  - Option 1: Authorize for remaining 2015 quarter-ends
    - Not obligated to conduct the operations
    - Simpler from an administrative and communications standpoint
  - Option 2: Authorize each quarter

Appendix 2: Materials used by Ms. Logan

Class II FOMC – Restricted (FR)

Quarter-end Term RRP Operations Resolution

March 17-18, 2015

Option 1: Proposed Resolution on Term RRP Testing over the End of the Second Quarter of 2015

"During the period of June 18, 2015, to June 29, 2015, the Federal Open Market Committee (FOMC) authorizes the Federal Reserve Bank of New York to conduct a series of term reverse repurchase operations involving U.S. government securities. Such operations shall: (i) mature no later than July 8, 2015; (ii) be subject to an overall size limit of $300 billion outstanding at any one time; (iii) be subject to a maximum bid rate of five basis points above the ON RRP offering rate in effect on the day of the operation; (iv) be awarded to all submitters: (A) at the highest submitted rate if the sum of the bids received is less than or equal to the preannounced size of the operation, or (B) at the stop-out rate, determined by evaluating bids in ascending order by submitted rate up to the point at which the total quantity of bids equals the preannounced size of the operation, with all bids below this rate awarded in full at the stop-out rate and all bids at the stop-out rate awarded on a pro rata basis, if the sum of the counterparty offers received is greater than the preannounced size of the operation. Such operations may be for forward settlement. The System Open Market Account manager will inform the FOMC in advance of the terms of the planned operations. The Chair must approve the terms of, timing of the announcement of, and timing of the operations. These operations shall be conducted in addition to the authorized overnight reverse repurchase agreements, which remain subject to a separate overall size limit authorized by the FOMC."

Option 2: Proposed Resolution on Term RRP Testing over Quarter-ends through January 29, 2016

"During each of the periods of June 18 to 29, 2015; September 18 to 29, 2015; and December 17 to 30, 2015, the Federal Open Market Committee (FOMC) authorizes the Federal Reserve Bank of New York to conduct a series of term reverse repurchase operations involving U.S. government securities. Such operations shall: (i) mature no later than July 8, 2015, October 7, 2015, and January 8, 2016, respectively; (ii) be subject to an overall size limit of $300 billion outstanding at any one time; (iii) be subject to a maximum bid rate of five basis points above the ON RRP offering rate in effect on the day of the operation; (iv) be awarded to all submitters: (A) at the highest submitted rate if the sum of the bids received is less than or equal to the preannounced size of the operation, or (B) at the stop-out rate, determined by evaluating bids in ascending order by submitted rate up to the point at which the total quantity of bids equals the preannounced size of the operation, with all bids below this rate awarded in full at the stop-out rate and all bids at the stop-out rate awarded on a pro rata basis, if the sum of the counterparty offers received is greater than the preannounced size of the operation. Such operations may be for forward settlement. The System Open Market Account manager will inform the FOMC in advance of the terms of the planned operations. The Chair must approve the terms of, timing of the announcement of, and timing of the operations. These operations shall be conducted in addition to the authorized overnight reverse repurchase agreements, which remain subject to a separate overall size limit authorized by the FOMC."

Appendix 3: Materials used by Ms. Ihrig and Mr. Martin

Material for

Discussion of Normalization Tools

Jane E. Ihrig and Antoine Martin

March 17, 2015

ON RRP capacity issues

Options for initial aggregate ON RRP capacity

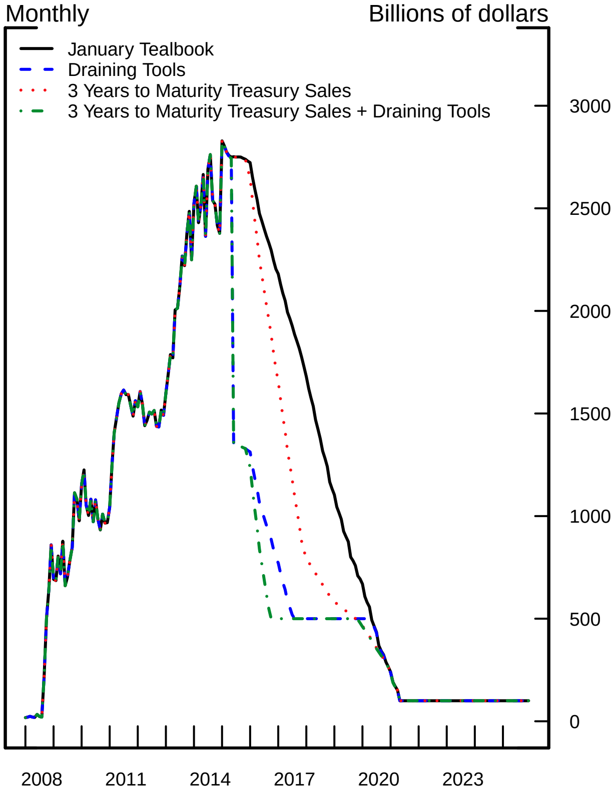
- Option 1: Temporarily elevate initial cap
  - Sensitive to financial stability and footprint concerns
  - If insufficient interest rate control, increase the cap
- Option 2: Suspend cap for a short period; establish cap at end of brief period
  - Substantial capacity to start

Communications about initial capacity

- March minutes report capacity at liftoff "temporarily elevated"
- Ahead of liftoff or at liftoff announce initial capacity
  - Early: provide markets with further clarity of liftoff strategy
  - At liftoff: evaluate developments as they evolve

Reserve balances

Monthly Billions of dollars



Source: H.4.1 release and staff estimates.

Going forward

- In the longer run, use of the ON RRP facility could be expected to wane, which would make elimination of ON RRPs straightforward
- If usage remains well below the cap, that cap could be reduced with little effect on market rates, so long as "headroom" remains sufficient
- If usage is high, substantial use of other tools may be needed to provide rate support
- The Committee will need to weigh tradeoffs between efficacy and costs for these tools
- Clear public communication about the ON RRP cap could avoid sending an unintended signal

Questions for the Normalization Tools Discussion

1. What are your general views of the two options for the initial setting of the aggregate cap on ON RRP capacity discussed in the March 6, 2015, memo entitled, “More Steps towards Finalizing the FOMC's Operational Preparations for Liftoff”? Those options are:

    a. establishing a temporary elevated cap at liftoff and adjusting it later as appropriate or, alternatively,

    b. operating for a brief initial period without a cap and then imposing a cap based on observed take-up on ON RRP operations after liftoff

2. What are your general views regarding strategies that the Committee could use to reduce ON RRP take-up after liftoff while maintaining appropriate interest rate control? (These strategies are discussed in the March 6, 2015, memo entitled, “Lowering the ON RRP Facility Cap after Liftoff.”)

Proposed March Minutes Language

[Participants] agreed to augment the Committee's Policy Normalization Principles and Plans by providing the following additional details regarding the operational approach the FOMC will use when it becomes appropriate to begin normalizing the stance of monetary policy.[1]

When economic conditions warrant the commencement of policy firming, the Federal Reserve will:

- Continue to target a range for the federal funds rate that is 25 basis points wide.
- Set the rate of interest on excess reserves (IOER) equal to the top of the target range for the federal funds rate and set the offering rate associated with an overnight reverse repurchase agreement (ON RRP) facility equal to the bottom of the target range for the federal funds rate.
- Allow aggregate capacity of the ON RRP facility to be temporarily elevated to support policy implementation. Adjust the IOER rate and the parameters of the ON RRP facility, and use other tools such as term operations, as necessary for appropriate monetary control, based on policymakers' assessments of the efficacy and costs of their tools. The Committee expects to reduce the available capacity of the facility fairly soon after it commences policy firming.

[1] The Committee's Policy Normalization Principles and Plans, released September 17, 2014, may be found at the following link: http://www.federalreserve.gov/newsevents/press/monetary/20140917c.htm.

Appendix 4: Materials used by Mr. Kamin

Class II FOMC – Restricted (FR)

Material for

The International Outlook

Steven B. Kamin

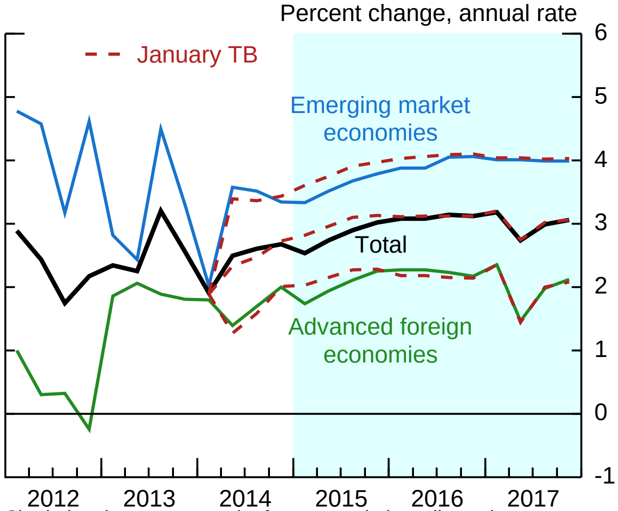
March 17, 2015

Class II FOMC - Restricted (FR)

Exhibit 1

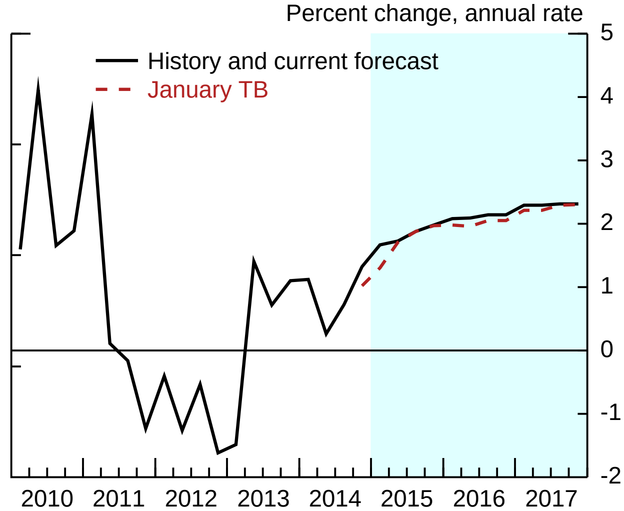
The International Outlook

1. Foreign GDP

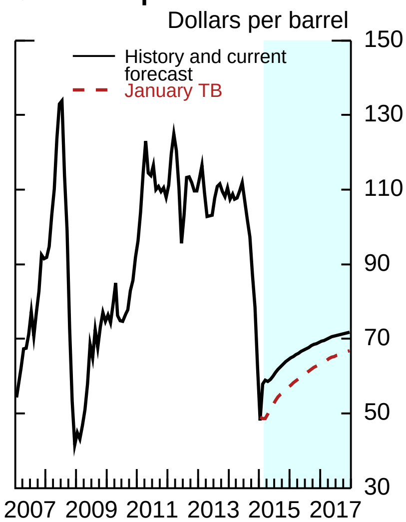


Shaded region represents the forecast period on all panels.

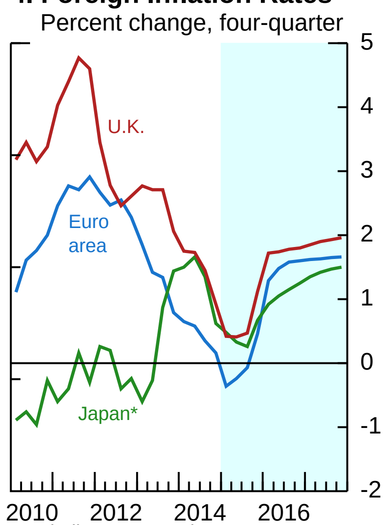
2. Euro-Area GDP



3. Brent Spot Prices

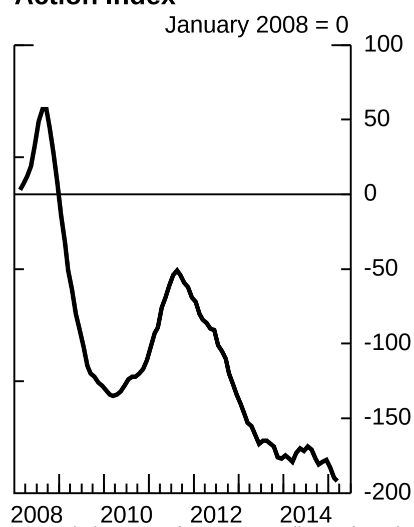


4. Foreign Inflation Rates



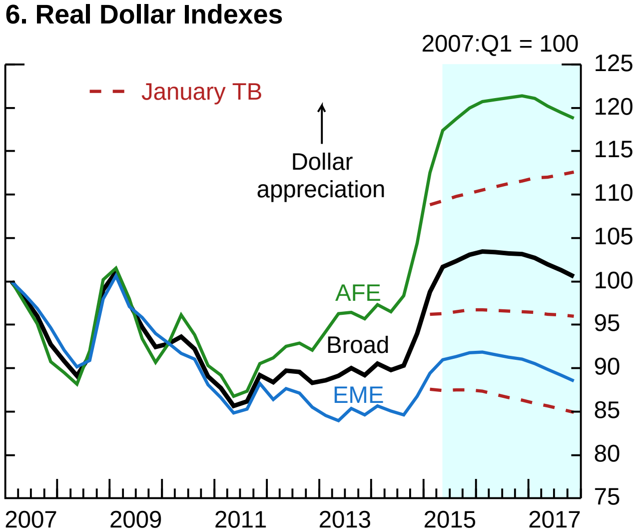
*Excluding consumption tax.

5. Foreign Monetary Policy Action Index*

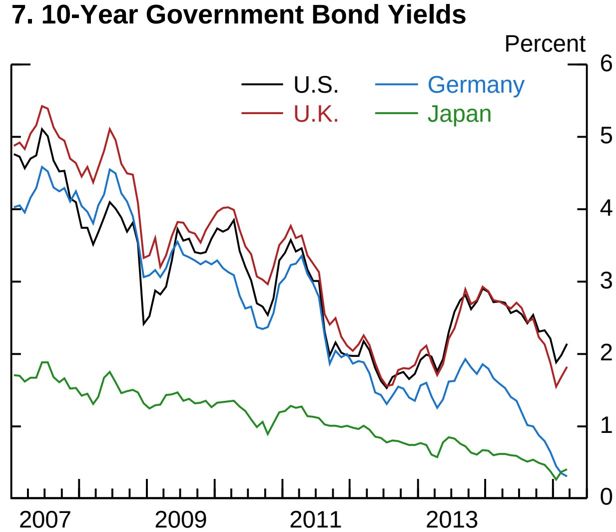


*Cumulative sum of monetary policy actions (-1 for policy loosening, 0 for no change, and +1 for policy tightening). Sample includes 37 countries.

6. Real Dollar Indexes



7. 10-Year Government Bond Yields



Appendix 5: Materials used by Mr. Wilcox

Class II FOMC – Restricted (FR)

Material for

The U.S. Outlook

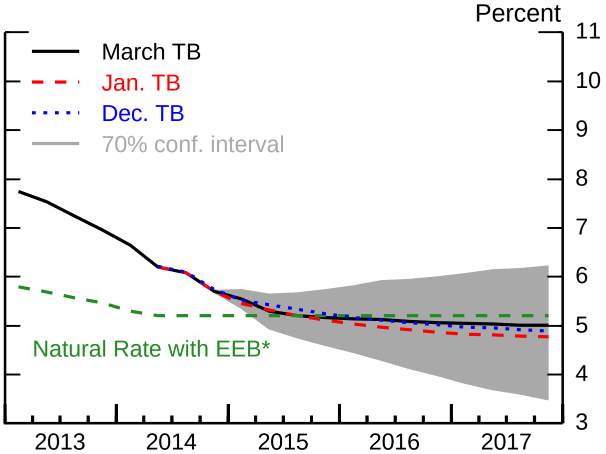
David Wilcox

March 17, 2015

Forecast Summary

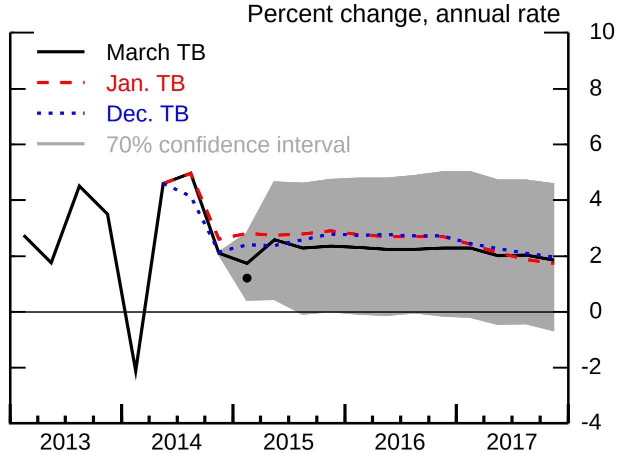
Confidence Intervals Based on FRB/US Stochastic Simulations

1. Unemployment Rate



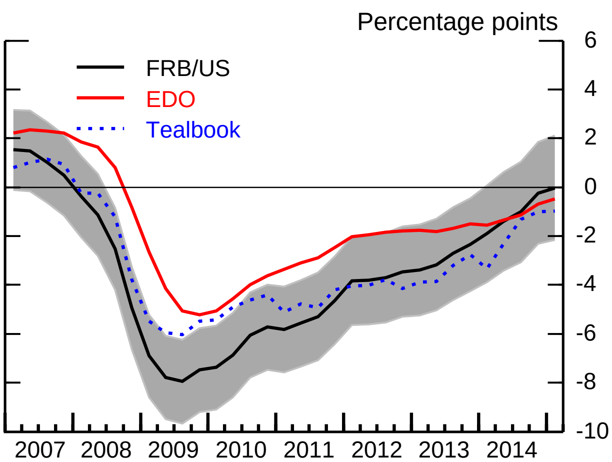
*Effect of emergency unemployment compensation and state-federal extended benefit programs.

2. Real GDP



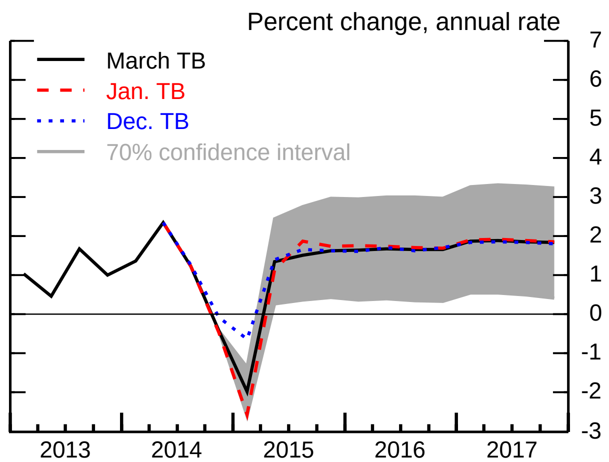
Note: The solid dot gives the staff forecast for 2015:Q1 as of Monday, March 16.

3. Output Gap Estimates

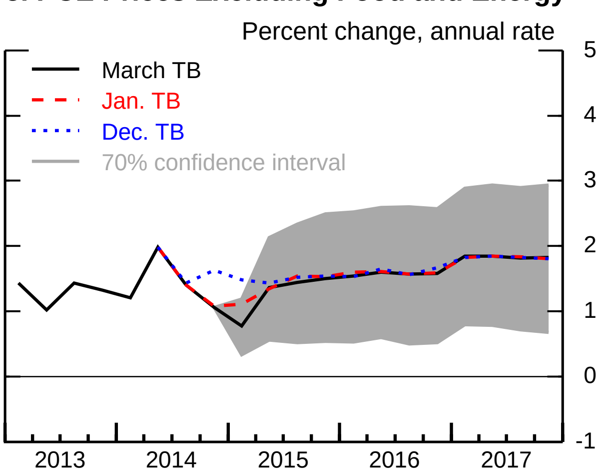


Note: The shaded region is the 2-standard deviation band around the FRB/US output gap, reflecting only filtering uncertainty.

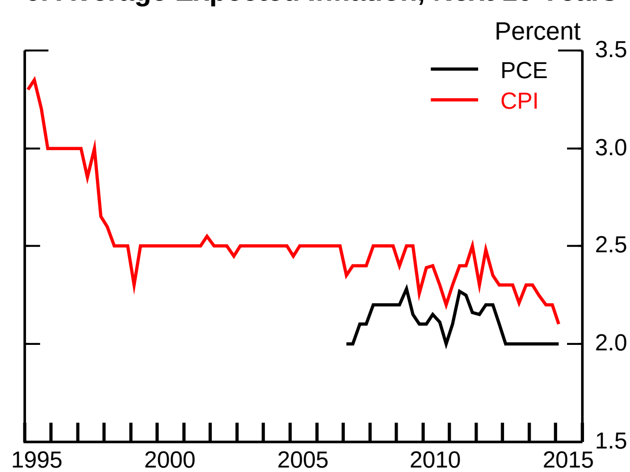
4. PCE Prices



5. PCE Prices Excluding Food and Energy



6. Average Expected Inflation, Next 10 Years



Note: Median response from the Survey of Professional Forecasters.

Appendix 6: Materials used by Mr. Kim

Material for Briefing on the

Summary of Economic Projections

Don Kim

March 17, 2015

Exhibit 1. Central tendencies and ranges of economic projections, 2015–17 and over the longer run

NOTE: The data for the actual values of the variables are annual.

Exhibit 2. Economic projections for 2015–17 and over the longer run (percent)

Change in real GDP

	2015	2016	2017	Longer run
Central Tendency	2.3 to 2.7	2.3 to 2.7	2.0 to 2.4	2.0 to 2.3
December projection	2.6 to 3.0	2.5 to 3.0	2.3 to 2.5	2.0 to 2.3
Range	2.1 to 3.1	2.2 to 3.0	1.8 to 2.5	1.8 to 2.5
December projection	2.1 to 3.2	2.1 to 3.0	2.0 to 2.7	1.8 to 2.7
Memo: Tealbook**	2.1	2.3	2.0	1.9
December projection	2.5	2.7	2.2	2.0

Unemployment rate

	2015	2016	2017	Longer run
Central Tendency	5.0 to 5.2	4.9 to 5.1	4.8 to 5.1	5.0 to 5.2
December projection	5.2 to 5.3	5.0 to 5.2	4.9 to 5.3	5.2 to 5.5
Range	4.8 to 5.4	4.5 to 5.2	4.8 to 5.5	4.9 to 5.8
December projection	5.0 to 5.5	4.9 to 5.4	4.7 to 5.7	5.0 to 5.8
Memo: Tealbook	5.2	5.1	5.0	5.2
December projection	5.2	5.0	4.9	5.2

PCE inflation

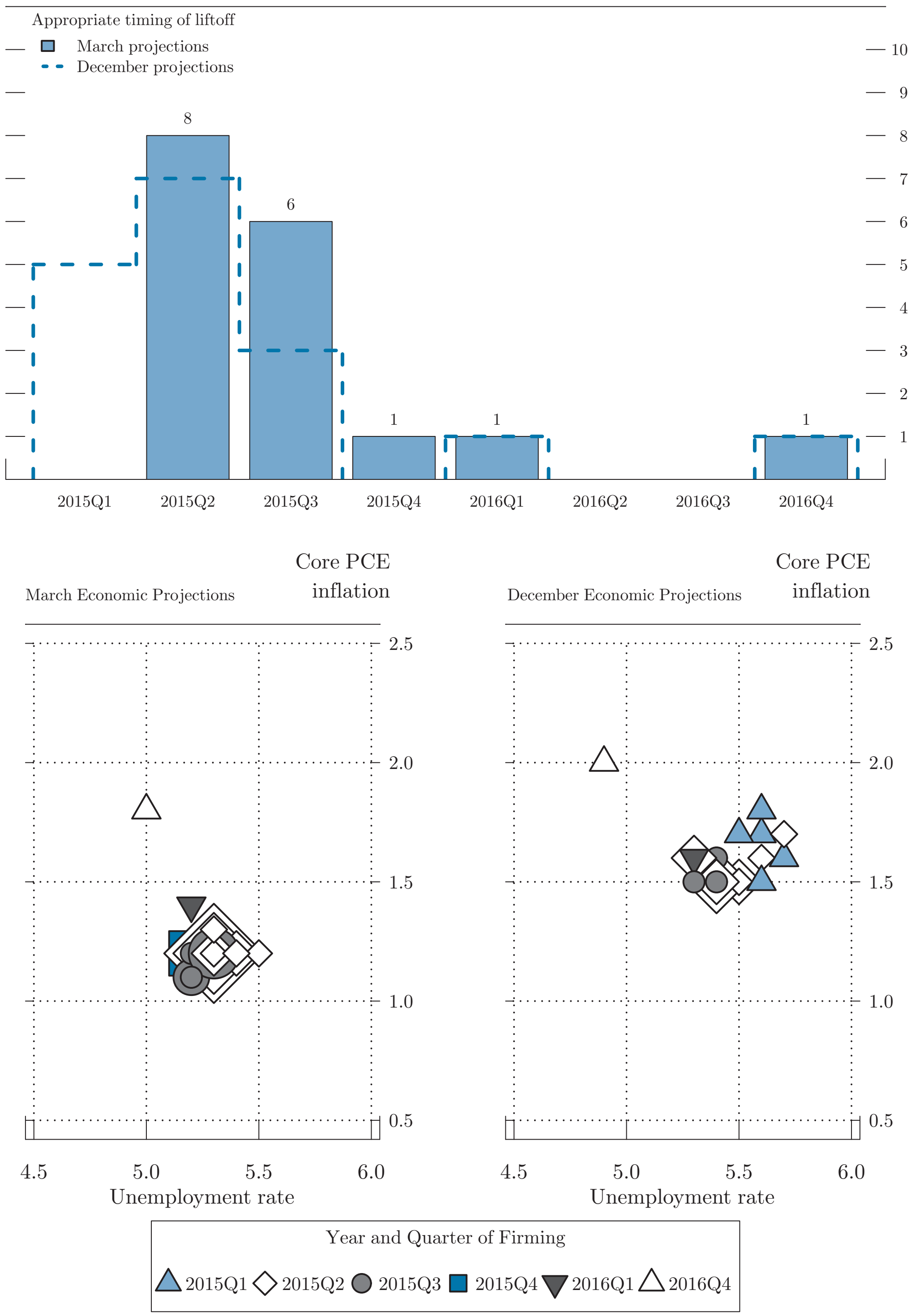
	2015	2016	2017	Longer run
Central Tendency	0.6 to 0.8	1.7 to 1.9	1.9 to 2.0	2.0
December projection	1.0 to 1.6	1.7 to 2.0	1.8 to 2.0	2.0
Range	0.6 to 1.5	1.6 to 2.4	1.7 to 2.2	2.0
December projection	1.0 to 2.2	1.6 to 2.1	1.8 to 2.2	2.0
Memo: Tealbook	0.6	1.7	1.9	2.0
December projection	1.0	1.7	1.8	2.0

Core PCE inflation

	2015	2016	2017
Central Tendency	1.3 to 1.4	1.5 to 1.9	1.8 to 2.0
December projection	1.5 to 1.8	1.7 to 2.0	1.8 to 2.0
Range	1.2 to 1.6	1.5 to 2.4	1.7 to 2.2
December projection	1.5 to 2.2	1.6 to 2.1	1.8 to 2.2
Memo: Tealbook	1.3	1.6	1.8
December projection	1.5	1.6	1.8

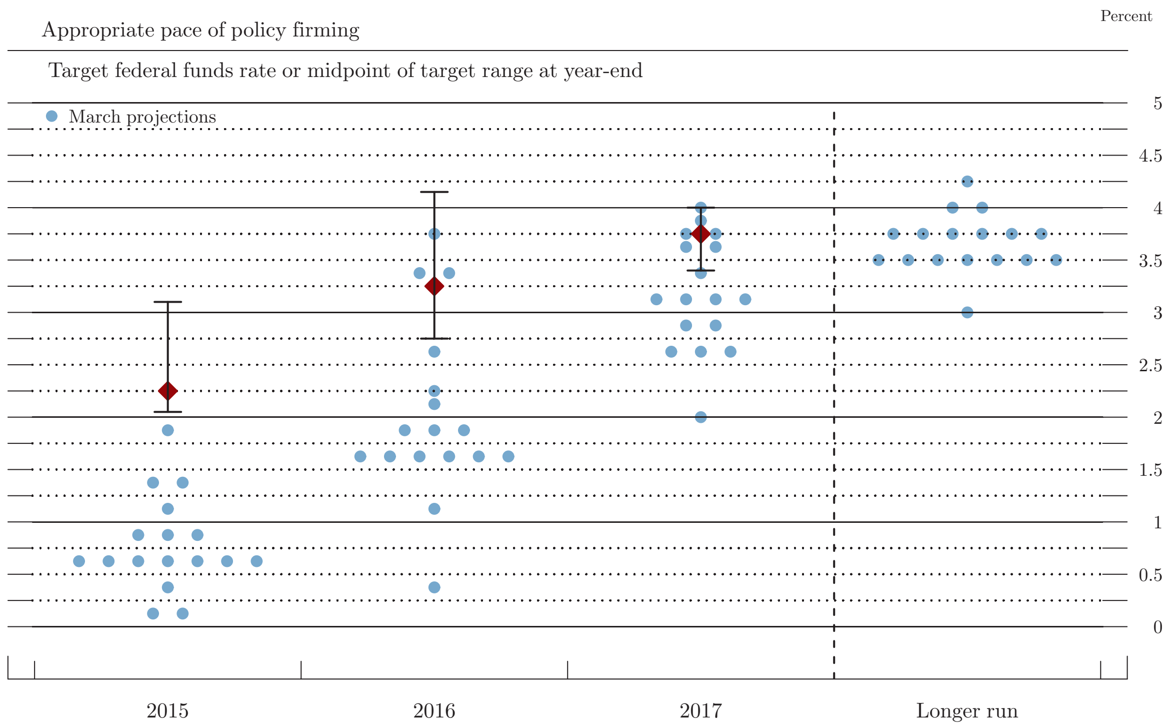
* The percent changes in real GDP and inflation are measured Q4/Q4.
** The March 2015 Tealbook value that was updated on March 13, 2015, is reported here.

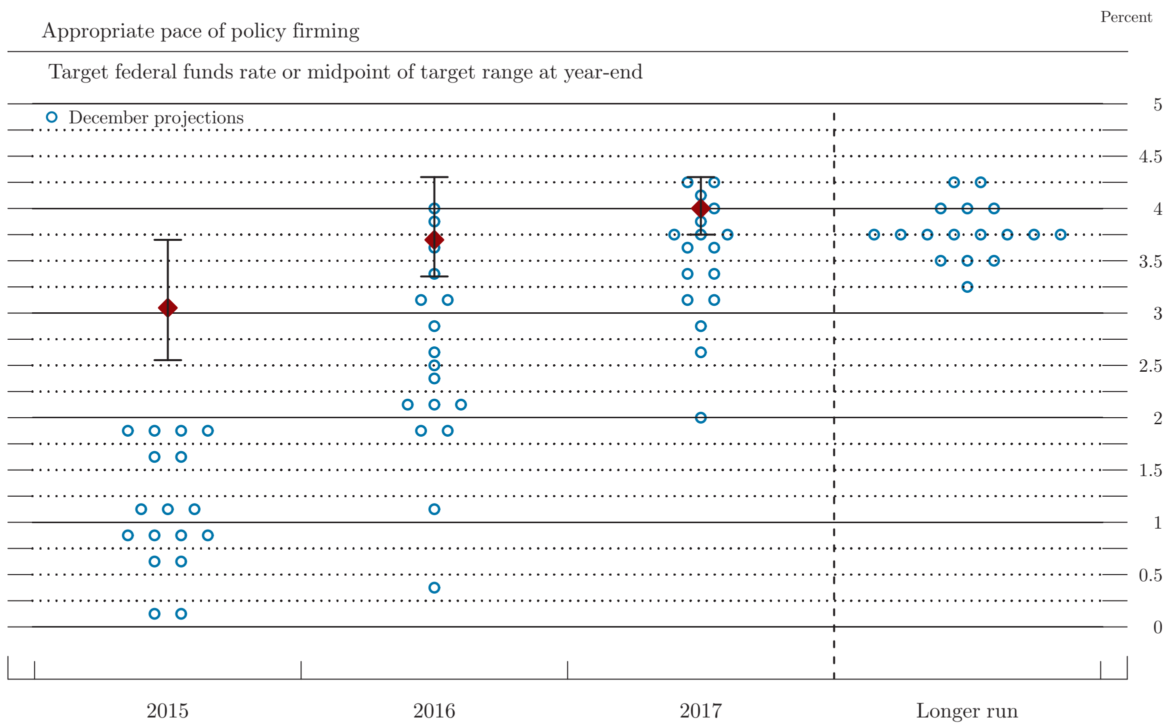
Exhibit 3. FOMC participants' assessments of the timing of and economic conditions at liftoff



NOTE: In the upper panel, the height of each bar denotes the number of FOMC participants who judge that, under appropriate monetary policy, the first increase in the target range for the federal funds rate from its current range of 0 to 1/4 percent will occur in the specified calendar year and quarter. In the lower panels, when the projections of two or more participants are identical, larger markers, which represent one participant each, are used so that each projection can be seen.

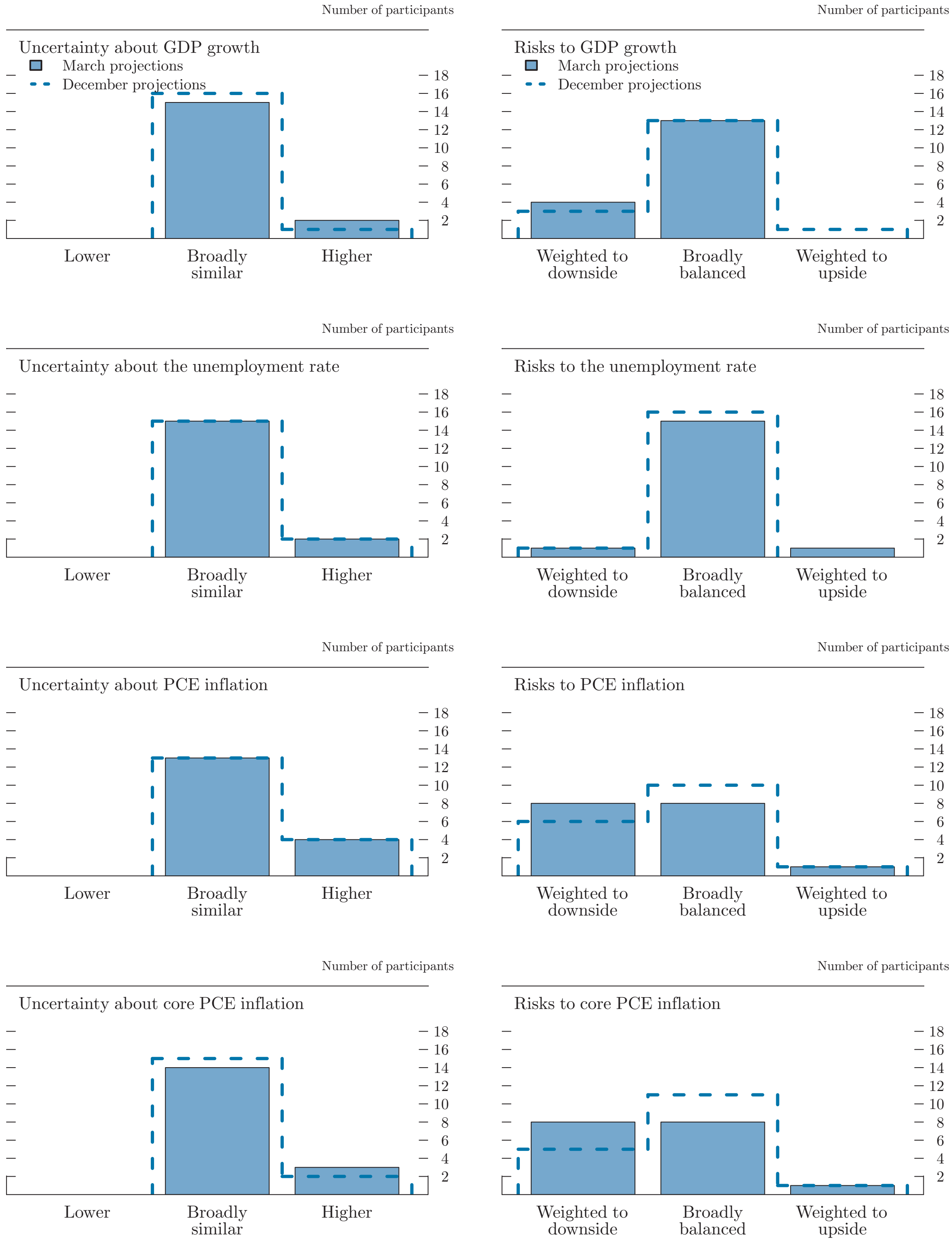
Exhibit 4. Overview of FOMC participants' assessments of appropriate monetary policy





NOTE: In the two panels above, each circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The red diamonds represent the median FOMC participant's federal funds rate projections assuming that each FOMC participant applied the non-inertial Taylor 1999 Rule to his or her underlying projections for the unemployment gap, core PCE inflation and longer-run nominal federal funds rate. The whiskers represent the central tendency of the prescriptions of the non-inertial Taylor (1999) rule using participants' projections.

Exhibit 5. Uncertainty and risks in economic projections



Appendix 7: Materials used by Mr. Laubach

Class I FOMC – Restricted Controlled (FR)

Revised Proposed March Minutes Language

March 18, 2015

Revised Proposed March Minutes Language

[Participants] agreed to augment the Committee's Policy Normalization Principles and Plans by providing the following additional details regarding the operational approach the FOMC ~~will~~ **intends to** use when it becomes appropriate to begin normalizing the stance of monetary policy.[1]

When economic conditions warrant the commencement of policy firming, the Federal Reserve ~~will~~ **intends to**:

- Continue to target a range for the federal funds rate that is 25 basis points wide.
- Set the rate of interest on excess reserves (IOER) equal to the top of the target range for the federal funds rate and set the offering rate associated with an overnight reverse repurchase agreement (ON RRP) facility equal to the bottom of the target range for the federal funds rate.
- Allow aggregate capacity of the ON RRP facility to be temporarily elevated to support policy implementation**;** adjust the IOER rate and the parameters of the ON RRP facility, and use other tools such as term operations, as necessary for appropriate monetary control, based on policymakers' assessments of the efficacy and costs of their tools. The Committee expects **that it will be appropriate** to reduce the ~~available~~ capacity of the facility fairly soon after it commences policy firming.

[1] The Committee's Policy Normalization Principles and Plans, released September 17, 2014, may be found at the following link: www.federalreserve.gov/newsevents/press/monetary/20140917c.htm

Appendix 8: Materials used by Mr. Laubach

Class I FOMC – Restricted Controlled (FR)

Updated SEP Information

March 18, 2015

Embargoed for release at 2:00 p.m., EDT, March 18, 2015

Economic Projections of Federal Reserve Board Members and Federal Reserve Bank Presidents, March 2015

Advance release of table 1 of the Summary of Economic Projections to be released with the FOMC minutes

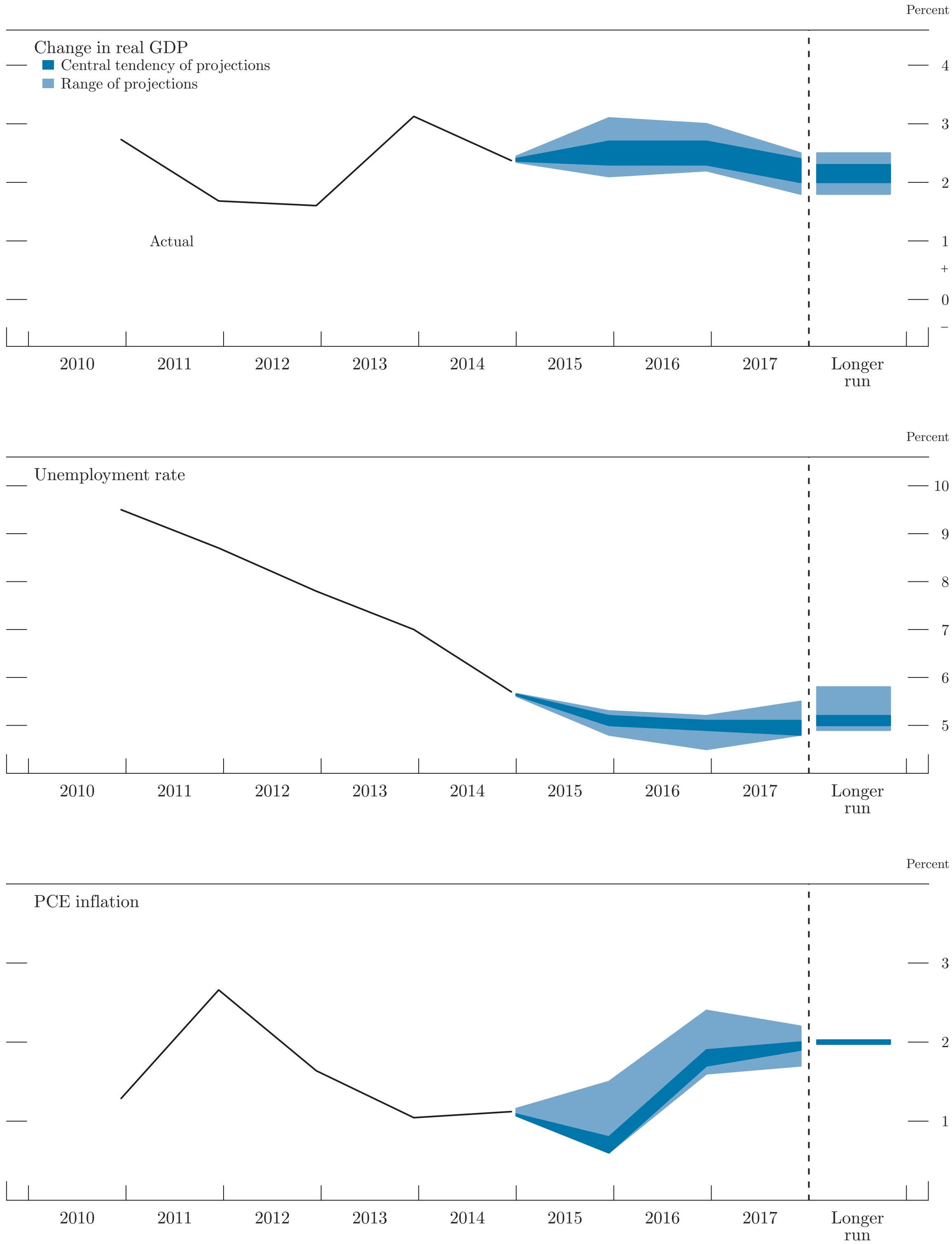
Percent

Variable	Central tendency[1]				Range[2]			
	2015	2016	2017	Longer run	2015	2016	2017	Longer run
Change in real GDP	2.3 to 2.7	2.3 to 2.7	2.0 to 2.4	2.0 to 2.3	2.1 to 3.1	2.2 to 3.0	1.8 to 2.5	1.8 to 2.5
December projection	2.6 to 3.0	2.5 to 3.0	2.3 to 2.5	2.0 to 2.3	2.1 to 3.2	2.1 to 3.0	2.0 to 2.7	1.8 to 2.7
Unemployment rate	5.0 to 5.2	4.9 to 5.1	4.8 to 5.1	5.0 to 5.2	4.8 to 5.3	4.5 to 5.2	4.8 to 5.5	4.9 to 5.8
December projection	5.2 to 5.3	5.0 to 5.2	4.9 to 5.3	5.2 to 5.5	5.0 to 5.5	4.9 to 5.4	4.7 to 5.7	5.0 to 5.8
PCE inflation	0.6 to 0.8	1.7 to 1.9	1.9 to 2.0	2.0	0.6 to 1.5	1.6 to 2.4	1.7 to 2.2	2.0
December projection	1.0 to 1.6	1.7 to 2.0	1.8 to 2.0	2.0	1.0 to 2.2	1.6 to 2.1	1.8 to 2.2	2.0
Core PCE inflation[3]	1.3 to 1.4	1.5 to 1.9	1.8 to 2.0		1.2 to 1.6	1.5 to 2.4	1.7 to 2.2	
December projection	1.5 to 1.8	1.7 to 2.0	1.8 to 2.0		1.5 to 2.2	1.6 to 2.1	1.8 to 2.2	

Note: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The December projections were made in conjunction with the meeting of the Federal Open Market Committee on December 16–17, 2014.

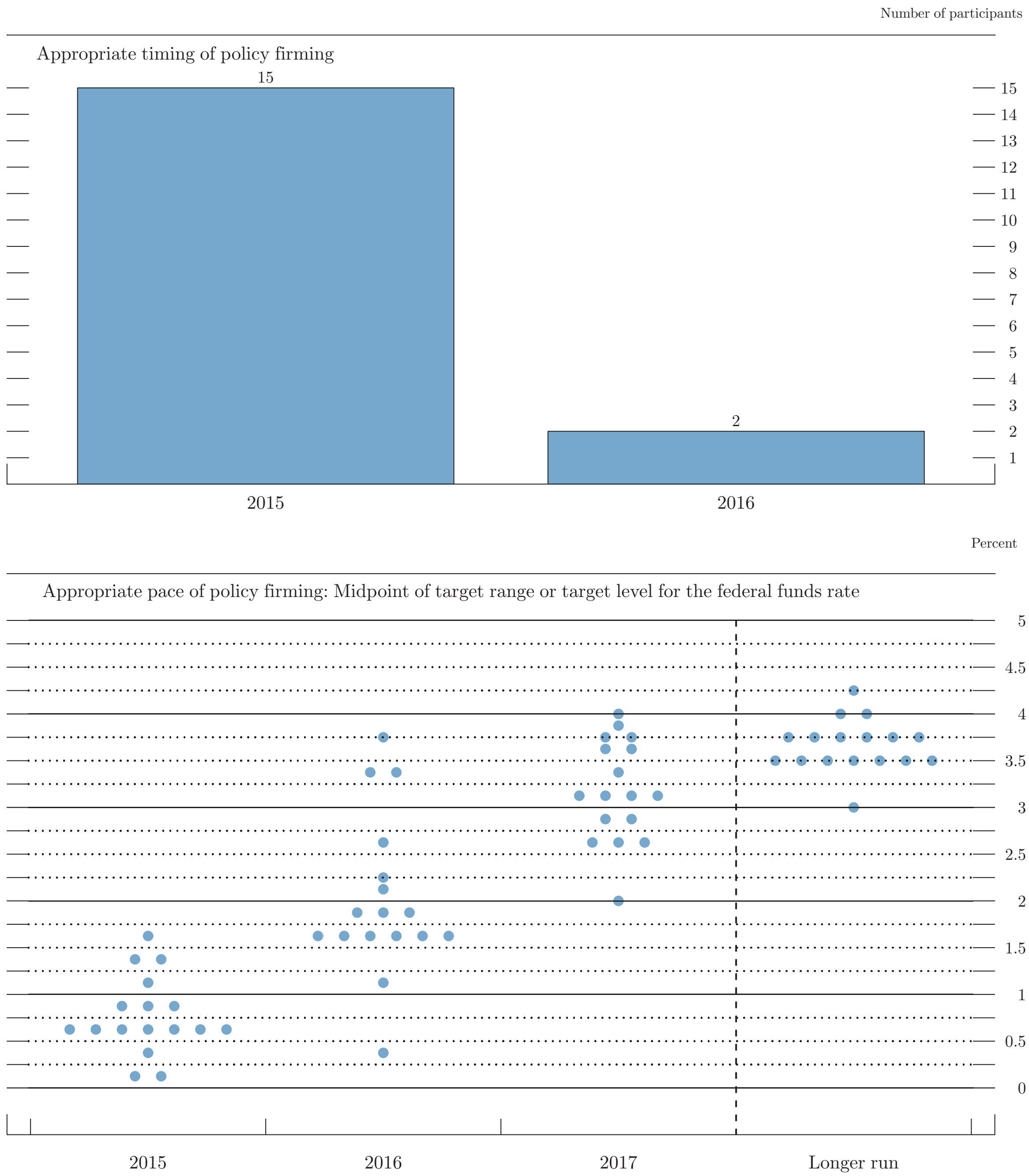
1. The central tendency excludes the three highest and three lowest projections for each variable in each year.
2. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
3. Longer-run projections for core PCE inflation are not collected.

Figure 1. Central tendencies and ranges of economic projections, 2015–17 and over the longer run



NOTE: Definitions of variables are in the general note to the projections table. The data for the actual values of the variables are annual.

Figure 2. Overview of FOMC participants' assessments of appropriate monetary policy



NOTE: In the upper panel, the height of each bar denotes the number of FOMC participants who judge that, under appropriate monetary policy, the first increase in the target range for the federal funds rate from its current range of 0 to 1/4 percent will occur in the specified calendar year. In December 2014, the numbers of FOMC participants who judged that the first increase in the target federal funds rate would occur in 2015, and 2016 were, respectively, 15, and 2. In the lower panel, each shaded circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run.

Appendix 9: Materials used by Mr. Laubach

Class I FOMC – Restricted Controlled (FR)

Material for

Briefing on Monetary Policy Alternatives

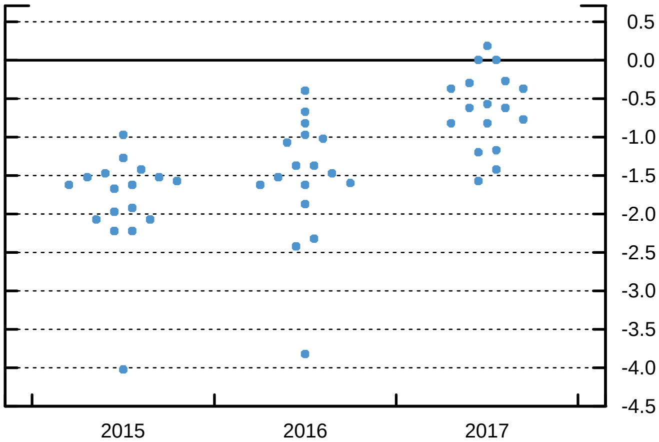
Thomas Laubach
March 17–18, 2015

Exhibit 1

Market Expectations and Policy Issues

Difference Between Participants' FFR Projections and Taylor (1999)-Implied Values

Percentage Points



Note: Taylor (1999)-implied FFR values are calculated using participants' projections for unemployment and core PCE inflation.
Source: March 2015 SEP.

Policy Implications of Participants' Projected FFR Shortfalls

- Taylor (1999) rule:

$$i = r^*_{LR} + \pi + 0.5 * (\pi - 2) - 2 * (u - u_{LR})$$

- Median difference approximately -1.5pp in 2015 and 2016; narrows to approximately -0.5pp by 2017.
- Are shortfalls from the Taylor (1999) benchmark a good measure of monetary policy accomodation?

Estimates of Time-varying r* Implied by Participants' Projections

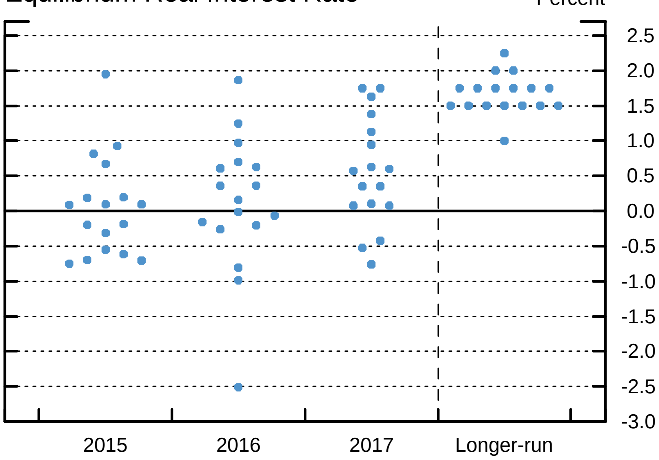
- IS equation relates the unemployment gap to the real interest rate gap as follows:

$$(u_t - u_t^*) = \alpha * (u_{t-1} - u_{t-1}^*) + \beta * (r_{t-1} - r_{t-1}^*)$$

- Estimate coefficients α and β using data from the 4th quarter of each year, staff's estimates of u*, and Laubach-Williams estimates of r*.
- Insert participants' estimates of the longer-run unemployment rate and projections for the unemployment rate and real federal funds rate to solve for their implied time-varying r*.

Projected r*: Implicit Year-End and Longer-Run Equilibrium Real Interest Rate

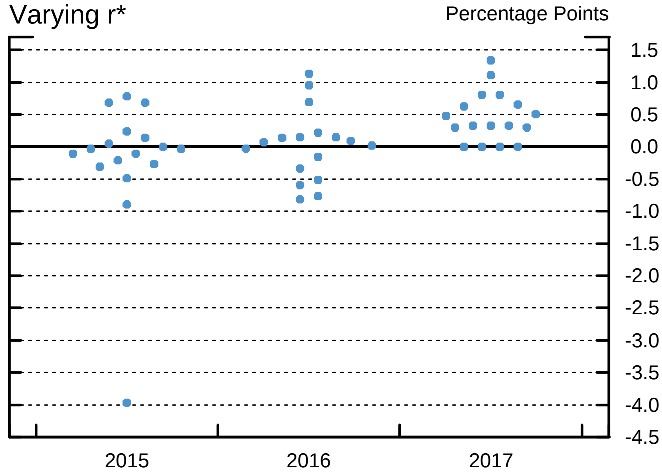
Percent



Note: 2017 values assume that participants' projections for the unemployment rate in 2018 are equal to their longer-run values, and that core PCE inflation is equal to 2 percent by year-end 2018.
Source: March 2015 SEP.

Difference Between Participants' FFR Projections and Taylor (1999)-Implied Values Using Time-Varying r*

Percentage Points



Note: Taylor (1999)-implied FFR values are calculated using participants' projections for unemployment and core PCE inflation. Participants' time-varying r* is assumed to be equal to their year-end equilibrium real interest rate (r_t^*) calculated above.
Source: March 2015 SEP.

Exhibit 2

Market Expectations and Policy Issues (cont.)

Caveats to this Analysis

- Results are conditional on a specific IS equation.
- Model does not provide insight into structural factors driving changes in r*.
- Lingering effects of financial crisis, and restraint from economic and financial developments abroad may play some role.

Policy Alternatives

PCE Inflation: The Current Situation and the Outlook

- Common Elements:
  - Declined further below the Committee’s objective.
  - Remains near its recent low level in the near-term.
- Range of views on:
  - Recent movements in inflation compensation.
  - Degree of confidence in inflation outlook.

Forward Guidance on First Increase in the Target Range for the Federal Funds Rate

- Communicating the data dependence of the Committee’s liftoff decision:
  - Further improvement in labor market conditions anticipated.
  - Different characterization of inflation prospects that would warrant liftoff.
- Shaping expecations for the timing of liftoff:
  - Alternative B encompasses June or later.
  - Alternative C boosts the odds of a June liftoff.
  - Alternative A would push likely timing of liftoff further into the future.

JANUARY 2015 FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in December suggests that economic activity has been expanding at a solid pace. Labor market conditions have improved further, with strong job gains and a lower unemployment rate. On balance, a range of labor market indicators suggests that underutilization of labor resources continues to diminish. Household spending is rising moderately; recent declines in energy prices have boosted household purchasing power. Business fixed investment is advancing, while the recovery in the housing sector remains slow. Inflation has declined further below the Committee's longer-run objective, largely reflecting declines in energy prices. Market-based measures of inflation compensation have declined substantially in recent months; survey-based measures of longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with appropriate policy accommodation, economic activity will expand at a moderate pace, with labor market indicators continuing to move toward levels the Committee judges consistent with its dual mandate. The Committee continues to see the risks to the outlook for economic activity and the labor market as nearly balanced. Inflation is anticipated to decline further in the near term, but the Committee expects inflation to rise gradually toward 2 percent over the medium term as the labor market improves further and the transitory effects of lower energy prices and other factors dissipate. The Committee continues to monitor inflation developments closely.

3. To support continued progress toward maximum employment and price stability, the Committee today reaffirmed its view that the current 0 to ¼ percent target range for the federal funds rate remains appropriate. In determining how long to maintain this target range, the Committee will assess progress—both realized and expected—toward its objectives of maximum employment and 2 percent inflation. 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. Based on its current assessment, the Committee judges that it can be patient in beginning to normalize the stance of monetary policy. However, if incoming information indicates faster progress toward the Committee's employment and inflation objectives than the Committee now expects, then increases in the target range for the federal funds rate are likely to occur sooner than currently anticipated. Conversely, if progress proves slower than expected, then increases in the target range are likely to occur later than currently anticipated.

4. The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. This policy, by keeping the Committee's holdings of longer-term securities at sizable levels, should help maintain accommodative financial conditions.

5. When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent. The Committee currently anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run.

FOMC STATEMENT—MARCH 2015 ALTERNATIVE A

1. Information received since the Federal Open Market Committee met in ~~December~~ **January** ~~suggests~~ **indicates** that **growth in** economic activity has ~~been expanding at a solid pace~~ **moderated**. Labor market conditions have improved further, with strong job gains and a lower unemployment rate. On balance, a range of labor market indicators suggests that underutilization of labor resources continues to diminish**, but wage increases remain subdued**. Household spending is rising moderately; ~~recent~~ **earlier** declines in energy prices have boosted household purchasing power. Business fixed investment is advancing **modestly, export growth has weakened**, ~~while~~ **and** the recovery in the housing sector remains slow. Inflation has declined further below the Committee's longer-run objective, ~~largely~~ **partly** reflecting **earlier** declines in energy prices. Market-based measures of inflation compensation ~~have declined substantially in recent months~~ **remain well below levels observed last summer**; survey-based measures of longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with appropriate policy accommodation, economic activity will expand at a moderate pace, with labor market indicators continuing to move toward levels the Committee judges consistent with its dual mandate. The Committee continues to see the risks to the outlook for economic activity and the labor market as nearly balanced. Inflation is anticipated to ~~decline further~~ **remain near its recent low level** in the near term**.** ~~, but~~ The Committee expects inflation to rise **very** gradually toward 2 percent over the medium term as the labor market improves further and the transitory effects of ~~lower~~ **earlier** energy ~~prices~~ **price declines** and other factors dissipate. **However,** the Committee **is concerned that inflation could run substantially below the 2 percent objective for a protracted period and** continues to monitor inflation developments closely.

3. To support continued progress toward maximum employment and price stability, the Committee today reaffirmed its view that the current 0 to ¼ percent target range for the federal funds rate remains appropriate. In determining how long to maintain this target range, the Committee will assess progress—both realized and expected—toward its objectives of maximum employment and 2 percent inflation. 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. Based on its current assessment, the Committee judges that it can be patient in beginning to normalize the stance of monetary policy **until inflation is clearly moving up toward 2 percent**. ~~However, if incoming information indicates faster progress toward the Committee's employment and inflation objectives than the Committee now expects, then increases in the target range for the federal funds rate are likely to occur sooner than currently anticipated. Conversely, if progress proves slower than expected, then increases in the target range are likely to occur later than currently anticipated.~~ **The Committee is prepared to use its tools as necessary to return inflation to 2 percent in two to three years.**

4. The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. This policy, by keeping the Committee's holdings of longer-term securities at sizable levels, should help maintain accommodative financial conditions.
5. When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent. The Committee currently anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run.

FOMC STATEMENT—MARCH 2015 ALTERNATIVE B

1. Information received since the Federal Open Market Committee met in ~~December~~ **January** suggests that economic ~~activity~~ ~~has been~~ ~~is expanding at a~~ ~~solid~~ ~~moderate pace~~ **growth has moderated somewhat**. Labor market conditions have improved further, with strong job gains and a lower unemployment rate. ~~On balance,~~ A range of labor market indicators suggests that underutilization of labor resources continues to diminish. Household spending is rising moderately; ~~recent~~ **earlier** declines in energy prices have boosted household purchasing power. Business fixed investment is advancing, while the recovery in the housing sector remains slow **and export growth has weakened**. Inflation has declined further below the Committee's longer-run objective, largely reflecting ~~earlier~~ declines in energy prices. Market-based measures of inflation compensation ~~have declined substantially in recent months~~ ~~have reversed part of their previous decline but~~ **remain low**; survey-based measures of longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with appropriate policy accommodation, economic activity will expand at a moderate pace, with labor market indicators continuing to move toward levels the Committee judges consistent with its dual mandate. The Committee continues to see the risks to the outlook for economic activity and the labor market as nearly balanced. Inflation is anticipated to ~~decline further~~ **remain near its recent low level** in the near term, but the Committee expects inflation to rise gradually toward 2 percent over the medium term as the labor market improves further and the transitory effects of ~~lower~~ **earlier** energy ~~prices~~ **price declines** and other factors dissipate. The Committee continues to monitor inflation developments closely.

3. To support continued progress toward maximum employment and price stability, the Committee today reaffirmed its view that the current 0 to ¼ percent target range for the federal funds rate remains appropriate. In determining how long to maintain this target range, the Committee will assess progress—both realized and expected—toward its objectives of maximum employment and 2 percent inflation. 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. ~~Based on its current assessment~~ **Consistent with its previous statement**, the Committee judges that ~~it can be patient in beginning to normalize the stance of monetary policy~~ **an increase in the target range for the federal funds rate remains unlikely at the April FOMC meeting. The Committee anticipates that it will be appropriate to raise the target range for the federal funds rate when it has seen further improvement in the labor market and is reasonably confident that inflation will move back to its 2 percent objective over the medium term. This change in the forward guidance does not indicate that the Committee has decided on the timing of the initial increase in the target range.** ~~However, if incoming information indicates faster progress toward the Committee's employment and inflation objectives than the Committee now expects, then increases in the target range for the federal funds rate are likely to occur sooner than currently anticipated. Conversely, if progress proves~~

~~slower than expected, then increases in the target range are likely to occur later than currently anticipated.~~

4. The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. This policy, by keeping the Committee's holdings of longer-term securities at sizable levels, should help maintain accommodative financial conditions.
5. When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent. The Committee currently anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run.

FOMC Statement—March 2015 Alternative C

1. Information received since the Federal Open Market Committee met in ~~December~~ **January** ~~suggests~~ **indicates** that economic activity has been expanding at a solid pace **on average in recent quarters**. Labor market conditions have improved further, with strong job gains and a lower unemployment rate. ~~On balance,~~ A **wide** range of labor market indicators suggests that ~~underutilization of labor resources continues to diminish~~ **the labor market is approaching conditions consistent with maximum employment**. Household spending is rising ~~moderately~~ **solidly**; ~~recent~~ **earlier** declines in energy prices have boosted household purchasing power. Business fixed investment is advancing, while the recovery in the housing sector remains slow. Inflation has declined further below the Committee's longer-run objective, largely reflecting **earlier** declines in energy prices. Market-based measures of inflation compensation have ~~declined substantially in recent months~~ **increased**; survey-based measures of longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with appropriate policy accommodation, economic activity will expand at a moderate pace, with labor market indicators continuing to move toward levels the Committee judges consistent with its dual mandate. The Committee continues to see the risks to the outlook for economic activity and the labor market as nearly balanced. Inflation is anticipated to ~~decline further~~ **remain near its recent low level** in the near term, but the Committee expects inflation to rise gradually ~~toward~~ **to** 2 percent over the medium term as the labor market improves further and the transitory effects of ~~lower~~ **earlier** energy ~~prices~~ **price declines** and other factors dissipate. The Committee continues to monitor inflation developments closely.

3. To support continued progress toward maximum employment and price stability, the Committee today reaffirmed its view that the current 0 to ¼ percent target range for the federal funds rate remains appropriate. In determining ~~how long to maintain this~~ **future adjustments of the** target range **for the federal funds rate**, the Committee will assess progress—both realized and expected—toward its objectives of maximum employment and 2 percent inflation. 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. Based on its current assessment, the Committee judges that ~~it can be patient in beginning to normalize the stance of monetary policy~~ **economic conditions will likely warrant an increase in the target range for the federal funds rate in a couple of meetings**. However, if incoming information indicates ~~faster~~ **slower** progress toward the Committee's employment and inflation objectives than the Committee now expects, then ~~increases in the target range for the federal funds rate are likely to occur sooner than currently anticipated. Conversely, if progress proves slower than expected, then increases in the target range are~~ **the initial increase is** likely to occur later than currently anticipated.

4. The Committee is maintaining its existing policy of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at

auction. This policy, by keeping the Committee's holdings of longer-term securities at sizable levels, should help maintain accommodative financial conditions.

5. ~~When the Committee decides to begin to remove policy accommodation, it will take a balanced approach consistent with its longer-run goals of maximum employment and inflation of 2 percent.~~ **Based on its economic outlook,** the Committee currently anticipates that even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run. **In response to unanticipated economic and financial developments, the Committee will adjust the target federal funds rate to best promote the attainment of its objectives of maximum employment and 2 percent inflation.**

JANUARY 2015 DIRECTIVE

Consistent with its statutory mandate, the Federal Open Market Committee seeks monetary and financial conditions that will foster maximum employment and price stability. In particular, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to undertake open market operations as necessary to maintain such conditions. The Committee directs the Desk to maintain its policy of rolling over maturing Treasury securities into new issues and its policy of reinvesting principal payments on all agency debt and agency mortgage-backed securities in agency mortgage-backed securities. The Committee also directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency mortgage-backed securities transactions. The System Open Market Account manager and the secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

DIRECTIVE FOR MARCH 2015 ALTERNATIVES A, B, AND C

Consistent with its statutory mandate, the Federal Open Market Committee seeks monetary and financial conditions that will foster maximum employment and price stability. In particular, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to ¼ percent. The Committee directs the Desk to undertake open market operations as necessary to maintain such conditions. The Committee directs the Desk to maintain its policy of rolling over maturing Treasury securities into new issues and its policy of reinvesting principal payments on all agency debt and agency mortgage-backed securities in agency mortgage-backed securities. The Committee also directs the Desk to engage in dollar roll and coupon swap transactions as necessary to facilitate settlement of the Federal Reserve's agency mortgage-backed securities transactions. The System Open Market Account manager and the secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.