

Appendix 1: Materials used by Mr. Potter

Class II FOMC – Restricted (FR)

Material for the Briefing on

**Financial Developments and
Open Market Operations**

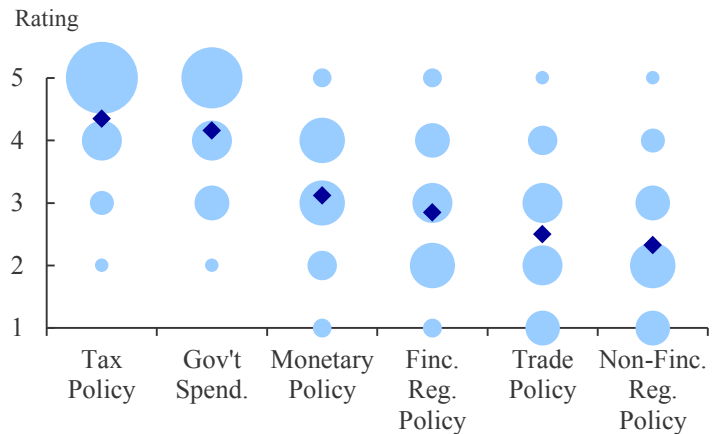
Simon Potter
December 13, 2016

(1) Changes in Asset Prices Since Nov. FOMC

	Change	Current Level
Nominal 10-Year TSY Yield	+64 bps	2.47%
5Y5Y Breakeven Inflation	+33 bps	2.08%
U.S. Broad T.W. Dollar	+2.9%	127
S&P 500 Index	+7.0%	2260
JPM EM FX Index	-3.5%	66
High-Yield OAS	-75 bps	4.17%

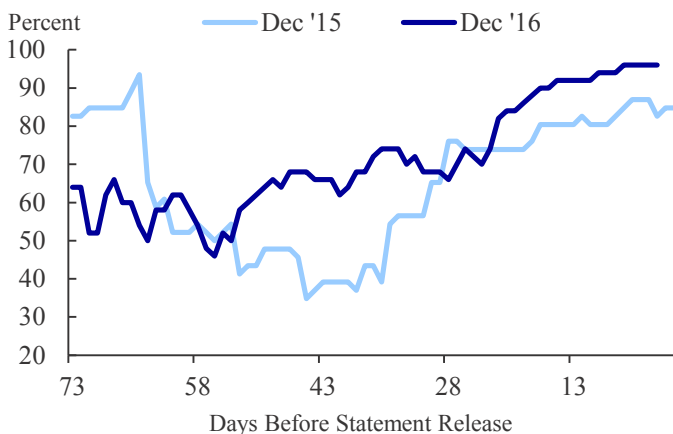
Source: Barclays, Bloomberg, Federal Reserve Board, J.P. Morgan

(2) Importance of U.S. Economic Policies Explaining Change in the 10-Year Treasury Yield*



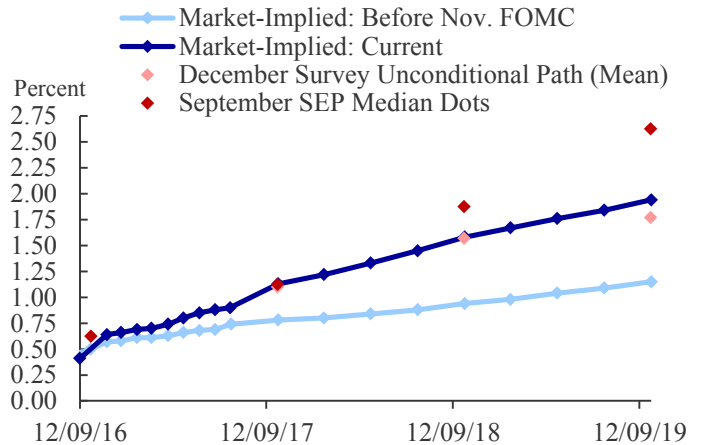
*Based on all responses from the December Surveys of Primary Dealers and Market Participants. Diamonds indicate average.
Source: FRBNY

(3) Probability of a Rate Hike by December FOMC*



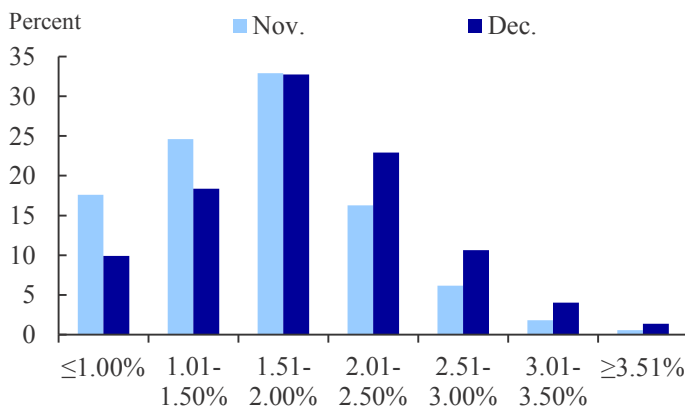
*Series start day of August Employment Situation release. Assumes a current effective rate of 12 bps increasing to 35 bps for the Dec. '15 meeting and a current effective rate of 40 bps increasing to 65 bps for the Dec. '16 meeting.
Source: Bloomberg, Desk Calculations

(4) Implied Federal Funds Rate Path*



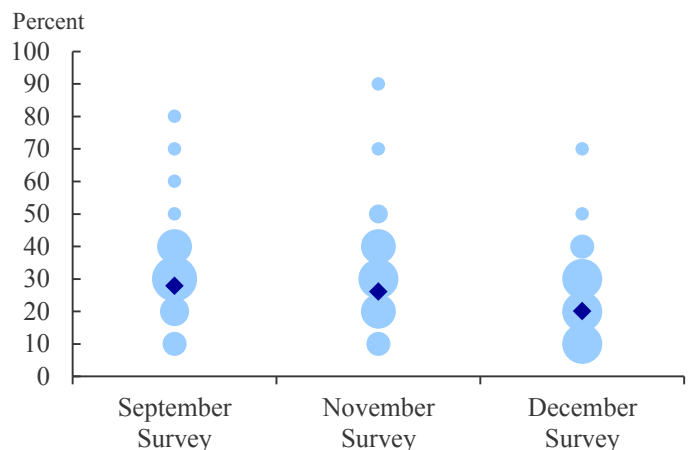
*Market-implied paths derived from federal funds and Eurodollar futures. Survey path is the average PDF-implied means from the December surveys of Primary Dealers and Market Participants.
Source: Bloomberg, Desk Calculations, Federal Reserve Board, FRBNY

(5) Year-End 2018 Fed Funds PDF Conditional on Not Moving to the ZLB*



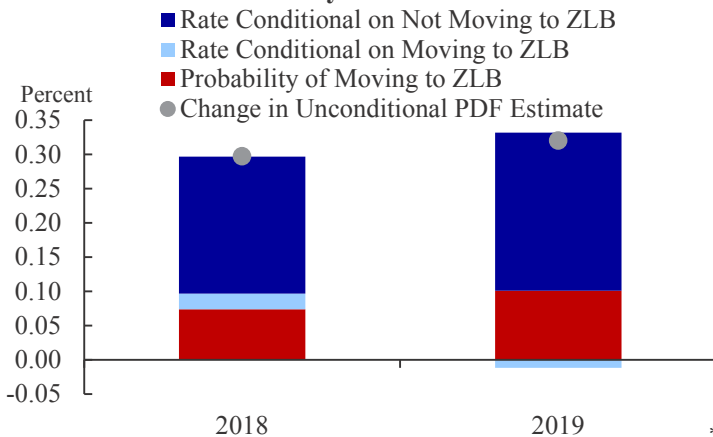
*Based on all responses from the Surveys of Primary Dealers and Market Participants.
Source: FRBNY

(6) Probability Assigned to Moving to the ZLB*



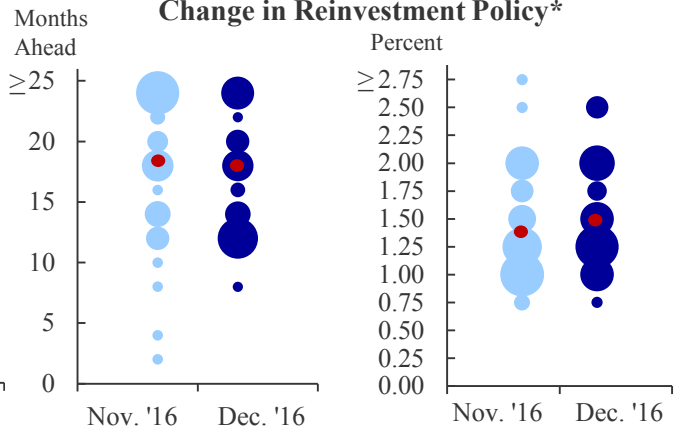
*Based on all responses from the Surveys of Primary Dealers and Market Participants. Diamonds indicate average.
Source: FRBNY

(7) Decomposition of Changes in Unconditional Survey Path from Nov. to Dec.*



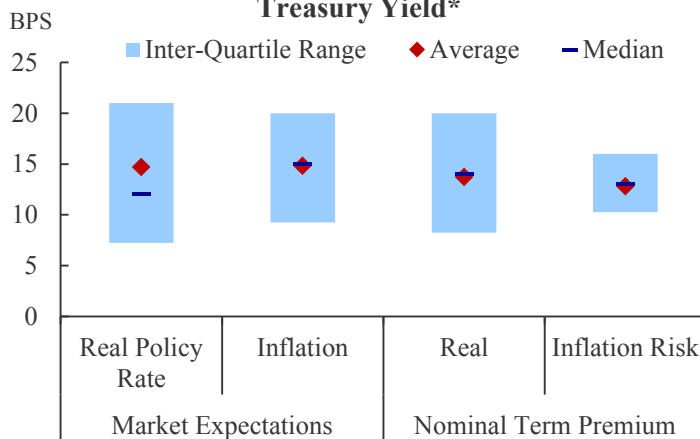
*Based on all responses from the November and December Surveys of Primary Dealers and Survey of Market Participants. Source: FRBNY

(8) Timing of and Fed Funds Rate Expected at Change in Reinvestment Policy*



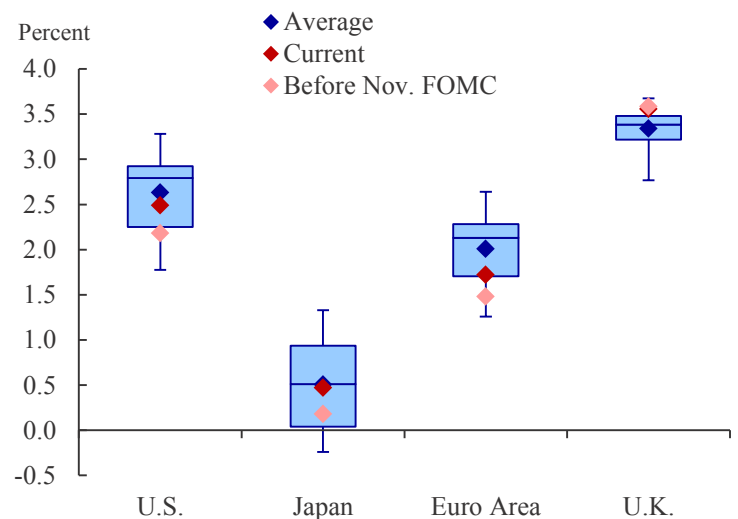
*Dots scaled by percent of respondents from the Nov. and Dec. Surveys of Primary Dealers and Market Participants. Red dot is median. If expected time of policy change differs between Treasury and MBS, earlier is taken. Source: FRBNY

(9) Decomposition of Change in 10-Year Nominal Treasury Yield*



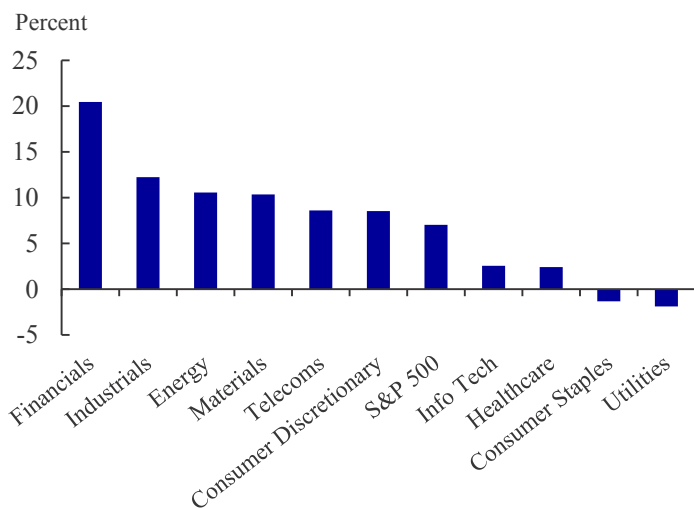
*Based on all responses from the December Surveys of Primary Dealers and Market Participants. Change decomposition is from Nov. 1 to Nov. 30, 2016. Source: FRBNY

(10) Five-Year, Five Year Inflation Swaps Since 2011



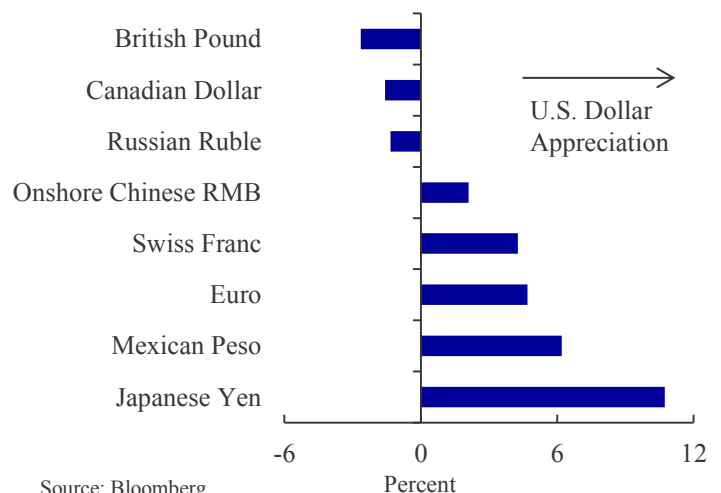
Source: Barclays

(11) S&P Sector Performance Since Nov. FOMC



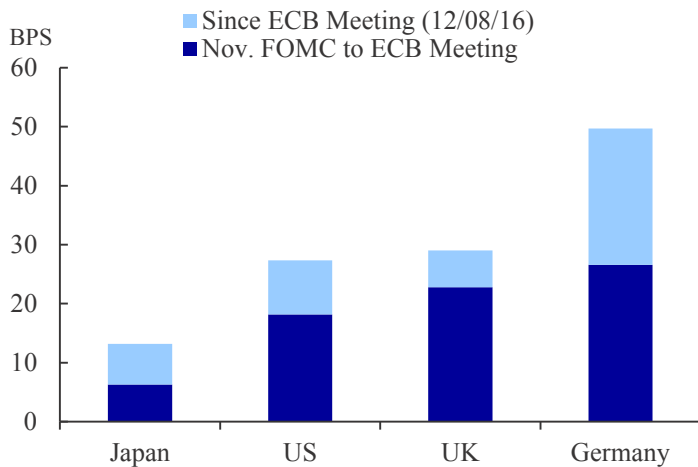
Source: Bloomberg

(12) Currency Change Against U.S. Dollar Since Nov. FOMC



Source: Bloomberg

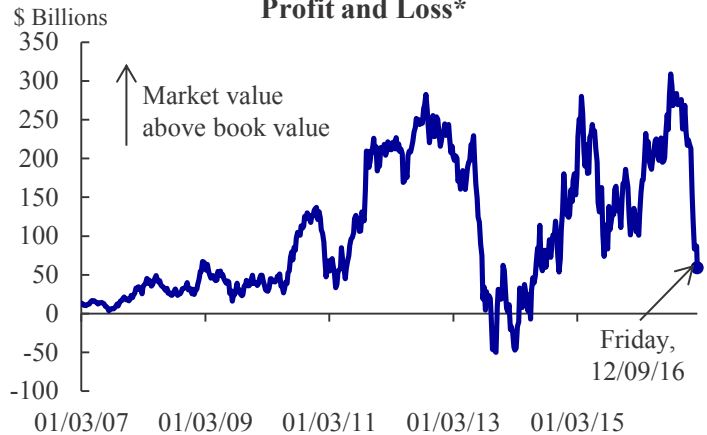
(13) Changes in Yield Curve Steepness Since Nov. FOMC*



*30-year yield less 2-year yield.

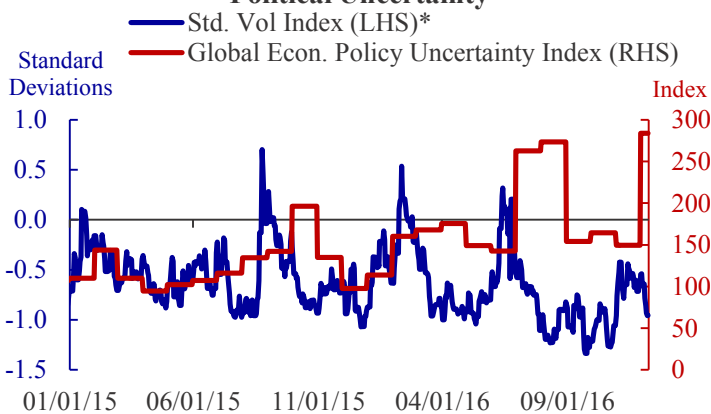
Source: Bloomberg

(14) SOMA Domestic Portfolio Unrealized Profit and Loss*



*Wednesday values shown, except last value. Missing or incomplete values replaced with the value from the prior business day. Agency MBS Unrealized PnL taken from Blackrock Solutions and do not include unsettled amounts. Source: FRBNY

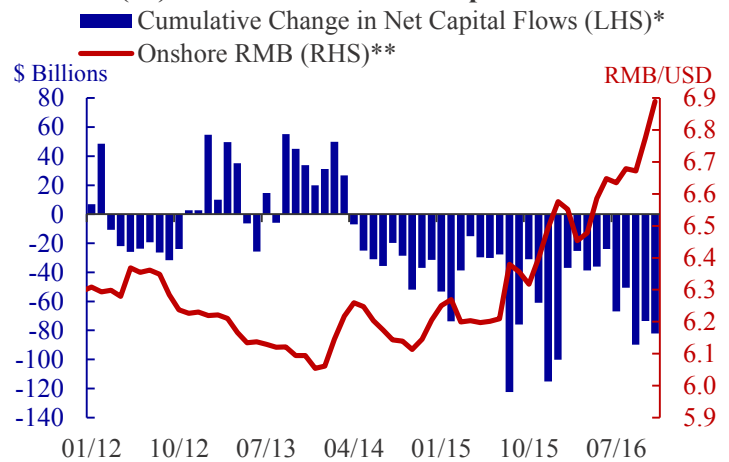
(15) Standardized Implied Volatility and Global Political Uncertainty



*Simple average of standardized VIX, DM FX implied volatility, 1-month 2-year swaption-implied volatility, and 1-month 10-year swaption-implied volatility re-standardized back to June 1994.

Source: Bloomberg, Baker, Bloom and Davis, Desk Calculations

(16) RMB Level and Net Capital Flows

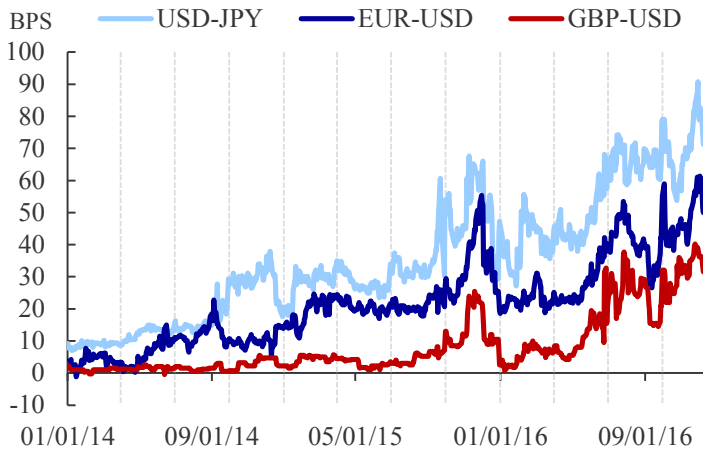


*Reflects financial account balance plus errors and omissions.

**Month-end level.

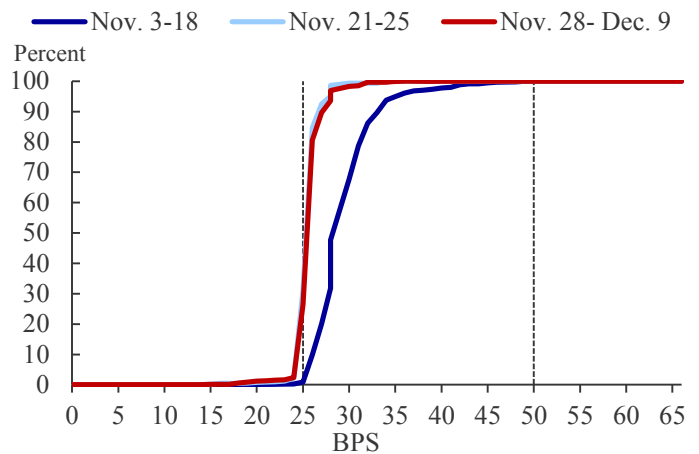
Source: Bloomberg, IIF, Staff estimate for Nov. '16

(17) Three-Month Swap Basis*



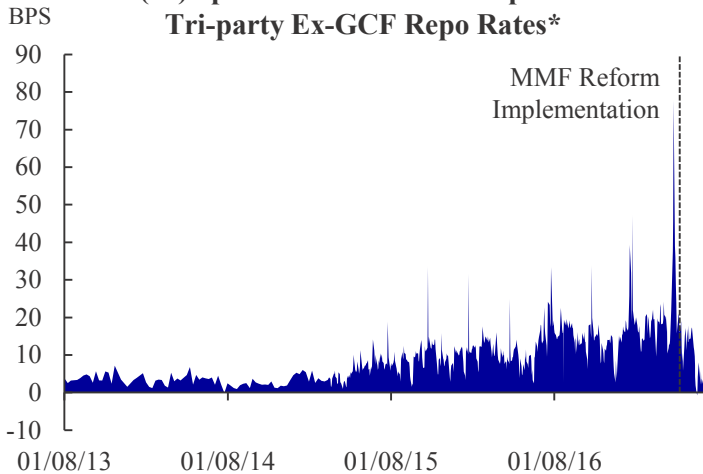
*Dashed lines indicate quarter end dates.
Source: Bloomberg

(18) Distribution of Overnight Treasury Tri-Party Ex-GCF Repo Volumes*



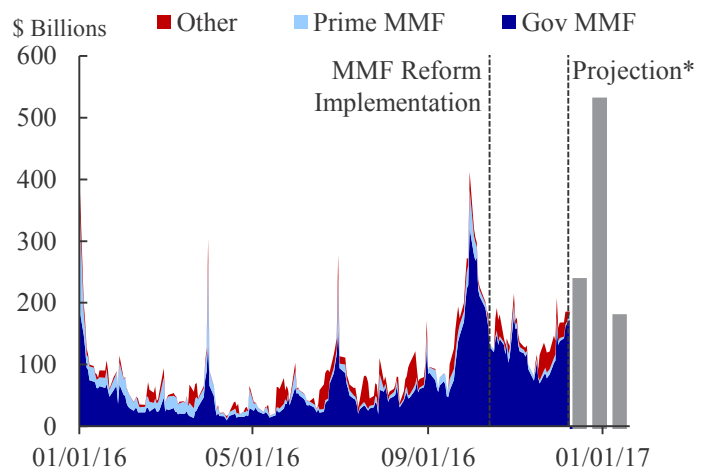
*Excludes intrabank transactions.
Source: BNYM Matching Data, DTCC, FRBNY, JPMC

(19) Spread Between GCF Repo and Tri-party Ex-GCF Repo Rates*



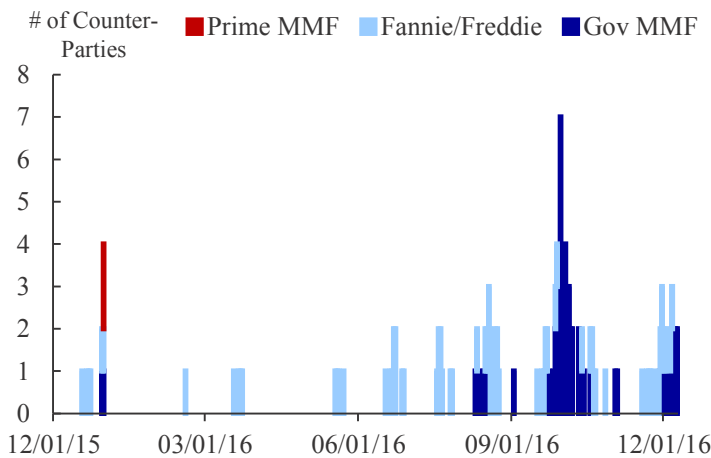
*Tri-party ex-GCF data series begins 01/08/13 and excludes intrabank transactions.
Source: Bloomberg, BNYM Matching Data, DTCC, FRBNY, JPMC

(20) ON RRP Take-Up by Counterparty Type



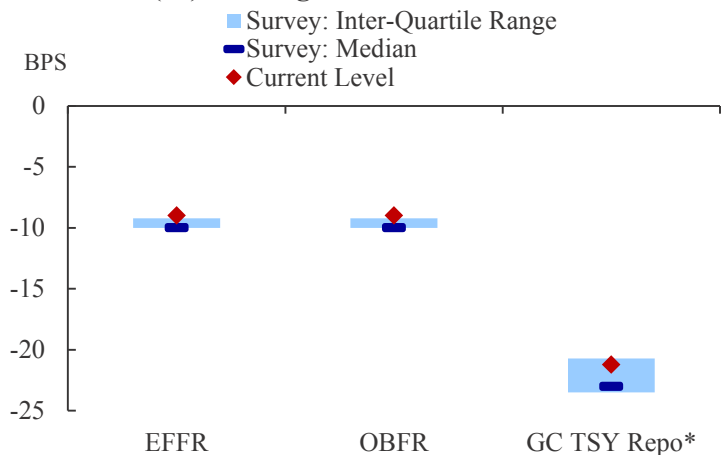
*Survey respondents projected take-up for 12/16, 12/30, and 1/13.
Source: FRBNY, FRBNY Survey of MMFs

(21) Number of RRP Counterparties Participating at 50 Percent or Greater of Individual Limit



Source: FRBNY

(22) Overnight Rates Relative to IOER



*Current and survey levels reflect triparty ex-GCF which are representative of the rate MMFs receive from dealers.
Source: FRBNY, FRBNY Survey of MMFs (results for 12/16/16)

Appendix 1: Desk Operational Readiness Framework

- Developed over past 2 years in consultation with Board staff
 - Assesses readiness to execute full range of SOMA operations
 - Provides means to communicate the time required to deploy operations not currently in use and more effectively prioritize and employ limited resources to improve operational capabilities
- Desk plans to update the Committee on the operational readiness prioritization process and any ongoing projects on an annual basis going forward

Appendix 2: Summary of Operational Testing

Summary of Operational Tests in prior period:

- Domestic Authorization
 - November 29: Outright MBS Sale (specified pool) for \$58 million
 - December 1: Outright MBS Sale (basket) for \$19.8 million
 - December 6: Treasury Outright Sale for \$400 million
 - December 7: Overnight repo for \$59 million

Upcoming Operational Tests

- None

Appendix 2: Materials used by Ms. Aaronson and Mr. Doyle

Class II FOMC – Restricted (FR)

Material for

**Staff Presentation on the Economic and Financial
Situation**

Stephanie R. Aaronson and Brian M. Doyle
December 13, 2016

Near-term

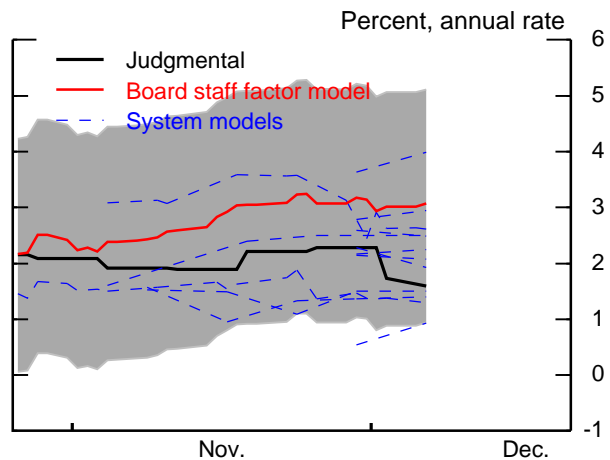
1. Near-Term Outlook

(Quarterly percent changes or percentage point contributions at annual rate)

	2016			
	H1	Q3 ^f	Q4 ^f	H2 ^f
1. Real GDP	1.1	3.3	1.6	2.4
2. October TB	1.1	2.5	2.1	2.3
<i>Contributions to growth:</i>				
3. PDPF	1.8	1.8	2.1	2.0
4. Inventory inv.	-0.8	0.5	-0.3	0.1
5. Government	0.0	0.1	0.4	0.3
6. Net exports	0.1	0.8	-0.6	0.1
<i>Memo:</i>				
7. Real GDI Growth	0.8	5.3	2.4	3.9

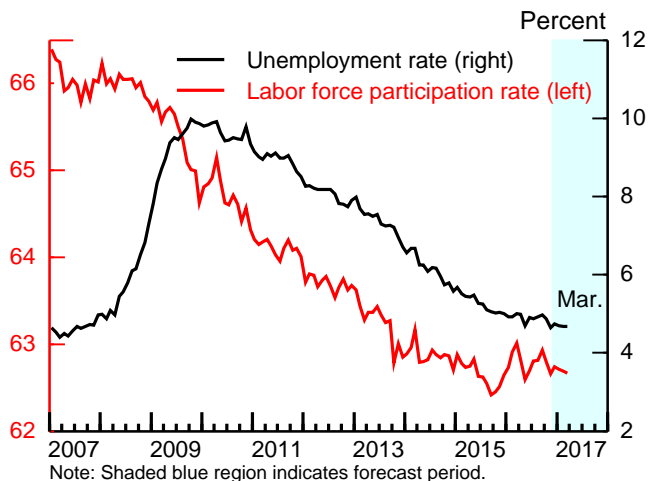
f: Staff forecast.

2. Evolution of 2016:Q4 GDP Growth Nowcasts



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

3. Unemployment Rate and Labor Force Participation Rate



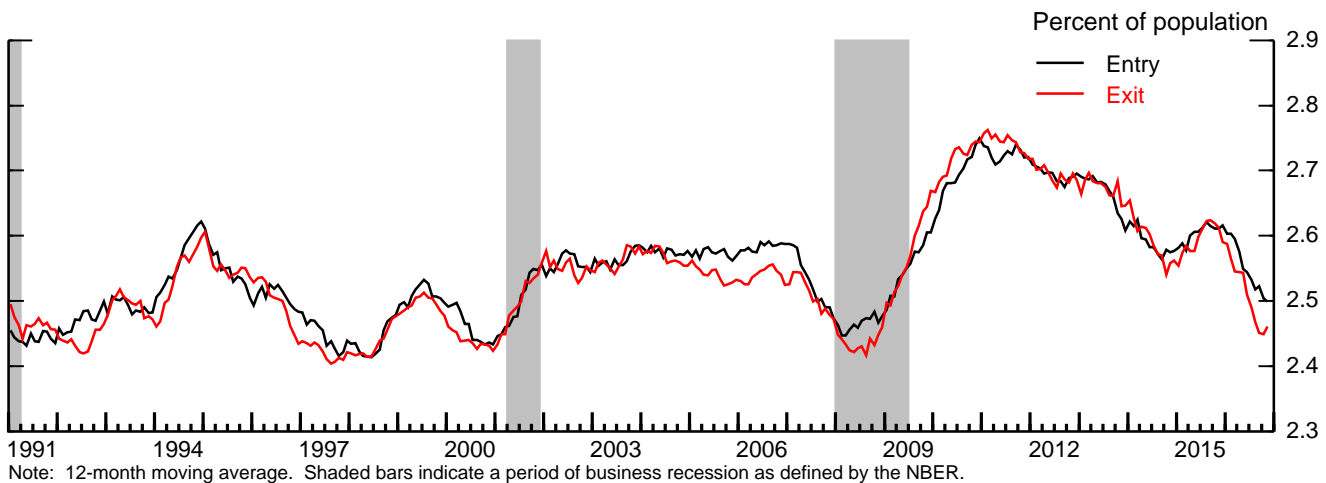
Note: Shaded blue region indicates forecast period.

4. Unemployment-to-Employment Transition Rate



Note: 3-month moving average. Shaded bar indicates a period of business recession as defined by the NBER.

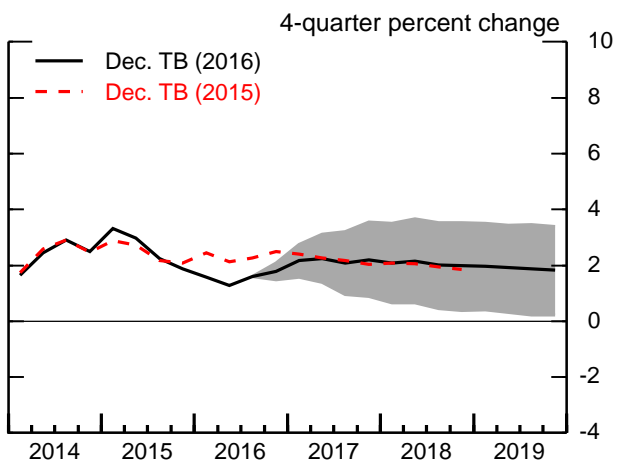
5. Labor Force Entry and Exit



Note: 12-month moving average. Shaded bars indicate a period of business recession as defined by the NBER.

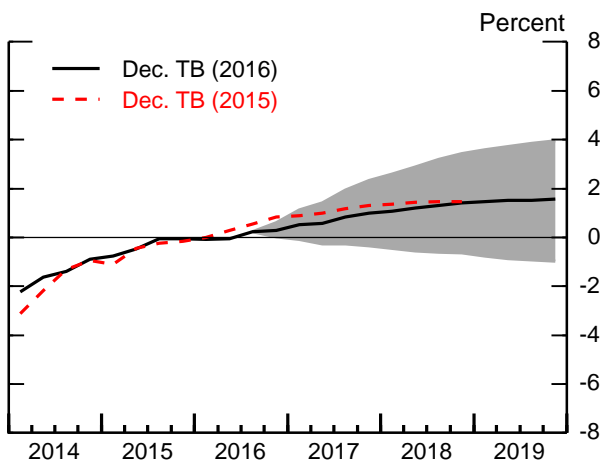
Staff Projection

1. Real GDP

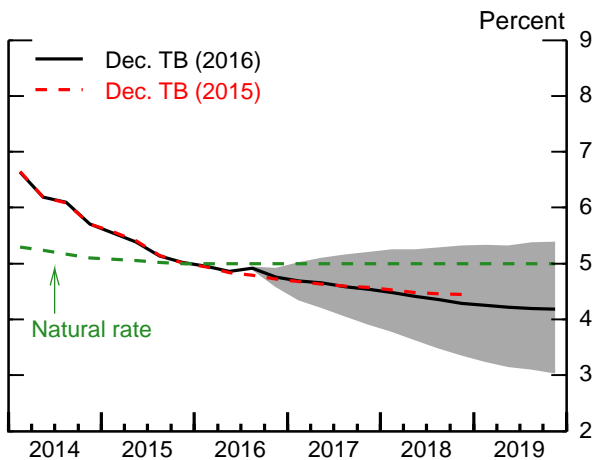


Note: The shaded regions for panels 1, 2, and 3 are the 70 percent confidence interval based on FRB/US stochastic simulations.

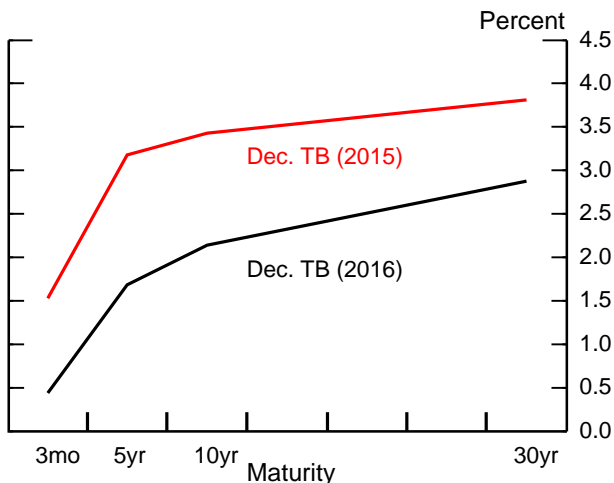
2. Output Gap Estimates



3. Unemployment Rate



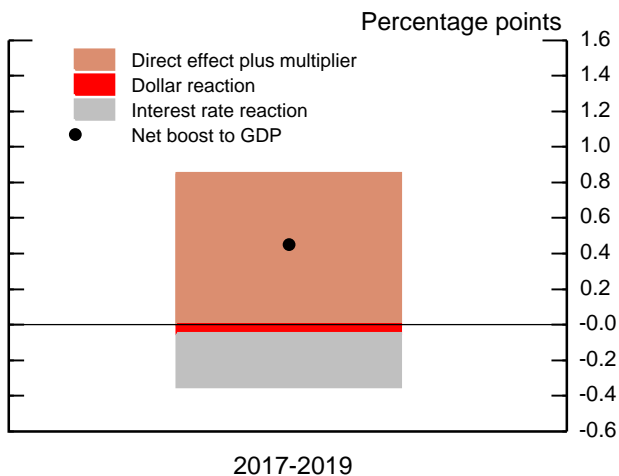
4. Treasury Yields in 2016:Q4



5. Fiscal Policy Assumptions

- Personal income tax cut worth 1 percent of GDP, beginning in 2017:Q3
- Cumulative direct effect on GDP of 0.7 (no multiplier, no financial reaction)
- Substantial financial restraint is already in place, but household spending adjusts over three years

6. Net Effect of Fiscal Policy

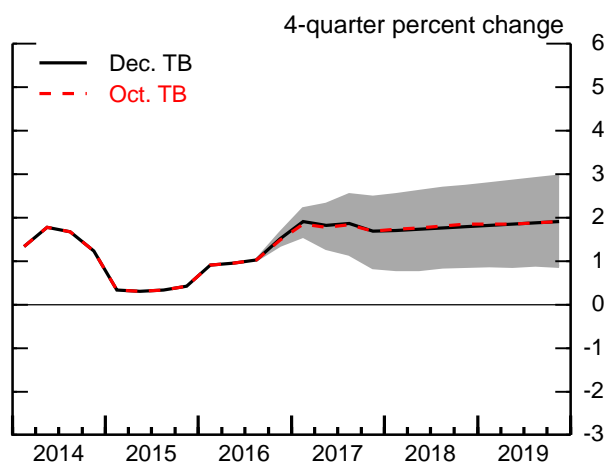


Class II FOMC - Restricted (FR)

Exhibit 3

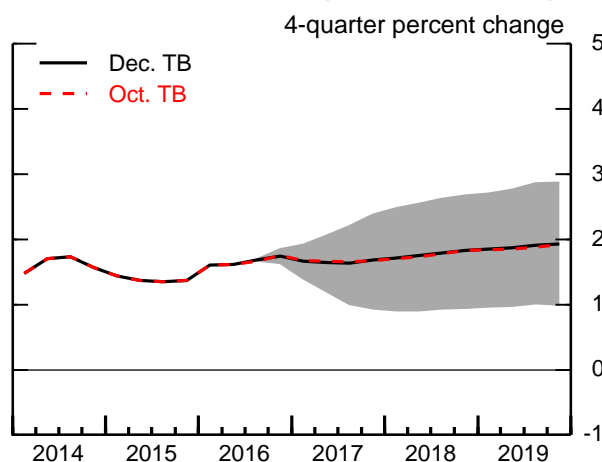
Inflation

1. PCE Prices

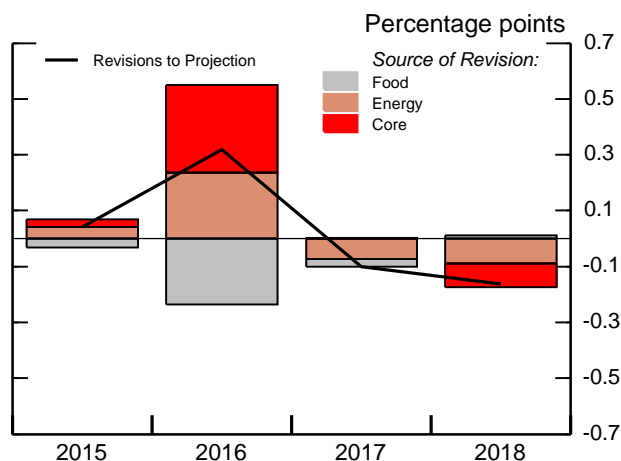


Note: The shaded regions for panels 1 and 2 are the 70 percent confidence interval based on FRB/US stochastic simulations.

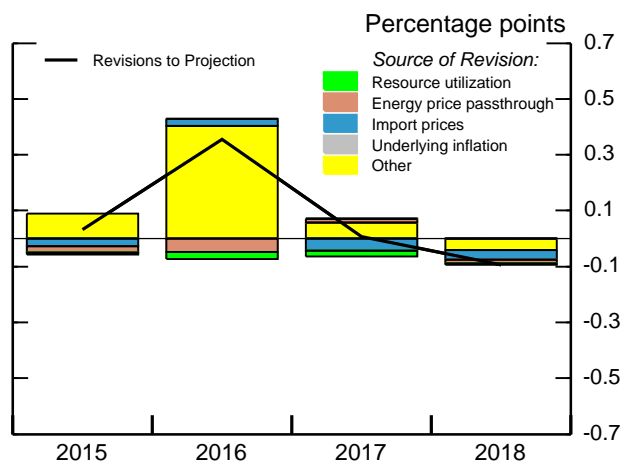
2. PCE Prices Excluding Food and Energy



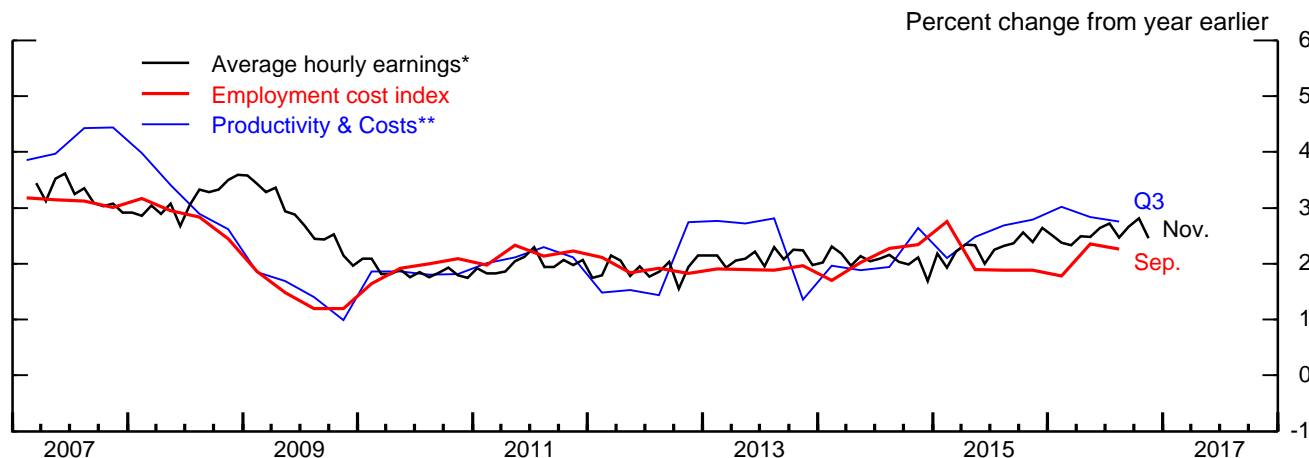
3. Inflation Revisions Since December: Total PCE



4. Inflation Revisions Since December: Core PCE



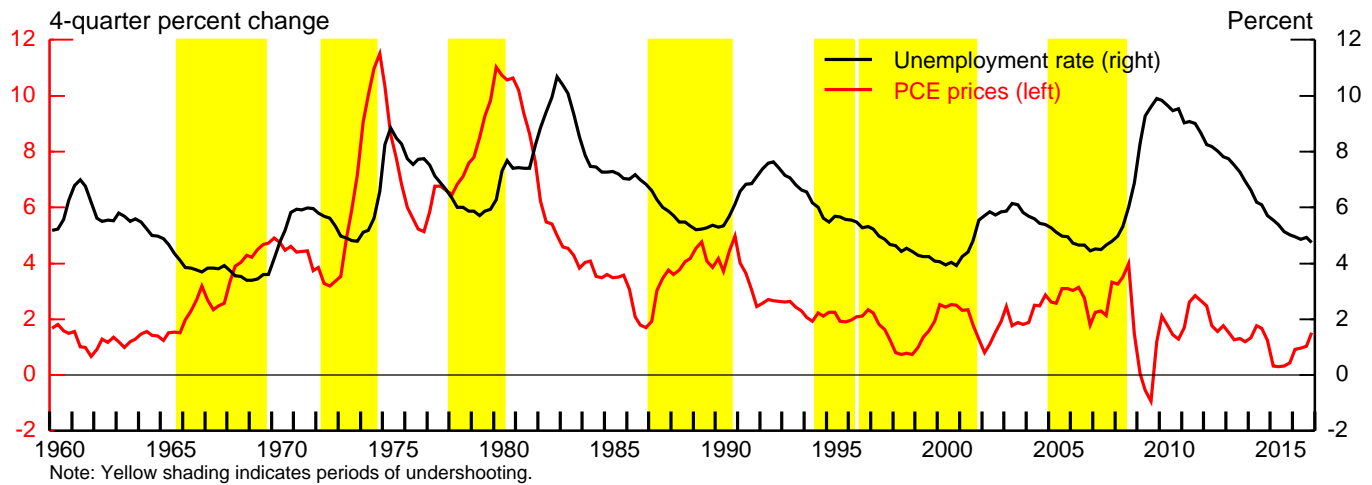
5. Measures of Labor Compensation



* All employees. ** 2016:Q3 based on staff estimate, data are 4 quarter moving average.

Highlights of Unemployment Rate Undershooting Memo

1. Unemployment Rate and Total PCE Prices



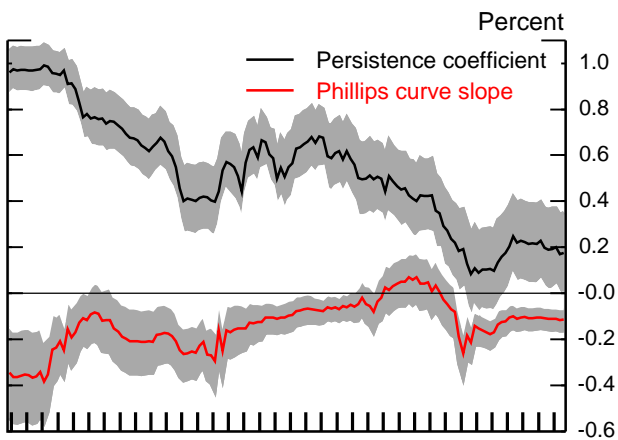
2. Findings

- Soft landings, while not common, have occurred
- Soft landings were generally accompanied by pre-emptive tightening and benign shocks
- Tight labor markets have often been associated with rising inflation, both domestically and internationally
- The evidence is ambiguous as to whether tight labor markets cause financial instability or have permanent positive spillovers

3. Inflation Episodes

- Many of the inflationary episodes occurred when the inflation process was more sensitive to slack and more persistent (e.g. 1960s and 1970s)
- Committee sometimes underestimated depth of undershoot, in part due to incomplete real-time data
- Monetary policymakers did not always focus on restraining economic activity to avoid inflation

4. Parameters of the Phillips Curve Over Time



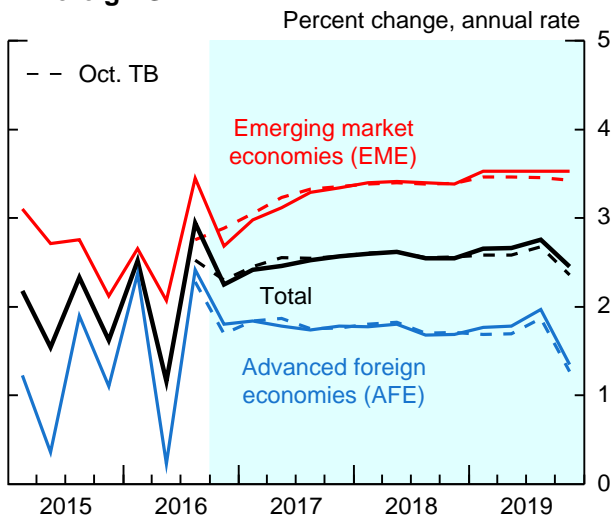
Note: Parameters are generated from 10 year rolling regressions beginning in 1970:Q1. Shaded regions indicate 70 percent confidence intervals.

5. Concluding Thoughts

- Changes to the inflation process and inflation below the Committee's objective reduce the probability of a sizable inflationary episode
- We continue to judge that financial stability vulnerabilities are currently at only a moderate level
- There is still substantial uncertainty about the current state of the economy
- The inflation process is not static
- The economy will be subject to shocks

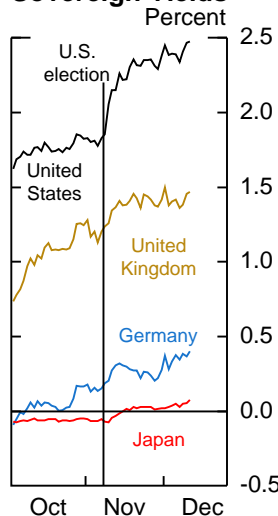
Foreign Outlook and Spillovers from U.S. Fiscal Policy

1. Foreign GDP*

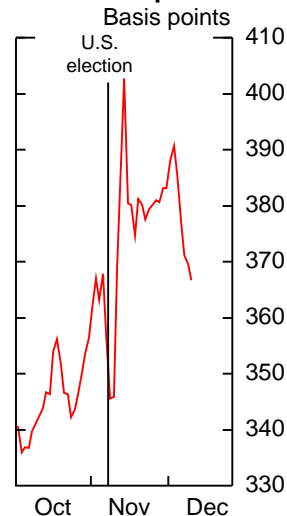


* Weighted by bilateral shares in U.S. merchandise exports.
Note: Shaded blue region indicates forecast period.

2. 10-Year AFE Sovereign Yields



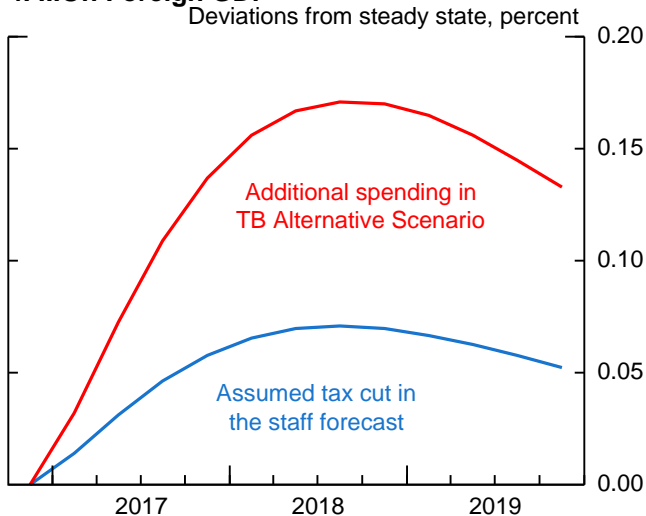
3. EMBI+ Spreads*



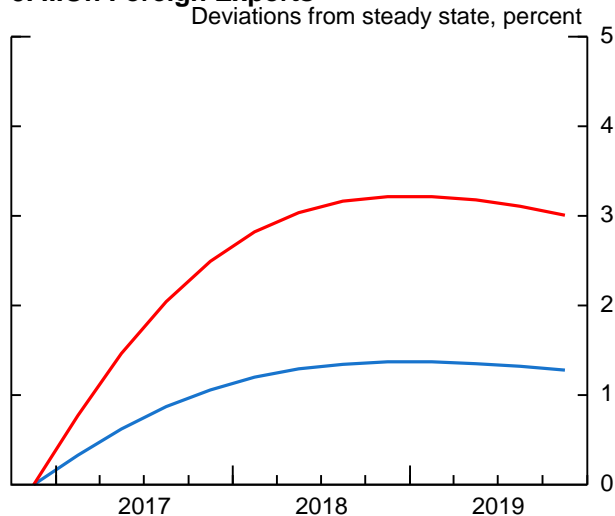
* Emerging market bond spreads over zero-coupon Treasuries.

Effects of a U.S. Fiscal Policy Shock on Foreign Economies

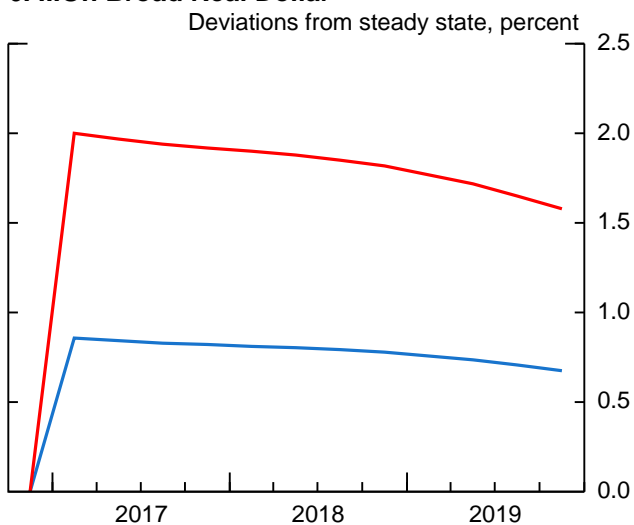
4. ...On Foreign GDP



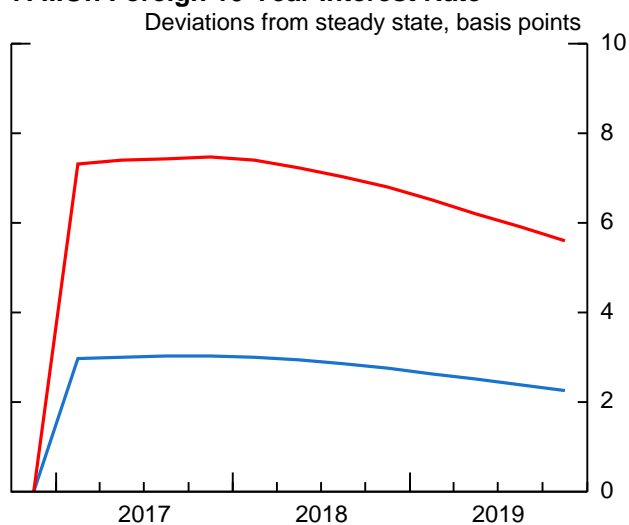
5. ...On Foreign Exports



6. ...On Broad Real Dollar

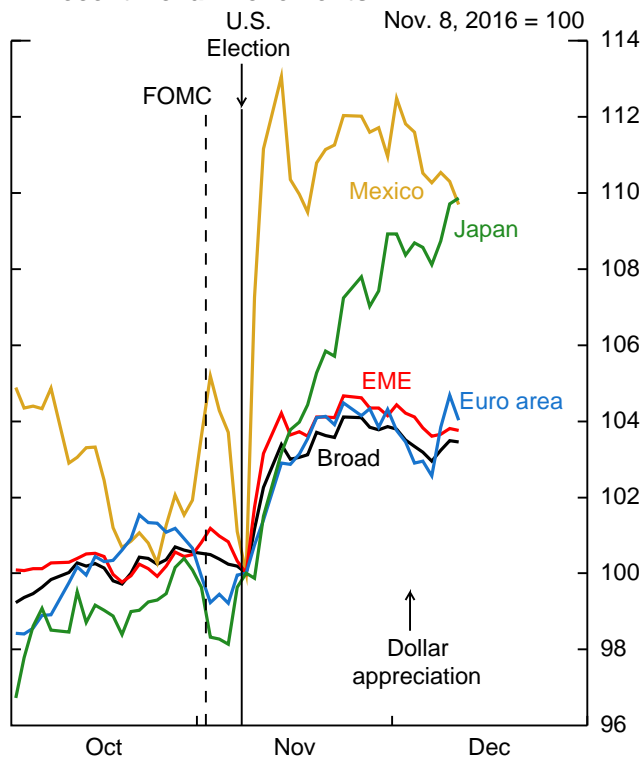


7. ...On Foreign 10-Year Interest Rate

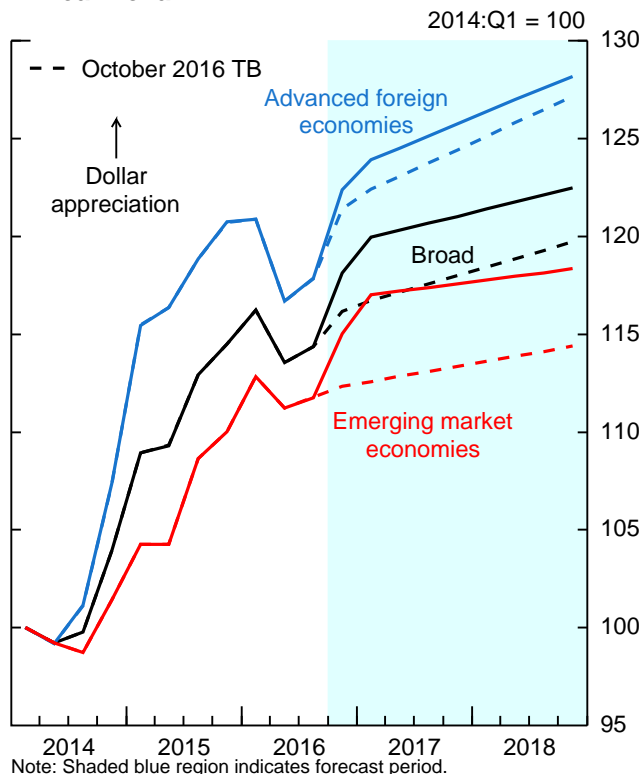


Understanding Movements in the Dollar

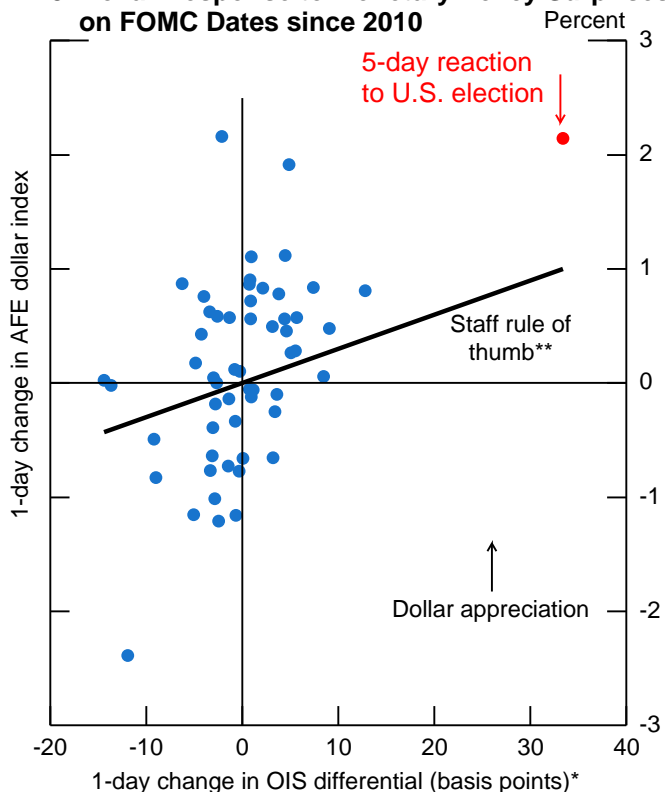
1. Recent Dollar Movements



2. Real Dollar



3. Dollar Response to Monetary Policy Surprises on FOMC Dates since 2010



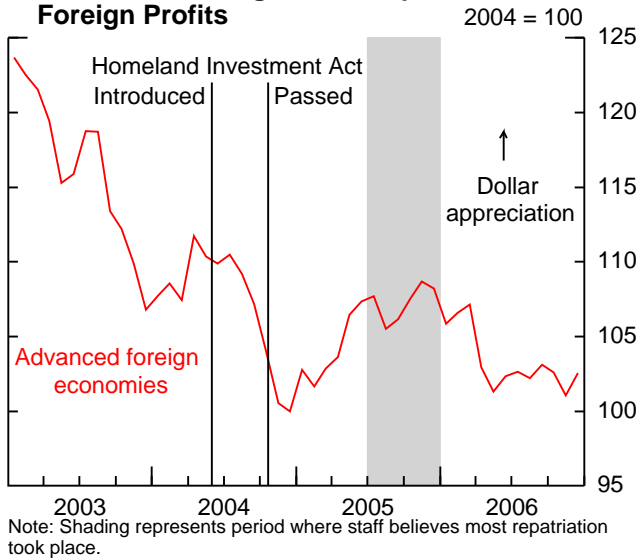
* Difference between U.S. and AFE market-implied 1-month policy rates, 2 years forward.
** The staff rule of thumb has a 1 percent move in the dollar for every 30 basis points of surprise in the 1 day change in the OIS differential.

4. Why Might the Dollar Response be Larger than Implied by Expected Fiscal Policy?

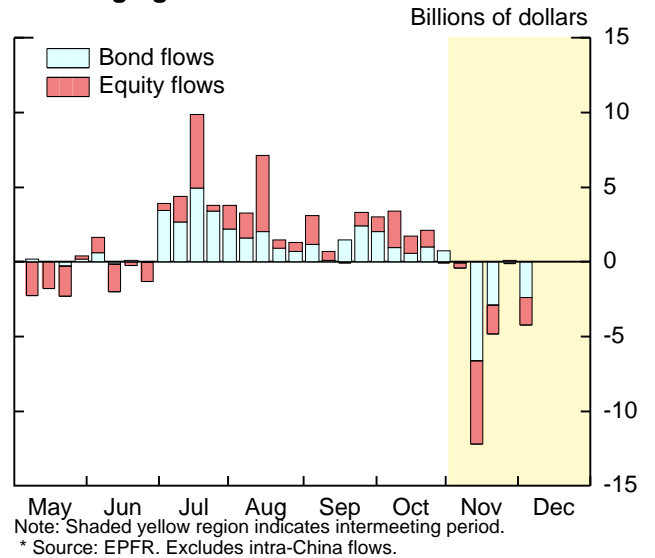
- Dollar is more sensitive to fiscal policy surprise than we expected
- Markets could be expecting a larger fiscal package
- Other factors may be influencing the dollar

Other Reasons for Dollar Movement

1. U.S. Dollar During Earlier Repatriation of Foreign Profits



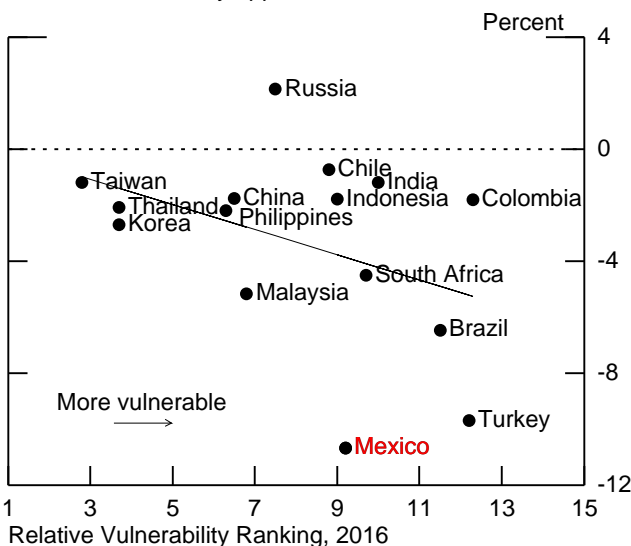
2. Emerging Market Flows*



Exchange Rate Movements

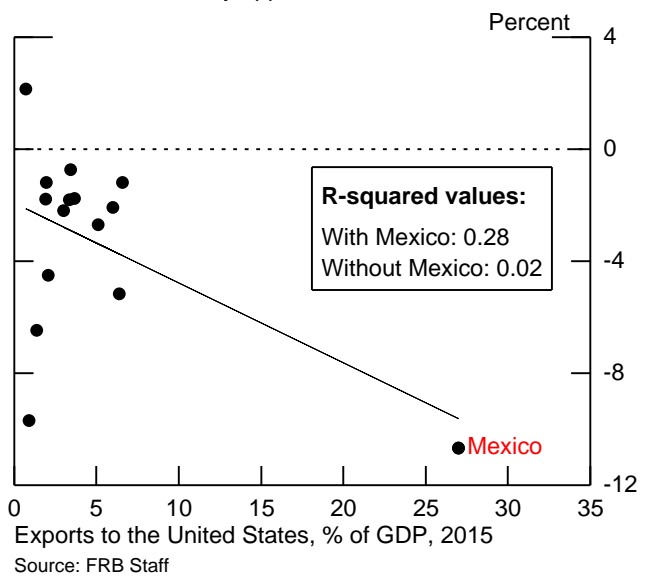
3. ...and Vulnerability

Currency appreciation, Nov 8 to Dec 9, 2016



4. ...and Exports

Currency appreciation, Nov 8 to Dec 9, 2016



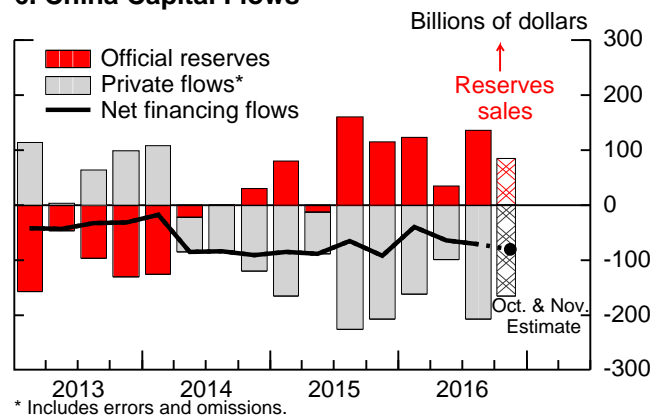
5. Key Political Events in the Euro Area Through 2017

	When?	What vote?
Netherlands	15-Mar-17	General Election
France	23-Apr-17	1st Round of Presidential Election
France	07-May-17	2nd Round of Presidential Election
Germany	TBD*	General Election

Source: Media articles and J.P. Morgan

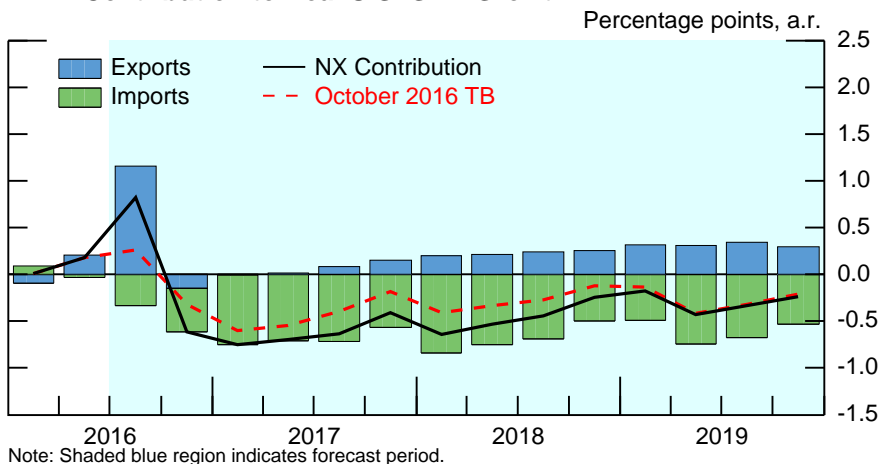
* According to German law, the election could take place anytime between August 27, 2017 and October 22, 2017.

6. China Capital Flows

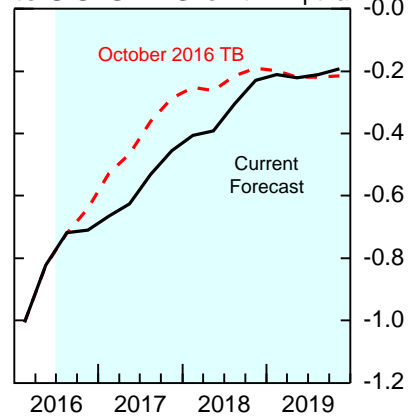


Trade and Trade Policy

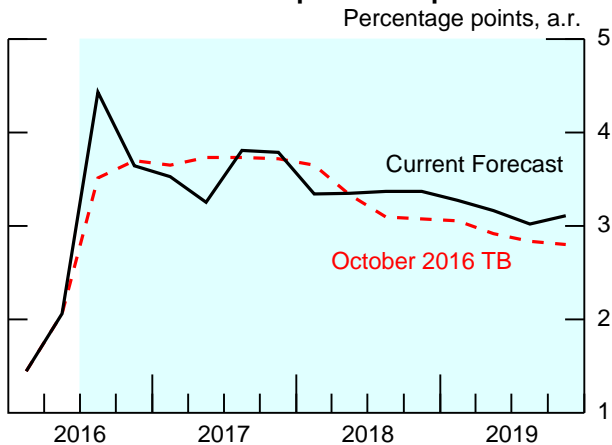
1. NX Contribution to Real U.S. GDP Growth



2. Dollar's Impact on NX contribution to U.S. GDP Growth



3. U.S. GDP Growth Impact on Import Growth

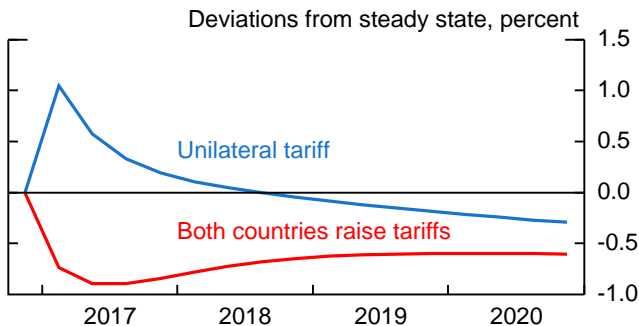


4. Trade Policy

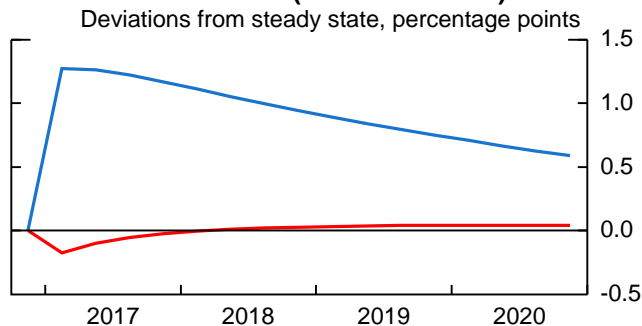
- No trade policy actions assumed in forecast
- President has broad authority over tariffs
- President-Elect has discussed several possible policy actions including renegotiating NAFTA and declaring China a currency manipulator

Response to a 10 Percent Tariff on Imports to the United States

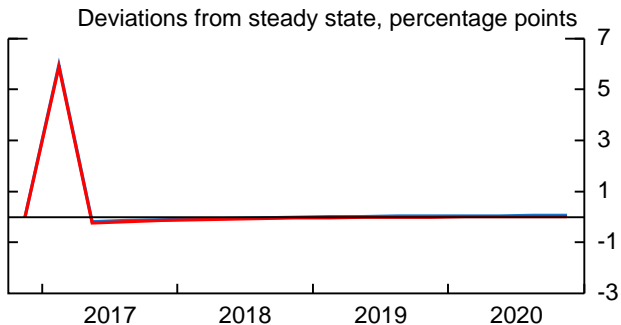
5. ...Of Real U.S. GDP



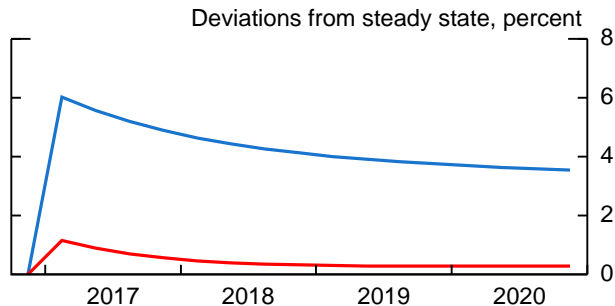
6. ...Of Trade Balance (Percent of GDP)



7. ...Of U.S. Inflation



8. ...Of Dollar



Appendix 3: Materials used by Mr. Kim

Class I FOMC – Restricted Controlled (FR)

Material for Briefing on the

Summary of Economic Projections

Don Kim

December 13, 2016

Exhibit 1. Medians, central tendencies, and ranges of economic projections, 2016–19 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 2016–19 and over the longer run (percent)

Change in real GDP					
	2016	2017	2018	2019	Longer run
Median.....	1.9	2.1	2.0	1.9	1.8
September projection.....	1.8	2.0	2.0	1.8	1.8
Range.....	1.8 – 2.0	1.7 – 2.4	1.7 – 2.3	1.5 – 2.2	1.6 – 2.2
September projection.....	1.7 – 2.0	1.6 – 2.5	1.5 – 2.3	1.6 – 2.2	1.6 – 2.2
Memo: Tealbook.....	1.8	2.2	2.0	1.8	1.7
September projection.....	1.8	2.4	2.0	1.7	1.7

Unemployment rate					
	2016	2017	2018	2019	Longer run
Median.....	4.7	4.5	4.5	4.5	4.8
September projection.....	4.8	4.6	4.5	4.6	4.8
Range.....	4.7 – 4.8	4.4 – 4.7	4.2 – 4.7	4.1 – 4.8	4.5 – 5.0
September projection.....	4.7 – 4.9	4.4 – 4.8	4.3 – 4.9	4.2 – 5.0	4.5 – 5.0
Memo: Tealbook.....	4.8	4.5	4.3	4.2	5.0
September projection.....	4.9	4.5	4.3	4.2	5.0

PCE inflation					
	2016	2017	2018	2019	Longer run
Median.....	1.5	1.9	2.0	2.0	2.0
September projection.....	1.3	1.9	2.0	2.0	2.0
Range.....	1.5 – 1.6	1.7 – 2.0	1.8 – 2.2	1.8 – 2.2	2.0
September projection.....	1.1 – 1.7	1.5 – 2.0	1.8 – 2.0	1.8 – 2.1	2.0
Memo: Tealbook.....	1.5	1.7	1.8	1.9	2.0
September projection.....	1.2	1.6	1.8	1.9	2.0

Core PCE inflation					
	2016	2017	2018	2019	
Median.....	1.7	1.8	2.0	2.0	
September projection.....	1.7	1.8	2.0	2.0	
Range.....	1.6 – 1.8	1.7 – 2.0	1.8 – 2.2	1.8 – 2.2	
September projection.....	1.5 – 2.0	1.6 – 2.0	1.8 – 2.0	1.8 – 2.1	
Memo: Tealbook.....	1.7	1.7	1.8	1.9	
September projection.....	1.6	1.6	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 September 20–21, 2016, meeting, and one participant did not submit such projections in conjunction with the December 13–14, 2016, 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 September 20-21, 2016, meeting, and one participant did not submit such a projection in conjunction with the December 13-14, 2016, meeting.

Exhibit 4. Fiscal Policy Assumptions and Revisions to the Projections

Fiscal Policy Assumptions

- Nine of you incorporated some change in fiscal policy in your baseline projections.
 - Most of this group assumed that the fiscal stimulus would be of the same order of magnitude as in the December Tealbook.
- Eight of you did not incorporate a change in fiscal policy in your baseline projections.
 - Many in this group expressed the view that uncertainty surrounding prospective changes in fiscal and other policies is very large or that there is not yet enough information to make a reasonable assumption about the magnitude of the changes.

Revisions to the Projections

Change in Real GDP (Q4/Q4)

		2017	2018	2019	LR
Change in Fiscal Assumption	Average	0.08	0.12	0.09	0.02
	Standard Deviation	0.23	0.10	0.14	0.04
No Change in Fiscal Assumption	Average	0.00	-0.01	0.01	0.00
	Standard Deviation	0.11	0.04	0.04	0.00

Unemployment Rate (Q4 average)

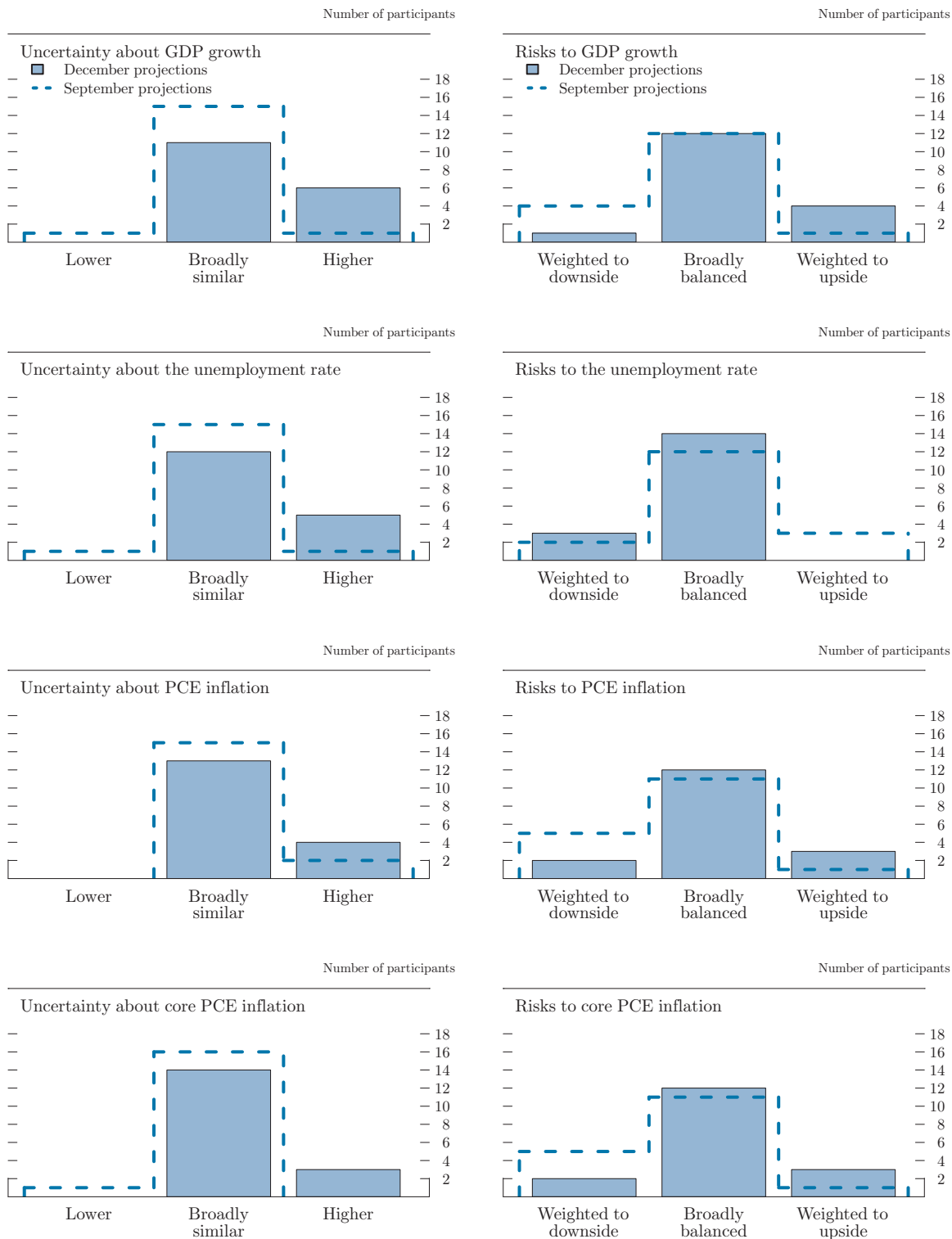
		2017	2018	2019	LR
Change in Fiscal Assumption	Average	-0.06	-0.12	-0.14	0.00
	Standard Deviation	0.09	0.15	0.19	0.00
No Change in Fiscal Assumption	Average	-0.09	-0.05	0.00	0.00
	Standard Deviation	0.11	0.09	0.05	0.00

Federal Funds Rate (end of Q4)

		2017	2018	2019	LR
Change in Fiscal Assumption	Average	0.08	0.25	0.29	0.08
	Standard Deviation	0.18	0.18	0.18	0.13
No Change in Fiscal Assumption	Average	0.03	-0.03	0.00	0.00
	Standard Deviation	0.21	0.16	0.13	0.00

NOTE: In the tables above, the average and standard deviation (in percentage points) are shown for the revisions in projections (since September) for two groups. "Change in Fiscal Assumption" denotes the 9 participants who have incorporated a changed fiscal assumption in their baseline projections. "No Change in Fiscal Assumption" denotes the 8 participants who have not incorporated a changed fiscal assumption in their baseline projections.

Exhibit 5. Uncertainty and risks in economic projections



Appendix 4: Materials used by Mr. Laubach

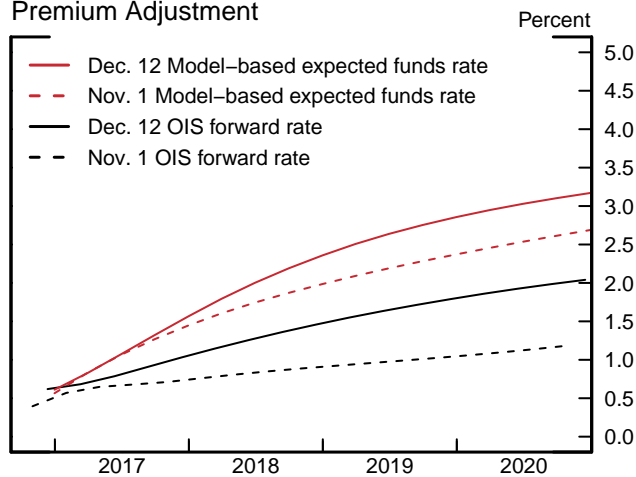
Class I FOMC – Restricted Controlled (FR)

Material for the Briefing on

Monetary Policy Alternatives

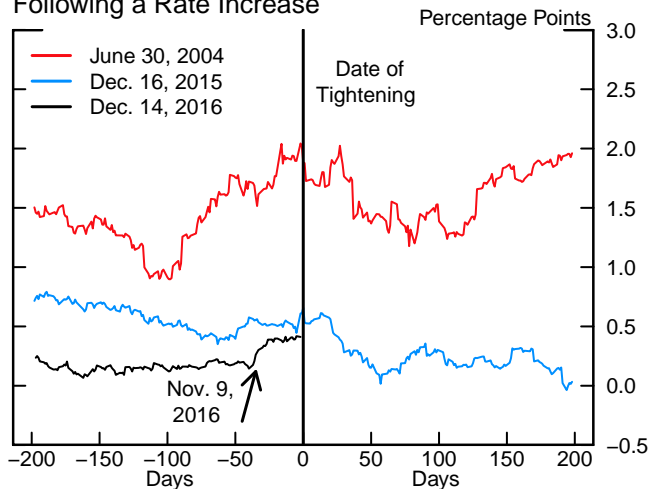
Thomas Laubach
December 13–14, 2016

Policy Rate Path with and without Term Premium Adjustment



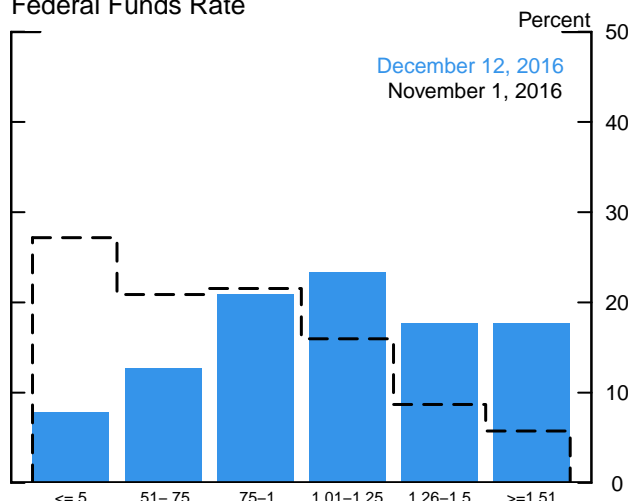
Note: OIS-Implied path is estimated with a spline approach and includes a term premium of zero. Model-implied path is estimated using a term structure model maintained by Board staff.
Source: Bloomberg, Blue Chip Financial Forecasts, and staff calculations.

Expected Pace of Tightening during the Year Following a Rate Increase



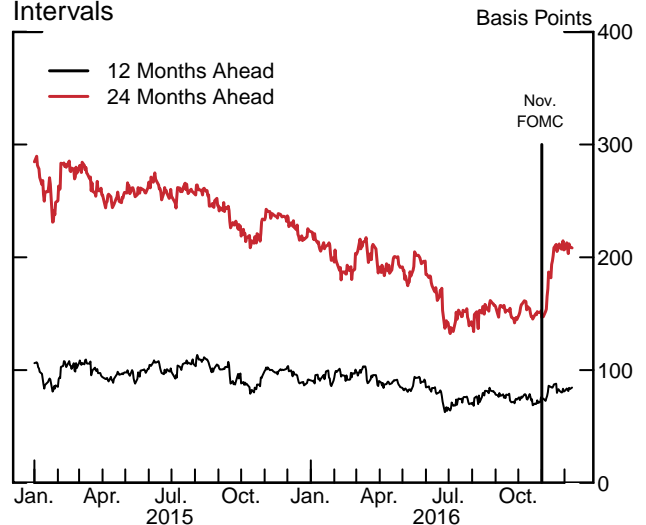
Note: Expected pace of tightening is the difference in the expected federal funds rate one year after the rate increase and federal funds rate upon the rate increase based on Eurodollar futures and basis swaps.
Source: CME and Staff Calculations

Probability Distribution of Year-End 2017 Federal Funds Rate



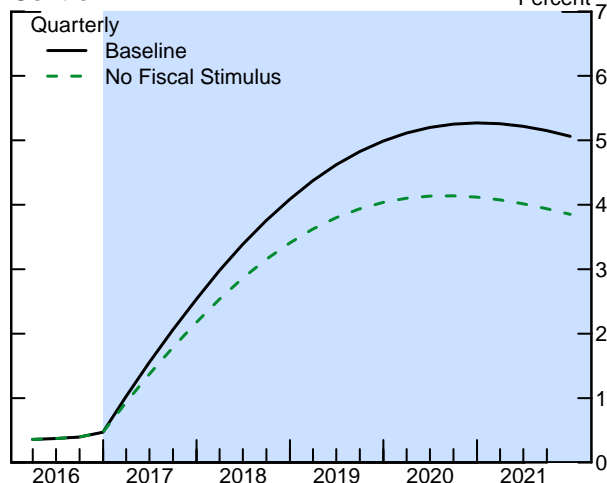
Note: Computed from Eurodollar futures options, accounting for the differences in the levels and option-implied volatilities of LIBOR and the federal funds rate, but not adjusted for risk premiums.
Source: CME Group and staff calculations.

Width of 90% Federal Funds Rate Confidence Intervals



Note: Computed using implied volatility derived from eurodollar futures options.
Source: CME and staff calculations.

Federal Funds Rate Paths under Optimal Control



Note: The simulations use an equal-weight specification of the loss function and are conditioned on the same response to fiscal stimulus of term premiums and the real federal funds rate in the long run as in the Tealbook projection.
Source: FRB/US and staff calculations.

Monetary Policy Response: Caveats

- OC prescriptions sensitive to:
 - Details of fiscal package
 - The loss function
- Uncertain whether financial conditions will respond as assumed in FRB/US
- OC omits risk management considerations

NOVEMBER 2016 FOMC STATEMENT

1. Information received since the Federal Open Market Committee met in September indicates that the labor market has continued to strengthen and growth of economic activity has picked up from the modest pace seen in the first half of this year. Although the unemployment rate is little changed in recent months, job gains have been solid. Household spending has been rising moderately but business fixed investment has remained soft. Inflation has increased somewhat since earlier this year but is still below the Committee's 2 percent longer-run objective, partly reflecting earlier declines in energy prices and in prices of non-energy imports. Market-based measures of inflation compensation have moved up but remain low; most 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 expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market conditions will strengthen somewhat further. Inflation is expected to rise to 2 percent over the medium term as the transitory effects of past declines in energy and import prices dissipate and the labor market strengthens further. 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. Against this backdrop, the Committee decided to maintain the target range for the federal funds rate at $\frac{1}{4}$ to $\frac{1}{2}$ percent. The Committee judges that the case for an increase in the federal funds rate has continued to strengthen but decided, for the time being, to wait for some further evidence of continued progress toward its objectives. 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.

DECEMBER 2016 ALTERNATIVE A

1. Information received since the Federal Open Market Committee met in ~~September~~ **November** indicates that the labor market has continued to strengthen and ~~growth of that~~ economic activity has ~~picked up from the modest~~ **been expanding at a moderate** pace ~~seen in the first half of this year~~ **since mid-year**. Although ~~The~~ unemployment rate is ~~little changed in~~ **has declined over** recent months; ~~and~~ job gains have been solid; ~~however, wages have continued to rise at a subdued pace,~~ **on average**. Household spending has been rising moderately but business fixed investment has remained soft. Inflation has increased somewhat since earlier this year but is still below the Committee's 2 percent longer-run objective, **only** partly reflecting earlier declines in energy prices and in prices of non-energy imports. Market-based measures of inflation compensation have moved up but remain low; most 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 expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market conditions will strengthen somewhat further. Inflation is expected to rise to 2 percent over the medium term as the transitory effects of past declines in energy and import prices dissipate and the labor market strengthens further. 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. Against this backdrop **of subdued labor market pressures and below-target inflation**, the Committee decided to maintain the target range for the federal funds rate at $\frac{1}{4}$ to $\frac{1}{2}$ percent. ~~The Committee judges that the case for an increase in the federal funds rate has continued to strengthen but decided, for the time being, to~~ **while waiting** for ~~some further evidence of continued~~ progress toward its objectives. 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, **along with risks to the economic outlook**. 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 **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.

DECEMBER 2016 ALTERNATIVE B

1. Information received since the Federal Open Market Committee met in ~~September~~ **November** indicates that the labor market has continued to strengthen and ~~growth of that~~ economic activity has ~~picked up from the modest~~ **been expanding at a moderate** pace ~~seen in the first half of this year~~ **since mid-year**. Although the ~~unemployment rate is little changed in recent months,~~ Job gains have been solid **in recent months and the unemployment rate has declined**. Household spending has been rising moderately but business fixed investment has remained soft. Inflation has increased ~~somewhat~~ since earlier this year but is still below the Committee's 2 percent longer-run objective, partly reflecting earlier declines in energy prices and in prices of non-energy imports. Market-based measures of inflation compensation have moved up ~~but remain low~~ **considerably but still are low**; most 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 expects that, with gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market conditions will strengthen somewhat further. Inflation is expected to rise to 2 percent over the medium term as the transitory effects of past declines in energy and import prices dissipate and the labor market strengthens further. 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. ~~Against this backdrop~~ **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 $\frac{1}{4}$ to $\frac{1}{2}$ **to $\frac{3}{4}$** percent. ~~The Committee judges that the case for an increase in the federal funds rate has continued to strengthen but decided, for the time being, to wait for some further evidence of continued progress toward its objectives.~~ The stance of monetary policy remains accommodative, thereby supporting **some** further ~~improvement~~ **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.

DECEMBER 2016 ALTERNATIVE C

1. Information received since the Federal Open Market Committee met in ~~September~~ **November** indicates that the labor market has continued to strengthen and growth of ~~that~~ economic activity has ~~picked up from the modest~~ **been expanding at a moderate** pace ~~seen in the first half of this year~~ **since mid-year**. Although the unemployment rate is little changed in recent months, Job gains have been solid **in recent months and the unemployment rate has declined**. Household spending has been rising moderately but business fixed investment has remained soft. Inflation has increased ~~somewhat~~ since earlier this year, ~~but is still below~~ **moving closer to** the Committee's 2 percent longer-run objective, ~~partly reflecting earlier declines in energy prices and in prices of non-energy imports~~. Market-based measures of inflation compensation have moved up ~~but remain low~~ **considerably**; most 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 expects that, with **additional** gradual adjustments in the stance of monetary policy, economic activity will expand at a moderate pace and labor market conditions will strengthen somewhat further. Inflation is expected to rise to 2 percent over the medium term as ~~the transitory effects of past declines in energy and import prices dissipate and the labor market strengthens further~~. 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. Against this backdrop **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 $\frac{1}{4}$ to $\frac{1}{2}$ **to $\frac{3}{4}$** percent. ~~The Committee judges that the case for an increase in the federal funds rate has continued to strengthen but decided, for the time being, to wait for some further evidence of continued progress toward its objectives.~~ The stance of monetary policy remains accommodative, thereby supporting **some** further ~~improvement~~ **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, **along with risks to the economic outlook**. 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~~ **additional** 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 December 2016 Alternatives B and C

Release Date: ~~November 2~~ **December 14**, 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 [statement](#) on ~~November 2~~, 2016 **December 14, 2016**:

- The Board of Governors of the Federal Reserve System ~~left unchanged~~ **voted [unanimously] to raise** the interest rate paid on required and excess reserve balances ~~at 0.50~~ **to 0.75** percent, **effective December 15, 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 ~~November 3~~ **December 15**, 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 ~~¼ to ½~~ **to ¾** 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~~ **voted [unanimously] to approve a ¼ percentage point increase in** the discount rate (the primary credit rate), ~~which remains at 1.00~~ **to 1.25** percent, **effective December 15, 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.

Implementation Note for December 2016 Alternative A

Release Date: ~~November 2~~ **December 14**, 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 [statement](#) on ~~November 2~~, 2016 **December 14, 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 ~~November 3~~ **December 15**, 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 $\frac{1}{4}$ to $\frac{1}{2}$ 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.

Appendix 5: Materials used by Mr. Wilcox

Selected Unemployment and Labor Force Participation Rates
(Percent; based on seasonally adjusted data)

Group	2015	2016		2016		
		Q2	Q3	Sep.	Oct.	Nov.
Civilian unemployment rate (16 years and older)	5.3	4.9	4.9	5.0	4.9	4.6
<i>Sex/Age</i>						
Teenagers	16.9	16.0	15.7	15.8	15.6	15.2
20-24 years old	9.7	8.6	8.4	8.1	8.4	8.1
Men, 25 years and older	4.3	3.9	4.1	4.2	4.1	3.8
Women, 25 years and older	4.3	4.0	4.1	4.1	4.0	3.9
<i>Race/Ethnicity</i>						
White	4.6	4.2	4.4	4.4	4.3	4.2
Black or African-American	9.5	8.5	8.3	8.3	8.6	8.1
Asian	3.8	3.8	4.0	3.9	3.4	3.0
Hispanic or Latino	6.6	5.8	5.8	6.4	5.7	5.7
Labor force participation rate (16 years and older)	62.7	62.7	62.9	62.9	62.8	62.7
<i>Sex/Age</i>						
Teenagers	34.3	34.9	35.6	35.8	35.2	35.3
20-24 years old	70.6	70.6	70.5	70.4	70.1	70.4
Men, 25 years and older	71.5	71.6	71.6	71.6	71.6	71.4
Women, 25 years and older	57.2	57.2	57.4	57.5	57.5	57.3
<i>Race/Ethnicity</i>						
White	62.8	62.9	62.9	62.9	62.8	62.7
Black or African-American	61.5	61.1	61.7	62.0	61.8	61.9
Asian	62.8	63.3	63.5	63.8	63.9	62.9
Hispanic or Latino	65.9	65.6	66.0	66.1	65.6	65.7
Employment-to-population ratio (16 years and older)	59.3	59.6	59.8	59.8	59.7	59.7
<i>Sex/Age</i>						
Teenagers	28.5	29.3	30.0	30.2	29.7	29.9
20-24 years old	63.8	64.5	64.6	64.7	64.2	64.7
Men, 25 years and older	68.5	68.8	68.7	68.6	68.7	68.7
Women, 25 years and older	54.7	54.9	55.0	55.1	55.2	55.1
<i>Race/Ethnicity</i>						
White	59.9	60.2	60.1	60.1	60.1	60.1
Black or African-American	55.7	55.9	56.6	56.8	56.5	56.9
Asian	60.4	60.9	61.0	61.3	61.7	61.0
Hispanic or Latino	61.6	61.7	62.2	61.9	61.9	61.9

Source: Bureau of Labor Statistics.

Note. These categories are not mutually exclusive as the ethnicity Hispanic may include people of any race. The Current Population Survey defines Hispanic ethnicity as those who report their origin is Mexican, Puerto Rican, Cuban, Central or South American (and some others).