Responses to Survey of Primary Dealers

Markets Group, Federal Reserve Bank of New York

June 2013

Responses to the Primary Dealer Policy Expectations Survey
Distributed: 6/6/2013 – Received by: 6/10/2013

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] For multiple choice questions, the number of responses for each option is reported. Brief summaries of the comments received in free response form have also been provided.

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

Monetary Policy Expectations

1. Do you expect any changes in the FOMC statement and, if so, what changes?

Some dealers expected either minor changes or no changes to the June FOMC statement. Of those expecting changes, several dealers noted that the Committee may recognize recent softness in growth and inflation data over the intermeeting period. Several dealers mentioned that there was a chance that the FOMC may provide additional clarity around the path of asset purchases.

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

	H2 2013	H1 2014	H2 2014	H1 2015	H2 2015	H1 2016	H2 2016	H1 2017	≥ H2 2017
Average	0%	5%	11%	25%	27%	17%	8%	4%	4%

	Most likely quarter and year of first target rate increase:
25th Pctl	Q2 2015
Median	Q3 2015
75th Pctl	Q3 2015

3. 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:

	H2 2013	H1 2014	H2 2014	H1 2015	H2 2015	H1 2016	H2 2016	H1 2017	H2 2017	Longer Run
25th Pctl	0-.25%	0-.25%	0-.25%	0-.25%	0.50%	1.00%	1.50%	2.00%	2.50%	3.75%
Median	0-.25%	0-.25%	0-.25%	0-.25%	0.75%	1.50%	2.00%	3.00%	3.25%	4.00%
75th Pctl	0-.25%	0-.25%	0-.25%	0.50%	1.00%	2.00%	2.50%	3.25%	4.00%	4.00%

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

4. **Of the possible outcomes below, please indicate the percent chance you attach to the 10-year Treasury yield falling in each of the following ranges at the end of 2013 and 2014.**

	<1.00%	1.00 - 1.50%	1.51 - 2.00%	2.01 - 2.50%	2.51 - 3.00%	3.01 - 3.50%	>3.50%
Year-end 2013 :	1%	6%	21%	38%	22%	8%	2%

	<1.50%	1.50 - 2.00%	2.01 - 2.50%	2.51 - 3.00%	3.01 - 3.50%	3.51 - 4.00%	>4.00%
Year-end 2014 :	3%	7%	19%	30%	24%	13%	5%

5. **The 10-year Treasury yield has increased by approximately 46 basis points since the release of the May FOMC statement. Please rate the importance of the factors below in explaining this increase. (5 = very important, 1 = not important)**

Factors Influencing the Increase in the 10-year Treasury Yield

	1 - not important	2	3	4	5 - very important
Stronger growth prospects	5	5	8	2	1
Higher inflation outlook	20	1	0	0	0
Global factors	3	6	7	3	2
Change in perception of FOMC's view of appropriate policy	0	1	1	5	14
Heightened uncertainty on FOMC's view of appropriate policy	0	1	3	4	13
Other / technical factors	10	2	7	1	1

(20 primary dealer comments)

Most dealers stated that a change in perception of or heightened uncertainty around the FOMC's view of appropriate monetary policy were key factors in the rise in the 10-Treasury yield over the period. Some dealers noted that these changes were driven by FOMC communications, with several specifically noting the Chairman's testimony before the Joint Economic Committee of Congress. Some dealers mentioned that the market now expects an earlier reduction in the pace of purchases than previously expected. Several dealers noted that technical and/or positioning factors exacerbated the moves in the 10-year Treasury yield, including flows related to volatility in the agency MBS market. Several dealers also mentioned that effects stemming from the Bank of Japan's recent policy actions had contributed to the move higher in the 10-year Treasury yield.

6. **In the May FOMC statement, the Committee announced it will continue purchasing additional agency mortgage-backed securities at a pace of $40 billion per month and longer-term Treasury securities at a pace of $45 billion per month, and also stated that it would take appropriate account of the likely efficacy and costs of such purchases as well as the extent of progress toward its economic objectives in determining the size, pace, and composition of its asset purchases.**

   a) **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
2013	June 18-19:	25th Pctl	45	40
		Median	45	40
		75th Pctl	45	40
	July 30-31:	25th Pctl	45	40
		Median	45	40
		75th Pctl	45	40
	September 17-18:	25th Pctl	35	30
		Median	45	40
		75th Pctl	45	40
	October 29-30:	25th Pctl	30	30
		Median	45	40
		75th Pctl	45	40
	December 17-18:	25th Pctl	25	25
		Median	30	30
		75th Pctl	35	40
2014	January 28-29:	25th Pctl	20	15
		Median	25	25
		75th Pctl	30	30
	March 18-19:	25th Pctl	10	10
		Median	15	15
		75th Pctl	20	20
	April 29-30:	25th Pctl	0	0
		Median	10	0
		75th Pctl	15	15
	June 17-18: (1 year ahead)	25th Pctl	0	0
		Median	0	0
		75th Pctl	0	0

b) Please provide your expectation for the change in the amount of domestic securities held in the SOMA portfolio during each of the periods below. In the case of purchases, please include settled and unsettled amounts.[2]

		2014 H2	2015 H1	2015 H2	2016 CY*	2017 CY*	2018 CY*
		$Billions					
Change in the estimated amount of Treasuries:	25th Pctl portfolio	0	-7	-80	-81	-235	-330
	Median portfolio	0	0	0	-210	-196	-300
	75th Pctl portfolio	15	0	-15	-200	-115	-294
Change in the estimated amount of agency debt and MBS:	25th Pctl portfolio	-38	-53	-138	-273	-177	-175
	Median portfolio	25	-55	-85	-145	-172	-76
	75th Pctl portfolio	0	-40	-45	-139	-114	-95

**Calendar Year*

Please describe your assumptions for the monthly pace of asset purchases for Treasury and agency MBS securities, if not clear from the above:

(16 primary dealer comments)

Many dealers clarified their assumptions for the monthly pace of purchases. Some dealers stated that they expect the first reduction in the pace of purchases to be announced at an FOMC meeting in 2013, while several stated that they expect the first reduction in the pace of purchases in 2014. Many dealers noted their expectation for purchases to end in 2014, with several dealers expecting the first half of 2014, and several others expecting the second half of 2014.

Please explain your assumptions behind your projections for the size and pace of passive redemption and sales of securities, if applicable:

(20 primary dealer comments)

Many dealers noted that they either did not expect the FOMC to sell agency MBS in the given timeframe, or viewed sales of agency MBS as unlikely to ever occur in the context of balance sheet normalization. Many dealers stated their expectation for passive runoff of the SOMA portfolio to commence in 2015, with some dealers seeing a decline in agency MBS holdings and several seeing a decline in Treasury holdings. Several dealers noted that they expect the Treasury portfolio to begin declining in 2016. Several dealers also provided their assumptions for the speed at which they expect agency MBS holdings to run off passively.

c) If you made any changes to your expectations for the overall size, pace, and/or composition of asset purchases relative to your responses since the last survey on April 22, please explain the factors that motivated you to make the change(s).

Many dealers made changes to their expectations for asset purchases since the April survey, and several dealers cited FOMC communication as a driver of their change. Changes in dealer expectations varied. Some dealers expected changes in the overall amount and length of asset purchases. Several dealers mentioned that they now see an earlier timetable for a reduction in the monthly pace of asset purchases, while several noted that they had not made any changes to their prior expectations.

[2] Respondents provided their expected change in the SOMA portfolio of Treasuries and agency debt and MBS at each time horizon. The above data is constructed by creating a portfolio level for each respondent at each time horizon based upon their responses. The 25th percentile, median, and 75th percentile portfolio level are then sampled at each time horizon. The above data represent the changes in these portfolios at each time horizon.

7. **If you expect a change in the monthly pace of asset purchases prior to the end of the program, and assuming that the economy progresses according to the scenario you judge most likely, please address the following:**

   a) **At the time you expect an initial change in the monthly pace of asset purchases, what is your best estimate for the realized values of the following economic indicators? If you project the monthly pace of Treasury and agency MBS purchases to change at different times, please provide estimates as of the earlier of the two dates. For reference, as of 4/30/13 the level of total U.S. employees on nonfarm payrolls, seasonally adjusted, was 135.5 million.**

	Expected Level of Non-farm Payrolls at the First Change in the Pace of Asset Purchases (mn):	Expected Unemployment Rate at the First Change in the Pace of Asset Purchases	Expected y/y Change in PCE Deflator at the First Change in the Pace of Asset Purchases
25th Pctl	136.40	7.2%	1.0%
Median	136.60	7.3%	1.3%
75th Pctl	136.90	7.4%	1.5%

   b) **At the time you expect asset purchases to be completed, what is your best estimate for the realized values of the following economic indicators? If you expect Treasury and agency MBS purchases to be completed at different times, please provide estimates as of the later of the two dates. For reference, as of 4/30/13 the level of total U.S. employees on nonfarm payrolls, seasonally adjusted, was 135.5 million.**

	Expected Level of Non-farm Payrolls at the End of Asset Purchases (mn):	Expected Unemployment Rate at the End of Asset Purchases	Expected y/y Change in PCE Deflator at the End of Asset Purchases
25th Pctl	137.50	6.9%	1.5%
Median	138.00	7.0%	1.7%
75th Pctl	138.30	7.1%	2.0%

8. **The April/May 2013 FOMC statement noted, "The Committee will continue its purchases of Treasury and agency mortgage-backed securities, and employ its other policy tools as appropriate, until the outlook for the labor market has improved substantially in a context of price stability... In determining the size, pace, and composition of its asset purchases, the Committee will continue to take appropriate account of the likely efficacy and costs of such purchases as well as the extent of progress toward its economic objectives.**

   a) **The FOMC's March 2013 Summary of Economic Projections shows the expected central tendency for the unemployment rate at the end of 2013 falling between 7.3 and 7.5 percent. Please indicate the percent chance you attach to the unemployment rate corresponding to the following hypothetical scenarios at year-end 2013: 1) it declines to less than 7.3 percent; 2) it falls within the 7.3 to 7.5 percent range; and 3) it rises above 7.5 percent. Please consider all possible conditions that may be associated with these scenarios in providing your responses.**

	< 7.3%	7.3% - 7.5%	> 7.5%
Average	44%	38%	18%

b) **Please indicate the percent chance you attach to the dollar level of the SOMA portfolio falling within the following ranges at year-end 2014 for each of three hypothetical unemployment rate scenarios described in part a). For your reference, the level of the SOMA portfolio including inflation accretion and settled and unsettled agency MBS according to the January 3, 2013 H.4.1 release was $2,785 billion (the H.4.1 closest to the start of 2013).**

Unemployment rate at year-end 2013		**Year End 2014 ($Billions)**						
		<2500	**2500-3000**	**3000-3500**	**3500-4000**	**4000-4500**	**4500-5000**	**>5000**
Less than 7.3 percent	Average	0%	2%	16%	51%	25%	5%	0%
Between 7.3 and 7.5 percent	Average	0%	1%	10%	45%	34%	9%	1%
Greater than 7.5 percent	Average	0%	1%	6%	39%	37%	15%	2%

c) **Of the possible outcomes below, please indicate the percent chance you attach to the SOMA portfolio level falling in each of the following ranges at year-end 2013. Probabilities for the year-end 2014 level of the SOMA portfolio are automatically calculated using the responses you provided in parts a) and b) and the rules of conditional probability. These probabilities should be consistent with your views; if they are not, please verify your responses from parts a) and b).**

	Year End 2013						
	<3000	**3000-3250**	**3250-3500**	**3500-3750**	**3750-4000**	**4000-4250**	**>4250**
Average	0%	1%	8%	36%	47%	7%	1%

	Year End 2014						
	<2500	**2500-3000**	**3000-3500**	**3500-4000**	**4000-4500**	**4500-5000**	**>5000**
Average	0%	1%	12%	46%	31%	8%	1%

9. Provide your firm's estimate of the most likely outcome (i.e., the mode) for output, inflation, and unemployment. Are the risks to output, inflation and unemployment skewed to the downside, balanced, or skewed to the upside relative to your forecast? Please comment on any risks you see to your forecast.

(15 complete primary dealer responses)

		Q4/Q4 2013	Q4/Q4 2014	Q4/Q4 2015	Longer Run
	25th Pctl	2.10%	2.70%	2.80%	2.25%
GDP:	Median	2.20%	2.80%	3.00%	2.30%
	75th Pctl	2.40%	3.00%	3.30%	2.50%
	25th Pctl	1.25%	1.70%	1.78%	
Core PCE:	Median	1.30%	1.70%	1.90%	
	75th Pctl	1.50%	1.90%	2.00%	
	25th Pctl	1.10%	1.60%	1.90%	2.00%
Headline PCE:	Median	1.30%	1.90%	2.00%	2.00%
	75th Pctl	1.50%	2.00%	2.00%	2.05%
	25th Pctl	7.20%	6.50%	6.05%	5.80%
Unemployment Rate*:	Median	7.30%	6.80%	6.30%	6.00%
	75th Pctl	7.40%	6.80%	6.40%	6.26%

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

2013 Forecasts*

Number of Respondents Citing:	Downside Risk	Balanced Risk	Upside Risk
GDP:	6	13	2
Core PCE:	6	15	0
Headline PCE:	6	15	0
Unemployment Rate:	1	16	4

2014 Forecasts*

Number of Respondents Citing:	Downside Risk	Balanced Risk	Upside Risk
GDP:	2	15	4
Core PCE:	4	13	4
Headline PCE:	4	13	4
Unemployment Rate:	2	15	4

2015 Forecasts*

Number of Respondents Citing:	Downside Risk	Balanced Risk	Upside Risk
GDP:	2	13	0
Core PCE:	0	12	3
Headline PCE:	0	13	3
Unemployment Rate:	2	13	0

**Upside risk is a risk towards higher GDP growth, a higher inflation rate, and a lower unemployment rate. Downside risk is a risk towards lower GDP growth, a lower inflation rate, and a higher unemployment rate.*

10. **For the outcomes below, please indicate the percent chance you attach to the annual average CPI inflation rate from 2018 - 2023. Please also indicate your point estimate for the most likely outcome (i.e., the mode).**

	≤1.0%	1.01-1.5%	1.51-2.0%	2.01-2.5%	2.51-3.0%	≥3.01%
Average	3%	11%	25%	32%	18%	10%

	Point Estimate
25th Pctl	2.00%
Median	2.25%
75th Pctl	2.50%

11. **a and b) What percent chance do you attach to the US economy currently being in a recession (NBER-defined)? What percent chance would you attach to the US economy being in a recession in 6 months (NBER-defined)?**

	Currently in NBER Recession
25th Pctl	4%
Median	5%
75th Pctl	10%

	NBER Recession in 6 Months
25th Pctl	10%
Median	15%
75th Pctl	20%

12. **Please comment on any changes to your macroeconomic assessments and risks to your forecast since the last FOMC meeting.**

(20 primary dealer comments)

Several dealers lowered their outlook for inflation while several others revised their forecasts to now project a lower unemployment rate. Several dealers mentioned that they were concerned with the recent deceleration in inflation. Several dealers had no changes to their macroeconomic forecasts.

Appendix: Updates to the Survey

Updated as of June 24, 2013

Following the June FOMC Meeting (June 18-19), primary dealers were asked to update their responses to questions 2, 3, 6, 7, and 8.

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

	H2 2013	H1 2014	H2 2014	H1 2015	H2 2015	H1 2016	H2 2016	H1 2017	≥ H2 2017
Average	0%	5%	11%	26%	26%	16%	8%	4%	3%

	Most likely quarter and year of first target rate increase:
25th Pctl	Q2 2015
Median	Q2 2015
75th Pctl	Q3 2015

3. 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:

	H2 2013	H1 2014	H2 2014	H1 2015	H2 2015	H1 2016	H2 2016	H1 2017	H2 2017	Longer Run
25th Pctl	0-.25%	0-.25%	0-.25%	0-.25%	0.50%	1.00%	1.50%	2.00%	2.50%	3.75%
Median	0-.25%	0-.25%	0-.25%	0.25%	1.00%	1.50%	2.25%	3.00%	3.25%	4.00%
75th Pctl	0-.25%	0-.25%	0-.25%	0.50%	1.00%	2.00%	2.75%	3.50%	4.00%	4.00%

6. **In the May FOMC statement, the Committee announced it will continue purchasing additional agency mortgage-backed securities at a pace of $40 billion per month and longer-term Treasury securities at a pace of $45 billion per month, and also stated that it would take appropriate account of the likely efficacy and costs of such purchases as well as the extent of progress toward its economic objectives in determining the size, pace, and composition of its asset purchases.**

   a) **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
2013	June 18-19:	25th Pctl	45	40
		Median	45	40
		75th Pctl	45	40
	July 30-31:	25th Pctl	45	40
		Median	45	40
		75th Pctl	45	40
	September 17-18:	25th Pctl	35	30
		Median	40	35
		75th Pctl	45	40
	October 29-30:	25th Pctl	30	30
		Median	35	33
		75th Pctl	45	40
	December 17-18:	25th Pctl	25	20
		Median	30	25
		75th Pctl	35	30
2014	January 28-29:	25th Pctl	20	15
		Median	25	20
		75th Pctl	25	25
	March 18-19:	25th Pctl	8	7
		Median	15	10
		75th Pctl	20	20
	April 29-30:	25th Pctl	0	0
		Median	10	5
		75th Pctl	15	10
	June 17-18: (1 year ahead)	25th Pctl	0	0
		Median	0	0
		75th Pctl	0	0

b) Please provide your expectation for the change in the amount of domestic securities held in the SOMA portfolio during each of the periods below. In the case of purchases, please include settled and unsettled amounts.[3]

		2014 H2	2015 H1	2015 H2	2016 CY*	2017 CY*	2018 CY*
		$Billions					
Change in the estimated amount of Treasuries:	25th Pctl portfolio	0	-2	-2	-196	-188	-365
	Median portfolio	0	0	0	-201	-199	-275
	75th Pctl portfolio	10	-2	-2	-171	-146	-284
Change in the estimated amount of agency debt and MBS:	25th Pctl portfolio	-15	-45	-150	-245	-169	-106
	Median portfolio	0	-61	-64	-123	-164	-83
	75th Pctl portfolio	0	-25	-50	-155	-125	-65

**Calendar Year*

Please describe your assumptions for the monthly pace of asset purchases for Treasury and agency MBS securities, if not clear from the above:

(10 primary dealer comments)

Some dealers restated their assumptions for the monthly pace of asset purchases. Several mentioned that they expect a reduction in the pace of purchases to be announced at a 2013 FOMC meeting, and for asset purchases to end in the first half of 2014.

Please explain your assumptions behind your projections for the size and pace of passive redemption and sales of securities, if applicable:

(8 primary dealer comments)

Several dealers noted that they either did not expect the FOMC to sell agency MBS in the given timeframe, or viewed sales of agency MBS as unlikely to ever occur in the context of balance sheet normalization. Several dealers stated they expect the SOMA portfolio to decline in 2015 through passive runoff of agency MBS. Several dealers noted that they expect the SOMA Treasury portfolio to begin declining in 2016.

c) If you made any changes to your expectations for the overall size, pace, and/or composition of asset purchases relative to your responses since the last survey on April 22, please explain the factors that motivated you to make the change(s).

(14 primary dealer comments)

Many dealers noted that they had made changes to their expectations for asset purchases since the original June survey, with some citing communication from the June FOMC meeting as driving their changes. Several dealers stated that they now expect an initial reduction in the monthly pace of asset purchases to occur earlier than previously projected and several others also changed the size of the initial step downwards. Several dealers highlighted the Chairman's press conference generally, as well as the specific reference to an unemployment rate around 7 percent when asset purchases end.

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[3] Respondents provided their expected change in the SOMA portfolio of Treasuries and agency debt and MBS at each time horizon. The above data is constructed by creating a portfolio level for each respondent at each time horizon based upon their responses. The 25th percentile, median, and 75th percentile portfolio level are then sampled at each time horizon. The above data represent the changes in these portfolios at each time horizon.

7. **If you expect a change in the monthly pace of asset purchases prior to the end of the program, and assuming that the economy progresses according to the scenario you judge most likely, please address the following:**

   a) **At the time you expect an initial change in the monthly pace of asset purchases, what is your best estimate for the realized values of the following economic indicators? If you project the monthly pace of Treasury and agency MBS purchases to change at different times, please provide estimates as of the earlier of the two dates. For reference, as of 4/30/13 the level of total U.S. employees on nonfarm payrolls, seasonally adjusted, was 135.5 million.**

	Expected Level of Non-farm Payrolls at the First Change in the Pace of Asset Purchases (mn):	Expected Unemployment Rate at the First Change in the Pace of Asset Purchases	Expected y/y Change in PCE Deflator at the First Change in the Pace of Asset Purchases
25th Pctl	136.20	7.3%	1.0%
Median	136.30	7.3%	1.2%
75th Pctl	136.74	7.4%	1.4%

   b) **At the time you expect asset purchases to be completed, what is your best estimate for the realized values of the following economic indicators? If you expect Treasury and agency MBS purchases to be completed at different times, please provide estimates as of the later of the two dates. For reference, as of 4/30/13 the level of total U.S. employees on nonfarm payrolls, seasonally adjusted, was 135.5 million.**

	Expected Level of Non-farm Payrolls at the End of Asset Purchases (mn):	Expected Unemployment Rate at the End of Asset Purchases	Expected y/y Change in PCE Deflator at the End of Asset Purchases
25th Pctl	137.50	6.9%	1.5%
Median	137.95	7.0%	1.7%
75th Pctl	138.20	7.0%	1.8%

8. **The April/May 2013 FOMC statement noted, "The Committee will continue its purchases of Treasury and agency mortgage-backed securities, and employ its other policy tools as appropriate, until the outlook for the labor market has improved substantially in a context of price stability... In determining the size, pace, and composition of its asset purchases, the Committee will continue to take appropriate account of the likely efficacy and costs of such purchases as well as the extent of progress toward its economic objectives.**

   a) **The FOMC's March 2013 Summary of Economic Projections shows the expected central tendency for the unemployment rate at the end of 2013 falling between 7.3 and 7.5 percent. Please indicate the percent chance you attach to the unemployment rate corresponding to the following hypothetical scenarios at year-end 2013: 1) it declines to less than 7.3 percent; 2) it falls within the 7.3 to 7.5 percent range; and 3) it rises above 7.5 percent. Please consider all possible conditions that may be associated with these scenarios in providing your responses.**

	< 7.3%	7.3% - 7.5%	> 7.5%
Average	46%	36%	18%

b) Please indicate the percent chance you attach to the dollar level of the SOMA portfolio falling within the following ranges at year-end 2014 for each of three hypothetical unemployment rate scenarios described in part a). For your reference, the level of the SOMA portfolio including inflation accretion and settled and unsettled agency MBS according to the January 3, 2013 H.4.1 release was $2,785 billion (the H.4.1 closest to the start of 2013).

		Year End 2014 ($Billions)						
Unemployment rate at year-end 2013		**<2500**	**2500-3000**	**3000-3500**	**3500-4000**	**4000-4500**	**4500-5000**	**>5000**
Less than 7.3 percent	Average	0%	2%	16%	57%	21%	3%	0%
Between 7.3 and 7.5 percent	Average	0%	1%	10%	51%	30%	6%	1%
Greater than 7.5 percent	Average	0%	1%	6%	42%	37%	11%	2%

c) Of the possible outcomes below, please indicate the percent chance you attach to the SOMA portfolio level falling in each of the following ranges at year-end 2013. Probabilities for the year-end 2014 level of the SOMA portfolio are automatically calculated using the responses you provided in parts a) and b) and the rules of conditional probability. These probabilities should be consistent with your views; if they are not, please verify your responses from parts a) and b).

	Year End 2013						
	<3000	**3000-3250**	**3250-3500**	**3500-3750**	**3750-4000**	**4000-4250**	**>4250**
Average	0%	1%	8%	41%	43%	5%	1%

	Year End 2014						
	<2500	**2500-3000**	**3000-3500**	**3500-4000**	**4000-4500**	**4500-5000**	**>5000**
Average	0%	1%	12%	52%	27%	6%	1%