Responses to Survey of Primary Dealers

Markets Group, Federal Reserve Bank of New York

April 2015

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For most questions, median responses across dealers, along with the 25th and 75th percentiles, are reported. For questions that ask respondents to give a probability distribution, the average response across dealers for each potential outcome is reported.[1] Brief summaries of the comments received in free response form are also provided.

Responses were received from 22 primary dealers. Except where noted, all 22 dealers responded to each question. In some cases, dealers may not have provided forecasts extending to the same time horizon as requested in the survey. In these instances, the number of respondents who answered all parts of the question is indicated.

Monetary Policy Expectations

1. a) Provide below your expectations for changes, if any, to the language referencing each of the following topics in the April FOMC statement. Limit your responses to changes you consider most likely.

Current economic conditions and the economic outlook:

Some dealers expected the statement to reflect a slightly less optimistic tone with regard to current economic conditions and the outlook for economic growth. Several dealers expected slight downgrades to the language in the statement regarding the strength of the labor market.

Communication on the Committee's policy of reinvesting principal payments on Treasury and agency securities:

Most dealers did not expect a significant change to the Committee's policy of reinvesting Treasury and agency securities.

Communication on the expected path of policy rates and forward guidance on the target federal funds rate:

Most dealers did not expect a significant change in the Committee's communication regarding the expected path of policy rates or the forward guidance. Several dealers noted that they expected the Committee to highlight a continued emphasis on data dependency.

Other:

Dealers did not provide substantial commentary in this section.

[1] Answers may not sum to 100 percent due to rounding.

b) How do you expect the April FOMC events to influence market perceptions of the stance of monetary policy, if at all? (1 = less accommodative, 3 = neutral, 5 = more accommodative)

Perceived Stance of Monetary Policy	
25th Pctl	3
Median	3
75th Pctl	3

Please explain:

Some dealers expected that the April FOMC events would not materially affect market perceptions of the stance of monetary policy. Several dealers expected that the April FOMC events would result in market perceptions of the stance of monetary being more accommodative.

2. How would you grade the Federal Reserve System's communication with the markets and with the public since the policy survey on March 9? Please provide a rating between 1 and 5, with 1 indicating ineffectiveness and 5 indicating effectiveness.

	Fed Communication Grade Number of Respondents:
1 - Ineffective	1
2	6
3	4
4	10
5 - Effective	1

Please explain:

Some dealers viewed the Federal Reserve System's communication as effective, while several other dealers cited miscellaneous aspects of Federal Reserve communication they felt could use further clarification.

3. a) Of the possible outcomes below, provide the percent chance you attach to the timing of the first increase in the federal funds target rate or range. Also, provide your estimate for the most likely meeting for the first increase.

	Apr. 28-29	Jun. 16-17	Jul. 28-29	Sep. 16-17	Oct. 27-28	Dec. 15-16	≥ Jan. 2016
Average	0%	13%	7%	37%	8%	20%	15%

	Most Likely Meeting of First Increase in Target Rate or Range
25th Pctl	September 2015
Median	September 2015
75th Pctl	September 2015

The March FOMC minutes indicated that "further improvement in the labor market, a stabilization of energy prices and a leveling out of the foreign exchange value of the dollar were all seen as helpful in establishing confidence that inflation would turn up." Relatedly, the Chair recently indicated that she would be "uncomfortable raising the federal funds rate" if readings on core inflation or other indicators were to weaken. Please rate the importance of these factors in determining whether the Committee would be "reasonably confident" in the inflation outlook (5= very important, 1= unimportant).

	Further Improvement in Labor Market	Stabilization in Energy Prices	Leveling Out of the U.S. Dollar	Absence of Weakening in Realized Core Inflation	Other (11 Responses)
Average	4.6	3.3	3.7	4.2	4.1

Other factors:

Several dealers noted an increase in inflation expectations and several other dealers noted an increase in wage growth as factors which they felt would contribute to the Committee becoming "reasonably confident" in the inflation outlook.

Please discuss what motivated your factor ratings.

Some dealers cited Federal Reserve communication as motivating their factor ratings. Several dealers cited the trajectory of realized core inflation, while several other dealers cited labor market conditions as motivating their factor ratings.

b) Provide the percent chance you attach to the target federal funds rate or range not returning to the zero lower bound during the 2 years following liftoff.

	Probability of Not Returning to ZLB within 2 Years Following Liftoff
25th Pctl	75%
Median	85%
75th Pctl	90%

Conditional on the target not returning to the zero lower bound, provide the percent chance you attach to the net change in the target rate or range in each of the two years following liftoff.

	First Year Following Liftoff				
	0 - 50 basis points	51 - 100 basis points	101 - 150 basis points	151 - 200 basis points	>200 basis points
Average	18%	40%	26%	13%	3%

	Second Year Following Liftoff				
	0 - 50 basis points	51 - 100 basis points	101 - 150 basis points	151 - 200 basis points	>200 basis points
Average	13%	30%	30%	19%	8%

c) Provide your estimate of the most likely outcome (i.e., the mode) for the target federal funds rate or range, as applicable, immediately following the FOMC meetings and at the end of each quarter or half-year period below. If you expect a range, please provide both the top and bottom of the range in the specified fields below. If you expect a target rate, provide your response in the "Target rate" field only.
(21 complete responses)

Top of Target Range

	Apr 28-29	June 16-17	July 28-29	September 16-17	October 27-28	December 15-16	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 H1	2017 H2	2018 H1	2018 H2
25th Pctl	0.25%	0.25%	0.25%	0.50%	0.50%	0.75%	1.00%	1.00%	1.25%	1.75%	2.00%	2.63%	3.13%	3.00%
Median	0.25%	0.25%	0.25%	0.50%	0.50%	0.75%	1.00%	1.25%	1.50%	2.00%	2.25%	3.00%	3.25%	3.38%
75th Pctl	0.25%	0.25%	0.25%	0.50%	0.50%	0.75%	1.00%	1.25%	1.75%	2.00%	2.75%	3.25%	3.50%	4.00%
# of Responses	22	22	22	22	22	22	20	19	19	19	16	16	16	14

Bottom of Target Range

	Apr 28-29	June 16-17	July 28-29	September 16-17	October 27-28	December 15-16	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 H1	2017 H2	2018 H1	2018 H2
25th Pctl	0.00%	0.00%	0.00%	0.25%	0.25%	0.50%	0.75%	0.75%	1.00%	1.50%	1.75%	2.38%	2.88%	2.75%
Median	0.00%	0.00%	0.00%	0.25%	0.25%	0.50%	0.75%	1.00%	1.25%	1.75%	2.00%	2.75%	3.00%	3.13%
75th Pctl	0.00%	0.00%	0.00%	0.25%	0.25%	0.50%	0.75%	1.00%	1.50%	1.75%	2.50%	3.00%	3.25%	3.75%
# of Responses	22	22	22	22	22	22	20	19	19	19	16	16	16	14

Target Rate

	Apr 28-29	June 16-17	July 28-29	September 16-17	October 27-28	December 15-16	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 H1	2017 H2	2018 H1	2018 H2
25th Pctl							0.25%	0.50%	0.75%	1.00%	2.25%	2.75%	2.75%	2.75%
Median							0.63%	1.25%	1.50%	1.75%	2.50%	2.75%	3.00%	3.25%
75th Pctl							1.00%	1.75%	2.25%	2.25%	2.50%	3.00%	3.25%	3.75%
# of Responses	0	0	0	0	0	0	2	3	3	3	5	5	5	7

d) In addition, provide your estimate of the longer-run target federal funds rate and your expectation for the average federal funds rate over the next 10 years.

	Longer Run	10-yr Average FF Rate
25th Pctl	3.25%	2.50%
Median	3.50%	2.78%
75th Pctl	3.75%	3.40%

e) Of the possible outcomes below, please indicate the percent chance you attach to the target federal funds rate or range falling in each of the following ranges at the end of 2015, 2016, and 2017. If you expect a target range for federal funds please use the midpoint of the range in providing your response.
(21 complete responses)

	Year-End 2015						
	0.00 - 0.25%	0.26 - 0.50%	0.51 - 1.00%	1.01 - 1.50%	1.51 - 2.00%	2.01 - 2.50%	≥2.51%
Average	15%	30%	44%	9%	1%	0%	0%

	Year-End 2016						
	≤0.50%	0.51 - 1.00%	1.01 - 1.50%	1.51 - 2.00%	2.01 - 2.50%	2.51 - 3.00%	≥3.01%
Average	6%	11%	25%	27%	21%	8%	2%

	Year-End 2017						
	≤2.00%	2.01 - 2.50%	2.51 - 3.00%	3.01 - 3.50%	3.51 - 4.00%	4.01 - 4.50%	≥4.51%
Average	20%	20%	21%	22%	10%	5%	2%

If you changed your expectations for the most likely timing of liftoff and/or the most likely path of the target rate or range since the last time the questions were asked, explain the factors that motivated you to make the change(s):

Several dears noted that below-forecast U.S. GDP growth led them to adjust their expectation for the timing of liftoff and/or the most likely path of the target rate or range. Several other dealers cited Federal Reserve communication when explaining the change to their forecasts.

f) In a recent speech Chair Yellen indicated that the "equilibrium real federal funds rate, the real rate consistent with the economy achieving maximum employment and price stability in the medium term, is currently quite low by historical standards." Conditioned on your expectations for the economy and the future stance of policy, what is your forecast for the level of the equilibrium real federal funds rate at each of the time periods below? Please also provide your estimate of the current level of the equilibrium real federal funds rate.
(21 complete responses)

	Current Level	Year-end 2015	Year-end 2016	Year-end 2017
25th Pctl	0.00%	0.10%	0.60%	1.00%
Median	0.25%	0.78%	1.13%	1.50%
75th Pctl	0.80%	1.25%	1.55%	1.75%

4. a) Of the possible outcomes below, provide the percent chance you attach to the 10-year Treasury yield falling in each of the following ranges at the end of 2015 and 2016.

	Year-End 2015						
	≤1.50%	1.51-2.00%	2.01-2.50%	2.51-3.00%	3.01-3.50%	3.51-4.00%	>4.00%
Average	8%	20%	36%	24%	8%	3%	2%

	Year-End 2016						
	≤2.50%	2.51-3.00%	3.01-3.50%	3.51-4.00%	4.01-4.50%	4.51-5.00%	>5.00%
Average	22%	33%	26%	12%	4%	2%	1%

If you changed your expectations since the last time the question was asked, explain the factors that motivated you to make the change(s).

Some dealers explained that lower European sovereign debt yields led them to adjust their forecasts for the 10-year Treasury yield.

b) **The 10-year Treasury yield decreased 16 basis points between March 17 and April 15. Please decompose this change into changes in the market's expected average real policy rate, expected average inflation rate, and the market-implied nominal term premium. Please ensure that your sum matches the change.**

	Change in Market's Expected Average Real Policy Rate	Change in Market's Expected Average Inflation Rate	Change in Market-Implied Nominal Term Premium
Average (bps)	-19	6	-3

Please explain which factor or factors motivated your decomposition.
Some dealers cited Federal Reserve communications when decomposing the change in the 10-year Treasury yield. Some dealers explained that their decomposition was driven by an increase in market-implied measures of inflation compensation. Several dealers cited weakening domestic economic data, while several other dealers explained that their decomposition was driven by a perceived reduction in term premium resulting from lower yields on European sovereign debt.

c) **The March FOMC minutes noted that "market-based measures [of inflation compensation] had tracked quite closely the movements in crude oil over the intermeeting period." Please discuss which factor or factors you believe are most pertinent in explaining the correlation between changes in short-dated energy futures prices and TIPS-implied five-year inflation compensation, five years ahead.**

Some dealers cited technical factors specific to the TIPS market when explaining the correlation. Several dealers felt that a decline in energy prices had led to lower inflation expectations, and hence reduced investor appetite for TIPS. Several dealers felt that the decline in energy prices was reflective of expectations for a slowdown in global growth, and several other dealers felt that the correlation was not indicative of a causal relationship.

5. a) **Provide the percent chance you attach to the unemployment rate falling within the following ranges at the time of the first increase in the target federal funds rate or range.**

	< 5.0%	5.0 - 5.4%	5.5 - 5.9%	6.0 - 6.5%	> 6.5%
Average	32%	56%	11%	2%	0%

b) **Provide the percent chance you attach to inflation between 1 and 2 years ahead falling within the following ranges at the time of the first increase in the target federal funds rate or range.**

	< 1.25%	1.25 - 1.74%	1.75 - 2.24%	2.25 - 2.74%	≥ 2.75%
Average	4%	23%	50%	18%	5%

c) **Provide your estimate for the most likely value of the following indicators at the time of the first increase in the target federal funds rate or range. When specifying values below, where appropriate, provide your estimate consistent with the last published value prior to the announcement of liftoff. For reference, the level of total U.S. employees on nonfarm payrolls for March, seasonally adjusted, was 141.2 million. (21 complete responses)**

	Unemployment Rate	Labor Force Participation Rate	Total NFP*	12-Month Change in Average Hourly Earnings	Core 12-Month PCE Inflation	Headline 12-Month PCE Inflation	Inflation Between 1 and 2 Years Ahead
25th Pctl	5.2%	62.7%	142.1	2.3%	1.3%	0.3%	1.9%
Median	5.2%	62.8%	142.3	2.4%	1.4%	0.6%	2.0%
75th Pctl	5.3%	62.9%	142.6	2.5%	1.5%	1.2%	2.0%

**In millions*

d) Provide your forecast for the expected levels of the following indicators at the time periods provided below. If you expect a target range, please enter the range. If you do not believe a particular tool will be used during one or more of the time periods below, please enter "N/A". If you do not believe a cap on the O/N RRP will be employed at a particular time period, please write "No cap".*
(18 complete responses)

One Quarter Prior to Liftoff

	IOER Rate	Target Federal Funds Rate or Range	Federal Funds Effective Rate	O/N RRP Rate	3M LIBOR Rate	Overnight Treasury GCF Repo Rate	O/N RRP Demand ($ bn)	O/N RRP Cap ($ bn)**
25th Pctl	0.25%	0.13%	0.12%	0.05%	0.26%	0.13%	100	300
Median	0.25%	0.13%	0.13%	0.05%	0.28%	0.15%	136	300
75th Pctl	0.25%	0.13%	0.13%	0.05%	0.30%	0.20%	150	300

Immediately Following Liftoff

	IOER Rate	Target Federal Funds Rate or Range	Federal Funds Effective Rate	O/N RRP Rate	3M LIBOR Rate	Overnight Treasury GCF Repo Rate	O/N RRP Demand ($ bn)	O/N RRP Cap ($ bn)**
25th Pctl	0.50%	0.38%	0.30%	0.25%	0.55%	0.31%	150	425
Median	0.50%	0.38%	0.35%	0.25%	0.55%	0.35%	190	500
75th Pctl	0.50%	0.38%	0.38%	0.25%	0.60%	0.40%	500	750

† 3 dealers expected no O/N RRP cap.

1 Year Following Liftoff

	IOER Rate	Target Federal Funds Rate or Range	Federal Funds Effective Rate	O/N RRP Rate	3M LIBOR Rate	Overnight Treasury GCF Repo Rate	O/N RRP Demand ($ bn)	O/N RRP Cap ($ bn)**
25th Pctl	1.50%	1.38%	1.35%	1.25%	1.55%	1.30%	100	300
Median	1.50%	1.38%	1.38%	1.25%	1.63%	1.45%	213	300
75th Pctl	1.75%	1.63%	1.62%	1.50%	1.90%	1.60%	400	500

3 Years Following Liftoff

	IOER Rate	Target Federal Funds Rate or Range	Federal Funds Effective Rate	O/N RRP Rate	3M LIBOR Rate	Overnight Treasury GCF Repo Rate	O/N RRP Demand ($ bn)	O/N RRP Cap ($ bn)**
25th Pctl	3.25%	3.13%	3.13%	3.00%	3.33%	3.10%	88	150
Median	3.50%	3.25%	3.35%	3.25%	3.50%	3.30%	125	250
75th Pctl	3.50%	3.63%	3.50%	3.25%	3.80%	3.50%	250	388

**For dealers that submitted ranges, midpoints of the ranges are used.*
***Only dealers who forecasted a cap were included in the calculation for the expected size of the O/N RRP cap.*

Please note how you expect the Committee's approach to policy normalization to evolve over time. Additionally, comment on any changes you expect over time in the relative levels of money market rates and the expected amount of O/N RRP usage.

Some dealers noted their expectation for usage of overnight RRPs to increase over the course of the normalization process. Several dealers noted their expectation that demand for the O/N RRP facility from money market funds will remain elevated in the year following liftoff.

e) The standard deviation of submitted bids to the O/N RRP over the first quarter of 2015, excluding month- and quarter-end dates, was approximately $32 billion. Please indicate whether you expect that the variation in submitted bids to the O/N RRP, excluding month- and quarter-end dates, will be higher, lower, or equal to this current level of variation, over the quarter ending at each of the time periods below.

O/N RRP Variation
Number of Respondents:

	Immediately Following Liftoff	6 Months Following Liftoff	1 Year Following Liftoff	3 Years Following Liftoff
Higher	16	13	4	1
Equal	6	9	12	7
Lower	0	0	6	14

Please explain which factor or factors were most relevant in formulating your expectations for the variation in submitted bids to the O/N RRP.

Several dealers felt that the uncertainty around the ultimate level of usage of the O/N RRP at the time around liftoff was a factor in motivating their estimate of the variation in submitted bids.

f) At the March FOMC meeting the Committee augmented its Policy Normalization Principles and Plans, indicating that, at liftoff, it plans to "continue to target a range for the federal funds rate that is 25 basis points wide...set the IOER rate equal to the top of the target range...and set the offering rate associated with an ON RRP facility equal to the bottom of the target range." Please provide the percent chance you attach to the average federal funds effective rate, excluding month- or quarter-end dates, falling within the following subsets relative to the 25 basis point target range in the first month immediately following liftoff.

	Below the Range	Bottom 8 Basis Points of Range	Middle 9 Basis Points of Range	Top 8 Basis Points of Range	Above the Range
Average	6%	35%	43%	14%	2%

Please explain which factor or factors were most relevant in formulating your expectations and any assumptions made.

Several dealers cited confidence in the Federal Reserve's ability to control short-term rates as partially motivating their expectations.

6. Provide your estimate of the most likely quarter and year during which the FOMC will first cease reinvesting some or all payments of principal on Treasuries and/or agency debt and MBS. In addition, please provide your expectation for the timing, in months, relative to the first increase in the target rate or range. If you do not expect the FOMC to cease reinvestments for either or both asset classes during the process of policy normalization, please select "N/A". Please ensure your signs are correct.

Number of Months Relative to Liftoff	Treasuries	Agency Debt and MBS
25th Pctl	4	4
Median	9	6
75th Pctl	12	12

Most Likely Quarter and Year of End to Reinvestments	Treasuries*	Agency Debt and MBS
25th Pctl	Q1 2016	Q1 2016
Median	Q2 2016	Q1 2016
75th Pctl	Q3 2016	Q3 2016

**One dealer expects no end to reinvestments of Treasury securities*

Please explain your assumptions for the timing, size, and pace of redemptions and sales of securities, if applicable. Please also explain the factors behind any change in your expectations since the last time the question was asked:

Several dealers indicated that they do not expect any sales of securities, while several other dealers noted that their expectations were unchanged from the prior survey.

7. a) Provide your estimate of the most likely outcome for output, inflation, and unemployment. (17 complete responses)

		Q4/Q4 2015	Q4/Q4 2016	Q4/Q4 2017	Longer Run
GDP:	25th Pctl	2.40%	2.50%	2.30%	2.00%
	Median	2.60%	2.80%	2.60%	2.23%
	75th Pctl	2.80%	2.90%	2.70%	2.30%
Core PCE Deflator:	25th Pctl	1.40%	1.80%	1.90%	
	Median	1.50%	1.90%	2.00%	
	75th Pctl	1.60%	2.00%	2.00%	
Headline PCE Deflator:	25th Pctl	0.80%	1.80%	2.00%	2.00%
	Median	1.00%	1.90%	2.00%	2.00%
	75th Pctl	1.10%	2.10%	2.20%	2.00%
Unemployment Rate*:	25th Pctl	5.00%	4.60%	4.60%	5.00%
	Median	5.15%	4.80%	4.80%	5.10%
	75th Pctl	5.20%	4.90%	5.00%	5.50%

**Average level of the unemployment rate over Q4.*

b) How would you characterize the overall balance of U.S. economic data over the intermeeting period? (5 = significantly stronger than expected, 3 = neutral/mixed, 1 = significantly weaker than expected). Please explain which data were most relevant in formulating your characterization.

Characterization of Balance of U.S. Economic Data over Intermeeting Period	
25th Pctl	2
Median	2
75th Pctl	2

Please explain:

Some dealers cited below-expectations labor market data when explaining their characterization of U.S. economic data over the intermeeting period. Several dealers noted that lower-than-expected consumer spending was an important factor, while several other dealers felt that a variety of below-expectations economic data over the intermeeting period played a role in their characterization. Several dealers also cited weather and transitory factors as impacting the intermeeting economic data.

c) **Please provide an estimate of how the change in the value of the U.S. dollar since June 2014 has impacted your forecasts for average real GDP growth (Q4/Q4) and the change in the core PCE deflator (Q4/Q4) for 2015, if applicable. Please ensure that your signs are correct.**
(21 complete responses)

	Change in 2015 Real GDP Growth (bps)	Change in 2015 Core PCE (bps)
25th Pctl	-50	-30
Median	-40	-20
75th Pctl	-30	-10

8. a) **For the outcomes below, provide the percent chance you attach to the annual average CPI inflation rate from April 1, 2015 – March 31, 2019. Please also provide your point estimate for the most likely outcome.**

	≤1.00%	**1.01-1.50%**	**1.51-2.00%**	**2.01-2.50%**	**2.51-3.0%**	**≥3.01%**
Average	4%	12%	31%	32%	14%	7%

Point estimate for most likely outcome:

	Most Likely Outcome
25th Pctl	1.90%
Median	2.10%
75th Pctl	2.25%

b) **For the outcomes below, provide the percent chance you attach to the annual average CPI inflation rate from April 1, 2020 – March 31, 2024. Please also provide your point estimate for the most likely outcome.**

	≤1.00%	**1.01-1.50%**	**1.51-2.00%**	**2.01-2.50%**	**2.51-3.00%**	**≥3.01%**
Average	3%	9%	24%	38%	18%	8%

Point estimate for most likely outcome:

	Most Likely Outcome
25th Pctl	2.00%
Median	2.23%
75th Pctl	2.30%

9. a) **What percent chance do you attach to the U.S. economy currently being in a recession?**

b) **What percent chance do you attach to the U.S. economy being in a recession in 6 months?**

	Currently in NBER Recession
25th Pctl	0%
Median	3%
75th Pctl	5%

	NBER Recession in 6 Months
25th Pctl	5%
Median	10%
75th Pctl	15%