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

Class II FOMC – Restricted (FR)

Material for the Briefing on

Financial Developments and Open Market Operations

Simon Potter and Lorie Logan
March 14, 2017

Class II FOMC – Restricted (FR)

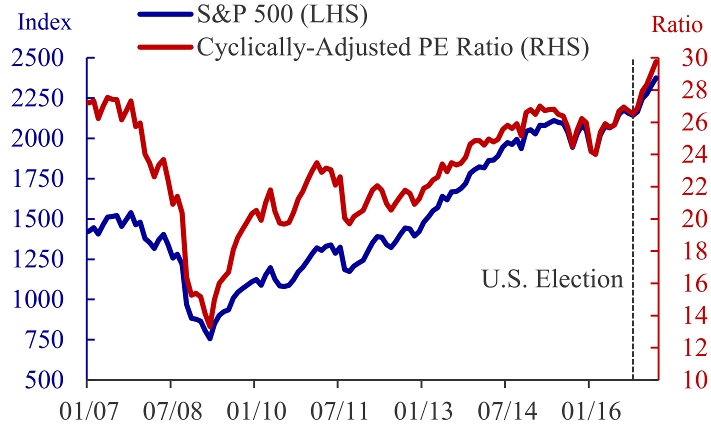
Exhibit 1

(1) Asset Price Changes Since Nov. FOMC

	Nov. FOMC to Jan./Feb. FOMC	Since Jan./Feb. FOMC	Total Change
S&P 500 Index	+7.9 %	+4.1 %	+12.4 %
KBW Bank Index	+22.7 %	+5.8 %	+29.9 %
High-Yield OAS	-104 bps	-12 bps	-116 bps
U.S. Broad T.W. Dollar	+2.0 %	+0.2 %	+2.2 %
Nominal 10-Year TSY Yield	+63 bps	+12 bps	+75 bps
E.M. Bond Spread Index	-16 bps	-20 bps	-36 bps

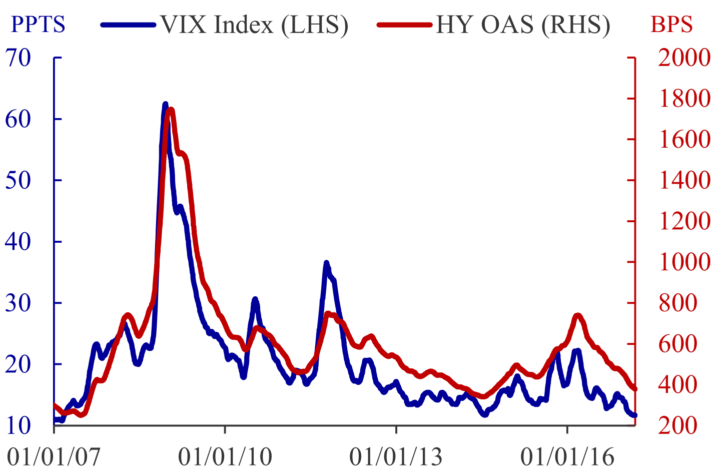
Source: Barclays, Bloomberg, Federal Reserve Board, J.P. Morgan

(2) S&P 500 Index and Cyclically-Adjusted PE Ratio*



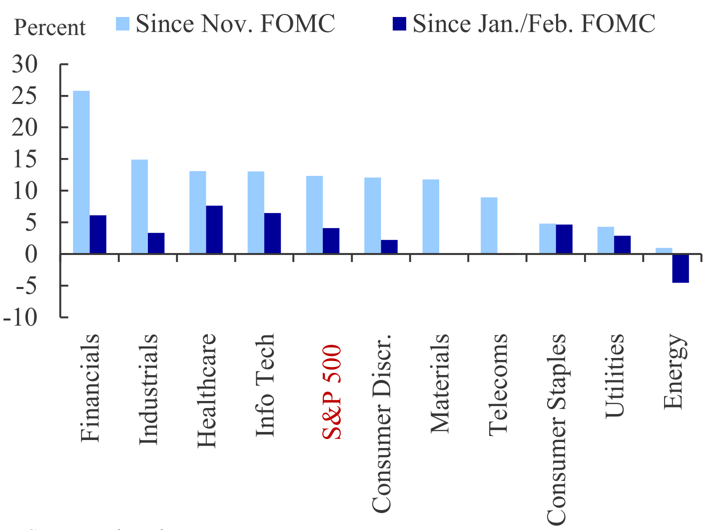
*Cyclically-adjusted PE ratio is a monthly series, S&P 500 is a monthly average.
Source: Bloomberg, Robert Shiller

(3) VIX Index and High-Yield Credit OAS*



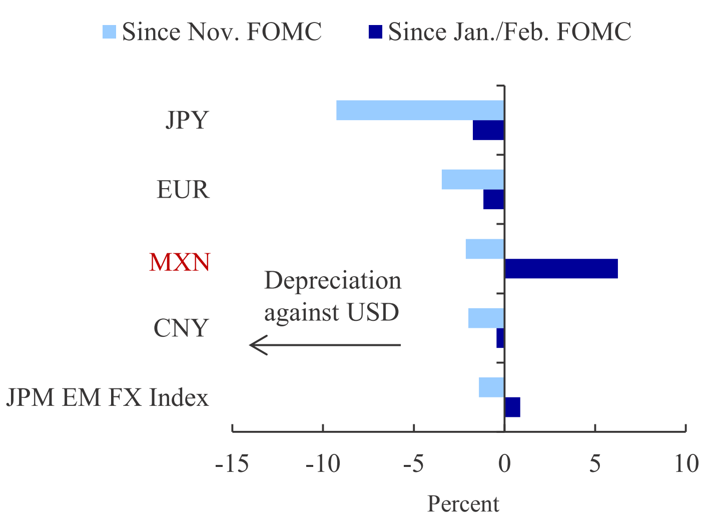
*Rolling 50-day average.
Source: Barclays, Bloomberg

(4) S&P 500 Sector Performance



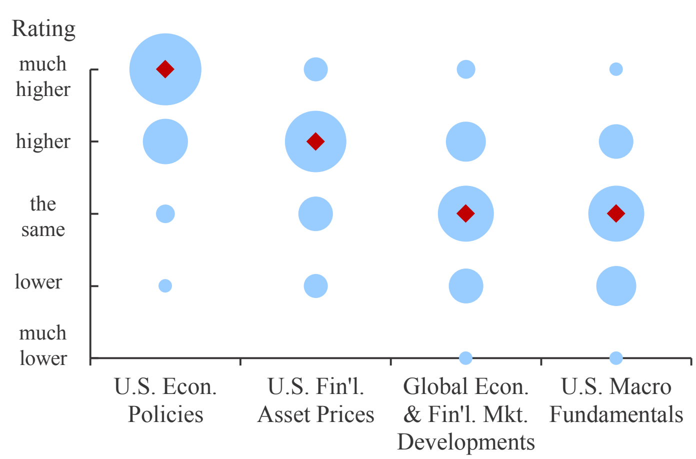
Source: Bloomberg

(5) Currency Performance Against U.S. Dollar



Source: Bloomberg, J.P. Morgan

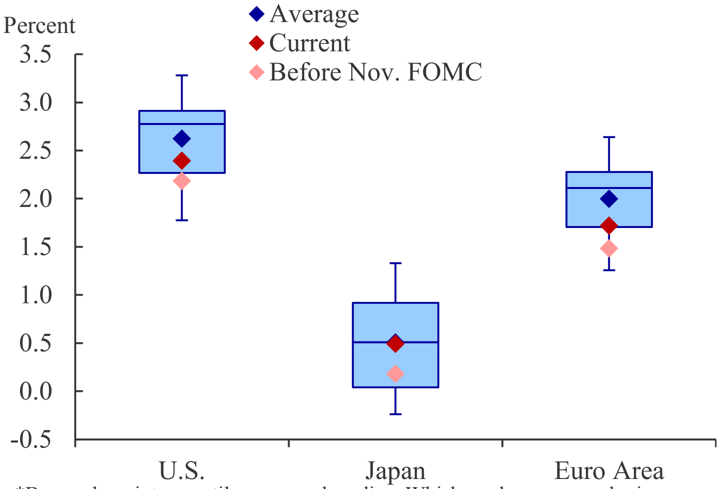
(6) Assessment of Uncertainty Relative to October*



*Dots scaled by percent of respondents from the March Surveys of Primary Dealers and Market Participants. Red diamond is median.
Source: FRBNY

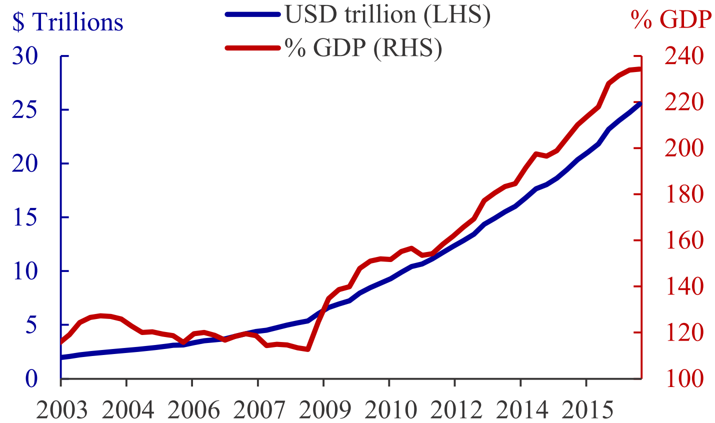
Class II FOMC – Restricted (FR) Exhibit 2

(7) Five-Year, Five-Year Inflation Swaps Since 2011*



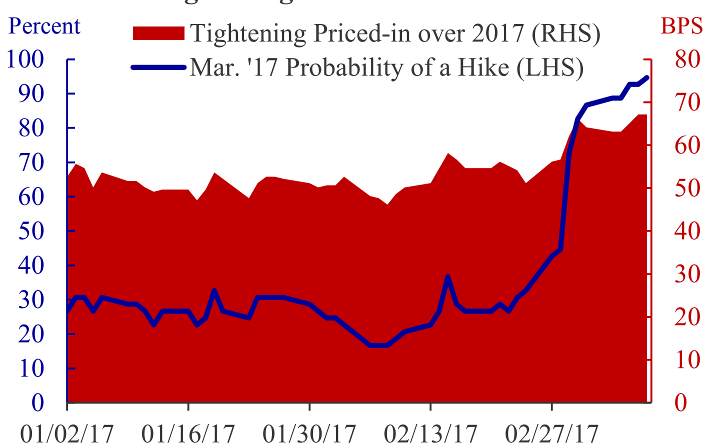
*Boxes show interquartile range and median. Whiskers show max and min.
Source: Barclays

(8) China Aggregate Credit*



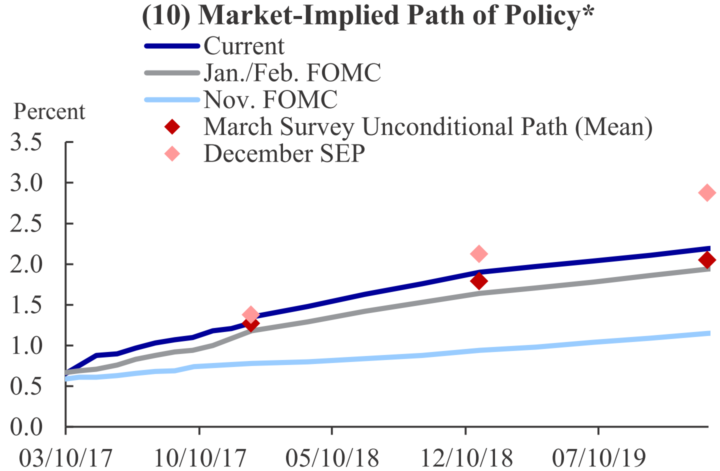
*Includes shadow credit and corporate and municipal bonds. Excludes central government debt. Historic USD figures are calculated using a constant exchange rate as of year-end 2016.
Source: CEIC, FRBNY

(9) Probability of a March Rate Hike and Amount of Tightening Priced-in over 2017*



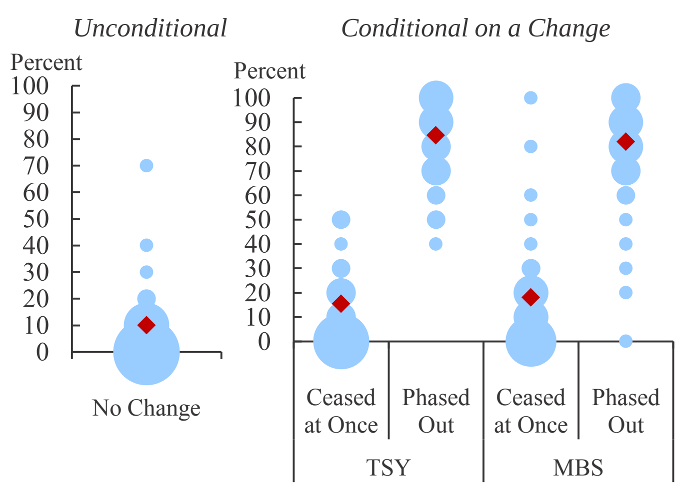
*Assumes futures contracts price in a rolling 6 month average EFFR decline on month-end dates.
Source: Bloomberg, Desk Calculations

(10) Market-Implied Path of Policy*



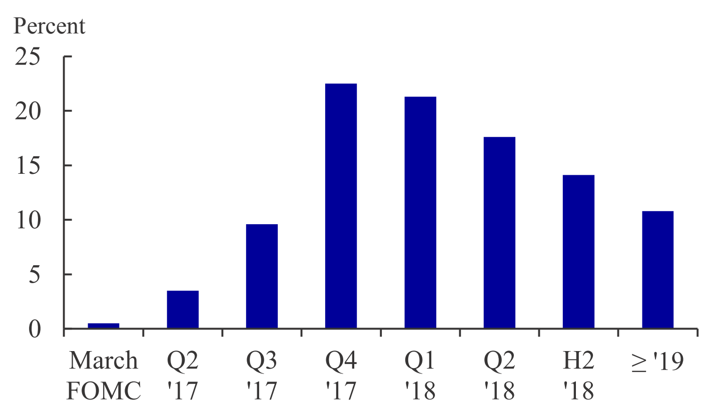
*Market-implied paths derived from federal funds and Eurodollar futures. Survey path is the average PDF-implied means from the March Surveys of Primary Dealers and Market Participants.
Source: Bloomberg, Desk Calculations, Federal Reserve Board, FRBNY

(11) Probability of Reinvestment Outcomes*



*Dots scaled by percent of respondents from the March Surveys of Primary Dealers and Market Participants. Red diamond is average.
Source: FRBNY

(12) Average PDF of Expected Time of First Announced Change in Reinvestment Policy*

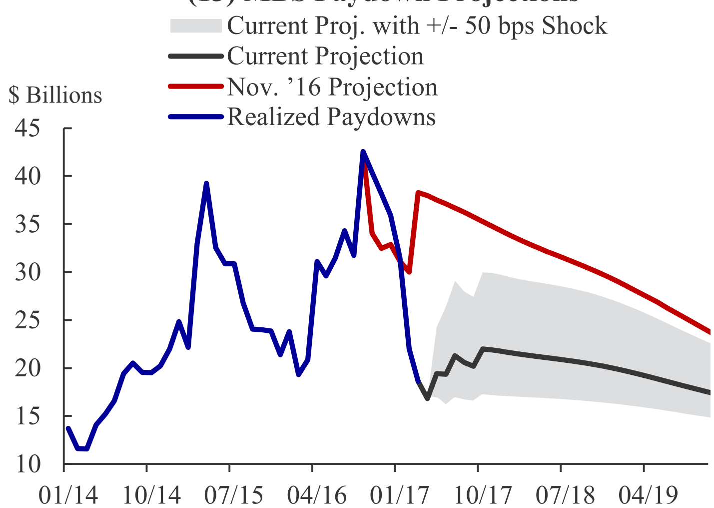


*Conditional on less than 100 percent probability assigned to no change in reinvestments. Based on all responses from the March Surveys of Primary Dealers and Market Participants.
Source: FRBNY

Class II FOMC – Restricted (FR)

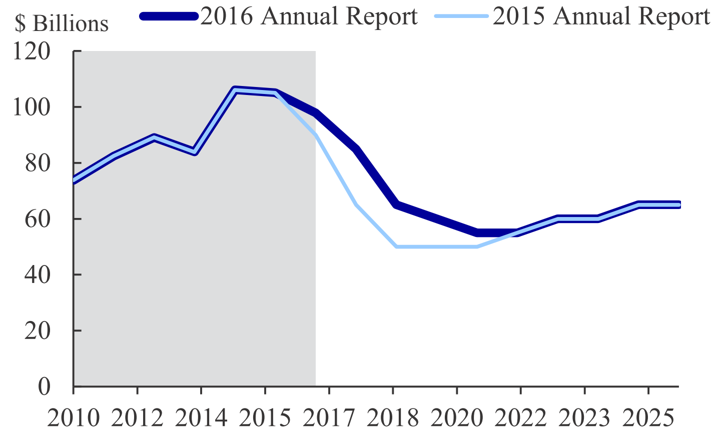
Exhibit 3

(13) MBS Paydown Projections*



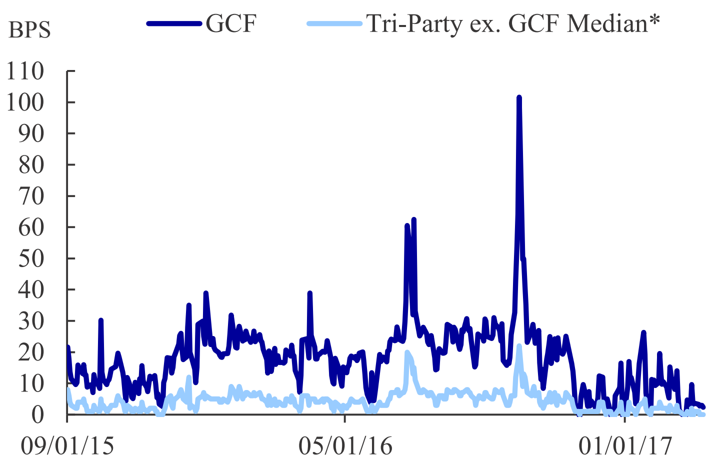
*Projections are based on forward rates.
Source: FRBNY

(14) Projected SOMA Net Income: Baseline*



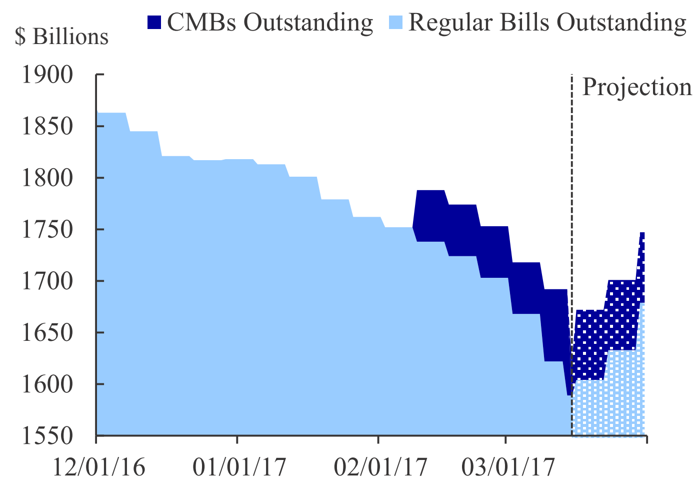
*Figures for 2010-2016 (shaded area) are realized income. Projected figures are rounded.
Source: FRBNY

(15) Overnight Treasury Tri-Party GC Repo Rate Spreads to ON RRP



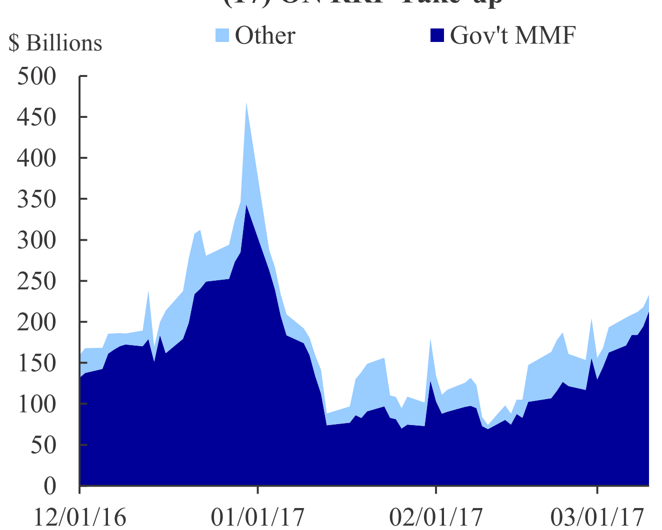
*Excludes intrabank and ON RRP transactions.
Source: Bloomberg, FRBNY

(16) Bills Outstanding*



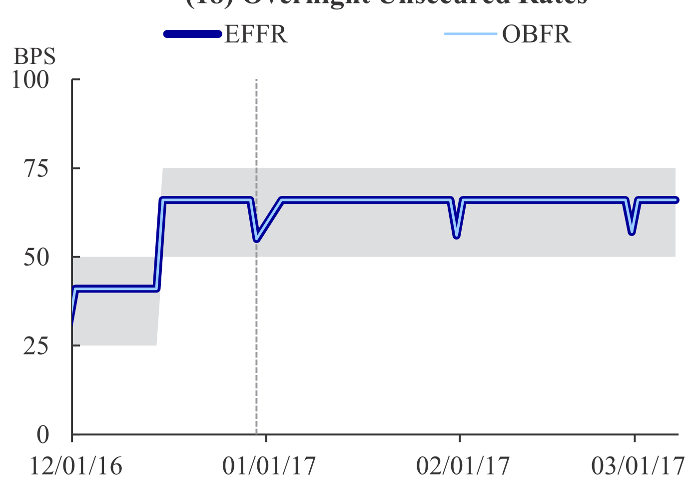
*As of Monday, 03/13/17.
Source: FRBNY, Treasury Department

(17) ON RRP Take-up



Source: FRBNY

(18) Overnight Unsecured Rates*



*Grey dashed line indicates quarter-end. Shaded area reflects target range for the EFFR.
Source: FRBNY

Appendix

(1) Summary of Operational Testing

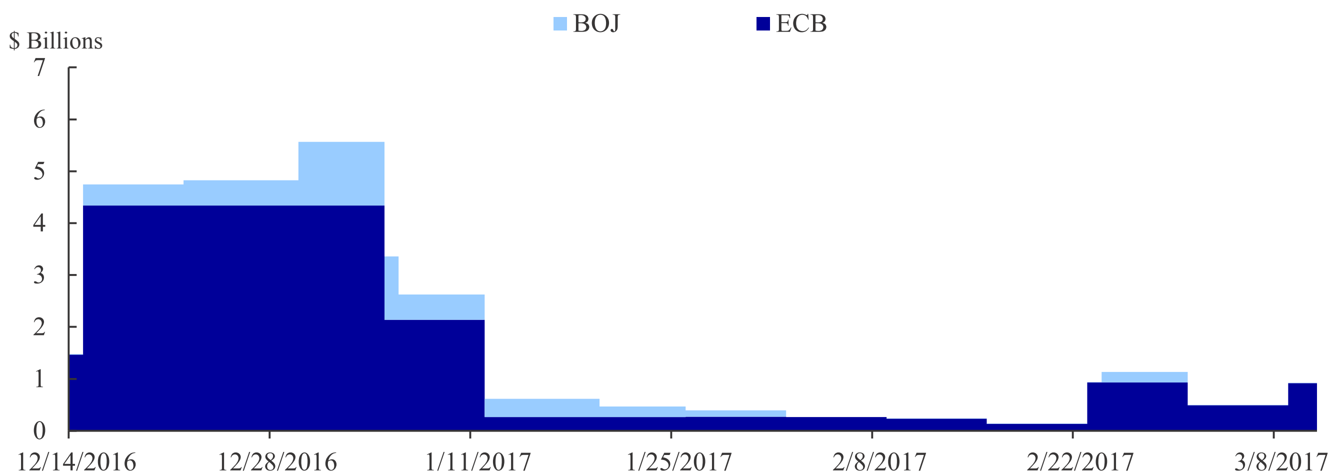
Summary of Operational Tests in prior period

- Foreign Authorization
    - February 15: Euro-denominated overnight repo for €1 million
- TDF test operation
    - February 23: Conducted 7-day test with total take-up of $17 billion

Upcoming Operational Tests

- Tests scheduled under the Domestic Authorization
    - March 22: Treasury outright purchase for no more than $200 million
    - April 18 and 20: Outright MBS Sales (specified pool) for no more than $180 million, total
    - April 25: Outright MBS Sale (basket) for no more than $20 million
- Tests scheduled under the Foreign Authorization
    - March 22: Liquidity swap with the Bank of Canada for CAD51 thousand
    - March 27: Euro-denominated sovereign debt sale for approximately €1 million
    - March 27: Liquidity swap with the European Central Bank for approximately €51 thousand
    - April 18: Euro-denominated overnight repo for approximately €1 million
    - April 20: Liquidity swap with the Swiss National Bank for approximately CHF51 thousand

(2) FX Swaps Outstanding



Source: FRBNY

(3) FX Intervention

- There were no intervention operations in foreign currencies for the System's account during the intermeeting period.

Appendix 2: Materials used by Mr. López-Salido, Mses. Ihrig and Remache, and Mr. Clouse

Class I FOMC – Restricted Controlled (FR)

Material for Briefing on the

System Open Market Account Reinvestment Policy

David López-Salido, Jane E. Ihrig, and Julie Ann Remache
March 14, 2017

Exhibit 1
The Macroeconomic Effects of a State−Contingent Approach to Ending Reinvestment

Policy Assumptions and Modeling Approach

- Two reinvestment policies:
  - State−contingent policy: Reinvestments cease in the final quarter of the year in which the federal funds rate passes 1½ or 2½ percent.
  - Fixed−date policy (TB baseline): Reinvestments cease at the end of 2017:Q3.
- Previous memos analyzed a small number of "adverse scenarios."
- We use stochastic simulations of FRB/US to consider a wide range of potential scenarios.
- FRB/US simulations are combined with the model staff uses to estimate term premium effects of changes in the SOMA portfolio.
- Federal funds rate is governed by inertial Taylor (1999) rule.

Results

- Inasmuch as the TB baseline projects that the FFR will reach 1½ percent at the end of 2017:
  - Under the 1½ percent policy, about half of the simulations show reinvestment continuing beyond 2017.
  - Under the 2½ percent policy, the median date for ending reinvestment is the end of 2018.
- Over the entire set of simulations, relative to the fixed−date policy:
  - The median size of the balance sheet is $525 and $660 billion larger under the 1½ and 2½ percent policies, respectively.
  - Median macroeconomic outcomes differ only slightly under the state−contingent policies.
  - The state−contingent policies modestly reduce the probability of returning to the ELB.
- In ELB episodes, relative to the fixed−date policy, state−contingent policies:
  - Lead to a median difference in the balance sheet of up to $1.5 trillion;
  - Produce a small improvement in macroeconomic outcomes.

Caveats

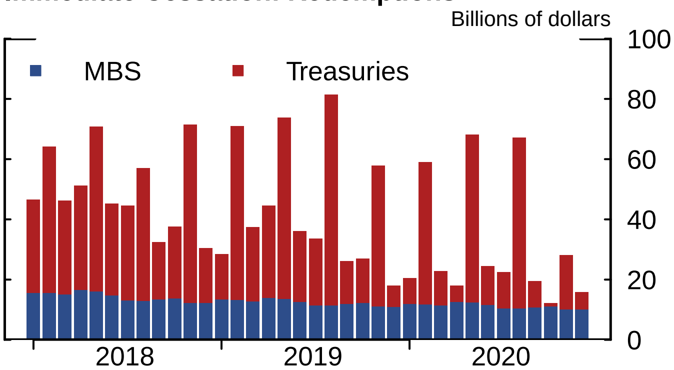
- Our results are sensitive to:
  - The structure of FRB/US and its historical distribution of shocks.
  - The baseline projection.
  - The assumed interest rate rule.
- A baseline closer to the ELB, or a non−inertial response to recessionary shocks, would imply a larger probability of returning to the ELB.
  - In such circumstances, policymakers might wish to consider resuming reinvestment or even undertaking new asset purchases to support improved macroeconomic outcomes.

Exhibit 2

4 Illustrative Scenarios

- "Immediate cessation": All maturing securities are redeemed beginning in Q4 2017.
- "Capped Treasury": Maturing Treasury securities are redeemed up to a maximum of $30 billion per month.
- "2−Year Phase Out": Reinvestments of maturing securities are gradually phased out over 2 years.
- "MBS redemptions only": Maturing Treasury securities continue to be reinvested

Immediate Cessation: Redemptions



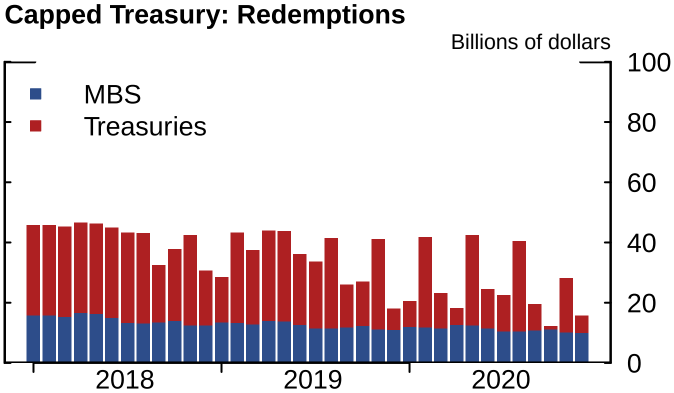
Redemptions ($ bil)

Year	MBS	TSY
2018	175	425
2019	150	385
2020	135	245

Rollovers ($ bil)

Year	MBS	TSY
2018	0	0
2019	0	0
2020	0	0

Capped Treasury: Redemptions



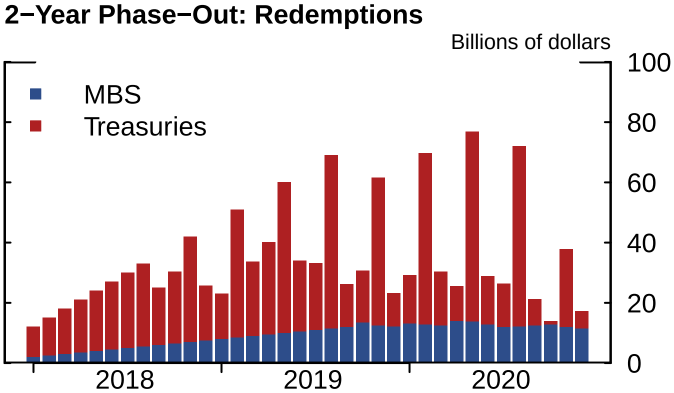
Redemptions ($ bil)

Year	MBS	TSY
2018	175	330
2019	150	270
2020	135	175

Rollovers ($ bil)

Year	MBS	TSY
2018	0	95
2019	0	115
2020	0	70

2−Year Phase−Out: Redemptions



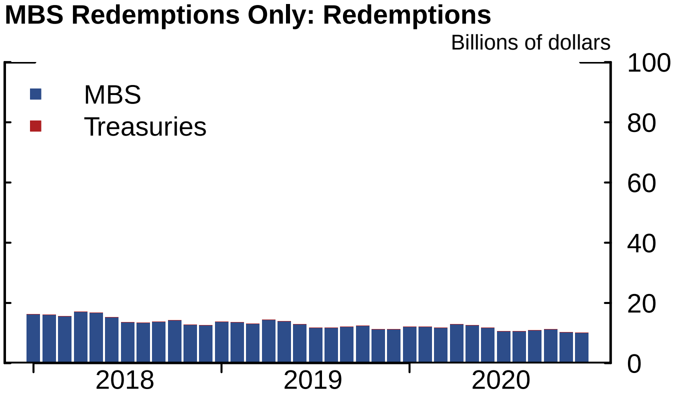
Redemptions ($ bil)

Year	MBS	TSY
2018	60	245
2019	130	360
2020	150	295

Rollovers ($ bil)

Year	MBS	TSY
2018	120	180
2019	30	40
2020	0	0

MBS Redemptions Only: Redemptions



Redemptions ($ bil)

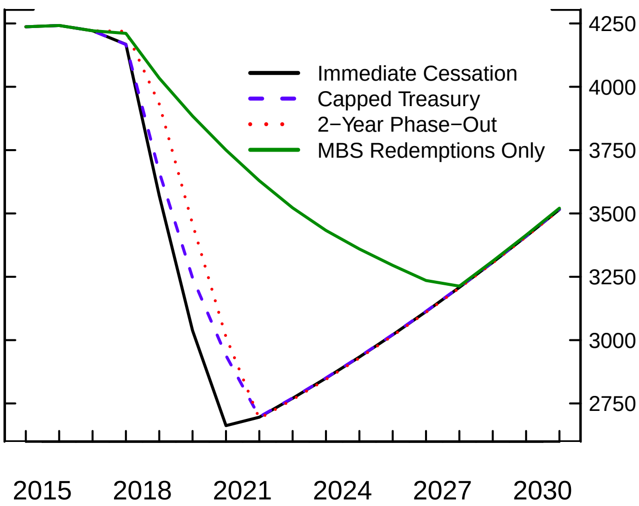
Year	MBS	TSY
2018	175	0
2019	150	0
2020	135	0

Rollovers ($ bil)

Year	MBS	TSY
2018	0	425
2019	0	400
2020	0	375

Exhibit 3

SOMA Holdings



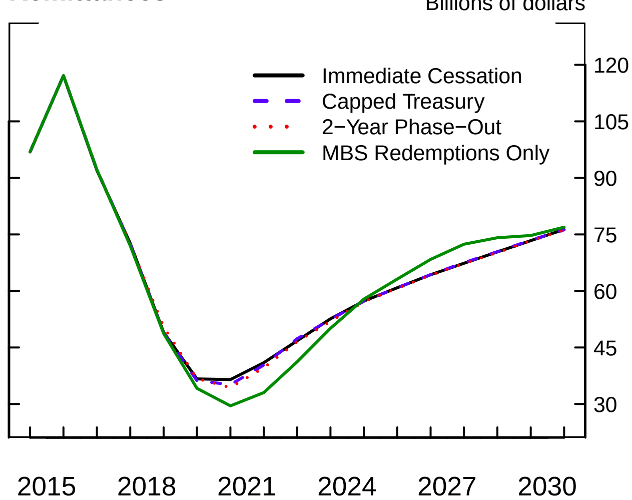
Normalization Date

	$100 bn	**$500 bn**	$1 tn
Immediate Cessation	2022:Q1	**2021:Q1**	2019:Q4
Capped Treasury	2023:Q1	**2021:Q4**	2020:Q2
2−Year Phase−Out	2022:Q3	**2021:Q4**	2020:Q3
MBS Redemptions Only	2030:Q2	**2027:Q4**	2024:Q3

Reinvestment

- Current policy: invest proportional to new Treasury issuances
- Alternative: invest all maturing funds into shorter maturities, perhaps bills

Remittances

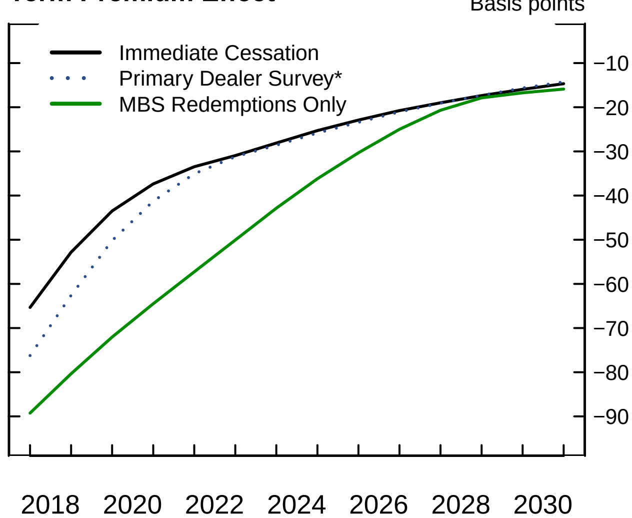


Market Expectations for Reinvestment Policy*

- Respondents highest probability for first announced change in policy
  - Timing: between 2017:Q4 and 2018:Q2
  - Level of fed funds rate: between 1.26 and 1.75 percent
- Average respondent attached a 80−85 percent likelihood to phasing out
  - 12 month taper

*March Primary Dealer and Buyside Surveys

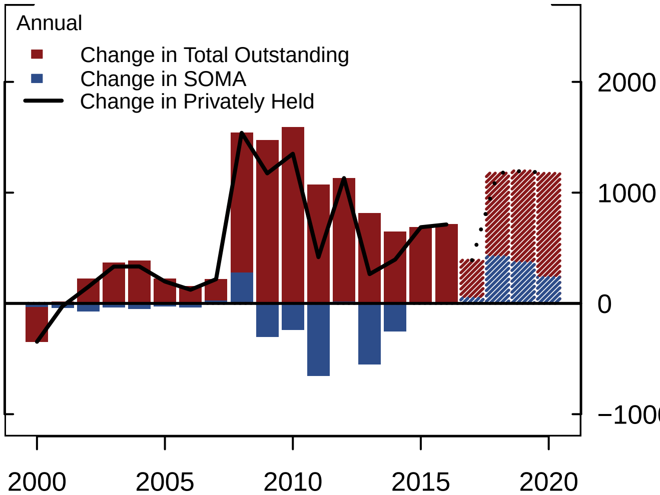
Term Premium Effect



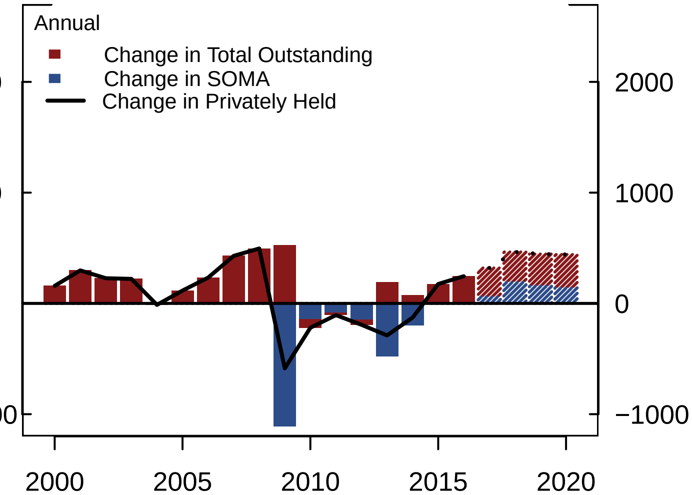
*December Primary Dealer Survey

Exhibit 4

Change in Privately Held Treasury Debt



Change in Privately Held Agency MBS



Note: SOMA Redemptions (purchases) are shown as positive (negative) changes. Projection assumes immediate cessation in late 2017.

Communication Issues

- How the portfolio may evolve over the medium and longer run
- When to inform about approach for redemptions
- If the policy could be reversed

Pros and Cons of Different Reinvestment Strategies

	Balance Sheet Decline	Interest Rate Risk	Communicate	Redemptions in 2018 ($ bil) MBS	Redemptions in 2018 ($ bil) TSY
Immediate Cessation	rapid	smallest	easy, but prepare markets	175	425
Capped Treasury	↓	↓	a bit more complicated	175	330
2−Year Phase−Out			complicated ($, %; timing)	60	245
MBS Redemptions Only	slow	largest	easy, but mostly unexpected	175	0

Exhibit 5

Questions for Discussion

(1) What are your views about the factors that should influence the timing of a change to reinvestments? What are your views about the principles that should guide a possible restarting of reinvestments at some point in the future?

(2) What are your views regarding the four illustrative options for reinvestments discussed in the staff memo? Are there variations on these basic approaches (or entirely different options) that you believe should be considered?

(3) What changes in FOMC statements, minutes, and other communications may be appropriate to provide guidance about the likely timing and other aspects of a change in reinvestment policy? When should such changes in communications be implemented?

Appendix 3: Materials used by Mr. Wascher

Class II FOMC – Restricted (FR)

Material for Briefing on

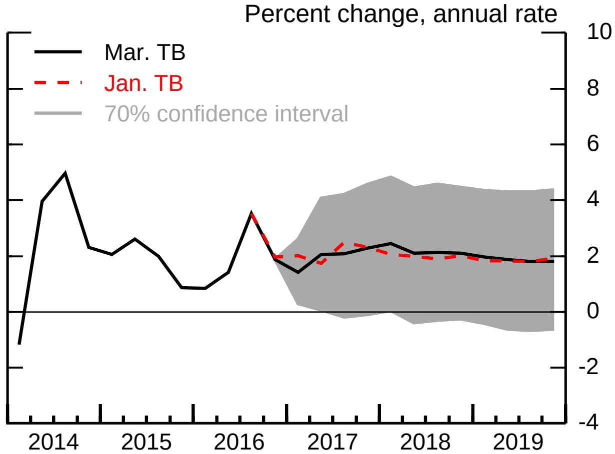
The U.S. Outlook

William Wascher
March 14, 2017

Forecast Summary

Confidence Intervals for Panels 1, 6, 7, and 8 Based on FRB/US Stochastic Simulations

1. Real GDP

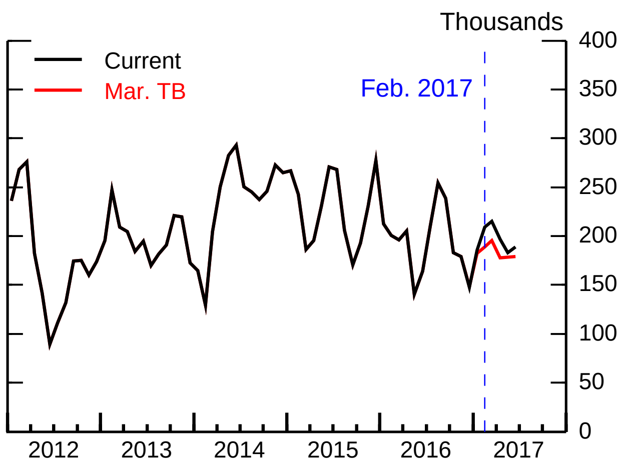


2. Tealbook Update

	2017 H1	2017 H2	2018	2019
	Change at AR, %		Q4-over-Q4 change, %	
Real GDP	1.8	2.2	2.2	1.9
Mar. TB	*1.7*	*2.2*	*2.2*	*1.9*
Unempl. rate*	4.7	4.6	4.2	4.1
Mar. TB	*4.7*	*4.6*	*4.2*	*4.1*
Total PCE prices	1.9	1.5	1.8	1.9
Mar. TB	*2.0*	*1.5*	*1.8*	*1.9*

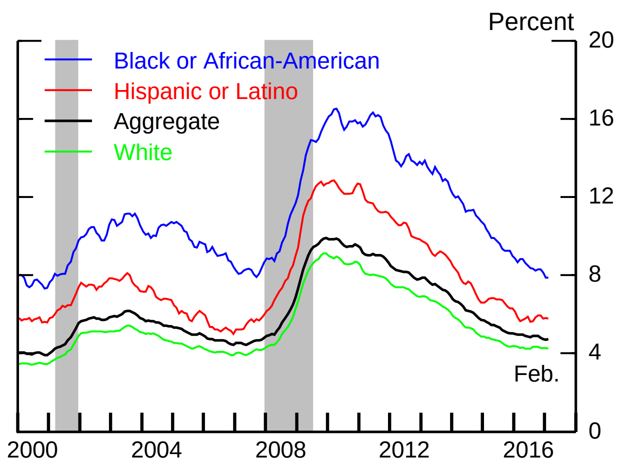
* Percent, final quarter of period indicated.

3. Total Nonfarm Payrolls*



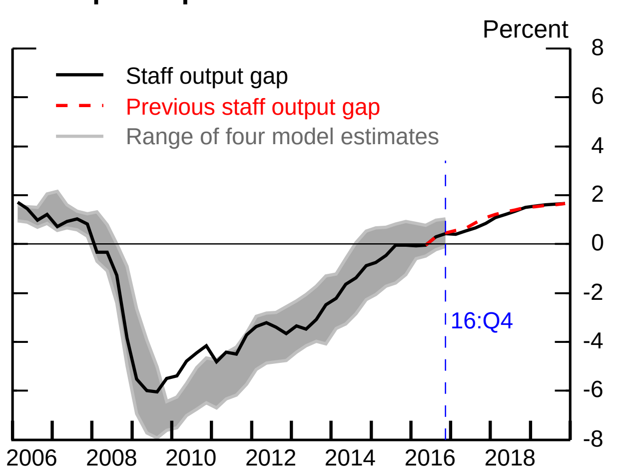
* Three-month moving average of monthly change.

4. Unemployment Rates by Race or Ethnicity

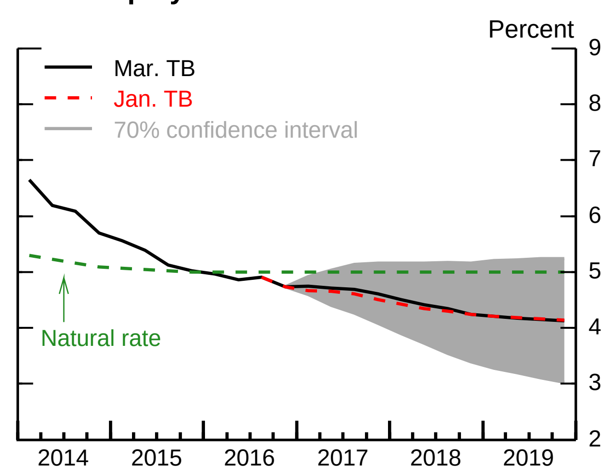


Note: Three-month moving averages. Shaded bars indicate a period of business recession as defined by the NBER.

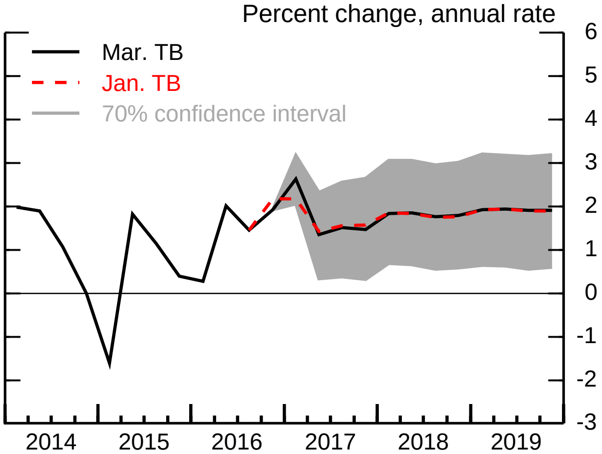
5. Output Gap Estimates



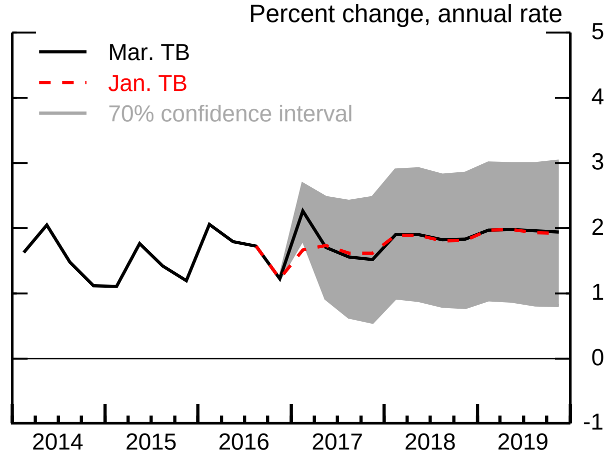
6. Unemployment Rate



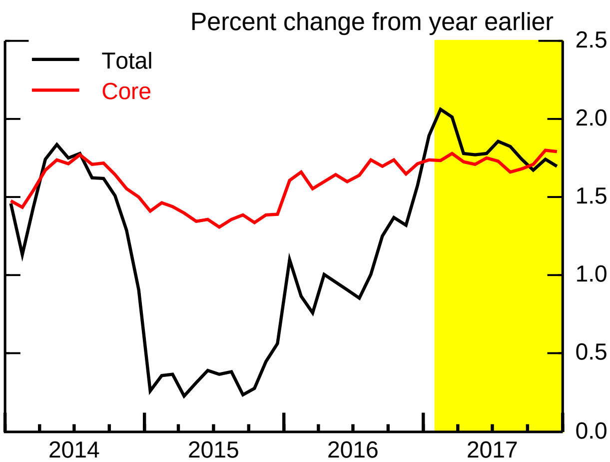
7. Total PCE Prices



8. PCE Prices Excluding Food and Energy

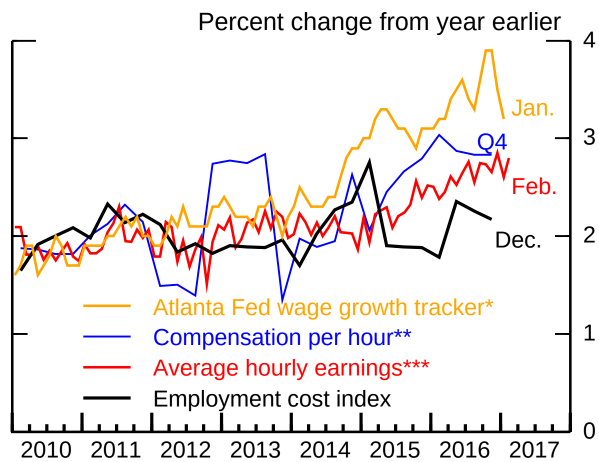


9. Monthly PCE Price Inflation



Note: Shaded yellow region indicates forecast period.

10. Measures of Labor Compensation



*Three-month moving average. **Percent change of the four-quarter moving average from a year earlier. ***All employees.

Appendix 4: Materials used by Mr. Kamin

Class II FOMC – Restricted (FR)

Material for Briefing on

The International Outlook

Steven B. Kamin

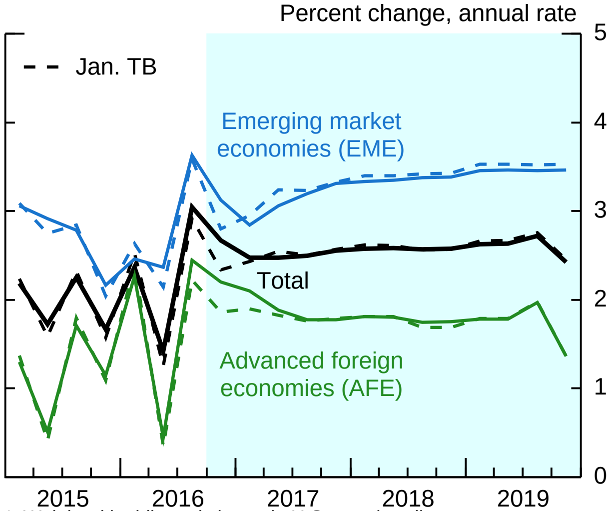
March 14, 2017

Class II FOMC - Restricted (FR)

Exhibit 1

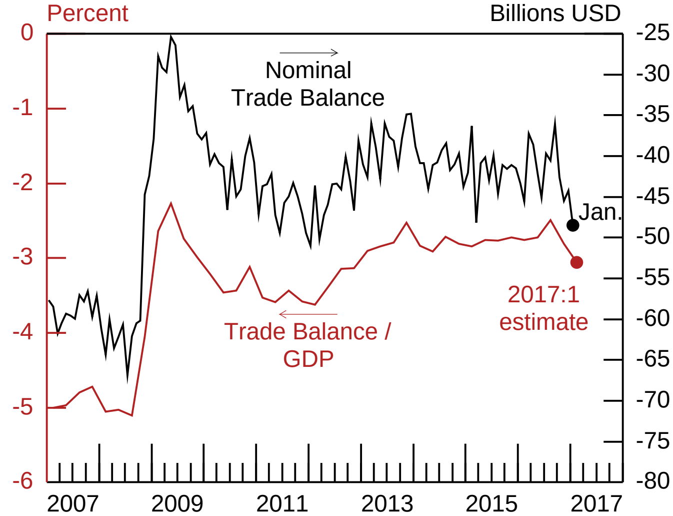
The International Outlook

1. Foreign GDP*

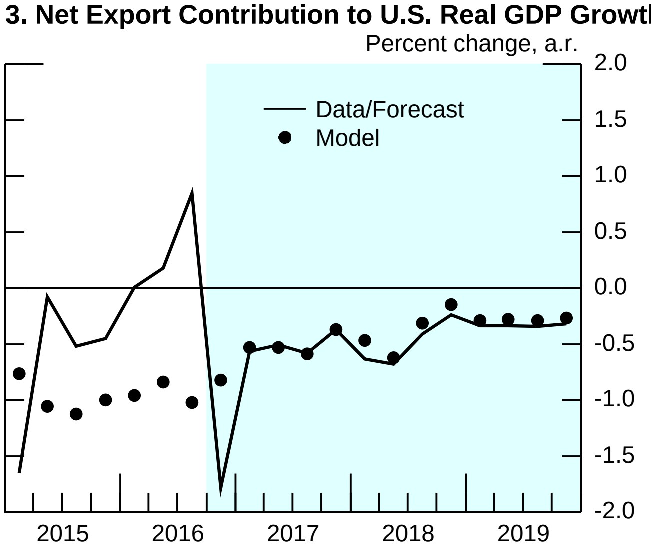


* Weighted by bilateral shares in U.S. merchandise exports.

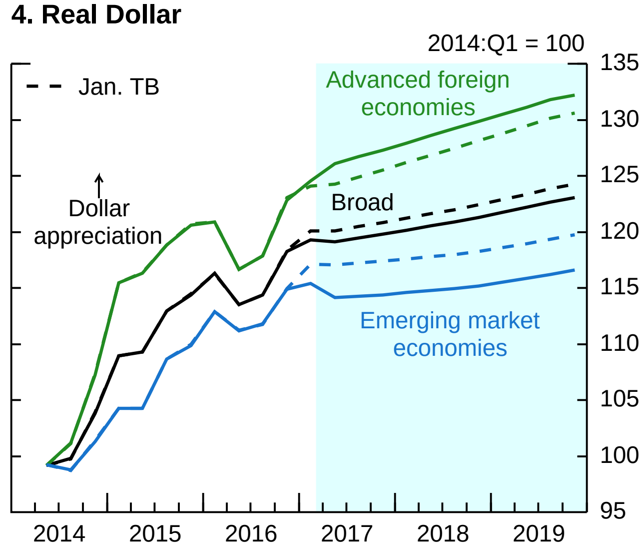
2. U.S. Trade Balance



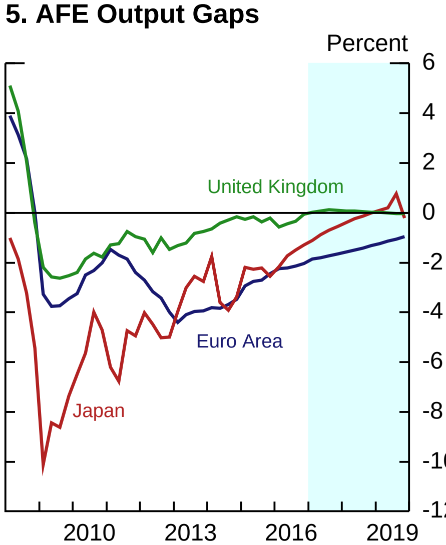
3. Net Export Contribution to U.S. Real GDP Growth



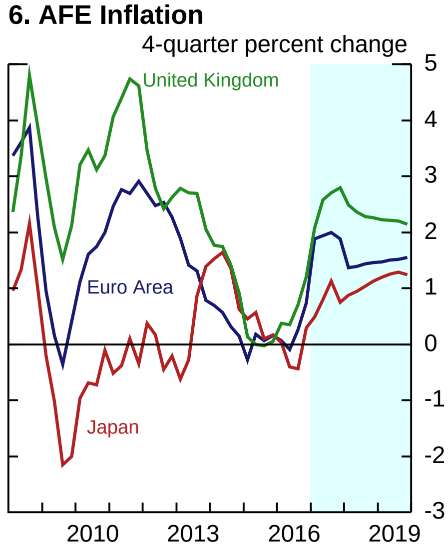
4. Real Dollar



5. AFE Output Gaps



6. AFE Inflation



7. Central Bank Guidance

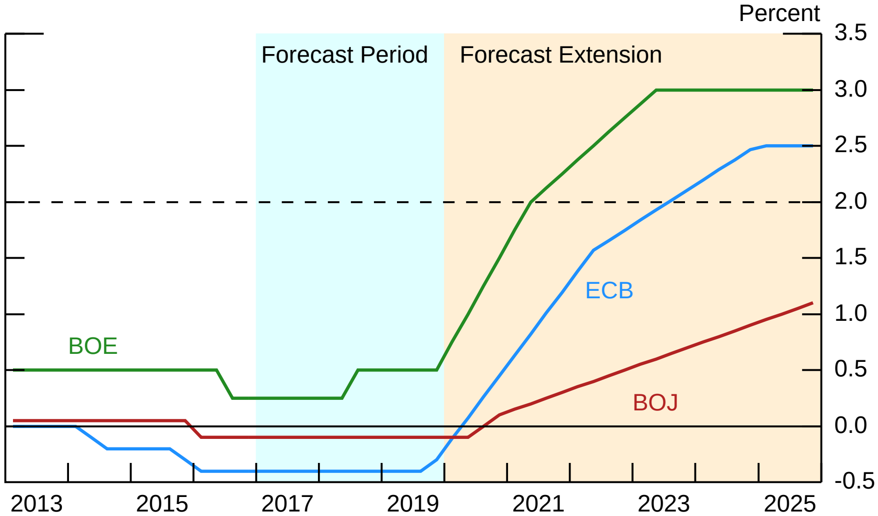
- **BOE:** maintain stock of purchased assets until Bank Rate “around 2%.” Views asset sales and reinvestment decisions as equivalent.
- **ECB:** purchase €80 billion in March then €60 billion per month until end-2017. No rate hike until “well past” end of asset purchases.
- **BOJ:** expand monetary base until inflation above target “in a stable manner.”

Class II FOMC - Restricted (FR)

Exhibit 2 (last)

The International Outlook (2)

8a. Central Bank Policy Rates



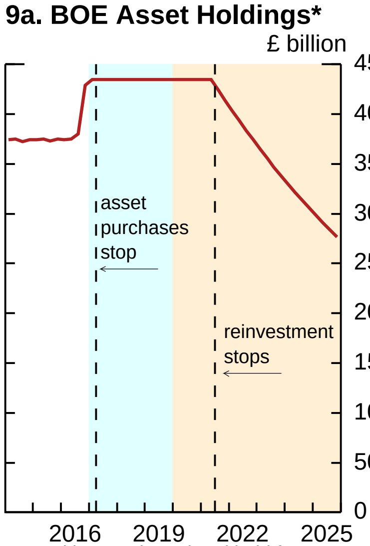
8b. Policy Rates in Long Run

BOE: 3.0 percent
- 2% inflation
- 1% real r*

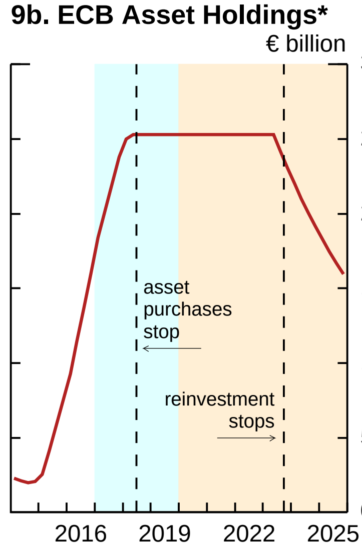
ECB: 2.5 percent
- 2% inflation
- 0.5% real r*

BOJ: 1.5 percent
- 1.5% inflation
- 0% real r*

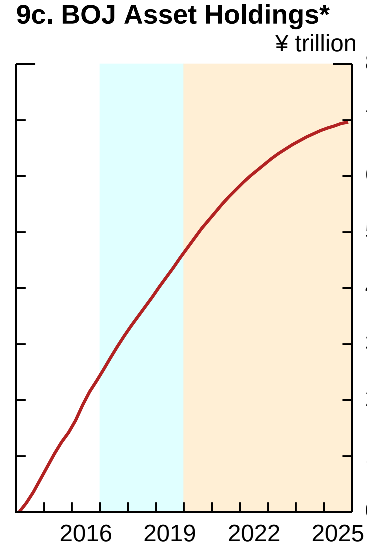
9a. BOE Asset Holdings*



9b. ECB Asset Holdings*

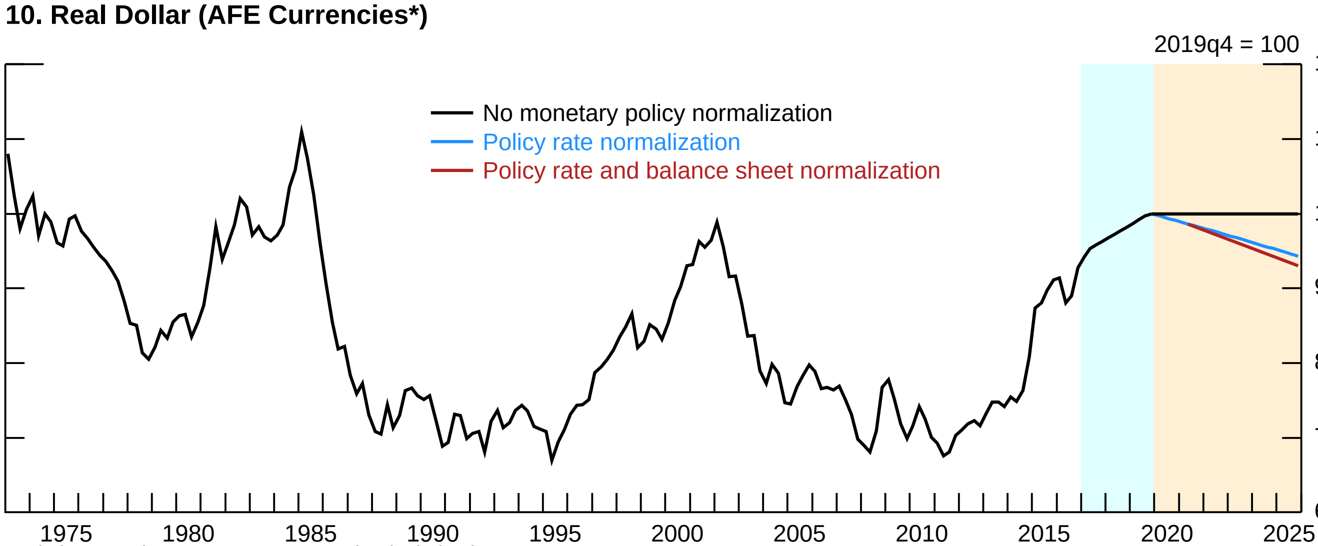


9c. BOJ Asset Holdings*



*Securities purchased and held for monetary policy purposes.

10. Real Dollar (AFE Currencies*)



*Includes Canada, Euro Area, Japan, and United Kingdom.

Appendix 5: Materials used by Mr. Cavallo

Material for Briefing on the

Summary of Economic Projections

Michele Cavallo
March 14, 2017

Exhibit 1. Medians, central tendencies, and ranges of economic projections, 2017–19 and over the longer run

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. One participant did not submit longer-run projections for the change in real GDP or the unemployment rate.

Exhibit 2. Economic projections for 2017–19 and over the longer run (percent)

Change in real GDP

	2017	2018	2019	Longer run
Median	2.1	2.1	1.9	1.8
December projection	2.1	2.0	1.9	1.8
Range	1.7 – 2.3	1.7 – 2.4	1.5 – 2.2	1.6 – 2.2
December projection	1.7 – 2.4	1.7 – 2.3	1.5 – 2.2	1.6 – 2.2
Memo: Tealbook	2.0	2.2	1.9	1.7
December projection	2.2	2.0	1.8	1.7

Unemployment rate

	2017	2018	2019	Longer run
Median	4.5	4.5	4.5	4.7
December projection	4.5	4.5	4.5	4.8
Range	4.4 – 4.7	4.2 – 4.7	4.1 – 4.8	4.5 – 5.0
December projection	4.4 – 4.7	4.2 – 4.7	4.1 – 4.8	4.5 – 5.0
Memo: Tealbook	4.6	4.2	4.1	5.0
December projection	4.5	4.3	4.2	5.0

PCE inflation

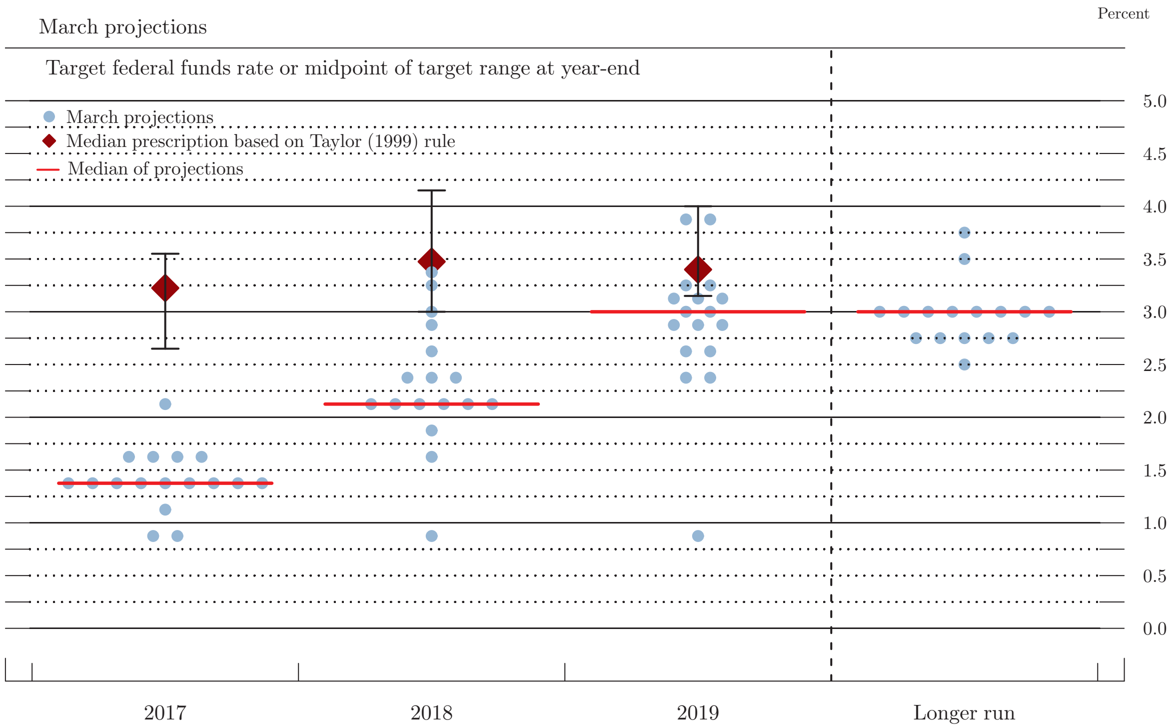
	2017	2018	2019	Longer run
Median	1.9	2.0	2.0	2.0
December projection	1.9	2.0	2.0	2.0
Range	1.7 – 2.1	1.8 – 2.1	1.8 – 2.2	2.0
December projection	1.7 – 2.0	1.8 – 2.2	1.8 – 2.2	2.0
Memo: Tealbook	1.7	1.8	1.9	2.0
December projection	1.7	1.8	1.9	2.0

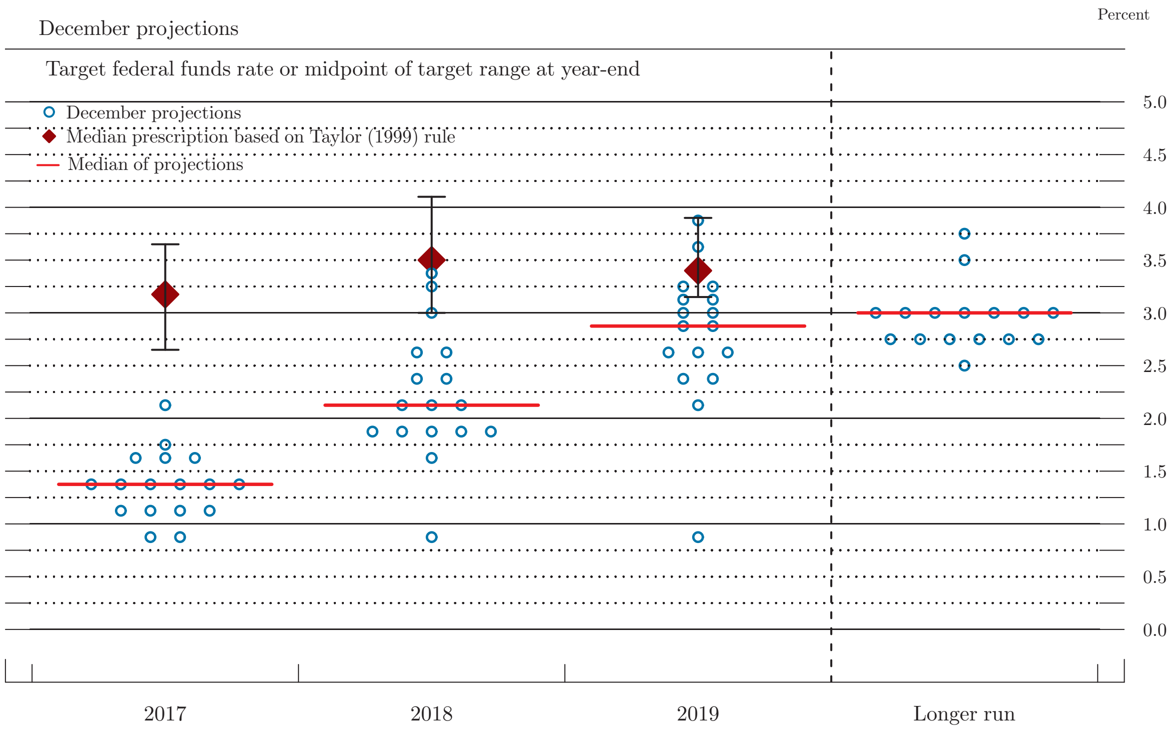
Core PCE inflation

	2017	2018	2019
Median	1.9	2.0	2.0
December projection	1.8	2.0	2.0
Range	1.7 – 2.0	1.8 – 2.1	1.8 – 2.2
December projection	1.7 – 2.0	1.8 – 2.2	1.8 – 2.2
Memo: Tealbook	1.8	1.9	2.0
December projection	1.7	1.8	1.9

* 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. One participant did not submit longer-run projections for the change in real GDP, the unemployment rate, or the federal funds rate in conjunction with the December 13–14, 2016, meeting, and one participant did not submit such projections in conjunction with the March 14–15, 2017, meeting.

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

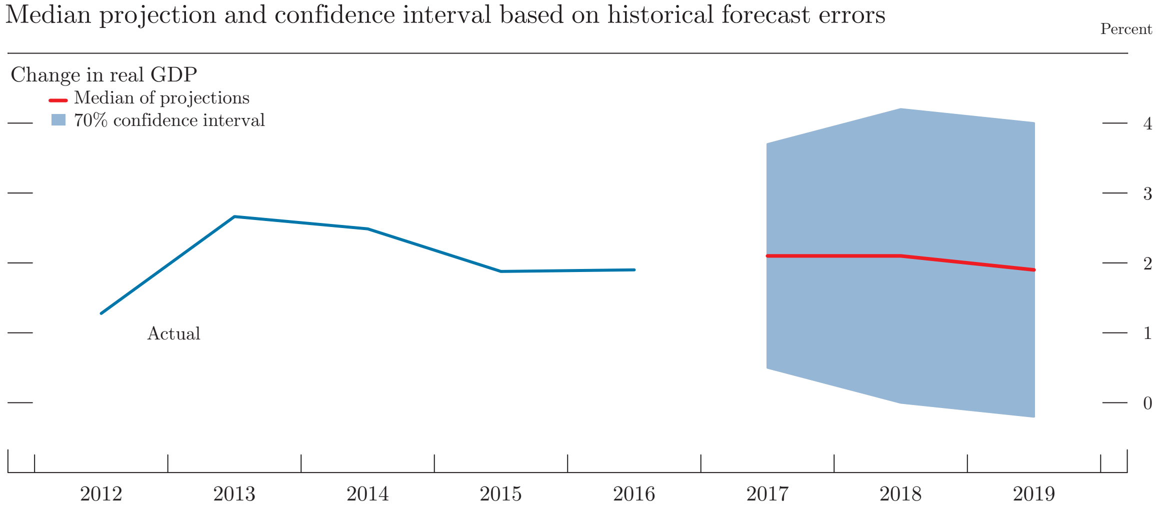




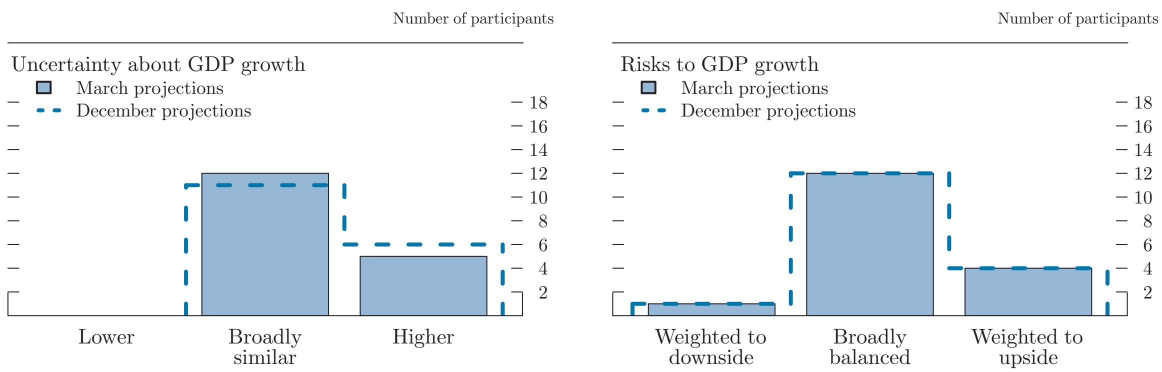
NOTE: In the two panels above, each circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual participant's judgment of the midpoint of the appropriate target range for the federal funds rate or the appropriate target level for the federal funds rate at the end of the specified calendar year or over the longer run. The red diamonds 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-inertial Taylor (1999) rule using participants' projections. One participant did not submit a longer-run projection for the federal funds rate in conjunction with the December 13–14, 2016, meeting, and one participant did not submit such a projection in conjunction with the March 14–15, 2017, meeting.

Exhibit 4.A. Uncertainty and risks in projections of GDP growth

Median projection and confidence interval based on historical forecast errors



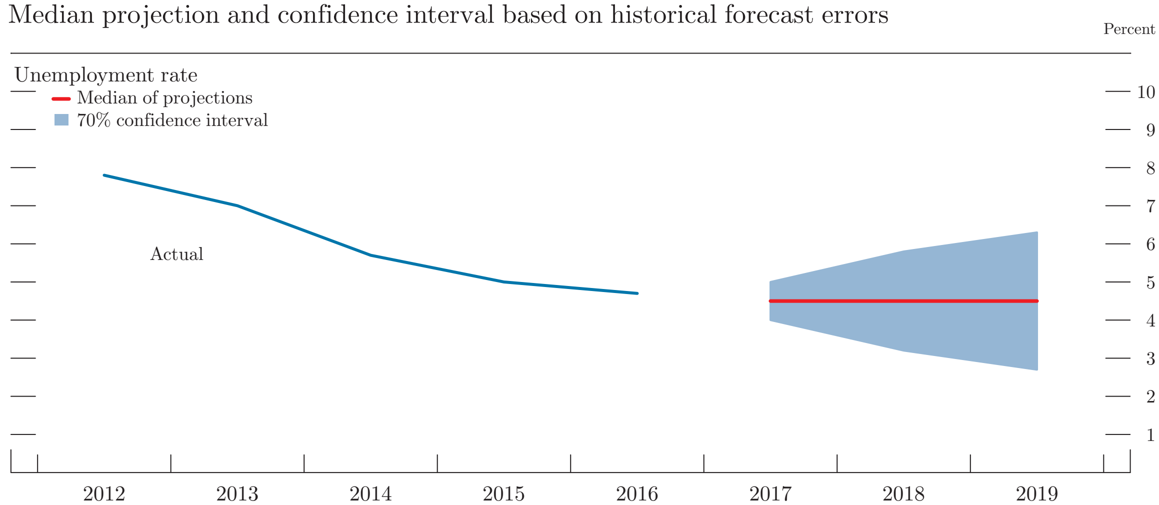
FOMC participants' assessments of uncertainty and risks around their economic projections



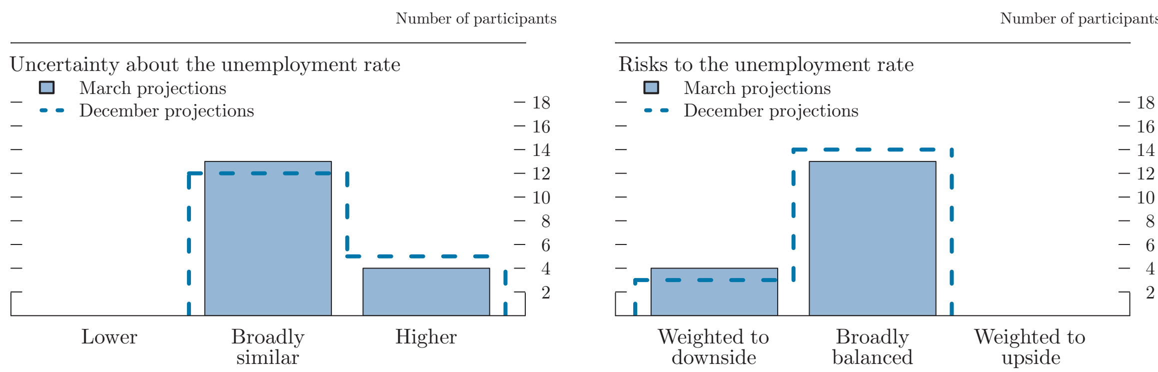
Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in real GDP from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in Table 2. Because current conditions may differ from those that prevailed on average over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

Exhibit 4.B. Uncertainty and risks in projections of the unemployment rate

Median projection and confidence interval based on historical forecast errors



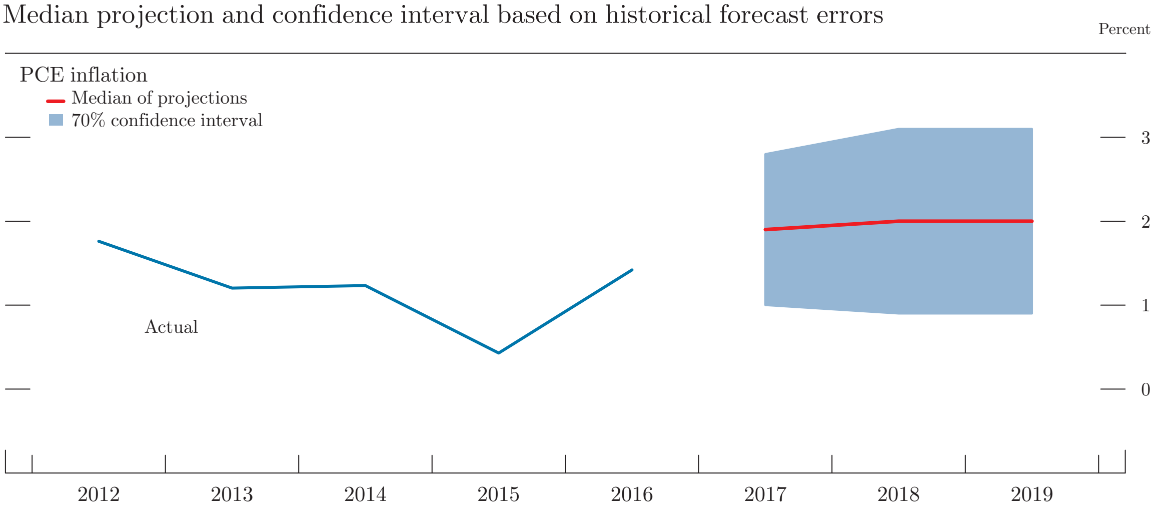
FOMC participants' assessments of uncertainty and risks around their economic projections



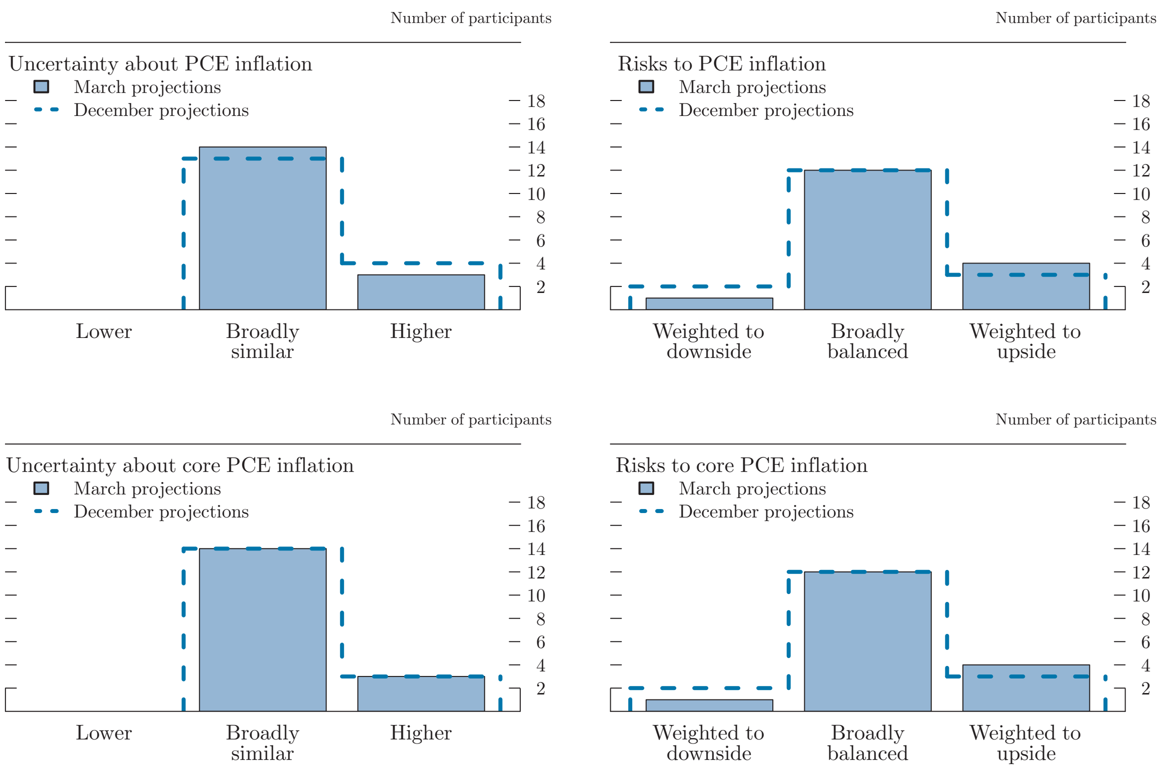
Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the average civilian unemployment rate in the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in Table 2. Because current conditions may differ from those that prevailed on average over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

Exhibit 4.C. Uncertainty and risks in projections of PCE inflation

Median projection and confidence interval based on historical forecast errors

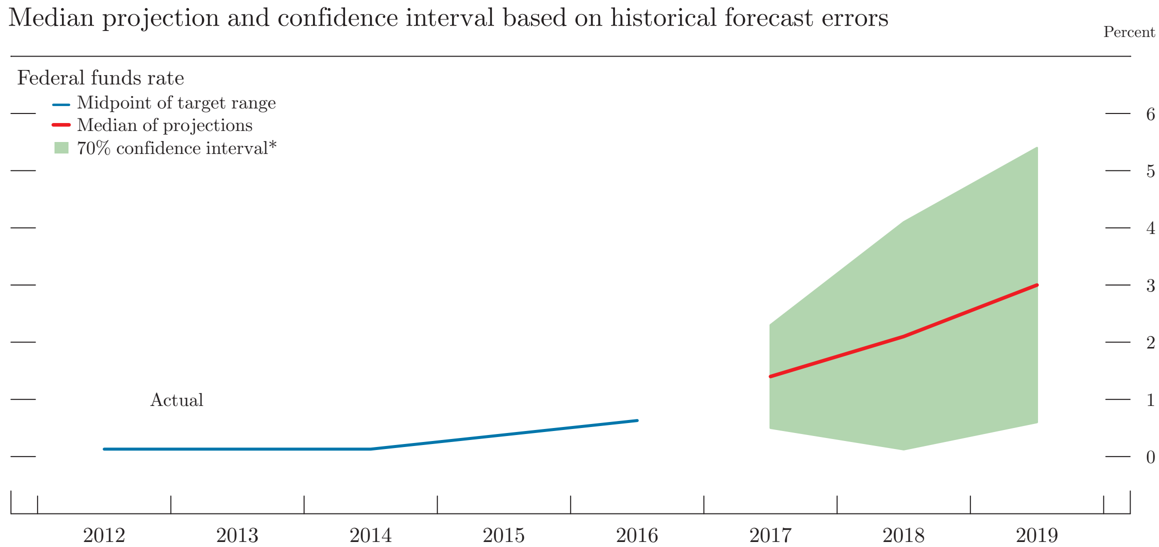


FOMC participants' assessments of uncertainty and risks around their economic projections



Note: The blue and red lines in the top panel show actual values and median projected values, respectively, of the percent change in the price index for personal consumption expenditures (PCE) from the fourth quarter of the previous year to the fourth quarter of the year indicated. The confidence interval around the median projected values is assumed to be symmetric and is based on root mean squared errors of various private and government forecasts made over the previous 20 years; more information about these data is available in Table 2. Because current conditions may differ from those that prevailed on average over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections; these current assessments are summarized in the lower panels. Generally speaking, participants who judge the uncertainty about their projections as "broadly similar" to the average levels of the past 20 years would view the width of the confidence interval shown in the historical fan chart as largely consistent with their assessments of the uncertainty about their projections. Likewise, participants who judge the risks to their projections as "broadly balanced" would view the confidence interval around their projections as approximately symmetric. For definitions of uncertainty and risks in economic projections, see the box "Forecast Uncertainty."

Exhibit 5. Uncertainty in projections of the federal funds rate



NOTE: The blue and red lines are based on actual values and median projected values, respectively, of the Committee's target for the federal funds rate at the end of the year indicated. The actual values are the midpoint of the target range; the median projected values are based on either the midpoint of the target range or the target level. The confidence interval around the median projected values is based on root mean squared errors of various private and government forecasts made over the previous 20 years. The confidence interval is not strictly consistent with the SEP projections for the federal funds rate, primarily because the SEP projections are not forecasts of the likeliest outcomes for the federal funds rate, but rather projections of participants' individual assessments of appropriate monetary policy. Still, historical forecast errors provide a broad sense of the uncertainty around the future path of the federal funds rate generated by the uncertainty about the macroeconomic variables as well as additional adjustments to monetary policy that may be appropriate to offset the effects of shocks to the economy.

The confidence interval is assumed to be symmetric, except when it is truncated at zero—the bottom of the lowest target range for the federal funds rate that has been adopted in the past by the Committee. This truncation is not intended to indicate the likelihood of the use of negative interest rates to provide additional monetary policy accommodation if doing so was judged appropriate. In such situations, the Committee could also employ other tools, including forward guidance and large-scale asset purchases, to provide additional accommodation. Because current conditions may differ from those that prevailed on average over the previous 20 years, the width and shape of the confidence interval estimated on the basis of the historical forecast errors may not reflect FOMC participants' current assessments of the uncertainty and risks around their projections.

* The confidence interval is derived from forecasts of the average level of short-term interest rates in the fourth quarter of the year indicated; more information about these data is available in Table 2. The shaded area encompasses less than a 70 percent confidence interval if it has been truncated at zero.

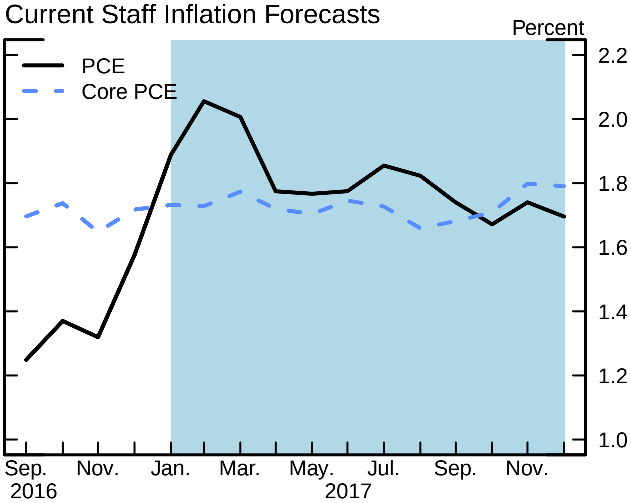
Appendix 6: Materials used by Mr. Laubach

Material for the Briefing on

Monetary Policy Alternatives

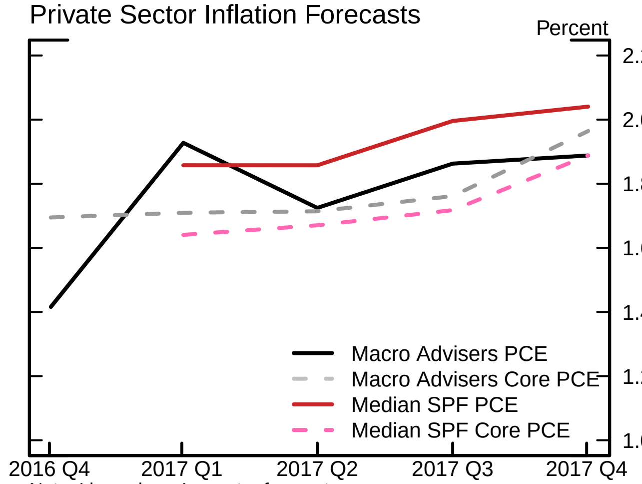
Thomas Laubach
Exhibits by Michelle Bongard
March 14–15, 2017

Current Staff Inflation Forecasts



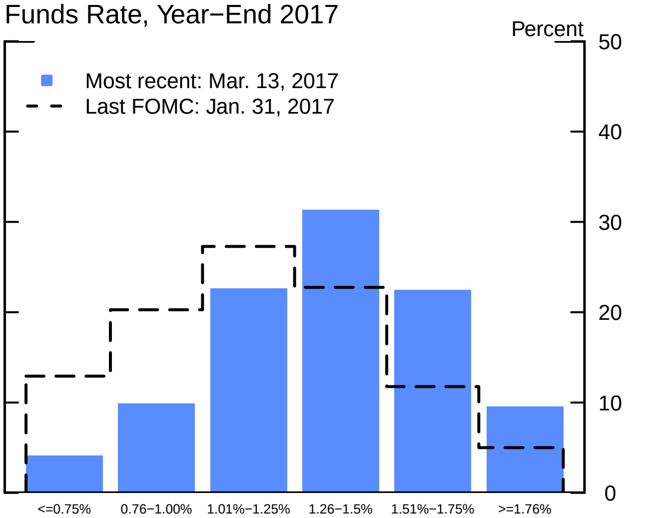
Note: Lines show 12−month inflation through the indicated month. Forecasts were last updated on March 9, 2017.
Source: Staff calculations.

Private Sector Inflation Forecasts



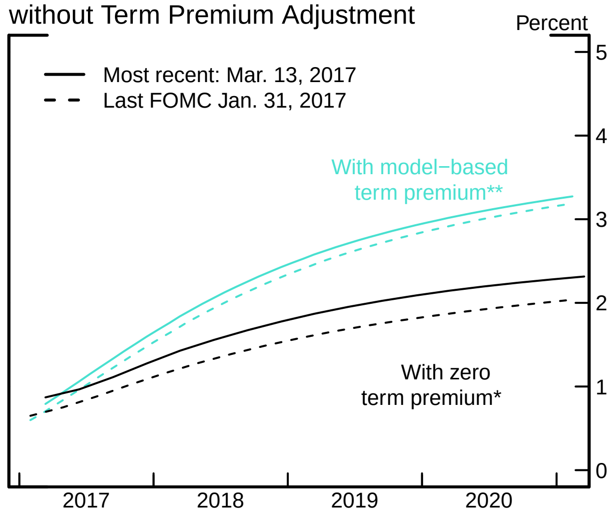
Note: Lines show 4−quarter forecasts.
Source: February Survey of Professional Forecasters, and Macroeconomic Advisers (March 3).

Market−Implied Probability Distribution of the Federal Funds Rate, Year−End 2017



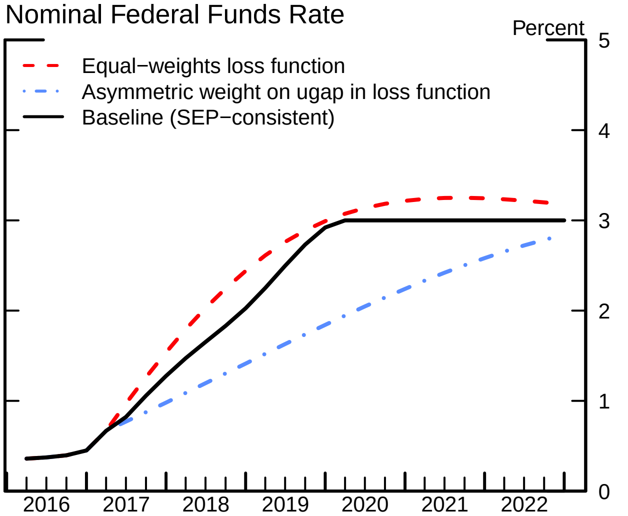
Note: Estimated from Eurodollar futures options, accounting for the differences in the levels and option−implied volatilities of LIBOR and the federal funds rate, but not adjusted for risk premiums.
Source: CME Group and staff calculations.

Market−Implied Rate Expectations with and without Term Premium Adjustment



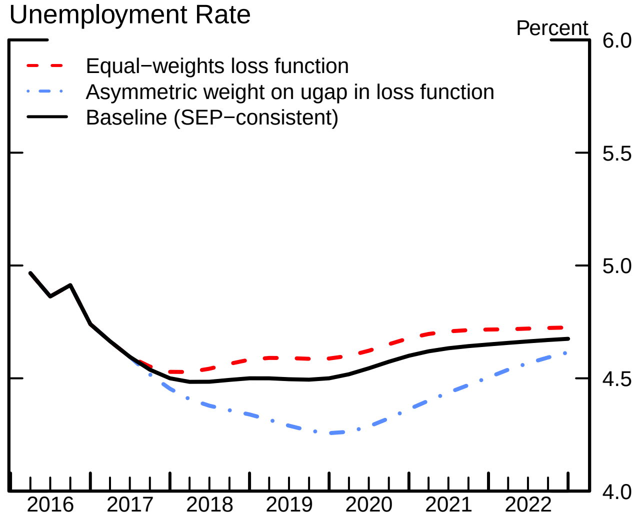
* Estimated with a spline approach and includes a term premium of zero.
** Estimated using a term structure model maintained by Board staff.
Source: Bloomberg, Blue Chip Financial Forecasts, and staff calculations.

Nominal Federal Funds Rate



Note: To construct an SEP−consistent baseline for the FRB/US model, the staff interpolated annual SEP information to quarterly frequency and assumed that beyond 2019 the economy transitions to the longer−run values in a smooth way.
Source: March SEP, FRB/US, and staff calculations.

Unemployment Rate



Note: To construct an SEP−consistent baseline for the FRB/US model, the staff interpolated annual SEP information to quarterly frequency and assumed that beyond 2019 the economy transitions to the longer−run values in a smooth way.
Source: March SEP, FRB/US, and staff calculations.

JANUARY-FEBRUARY 2017 FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in December indicates that the labor market has continued to strengthen and that economic activity has continued to expand at a moderate pace. Job gains remained solid and the unemployment rate stayed near its recent low. Household spending has continued to rise moderately while business fixed investment has remained soft. Measures of consumer and business sentiment have improved of late. Inflation increased in recent quarters but is still below the Committee's 2 percent longer-run objective. Market-based measures of inflation compensation remain low; most survey-based measures of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, labor market conditions will strengthen somewhat further, and inflation will rise to 2 percent over the medium term. Near-term risks to the economic outlook appear roughly balanced. The Committee continues to closely monitor inflation indicators and global economic and financial developments.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to maintain the target range for the federal funds rate at 1/2 to 3/4 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening 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 2017 ALTERNATIVE A

1. Information received since the Federal Open Market Committee met in ~~December~~ **February** indicates that the labor market ~~has continued to~~ strengthen**ed somewhat in recent months** and that economic activity has continued to expand at a moderate pace. Job gains remained solid**,** ~~and~~ **while** the unemployment rate ~~stayed near its recent low~~ **and other indicators of labor utilization changed little, on balance, and wage pressures remained subdued**. Household spending has continued to rise moderately while business fixed investment has ~~remained soft~~ **risen modestly**. ~~Measures of consumer and business sentiment have improved of late.~~ **Although** inflation increased in recent ~~quarters~~ **months** ~~but is still below~~**, moving toward** the Committee's 2 percent longer-run objective**, the rise largely reflected the temporary effects of recent increases in energy prices**. Market-based measures of inflation compensation remain low; ~~most~~ survey-based measures of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, labor market conditions will strengthen somewhat further, and inflation will rise to 2 percent over the medium term. Near-term risks to the economic outlook appear roughly balanced. The Committee continues to closely monitor inflation indicators and global economic and financial developments.

3. ~~In view of realized and expected labor market conditions and inflation~~ **Against this backdrop**, the Committee decided to maintain the target range for the federal funds rate at 1/2 to 3/4 percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a **sustained** 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~~ **inflation developments relative to** its **symmetric** 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 2017 ALTERNATIVE B

1. Information received since the Federal Open Market Committee met in ~~December~~ **February** indicates that the labor market has continued to strengthen and that economic activity has continued to expand at a moderate pace. Job gains remained solid and the unemployment rate ~~stayed near its recent low~~ **was little changed in recent months**. Household spending has continued to rise moderately while business fixed investment ~~has remained soft~~ **appears to have firmed somewhat**. ~~Measures of consumer and business sentiment have improved of late.~~ Inflation **has** increased in recent quarters ~~but is still below~~**, moving close to** the Committee's 2 percent longer-run objective**; excluding energy and food prices, inflation is little changed and continues to run somewhat below 2 percent**. Market-based measures of inflation compensation remain low; ~~most~~ survey-based measures of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, labor market conditions will strengthen somewhat further, and inflation will ~~rise to~~ **stabilize around** 2 percent over the medium term. Near-term risks to the economic outlook appear roughly balanced. The Committee continues to closely monitor inflation indicators and global economic and financial developments.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to ~~maintain~~ **raise** the target range for the federal funds rate ~~at 1/2~~ to 3/4 **to 1** percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a **sustained** 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~~ **inflation developments relative to** its **symmetric** 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 2017 Alternative C

1. Information received since the Federal Open Market Committee met in ~~December~~ **February** indicates that the labor market has continued to strengthen and that economic activity has continued to expand at a moderate pace. Job gains ~~remained solid~~ **picked up** and the unemployment rate ~~stayed near its recent low~~ **was little changed in recent months**. Household spending has continued to rise moderately while business fixed investment ~~has remained soft~~ **appears to have firmed somewhat**. ~~Measures of consumer and business sentiment have improved of late.~~ Inflation **has** increased in recent quarters ~~but is still below~~**, moving close to** the Committee's 2 percent longer-run objective. Market-based measures of inflation compensation ~~remain low; most~~ **and** survey-based measures of longer-term inflation expectations are little changed, on balance.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects that, with **further** gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace, labor market conditions will strengthen somewhat further, and inflation will ~~rise to~~ **stabilize around** 2 percent over the medium term. Near-term risks to the economic outlook appear roughly balanced. The Committee continues to closely monitor inflation indicators and global economic and financial developments.

3. In view of realized and expected labor market conditions and inflation, the Committee decided to ~~maintain~~ **raise** the target range for the federal funds rate ~~at 1/2~~ to 3/4 **to 1** percent. The stance of monetary policy remains accommodative, thereby supporting some further strengthening in labor market conditions and a **sustained** 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 **currently** expects that economic conditions will evolve in a manner that will warrant ~~only~~ gradual increases in the federal funds rate~~;~~ **and that** 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.

Implementation Note for March 2017 Alternative A

*Release Date: ~~February 1~~ **March 15**, 2017*

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 statement on ~~February 1~~ **March 15**, 2017:

- The Board of Governors of the Federal Reserve System voted unanimously to maintain the interest rate paid on required and excess reserve balances at 0.75 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 ~~February 2~~ **March 16**, 2017, 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 1/2 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 0.50 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 voted unanimously to approve the establishment of the primary credit rate at the existing level of 1.25 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 2017 Alternatives B and C

*Release Date: ~~February 1~~ **March 15**, 2017*

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 statement on ~~February 1~~ **March 15**, 2017:

- The Board of Governors of the Federal Reserve System voted unanimously to ~~maintain~~ **raise** the interest rate paid on required and excess reserve balances ~~at~~ **to** ~~0.75~~ **1.00** percent, effective ~~February 2~~ **March 16**, 2017.

- 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 ~~February 2~~ **March 16**, 2017, 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 ~~1/2 to~~ 3/4 **to 1** 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 ~~0.50~~ **0.75** 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 voted unanimously to approve ~~the establishment of~~ **a 1/4 percentage point increase in** the primary credit rate ~~at the existing level of 1.25~~ **to 1.50** percent**, effective March 16, 2017**. **In taking this action, the Board approved requests to establish that rate 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 7: Materials used by Mr. Wascher

Class II FOMC – Restricted (FR)

Material for

Consumer Price Index Update

William Wascher
March 15, 2017

Recent Changes in Consumer Price Indexes
(Percent changes)

	Monthly change			Feb./Feb. change	
	Dec.	Jan.	Feb.	2016	2017
Total CPI	**0.3**	**0.6**	**0.1**	**1.0**	**2.7**
March TB			*0.1*		*2.8*
Food	0.0	0.1	0.2		
March TB			*0.2*		
Energy	1.2	4.0	−1.0		
March TB			*−1.7*		
Core CPI	**0.2**	**0.3**	**0.2**	**2.3**	**2.2**
March TB			*0.2*		*2.3*

Note: February 2017 CPI data released at 8:30 a.m. on March 15, 2017.