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Understanding the New York Fed's *Survey of Primary Dealers*

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The New York Fed's Survey of Primary Dealers *plays a key role in the Federal Reserve's understanding of market expectations for monetary policy and the economy, providing timely and comprehensive dealer insight into a range of topics. In recent years, the survey has evolved to reflect the changing macroeconomic environment brought about by the financial crisis and by the Fed's move into new policy tools aimed at adjusting the size and composition of its balance sheet and giving more explicit forward guidance on the path of short-term interest rates. This study offers an in-depth look at the survey and discusses its structure and evolution.*

For almost a decade, the Federal Reserve Bank of New York has produced the *Survey of Primary Dealers (SPD)*. The survey—conducted one to two weeks ahead of each regularly scheduled Federal Open Market Committee (FOMC) meeting—provides a timely and comprehensive summary of market expectations on a variety of topics relevant to the Committee's mandate. The survey is posted on the New York Fed's website at the same time it is sent to primary dealers—currently twenty-one institutions with whom the Bank trades U.S. government and certain other securities.[1] Results are analyzed ahead of each FOMC meeting; aggregate results are published three weeks after the meeting.

In this edition of *Current Issues*, we describe the objectives of the *SPD*, discuss its structure and evolution, and provide practical examples of how survey results inform views on market expectations.

Survey Rationale and Structure

The assessment of financial market conditions and market expectations for policy decisions is an important input to the monetary policymaking process. U.S. monetary policy influences the economy in part through its effect on financial markets. For example, changes in interest rates as a result of monetary policy decisions can affect prices of equity and credit instruments as well as the value of the dollar against foreign currencies. These price changes in turn influence the cost of capital for firms and banks, a range of consumer borrowing rates as well as overall household wealth, and the relative competitiveness of U.S. exports.

In addition to the Bank's use of a range of quantitative analytical techniques, conversations with members of the financial community are one aspect of

[1] For more detailed information, see the Bank's Primary Dealers web page: www.newyorkfed.org/markets/primarydealers.html.

understanding policy expectations and the effect of policy decisions on financial markets. As part of these efforts, staff speak on a daily basis with traders, strategists, and economists in the primary dealer community to better comprehend their views on markets and their expectations for monetary policy and the economy. These conversations are complemented by talks with institutional investors. The consensus view that emerges from these dialogues and the distribution of opinions around that consensus help to ensure a solid grasp of financial market conditions and market expectations for monetary policy and the economy.

While a daily flow of commentary is one input into financial market analysis, a more systematic snapshot of views in the form of surveys is also helpful. The *SPD* has traditionally focused on the primary dealer community.[2] One reason is that economic forecasting and market research by primary dealers can inform the views of their clients. As such, the dealers' expectations for monetary policy and the economy can serve as a rough proxy for investor expectations. In addition, risk-taking activities of dealers can be informed by the views of their economists and strategists. As a matter of course, New York Fed staff compare results of the *SPD* with those of other surveys, such as the *Blue Chip Economic Indicators,* the *Survey of Professional Forecasters*, and ones conducted by the financial press and financial institutions.[3] Another reason for the focus on primary dealers is that the formal relationship between the New York Fed and the dealers helps to ensure responsiveness to the survey and use of a relatively stable sample.

The *SPD* generally encompasses two broad areas of focus. The first centers on expectations for monetary policy, with several questions inquiring about respondents' outlook for the path of the federal funds rate over the near and medium terms (see Appendix 1). Questions can be phrased in a variety of ways. For example, respondents are routinely asked to provide their modal expectations for the target fed funds rate at various time horizons. Additionally, the survey asks for probability distributions for particular monetary policy outcomes. For instance, it currently asks each respondent to attach probabilities to the half-year period in which the first increase in the target fed funds rate will occur.[4] These probability distributions enable a fuller understanding of respondents' views and allow for the computation of more sophisticated statistics that capture concepts such as uncertainty of responses and disagreement across respondents.[5] More recently, the survey has also queried primary dealers about probabilities of policy outcomes over different time horizons. It has asked them, for instance, to indicate the percentage likelihood they attach to the Federal Reserve's domestic asset holdings falling within certain ranges at year-end 2013 and 2014.[6]

The second section of the *SPD* generally focuses on the economic outlook. Like many other surveys, the *SPD* solicits forecasts for GDP growth, headline and core inflation, and longer-term inflation expectations. Questions on uncertainty around economic forecasts have also been included, as have more idiosyncratic questions associated with the outlook. For example, respondents have been asked to quantify the extent to which the crisis in Europe exerted a drag on their forecast for 2012 GDP growth as well as the contribution of U.S. federal fiscal policy to GDP growth in 2012 and 2013.

New York Fed staff construct questions without input from FOMC members. This is an important design element, as it mitigates the risk of the survey influencing market expectations and affecting trading and prices in a range of financial markets. In designing the survey, the staff draw on recent policy actions, FOMC meeting statements and minutes, and public remarks by the Chairman and Committee members to identify topics that are likely to influence financial market pricing and policy expectations. In addition, survey questions frequently provide specific context by referencing public statements by the Chairman and the Committee. This serves to reinforce the practice of using questions on topics that Committee members have already discussed publicly. The August 2011 FOMC meeting minutes, for instance, covered the range of policy tools available to promote a stronger economic recovery, such as forward guidance regarding the likely path of monetary policy, additional asset purchases, an increase in the average maturity of the Federal Reserve's asset portfolio, and a reduction in interest rates paid on excess reserves. In the next survey, prepared ahead of the September 2011 meeting, the *SPD* sought respondents' views on how each of these tools might be structured should the Committee decide to employ them.

Evolution of the *SPD*

While the *SPD* has maintained a basic structure over its life, its content has evolved considerably in recent years in response to the dramatic changes in the economic, financial, and policy environments. In its early days, prior to the financial crisis, the *SPD* was more narrowly focused on tracking expectations for the target fed funds rate and the economy. However, questions

[2] New York Fed staff typically distribute the survey to each primary dealer's economics team. Where the survey asks questions about specific financial markets, the economics team will usually coordinate a response with its strategist or trader colleagues.

[3] These surveys differ from the *SPD* in important ways, such as survey frequency, number and type of respondents, forecast horizon for economic variables like GDP, and relative focus on economic, monetary policy, and financial market variables and expectations.

[4] See, for example, Question 2 in the June 2013 survey.

[5] Uncertainty is the variance within a dealer's forecast distribution, while disagreement is the variance across forecast averages.

[6] See, for example, Question 10 in the April 2013 survey.

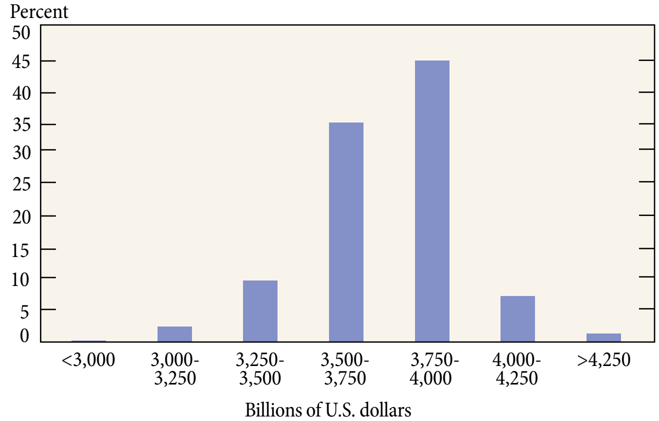
on the monetary policy outlook have increased in complexity as the policy stance has grown more complicated. For example, as the fed funds rate approached the zero bound in late 2008, the public conversation began to center on unconventional monetary policy measures available to the Federal Reserve, such as those that involved an expansion of its balance sheet. As such, questions on the likelihood and market effect of asset purchase programs have increasingly appeared on the *SPD* (see Appendix 2).

Most recently, the New York Fed made several adjustments to the *SPD* to reflect the introduction at the September 2012 FOMC meeting of flow-based asset purchases. According to the flow-based approach, the Committee does not announce an anticipated size of total purchases, but instead describes the economic conditions that would warrant a change in the monthly pace and composition of purchases. Market expectations for total asset purchases can therefore fluctuate as the economic outlook evolves. Recent surveys have attempted to understand the evolution of dealer expectations for the size and composition of asset purchases, and a multipart question was introduced to gather such information. It asks dealers to provide their expectations for the monthly pace of purchases over the coming FOMC meetings and to indicate whether they believe the pace of purchases will change over a number of longer horizons.[7] The question also asks when dealers expect the flow-based program to end. Additionally, a separate question asking for dealers' distribution of expectations for the level of the Federal Reserve's System Open Market Account (SOMA) portfolio helps New York Fed staff identify the level of certainty around expectations for growth in the portfolio. Chart 1 presents aggregate responses to this question from a recent survey.

The inclusion of questions on expectations for policy announcements serves a number of purposes. First, a detailed set of expectations on potential policy actions can provide a more informed understanding of the financial market implications of FOMC decisions. Consider a scenario in which the FOMC announces a sizable asset purchase program, but the level of long-term interest rates remains largely unchanged following the announcement. At first glance, it may be tempting to conclude that such an announcement was ineffective in influencing financial conditions. However, if financial markets fully anticipated such an announcement, the effect of the policy would likely have been factored into the level of interest rates ahead of time. Thus, the detailed data made available on expectations for programs—including the anticipated size and composition of a program and the likelihood of an announcement—serve as an input to policy analysis.

[7] See, for example, Question 5 in the October 2012 survey and Question 6 in the June 2013 survey.

Chart 1
Expectations for SOMA Level at Year-End 2013: Average Probability Distribution

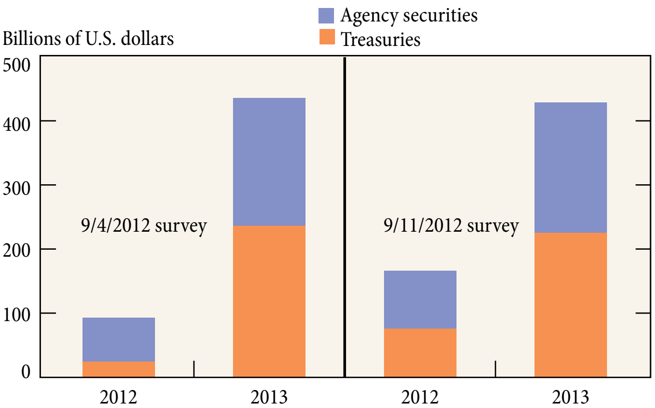


Source: Federal Reserve Bank of New York, *Survey of Primary Dealers*, April 2013.

Additionally, the gauging of market expectations for Federal Reserve policy informs the effectiveness and credibility of communication about future policy. In recent years, the Fed has made several efforts to increase transparency around monetary policy, and information about potential future policy actions is often publicly provided in FOMC statements, minutes, press conferences, and speeches. Querying primary dealers on their expectations for Federal Reserve policy actions allows New York Fed staff to determine the extent to which market expectations have been informed by Fed communication. Alternatively, survey results might indicate that dealers have different economic forecasts than policymakers have, and this difference may explain the dealers' outlook for policy independent of the effectiveness of Federal Reserve communication.

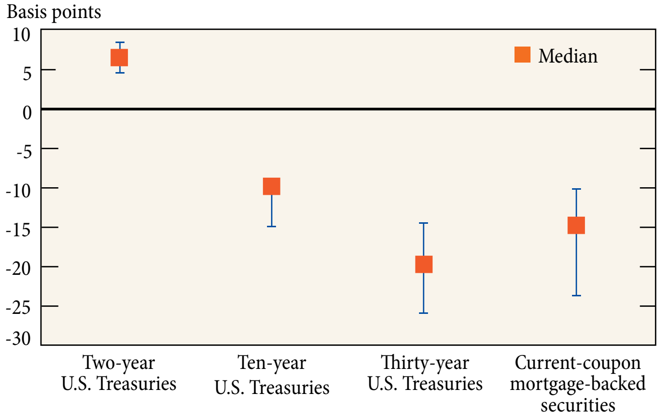
The August and September 2011 *SPD*s show how the survey can measure shifts in policy expectations. Respondents were asked to assign probabilities to the use of particular tools over one- and two-year horizons to ease or tighten policy. With regard to easing policy, respondents to the August survey assigned a median 20 percent probability to the FOMC increasing the duration of the SOMA portfolio within one year. In the September *SPD*, the median probability rose to 75 percent, suggesting growing but not unanimous expectations for such a policy action. Notably, the yield on the ten-year Treasury note declined by roughly 80 basis points over this period. The September survey also attempted to gauge expectations for the size of a maturity extension program, were the Fed to announce one. The median respondent anticipated a $325 billion program. Taken together, the responses to these two questions suggest that the announcement of the $400 billion Maturity Extension Program (MEP) at the

Chart 2
Median Yearly Expected Change in SOMA Assets



Source: Federal Reserve Bank of New York, *Survey of Primary Dealers*.

Chart 3
Yield Impact of Maturity Extension Program



Source: Federal Reserve Bank of New York, *Survey of Primary Dealers*, November 2011.

Note: The bars represent the middle 50 percent of responses.

September 2011 FOMC meeting was somewhat of a surprise to market participants in terms of the program's timing and size. New York Fed staff can use this information, supplemented by other analytical tools as well as by conversations with market participants, to assess whether the immediate asset price response to the MEP announcement was similar to the response to prior asset purchase announcements, after taking account of other factors, such as program structure. This type of analysis can assist in determining the market implications of policy and the potential effects of future actions.

Similarly, the survey conducted ahead of the September 2012 FOMC meeting attempted to assess expectations for asset purchases, and included a question on dealers' expectations for the size of the SOMA portfolio over the next five years. Responses showed median expectations for the portfolio to reach $3 trillion by the end of 2013, implying expectations for asset purchases totaling $530 billion (Chart 2, sum of first two columns). The survey was conducted from August 31 to September 4. However, after the survey closed, there was significant market reaction to the August U.S. employment report on September 7, which appeared to indicate a further shift in policy expectations. As such, dealers were asked to update their forecasts for the SOMA portfolio ahead of the FOMC meeting; they now reported expectations for a median increase of $600 billion to the portfolio (Chart 2, sum of last two columns).

Another objective of the survey is to understand dealers' views on the effectiveness of monetary policy. As the size and composition of the Federal Reserve's balance sheet became a primary instrument of monetary policy, the survey solicited the views of dealers' staff economists on the extent to which various programs would prove effective in promoting the Fed's monetary policy objectives. Continuing with the example of the MEP, we note that in the *SPD* conducted after the program's introduction, dealers were asked to quantify the net effect of the program on Treasury yields and the current-coupon mortgage-backed-security (MBS) yield. The results indicated belief that the start-up of the MEP, as well as a change to the reinvestment policy for MBS,[8] had led to notable declines in ten- and thirty-year Treasury yields and in the current-coupon MBS yield (Chart 3). The sale of short-dated Treasury securities through the MEP was viewed as placing only moderate upward pressure on two-year Treasury yields.

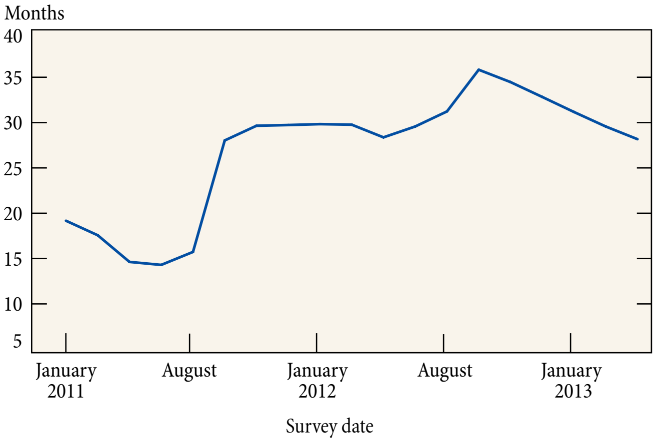
Survey Responses over Time

SPD results can provide timely, systematic information about market expectations at a set point in time. Moreover, most questions appear on a recurring basis, allowing for the formation of time series. For example, the survey asks respondents to forecast the most likely quarter and year of the first increase in the target fed funds rate. As Chart 4 shows, expectations for the timing of the first rate hike have evolved considerably over the past two years. Throughout the first half of 2011, the median dealer forecast anticipated the first conventional policy tightening by the end of 2012. The anticipated number of months until the first tightening declined from around twenty in early 2011 to fifteen—or to occur by late 2012—by the time of the *SPD* conducted ahead of the June 2011 FOMC meeting. However, in the first survey following the FOMC's introduction at the August 2011 meeting of calendar-date guidance

[8] At the same time that it announced the Maturity Extension Program, the Committee announced that it would reinvest principal payments from its holdings of agency debt and agency mortgage-backed securities into agency mortgage-backed securities in order to provide support for the mortgage market.

Chart 4

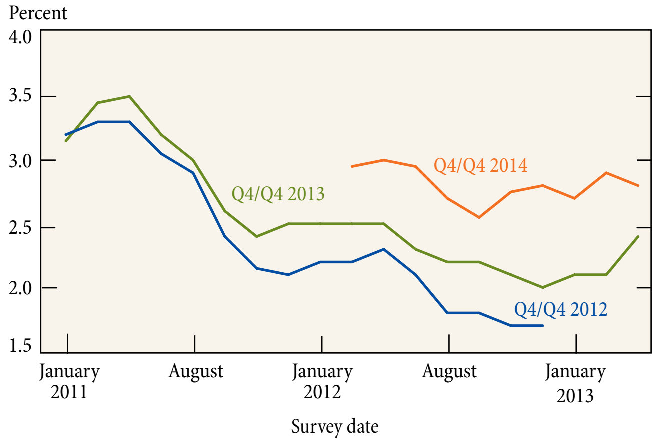
Time until Expected First Rate Hike



Source: Federal Reserve Bank of New York, *Survey of Primary Dealers*.

Chart 5

Median Forecasts of GDP Growth



Source: Federal Reserve Bank of New York, *Survey of Primary Dealers*.

on the expected path of the fed funds rate, the timing of the median respondent's expectation for the first rate hike jumped further into the future, nearly doubling the length of time dealers expected to elapse before the first increase in the target rate. Market commentary following the August 2011 meeting characterized the introduction of calendar-based guidance as a surprise, both in terms of the FOMC specifying an expectation for the date of the first target rate increase and in terms of the date specified being much further in the future than what the market expected at the time.

A similar exercise can be applied to responses to macroeconomic expectations reported in the *SPD*. For many years, the survey has gathered dealer forecasts for GDP one, two, and three years ahead. The evolution of this time series over the past two years reveals the deterioration in market participants' outlook for growth. The series shows a steady decline in forecast GDP, with a particularly significant drop occurring over fall 2011. Reasons for the downgrades reported by respondents included the sovereign debt and banking crises in Europe, U.S. fiscal policy, sluggish improvement in labor market conditions, and low consumer confidence.

More recently, respondents' longer-term growth outlook has improved slightly. In the October 2012 *SPD*, dealer forecasts for Q4/Q4 2014 GDP increased 0.2 percentage point, to 2.75 percent (Chart 5), an increase that has been reported in subsequent surveys. A couple of dealers noted that their upgraded medium-term economic forecasts were a result of Federal Reserve policy actions taken in September 2012.

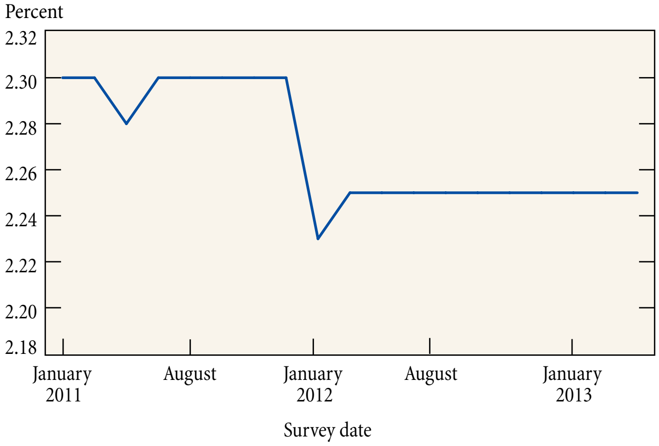
Similarly, for many years the survey has asked respondents to assign probabilities to a variety of outcomes for headline inflation for the five-year period beginning five years ahead. In other words, respondents are asked to estimate their own distribution of inflation expectations as well as provide a point estimate for the most likely outcome. The behavior of this time series can provide valuable insight not only into the level of inflation expectations over time, but also into other properties, such as the level of disagreement between respondents on the likelihood of various inflation outcomes. Interestingly, the resultant time series suggests remarkable stability in dealers' inflation expectations over time (Chart 6)—a result similar to those ascertained from other survey sources, such as the *Survey of Professional Forecasters*. These survey-based measures complement market-based measures of inflation compensation, such as the breakeven inflation rates implied by nominal securities and Treasury inflation-protected securities of comparable maturities.

The survey has also asked respondents to rate the effectiveness of Federal Reserve communication (Chart 7). Dealers are asked to rate communication since the previous survey, with a score of 1 indicating ineffectiveness and 5 suggesting effectiveness. Dealer ratings here are generally fairly stable, between 3.5 and 4, although there was a notable drop in April 2011. In that survey, most dealers mentioned that the wide and sometimes conflicting range of views expressed by Federal Reserve officials in their public commentary led to an inconsistent message over that intermeeting period. However, dealers also expected that the newly announced post-FOMC press conferences held by the Chairman, which were to begin with the April 2011 meeting, would help alleviate the confusion. As expected, the score rebounded in the next survey, with the press conference viewed as a significant innovation in Federal Reserve communication.

The communication score also declined sharply from the December 2012 survey to the January 2013 survey. In their

Chart 6

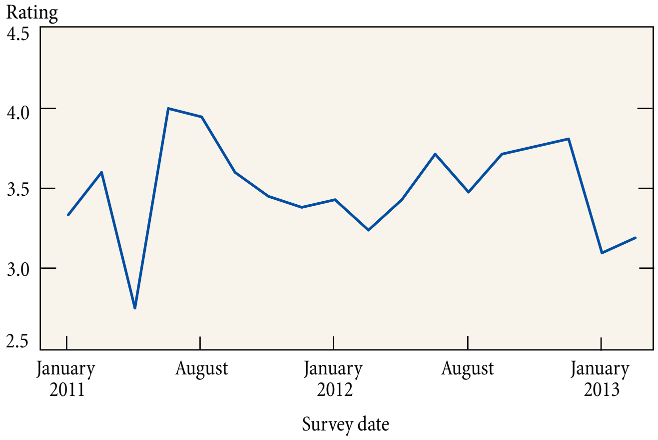
Median of Modal Forecasts for Five-Year Inflation beginning Five Years Ahead



Source: Federal Reserve Bank of New York, *Survey of Primary Dealers*.

Chart 7

Average Grade Given to Fed's Communcation Strategy



Source: Federal Reserve Bank of New York, *Survey of Primary Dealers*.

qualitative responses, many dealers noted that the introduction of a quantitative threshold for future changes to the low level of the fed funds rate had occurred much earlier than they had anticipated based on commentary by FOMC members. Some also noted that the December FOMC meeting minutes portrayed an unexpectedly greater range of member views on the likely duration of the flow-based asset purchase program.

Conclusion

The New York Fed's *Survey of Primary Dealers* offers a useful input into the Federal Reserve's understanding of expectations for monetary policy and the real economy. The survey benefits from a relatively stable sample of dealers who often influence the views of a wide range of market participants and complements other quantitative and qualitative techniques for tracking financial market developments.

The *SPD* has evolved in recent years to reflect both the changing macroeconomic environment brought about by the financial crisis as well as the Fed's move into new policy tools focused on adjusting the size and composition of its balance sheet and providing more explicit forward guidance on the path of short-term interest rates. The survey will likely continue to evolve, particularly as the level of policy accommodation changes and the Federal Reserve eventually begins to normalize the stance of policy.

Appendix 1

Typical Question on the Outlook for the Target Federal Funds Rate

From the December 2012 Survey

Of the possible outcomes below, please indicate the percent chance you attach to the timing of the first federal funds target rate increase:

2012 H2	2013 H1	2013 H2	2014 H1	2014 H2	2015 H1	2015 H2	2016 H1	2016 H2	≥2017 H1

Estimate for most likely quarter and year of first target rate increase:

Provide your firm's estimate of the most likely outcome (i.e., the mode) for the federal funds target rate or range at the end of each half-year period and over the longer run:

2012 H2	2013 H1	2013 H2	2014 H1	2014 H2	2015 H1	2015 H2	2016 H1	2016 H2	≥2017 H1

Longer Run:

Appendix 2

Representative Questions on Balance Sheet Policy

From the September 2011 Survey

For each listed policy tool, please indicate the probability the tool will be used to signal future policy easing or to ease policy within the next 1 and 2 years.

	Probability within 1 Year	Probability within 2 Years
Lower interest on excess reserves		
Expand SOMA portfolio through security purchases		
Increase duration of portfolio*		
Change guidance on the period over which the target rate will remain in effect		
Provide guidance on the period over which the SOMA portfolio will remain at the current level		

*i.e., a deliberate action to increase the duration of the SOMA portfolio, independent of other policy changes.

From the December 2012 Survey

In the September FOMC statement, the Committee announced a new asset purchase program. In the statement, the Committee said, "These actions…together will increase the Committee's holdings of longer-term securities by about $85 billion each month through the end of the year."

Please provide your expectation for the monthly pace of purchases that will be in effect after each of the below FOMC meetings.

Monthly Pace of Longer-Term Security Purchases
($ Billions)

	Treasuries	Agency MBS
December 11-12		
January 29-30		
March 19-20		
1 Year Ahead (December 17-18)		

Please indicate the quarter and year you expect purchases associated with the flow-based asset purchase program to end.

Quarter and Year:

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