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

Material for the Briefing on

# Financial Developments and Open Market Operations

Simon Potter and Lorie Logan March 15, 2016

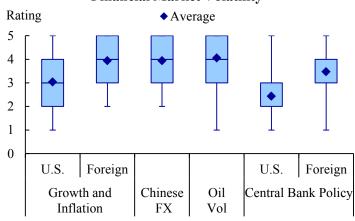
Exhibit 1

#### (1) Asset Price Changes

	Jan. FOMC to 02/11/16	Since 02/11/16	Since Dec. FOMC
Changes in Percent			
S&P 500 Index	-4	+11	-1
EuroStoxx 50 Index	-12	+15	-5
Brent Crude	-5	+34	+5
Bloomberg Dollar Index	-2	-1	-2
Changes in Basis Points			
U.S. HY Corp. Credit OAS	+95	-197	-25
U.S. IG Corp. Credit OAS	+22	-39	+9
U.S. 10-Year Nominal TSY	-34	+32	-28

Source: Barclays, Bloomberg

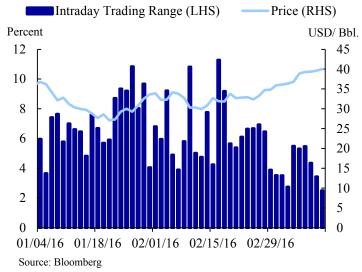
# (2) Importance of Factors Explaining Financial Market Volatility\*



\*Based on all responses from the March Surveys of Primary Dealers and Market Participants.

Source: Federal Reserve Bank of New York

#### (3) Brent Crude Realized Volatility and Price Level

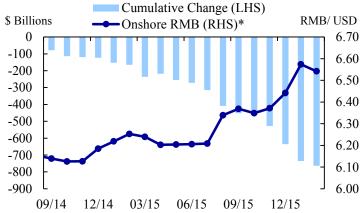


#### (5) Five-Year, Five-Year Real Rates\*



\*Calculated by subtracting the inflation swap rate from the nominal swap rate and can be influenced by swap spreads and inflation bases across jurisdictions. Source: Barclays

#### (4) RMB Level and Cumulative Change in China Foreign Exchange Reserves



\*Average level over the month.

Source: Bloomberg

#### (6) Equity and Bank Index Performance

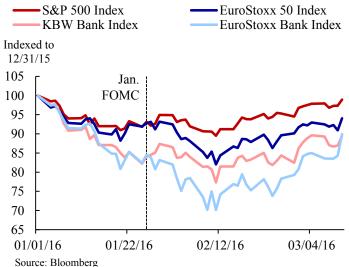
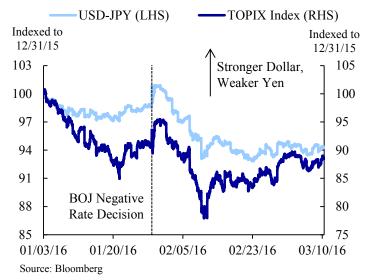


Exhibit 2

#### (7) Japanese Yen and Equity Performance

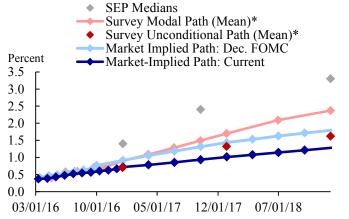


#### (9) Five-Year, Five-Year Inflation Swaps\*

	U.S.	Euro Area	Japan
		(Percent)	
Crisis Low	1.93	2.26	-2.98
Percentile	0.01	0.48	0.00
Abe Takes Office (Dec. '12)	3.09	2.24	0.25
Percentile	0.85	0.41	0.46
Draghi at Jackson Hole (Aug. '14)	2.77	1.95	1.14
Percentile	0.27	0.15	0.93
Current Level	1.99	1.50	0.01
Percentile	0.01	0.01	0.29

<sup>\*</sup>Percentiles of the distributions of rates over the last 10-years are shown for U.S. and euro area, and over the last 9-years for Japan (earliest data available). Source: Barclays

#### (11) Expected and Implied Fed Funds Rate Paths



<sup>\*</sup>Based on all responses from the March Surveys of Primary Dealers and Market Participants.

Source: Bloomberg, Federal Reserve Bank of New York, Federal Reserve Board of Governors

#### (8) ECB Policy Action

Interest Rate Changes:

- 5 bps cuts to refinancing operation rate and marginal lending facility rate to 0.00% and 0.25%, respectively
- 10 bps cut to deposit facility rate to -0.40%

Asset Purchase Changes:

- €20 billion monthly expansion to €80 billion per month
- Investment grade euro-denominated bonds issued by nonbanks will be eligible for purchases

TLTRO II will commence in June 2016

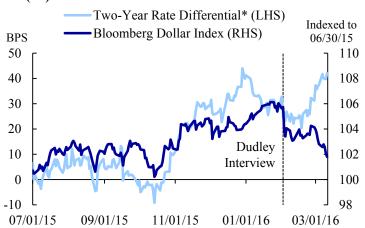
 Borrowing in these operations can be as low as the interest rate on the deposit facility

#### (10) Share of Sovereign Bonds with Negative Yields

Maturity	Japan	Euro Area
< 2 Years	100%	94%
2-5 Years	100%	67%
5-10 Years	100%	33%
10-15 Years	30%	6%
15-20 Years	0%	3%
20-30 Years	0%	1%
Total	74%	51%

Source: Bloomberg, Staff Calculations

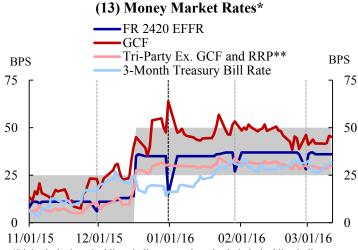
#### (12) Two-Year Rate Differential and Dollar Index



\*Computed as U.S. two-year yield less weighted average of two-year yields of countries with weights comparable to Bloomberg dollar index.

Source: Bloomberg, Staff calculations

Exhibit 3

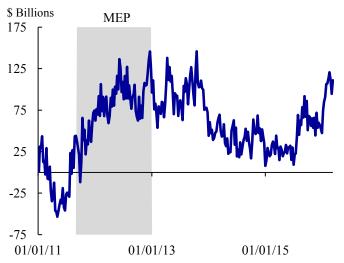


\*Light dashed vertical lines indicate month-ends, dark dashed line indicates quarter-end.

\*\*Excludes intra-bank transactions.

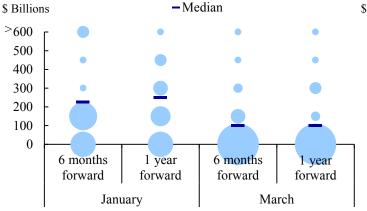
Source: Federal Reserve Bank of New York

#### (15) Primary Dealer Net Treasury Position



Source: Federal Reserve Bank of New York, Haver

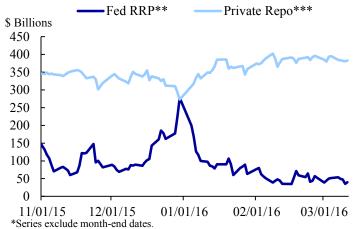
#### (17) Expected RRP Demand\*



\*Dots scaled by percent of respondents from the March Surveys of Primary Dealers and Market Participants.

Source: Federal Reserve Bank of New York

#### (14) Overnight Treasury Repo Volumes\*

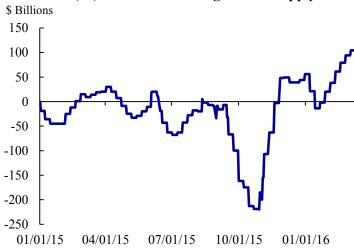


\*\*Overnight RRP.

\*\*\*Includes total triparty repo activity ex. Fed RRP.

Source: Federal Reserve Bank of New York

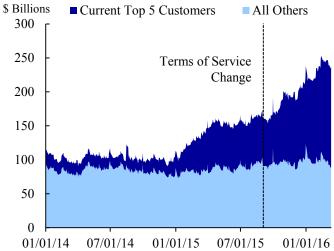
#### (16) Cumulative Change in Bill Supply\*



\*Shown as cumulative change since the start of 2015.

Source: Federal Reserve Bank of New York, Treasury Department

#### (18) Foreign RP Pool Volume



Source: Federal Reserve Bank of New York

Exhibit 4

#### (19) Recent Trends in SOMA Foreign Portfolio Income

SOMA holds around \$20 billion euro- and yen-denominated investments

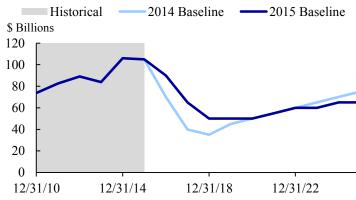
Due to negative rates in euro area and Japan:

- Euro interest income expected to turn negative this month
- Yen income expected to decline to zero but not negative
- · Total SOMA foreign income expected to be negative in April

Negative income could be noted in the following reports:

- Monthly ESF financial statements
- · FRBNY Quarterly Report
- FRS and other RB annual reports and statements

# (21) Projected and Realized SOMA Net Income: Annual Report\*



\*Figures for 2010-15 (shaded area) are realized returns. Projected figures are rounded. Rate path and reinvestment assumptions use the Dec.'15 Surveys of Primary Dealers and Market Participants.

Source: Federal Reserve Bank of New York

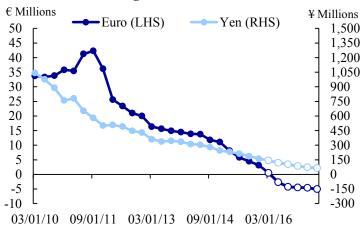
#### (23) March Term RRP Announcement

Should the Committee decide to conduct term RRPs and an aggregate cap on ON RRP is not re-introduced:

• The Desk plans to offer \$250 billion in term RRPs

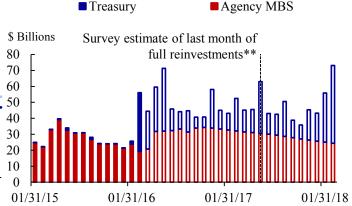
			Amount		
Operation	Maturity		Offered	Max. Rate	
Date	Date	Term	(\$ Billions)	(BPS)	
Mar 28	Apr 04	7 Days	125	ON RRP + 1	
Mar 30	Apr 01	2 Days	125	ON RRP + 1	

# (20) Quarterly Realized and Projected Foreign Portfolio Income\*



\*Filled dots are realized, unfilled dots are projections. Source: Federal Reserve Bank of New York

#### (22) Receipts of Principal on SOMA Securities\*



\*Filled bars are realized, unfilled bars are projections.

\*\*Based on all responses from the March Surveys of Primary Dealers and Market Participants.

Source: Federal Reserve Bank of New York

#### (24) March Quarter-End Term RRP Considerations

In support of conducting term RRPs:

- Provides continuity to market
- Supports FOMC guidance to reduce elevated ON RRP capacity
- Supports operational readiness

In support of not conducting term RRPs:

- Current ON RRP facility should provide ample capacity
  - o Term RRPs will not add to interest rate control
- Incremental interest cost of providing term RRP

Instruction to Desk to conduct term RRPs would be added to implementation note, released concurrent with March statement

Appendix (Last)

#### **Appendix: Summary of Operational Testing**

Summary of Operational Tests in prior period:

- · Domestic Authorization
  - o February 23: Completed Treasury outright purchase for \$226 million
- Foreign Authorization
  - o February 9: Completed euro-denominated overnight repo for €1 million
  - o February 9: Completed liquidity swap with Bank of Canada for \$51 thousand
- TDF test operation
  - o February 18: Conducted 7-day test with total take-up of \$64 billion

#### **Upcoming Operational Tests**

- No tests under the Domestic Authorization
- Three tests scheduled under the Foreign Authorization
  - o April 12: Euro-dominated overnight repo for approximately €1 million
  - April 19: Liquidity swap with the European Central Bank for approximately €51 thousand
  - April 21: Liquidity swap with the Swiss National Bank for approximately CHF 51 thousand

**Appendix 2: Materials used by Mr. Wilcox** 

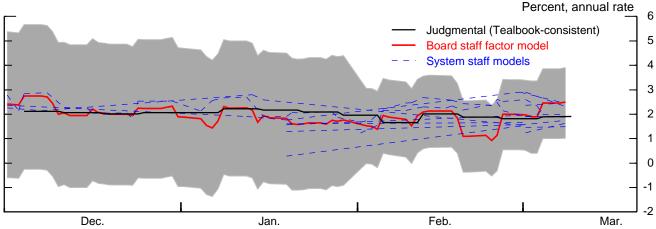
Material for the Briefing on

The U.S. Outlook

David W. Wilcox March 15, 2016

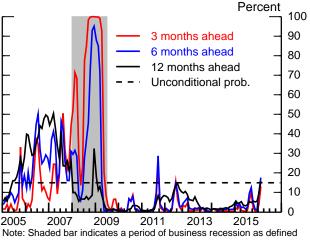
#### **Forecast Summary**

#### 1. Evolution of 2016:Q1 GDP Growth Nowcasts



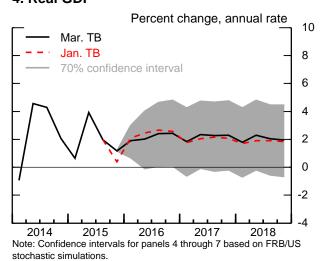
Note: The shaded region is a 70 percent confidence interval around the Board staff factor model estimate.

#### 2. Recession Probabilities at Various **Horizons**

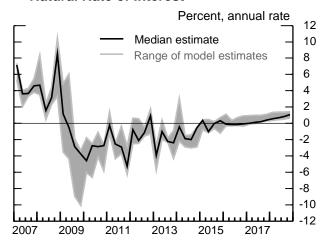


by the National Bureau of Economic Research.

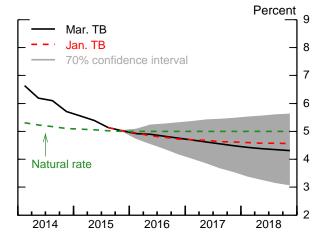
#### 4. Real GDP



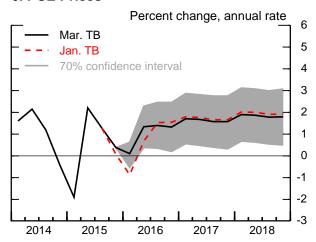
#### 3. Estimates of the Short-Run Real **Natural Rate of Interest**



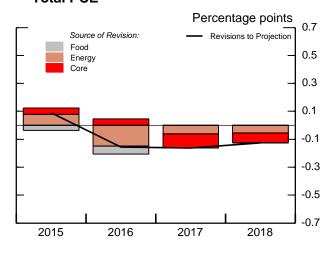
#### 5. Unemployment Rate



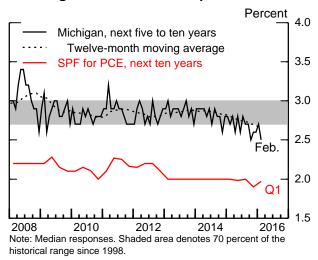
#### 6. PCE Prices



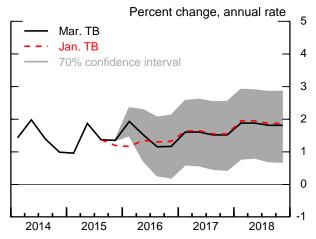
### 8. Inflation Revisions Since December: Total PCE



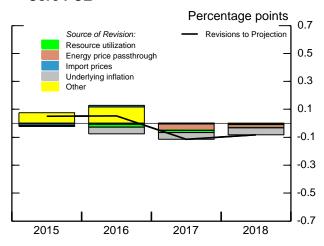
#### 10. Longer-Term Inflation Expectations



#### 7. PCE Prices Excluding Food and Energy



### 9. Inflation Revisions Since December: Core PCE



### **Appendix 3: Materials used by Ms. Wilson**

Material for the Briefing on

The International Outlook

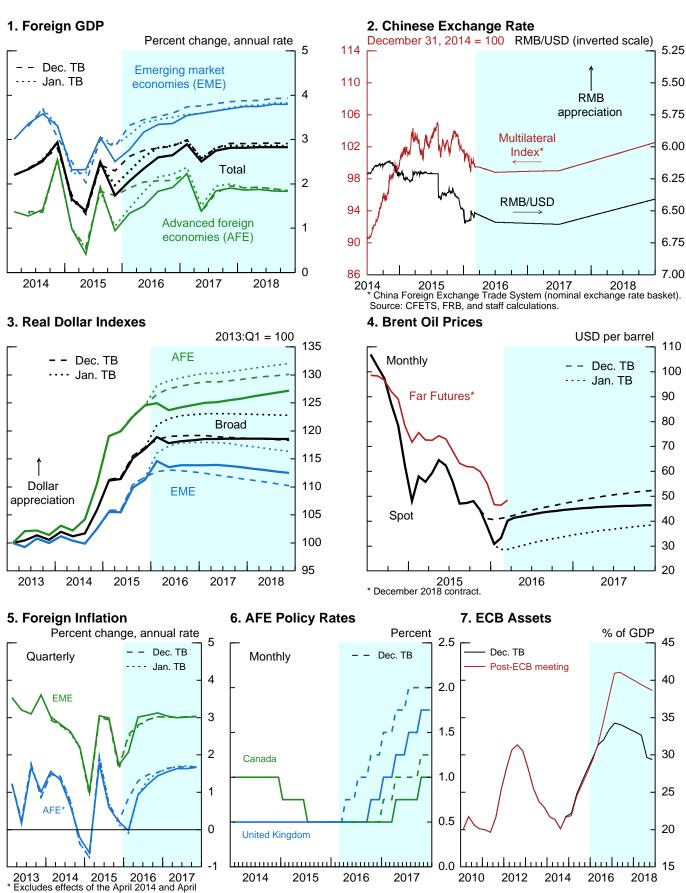
Beth Anne Wilson March 15, 2016

2017 Japanese tax hikes.

#### Exhibit 1

Page 1 of 2

#### The International Outlook



#### Exhibit 2

Page 2 of 2

### The International Outlook (2)

#### 8. Recession Probability Model

#### Monthly probit model, including:

- Index of macro indicators: IP, retail sales, new export orders, and GDP\*
- Index of financial stress: excess bond premium\*\*

World recession defined as countries comprising 2/3 of world GDP in recession

#### Model attributes current probability:

- 2/3 to macro factors
- 1/3 to financial factors
- Aruoba, Diebold, Scotti Index (JBES, 2009).
- \*\* Gilchrist and Zakrajsek Index (AER, 2012).

### 9. Estimated Probability of Global Recession **Over the Next 12 Months** 1.0 8.0 Unconditional 0.6 Feb. 2016 Probability (.16) 0.4 0.2 1975 1980 1985 1990 1995 2000 2005 2010 2015

Note: Gray shading indicates that countries in our sample amounting to twothirds of the world economy are classified in recession.

#### 10. Foreign Recession Scenarios

Tightening financial conditions, falling confidence reduce foreign GDP

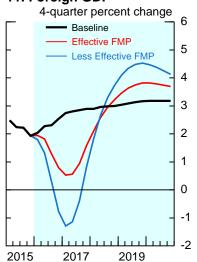
#### **Effective Foreign Monetary Policy (FMP)**

- Foreign central bank actions depress bond yields, support domestic demand. Foreign GDP growth falls below 1%.
- U.S. GDP growth down to 1.5%, real dollar up 4%.

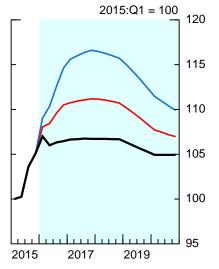
#### **Less Effective Foreign Monetary Policy**

- Low pass-through of monetary policy to private yields and household demand, GDP boost comes from exchange rate.
- Foreign GDP growth falls below -1%.
- U.S. GDP growth below 1% and real dollar up 9%.

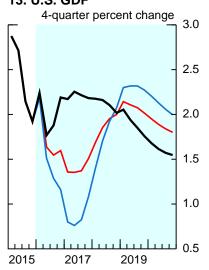
#### 11. Foreign GDP



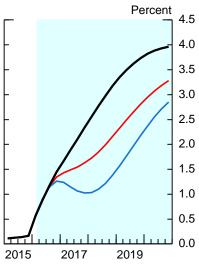
#### 12. Real Broad Dollar



13. U.S. GDP



14. Federal Funds Rate



**Appendix 4: Materials used by Mr. Tetlow** 

Class I FOMC – Restricted Controlled (FR)

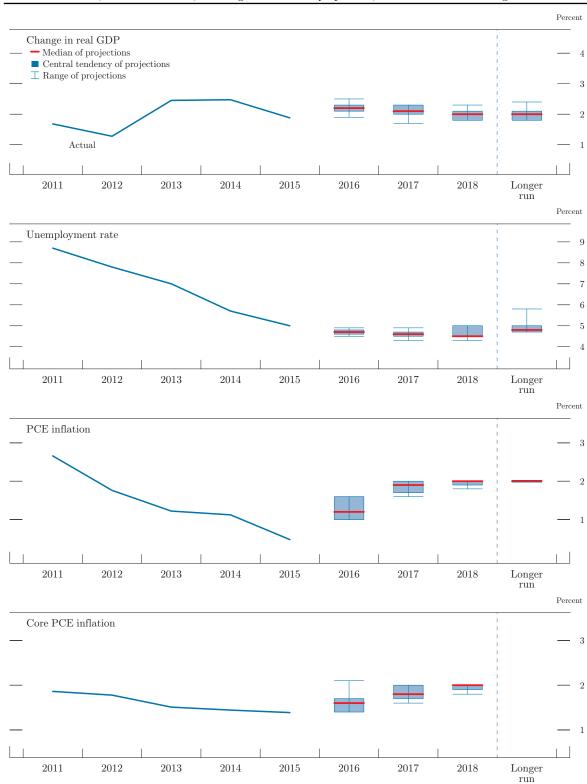
Material for Briefing on the

**Summary of Economic Projections** 

Robert J. Tetlow March 15, 2016

#### Class I FOMC – Restricted Controlled (FR)

 $Exhibit \ 1. \ Medians, central \ tendencies, \ and \ ranges \ of \ economic \ projections, \ 2016-18 \ and \ over \ the \ longer \ runder \ projections \ and \ ranges \ of \ economic \ projections \ projections \ and \ projections \ pro$ 



Note: The data for the actual values of the variables are annual. The percent changes in real GDP and inflation are measured Q4/Q4. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated.

#### Authorized for Public Release

#### Class I FOMC – Restricted Controlled (FR)

Exhibit 2. Economic projections for 2016–18 and over the longer run (percent)

#### Change in real GDP

	2016	2017	2018	Longer
				run
Median	2.2	2.1	2.0	2.0
December projection	2.4	2.2	2.0	2.0
Range	1.9 - 2.5	1.7 - 2.3	1.8 - 2.3	1.8 - 2.4
December projection	2.0 - 2.7	1.8 - 2.5	1.7 - 2.4	1.8 - 2.3
Memo: Tealbook	2.2	2.2	2.0	1.9
December projection	2.5	2.0	1.9	1.9

#### Unemployment rate

	2016	2017	2018	Longer
				run
Median	4.7	4.6	4.5	4.8
December projection	4.7	4.7	4.7	4.9
Range	4.5 - 4.9	4.3 - 4.9	4.3 - 5.0	4.7 - 5.8
December projection	4.3 - 4.9	4.5 - 5.0	4.5 - 5.3	4.7 - 5.8
Memo: Tealbook	4.8	4.5	4.3	5.0
December projection	4.7	4.6	4.5	5.1

#### **PCE** inflation

	2016	2017	2018	Longer
				run
Median	1.2	1.9	2.0	2.0
December projection	1.6	1.9	2.0	2.0
Range	1.0 - 1.6	1.6 - 2.0	1.8 - 2.0	2.0
December projection	1.2 - 2.1	1.7 - 2.0	1.7 - 2.1	2.0
Memo: Tealbook	1.0	1.6	1.8	2.0
December projection	1.2	1.8	2.0	2.0

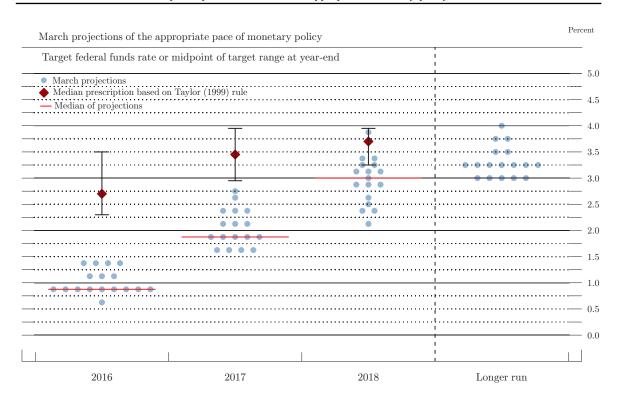
#### Core PCE inflation

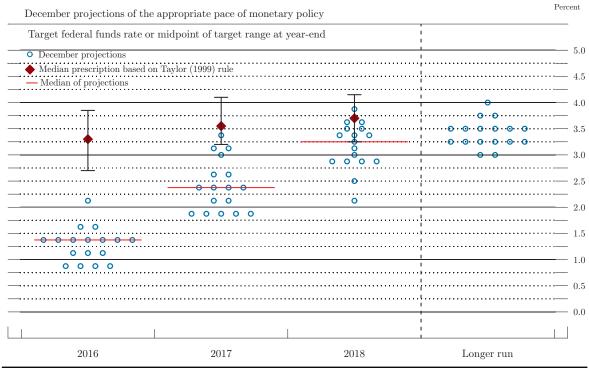
	2016	2017	2018
Median		1.8 1.9	2.0 2.0
Range		$1.6 - 2.0 \\ 1.6 - 2.0$	1.8 - 2.0 $1.7 - 2.1$
Memo: Tealbook		1.6 1.7	1.8 1.9

<sup>\*</sup> The percent changes in real GDP and inflation are measured Q4/Q4. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated.

#### Class I FOMC – Restricted Controlled (FR)

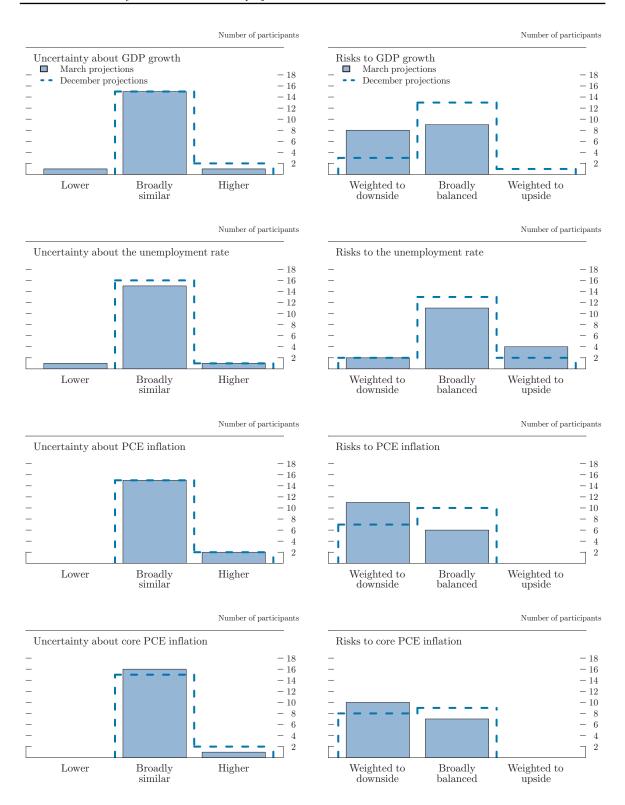
Exhibit 3. Overview of FOMC participants' assessments of appropriate monetary policy





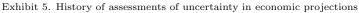
Note: In the two panels above, each circle indicates the value (rounded to the nearest ½ percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The red diamonds for each year represent the median of the federal funds rate prescriptions that were derived by taking each participant's projections for the unemployment gap, core PCE inflation and longer-run nominal federal funds rate for that year and inserting them into the non-inertial Taylor (1999) rule. The whiskers represent the central tendency of the prescriptions of the non-intertial Taylor (1999) rule using participants' projections.

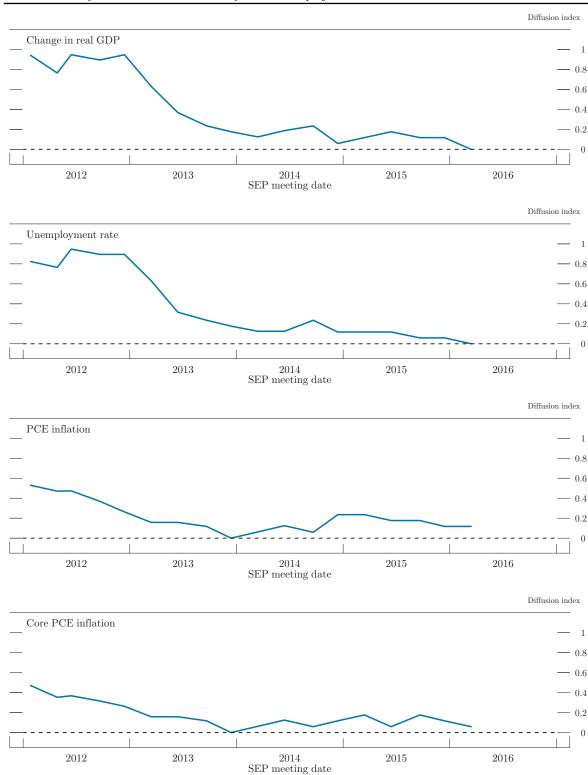
Exhibit 4. Uncertainty and risks in economic projections



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#### Class I FOMC – Restricted Controlled (FR)



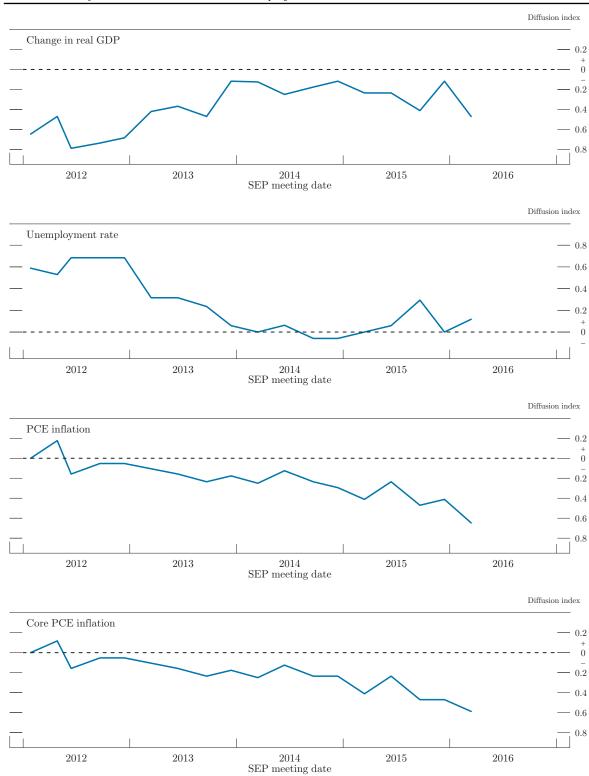


Note: The diffusion index for uncertainty about a variable equals the fraction of participants who reported that uncertainty about that variable is higher than normal minus the fraction who reported that uncertainty is lower than normal.

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#### Class I FOMC – Restricted Controlled (FR)





Note: The diffusion index for assessment of risks about a variable equals the fraction of participants who reported that risks are weighted to the upside minus the fraction who reported that risks are weighted to the downside.

**Appendix 5: Materials used by Mr. Laubach** 

Class I FOMC – Restricted Controlled (FR)

Material for the Briefing on

Monetary Policy Alternatives

Thomas Laubach March 15–16, 2016

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0.5

0.0

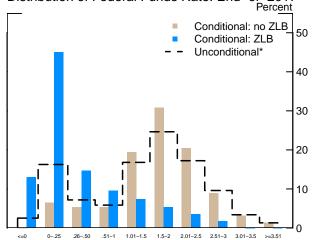
#### **Exhibit 1: Monetary Policy Alternatives**

### Medium Term Outlook: 2017 Q4/Q4 Survey Responses

_			Percent
	Dec./Jan.	March	
Real GDP			
PD Survey	2.3	2.25	
Blue Chip	2.4	2.3	
Inflation			
PD Survey (PCE)	2	2.05	
Blue Chip (CPI)	2.3	2.3	

Note: The inflation measures are headline PCE and headline CPI inflation, respectively. The Primary Dealer Survey was taken before Dec 8, 2015; the Blue Chip survey was taken January 4–5, 2016. Source: FRBNY Primary Dealer Survey and Blue Chip Economic Indicators Survey.

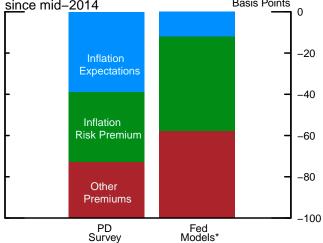
#### Distribution of Federal Funds Rate: End-of-2017



\* Based on the median dealer estimate of 25% probability of the funds rate returning to the ZLB.

Source: FRBNY Primary Dealer Survey.

# Inflation Compensation: Composition of Decline since mid–2014 Basis Points



\*Fed models reflect the average composition from term structure models of the Board, FRBNY, and FRB Chicago.



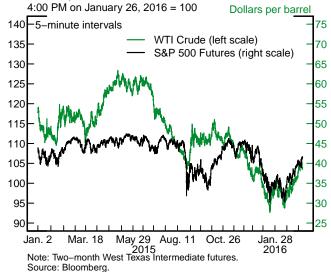
2016 2017 2018 2019

Note: The implied federal funds rate path is estimated using overnight index swaps (OIS) quotes with a spline approach and a term premium of zero basis points.

Source: Bloomberg and staff calculations.

Federal Funds Rate Projections

#### Intraday Crude Oil and S&P 500 Futures



Risk-Neutral Probability of Average Inflation Over Next Ten Years Falling Below 1%



Note: Implied by inflation caps and floors.
Source: BGC Partners and Staff calculations.

#### JANUARY 2016 FOMC STATEMENT

- 1. Information received since the Federal Open Market Committee met in December suggests that labor market conditions improved further even as economic growth slowed late last year. Household spending and business fixed investment have been increasing at moderate rates in recent months, and the housing sector has improved further; however, net exports have been soft and inventory investment slowed. A range of recent labor market indicators, including strong job gains, points to some additional decline in underutilization of labor resources. Inflation has continued to run below the Committee's 2 percent longer-run objective, partly reflecting declines in energy prices and in prices of non-energy imports. Market-based measures of inflation compensation declined further; survey-based measures of longer-term inflation expectations are little changed, on balance, in recent months.
- 2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee currently expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market indicators will continue to strengthen. Inflation is expected to remain low in the near term, in part because of the further declines in energy prices, but to rise to 2 percent over the medium term as the transitory effects of declines in energy and import prices dissipate and the labor market strengthens further. The Committee is closely monitoring global economic and financial developments and is assessing their implications for the labor market and inflation, and for the balance of risks to the outlook.
- 3. Given the economic outlook, the Committee decided to maintain the target range for the federal funds rate at ½ to ½ percent. The stance of monetary policy remains accommodative, thereby supporting further improvement in labor market conditions and a return to 2 percent inflation.
- 4. In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to 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. In light of the current shortfall of inflation from 2 percent, the Committee will carefully monitor actual and expected progress toward its inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant only gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.
- 5. 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, and it anticipates doing so until normalization of the level of the federal funds rate is well under way. This policy, by keeping the Committee's holdings of longer-term securities at sizable levels, should help maintain accommodative financial conditions.

#### MARCH 2016 ALTERNATIVE A

- 1. Information received since the Federal Open Market Committee met in December January suggests that labor market conditions improved further even as economic growth slowed late last year economic activity has been expanding at a moderate pace. Household spending and business fixed investment have has been increasing at moderate rates a solid moderate rate in recent months, and the housing sector has improved further; however, business fixed investment and net exports have been soft and inventory investment slowed. A range of recent labor market indicators, including strong job gains, points to some additional decline in underutilization of labor resources strengthening of the labor market. Inflation has picked up in recent months; however, it continued to run below the Committee's 2 percent longer-run objective, partly reflecting declines in energy prices and in prices of nonenergy imports. Market-based measures of inflation compensation declined further remain near historically low levels; some survey-based measures of longer-term inflation expectations are little changed, on balance, in recent months declined further.
- 2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee currently expects that, with gradual adjustments in the stance of appropriately accommodative monetary policy, economic activity will expand at a moderate pace and labor market indicators will continue to strengthen. However, global economic and financial developments in recent months pose downside risks to the outlook for economic activity and the labor market. Inflation is expected to remain low in the near term, in part because of the further earlier declines in energy prices, but to rise to 2 percent over the medium term as the transitory effects of declines in energy and import prices dissipate and the labor market strengthens further. The Committee is closely monitoring global economic and financial developments and is assessing their implications for the labor market and inflation, and for the balance of risks to the outlook. In light of continued low readings from measures of longer-term inflation compensation and expectations, the Committee judges that the risks that inflation will fail to rise to 2 percent over the medium term have increased.
- 3. Given the economic outlook <u>and associated risks</u>, the Committee decided to maintain the target range for the federal funds rate at ½ to ½ percent. The stance of monetary policy remains accommodative, thereby supporting further improvement in labor market conditions and a return to 2 percent inflation. The Committee anticipates that it will not increase this target range until inflation moves closer to 2 percent on a sustained basis and the risks to the economic outlook are more closely balanced.
- 4. In determining the When adjustments to the target range become appropriate, their timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess will depend on the Committee's assessment of realized and expected economic conditions relative to 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. In light of the current shortfall of inflation from 2 percent, the Committee will carefully monitor actual and expected progress toward its inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant only gradual increases in the federal funds rate; the federal funds rate is likely to will remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

5. 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, and it anticipates doing so until normalization of the level of the federal funds rate is well under way. This policy, by keeping the Committee's holdings of longer-term securities at sizable levels, should help maintain accommodative financial conditions.

#### MARCH 2016 ALTERNATIVE B

- 1. Information received since the Federal Open Market Committee met in December January suggests that labor market conditions improved further even as economic growth slowed late last year economic activity has been expanding at a moderate pace despite the global economic and financial developments of recent months. Household spending and business fixed investment have has been increasing at moderate rates in recent months a solid moderate rate, and the housing sector has improved further; however, business fixed investment and net exports have been soft and inventory investment slowed. A range of recent labor market indicators, including strong job gains, points to some additional decline in underutilization of labor resources strengthening of the labor market. Inflation has picked up in recent months; however, it continued to run below the Committee's 2 percent longer-run objective, partly reflecting declines in energy prices and in prices of nonenergy imports. Market-based measures of inflation compensation declined further remain low; survey-based measures of longer-term inflation expectations are little changed, on balance, in recent months.
- 2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee currently expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market indicators will continue to strengthen. However, global economic and financial developments continue to pose risks. Inflation is expected to remain low in the near term, in part because of the further earlier declines in energy prices, but to rise to 2 percent over the medium term as the transitory effects of declines in energy and import prices dissipate and the labor market strengthens further. The Committee is closely monitoring global economic and financial developments and is assessing their implications for the labor market and inflation, and for the balance of risks to the outlook. The Committee continues to monitor inflation developments closely.
- 3. Given the economic outlook Against this backdrop, the Committee decided to maintain the target range for the federal funds rate at ½ to ½ percent. The stance of monetary policy remains accommodative, thereby supporting further improvement in labor market conditions and a return to 2 percent inflation.
- 4. In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to 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. In light of the current shortfall of inflation from 2 percent, the Committee will carefully monitor actual and expected progress toward its inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant only gradual increases in the federal funds rate; the federal funds rate is likely to remain, for some time,

below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

5. 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, and it anticipates doing so until normalization of the level of the federal funds rate is well under way. This policy, by keeping the Committee's holdings of longer-term securities at sizable levels, should help maintain accommodative financial conditions.

#### MARCH 2016 ALTERNATIVE C

- 1. Information received since the Federal Open Market Committee met in December January suggests that labor market conditions improved further even as economic growth slowed late last year economic activity has been expanding at a moderate pace despite the global economic and financial developments of recent months. Household spending and business fixed investment have has been increasing at moderate rates in recent months a solid moderate rate, and the housing sector has improved further; however, business fixed investment and net exports have been soft and inventory investment slowed. A range of recent labor market indicators, including strong job gains, points to some additional decline in underutilization of labor resources strengthening of the labor market. Inflation has continued to run below the Committee's 2 percent longer-run objective, partly reflecting earlier declines in energy prices and in prices of non-energy imports, but it has risen in recent months. Market-based measures of inflation compensation declined further; and survey-based measures of longer-term inflation expectations are little changed, on balance, in recent months.
- 2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee currently expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market indicators will continue to strengthen. Overall, taking into account domestic and international developments, the Committee sees the risks to the outlook for both economic activity and the labor market as balanced. Inflation is expected to remain low in the near term, in part because of the further declines in energy prices, but to rise to 2 percent over the medium term as the transitory effects of declines in energy and import prices dissipate and the labor market strengthens further. The Committee is closely monitoring global economic and financial developments and is assessing their implications for the labor market and inflation, and for the balance of risks to the outlook continues to monitor inflation developments closely.
- 3. Given the economic outlook Against this backdrop, the Committee decided to maintain increase the target range for the federal funds rate at ½ to ½ to ¾ percent. The stance of monetary policy remains accommodative, thereby supporting further improvement in labor market conditions and a return to 2 percent inflation.
- 4. In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to 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. In light of the current shortfall of inflation from 2 percent, the Committee will carefully monitor actual and expected progress toward its inflation goal. The Committee expects that economic conditions will evolve in a manner that will warrant only gradual increases

in the federal funds rate; the federal funds rate is likely to remain, for some time, below levels that are expected to prevail in the longer run. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.

5. 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, and it anticipates doing so until normalization of the level of the federal funds rate is well under way. This policy, by keeping the Committee's holdings of longer-term securities at sizable levels, should help maintain accommodative financial conditions.

#### Implementation Note for March 2016 Alternative A and Alternative B

Release Date: <del>January 27</del> March 16, 2016

#### **Decisions Regarding Monetary Policy Implementation**

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its <u>statement</u> on <u>January 27 March 16</u>, 2016:

- The Board of Governors of the Federal Reserve System left unchanged the interest rate paid on required and excess reserve balances at 0.50 percent.
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:

"Effective January 28 March 17, 2016, the Federal Open Market Committee directs the Desk to undertake open market operations as necessary to maintain the federal funds rate in a target range of 1/4 to 1/2 percent, including overnight reverse repurchase operations (and reverse repurchase operations with maturities of more than one day when necessary to accommodate weekend, holiday, or similar trading conventions) at an offering rate of 0.25 percent, in amounts limited only by the value of Treasury securities held outright in the System Open Market Account that are available for such operations and by a per-counterparty limit of \$30 billion per day.

The Committee directs the Desk to continue rolling over maturing Treasury securities at auction and to continue 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."

More information regarding open market operations may be found on the Federal Reserve Bank of New York's website.

• The Board of Governors of the Federal Reserve System took no action to change the discount rate (the primary credit rate), which remains at 1.00 percent.

This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve's operational tools and approach used to implement monetary policy.

#### **Implementation Note for March 2016 Alternative C**

Release Date: January 27 March 16, 2016

#### **Decisions Regarding Monetary Policy Implementation**

The Federal Reserve has made the following decisions to implement the monetary policy stance announced by the Federal Open Market Committee in its <u>statement</u> on <u>January 27 March 16</u>, 2016:

- The Board of Governors of the Federal Reserve System left unchanged the interest rate paid on required and excess reserve balances at 0.50 percent voted [unanimously] to raise the interest rate paid on required and excess reserve balances to 0.75 percent, effective March 17, 2016.
- As part of its policy decision, the Federal Open Market Committee voted to authorize and direct the Open Market Desk at the Federal Reserve Bank of New York, until instructed otherwise, to execute transactions in the System Open Market Account in accordance with the following domestic policy directive:

"Effective January 28 March 17, 2016, the Federal Open Market Committee directs the Desk to undertake open market operations as necessary to maintain the federal funds rate in a target range of 1/4 to 1/2 to 3/4 percent, including overnight reverse repurchase operations (and reverse repurchase operations with maturities of more than one day when necessary to accommodate weekend, holiday, or similar trading conventions) at an offering rate of 0.25 0.50 percent, in amounts limited only by the value of Treasury securities held outright in the System Open Market Account that are available for such operations and by a per-counterparty limit of \$30 billion per day.

The Committee directs the Desk to continue rolling over maturing Treasury securities at auction and to continue 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."

More information regarding open market operations may be found on the Federal Reserve Bank of New York's website.

• In a related action, the Board of Governors of the Federal Reserve System took no action to change the discount rate (the primary credit rate), which remains at 1.00 voted [unanimously] to approve a 1/4 percentage point increase in the discount rate (the primary credit rate) to 1.25 percent, effective March 17, 2016. In taking this action, the Board approved requests submitted by the Boards of Directors of the Federal Reserve Banks of ....

This information will be updated as appropriate to reflect decisions of the Federal Open Market Committee or the Board of Governors regarding details of the Federal Reserve's operational tools and approach used to implement monetary policy.

**Appendix 6: Materials used by Mr. Wilcox** 

Material for

Consumer Price Index Update

David W. Wilcox March 16, 2016

### **Recent Changes in Consumer Price Indexes**

(Percent changes)

	Mo	nthly cha	ange	Feb./Fet	. change
	Dec.	Jan.	Feb.	2015	2016
<b>Fotal CPI</b> <i>March TB</i>	-0.1	0.0	<b>-0.2</b> −0.2	0.0	<b>1.0</b> 0.9
Food <i>March TB</i>	-0.2	0.0	0.2 0.1		
Energy March TB	-2.8	-2.8	-6.0 -5.4		
Core CPI March TB	0.2	0.3	<b>0.3</b> 0.2	1.7	2.3 2.2

Note: February 2016 CPI data released at 8:30 a.m. on March 16, 2016.