Table 1. Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, September 2013

Percent

Variable	Central tendency[1]					Range[2]				
	2013	2014	2015	2016	Longer run	2013	2014	2015	2016	Longer run
Change in real GDP	2.0 to 2.3	2.9 to 3.1	3.0 to 3.5	2.5 to 3.3	2.2 to 2.5	1.8 to 2.4	2.2 to 3.3	2.2 to 3.7	2.2 to 3.5	2.1 to 2.5
June projection	2.3 to 2.6	3.0 to 3.5	2.9 to 3.6	n.a.	2.3 to 2.5	2.0 to 2.6	2.2 to 3.6	2.3 to 3.8	n.a.	2.0 to 3.0
Unemployment rate	7.1 to 7.3	6.4 to 6.8	5.9 to 6.2	5.4 to 5.9	5.2 to 5.8	6.9 to 7.3	6.2 to 6.9	5.3 to 6.3	5.2 to 6.0	5.2 to 6.0
June projection	7.2 to 7.3	6.5 to 6.8	5.8 to 6.2	n.a.	5.2 to 6.0	6.9 to 7.5	6.2 to 6.9	5.7 to 6.4	n.a.	5.0 to 6.0
PCE inflation	1.1 to 1.2	1.3 to 1.8	1.6 to 2.0	1.7 to 2.0	2.0	1.0 to 1.3	1.2 to 2.0	1.4 to 2.3	1.5 to 2.3	2.0
June projection	0.8 to 1.2	1.4 to 2.0	1.6 to 2.0	n.a.	2.0	0.8 to 1.5	1.4 to 2.0	1.6 to 2.3	n.a.	2.0
Core PCE inflation[3]	1.2 to 1.3	1.5 to 1.7	1.7 to 2.0	1.9 to 2.0		1.2 to 1.4	1.4 to 2.0	1.6 to 2.3	1.7 to 2.3	
June projection	1.2 to 1.3	1.5 to 1.8	1.7 to 2.0	n.a.		1.1 to 1.5	1.5 to 2.0	1.7 to 2.3	n.a.	

NOTE: Projections of change in real gross domestic product (GDP) and projections for both measures of inflation are from the fourth quarter of the previous year to the fourth quarter of the year indicated. PCE inflation and core PCE inflation are the percentage rates of change in, respectively, the price index for personal consumption expenditures (PCE) and the price index for PCE excluding food and energy. Projections for the unemployment rate are for the average civilian unemployment rate in the fourth quarter of the year indicated. Each participant's projections are based on his or her assessment of appropriate monetary policy. Longer-run projections represent each participant's assessment of the rate to which each variable would be expected to converge under appropriate monetary policy and in the absence of further shocks to the economy. The June projections were made in conjunction with the meeting of the Federal Open Market Committee on June 18–19, 2013.

1. The central tendency excludes the three highest and three lowest projections for each variable in each year.
2. The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year.
3. Longer-run projections for core PCE inflation are not collected.

Table 1.A. Economic projections for the first half of 2013*
(in percent)

Central tendencies and ranges

	Central tendency	Range
Change in real GDP	1.8 to 2.0	1.8 to 2.0
PCE inflation	0.6	0.6
Core PCE inflation	1.1	1.1

Participants' projections

Projection	Change in real GDP	PCE inflation	Core PCE inflation
1	1.8	0.6	1.1
2	2.0	0.6	1.1
3	1.8	0.6	1.1
4	2.0	0.6	1.1
5	2.0	0.6	1.1
6	1.8	0.6	1.1
7	1.9	0.6	1.1
8	2.0	0.6	1.1
9	2.0	0.6	1.1
10	2.0	0.6	1.1
11	2.0	0.6	1.1
12	1.8	0.6	1.1
13	2.0	0.6	1.1
14	2.0	0.6	1.1
15	2.0	0.6	1.1
16	1.9	0.6	1.1
17	1.8	0.6	1.1

* Growth and inflation are reported at annualized rates.

Table 1.B. Economic projections for the second half of 2013*
(in percent)

Central tendencies and ranges

	Central tendency	Range
Change in real GDP	2.2 to 2.6	1.8 to 2.8
PCE inflation	1.6 to 1.8	1.4 to 2.0
Core PCE inflation	1.3 to 1.5	1.3 to 1.7

Participants' projections

Projection	Change in real GDP	PCE inflation	Core PCE inflation
1	1.8	1.4	1.3
2	2.6	1.6	1.3
3	2.2	1.6	1.7
4	2.2	1.6	1.3
5	2.4	1.6	1.3
6	2.4	1.6	1.5
7	2.3	1.8	1.5
8	2.4	2.0	1.3
9	2.8	1.6	1.5
10	2.2	1.8	1.5
11	2.6	1.6	1.3
12	2.6	1.6	1.5
13	2.8	1.8	1.7
14	2.2	2.0	1.5
15	2.0	1.6	1.3
16	2.5	1.6	1.3
17	2.2	2.0	1.7

* Projections for the second half of 2013 implied by participants' September projections for the first half of 2013 and for 2013 as a whole. Growth and inflation are reported at annualized rates.

Table 2. September economic projections, 2013–16 and over the longer run (in percent)

Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	2013	1.8	7.3	1.0	1.2	0.13
2	2013	2.3	7.3	1.1	1.2	0.13
3	2013	2.0	7.2	1.1	1.4	0.13
4	2013	2.1	7.3	1.1	1.2	0.13
5	2013	2.2	7.2	1.1	1.2	0.13
6	2013	2.1	7.2	1.1	1.3	0.13
7	2013	2.1	7.2	1.2	1.3	0.13
8	2013	2.2	7.2	1.3	1.2	0.13
9	2013	2.4	7.1	1.1	1.3	0.13
10	2013	2.1	7.1	1.2	1.3	0.13
11	2013	2.3	7.2	1.1	1.2	0.13
12	2013	2.2	7.1	1.1	1.3	0.13
13	2013	2.4	6.9	1.2	1.4	0.13
14	2013	2.1	7.3	1.3	1.3	0.13
15	2013	2.0	7.2	1.1	1.2	0.13
16	2013	2.2	7.2	1.1	1.2	0.13
17	2013	2.0	7.2	1.3	1.4	0.13
1	2014	2.8	6.8	1.7	1.7	0.13
2	2014	3.1	6.8	1.4	1.5	0.13
3	2014	2.9	6.7	1.7	1.7	0.13
4	2014	2.9	6.9	1.3	1.5	0.13
5	2014	3.0	6.5	1.5	1.6	0.13
6	2014	3.0	6.7	1.3	1.5	0.13
7	2014	2.9	6.7	1.6	1.5	0.13
8	2014	3.0	6.7	1.4	1.4	0.13
9	2014	3.0	6.5	1.7	1.7	0.13
10	2014	2.2	6.4	1.6	1.7	1.00
11	2014	3.2	6.6	1.3	1.6	0.13
12	2014	3.0	6.3	1.8	1.8	1.00
13	2014	3.0	6.2	2.0	2.0	1.25
14	2014	3.0	6.9	1.4	1.5	0.13
15	2014	2.6	6.8	1.2	1.5	0.13
16	2014	3.3	6.5	1.8	1.8	0.13
17	2014	3.1	6.3	1.8	1.7	0.13

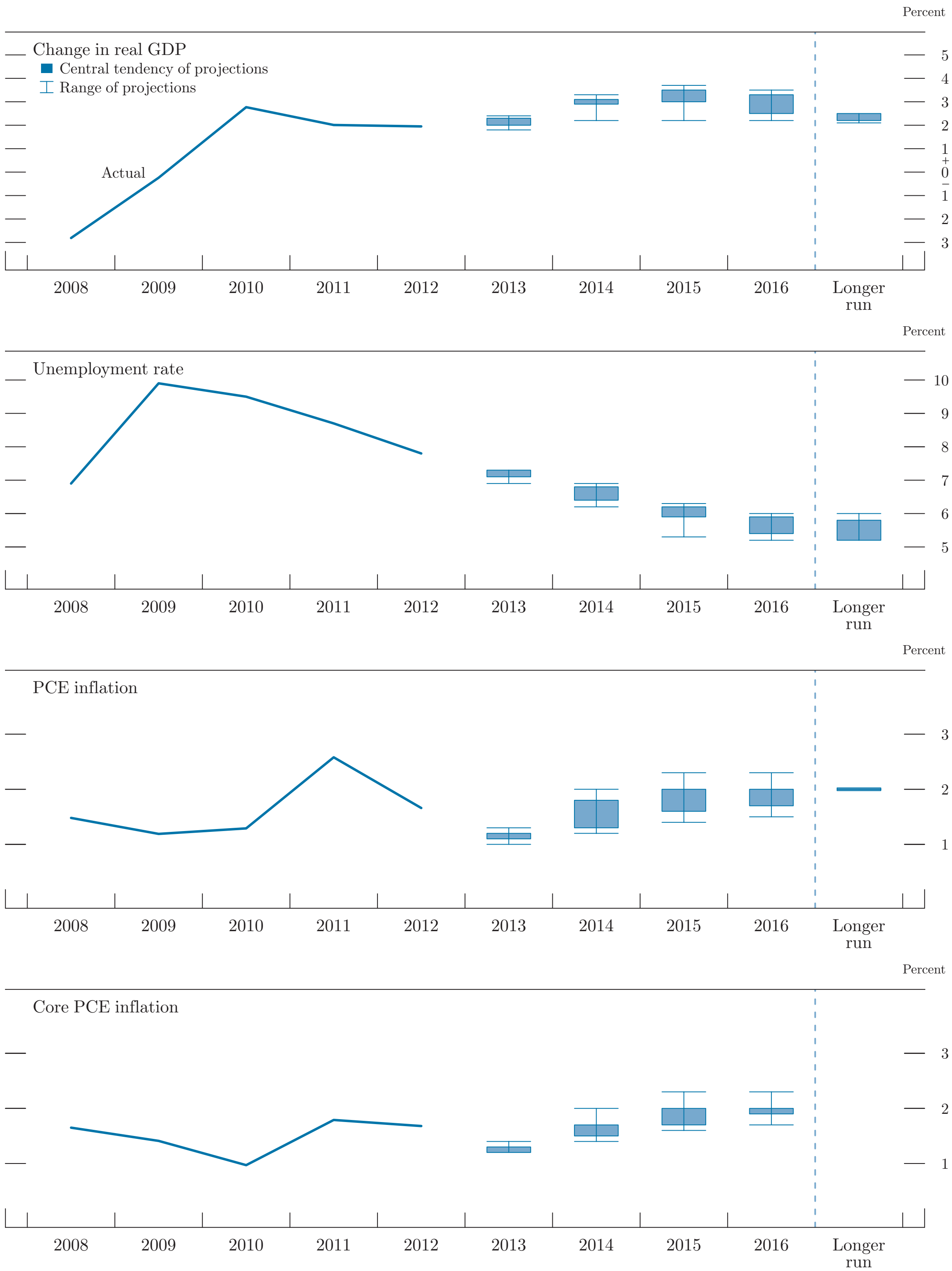
Table 2. ***(continued)***

Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	2015	3.0	6.1	2.0	2.0	0.75
2	2015	3.2	6.3	1.6	1.8	0.75
3	2015	3.0	6.0	2.0	2.0	1.50
4	2015	3.2	6.2	1.5	1.6	0.13
5	2015	3.0	6.0	1.7	1.8	1.00
6	2015	3.2	6.0	1.6	1.7	1.25
7	2015	3.1	6.3	1.8	1.7	0.75
8	2015	3.3	6.0	1.9	1.7	1.00
9	2015	3.2	6.0	2.0	2.0	1.50
10	2015	2.2	5.9	2.0	2.0	3.00
11	2015	3.5	5.8	1.6	1.8	0.75
12	2015	2.8	6.0	2.3	2.3	3.00
13	2015	2.5	6.0	2.0	2.0	3.25
14	2015	3.5	6.2	1.7	1.7	0.50
15	2015	3.1	6.2	1.4	1.6	0.75
16	2015	3.5	5.8	2.1	2.1	0.13
17	2015	3.7	5.3	2.0	2.0	1.00
1	2016	3.0	5.5	2.0	2.0	2.75
2	2016	3.0	5.9	1.8	1.9	1.75
3	2016	2.8	5.5	2.0	2.0	2.50
4	2016	3.3	5.6	1.6	1.7	1.00
5	2016	2.5	5.8	1.9	2.0	2.00
6	2016	3.1	5.6	1.8	1.9	2.50
7	2016	2.8	6.0	2.0	1.9	1.75
8	2016	3.0	5.7	1.7	1.7	1.75
9	2016	3.0	5.4	2.0	2.0	2.75
10	2016	2.2	5.7	2.0	2.0	4.00
11	2016	3.2	5.3	1.7	1.9	1.75
12	2016	2.5	6.0	2.0	2.0	4.25
13	2016	2.5	6.0	2.0	2.0	4.00
14	2016	3.5	5.7	1.9	1.9	1.50
15	2016	3.5	5.6	1.5	1.7	1.75
16	2016	3.5	5.2	2.3	2.3	0.50
17	2016	2.3	5.3	2.0	2.0	2.00

Table 2. *(continued)*

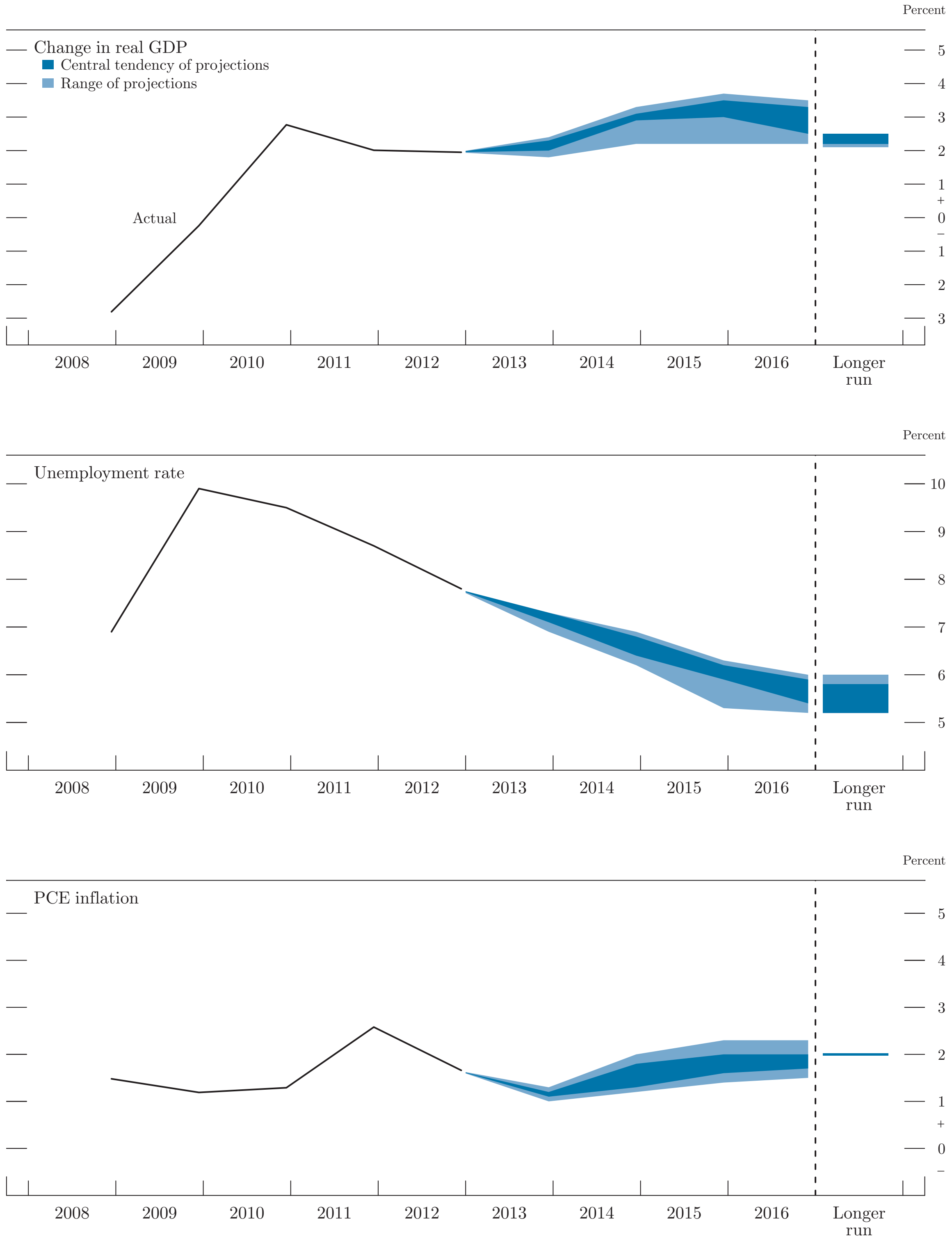
Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	LR	2.3	5.5	2.0		4.30
2	LR	2.3	5.4	2.0		4.30
3	LR	2.5	5.2	2.0		4.00
4	LR	2.3	5.3	2.0		3.80
5	LR	2.3	5.5	2.0		4.00
6	LR	2.1	5.4	2.0		4.10
7	LR	2.3	6.0	2.0		4.00
8	LR	2.2	5.4	2.0		4.00
9	LR	2.4	5.4	2.0		4.00
10	LR	2.1	5.8	2.0		4.00
11	LR	2.2	5.2	2.0		3.25
12	LR	2.3	6.0	2.0		4.25
13	LR	2.5	6.0	2.0		4.00
14	LR	2.5	5.2	2.0		4.00
15	LR	2.5	5.2	2.0		4.00
16	LR	2.3	5.8	2.0		3.50
17	LR	2.3	5.3	2.0		3.50

Figure 1.A. Central tendencies and ranges of economic projections, 2013–16 and over the longer run



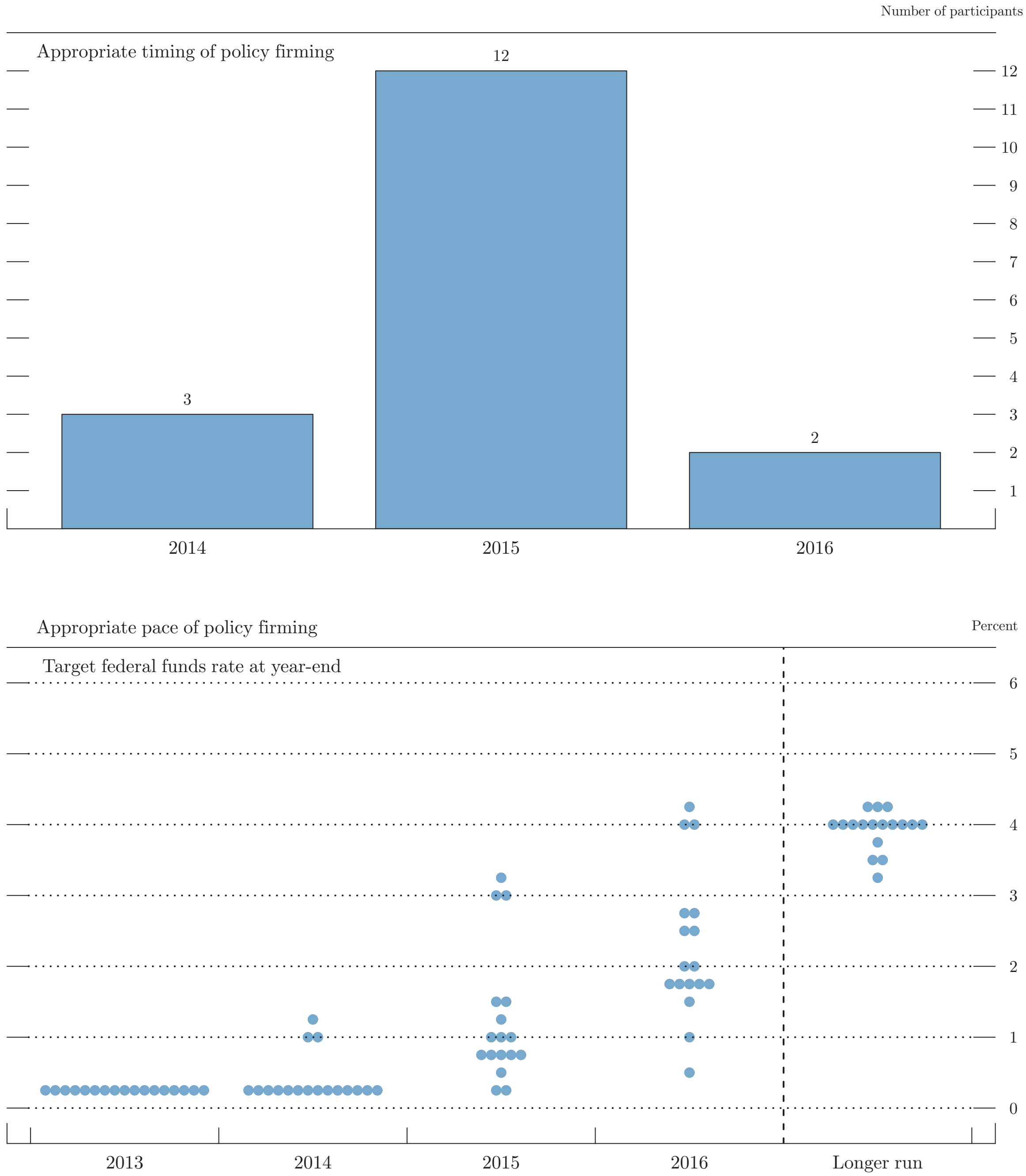
NOTE: Definitions of variables are in the general note to table 1. The data for the actual values of the variables are annual.

Figure 1.B. Central tendencies and ranges of economic projections, 2013–16 and over the longer run



NOTE: Definitions of variables are in the general note to table 1. The data for the actual values of the variables are annual.

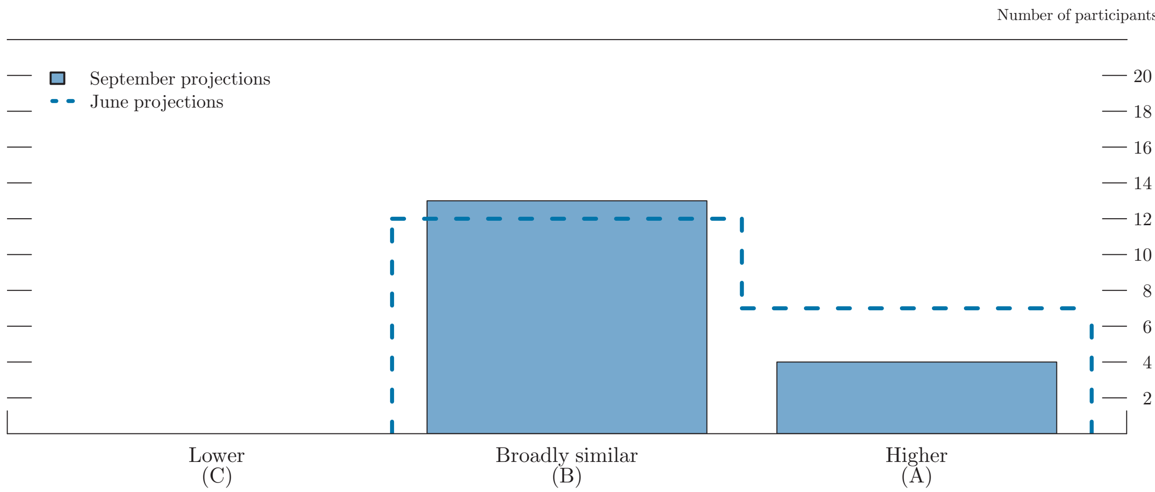
Figure 2. Overview of FOMC participants' assessments of appropriate monetary policy



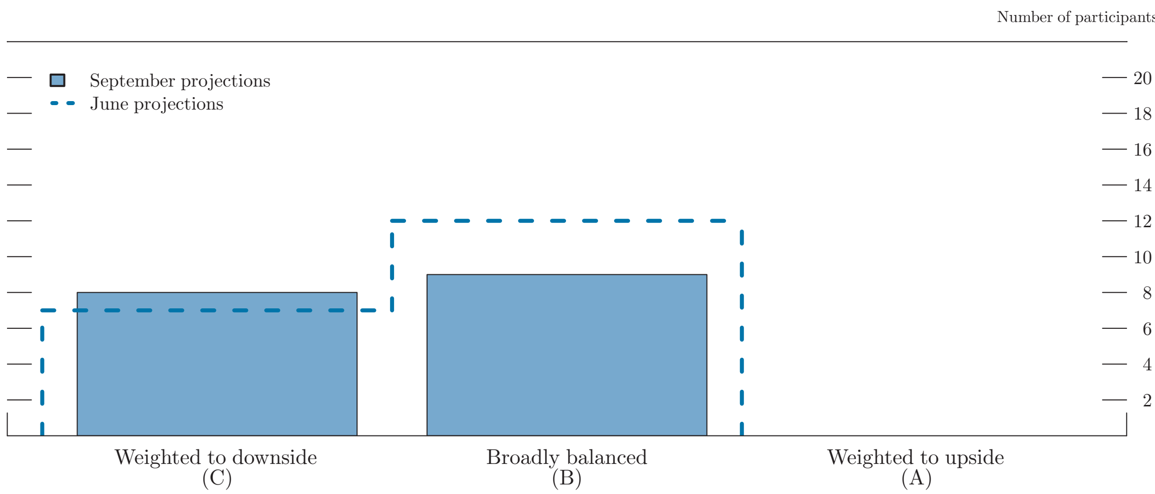
NOTE: In the upper panel, the height of each bar denotes the number of FOMC participants who judge that, under appropriate monetary policy, the first increase in the target federal funds rate from its current range of 0 to 1/4 percent will occur in the specified calendar year. In June 2013, the numbers of FOMC participants who judged that the first increase in the target federal funds rate would occur in 2013, 2014, 2015, and 2016 were, respectively, 1, 3, 14, and 1. In the lower panel, each shaded circle indicates the value (rounded to the nearest 1/4 percentage point) of an individual participant's judgment of the appropriate level of the target federal funds rate at the end of the specified calendar year or over the longer run.

Figure 4.A. Uncertainty and risks – GDP growth

2(a): Please indicate your judgment of the uncertainty attached to your projections relative to levels of uncertainty over the past 20 years.



2(b): Please indicate your judgment of the risk weighting around your projections.

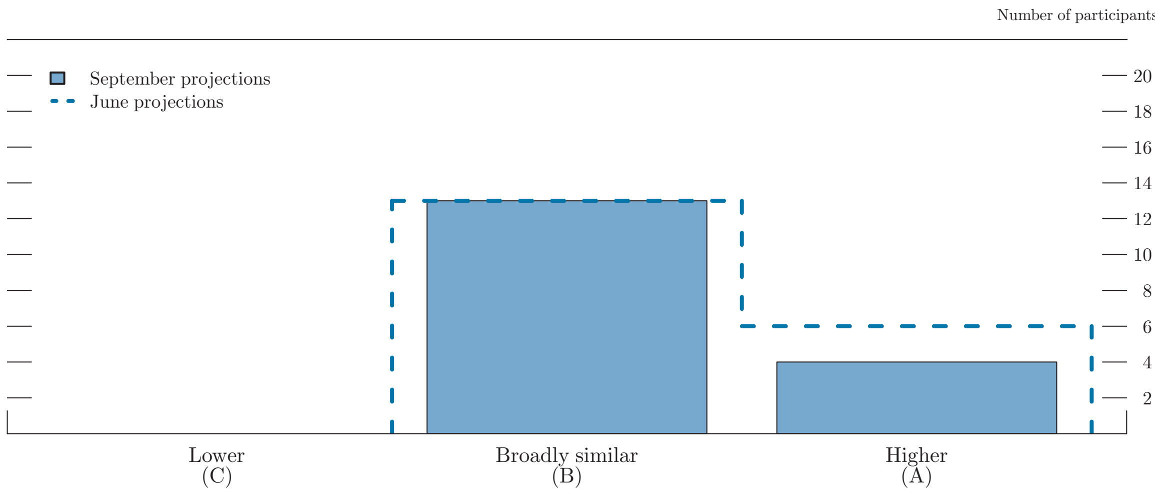


Individual responses

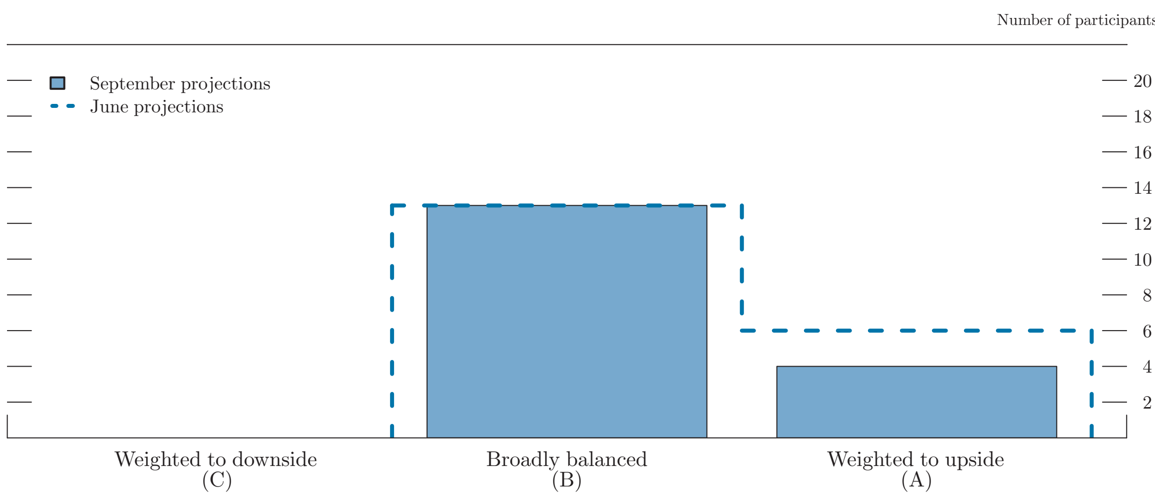
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	A	B	A	B	B	B	B	B	B	B	B	B	B	B	A	A
2(b)	B	C	C	C	B	B	B	C	B	B	C	B	B	C	C	B	C

Figure 4.B. Uncertainty and risks – Unemployment rate

2(a): Please indicate your judgment of the uncertainty attached to your projections relative to levels of uncertainty over the past 20 years.



2(b): Please indicate your judgment of the risk weighting around your projections.

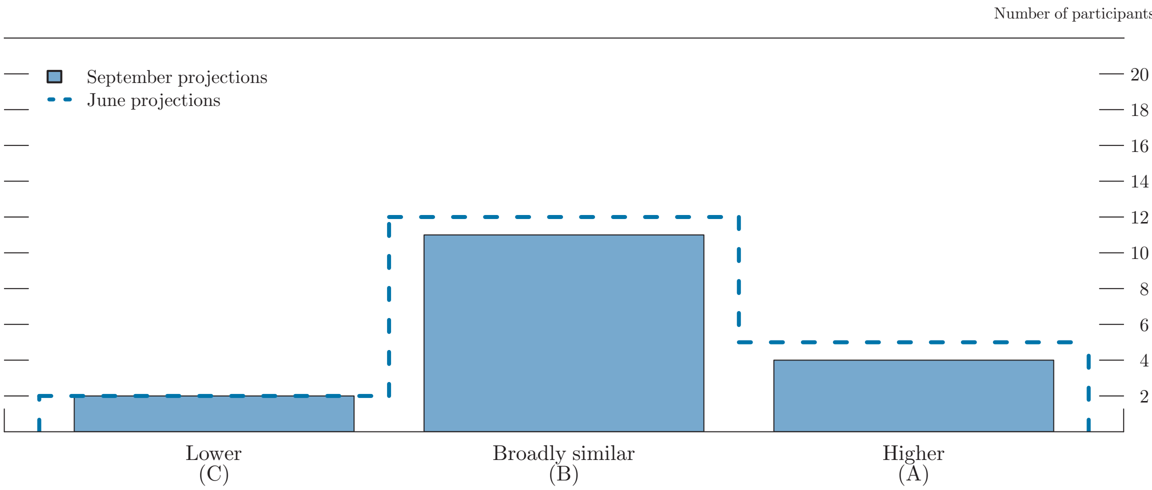


Individual responses

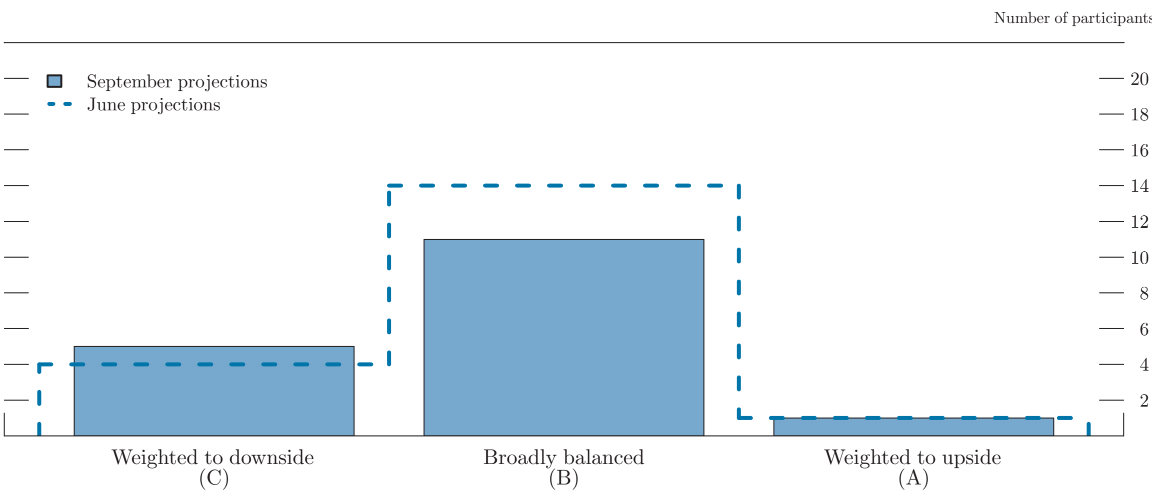
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	A	B	A	B	B	B	B	B	B	B	B	B	B	B	A	A
2(b)	B	B	B	A	B	B	B	B	B	B	A	B	B	A	B	B	A

Figure 4.C. Uncertainty and risks – PCE inflation

2(a): Please indicate your judgment of the uncertainty attached to your projections relative to levels of uncertainty over the past 20 years.



2(b): Please indicate your judgment of the risk weighting around your projections.

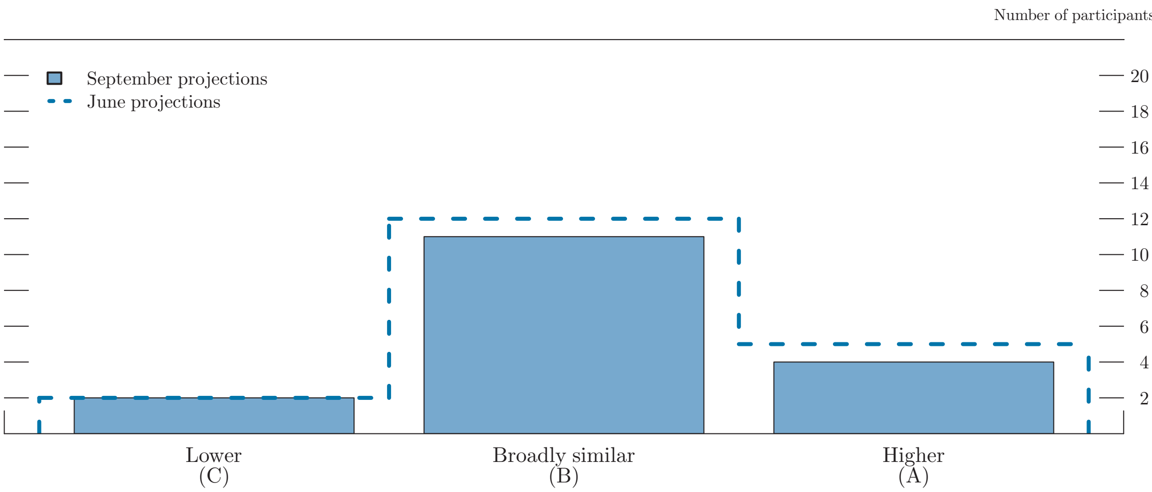


Individual responses

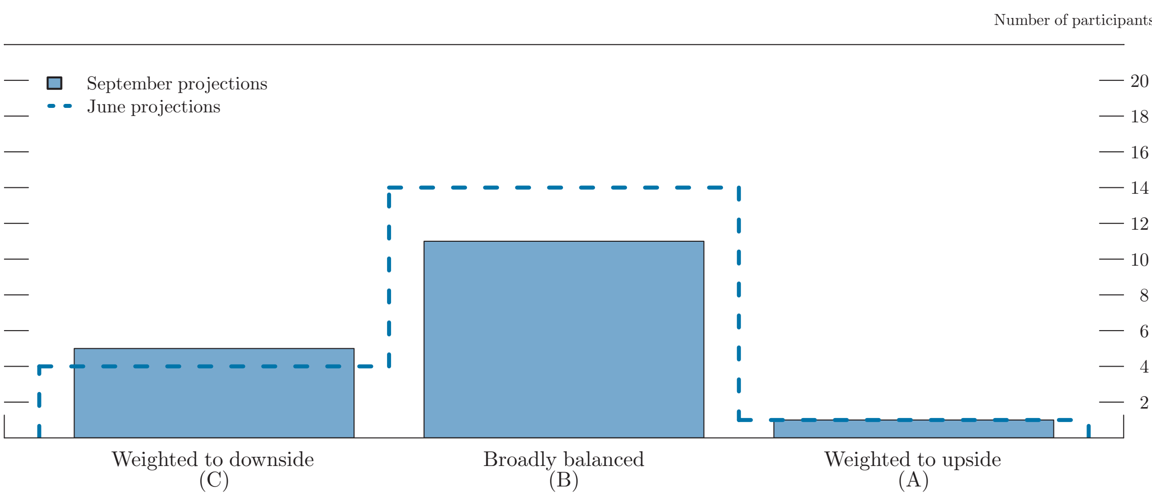
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	B	B	A	B	C	B	B	B	C	B	B	A	B	B	A	A
2(b)	B	B	C	C	B	B	B	B	B	B	C	B	A	C	B	C	B

Figure 4.D. Uncertainty and risks – Core PCE inflation

2(a): Please indicate your judgment of the uncertainty attached to your projections relative to levels of uncertainty over the past 20 years.



2(b): Please indicate your judgment of the risk weighting around your projections.



Individual responses

Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	B	B	A	B	C	B	B	B	C	B	B	A	B	B	A	A
2(b)	B	B	C	C	B	B	B	B	B	B	C	B	A	C	B	C	B

Longer-run Projections

1(c). If you anticipate that the convergence process will take SHORTER OR LONGER than about five or six years, please indicate below your best estimate of the duration of the convergence process. You may also include below any other explanatory comments that you think would be helpful.

Respondent 1: N/A

Respondent 2: Based on my forecast we appear to be about 4 years away on both inflation and unemployemt.

Respondent 3: N/A

Respondent 4: Convergence to the long-run levels of the unemployment rate and inflation is expected in about 5 years.

Respondent 5: N/A

Respondent 6: N/A

Respondent 7: N/A

Respondent 8: N/A

Respondent 9: I expect convergence within five years.

Respondent 10: My projection is that the economy has been growing along its medium trend path for some time. As such, it can be thought of as having already "converged" in this sense, even though the unemployment rate continues to change.

My projection has the unemployment rate path flattening out in 2016. You could think of that as a type of "convergence."

Respondent 11: N/A

Respondent 12: I anticipate a quicker convergence - real GDP growth will converge to its long-run value in 2017, the unemployment rate in 2015, and PCE inflation in 2016.

Respondent 13: The convergence process may be somewhat shorter than 5-6 years

Respondent 14: N/A

Respondent 15: N/A

Respondent 16: Shorter than five years under appropriate monetary policy.

The fall in labor force participation has led me to a slightly lower estimate of the long-run unemployment rate consistent with 2% inflation.

Respondent 17: After the comprehensive revision of GDP and the associated productivity revisions, our assessment of the economy's potential growth rate remains within the 2% to 2 1/2% range, with a point estimate of about 2 1/4% (rounded to 2.3% above). We also took this opportunity to reassess our assumptions concerning the longer-run unemployment rate: our interpretation of the recent literature is that a reasonable range for an estimate of the longer-run unemployment rate is 4 1/2% to 6%, with a point estimate of about 5 1/4% (rounded to 5.3% above). Assuming appropriate policy and no further significant shocks, we expect the unemployment rate to be near its longer-run level by the end of 2015 and the output gap to be fairly small around late 2015/early 2016. However, our analysis of recent long expansions suggests there is a significant probability that the unemployment rate could fall modestly below 5 1/4% for a period within the 5-6 year timeframe.

We assume that long-term inflation expectations will continue to be anchored around 2.5% on a CPI basis and that the FOMC's inflation objective will remain at 2% for the PCE deflator (equivalent to about 2.5% for the CPI based on longer-term average of the difference between CPI and PCE inflation). Under these conditions and with the output gap anticipated to shrink over the coming years, we expect inflation as measured by the PCE deflator to be about 2% in 2016 and remain near that level thereafter.

As indicated in our projections, we anticipate that under appropriate monetary policy and no further shocks, the convergence process should be largely completed by 2016.

Uncertainty and Risks

2(a). (Optional) If you have any explanatory comments regarding your judgment of the uncertainty attached to your projections relative to levels of uncertainty over the past 20 years, you may enter them below.

Respondent 1: N/A

Respondent 2: Uncertainty about growth stems from higher-than-normal uncertainty about potential growth, post-crisis effects and financial risks, uncertainty about Europe and China, US fiscal policy (including debt limit) and unconventional monetary policy. These factors influence uncertainty about unemployment, which is further exacerbated by variability in productivity and Okun's Law.

I am on the margin of rating inflation uncertainty as lower than normal. Well-anchored inflation expectations, less volatility in commodities make inflation relatively more stable.

Respondent 3: N/A

Respondent 4: N/A

Respondent 5: N/A

Respondent 6: Uncertainty about my projection for economic activity is similar to its average level over the past 20 years. Of course, that period was characterized by considerable turmoil, including the Great Recession, the European (and earlier, Asian) financial crises, the Iraq war, 9/11, the dot.com boom and bust, and so on.

Inflation is anchored by quite stable inflation expectations. The stability of these expectations has been reinforced by the release in 2012 of an explicit 2 percent objective for inflation. Hence, uncertainty about inflation is lower than in the past two decades.

Respondent 7: At this point, uncertainty looks to be broadly similar to the norms of the last 20 years.

Respondent 8: N/A

Respondent 9: N/A

Respondent 10: Real GDP is likely to grow more slowly than it has in previous cyclical expansions, more in line with growth in the last few years. I do not believe that fluctuations in growth around this lower trend are likely to be larger than they were in the past. Inflation expectations are probably more firmly anchored following the FOMC's consensus statement, and uncertainty is correspondingly lower than in the past.

Respondent 11: N/A

Respondent 12: N/A

Respondent 13: It remains the case that the effect of the extraordinary monetary policy in place and uncertainties surrounding the future path of policy, including the timing of the exit from accommodative policy, contribute to uncertainty around my inflation forecast.

Respondent 14: As with the Tealbook, because the experience of the past 5 years is now such a large part of the comparison period, we think the uncertainty over the GDP growth and unemployment rate forecasts are broadly similar to the levels of uncertainty over the past 20 years. If not for those years, we'd say the level of uncertainty was higher than usual.

Respondent 15: N/A

Respondent 16: N/A

Respondent 17: Quantitative judgment based on the width of the probability intervals from the FRBNY forecast distribution for real GDP growth and core PCE inflation relative to the forecast errors over the last 20 years. The widths of these intervals are not substantially different from those at the time of the June SEP. In part, the probability intervals remain wide because of the extraordinary economic and financial environment, including the policy rate remaining constrained by its effective lower bound. Another factor contributing to high uncertainty is the political contention surrounding the fiscal outlook. Moreover, the further increases of volatility in global financial markets since June suggest that uncertainty continues to be greater than usual.

Uncertainty and Risks (continued)

2(b). (Optional) If you have any explanatory comments regarding your judgment of the risk weighting around your projections, you may enter them below.

Respondent 1: N/A

Respondent 2: Downside risks to output include financial risks (Europe, still), the effects of ZLB, the effects of tighter financial conditions, adverse structural changes in productivity or in the labor market, fiscal risks (including debt limit again). Downside risks to output normally imply upside risks to unemployment but some unemployment-specific risks (participation declines, productivity) have led to downside surprises to unemployment which may be repeated.

Main risk to inflation at this point is commodity prices, which have balanced risks. I don't see the Fed's balance sheet inflation expectations, or the dollar, as having material risks for inflation.

Respondent 3: N/A

Respondent 4: N/A

Respondent 5: N/A

Respondent 6: Brinkmanship over fiscal policy and increased volatility in financial markets are downside risks to activity. So far, these risks appear modest. On the flip side, other headwinds continue to abate, raising the plausibility of a virtuous cycle and leaving risks to economic activity balanced.

The zero lower bound does somewhat constrain our ability to respond to adverse shocks. However, this constraint has become less of an issue over time, in light of the effectiveness of forward guidance (especially with the threshold language) and LSAPs. As a result, I do not view the zero lower bound as a quantitatively significant source of downside skew at this point. This lack of substantial skew is consistent with the 70- and 90-percent forecast confidence intervals shown in Tealbook A.

Inflation risks are also balanced, despite some upside risk to oil prices from geopolitical factors.

Respondent 7: I believe the risks to my projections are broadly balanced. The real economy faces downside risks from ongoing fiscal challenges in the United States, but the resilience of the private sector suggests that there may be more momentum and hence upside risks than are commonly thought. The risks to my inflation outlook also appear to be broadly balanced. The large size of our balance sheet poses an upside risk to inflation expectations and, in turn, inflation. On the downside, a faltering recovery or more persistence in low recent core inflation readings could keep inflation at lower levels than I currently anticipate.

Respondent 8: N/A

Respondent 9: N/A

Respondent 10: N/A

Respondent 11: My expectation of a strong pickup in economic growth in the second half of the year and in 2014, reflecting a pickup in domestic spending and waning fiscal drag, have again proven overoptimistic, continuing a pattern of disappointments pertaining to growth that we've seen over the last several years. I have now moved back the timing of this anticipated pickup, but I see the risks around this forecast as weighted to the downside. I am concerned about the potential negative repercussions of the recent tightening in financial conditions and the fact that, faced with the zero bound, we have little scope to respond to negative shocks from this or other adverse shocks. Downside risks to GDP growth, coupled with a possibility of a significant pickup in labor force participation, create upside risks to my unemployment forecasts.

Respondent 12: N/A

Respondent 13: I view the risks to inflation as weighted to the upside over the medium and longer run. Longer-term inflation risks reflect uncertainty about the timing and efficacy of the Fed's withdrawal of accommodation. The risks to output growth and unemployment are balanced.

Respondent 14: We continue to think the risks to the forecast for growth are weighed to the downside and for unemployment to the upside. The weakness in consumer spending since last spring suggests the possibility that the fundamentals for the household sector have not improved to the degree that we have assumed. Not only is this a risk to the PCE and housing forecasts, but stronger consumer spending also is critical for inducing the business sector to increase hiring and capital expenditures. The movements in financial markets over the past several months suggest a heightened risk that financial conditions will turn tighter than we expect once we actually begin to scale back asset purchases or, down the road, when we begin to increase the funds rate. Downside risks also remain from the international sector, although on net these appear to have diminished since the last SEP. While the incoming data point to a diminished risk of lower-than-expected inflation over the near term, we still see a downside risk to the inflation outlook over the medium-term. Our projection depends heavily on inflation expectations pulling actual inflation back towards target. We may be overestimating the lift from expectations, or the degree to which they will remain well-anchored if we continue to see very low readings on actual inflation or if the public perceives some wavering of the FOMC's commitment to a symmetric 2 percent inflation target.

Respondent 15: N/A

Respondent 16: I remain concerned about our ability to respond effectively to a decline in inflation or inflation expectations.

Respondent 17: Quantitative judgment based on the difference between the central projection and the expected value from the FRBNY forecast distribution. Under our appropriate policy stance, the risks to the inflation outlook are roughly balanced, as has been the case in the previous four SEPs. The risks to the real activity outlook have shifted modestly to the downside since June, when they were roughly balanced. This shift reflects primarily four factors. First, the probability of a political stalemate concerning the federal budget and debt ceiling has increased. Second, geopolitical risks have increased, even following some deescalation in the Syria situation. Third, the rise in advanced economy long-term interest rates have raised the probability of adverse effects in the U.S. economy (particularly in housing) and in some major emerging market economies. Fourth, our assessment of the productivity revisions suggests a lower probability of a sustained period of above-trend productivity growth. These downside risks are partially offset by a higher probability of a better outlook in some of the advanced economies and China. Our risk assessment also reflects the constraints that monetary policy faces under the zero lower bound.

Key Factors Informing Your Judgments regarding the Appropriate Path of the Federal Funds Rate

3(c). Please describe the key factors informing your judgments regarding the appropriate path of the federal funds rate. You may include other comments on appropriate monetary policy here as well.

Respondent 1: Key factors informing my judgment regarding the appropriate path of monetary policy are achieving an inflation objective of 2.0 percent and ensuring a sustainable economic recovery that reduces unemployment. In addition, I have changed my monetary policy assumption to be consistent with our thresholds and forward guidance. Since this means raising the federal funds rate later than would be appropriate without such forward guidance, I have also changed my monetary policy assumption to reflect a faster increase in the federal funds rate. This is necessary in order to maintain the stability of long-run inflation expectations and to promote sustainable growth.

Respondent 2: In mid-2015 inflation is near target and unemployment hits 6.5% in my projection. Two rate increases take us to 0.75 by the end of the year.

Respondent 3: I expect the federal funds rate to remain in the 0 to 25 basis point range until the unemployment rate exceeds 6 1/2 percent, providing that inflation is projected to be close to the Committee's 2 percent objective in the medium term and longer-term inflation expectations remain anchored. Once the fed funds rate lifts from the zero lower bound, I expect the policy rate to follow a path broadly consistent with an outcomes-based Taylor rule.

Respondent 4: Liftoff of the federal funds rate from the zero-lower-bound occurs once the the unemployment rate reaches 6 percent. Given the projected modest acceleration in growth and an accompanying rate of inflation well below target, monetary policy can afford to be patient when removing accomodation.

Respondent 5: I am assuming we keep the funds rate near zero until we cross the 6.5% unemployment threshold, which in my forecast happens at the end of 2014. Thereafter, we raise it only gradually, at a rate of 25 basis points every other meeting, or 100 basis points per year, for each of the next two years. This gradual rate of increase tracks roughly with the prescriptions of the inertial Taylor (99) rule, but I am thinking of it more as a practical approximation to how we might plausibly implement a relatively gradual path of increase.

Respondent 6: Output and unemployment gaps are large and persistent, and my outlook for inflation over the medium term remains below our 2 percent objective. This situation calls for very accommodative monetary policy. Even with continuing LSAPs, appropriate policy calls for delaying liftoff from the zero lower bound until the third quarter of 2015, several months after the unemployment rate falls below 6-1/2 percent in my forecast. My judgment on appropriate policy is informed by looking at simple rules that adjust for the zero lower bound and by my expectations of, and uncertainty about, the costs and benefits of continuing unconventional actions.

Respondent 7: I currently anticipate that conditions will warrant raising the federal funds rate target in the second half of 2015. At that point, the unemployment rate will be below the 6 1/2 percent threshold and nearing my estimate of the natural rate, and inflation will be moving up toward the 2 percent long-run objective. With the economic recovery well-established, it will be appropriate to begin the normalization of monetary policy. Consistent with our current guidance, I further believe it will be appropriate to raise the funds rate gradually throughout 2016.

Respondent 8: N/A

Respondent 9: I remain skeptical of the value of this exercise. It is our post-liftoff reaction function–our long-run strategy–as it is understood by the public that chiefly matters for the strength of the recovery, and this strategy is not well conveyed either by a time-path for the funds rate or by threshold-based forward guidance.

For purposes of this exercise, I consider the implications of several simple policy rules, placing greatest weight on the prescriptions of the 1999 Taylor rule with inertia, as that rule seems to perform reasonably well in a wide range of circumstances. In simulating each rule, I assume that the natural real rate of interest is temporarily depressed, and I respect the Committee's public commitment to delay liftoff until after the unemployment rate reaches 6.5 percent. It is important to the credibility of the Committee that we try to honor the pledges of previous FOMCs unless the reasons for modifying them are clear and compelling.

Respondent 10: I believe that by mid-2014 the labor market will have improved to the point where an increase in the funds rate will be appropriate. Real growth will be near trend and inflation will be near 2.0 percent. Under these conditions an optimal policy would be to begin raising the funds rate in order to prevent an unwelcome increase in inflation.

Respondent 11: My path for the federal funds rate, both before and after liftoff from the zero bound, is importantly shaped by my expectation that the headwinds that have been holding back recovery for the last several years will continue to exert a restraining, albeit abating, influence on aggregate demand for many more years to come. For this reason, a highly accommodative policy–that is, real values of the federal funds rate that are below their historical 2% average–will be necessary for a long period of time to promote the attainment of full employment and our 2% inflation objective. In particular, I now anticipate liftoff of the federal funds rate in the second half of 2015 with an unemployment rate in the neighborhood of around 6%–which is below our threshold. Relative to policy rules that fit past behavior of the federal funds rate well, our thresholds, and my assumed path, reflect the need that I see for the federal funds rate to remain lower for longer than would be historically typical. I envision only a very gradual increase in the federal funds rate after liftoff occurs, with the funds rate in the vicinity of 1.75% at the end of 2016, even though the economy, at that point, is nearing maximum employment and inflation is moving back toward the Committee's 2% objective. The slow pace of normalization of the funds rate toward its longer-run normal level reflects the fact that the equilibrium real funds rate in my forecast, similar to Tealbook, is being held down by only slowly abating headwinds. These include an abnormally low impetus to aggregate demand from fiscal policy, an unusually large equity premium and credit spreads, and a continued and abnormal shortfall in the share of GDP devoted to residential investment. In addition, in contrast to Tealbook but in line with the staff's 3-factor model, my assumed longer-run value of the federal funds rate is 3.25%.

Respondent 12: Assuming appropriate policy and my views on the convergence process, my judgment is the the lift-off of the federal funds rate should occur in Q3/2014.

Respondent 13: I use the 6.5% unemployment rate as the trigger for liftoff. The economy returns to steady state by the end of 2015, with inflation returning to 2%, growth at 2.5%, and the unemployment at rate 6%. My policy path has the fed funds rate gradually rising over the forecast horizon to reach its long-run level of 4% by the end of 2016.

Respondent 14: In our forecast, the unemployment rate reaches 6-1/2 percent around the middle of 2015. At that time, the outlook for average inflation over the next one to two years is still below 2 percent. Accordingly, we assume the Committee keeps policy on hold, delaying the first increase in the funds rate until late in the year–at which time we think the unemployment rate will be closer to 6 percent. Our assumption for appropriate policy has rates rising slowly after lift-off, reaching only 1.5 percent by the end of 2016. We also assume that the Committee will strongly communicate its patience in removing accommodation. The delay in raising the policy rate upon hitting the 6-1/2 percent unemployment rate threshold and strong communication of accommodative policy should help support inflation expectations and buoy actual inflation.

In June we assumed the first reduction in the flow of LSAP purchases would occur in September. We now see it occurring at the October or December meeting, but this does not have a meaningful impact on our assumptions concerning the total purchases over the course of the program. Our assumptions concerning the path for the funds rate through 2016 have not changed.

Respondent 15: N/A

Respondent 16: Under appropriate monetary policy, the FOMC should keep the fed funds rate extraordinarily low at least until the unemployment rate falls below 5.5%, as long as the medium-term outlook for inflation remains below 2%.

It's worth noting that, under my benchmark outlook, the FOMC would raise the fed funds rate considerably in 2017. Growth would be below its long-run average. Unemployment would likely rise (back to its longer-run level of 5.8%) and inflation would fall (back toward 2%).

Respondent 17: The crucial factors behind our assessment of the appropriate path for monetary policy and the FFR are the current state of the economy, our central economic outlook, and our balance of risks around the central outlook. Overall, the indicators over the past year generally still point to a sluggish expansion. In particular, although the labor market outlook has improved some, our assessment is that the improvement has not reached the "substantial" standard. Financial conditions are still not fully normal and remain susceptible to sharp reversals depending upon developments; since June, these conditions have deteriorated to some degreee on net. Furthermore, we have seen the "whatever it takes" policy approach of the Federal Reserve and other advanced economy central banks as an important factor behind the extent of improvement in U.S. and global economic data. In contrast, recent uncertainties about whether central banks will maintain such accommodative postures have been a factor that contributed to the increased volatility and pressures in financial markets since May. As we noted earlier, these developments have contributed to a shift in our risk assessment for real activity from balanced to a modest downward skew.

In these circumstances and noting that the economic developments since September have been in rough accord with our September projection (when we had proposed the introduction of an outcome-based purchase program and policy stance), we thus see appropriate monetary policy as remaining accommodative to strengthen the economic expansion; under such a policy, it will be the economic outcomes and outlook that will dictate the path of the policy stance. Under our modal outlook, we still anticipate that the target FFR will remain near zero until the second half of 2015. We expect that long-term inflation expectations will remain anchored over this period. The pace of renormalization of the target FFR following the period of near zero policy rates will then depend upon our assessment of economic conditions, longer-term inflation expectations, and overall financial conditions. At this point, we expect that the increase in the FFR will be gradual such that it will still be below our estimate of its longer-run level at the end of 2016, as a commitment to remain "low for long" is important for providing accommodation at this time when the FFR is constrained by the zero lower bound.

Another factor informing our assessment of the appropriate path for the target FFR is our estimate of the equilibrium real short-term interest rate. In normal times, we assume that this rate is in the range of 1% - 3%; adding the objective for inflation (2%) then gives our estimated range for nominal equilibrium rate as 3.0 - 5.0%. Given the behavior of nominal and real Treasury yields and productivity growth since the end of the recession, we currently see this rate over the longer run as more likely to be in the lower half of the indicated range, which results in the point estimate given in the response to question 3(a). Moreover, given our assessment of economic and financial conditions, our judgement of the current "neutral" FFR is below our estimate of the longer-run FFR and is expected to remain so for some time.

Although we do not expect that additional tools will need to be implemented to provide accommodation in our modal outlook, we believe it is still important for the FOMC to be prepared to employ all of its tools in case some downside risks to the outlook are realized.

Appropriate Monetary Policy – Balance Sheet

3(d)&(e). Does your view of the appropriate path of the Federal Reserve's balance sheet, other than the projected timing for implementing the FOMC's exit strategy, differ materially from that assumed by the staff in the Tealbook? If yes, please specify in what ways (either qualitatively, or if you prefer, quantitatively).

	YES	NO
September survey	6	11
June survey	11	8

Respondent 1: No
I agree with the Tealbook assumption that asset purchases will be reduced from $85 billion per month to zero by the middle of 2014. However, I believe that we should begin tapering asset purchases at this meeting.

Respondent 2: No
N/A

Respondent 3: No
N/A

Respondent 4: Yes
Tapering of monthly purchases occurs only once labor market improvements are driven by sustained gains in employment. There is currently a lot of uncertainty surrounding the impact of FOMC announcements on long-term interest movements. With this caveat in mind, the expectation is that tapering will start in the first half of next year, and that the cumulative asset purchases since the beginning of 2013 will total $1.4 trillion.

Respondent 5: No
N/A

Respondent 6: No
N/A

Respondent 7: No
Like the Tealbook, I believe the pace of purchases should be slowed this year and ended by the middle of 2014, bringing the cumulative amount of purchases since September 2012 in the current program to $1.2 trillion.

Respondent 8: No
N/A

Respondent 9: Yes
I believe, specifically, that the Committee ought to immediately slow the pace of purchases, and I expect that economic conditions will warrant ending purchases completely by the end of the first quarter of 2014. This projected timing produces cumulative purchases below $1.2 trillion. Put another way, $1.2 trillion in cumulative purchases would be a "material disappointment".

Respondent 10: Yes
I favor the immediate cessation of long-term asset purchases and reinvestment of funds from maturing mortgage-backed securities into U.S. Treasury securities.

Respondent 11: Yes
I see the appropriate pace of asset purchases as data dependent so that the total should be linked to actual economic developments. My forecast for growth this year and next has been revised down relative to my June projection and the Committee projection articulated by the Chairman. Although the overall contours of the forecast are similar, I now think it likely that asset purchases will exceed those in the Tealbook baseline and continue somewhat longer than the middle of 2014, although total purchases in line with the Tealbook assumption are not ruled out and would remain possible and appropriate if incoming data provides confirmation of a pickup in the pace of growth, continued improvement in labor market conditions, and inflation moving back up toward our 2% objective.

Respondent 12: No
N/A

Respondent 13: Yes
I anticipate following the Committee's June 2011 exit strategy principles, but because my funds rate path is steeper than in the Tealbook, I anticipate that we would reduce the size of the balance sheet more quickly than in the Tealbook over the forecast horizon.

Respondent 14: No
N/A

Respondent 15: No
N/A

Respondent 16: Yes
I attribute much of the recent tightening of financial market conditions to the Committee's communications about its plans to reduce the flow of purchases. The scale of the tightening was much larger than I anticipated. In this sense, I would say that the tightening should be seen as due to a monetary policy "error" - a given action/communication has led to larger tightening effects than expected.

In my view, we should acknowledge that the outlook for financial market conditions in September is worse than we expected at the time of the press conference in June. Given that, we should be willing to change our policy choices - and, in particular, I would counsel against any reduction in the flow of purchases before the end of the year.

Respondent 17: No
With the changes in the Tealbook baseline for the balance sheet since June toward the assumptions we have generally maintained since last September, there is now little substantive difference between the Tealbook and us. We would note that within our overall strategy for appropriate monetary policy,

we believe that a collective emphasis on an accommodative stance based on a portfolio of tools would enhance the efficacy of policy under current circumstances.

Forecast Narratives

4(a). Please describe the key factors shaping your central economic outlook and the uncertainty around that outlook.

Respondent 1: Despite the 1-1/2 percentage point of fiscal tightening this year, the economy continues to grow at a moderate pace of about 2 percent. In the current quarter, growth will likely slow temporarily from the pace in the second quarter. I then expect growth to pick up to about 2 3/4 percent percent next year and then 3 percent in 2015 and 2016. The pick-up in growth reflects the diminution of the fiscal drag, an improving labor market, and rising household net worth from both the stock market and housing. While the housing recovery has slowed somewhat of late, it remains on track. The rate of auto sales has returned to its level of before the recession. Finally, the ISM indexes in August point to solid gains in manufacturing and nonmanufacturing activity.

I continue to see sustained improvement in labor market conditions. A broad measure of labor market conditions (that includes the unemployment rate, labor force participation, other measures of resource slack, growth in employment and earnings, and survey responses by businesses, consumers, and economists) shows that conditions have improved since last September and that labor market momentum remains strong by historical standards.

Turning to inflation, inflation remains below target but appears to have bottomed. And while wage inflation is below its historical average, it has remained steady or has even picked up, which would be consistent with inflation having bottomed. Therefore, with an improving labor market and stronger growth, we should see an increase in inflation over the forecast horizon.

Respondent 2: Moderate growth continues, supported by stronger housing and autos, higher wealth and stronger household and firm balance sheets. Payroll gains remain stuck in the 180K or so range, but unemployment has come down more quickly than expected. Confidence is generally higher, but has slipped a bit recently. Risks to growth are described above, but main difference from June is notable increase in interest rates, which will slow housing activity at least to some extent. Federal fiscal policy is both a restraint and a source of risk, state and local fiscal policy is flat to slightly negative. Accomodative monetary policy can only partially overcome fiscal drag. Conditions in AFEs look a little better (Europe, Japan, UK), with EMEs expected to get through recent volatility. Inflation seems well explained by anchored inflation expectations, some wiggles in oil prices, and a flat Phillips curve.

Respondent 3: The combined influences of ongoing stimulus and a dissipation of recent and longer-term headwinds are expected to allow for a modest acceleration in aggregate spending as we approach year-end and into 2014. Real GDP growth is expected to follow a path somewhat above real potential GDP growth over the medium term, gradually closing the current gap with potential GDP and lowering further the rate of unemployment.

I expect consumer spending to strengthen, as labor markets continue to improve providing greater support to income growth. Rising home and equity prices further bolster household confidence and wealth. Stronger export demand will likely lift industrial activity, a process that appears to be already underway. A stepped-up pace of industrial production and the expectation of stronger economic activity more generally, combined with solid profitability, liquid corporate balance sheets, and low interest rates, prompt stronger capital expansion. The adverse influence of the fiscal situation evident in the first half of the year will lessen. The fiscal position of state and local governments has improved and will allow for more spending activity from this sector over the forecast period.

As business activity improves and existing slack is reduced, downward pressures of wages and prices will lessen, allowing the inflation trend to gradually rise to its longer-term objective.

The forces restraining growth could be persistent and a stepped-up pace of growth may not materialize over the near-term or longer. I also see tail risks in conjunction with financial instability, potentially associated with deteriorating financial conditions in the emerging-market economies. With respect to inflation, persistent slack and weak pricing power of firms indicates a risk that we could continue to miss on our inflation objective to the downside for several more years and erode the anchor that current inflation expectations provide.

Respondent 4: Since June, medium- and long-term interest rates have increased well above expectations. The unexpected increase in interest rates largely shapes the revision to the current forecast relative to June. The predicted acceleration in the second half of the year is now forecast to be modest at best, in part owing to a slowdown in the interest-sensitive components of demand. While it is too early to gauge the ultimate impact of the increase in rates on the economy, there are signs of a slowdown in residential investment and business spending remains subdued. Consumer confidence is retracing some of the earlier gains, while high-frequency data are now pointing to modest growth in consumer spending this quarter. Factors affecting foreign demand are largely offsetting, with better news from some advanced foreign economies balanced by an appreciation of the real dollar. Improvements in the labor market are uneven, and it is not obvious that labor market conditions will brighten over the rest of this year if demand remains muted.

The main factors shaping the contours of the forecast have not changed. As the effects of fiscal policy wane, the pace of activity is expected to accelerate and generate a virtuous cycle in terms if improved confidence and spending. However, the acceleration is somewhat delayed and weakened by the recent rise in rates. To counter some of the unexpected rise in rates, tapering is deferred until the first half of next year, and the current asset purchase program is expected to total $1.4 trillion. Moreover, the liftoff of the federal funds rate from the zero-lower-bound occurs only once the unemployment rate reaches 6 percent, as the modest projected acceleration in growth in a context of low inflation allows for additional policy accomodation. With this policy stimulus in place, the unemployment rate is projected to reach 5.6 percent by the end of 2016. Inflation is expected to remain below target over the forecast horizon.

Risks to the real outlook remain skewed to the downside, in part reflecting the limited scope for further policy action. On the fiscal side, protracted negotiations over budget appropriations and the lifting of the federal debt limit are more than a tail risk. On the inflation side, the risk is that the recent low readings of core inflation may prove more long-lasting than what we assuming in our forecast.

Respondent 5: My central outlook is based on the premise that fiscal drag will fade over the rest of this year, so that barring any other important new developments, growth in 2014 and 2015 should be somewhat stronger than in 2013. In terms of risks, I worry about the increased potential for volatility in financial markets as we begin to exit from our extraordinarily accomodative policies, and what the resulting tightening of financial conditions might do to derail the recovery. Also, although it strikes me as quite improbable, there is perhaps a scenario where the spillovers from this financial-market volatility to emerging market economies, combined with some of their own structural weaknesses, leads to a broad and contagious collapse of activity in a subset of the most vulnerable of these economies.

Respondent 6: The economy is still recovering from the severe housing collapse and financial crisis. Recoveries from these types of episodes are associated with sustained weakness in aggregate demand through a variety of channels, which policy has only partially offset. The associated headwinds are easing as housing is strengthening, and consumer balance sheets as well as banking and credit conditions are improving. Nevertheless, fiscal policy has turned increasingly contractionary this year, fiscal debates and geopolitical risks raise uncertainty, and the global economy remains weak. In addition, the jump in bond yields in recent months has passed through into higher mortgage and corporate lending rates and has significantly tightened financial conditions.

In this environment, I expect the economic recovery will proceed at a moderate pace, which will allow us to continue making progress on closing output and unemployment gaps over the next few years. Even with substantial monetary stimulus, it will take several years of above-trend growth to return the economy to full employment.

In terms of inflation, significant slack in labor and goods markets and subdued commodity and import prices should keep inflation below the FOMC's 2 percent inflation target for the next few years. Well-anchored inflation expectations and diminishing slack eventually pull inflation back to our objective.

Respondent 7: I expect the economy to recover at a moderate rate from 2013 through 2016, reflecting a range of forces. On the negative side, U.S. fiscal policy, geopolitical events, and slowing growth abroad are weighing on the near-term outlook. But these forces should abate over time, and growth should pick up as low interest rates and expanding credit availability stimulate interest-sensitive sectors, the housing recovery continues in spite of the recent uptick in mortgage rates, business spending and hiring perk up, and the healing labor market supports stronger consumer spending.

Incoming data related to inflation suggest that the second quarter's very low inflation readings were likely a temporary aberration. Year-over-year headline inflation rates have been moving higher on the back of higher gasoline prices, and third quarter readings look to be in the 2 percent range. Core CPI inflation tentatively looks to have bottomed out within the last two months and begun to rebound, and I expect core PCE inflation will soon follow suit. Thus, I am more comfortable with my previous projection that the combination of well-anchored inflation expectations and an improving economy will help bring inflation back toward the 2 percent long-run objective over the next few years.

As to uncertainty and risks, the U.S. fiscal outlook remains uncertain, but overall uncertainty is comparable to historical norms of the last 20 years. While a stronger-than-expected U.S. housing recovery could provide a lift to growth, confrontations over the debt ceiling and further tightening of U.S. fiscal policy could weigh on growth. For inflation, I believe the uncertainty surrounding the forecast is consistent with historical norms and the risks are balanced. As I noted above, a faltering recovery or more persistence in low recent core inflation readings could keep inflation at lower levels than I currently anticipate. Alternatively, concerns about the continued expansion of our balance sheet could eventually cause inflation expectations and, in turn, inflation to rise.

Respondent 8: Economic data since the June meeting have, taken as a whole, been less positive than I antiipated would be the case and have led me to adjust GDP expectations somewhat down. I have also adjusted my unemployment numbers slighlty down, on the assumption that some combination of lower than projected labor participation rates and lower productivity increases will continue to bring reported unemployment down even in the face of lower growth than previously projected. The fairly modest nature of my adjustments reflects the view that the relatively disappointing data of the last few months are due in part to the financial tighenening that has been taking place, in part to some potentially transitory restraining factors, and in part to some noise in the data. The narrative of gradually diminishing fiscal drag and of substnatial progress on post-crisis balance sheet repair is still a reasonable one, which would suggest a path only mildly different from that anticipated in June. Having said that, I now have less assurance around this modal set of expectations. The Teal Book's supply side damage alternative scenario looks more plausible, if not yet convincing. As we receive more data in the coming months, including on productivity change and labor market developments, we have need to consider more directly whether trend growth is lower than most of us have heretofore been assuming.

Respondent 9: Sustained low real interest rates, abundant credit, improved household and strong corporate finances, and pent-up demand for consumer-durable and capital goods provide the basis for an acceleration in the pace of the recovery. Concerns about European and several major Asian economies and financial systems linger, but in several instances have begun to abate. Ongoing and prospective fiscal restraint, and uncertainty about the costs of healthcare and other regulation, continue to act as a drag on the economy. The housing recovery is proceeding, albeit at a somewhat slower pace. On balance, confidence in the durability of the recovery has increased.

Inflation appears to have stabilized. If the recovery accelerates, as expected, inflation will likely return gradually to target or near-target levels.

Respondent 10: Productivity growth has been lower than in past expansions, and the labor force participation rate is trending down. Therefore unemployment is declining at a rate consistent with past expansions while output growth remains low.

Respondent 11: I continue to expect a strengthening in the pace of growth as fiscal drag wanes later this year and continued albeit slow improvement in the labor market. With well-anchored inflation expectations, I anticipate that inflation will gradually move back toward the Committee's longer-run objective over the forecast horizon. Importantly, monetary policy will need to remain highly accommodative for many years to come in order for the Committee to achieve its dual mandate objectives in light of the continued headwinds that are holding back aggregate demand and will abate only slowly. Incoming data, particularly indicators pertaining to consumer and investment spending, have been weaker than I'd expected and, as a consequence, I've reduced my estimate of growth in the second half growth and in 2014. The marked increase in mortgage rates since May appears to be having a discernible negative impact on the housing market and the pace of housing price increases; the stronger dollar diminishes slightly my forecast contribution from net exports. I consider this deterioration in financial conditions since May to pose significant risks to the outlook. Unemployment has declined considerably more than I'd anticipated, although with declining labor force participation, and a significant cyclical participation shortfall, I believe that the overall degree of labor market slack is understated by the unemployment rate. I have been surprised by the strength in payroll employment growth during the past year, given the trendlike pace of output growth and I interpret the decline in the pace of payroll gains in recent months as a potential indication that productivity growth may finally be moving up to a more normal pace. If so, an improvement in the pace of growth will be needed to see a sustained improvement in the labor market. I see some of the transitory factors that held down inflation in the first half of the year as dissipating; that said, inflation is still notably below the Committee's 2% objective and I anticipate that it will rise only gradually over time as the economy recovers.

Respondent 12: I expect real growth to accelerate somewhat in the near term. The outlook overseas is improving and I expect a reasonable resolution of fiscal issues.

Respondent 13: I expect the economic recovery to continue at a moderate pace in 2013H2, accelerating to 3 percent growth in 2014. The pace of growth then runs at my longer-term trend of 2.5 percent in 2015 and 2016. With a moderate pace of growth over the forecast horizon, the labor market recovery remains gradual – I expect the unemployment rate to move down to about 6 percent by the end of 2015, at which time it reaches my estimate of the natural rate of unemployment. I anticipate that headline inflation will rise to 2 percent in 2014, and remain at that level in 2015 and 2016. Inflation stays anchored around my target of 2 percent in response to tighter monetary policy than that anticipated in the Tealbook.

In my view, the substantial liquidity that is now in the financial system continues to imply a risk that inflation will rapidly accelerate to unacceptable levels and that inflation expectations may become unanchored. To ward off these developments, the FOMC will need to commence a steady tightening of montary policy by ending asset purchases in 2014H1 and then beginning to raise rates in 2014H2.

Respondent 14: The key factors shaping our forecast are the same as they have been for some time. Accommodative monetary policy, improved household and business balance sheets, and the diminution of fiscal restraint should allow domestic demand to gain momentum as we move through the projection period. Pent-up demands for capital goods and consumer durables should provide further impetus to growth. Demand from abroad is projected to firm as Europe emerges from recession and emerging market economies work through recent disruptions. Our forecast also assumes that much of the recent increase in interest rates reflects a "one-off" adjustment as financial markets came to grips with the fact that policy will not remain in its current stance forever. Going forward, we assume no further unusual movements in financial conditions, including when we actually begin to reduce asset purchases or eventually increase the policy rate.

Together, these factors are assumed to produce above-potential growth in 2014, 2015, and 2016. Nonetheless, growth is not expected to be strong enough to close resource gaps completely, and we project that the unemployment rate will still be about 1/2 percentage point above its long-run neutral level at the end of the projection period. Resource slack thus is expected to exert some downward influence on inflation through much of the projection period. However, under our view of appropriate monetary policy, enough accommodation will remain in place (and be expected to remain in place) to support inflation expectations and produce an updrift in inflation. Nonetheless, we see inflation remaining a bit below 2 percent even in 2016.

The main sources of uncertainty and risks to our forecast are described in 2(b) above.

Respondent 15: My forecast is that the economy will continue to improve, but at a slower pace than indicated by the Baseline. There is a significant probability that fiscal headwinds will not abate until late next year or 2015, even if Congress raises the debt ceiling, funds the government, and declines to enact further spending restraint. I do not see a compelling narrative for a sharp increase in activity for the foreseeable future. I see more of the same.

Respondent 16: 1. As noted above: I continue to be concerned about possible declines in inflation expectations.

2. It is possible that the debates about the budget over the remainder of the year could cause untoward financial market fluctuations. But I believe that those fluctuations are unlikely to be as large as in 2011.

3. As in June: the main risk to the outlook is monetary policy itself. We seem to be cautious in our pursuit of our long-run price stability and employment goals. That caution will leave households and firms concerned about our ability/willingness to insulate the economy against tail risks, and push down on current spending.

Respondent 17: Other conditioning assumptions: We expect the lower degree of inflation persistence evident since the early 1990s to continue. Inflation expectations remain well anchored. We project real foreign GDP growth (GDP weighted) at 2.8% in 2013 and 3.0% in 2014–changes from June are small. Our assumptions concerning the nominal dollar exchange rate are similar to those in the Tealbook. Reflecting intermeeting developments, our assumed path of WTI oil prices, based on recent futures quotes, has moved up to $107.50 (from $94.50 in June) for 2013Q4 and to $94.50 (from $89.00 in June) for 2014Q4. Our federal fiscal assumptions are similar to those in the Tealbook, with significant fiscal restraint through the forecast horizon. We adopt the Tealbook assumptions regarding equity and home prices.

Outlook: Because much of the recent spending and production data have been on the weak side, we expect U.S. economic growth over the very near term to be subdued; however, we anticipate it to begin to strengthen later this year and to move to a little over 3% (Q4/Q4) in 2014 and about 3 3/4% in 2015, notably above our estimate of the potential growth rate. We believe that the private sector of the economy has made substantial progress in repairing balance sheets and working off excesses.

Consequently, the economy has been set to move to a higher level of activity, but it has been delayed by a series of negative shocks; in particular, contractionary federal fiscal policy and slowing global growth.

Several developments support this view of a pickup in 2014-15. Key measures of household financial conditions signal that household balances sheets have been largely repaired. The household net worth-disposable income ratio is at its average of the previous decade, reflecting rising equity and home prices and declining liabilities, and credit standards are beginning to ease somewhat; consequently, we are now experiencing a fairly typical cyclical recovery of consumer durable goods spending. After five years in which housing production was well below levels consistent with demographics, it appears that most of the excess housing supply has been dissipated. In addition, it appears that the downturn in the Euro Area has ended, and the contraction in state and local government spending is near completion. Federal fiscal drag is likely to reach its maximum in the second half of 2013 and then begin to subside.

As the economy moves into higher gear, the unemployment rate is projected to fall to between 6 1/4% and 6 1/2% by 2014Q4 and then to 5 1/4% by the end of 2015.

With the gradual reduction of economic slack, a decline of the exchange rate of the dollar, a firming in global demand, and the upward pull of anchored inflation expectations, inflation as measured by the PCE deflator is expected to move back up toward the FOMC longer-run objective by early 2015. Thereafter, with stable inflation expectations and dissipating economic slack (as the unemployment rate is expected to be near its longer-run value), inflation is expected to be near the FOMC longer-run objective.

There have been some positive developments consistent with our forecast, including the general improvement in consumer confidence, the ongoing recovery of motor vehicle sales, improvement in some indicators of manufacturers' orders, and more positive news out of the euro area and China. Moreover, home prices continue to increase and, while off recent highs, equity prices have risen substantially over the course of this year. Both developments support household net worth which could, in turn, prompt some decline of the personal saving rate and sustain consumer spending growth.

There has, however, been one significant development generally inconsistent with our forecast–the steep rise of mortgage interest rates and the leveling off of housing starts. There have been previous episodes in which long-term interest rates have moved up in anticipation of the beginning of the process of normalization of monetary policy. We suspect, however, that in the current case the increase has been greater than that implied by the fundamentals. Our modal forecast presumes that the recovery of housing starts will resume later in 2013 and continue in 2014, as we expect some of the increase in long rates to be reversed in the months ahead. Moreover, in an absolute sense, mortgage interest rates are still quite low by the standards of the past 50 years. However, the possibility that housing market activity does not recover as envisioned represents a notable downside risk to the forecast.

Forecast Narratives (continued)

4(b). Please describe the key factors causing your forecast to change since the previous SEP.

Respondent 1: The general contours of my forecast have not significantly changed since the last SEP. Given the incoming data, I have slightly reduced my forecast for real growth and inflation in 2013. In addition, I have pushed out the date for raising the federal funds rate to the first half of 2015, in line with our thresholds and forward guidance. I have also increased the trajectory of the federal funds rate after lift-off. As a result, my outlook for growth in 2014 and 2015 is slightly higher, and my outlook for unemployment in 2014 and 2015 is slightly lower.

Respondent 2: Main difference is change in financial conditions–higher interest rates for mortgages, corporate bonds, etc. Housing will be affected, at least to some degree. The stimulative effects of stock price gains probably do not fully offset higher yields. Incoming data do not show much evidence of pickup in growth (although more rapid declines in unemployment than expected) which led me to mark down growth going forward. Although the effect on my forecast is marginal, AFEs have done better and EMEs worse than expected since June.

Respondent 3: The incoming data have caused me to lower my 2013 growth projection by about a 1/4 percentage point. Otherwise, my forecast remains largely unchanged from what I submitted in June.

Respondent 4: The current forecast calls for slower growth as a result of higher-than-expected long-term interest rates. With a weaker real economy, the projected path for inflation is also lower.

Respondent 5: The most important change in my forecast in this round is that, while maintaining the same broad path of the unemployment rate, I have marked down GDP growth in 2014 and 2015 significantly, by about a half-percentage point in each year. In other words, I have begun to treat the productivity slowdown that we have been persistently seeing over the last few years as having something of a more permanent component.

Respondent 6: Since June, the data on spending have, on balance, been a little weaker than I expected and financial conditions have tightened further. These factors suggest a little less momentum to the recovery in output growth but do not substantially change the contours of the recovery. The unemployment rate has come in lower than I had anticipated, leading me to lower its projected path a touch. Incoming data have also led me to revise up slightly my near-term inflation forecast, especially for headline inflation, but led to minimal revisions further out.

The benchmark NIPA revisions showed higher historical output growth. The revisions imply faster historical growth in potential output, leaving the current output gap little affected. The revisions also led me to revise up my long-run projections for GDP growth and the equilibrium funds rate by about 1/10th.

Respondent 7: Overall, my forecasts are little changed since the June SEP. GDP continues to grow at a moderate pace, notwithstanding some changes in the quarterly pattern of growth, and I continue to expect that the pace of growth will increase going forward. The declines in the unemployment rate have been slightly faster than anticipated, precipitating another modest downward revision to my unemployment forecast. Past data revisions and recent gasoline price movements have caused me to nudge up my inflation outlook for 2013, but they have not had a meaningful impact on the outlook going forward: I continue to anticipate that an improving economy will help pull inflation toward our 2 percent long-run objective over the next few years.

Respondent 8: Not much change, for reasons explaind in 4(a).

Respondent 9: Real growth has been slightly weaker than I had anticipated, and I carry some of that weakness forward through the end of the year. Apart from that, the economy has performed very much as expected, and my forecast revisions are, accordingly, small.

Respondent 10: My forecast has not changed materially.

Respondent 11: I've lowered my forecasts for growth in 2013 and 2014 in response to weaker than anticipated incoming data. My unemployment projection is marginally lower at the end of 2013, reflecting a larger than anticipated decline since June, but is little changed at the end of the forecast period. My forecast for core inflation is essentially unchanged.

Respondent 12: Recent data on real GDP growth has caused me to reduce my growth estimates for 2013 and 2014.

Respondent 13: The weaker tone of incoming data led me to revise down slightly my forecast for output growth and inflation in 2013.

I've taken on board the 6.5% unemployment rate as the trigger for liftoff of the fed funds rate.

Respondent 14: Growth in the first half of 2013 was a tad softer than we anticipated in the June SEP. Moreover, the composition of growth – notably, softer consumer spending on nondurables and services and greater inventory investment – points to less momentum in activity going forward. Financial conditions have become less accommodative than we assumed in June. The news from labor markets has been mixed. The drag from the sequester may not be as great as we had feared and growth in Europe finally seems to be moving up. The revisions to the NIPA caused us to revise up our assumptions concerning potential output growth over history a bit, but we made no material changes our projections for potential going forward.

As a result of the changes, we have revised down our projection for growth a little more than 1/4 percentage point per year over the projection period. However, our projection for the unemployment rate at the end of 2015 is up only a touch, largely due to the bigger-than-anticipated drop in the rate so far this year. Our projection for inflation through 2015 is not materially different from the June SEP.

Respondent 15: N/A

Respondent 16: There has been little change in my forecast, except that I have lowered my estimate of the long-run unemployment rate consistent with 2% inflation.

Respondent 17: The data released since the June SEP have given mixed signals about economic conditions. Consequently, the changes to our medium term forecast have been relatively modest on net.

Over the near term, the data have suggested that the economy had less momentum going into the second half of the year, and we have lowered our real growth forecast for 2013H2. A number of data releases and financial developments have contributed to that. Overall, consumer spending indicators suggest that real PCE growth over the near term will be somewhat lower than we expected in

June. Equipment investment indicators, particularly shipments of nondefense capital goods excluding aircraft, were weaker than anticipated in June and July, leading us to reduce projections for equipment investment over the near term.

Because the rise in housing starts stalled starting in 2013Q2 and mortgage rates have risen substantially since May, we have lowered our residential investment projections for 2013Q4 and 2014Q1 modestly (because of the lag between housing starts and residential investment, our 2013Q3 projection is slightly higher). We also have lowered our profile for housing starts and residential investment over the rest of the forecast horizon.

The inflation data since June have been a bit higher than we anticipated in June, and we have raised our near-term inflation forecasts modestly. Because we see the rise as a slightly more rapid unwinding of temporary factors, we have not made significant changes to our medium-term inflation forecasts.

As we noted in our answer to question 2(b), our assessment of the balance of risks to the real GDP growth outlook has shifted to the downside because of a higher probability of a fiscal stalemate, increased geopolitical risks, higher long-term interest rates, and continued weak productivity growth.

Forecast Narratives (continued)

4(c). Please describe any important differences between your current economic forecast and the Tealbook.

Respondent 1: I see weaker economic growth over the forecast horizon (but still above trend). Correspondingly, I see a slightly higher unemployment rate. I also expect that inflation will rise more quickly than Tealbook and will average 2 percent in 2015 and 2016.

Respondent 2: I'm a bit more pessimistic. I still have a pickup in growth over the next few years, but I have marked it down a bit, correcting for earlier over-optimism. I think that inflation will move toward 2 percent a bit more quickly than the TB does, reflecting anchored inflation expectations and perhaps some "speed limit" effects. My NAIRU is a bit higher than TB.

Respondent 3: My growth projection tracks 1/4 to 1/2 percentage point under the Tealbook over the forecast horizon. This is a difference in perception about the pace of growth for potential GDP, not an important disagreement about the cyclical dynamics of the recovery. My inflation forecast runs about 1/2 percentage point above the Tealbook. My forecast for the rate of unemployment is essentially the same as the Tealbook.

Respondent 4: Despite being conditioned on greater monetary policy stimulus, my outlook for the real economy is somewhat more pessimistic than the Tealbook's.

Respondent 5: I am quite close to the Tealbook on the path of the unemployment rate, but somewhat more pessimistic on GDP growth, and hence implicitly on productivity growth.

Respondent 6: My forecast is broadly similar to the Tealbook projection.

Respondent 7: My forecast is broadly similar to the Tealbook. I expect that GDP growth will pick up over the course of this year and proceed at above-trend rates from 2014 through 2016, which will bring the unemployment rate down to a level near its natural rate in 2016 and pull inflation up toward our 2 percent long-term objective.

Respondent 8: N/A

Respondent 9: With long-run inflation expectations anchored and an anticipated pick up in real growth, I see a somewhat faster rise in inflation than is called for in the Tealbook. The faster rise in inflation combines with an assumed normalization of the natural real interest rate (due to balance-sheet repair, greater confidence in growth prospects, and the lifting of fiscal and regulatory uncertainties), to produce a more rapid increase in the funds rate than is assumed in the Tealbook baseline forecast.

Respondent 10: With sluggish growth in disposable income, I do not believe that consumer spending is poised to accelerate significantly. Nor do I expect productivity growth to pick up. As a result I expect GDP growth to remain around 2 percent. I also expect labor force participation to decline more rapidly than in the Tealbook, and thus unemployment will decline more rapidly than might be suggested by my GDP forecast.

Respondent 11: N/A

Respondent 12: While my forecast of real GDP growth in the long run matches the one in the Tealbook, my long run forecast for unemployment is higher than the one in the Tealbook (6% vs. 5.2%). My view on the amount of slack in the economy produces differences in some of my forecasts relative to the Tealbook. My forecast of real GDP in 2015 and 2016 is less than the ones in the Tealbook. I also see the appropriate path for the federal funds rate target increasing at a faster pace than the one in the Tealbook. Finally, I anticipate a slight, temporary overshooting of inflation that is not present in the Tealbook forecast.

Respondent 13: My forecast calls for higher inflation and tighter monetary policy over the forecast horizon than the Tealbook.

Respondent 14: Our top-line GDP forecast is similar to the Tealbook's through 2015, but our composition contains less household sector spending. We also assume a somewhat faster pace of potential output growth than the Tealbook ; his accounts for our higher growth projection in 2016. Given these paths for GDP growth and potential, our forecast contains a bit larger output and unemployment gaps at the end of the projection period than the Tealbook. Our inflation forecasts are similar. This largely reflects our assumptions for monetary policy, which incorporate a somewhat lower path for the federal funds rate than assumed in the Tealbook.

Respondent 15: Under my forecast, GDP growth is 2.0% in 2013, 2.6% in 2014, and 3.1% in 2015. I do not see a strong basis for expecting a faster return to stronger growth. I expect that we will continue to see significant reductions in unemployment, in part due to declining participation.

Respondent 16: I see appropriate monetary policy as being more accommodative than the TB's assumed policy stance. As a result, I'm forecasting that the unemployment rate will fall more rapidly than does the TB and the inflation rate will rise more rapidly (and to higher levels).

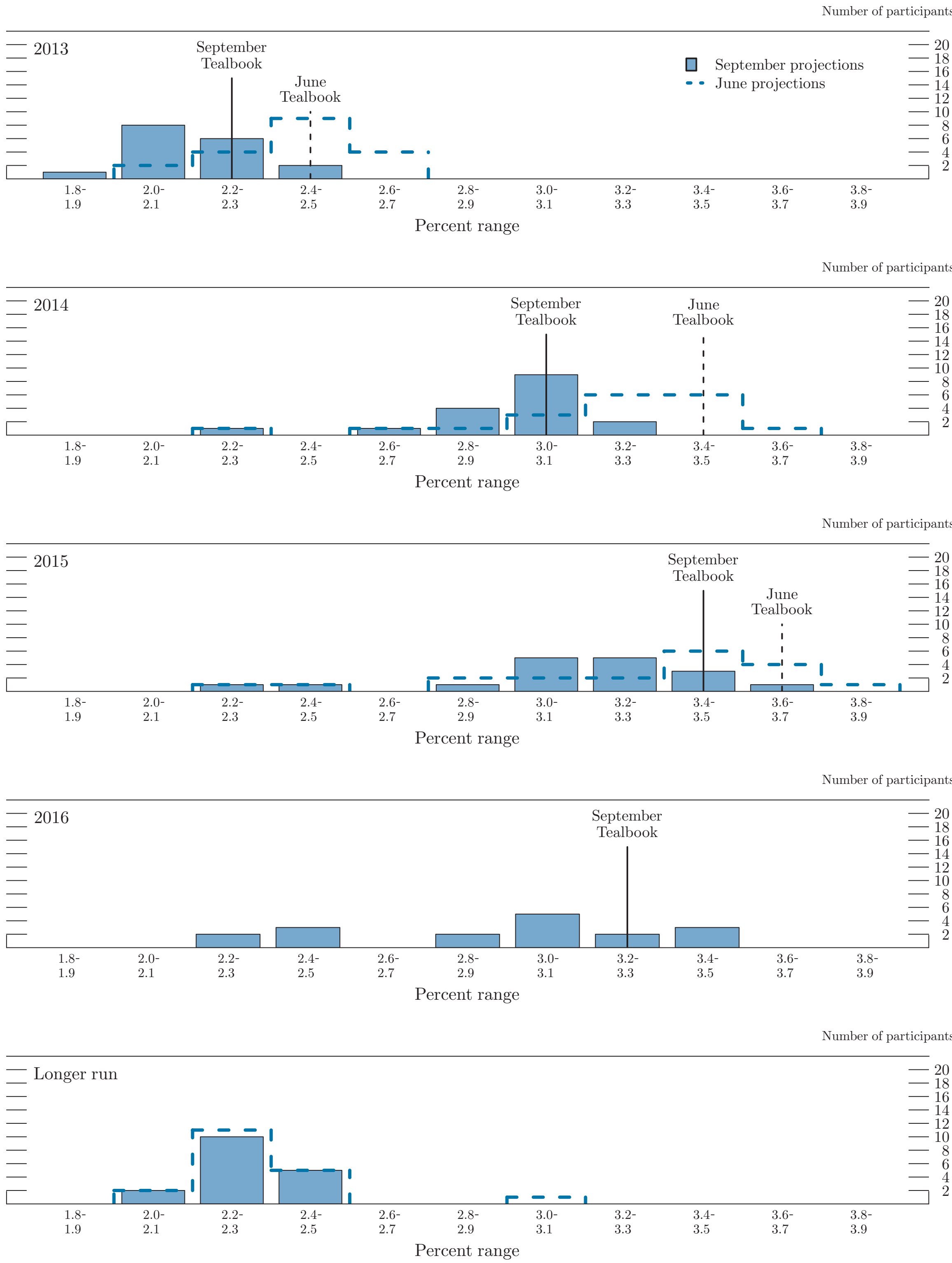
Respondent 17: Our forecast for real GDP growth in 2014-15 is similar to that of the Tealbook, but the composition of growth differs between the two forecasts. The Tealbook projects higher consumption growth than in our forecast; the difference appears to reflect a stronger wealth effect than we have in our forecast. With higher consumption growth from wealth effects, the Tealbook also projects the saving rate to decline further, while our forecast has the saving rate roughly flat over the forecast horizon. The Tealbook projects slower growth in business fixed investment than in our forecast; the reason for this difference appears to be that the Tealbook has a more moderate pace of business output growth than we have in our forecast.

The projected path of the unemployment rate in the Tealbook is somewhat above our forecast, with the unemployment rate in the Tealbook approaching the assumed natural rate by the end of 2016, one year later than in our projection. The Tealbook also sees the labor force participation rate declining modestly over the forecast horizon, whereas we anticipate a small increase. In part, these differences seem to reflect somewhat differing assessments of the labor market flows and dynamics that would be typical for this stage of an expansion.

We see a stronger influence of anchored inflation expectations on inflation dynamics than does the Tealbook. Consequently, our inflation forecast and the Tealbook forecast are similar for 2013, but beyond that we see total and core inflation rising more quickly to near 2% than does the Tealbook.

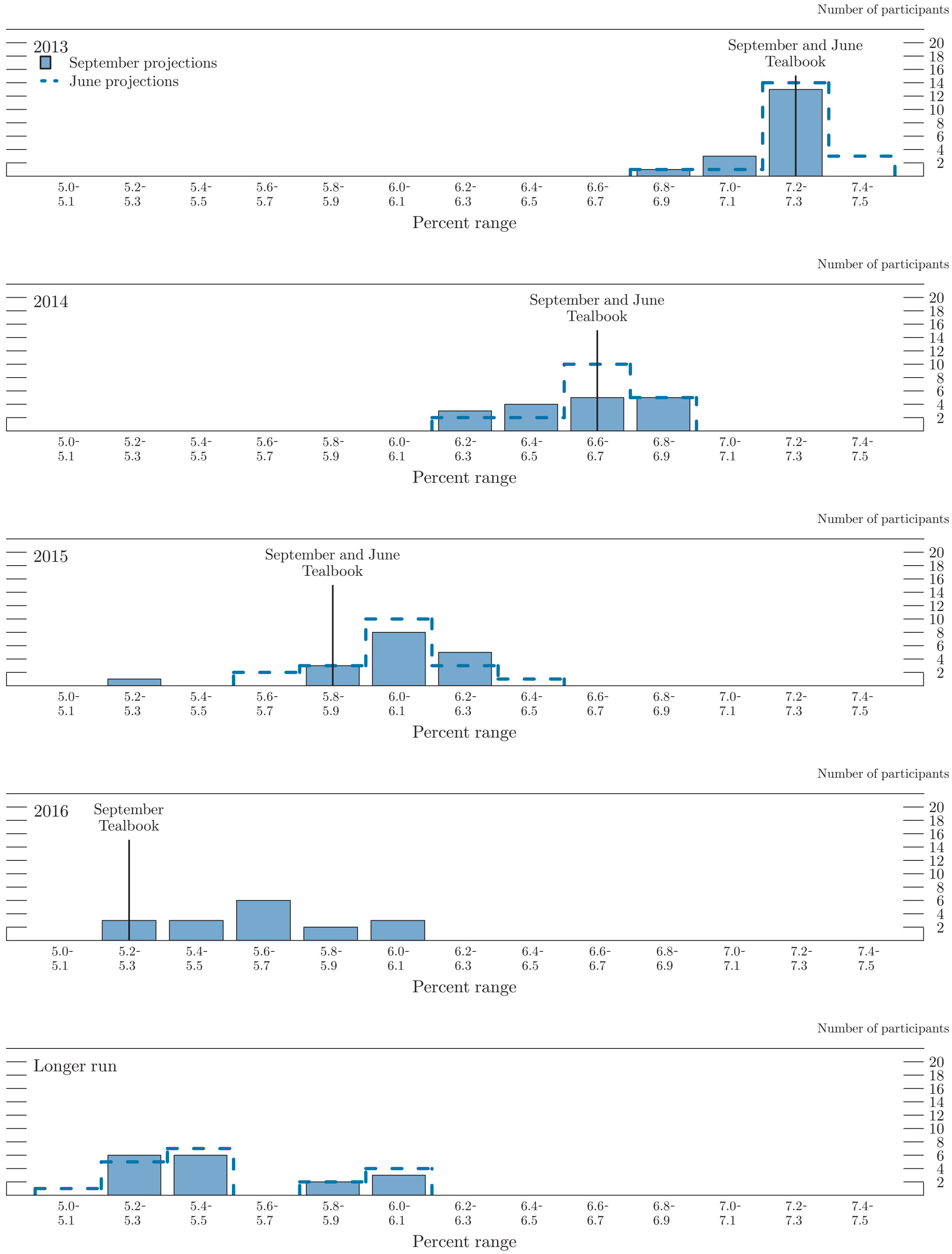
The risk assessments in the Tealbook and in our projection are now similar. However, we continue to see uncertainty around both the real activity and inflation forecasts as still higher than normal whereas the Tealbook sees uncertainty at near normal levels. This assessment reflects our view that the unusual nature of the current expansion as well as a policy environment that is constrained by the effective lower bound leaves uncertainty about both real activity and inflation above normal levels (even the more elevated normal levels now associated with the 20-year window of forecast errors). The volatility in global financial markets since early May seems consistent to us with large uncertainty about the economic outlook.

Figure 3.A. Distribution of participants' projections for the change in real GDP, 2013–16 and over the longer run



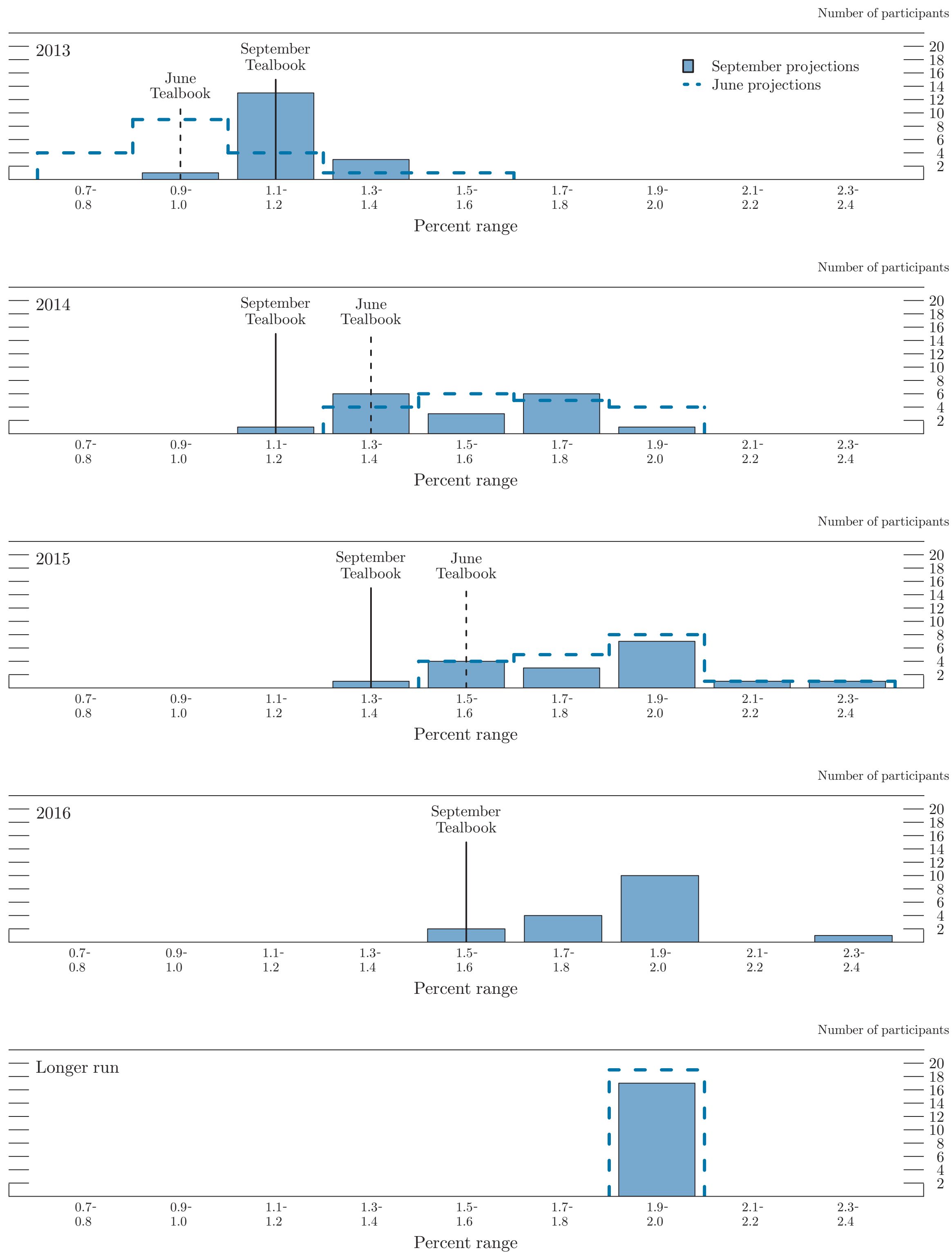
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.B. Distribution of participants' projections for the unemployment rate, 2013–16 and over the longer run



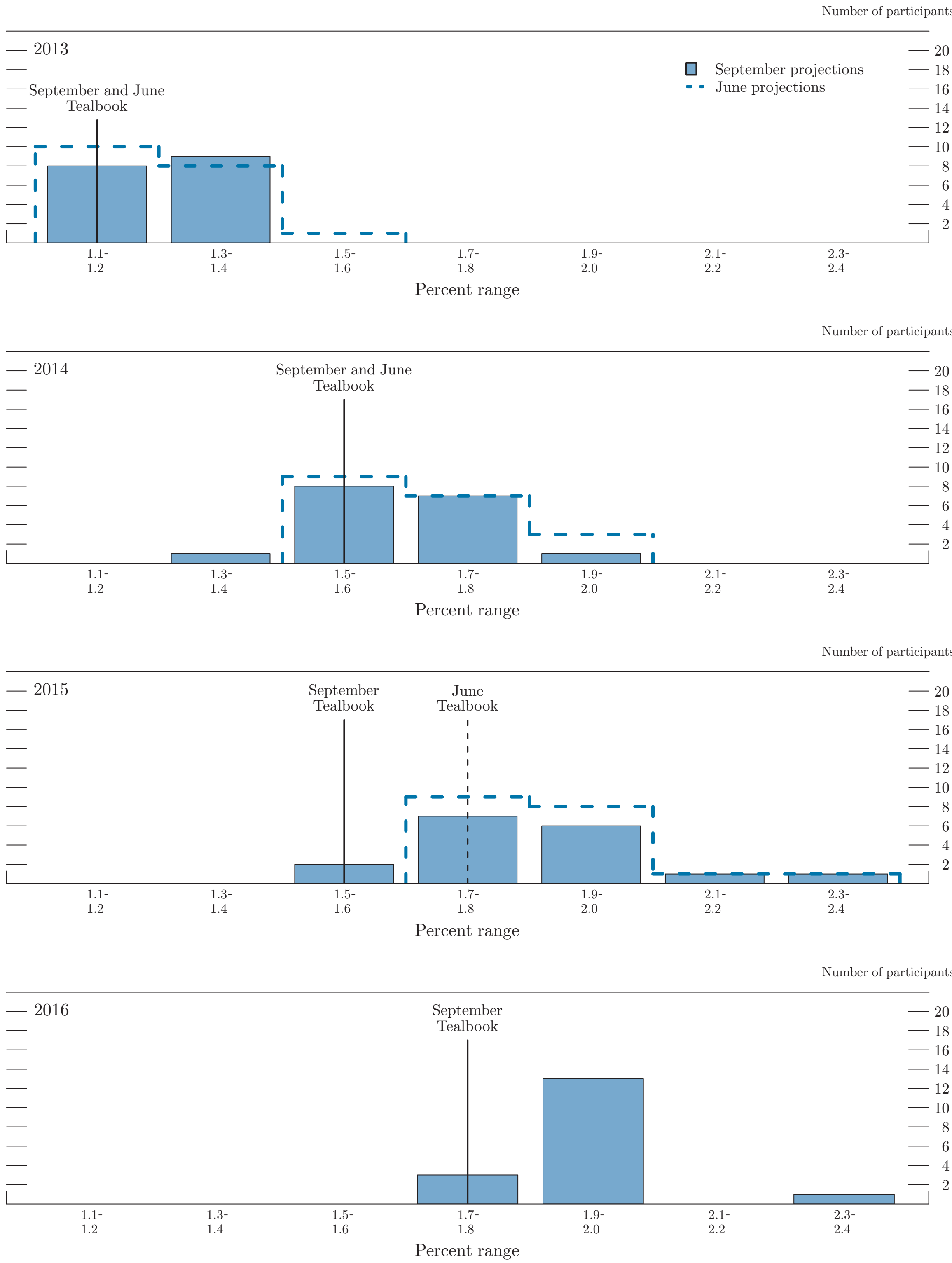
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.C. Distribution of participants' projections for PCE inflation, 2013–16 and over the longer run



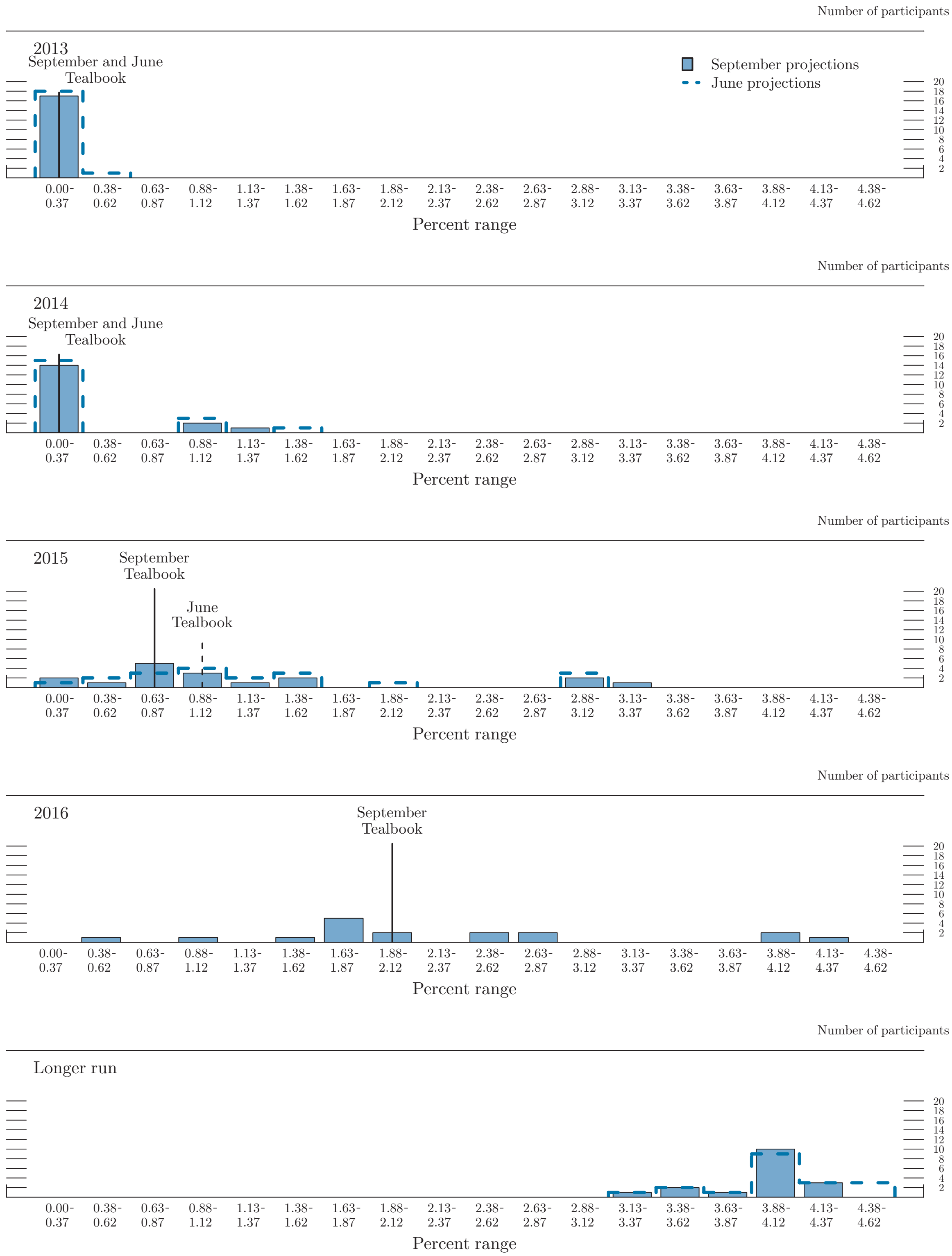
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.D. Distribution of participants' projections for core PCE inflation, 2013–16



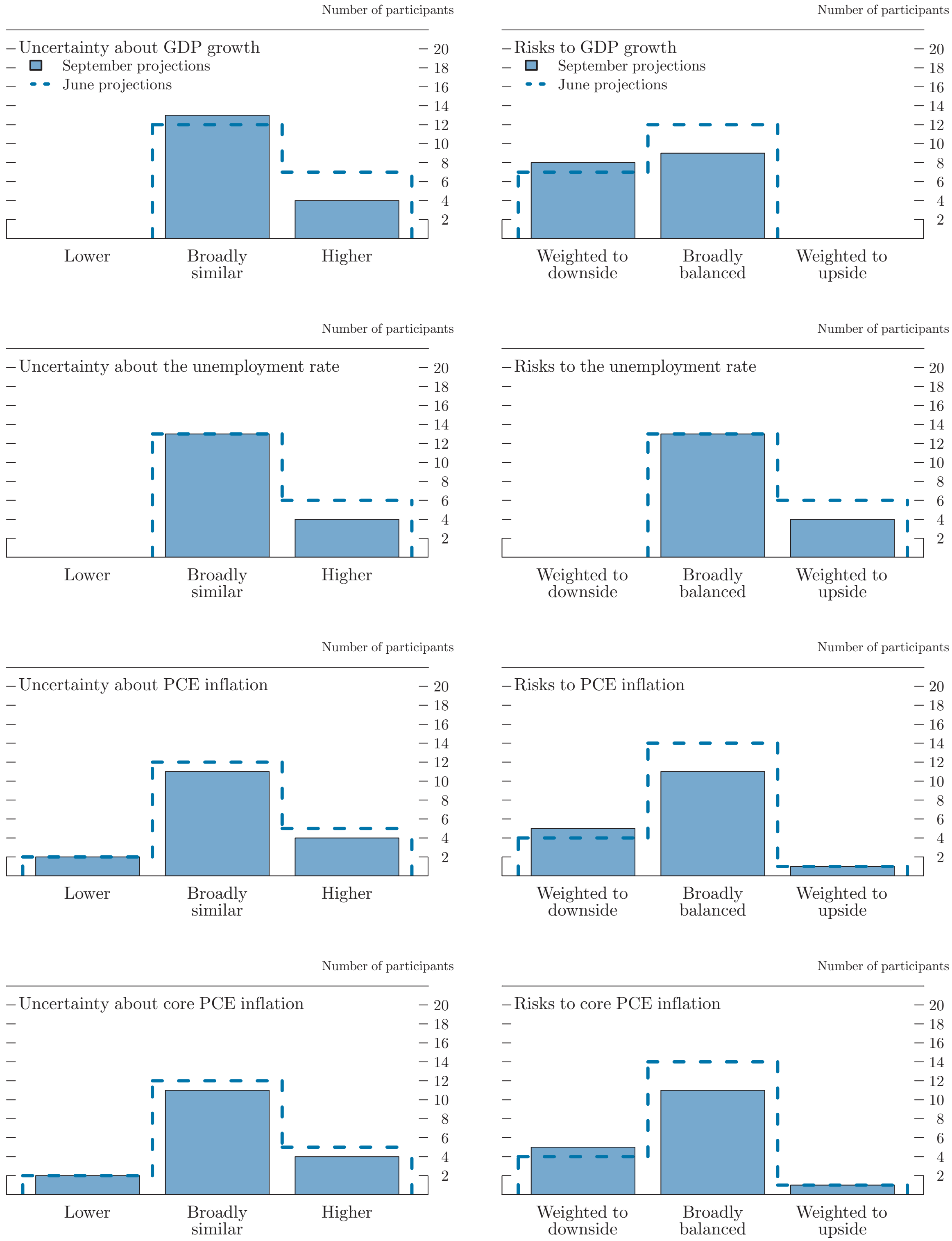
NOTE: Definitions of variables are in the general note to table 1.

Figure 3.E. Distribution of participants' projections for the target federal funds rate, 2013–16 and over the longer run



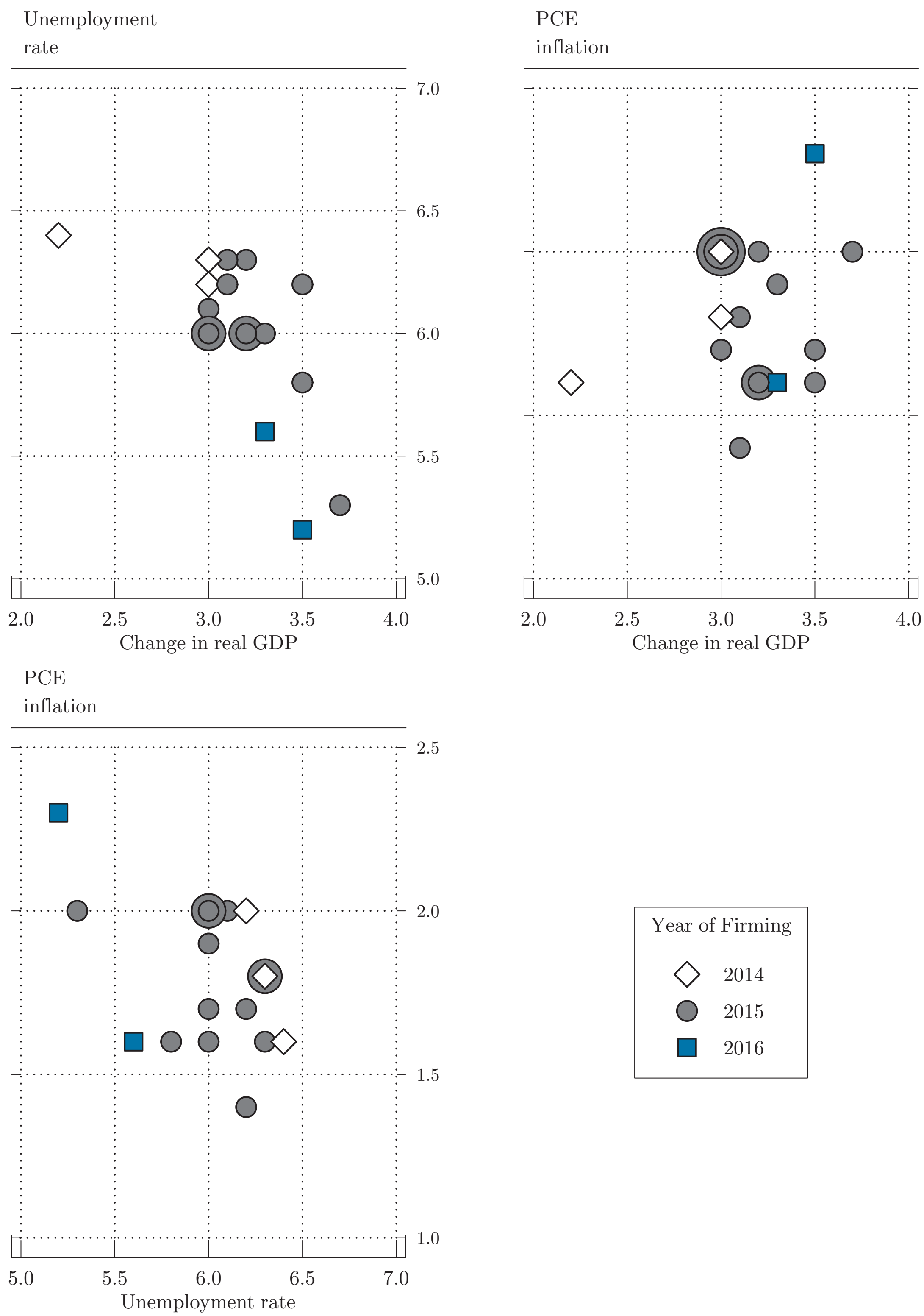
NOTE: The target federal funds rate is measured as the level of the target rate at the end of the calendar year or in the longer run.

Figure 4. Uncertainty and risks in economic projections



NOTE: Definitions of variables are in the general note to table 1.

Figure 5. Scatterplots of projections in the initial year of policy firming (in percent)



NOTE: When the projections of two or more participants are identical, larger markers, which represent one participant each, are used so that each projection can be seen.