RESPONSES TO SURVEY OF PRIMARY DEALERS

Markets Group, Federal Reserve Bank of New York

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The **Survey of Primary Dealers** is formulated by the Trading Desk at the Federal Reserve Bank of New York to enhance policymakers' understanding of market expectations on a variety of topics related to the economy, monetary policy and financial markets. The questions involve only topics that are widely discussed in the public domain and never presume any particular policy action. FOMC participants are not involved in the survey's design.

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

Responses were received from 23 primary dealers. Except where noted, all 23 dealers responded to each question. In some cases, dealers may not have provided complete responses (e.g. 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.

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

List of Primary Dealers:
www.newyorkfed.org/markets/primarydealers

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1a) Provide below your expectations for changes, if any, to the language referencing each of the following topics in the January FOMC statement.

Current economic conditions:

Several dealers indicated that they expected the Committee to downgrade its characterization of economic activity from "strong" to "solid" or "moderate," and several dealers suggested that the Committee could either describe the labor market as "strong" or note continued labor market strength. Several dealers suggested that the Committee could make reference to the partial U.S. government shutdown, and several suggested that the Committee could acknowledge or make reference to the impact of the partial shutdown on the availability of economic data. Finally, several dealers indicated that they expected no substantial changes to the statement language.

Economic outlook:
(20 responses)

Some dealers indicated that they expected no change to this section of the statement or for the Committee to continue to characterize risks to the outlook as "roughly balanced." Additionally, several dealers suggested that the Committee could indicate either increased downside risk or greater uncertainty surrounding the outlook.

Communication on the expected path of the target federal funds rate:
(22 responses)

Many dealers indicated that they expected no change to this section of the statement or for the Committee to maintain language referencing "some further gradual increases in the target range." Also, several dealers indicated that they expected the Committee to insert new language emphasizing the patient and/or data-dependent nature of future monetary policy decisions.

Other:
(9 responses)

Dealers did not provide substantial commentary in this section.

1b) What are your expectations for the Chairman's press conference?

Most dealers indicated that they expected the Chairman to emphasize patience and/or the data-dependent nature of future monetary policy decisions, and several indicated that they expected him to reiterate that monetary policy would be flexible in the face of economic developments and conditions. Several dealers indicated that they expected the Chairman to adopt a tone that was similar to recent Fed communications, and several indicated that they expected him to adopt an upbeat tone regarding economic fundamentals. In addition, several dealers

indicated that they expected the Chairman to acknowledge softness in measures of inflation, and several expected him to note potential headwinds or downside risks to the U.S. economy. Finally, several dealers indicated that the Chairman might discuss future balance sheet policy and/or the Committee’s long-run operating framework.

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

	Number of Respondents
1 - Ineffective	0
2	7
3	5
4	8
5 - Effective	3

Please explain.

Some dealers indicated that they perceived a difference in tone between communications at the December FOMC events and subsequent communication from Committee members, and several also perceived differences between the tone of the December FOMC events and the content of the December FOMC minutes. In addition, several dealers noted that, more recently, the Committee has clearly communicated it will be patient as it determines future monetary policy. Finally, several dealers suggested that communication regarding policy related to the balance sheet was unclear in some way.

3a) 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 of the following quarters and half years below. For the time periods at which you expect a target range, please indicate the midpoint of that range in providing your response.

	Jan 29-30 2019	Mar 19-20 2019	Apr 30-May 1 2019	Jun 18-19 2019	Jul 30-31 2019	Sep 17-18 2019	Oct 29-30 2019
25th Pctl	2.38%	2.38%	2.38%	2.63%	2.63%	2.63%	2.63%
Median	2.38%	2.38%	2.38%	2.63%	2.63%	2.63%	2.63%
75th Pctl	2.38%	2.38%	2.38%	2.63%	2.63%	2.88%	2.88%
# of Responses	23	23	23	23	23	23	23
	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 H1	2021 H2
25th Pctl	2.88%	2.88%	2.88%	2.88%	2.63%	2.88%	2.69%
Median	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%	2.88%
75th Pctl	2.88%	2.88%	3.13%	3.13%	3.13%	2.94%	3.00%
# of Responses	23	22	22	22	22	16	16

3b) 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	**2.50%**	**2.10%**
Median	**2.75%**	**2.50%**
75th Pctl	**3.00%**	**2.84%**

3c) Please indicate the percent chance that you attach to the following possible outcomes for the Committee's next policy action between now and the end of 2019.

	Next Change is Increase in Target Rate or Range	Next Change is Decrease in Target Rate or Range	No Change in Target Rate or Range Through the End of 2019
Average	**66%**	**8%**	**26%**

3d) Conditional on the Committee's next policy action between now and the end of 2019 being an increase in the target federal funds rate or range, please indicate the percent chance that you attach to the following possible outcomes for the timing of such a change. Only fill out this conditional probability distribution if you assigned a non-zero probability to the Committee's next policy action between now and the end of 2019 being an increase.

	Increase Occurs at January 2019 FOMC Meeting	Increase Occurs at March 2019 FOMC Meeting	Increase Occurs at April/May 2019 FOMC Meeting or later
Average	**1%**	**12%**	**87%**

3e) Please indicate the percent chance that you attach to the target federal funds rate or range falling in each of the following ranges at the end of 2019, conditional on the following possible scenarios for the direction and timing of the Committee's next policy action between now and the end of 2019. Only fill out the conditional probability distributions for which you assigned a non-zero probability to the conditioning event occurring. If you expect a target range, please use the midpoint of that range in providing your response.

Next Change is an Increase, Occurs at Mar. 2019 Meeting or Earlier								
	≤ 2.00%	2.01 - 2.25%	2.26 - 2.50%	2.51 - 2.75%	2.76 - 3.00%	3.01 - 3.25%	3.26 - 3.50%	≥ 3.51%
Average	**2%**	**3%**	**7%**	**22%**	**39%**	**18%**	**6%**	**2%**

Next Change is an Increase, Occurs at Apr./May 2019 Meeting or Later								
	≤ 2.00%	2.01 - 2.25%	2.26 - 2.50%	2.51 - 2.75%	2.76 - 3.00%	3.01 - 3.25%	3.26 - 3.50%	≥ 3.51%
Average	**2%**	**3%**	**9%**	**35%**	**38%**	**10%**	**2%**	**1%**

Next Change is a Decrease								
	≤ 0.50%	0.51 - 0.75%	0.76 - 1.00%	1.01 - 1.25%	1.26 - 1.50%	1.51 - 1.75%	1.76 - 2.00%	≥ 2.01%
Average	**6%**	**4%**	**5%**	**9%**	**14%**	**18%**	**24%**	**20%**

3f-i) Please indicate the percent chance that you attach to the target federal funds rate or range falling in each of the following ranges at the end of 2020 and 2021, conditional on **not** moving to the zero lower bound (ZLB) at any point between now and the end of 2021. If you expect a target range, please use the midpoint of that range in providing your response.
(21 responses)

Year-end 2020								
	≤ 1.00%	1.01-1.50%	1.51-2.00%	2.01-2.50%	2.51-3.00%	3.01-3.50%	3.51-4.00%	≥ 4.01%
Average	**4%**	**7%**	**12%**	**20%**	**29%**	**17%**	**11%**	**2%**

Year-end 2021								
	≤ 1.00%	1.01-1.50%	1.51-2.00%	2.01-2.50%	2.51-3.00%	3.01-3.50%	3.51-4.00%	≥ 4.01%
Average	**6%**	**10%**	**15%**	**16%**	**23%**	**18%**	**9%**	**4%**

3f-ii) Please indicate the percent chance that you attach to moving to the ZLB at some point between now and the end of 2021.

	Probability of Moving to ZLB at Some Point between Now and the End of 2021
25th Pctl	**20%**
Median	**25%**
75th Pctl	**35%**

3f-iii) Please indicate the percent chance that you attach to the target federal funds rate or range falling in each

of the following ranges at the end of 2020 and 2021, conditional on moving to the ZLB at some point between now and the end of 2021. Only fill out these conditional probability distributions if you assigned a non-zero probability to moving to the ZLB at some point between now and the end of 2021. If you expect a target range, please use the midpoint of that range in providing your response.
(20 responses)

Year-end 2020								
	< 0.00%	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	**11%**	**41%**	**16%**	**11%**	**7%**	**5%**	**4%**	**4%**

Year-end 2021								
	< 0.00%	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	**12%**	**53%**	**14%**	**9%**	**6%**	**4%**	**1%**	**0%**

3f-iv) What is your estimate of the target federal funds rate or range at the effective lower bound?

	Level of Target Federal Funds Rate or Range at ELB
25th Pctl	**-0.25%**
Median	**0.00%**
75th Pctl	**0.13%**

3g) For parts a-f, please explain the factors behind any change to your expectations, where applicable, since the last policy survey.
(22 responses)

Several dealers indicated that they had pushed back their expected timing for target rate increases this year, and several others indicated that they had removed one or more rate increases from their forecast for this year since the last survey. In explaining changes to their expectations, several dealers cited communication from Fed officials, and several cited slowing global growth or other international developments. Finally, several dealers indicated that they had made no material changes to their expectations.

4) Please indicate the percent chance that you attach to the 10-year Treasury yield falling in each of the following ranges at the end of 2019 and 2020.
(21 responses)

Year-end 2019							
	≤ 1.50%	1.51 - 2.00%	2.01 - 2.50%	2.51 - 3.00%	3.01 - 3.50%	3.51 - 4.00%	≥ 4.01%
Average	**2%**	**7%**	**17%**	**34%**	**31%**	**7%**	**2%**

Year-end 2020							
	≤ 1.50%	1.51 - 2.00%	2.01 - 2.50%	2.51 - 3.00%	3.01 - 3.50%	3.51 - 4.00%	≥ 4.01%
Average	**4%**	**10%**	**22%**	**28%**	**21%**	**12%**	**4%**

5) The neutral real federal funds rate can be understood as the level of the real federal funds rate that would be neither expansionary nor contractionary if the economy were operating at or near its potential. Please provide your estimate for the level of the neutral real federal funds rate at each of the time periods below. (21 responses)

	Current Level	Year-end 2019	Year-end 2020	Year-end 2021
25th Pctl	**0.38%**	**0.50%**	**0.50%**	**0.50%**
Median	**0.75%**	**0.75%**	**0.81%**	**0.75%**
75th Pctl	**1.00%**	**1.00%**	**1.00%**	**1.00%**

Please explain the factors behind any changes to your estimates since the policy survey on July 23. (19 responses)

Several dealers indicated that they had made no material changes to their estimates.

6) Various measures of interest rate and equity market volatility increased in the fourth quarter of 2018. Please rate the importance of the following factors in driving the increase in volatility in the fourth quarter of 2018, as well as in late December in particular. **(5=very important, 1=not important)**

Factors Driving Increased Interest Rate and Equity Market Volatility in 2018 Q4						
	Changes in outlook for U.S. economy	Changes in uncertainty around outlook for U.S. economy	Changes in outlook for foreign economies	Changes in uncertainty around outlook for foreign economies	Changes in perception of the FOMC's reaction function for interest rate policy	Changes in perception of the FOMC's reaction function for balance sheet policy
1-Not Important	**0**	**1**	**0**	**1**	**0**	**4**
2	**9**	**1**	**2**	**0**	**4**	**3**
3	**8**	**10**	**8**	**10**	**7**	**7**
4	**4**	**6**	**11**	**8**	**8**	**8**
5-Very Important	**2**	**5**	**2**	**4**	**4**	**1**
# of Responses	**23**	**23**	**23**	**23**	**23**	**23**

	Realized change in aggregate size of global central banks' balance sheets	Changes in global political uncertainty	Automated/ quantitative trading strategies	Seasonal factors (e.g., reduced market liquidity)	Other (please explain)
1-Not Important	**10**	**0**	**2**	**3**	**1**
2	**7**	**6**	**10**	**10**	**1**
3	**3**	**6**	**8**	**7**	**1**
4	**2**	**8**	**2**	**2**	**1**
5-Very Important	**1**	**3**	**1**	**1**	**2**
# of Responses	**23**	**23**	**23**	**23**	**6**

Factors Driving Increased Interest Rate and Equity Market Volatility in Late December 2018						
	Changes in outlook for U.S. economy	Changes in uncertainty around outlook for U.S. economy	Changes in outlook for foreign economies	Changes in uncertainty around outlook for foreign economies	Changes in perception of the FOMC's reaction function for interest rate policy	Changes in perception of the FOMC's reaction function for balance sheet policy
1 - Not Important	**1**	**0**	**0**	**0**	**1**	**2**
2	**4**	**1**	**2**	**2**	**3**	**2**
3	**12**	**9**	**9**	**6**	**8**	**6**
4	**5**	**9**	**8**	**9**	**6**	**6**
5 - Very Important	**1**	**4**	**4**	**6**	**5**	**7**
# of Responses	**23**	**23**	**23**	**23**	**23**	**23**
	Realized change in aggregate size of global central banks' balance sheets	Changes in global political uncertainty	Automated/ quantitative trading strategies	Seasonal factors (e.g., reduced market liquidity)	Other (please explain)	
1 - Not Important	**9**	**1**	**0**	**2**	**1**	
2	**7**	**4**	**9**	**3**	**0**	
3	**4**	**5**	**9**	**4**	**1**	
4	**3**	**9**	**3**	**8**	**0**	
5 - Very Important	**0**	**4**	**2**	**6**	**3**	
# of Responses	**23**	**23**	**23**	**23**	**5**	

If "Other", please explain.
(5 responses)

Dealers did not provide substantial commentary in this section.

7) In the June 2017 addendum to the 2014 Policy Normalization Principles and Plans, the Committee outlined its approach for reducing the Federal Reserve's holdings of Treasury and agency securities. Please provide your estimates for the effects, if any, on the following indicators from the implementation of reinvestment caps on maturing securities over calendar years 2018 and 2019.
(19 responses)

	10-Year Treasury Yield (bps)		30-Year Production Coupon MBS Option-Adjusted Spread (bps)	
	Over Calendar Year 2018	Over Calendar Year 2019	Over Calendar Year 2018	Over Calendar Year 2019
25th Pctl	**0**	**5**	**5**	**3**
Median	**10**	**10**	**10**	**8**
75th Pctl	**15**	**15**	**10**	**10**

	S&P 500 Index (percent)		10-Year ACM Term Premium (bps)	
	Over Calendar Year 2018	Over Calendar Year 2019	Over Calendar Year 2018	Over Calendar Year 2019
25th Pctl	**-4**	**-3**	**0**	**5**
Median	**-2**	**-2**	**6**	**8**
75th Pctl	**0**	**0**	**15**	**12**

Please explain the factors behind differences, if any, in the effects you estimate over calendar year 2019 compared to calendar year 2018.
(19 responses)

Several dealers indicated that they expected the impact of balance sheet normalization to be larger in 2018 than in 2019, and several others indicated that they expected the market impact of normalization in each of the two years to be comparable. Also, several dealers noted that they believed the impact of balance sheet normalization is already priced into markets.

8a) In the June 2017 addendum to the 2014 Policy Normalization Principles and Plans, the Committee outlined its approach for reducing the Federal Reserve's holdings of Treasury and agency securities. Please provide your estimate for the level of the par value of the SOMA portfolio at the end of 2019, conditional on the target federal funds rate or range at the end of 2019 falling in each of the ranges below. If you expect a range for the federal funds target, please use the midpoint of that range in providing your response. For reference, the level of the SOMA portfolio on January 9, 2019 was $3862 billion, including inflation compensation and settled and unsettled agency MBS, according to the most recent H.4.1 release.

Level of the Par Value of the SOMA Portfolio at Year-End 2019, Conditional on Different Levels of the Target Federal Funds Range ($ Billions)					
	≤ 1.75%	1.76-2.25%	2.26-2.75%	2.76 - 3.25%	≥3.26%
25th Pctl	**3600**	**3450**	**3400**	**3400**	**3400**
Median	**3673**	**3570**	**3439**	**3439**	**3433**
75th Pctl	**3800**	**3670**	**3540**	**3540**	**3540**
# of Responses	**22**	**22**	**22**	**22**	**22**

8b) Please indicate the percent chance that you attach to the following possible outcomes for the par value of the SOMA portfolio at the end of 2021, conditional on **not** moving to the ZLB at any point between now and the end of 2021. For reference, the level of the SOMA portfolio on January 9, 2019 was $3862 billion, including inflation compensation and settled and unsettled agency MBS, according to the most recent H.4.1 release. Levels referenced below are in $ billions.

	≤ 2500	2501 - 3000	3001 - 3500	3501 - 4000	≥ 4001
Average	**4%**	**17%**	**36%**	**34%**	**9%**

8c) Please indicate the percent chance that you attach to the following possible outcomes for the par value of the SOMA portfolio at the end of 2021, conditional on moving to the ZLB at any point between now and the end of 2021. Only fill out this conditional probability distribution if you assigned a non-zero probability to moving to the ZLB at some point between now and the end of 2021 in question 3. Levels referenced below are in $ billions.

	≤ 4000	4001 - 4500	4501 - 5000	5001 - 5500	≥ 5501
Average	**30%**	**31%**	**22%**	**12%**	**6%**

8d) Please explain how your view of balance sheet normalization has changed, if at all, since the policy survey on December 10.
(21 responses)

Many dealers indicated that their views of balance sheet normalization had not changed.

9a) For the outcomes below, provide the percent chance you attach to the annual average CPI inflation rate from January 1, 2019 - December 31, 2023 falling in each of the following ranges. 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	**4%**	**11%**	**29%**	**38%**	**14%**	**5%**

	Most Likely Outcome
25th Pctl	**2.00%**
Median	**2.15%**
75th Pctl	**2.25%**

9b) For the outcomes below, provide the percent chance you attach to the annual average CPI inflation rate from January 1, 2024 - December 31, 2028 falling in each of the following ranges. 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	**4%**	**10%**	**29%**	**39%**	**13%**	**5%**

	Most Likely Outcome
25th Pctl	**2.00%**
Median	**2.20%**
75th Pctl	**2.30%**

10a) What percent chance do you attach to:

the U.S. economy currently being in a recession*?
the U.S. economy being in a recession* **in 6 months**?
the global economy being in a recession** **in 6 months**?

	Currently in U.S. Recession		U.S. Recession in 6 Months		Global Recession in 6 Months
25th Pctl	**2%**	25th Pctl	**10%**	25th Pctl	**12%**
Median	**3%**	Median	**12%**	Median	**20%**
75th Pctl	**5%**	75th Pctl	**15%**	75th Pctl	**20%**

**NBER-defined recession*
***Previous IMF staff work has suggested that a "global recession" can be characterized as a period during which there is a decline in annual per-capita real global GDP, backed up by a decline or worsening in one or more of the following global macroeconomic indicators: industrial production, trade, capital flows, oil consumption and unemployment.*

10b) What percent chance do you attach to the U.S. economy first entering a recession* in each of the following periods?

	2019 or earlier	2020	2021	2022	2023 or later
Average	**17%**	**25%**	**26%**	**16%**	**15%**

**NBER-defined recession*

10c) Please explain the factors behind any change to your expectations in parts a and b since the last policy survey.
(17 responses)

Several dealers indicated that they had made no material changes to their recession probabilities, while several others indicated that they had increased their recession probabilities due to weakness in global economic data, heightened political uncertainty, and/or changes in financial conditions.

11a) Provide your estimate of the most likely outcome for output, inflation, and unemployment.
(16 responses)

		2019	2020	2021	Longer Run
Real GDP (Q4/Q4 Growth)	25th Pctl	**1.90%**	**1.50%**	**1.50%**	**1.70%**
	Median	**2.20%**	**1.70%**	**1.60%**	**1.85%**
	75th Pctl	**2.30%**	**1.90%**	**2.00%**	**2.00%**
Core PCE Inflation (Q4/Q4)	25th Pctl	**2.00%**	**2.00%**	**2.00%**	**-**
	Median	**2.10%**	**2.10%**	**2.00%**	**-**
	75th Pctl	**2.10%**	**2.10%**	**2.10%**	**-**
Headline PCE Inflation (Q4/Q4)	25th Pctl	**1.70%**	**2.00%**	**2.00%**	**2.00%**
	Median	**1.90%**	**2.00%**	**2.00%**	**2.00%**
	75th Pctl	**2.00%**	**2.10%**	**2.10%**	**2.00%**
Unemployment Rate (Q4 Average Level)	25th Pctl	**3.40%**	**3.40%**	**3.50%**	**4.10%**
	Median	**3.50%**	**3.60%**	**3.85%**	**4.40%**
	75th Pctl	**3.60%**	**3.80%**	**4.20%**	**4.50%**

11b) Please explain changes, if any, to your estimates in part a since the last time this question was asked.
(21 responses)

Several dealers indicated that they had revised lower their forecasts for GDP growth in 2019, several dealers indicated that they had revised lower their forecasts for inflation at some point during the forecast horizon, and several indicated that they had revised upward their forecasts for the unemployment rate at some point during the forecast horizon. In addition, several dealers indicated that they had made no material changes to their forecasts.