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

Percent

Variable	Central tendency[1]					Range[2]				
	2013	2014	2015	2016	Longer run	2013	2014	2015	2016	Longer run
Change in real GDP	2.2 to 2.3	2.8 to 3.2	3.0 to 3.4	2.5 to 3.2	2.2 to 2.4	2.2 to 2.4	2.2 to 3.3	2.2 to 3.6	2.1 to 3.5	1.8 to 2.5
September projection	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
Unemployment rate	7.0 to 7.1	6.3 to 6.6	5.8 to 6.1	5.3 to 5.8	5.2 to 5.8	7.0 to 7.1	6.2 to 6.7	5.5 to 6.2	5.0 to 6.0	5.2 to 6.0
September projection	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
PCE inflation	0.9 to 1.0	1.4 to 1.6	1.5 to 2.0	1.7 to 2.0	2.0	0.9 to 1.2	1.3 to 1.8	1.4 to 2.3	1.6 to 2.2	2.0
September projection	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
Core PCE inflation[3]	1.1 to 1.2	1.4 to 1.6	1.6 to 2.0	1.8 to 2.0		1.1 to 1.2	1.3 to 1.8	1.5 to 2.3	1.6 to 2.2	
September projection	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	

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 September projections were made in conjunction with the meeting of the Federal Open Market Committee on September 17–18, 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	1.8
PCE inflation	0.5	0.5
Core PCE inflation	1.0	1.0

Participants' projections

Projection	Change in real GDP	PCE inflation	Core PCE inflation
1	1.8	0.5	1
2	1.8	0.5	1
3	1.8	0.5	1
4	1.8	0.5	1
5	1.8	0.5	1
6	1.8	0.5	1
7	1.8	0.5	1
8	1.8	0.5	1
9	1.8	0.5	1
10	1.8	0.5	1
11	1.8	0.5	1
12	1.8	0.5	1
13	1.8	0.5	1
14	1.8	0.5	1
15	1.8	0.5	1
16	1.8	0.5	1
17	1.8	0.5	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	2.6 to 2.8	2.6 to 3.0
PCE inflation	1.3 to 1.5	1.3 to 1.9
Core PCE inflation	1.2 to 1.4	1.2 to 1.4

Participants' projections

Projection	Change in real GDP	PCE inflation	Core PCE inflation
1	2.8	1.5	1.2
2	2.8	1.3	1.2
3	2.8	1.5	1.2
4	2.6	1.3	1.2
5	2.6	1.3	1.2
6	3.0	1.9	1.4
7	2.8	1.3	1.2
8	3.0	1.3	1.2
9	2.8	1.3	1.2
10	2.8	1.3	1.2
11	2.8	1.3	1.2
12	2.6	1.3	1.2
13	2.8	1.5	1.4
14	2.6	1.5	1.4
15	2.8	1.5	1.2
16	2.6	1.3	1.2
17	2.6	1.7	1.4

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

Table 2. December 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	2.3	7.1	1.0	1.1	0.13
2	2013	2.3	7.1	0.9	1.1	0.13
3	2013	2.3	7.1	1.0	1.1	0.13
4	2013	2.2	7.1	0.9	1.1	0.13
5	2013	2.2	7.1	0.9	1.1	0.13
6	2013	2.4	7.0	1.2	1.2	0.13
7	2013	2.3	7.0	0.9	1.1	0.13
8	2013	2.4	7.1	0.9	1.1	0.13
9	2013	2.3	7.1	0.9	1.1	0.13
10	2013	2.3	7.1	0.9	1.1	0.13
11	2013	2.3	7.1	0.9	1.1	0.13
12	2013	2.2	7.0	0.9	1.1	0.13
13	2013	2.3	7.0	1.0	1.2	0.13
14	2013	2.2	7.1	1.0	1.2	0.13
15	2013	2.3	7.1	1.0	1.1	0.13
16	2013	2.2	7.1	0.9	1.1	0.13
17	2013	2.2	7.0	1.1	1.2	0.13
1	2014	3.2	6.2	1.6	1.6	0.75
2	2014	2.9	6.5	1.5	1.5	0.13
3	2014	3.0	6.5	1.6	1.6	0.13
4	2014	2.7	6.5	1.6	1.5	0.13
5	2014	3.2	6.5	1.4	1.5	0.13
6	2014	3.0	6.2	1.8	1.8	1.25
7	2014	2.2	6.4	1.4	1.4	0.13
8	2014	3.0	6.5	1.4	1.4	0.13
9	2014	3.2	6.6	1.4	1.4	0.13
10	2014	2.9	6.7	1.3	1.3	0.13
11	2014	3.1	6.6	1.3	1.4	0.13
12	2014	2.8	6.3	1.4	1.4	0.13
13	2014	3.1	6.4	1.5	1.6	0.13
14	2014	2.7	6.6	1.6	1.6	0.13
15	2014	2.9	6.6	1.4	1.4	0.13
16	2014	3.3	6.3	1.8	1.8	0.13
17	2014	3.1	6.5	1.4	1.4	0.13

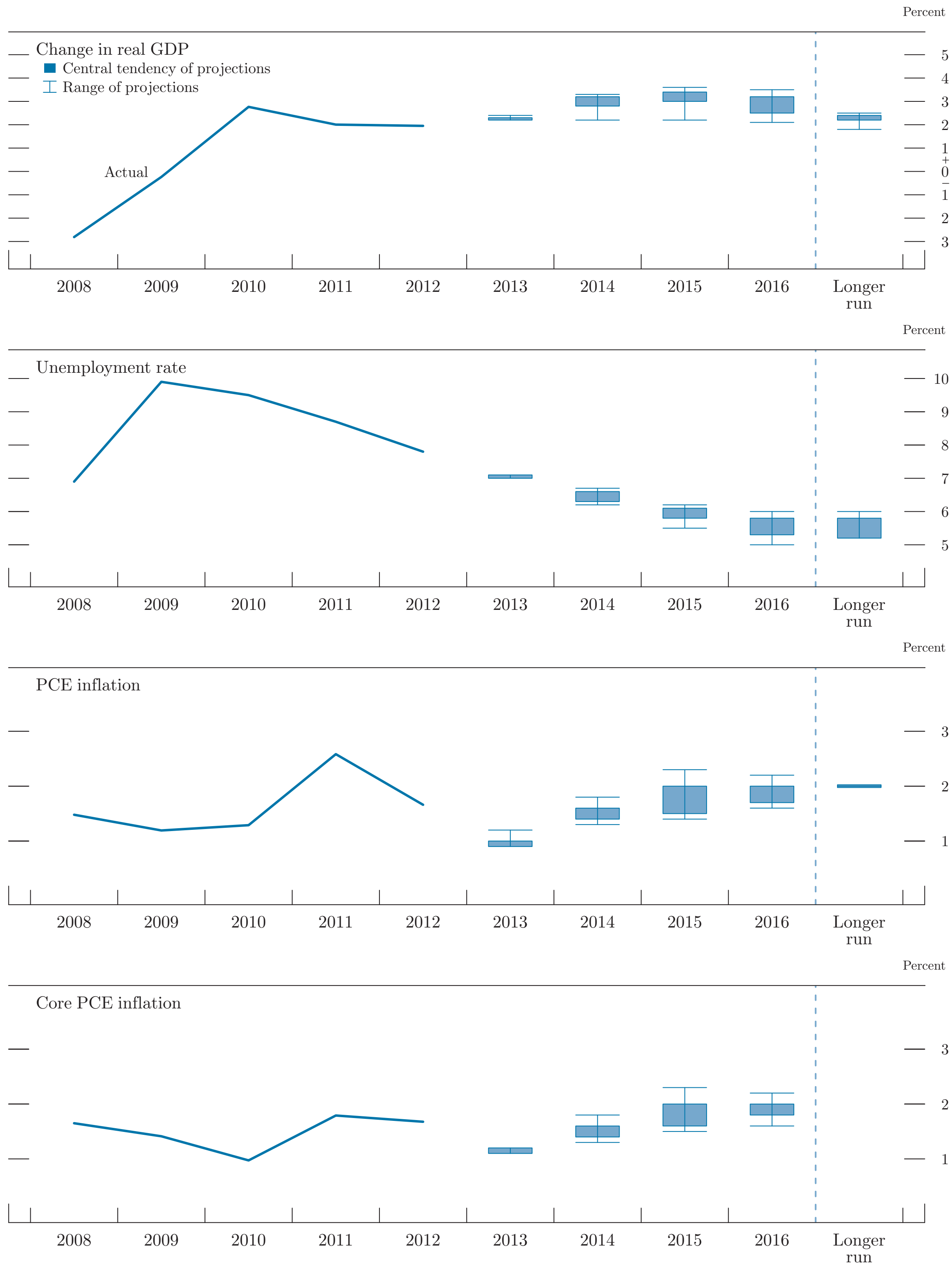
Table 2. ***(continued)***

Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	2015	3.0	5.8	2.3	2.3	2.75
2	2015	3.0	5.9	1.8	1.8	0.50
3	2015	3.0	5.9	2.0	2.0	1.50
4	2015	3.2	5.5	1.8	1.9	1.00
5	2015	3.6	5.8	1.5	1.6	0.50
6	2015	2.5	5.8	2.0	2.0	3.25
7	2015	2.2	5.9	1.8	1.8	2.00
8	2015	3.2	5.8	1.6	1.7	1.25
9	2015	3.1	6.2	1.7	1.6	0.75
10	2015	3.5	6.1	1.6	1.6	0.13
11	2015	3.4	6.1	1.4	1.5	0.13
12	2015	3.2	5.7	1.4	1.6	0.75
13	2015	3.1	6.0	1.6	1.8	0.75
14	2015	3.0	6.1	2.0	2.0	1.00
15	2015	3.2	6.1	1.5	1.7	0.50
16	2015	3.5	5.7	2.1	2.1	0.13
17	2015	3.2	5.9	1.7	1.8	0.75
1	2016	2.5	6.0	2.0	2.0	4.25
2	2016	2.8	5.4	2.0	2.0	2.50
3	2016	3.0	5.4	2.0	2.0	2.75
4	2016	2.5	5.3	2.0	2.0	2.00
5	2016	3.5	5.2	1.6	1.8	1.50
6	2016	2.4	5.8	2.0	2.0	4.00
7	2016	2.1	5.8	2.0	2.0	3.25
8	2016	3.1	5.4	1.8	1.9	2.50
9	2016	2.8	5.9	1.9	1.8	1.75
10	2016	3.5	5.6	1.8	1.8	1.25
11	2016	3.2	5.5	1.6	1.6	1.00
12	2016	3.2	5.3	1.6	1.7	1.75
13	2016	2.5	5.8	1.8	2.0	1.75
14	2016	3.0	5.5	2.0	2.0	3.00
15	2016	3.0	5.7	1.7	1.8	1.50
16	2016	3.5	5.0	2.2	2.2	0.50
17	2016	2.9	5.7	2.0	1.8	1.75

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

Projection	Year	Change in real GDP	Unemployment rate	PCE inflation	Core PCE inflation	Federal funds rate
1	LR	2.3	6.0	2.0		4.25
2	LR	2.5	5.2	2.0		4.00
3	LR	2.4	5.4	2.0		4.00
4	LR	2.3	5.3	2.0		3.50
5	LR	2.2	5.2	2.0		3.50
6	LR	2.4	5.8	2.0		4.00
7	LR	1.8	5.8	2.0		3.75
8	LR	2.1	5.4	2.0		4.10
9	LR	2.3	6.0	2.0		4.00
10	LR	2.5	5.2	2.0		4.00
11	LR	2.2	5.3	2.0		3.80
12	LR	2.3	5.3	2.0		4.00
13	LR	2.3	5.5	2.0		4.00
14	LR	2.3	5.5	2.0		4.30
15	LR	2.3	5.2	2.0		4.00
16	LR	2.3	5.5	2.0		3.50
17	LR	2.2	5.4	2.0		3.50

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

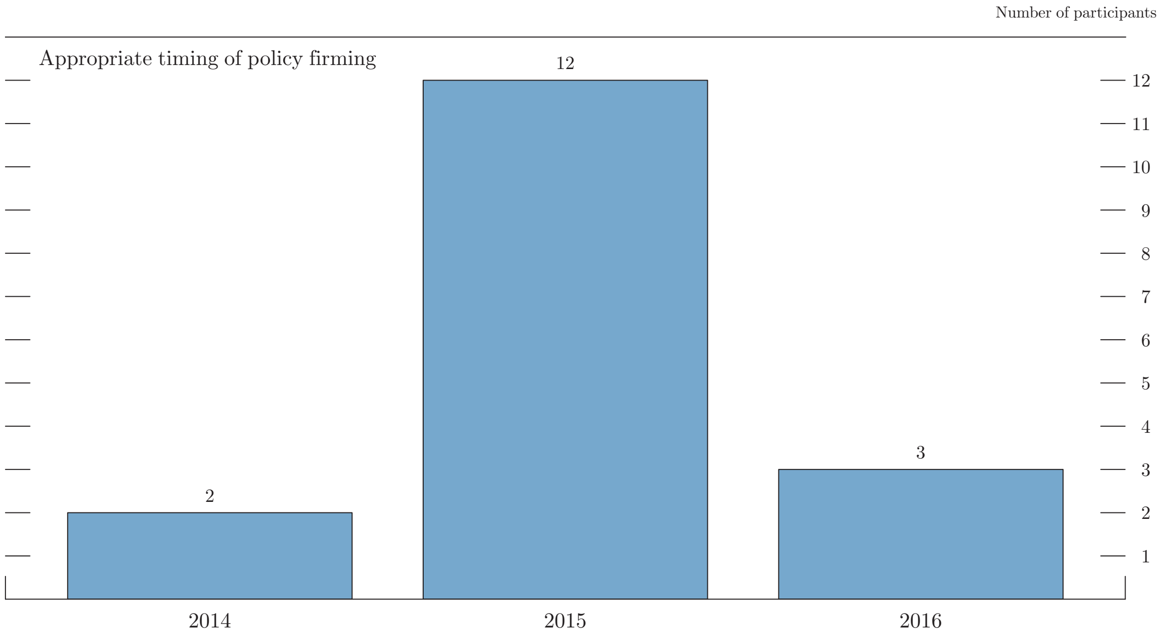


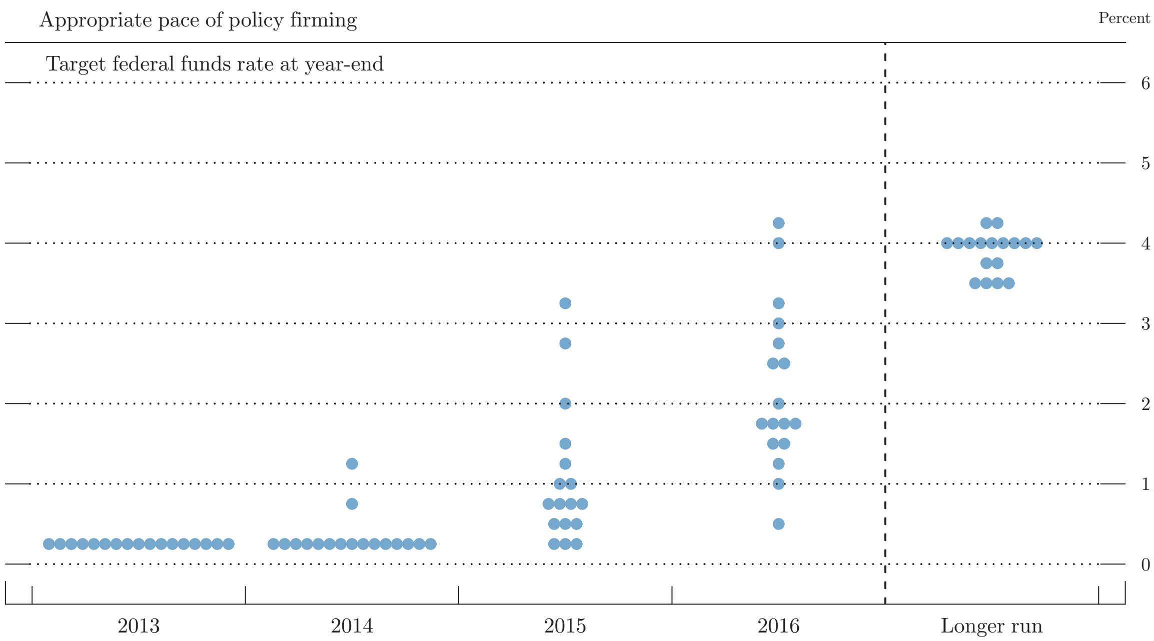
NOTE: Definitions of variables are in the general note to table 1. The data for the actual values of the variables are annual.

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

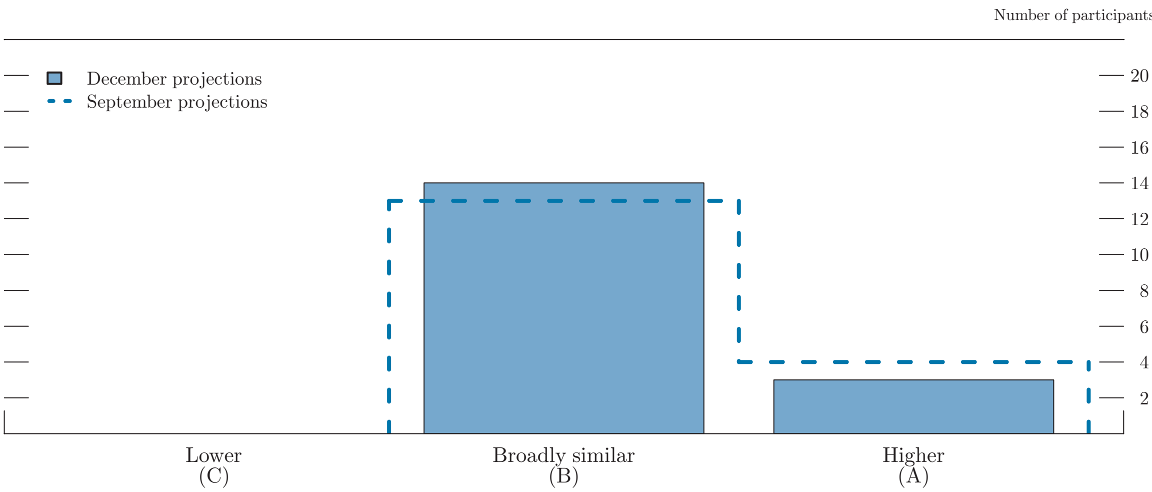




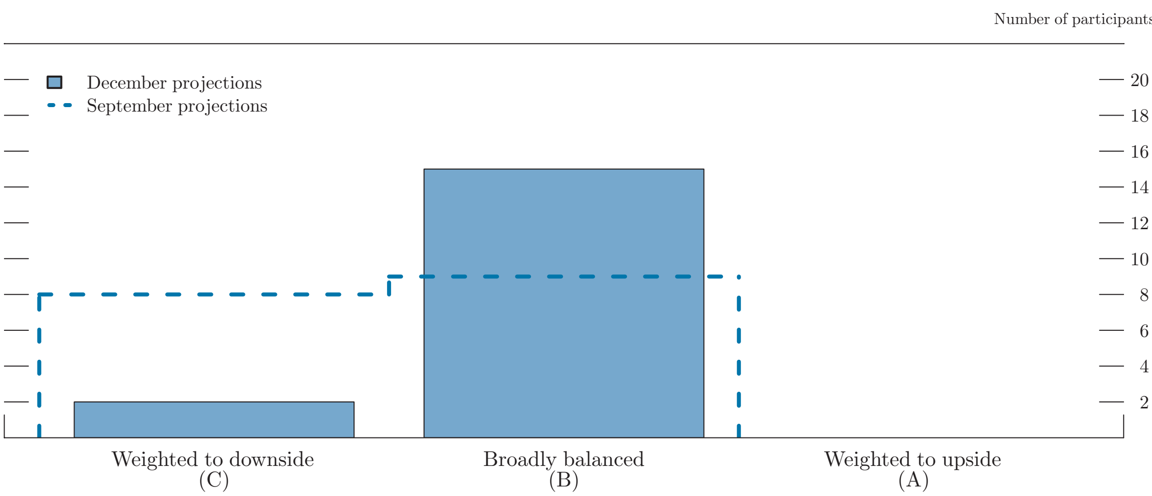
NOTE: In the upper panel, the height of each bar denotes the number of FOMC participants who judge that, under appropriate monetary policy, the first increase in the target federal funds rate from its current range of 0 to 1/4 percent will occur in the specified calendar year. In September 2013, the numbers of FOMC participants who judged that the first increase in the target federal funds rate would occur in 2014, 2015, and 2016 were, respectively, 3, 12, and 2. 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.

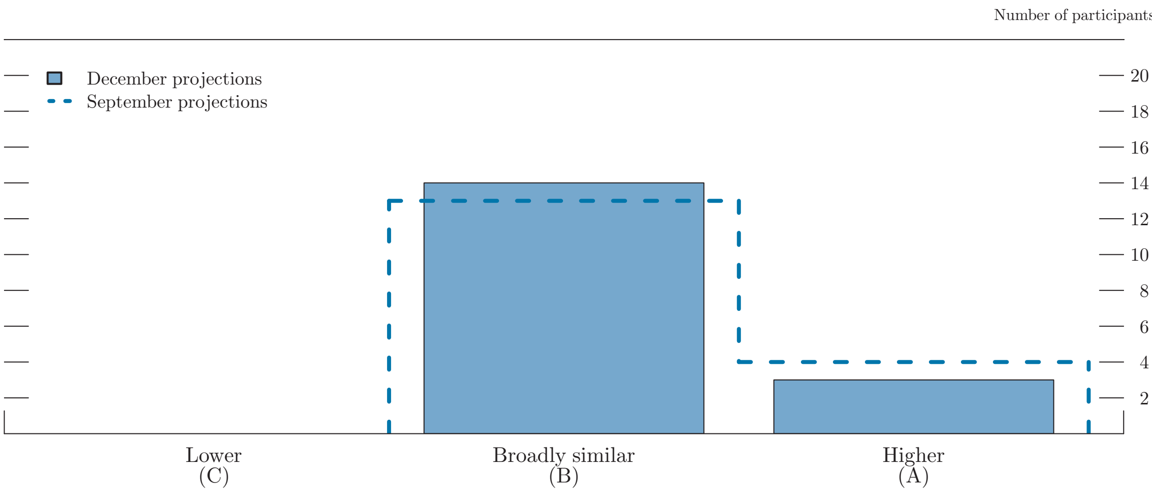


Individual responses

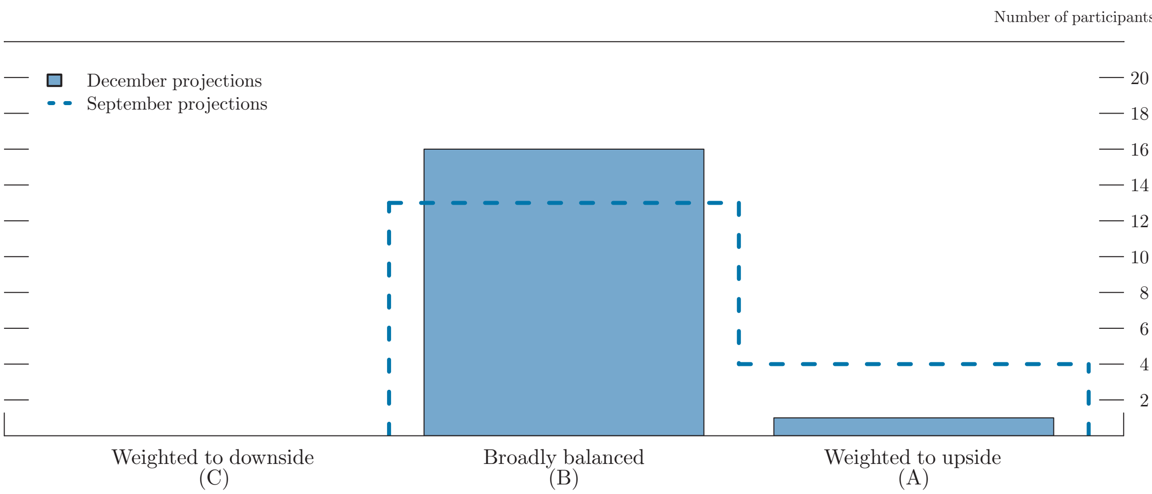
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	A	B
2(b)	B	B	B	B	C	B	B	B	B	B	B	B	B	B	C	B	B

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.

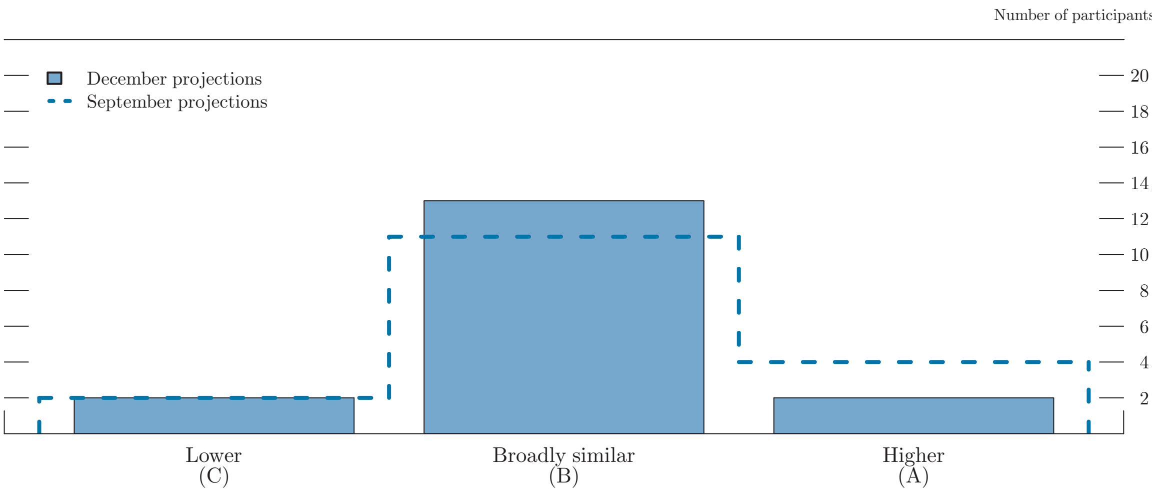


Individual responses

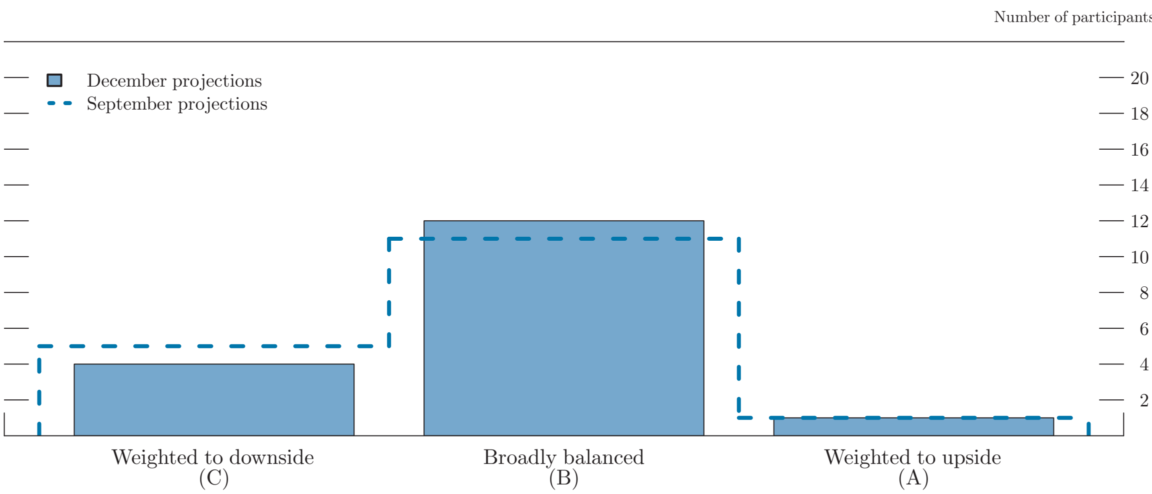
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	B	B	A	B	B	B	B	B	B	B	B	B	B	A	A	B
2(b)	B	B	B	B	A	B	B	B	B	B	B	B	B	B	B	B	B

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.

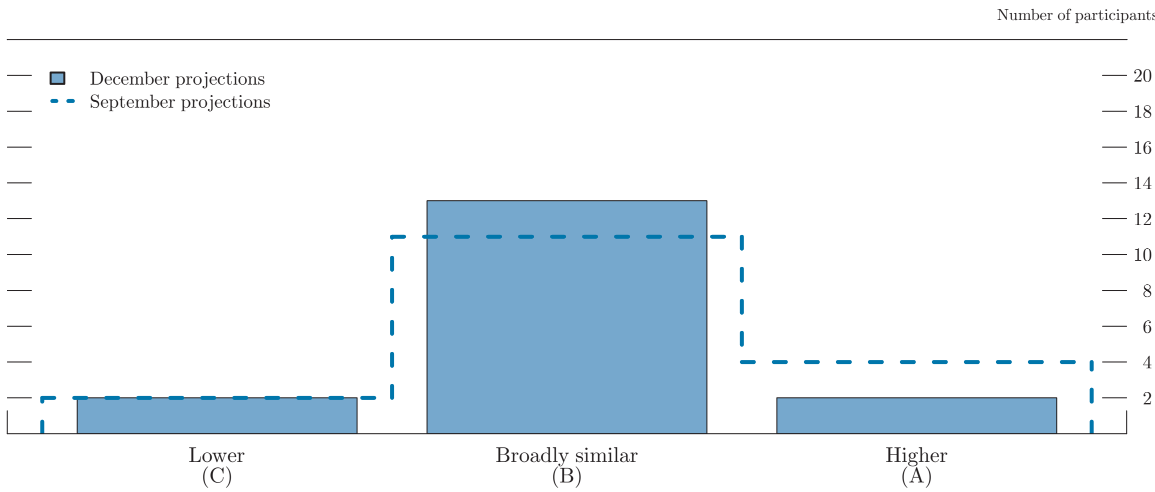


Individual responses

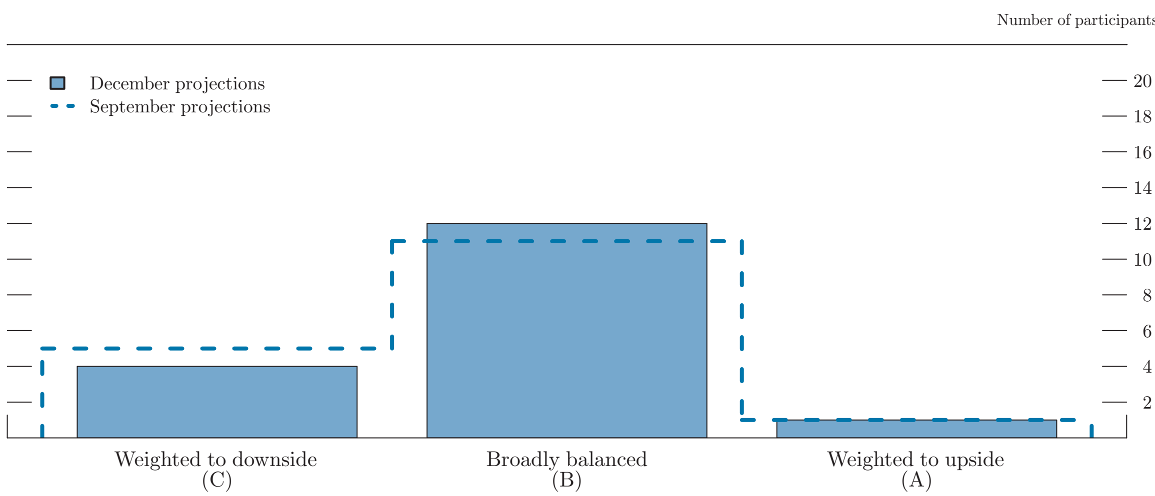
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	B	B	B	B	A	C	C	B	B	B	B	B	B	B	A	B
2(b)	B	B	B	B	C	A	B	B	B	C	C	B	B	B	B	C	B

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	B	B	A	C	C	B	B	B	B	B	B	B	A	B
2(b)	B	B	B	B	C	A	B	B	B	C	C	B	B	B	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: I anticipate a quicker convergence - real GDP will converge to its long run value in 2017, the unemployment rate in 2016, and PCE inflation in 2016. As part of this process, I anticipate that inflation will temporarily overshoot the FOMC's 2 percent target and that unemployment will temporarily reach levels below my judgment of its natural rate.

Respondent 2: N/A

Respondent 3: N/A

Respondent 4: 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). Our interpretation of the recent literature and some additional in-house analysis indicates 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 reach its longer-run level sometime in 2016 and the output gap to be fairly small around that same time. 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.

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.

Respondent 5: N/A

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

Respondent 7: As shown above, I expect inflation in 2016 to be 2 percent and unemployment to be at its long-run average of 5.8 percent at the end of 2016. Thus I expect the convergence process to be complete in 3 years.

Respondent 8: N/A

Respondent 9: N/A

Respondent 10: N/A

Respondent 11: Convergence to the long-run levels of the unemployment rate and inflation is expected to take roughly five years.

Respondent 12: N/A

Respondent 13: N/A

Respondent 14: N/A

Respondent 15: Based on my forecast we appear to be about four years away from convergence on both inflation and unemployment.

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: N/A

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: N/A

Respondent 3: N/A

Respondent 4: 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 have narrowed some from those at the time of the September SEP, and the interval for core PCE is now close to that 20-year average. Some of that narrowing reflects the apparent resolution of some of the political contention surrounding the fiscal outlook. The probability interval for real GDP growth remains wide in part because of the still-extraordinary economic and financial environment, including the policy rate remaining constrained by its effective lower bound.

Respondent 5: N/A

Respondent 6: 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 7: 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 in the past. Inflation expectations are probably more firmly anchored following the FOMC's January 2012 consensus statement, and uncertainty is correspondingly lower than in the past.

Respondent 8: 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 9: At this point, uncertainty looks to be broadly similar to the norms of the last 20 years.

Respondent 10: 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 11: N/A

Respondent 12: N/A

Respondent 13: N/A

Respondent 14: N/A

Respondent 15: Uncertainty about growth is the result of uncertainty that appears higher than normal about potential output, speed of recovery following a financial crisis, US fiscal policy, and the effects of unconventional monetary policies. These factors influence uncertainty about unemployment, which is further exacerbated by variability in productivity growth and in the Okun's Law relationship.

Uncertainty about inflation is lowered by well-anchored inflation expectations and low recent volatility in commodity prices. On the other side, surprisingly low inflation recently suggests that we don't understand inflation dynamics near zero or when slack is high all that well. On net, uncertainty is normal to low-normal.

Respondent 16: N/A

Respondent 17: N/A

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: N/A

Respondent 3: N/A

Respondent 4: 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 five SEPs. The downside risks to the real activity outlook have declined since September such that the risks are balanced over near-term horizons, as indicated in the summary of our judgment; however, at the longer horizons of the SEP, the risks are still modestly skewed to the downside. This decline in downside risks reflects primarily three factors. First, the probability of a political stalemate concerning the federal budget and debt ceiling has declined noticeably. Second, geopolitical risks seem to have moderated. Third, the global financial market movements suggest somewhat less stress on financial and economic conditions globally; recent global economic indicators have been roughly consistent with lesser stresses. Partly counterbalancing these developments is the low inflation data in many parts of the world, including the U.S., which suggest some possibility of continued sluggish growth that would leave the U.S. and world economy more susceptible to negative shocks. The constraints that monetary policy faces under the zero lower bound implies that the effects of such shocks could be more significant than they would be in more normal circumstances.

Respondent 5: Although I now see the distribution of shocks to aggregate demand as reasonably balanced, the balance of risks to GDP growth is weighted to the downside due to the constraints that limit the ability of monetary policy to offset negative shocks to demand at the zero lower bound. For the same reason, I see the risks to unemployment as weighted to the upside. Inflation is running below the level I had anticipated due partly to factors I expect to be largely transitory. That said, low inflation may prove more persistent, creating risks to inflation I consider to be weighted to the downside.

Respondent 6: 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 7: N/A

Respondent 8: Risks to economic activity appear balanced. The downside risks from fiscal brinkmanship have diminished considerably compared with September, when the government shutdown and debt ceiling were imminent. In addition, the economy has so far weathered the run-up in mortgage and other interest rates since the spring. Finally, as headwinds continue to abate, upside scenarios involving a virtuous cycle of economic activity become more plausible.

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.

Inflation risks are also balanced.

Respondent 9: I believe the risks to my projections are broadly balanced. The real economy faces a number of downside risks, including ongoing fiscal challenges, cautious business spending, tepid wage gains for households, and the possibility that financial markets and housing markets may respond adversely to the normalization of longer-term interest rates. But the economy has also shown resilience in the face of considerable fiscal drag in 2013. As fiscal drag eases, the housing recovery progresses, and the labor market gains momentum, upside surprises are certainly plausible. The risks to my inflation outlook also appear to be broadly balanced. A continuation of the recent low readings would keep inflation at lower levels than I anticipate, but I already expect that it will take some time for inflation to return to our 2 percent longer-run objective. Alternatively, faster economic growth or an un-anchoring of inflation expectations from our large balance sheet pose upside risks to the inflation outlook.

Respondent 10: It is a close call, but we think the risks to the forecasts for growth and unemployment are now roughly in balance. On the downside, we have experienced a number of false springs during this recovery, which makes us naturally wary that the recent good news regarding labor markets and consumer spending might prove to be ephemeral. More concretely, there still is a chance that financial conditions will tighten once we actually begin to reduce the pace of asset purchases if we do not add adequate offsetting enhancements to our forward guidance. There also continues to be downside risks to growth abroad. Moreover, the zero lower bound makes it more difficult for policy to respond to negative shocks that might hit the economy. On the upside, improved household sector fundamentals–notably, gains in housing wealth and better job prospects –raise the probability that the recent acceleration in consumer spending may prove to be more robust than we have projected. This, in turn, could produce more pronounced "virtuous cycle" dynamics then we are projecting. Finally, risks from the U.S. fiscal situation appear to be in better balance than they have been for some time.

We continue to see downside risks to the inflation outlook predominating over the medium-term. Actual inflation has surprised us on the downside since the September SEP and we don't see any obvious forces pushing it much higher in the near term: Neither the data nor our business contacts suggest any meaningful domestic cost pressures, demand is not strong enough for firms to increase margins, and there are no inflationary pressures coming from abroad. Our projection for inflation picking up steadily over the projection period depends heavily on an upward pull on prices from inflation expectations and credible FOMC communications about its commitment to a symmetric 2 percent inflation target. For some time we have noted the risk that this upward force may not be as strong as we have assumed, and the recent data have heightened our concern about this risk.

Respondent 11: N/A

Respondent 12: N/A

Respondent 13: N/A

Respondent 14: N/A

Respondent 15: Downside risks to output include the ZLB constraint, adverse changes in productivity, effects of tighter financial conditions, and fiscal risks, including the debt ceiling risk. In general, projections of pickups in output have not been fulfilled, and it is uncertain whether that is due to bad luck or headwinds that are stronger than we appreciate. Normally, downside risks to output would imply upside risks to unemployment, but some unemployment-specific risks (participation declines, slow productivity) have led to downside surprises in unemployment that could be repeated.

Main risk to inflation is commodity prices, which have balanced risks. On the upside, I don't see an unanchoring of inflation expectations, economic overshooting, or a weaker dollar as significant risks to inflation in the near term. There is a small downside risk associated with the possibility that slack is greater than understood both here and in other economies.

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

Respondent 17: N/A

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: Assuming appropriate policy and my views on the convergence process, my judgment is that the lift-off of the federal funds rate should occur in Q4/2014.

Respondent 2: I expect the federal funds rate to remain in the 0 to 25 basis point range for some time after the unemployment rate reaches 6 1/2 percent, providing inflation is projected to be close to the Committee's 2 percent objective in the medium term and longer-term inflation expectations continue to be anchored. Once the fed funds rate lifts from the zero lower bound, I expect the policy rate to follow a relatively shallow path, broadly in line with an outcome-based Taylor rule.

Respondent 3: I continue to believe that it is our post-liftoff policy reaction function as it is understood by the public that chiefly matters for the strength of the recovery. This reaction function 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 rely heavily 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 calculating the rule-prescribed funds rate, 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 preserving the credibility of the Committee that we try to honor the pledges of previous FOMCs unless the reasons for modifying those pledges are clear and compelling.

Respondent 4: 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, even though some indicators have become somewhat brighter since September, we still anticipate that expansion will be sluggish; in fact, the real growth forecast is modestly lower than in September and the projected path of the unemployment rate is slightly higher. Consequently, although the labor market outlook has improved some, our assessment is that the improvement has not reached the "substantial" standard. Financial conditions have improved, but they are still not fully normal and remain susceptible to sharp reversals depending upon developments. Furthermore, we believe that the strongly accommodative policy approach of the Federal Reserve and other advanced economy central banks has been an important factor behind the extent of improvement in U.S. and global economic data. In contrast, uncertainty about whether central banks will maintain accommodative postures has contributed to the occasional pressures evident in financial markets since May. Even though our risk assessment for real activity is again balanced and remains balanced for inflation, the downside risks to both real activity and inflation probably are more costly in the current environment.

In these circumstances and noting that the economic developments since September 2012 have been in rough accord with our projection at that time (when we had proposed the introduction of an outcome-based purchase program and policy stance), we 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. Based on our modal outlook, we 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 and the outlook, 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.

Respondent 5: My path for the federal funds rate, both before and after liftoff from the zero bound, is shaped by my expectation that the headwinds that have been holding back recovery since the financial crisis will to continue to exert a restraining, albeit abating, influence on aggregate demand for several years to come. In addition, inflation is running well below our 2% longer-run objective. To promote the attainment of our maximum employment and price stability objectives over the medium term, I see it as necessary to pursue a highly accommodative policy throughout the forecast period. I would assess the equilibrium real funds rate at present and over the forecast to be substantially below my estimate of its longer run normal level of around 1.5%. This reflects factors such as abnormally tight fiscal policy, lingering credit effects from the financial crisis and business and household pessimism. My estimate of the longer-run normal level of the nominal (and real) federal funds rate of 3.5% (and 1.5%) are consistent with estimates from the staff’s three factor model. This estimate likely reflects some pessimism about the prospects for longer-run growth, consistent, for example, with current Laubach-Williams estimates of trend GDP growth.

Respondent 6: 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 percent, growth at 2.4 percent, and the unemployment rate at 5.8%. My policy path has the funds rate gradually rising over the forecast horizon to reach its long-run level of 4% by the end of 2016.

Respondent 7: I expect that by early in 2015 labor markets will have improved significantly, and inflation will be above 1.5 percent and increasing. Accordingly, I believe we will want to begin raising the funds rate to keep the inflation rate from rising too sharply.

Respondent 8: Output and unemployment gaps remain large and persistent, and my outlook for inflation over the medium term is persistently 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 quarters after I forecast that the unemployment rate will reach 6-1/2 percent. 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 9: While the unemployment rate threshold is likely to be crossed in early 2015, low inflationary pressures will justify delaying the first increase in the federal funds rate target until the second half of 2015. By that point, the unemployment rate will have declined further and be nearing my estimate of the natural rate, and projected inflation will be closer to our 2 percent longer-run objective. Consistent with our current guidance, once the first increase in the funds rate target occurs, I also believe it will be appropriate to raise the funds rate gradually.

Respondent 10: Our forecast assumes that it will be appropriate to begin reducing the pace of asset purchases sometime between now and March. We also assume that the incoming data will be strong enough to justify completing the purchase program by the end of 2014. To insure that markets understand the Committee's intentions to keep policy highly accommodative, the first reduction in purchases should be accompanied by enhanced guidance about prospective actions once the unemployment rate hits 6-1/2 percent. This guidance should state that in order to raise rates we must also observe an improvement in a broad array of labor market indicators, that these improvements appear to be sustainable, and that there are strong signs that inflation will achieve our longer-run target within two years.

In our forecast, the unemployment rate reaches 6-1/2 percent sometime in the first half of 2015. However, we do not think that the unusual labor force dynamics will have run their course by then, and so the unemployment rate at that time will likely overstate the improvement in the labor market as a whole. Furthermore, we do not think we will have enough confidence in inflation reaching target by early 2017 to justify raising the funds rate at that time. Our baseline assumption is that the pre-conditions for funds rate lift-off will not be firmly in place until sometime in early 2016.

Respondent 11: Liftoff of the federal funds rate from the zero-lower-bound occurs once the unemployment rate reaches 6 percent. With inflation well below target and a relatively modest acceleration in the pace of GDP growth, monetary policy can afford to be patient in the process of removing accomodation.

Respondent 12: I expect moderate growth and inflation that will remain low and return only very gradually to the 2% objective. As a result, I expect that the Committee will move slowly to increase rates.

Respondent 13: I am assuming we cross the 6.5% unemployment threshold in approximately the third quarter of 2014. From that point, we continue to stay at the zero bound for roughly another six to nine months, so liftoff occurs around mid-2015. After liftoff, I have in mind that we raise the funds rate 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.

Respondent 14: Key factors informing my judgment regarding the appropriate path of monetary policy are achieving an inflation objective of 2.0 percent, ensuring a sustainable economic recovery that reduces unemployment, and being consistent with our thresholds and forward guidance. I believe that we should begin to taper asset purchases at this meeting, to allow time between ending asset purchases and beginning to raise the funds rate. Once we begin to raise the funds rate, I believe we can be gradual–raising the funds rate by 25 bps per meeting.

Respondent 15: In my projection, the unemployment rate hits 6.5 early in 2015 but inflation and year-ahead inflation are still modestly below target. I assume one rate increase late in 2015 and four more in 2016. Headwinds from fiscal policy and from aftereffects of financial crisis contribute to the low funds rate in 2016 by lowering the equilibrium real rate in the medium term.

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 5.5%) and inflation would fall (back toward 2%).

Respondent 17: N/A

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
December survey	6	11
September survey	6	11

Respondent 1: No
N/A

Respondent 2: Yes
My baseline outlook calls for the FOMC to announce a taper of our asset purchases at the current meeting and to end the asset purchase program sometime in 2014q2.

Respondent 3: Yes
I believe that the Committee ought to slow the pace of purchases at the turn of the year, and I expect that economic conditions will warrant ending purchases completely by the end of June. This projected timing produces cumulative purchases materially below $1.4 trillion.

Respondent 4: No
As in the Tealbook, we expect the pace of purchases to be reduced beginning in the first quarter of 2014, and for purchases to continue through most of the year. We anticipate the cumulative amount of purchases to be around $1.5 trillion, reasonably close to that of the Tealbook. 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.

Respondent 5: No
N/A

Respondent 6: Yes
I anticipate following the Commitee'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 7: Yes
I favor immediate cessation of long-term asset purchases and reinvestment of maturing mortgage-backed securities.

Respondent 8: Yes
I assume that the pace of purchases slows in January 2014 and that purchases end in the middle of 2014, with a cumulative amount of purchases in 2013 and 2014 of $1.3 trillion

Respondent 9: No
N/A

Respondent 10: No
N/A

Respondent 11: No
N/A

Respondent 12: No
N/A

Respondent 13: No
N/A

Respondent 14: No
While broadly consistent with Tealbook, I believe we should begin to reduce the pace of asset purchases at this meeting and should complete the asset purchase program by the summer.

Respondent 15: No
N/A

Respondent 16: Yes
I favor a more accommodative benchmark path for asset purchases than in the Tealbook.

Respondent 17: No
N/A

Forecast Narratives

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

Respondent 1: I expect an acceleration in near-term growth due to improving growth prospects abroad and progress on U.S. fiscal issues.

Respondent 2: A modest acceleration in aggregate spending occurs in 2014 amid dissipating headwinds and ongoing policy accommodation. GDP growth rises somewhat above potential GDP growth over the medium term, gradually reducing slack and supporting a further decrease in the rate of unemployment.

My outlook calls for a strengthening in consumer spending, as the labor market firms, disposable income grows at a more robust pace, and household balance sheets continue to improve. The pace of industrial production quickens, bolstered by improving export demand and global growth. And, a combination of high profit levels, liquid corporate balance sheets, and low interest rates promote stronger capital expansion.

I expect that fiscal drag on the economy will gradually lift throughout the forecast horizon, and uncertainty over the Federal budget situation will dissipate early in 2014. Absent these restraints on spending and investment, the pace of the expansion accelerates. The fiscal position of state and local governments continues to improve, allowing for more spending activity from this sector over the forecast period.

As the growth trajectory firms through the medium term, and excess slack is reduced, disinflationary pressures on wages and prices will lessen, allowing anchored inflation expectations to pull the underlying trend toward our inflation objective.

I see the risks to the growth outlook as being roughly balanced. A renewal of fiscal policy uncertainty would adversely influence fragile household, business, and financial market confidence, although I see the likelihood of such a scenario as having diminished since September. Slow productivity growth may also continue to restrain growth more than I expect. On the other hand, there is a possibility that latent economic strength being masked by significant headwinds (in the form of fiscal drag and policy uncertainty) is greater than I have assumed. Another upside risk to my growth outlook is the possibility of a virtuous dynamic where improving household balance sheets, rising wealth, and a firming in the employment trajectory creates more robust consumption growth.

The already low underlying inflation trend has softened further in recent months, causing me some concern that inflation expectations will fail to lift the inflation trend and, instead, become unhinged with downside consequences to inflation. This risk is balanced against the possibility that we are misreading the current level of slack in the economy, which would mean policy is overly accommodative, causing an overshooting of inflation relative to our price objective.

Respondent 3: Sustained low real interest rates, abundant credit, improved household and strong corporate finances, and pent-up demand for durable goods provide the basis for an acceleration in the pace of the recovery. The Euro-area economy appears to have stabilized, and the U.K. and Japanese economies are expanding. The substantial drags from restrictive U.S. fiscal policy and from fiscal and regulatory uncertainty seem likely to diminish. New oil and gas extraction technologies reduce the danger that higher energy prices will damp the recovery. On the other hand, corporations so far remain focused on squeezing out efficiencies, buying back shares, and paying dividends rather than on expanding their operations in ways that lead to robust employment growth.

Inflation has stabilized. If the recovery accelerates as expected, inflation will likely return fairly quickly to near-target levels.

Respondent 4: 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 foreign real GDP growth (GDP weighted) at 2.9% in 2013, 3.0% in 2014, and 3.1% in 2015–changes from September are small. Our assumptions concerning the nominal doll exchange rate are similar to those in the Tealbook. Reflecting movements in futures quotes since September, our assumed path of WTI oil prices has moved down to \$96.50 (from \$107.50 in September) for 2013Q4, to \$92.00 (from \$94.50 in September) for 2014Q4, and to \$86.50 for 2015Q4. Our federal fiscal assumptions are similar to those in the Tealbook, taking on board the recently proposed fiscal agreement that modestly mitigates the impact of the sequester. We adopt the Tealbook assumptions regarding equity and home prices.

Outlook: The economic indicators paint a picture of the economy in 2013Q4 that is in rough accord with our prior projection. Consumer spending appears to be rising more strongly than we expected in September, but residential and business fixed investment continue to be somewhat weaker than anticipated. Nevertheless, we see the economy on somewhat more solid footing as it enters 2014 than it has been in the past couple of years.

Therefore, we continue to anticipate economic growth be stronger in the next two years than it has been so far during this expansion, with real GDP growth of about 2 3/4% (Q4/Q4) in 2014 and about 3 1/4% in 2015, both 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–including contractionary federal fiscal policy and slowing global growth–that now appear to be dissipating.

Several developments support our view of a pickup in 2014-15. Growth should be supported by continued accommodative monetary policy. Furthermore, key measures of household financial conditions signal that household balance sheets have been largely repaired and that household deleveraging is largely over. The household net worth-disposable income ratio rose to 615% in 2013Q3, the highest since 2007Q4; if recent rises in equity prices are sustained, we could see a further rise in this ratio in the current quarter. Household liabilities recorded their first 4-quarter increase since 2008Q3, suggesting that households are more willing and able to use credit than they had been earlier in the expansion. Also, at about 5%, the personal saving rate in 2013Q3 was above the level consistent with its historical relationship to household net worth, suggesting that households have the capacity to raise their spending some. In addition, it appears that the foreign economic outlook is relatively sanguine, and the contraction in state and local government spending appears to have ended. Federal fiscal drag is on track to subside in 2014, and the recently announced budget agreement would lessen fiscal drag modestly further if it is enacted.

The somewhat firmer outlook for real PCE is offset by a weaker investment outlook. Growth of business fixed investment is ending 2013 on a weaker note than we anticipated in September. We still expect growth of business fixed investment to strengthen as capacity utilization moves higher and commercial vacancy rates decline, but that strengthening has been pushed back, lowering our projected path. Similarly, while we expect housing starts to resume an upward trend, the slope of that trend has been damped due to higher mortgage rates and the stronger-than-expected impact they have had on the housing market. The recently announced increases in the guarantee fees to go into effect in 2014 could have a modestly further dampening effect.

With real GDP growth improving, we expect a sustained pace of improvement in overall labor market conditions. However, it should be noted that from 2011 to 2013, productivity growth was only 3/4% (annual rate), 1/2 percentage point below our assumption of trend productivity growth. Therefore, it is possible that average monthly gains in payroll employment could fall back below 200,000 temporarily even with stronger real GDP growth, although we still see the average over 2014-15 as over that level. On the flip side, the labor force participation rate has continued to run below our expectations. Taking these factors into account, we project that the unemployment rate will fall to around 6 1/2% by 2014Q4, to about 5 1/2% by 2015Q4, and then to 5 1/4%, our estimate of the longer-run natural rate, in 2016.

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, our models predict that inflation as measured by the PCE deflator will gradually move upward over the forecast horizon. However, we see the recent downside surprises to inflation (both here and in other areas around the world) as indicating stronger disinflationary pressures than we had anticipated. Consequently, we now expect inflation to return to near the FOMC longer-run goal of 2% by the end of 2015, which is one year later than we had anticipated in September. 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.

Respondent 5: My forecast envisions a notable pickup in growth over the next several years, further declines in the unemployment rate, and slow movement in inflation back toward the Committee's 2 percent longer-run objective. An accommodative monetary policy and easing credit constraints will serve as important factors propelling a more rapid recovery. A significant factor shaping the outlook is the prospect of diminishing fiscal drag next year. The evidence suggests that private demand is strengthening meaningfully and consumer spending appears to now be growing at a reasonably robust pace. Factors propelling this pickup in PCE include the waning impact of tax increases earlier in the year, a strengthening of household balance sheets due to rising house and equity prices, improving prospects for the labor market and robust auto sales driven by low interest rates, readily available credit and an aging fleet, generating substantial replacement demand. Residential investment has slowed significantly this quarter, likely due to the effects of rising mortgage rates, but I expect a pickup in housing starts and considerable growth in residential investment next year. Investment in equipment and intangibles has also advanced at a very slow pace in recent quarters, but I anticipate that stronger growth in sales next year will lead to a meaningful pickup. With respect to the labor market, I have been surprised that with growth running around 2 percent, payroll employment has been rising at a reasonably consistent pace of 190,000 jobs per month over the past year–a pattern that is causing me to adjust down slightly my assumptions concerning the likely pace of productivity growth over the next few years. Unemployment has also declined by more than I'd anticipated due in part to a decline in labor force participation which I view as partly cyclical. In part for this reason, I see the decline in the unemployment rate as understating the extent of slack in the labor market. I anticipate some rebound, or at least a flattening out of the participation rate, and a slower decline in unemployment going forward. Inflation has been running below the Committee's 2% objective in spite of the fact that inflation expectations are well-anchored. In part, I believe this reflects significant remaining slack in labor and product markets; a decline in the rate of increase of medical prices also appears to be an important contributor. My forecast envisions a return to 2% inflation beyond the end of the forecast horizon.

Respondent 6: I expect output growth to accelerate to 3 percent in 2014. The pace of growth then runs near my longer-term trend rate of 2.4 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 5.8 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 gradually to 1.8 percent in 2014 and 2 percent 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 monetary policy by ending asset purchases in 2014H1 and then beginning to raise rates in 2014H2.

Respondent 7: With population growth below 1 percent and productivity growth at 1 percent, the longer-run trend for real GDP is lower than in previous business cycles.

Respondent 8: 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. Many of the associated headwinds are slowly easing:

- Housing has turned a corner, and appears poised to continue its recovery despite the pickup in mortgage rates this year;
- Consumer balance sheets as well as banking and credit conditions are improving;
- Fiscal austerity has been a notable drag on the economy this year, but that drag should lessen going forward;
- Europe is still a source of downside risk, but a severe crisis looks less likely over time; more broadly, the global economy is looking a little healthier;
- Although economic and policy uncertainty remain high, that uncertainty has fallen over time. The imminent fiscal deal should help in this regard.

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 9: Economic growth has once again been moderate in 2013, held down in part by considerable fiscal drag, weakness abroad, and generally cautious spending by businesses. However, even with these headwinds, the labor market has been improving and enters 2014 with momentum. Waning fiscal drag, stabilization in foreign economies, highly accommodative monetary policy, easing of tight credit standards, and ongoing recovery in the labor market make me cautiously optimistic that the economy is poised for moderately stronger growth in the years ahead compared with what we have experienced in the recent past. Furthermore, the resilience of the economy to the headwinds experienced in 2013–and, for that matter, to the headwinds of the last few years–suggests to me that the recovery can withstand dialing back our asset purchases.

Recent inflation readings have continued to be quite subdued, and as a consequence I have lowered my projected path for inflation slightly. Energy prices have been one downside surprise, as the combination of the domestic energy boom and slower growth in emerging markets keeps prices in check. Outside of energy prices, the surprise has not been that inflation has truly been drifting that much lower than where it was in the summer; rather, inflation has just not yet begun to turn up as I had expected. Despite these low inflation readings, inflation expectation measures appear to be well-anchored, which should limit further disinflationary pressure. Alongside an improving economy, I anticipate that inflation should slowly move back toward the 2 percent long-run objective over the next few years.

As I discussed above, I view overall uncertainty as roughly comparable to historical norms of the last 20 years, in spite of the uncertain long run U.S. fiscal situation. Risks to my outlook appear to be balanced for both the real economy and inflation. While there are downside risks to the real economy coming from the normalization of longer-term interest rates, the momentum coming from the labor market could point toward a stronger virtuous circle than I am currently anticipating.

Respondent 10: 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 the recovery in Europe and growth in emerging market economies build momentum. Our forecast also assumes that there will not be any unusual changes in financial conditions beyond those warranted by the improvement in the economic outlook.

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 nearly 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 to 1.8 percent by the end of 2016, with perhaps some modest overshooting of target beyond the projection horizon. (Our extended inflation forecast has PCE prices rising 2.0 percent in 2017 and 2.2 percent in 2018).

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

Respondent 11: While the pace of growth in real GDP during the second half of this year is somewhat stronger that previously thought, advances in the private component of demand are broadly in line with expectations. On the positive side, recent data releases are consistent with an acceleration in consumer spending in the current quarter. Household net worth appreciation and the waning impact of fiscal restraint on disposable income should help to sustain the ongoing pickup in consumption well into next year. Other components of private demand have been less encouraging. Higher long-term rates are slowing residential investment down, although pent-up demand for housing and mortgage rates that are still low by historical standards should provide support to the sector going forward. Moreover, businesses have been expanding capital at a slow pace so far this year. An improvement in this component of demand remains in the outlook and should lag the firming up of consumer spending. Labor market data indicators have been generally encouraging, although the portion of the decline in the unemployment rate resulting from a drop in labor force participation among youger workers may prove temporary. Wage increases remain muted, suggesting that slack in the labor market is still significant. Similarly, core inflation readings are low, with market-based price inflation hoverning near one percent both on a 6-month and a 12-month basis.

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 of improved confidence and spending. Still, the projected acceleration is relatively modest by historical standards and requires continued support from monetary policy. In particular, the outlook is conditioned on the current asset purchase program to total $1.4 trillion, with tapering of purchases starting in March of next year. 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 low inflation environment allows for additional policy accomodation. With this policy stimulus in place, the unemployment rate is projected to reach 5.5 percent by the end of 2016. Inflation is expected to remain below target over the forecast horizon.

While the risks to the real outlook have become somewhat more balanced,on the inflation side, the risk is that the recent low readings of core inflation may prove more long-lasting than what we are assuming in our forecast.

Respondent 12: My forecast is for continued moderate increases in growth, but at a lower level than the baseline. I expect unemployment to continue to decline at least as fast as the baseline, as a result of decent payroll growth in the 200,000 - 250,000 range and continued declines in the labor force participation rate. Finally, I expect that inflation will return only gradually to the Committee's 4% objective.

Respondent 13: My central outlook is based on the premise that fiscal drag will fade over the next couple of years, so that barring any unexpected shocks, growth in 2014 and 2015 should be stronger than in 2013. I view the risks around this central tendency as roughly balanced. On the downside, I continue to worry that the exit process from asset purchases and highly accomodative policies more generally may be bumpier than we would like, and that there could be an unintended tightening of financial conditions at some point in the process that could slow the recovery. On the upside, I think that if growth does pick up, there could be a virtuous circle whereby capital spending–which has been sluggish relative to fundamentals–begins to accelerate markedly. This in turn would further feed the step-up in growth.

Respondent 14: Despite significant fiscal tightening this year, the economy continues to grow at a moderate pace. However, I expect growth to slow in the fourth quarter as inventory accumulation moderates. Even so, I expect growth in final sales to accelerate. Overall, I expect growth to be about 2 1/4 percent in 2013, and then to pick up to about 2 3/4 percent next year and 3 percent in 2015 and 2016. The pickup in growth reflects a significant reduction in fiscal drag, an improving labor market, and rising household net worth from both the stock market and housing. Moreover, the rate of auto sales has returned to its level of before the recession and an improvement in manufacturing is seen in both employment and the ISM. Finally, while the housing recovery has slowed somewhat, it remains on track.

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, hires and quits rate, other measures of resource slack, growth in employment and earnings, and survey responses by businesses, consumer, and economists) shows that conditions have improved substantially since last September and that labor market momentum remains strong by historical standards.

Turning to inflation, with measures of inflation expectations holding steady and the labor market continuing to gradually normalize, I expect inflation to firm next year and move toward two percent over the next few years.

Respondent 15: Moderate pickup in growth and inflation, and continued gains in labor markets, come primarily from a stronger consumer (increased wealth, labor income, higher confidence, diminishing effects of tax increases), diminished federal fiscal drag, and modest pickup in other AFEs and in EMEs. Housing is being slowed by tighter financial conditions, which could be made yet tighter by slowing of LSAPs. Capital investment should do better as final sales expand both domestically and in export markets. State and local governments will be a small positive. Productivity and labor force growth are below pre-crisis levels, slowing growth but increasing the pace of declines in unemployment. The end of extended UI may have a marginal downward impact on unemployment.

Inflation is anchored by stable expectations and low volatility of commodity prices. However, inflation is lower than expected, in part because of special factors (medical prices, imports) but possibly also because slack remains greater (or the responsiveness to slack is greater) than previously thought.

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

2. As in September: 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: I have made only modest changes from my Septermber projections to the near- and medium-term outlook. Probably the most significant change in my outlook over the last three months has been the diminution in downside risk. It now appears reasonably clear that, contrary to my own suspicions, the government shutdown and fiscall cliff debate did not have a significant negative effect on the gorwoth trajectory for this and coming quarters. Inventory build-up in Q3 seems to have been a more important factor than these fiscal disruptions in slowing growth in Q4. But with job creation and retail sales holding up very well this quarter, there is additional support for the hypothesis that there is a decent amount of self-sustaining momentum in the economy, which would be even stronger were it not for the ongoing effects of fiscal contraction. The narrative of gruadually diminishing fiscal drag and of substantial progress on post-crisis balance sheet repair continues to be a reasonable one. Still, I don't think those downside risks have completely disappeared. A good bit of the increase in consumer spending is likely the result of wealth increases from equity and house appreciation, and perhaps from decreased savings rates, as opposed to income increases. Slowing, or even reversals, in the rate of asset appreciation, or a limit to declines in the savings rate could impede the pick-up in growth that I now regard as the most likely scenario. Indeed, a change in expectations around our monetary policy could itself slow equity and housing price increases, or perhaps even lead to transitory decreases.

Forecast Narratives (continued)

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

Respondent 1: My forecasts have changed slightly. The changes are due to improving growth prospects abroad, progress on U.S. fiscal issues, and recent inflation results.

Respondent 2: My growth forecast today is broadly similar to what it was in September. However, the incoming data have caused me to raise my 2013 growth projection by about a 1/4 percentage point. In response to further disinflationary trends that emerged during the intermeeting period, I've lowered my inflation forecast by roughly 1/4 percentage point through 2015.

Respondent 3: The economy has performed much as I had expected, and my forecast revisions are small.

Respondent 4: The data released since the September SEP have provided mixed signals about the economic outlook. Consequently, the changes to our medium-term forecast have been relatively modest on net.

Over the near term, the data indicate that real growth in 2013H2 will be somewhat higher than we anticipated in September. Although some of that higher growth has come from the high inventory growth contribution in 2013Q3, the recent consumption indicators also point to stronger real PCE growth in 2013Q4 than we have seen in recent quarters. However, at this time we are not taking much signal from 2013Q4 for real PCE in future quarters, and have made only minor upward revisions to the real PCE forecast in 2014-16.

Business fixed investment indicators have been soft generally since September, and we have lowered modestly the path for equipment expenditures and nonresidential structures expenditures. In addition, the housing indicators have continued to indicate a somewhat stronger response to higher mortgage rates than we had anticipated. Consequently, we have lowered our projected path for housing starts and residential investment.

The inflation data this year have been lower than we had anticipated: to illustrate, in December 2012, we projected total PCE inflation of 1.8% and core PCE inflation of 1.7% for 2013. We do not have a fully satisfactory explanation for the persistent miss, but given the weaker inflation data in other countries that we have seen, we have taken on board some possibility that global disinflationary pressures are somewhat greater than we anticipated. Therefore, even though we still expect inflation to move toward the FOMC objective, we now anticipate that the process will take somewhat longer.

As we stated in our answere to question 2(b), our assessment of the near-term risks to real GDP growth have shifted back to rough balance (although there is still some downside skew at longer horizons). This shift reflects some resolution to the fiscal contentions, which includes the recently announced fiscal agreement, as well as a higher probability that headwinds–including those from overseas–may be receding faster than anticipated.

Respondent 5: My forecast has changed only marginally since September. My projected unemployment path is slightly lower over the forecast horizon, in light of incoming data which have surprised me to the downside and my projection for inflation is lower this year, in light of incoming data, but little changed in the outyears.

Respondent 6: Inflation has been running a bit weaker than I expected, leading to a slight downward revision to my inflation forecast for 2014. I have lowered my estimate of the natural rate of unemployment to 5.8 percent based on my view that the labor force participation rate is not likely to show a meaningful increase for some time.

Respondent 7: N/A

Respondent 8: Relative to September, I now expect unemployment and output gaps to close a touch faster. My GDP forecast for 2013 is a touch stronger than in September, and the data remain consistent with a recovery that gains traction over the coming year. Much of the unexpected third-quarter strength in the level of economic activity was transitory, reflecting unexpectedly large accumulation of inventories which, in turn, contributes to lower fourth quarter growth. The October government shutdown also contributes to weak fourth-quarter growth but, again, leaves little longer-term imprint on the forecast. Other data on consumer and business spending have been positive on net.

In addition, the labor market has been stronger than I had anticipated. For example, the unemployment rate is running below what I had expected, leading me to lower its projected path somewhat and also to trim my forecast for potential output growth.

Finally, incoming data on core and overall prices have also led me to revise down my near-term inflation forecast. Revisions further out are small, despite narrower output and unemployment gaps, reflecting a reassessment downward of underlying inflation pressures.

Respondent 9: On net, the economy looks to be entering 2014 with more momentum than I had been anticipating: GDP growth in 2013 looks to be slightly stronger and the labor market recovery is further along than I had previously anticipated. As a result, I have revised up my growth outlook, and I have made yet another modest downward revision to my unemployment forecast. Despite these improvements in the real economy, broad inflation readings have continued their subdued pattern, and energy prices are lower than I had anticipated. Over time, an improving economy, a healing labor market, and stable inflation expectations will help pull inflation up toward our 2 percent long-run objective. However, I now expect that it will take slightly longer to reach this objective than I had previously expected.

Respondent 10: Our assumptions for appropriate policy have changed some since the September SEP. We pushed back the first increase in the federal funds rate from the end of 2015 to early 2016 and our expected level for the rate at the end of 2016 is 25 bps below our September submission. We also are assuming about $250 billion more of LSAPs than in our previous projection.

Our forecast for growth in the second half of 2013 is about 1/2 percentage point stronger than we projected in the September SEP. Some of this revision reflects the surge in inventory investment in the third quarter. More meaningfully, the data in hand for the fourth quarter show larger gains in employment and consumer spending then we had been anticipating, leading us to mark-up to our outlook for household spending in the near term. We have not materially changed our projection for growth beyond 2013, however. For some time our modal forecasts for 2013-2016 have incorporated sustained improvements in labor markets and consumption. We view the recent good news as diminishing the downside risks to this outlook as opposed to shifting the baseline. We have treated the other major positive developments since September, namely the apparent de-linking of market expectations for the paths for the LSAP and the fed funds rate and the recent federal budget deal, in a similar fashion. Accordingly, our balance of risks for growth in 2b above have shifted from "weighted to the downside" to "broadly in balance."

The unemployment rate has declined somewhat more than we anticipated in September. However, the gap between the labor force participation rate and its underlying trend has surprised us on the downside, suggesting an extra margin of slack in labor markets.

On the inflation front, we have been surprised by the softness in core consumer prices. In September, we had expected core PCE inflation to be somewhat above 1-1/2 percent in 2013:H2; today, we are looking for a rate of about 1-1/4 percent. Our inflation projection is a touch lower (0.1 percentage point per year) through the remainder of the projection period. As a result, we still have PCE inflation rising to 1.8 percent by 2016. However, we feel less confident about the forecast than we did in September. We had expected that our accommodative policies would exert more of an upward pull on inflation than we apparently have seen to date, which leaves us with more doubt about their ability to bring inflation up in line with our forecast.

Respondent 11: Changes to the outlook since October are minor. The unemployment rate is on a lower trajectory than previously forecast, but we interpret some of the recent decline in the unemployment rate as temporary. As a result, by the end of the forecast horizon the level of the unemployment rate remains close to level projected in October.

Respondent 12: no material changes; slightly higher growth for 2014, but still below Baseline.

Respondent 13: My forecast is little changed, other than taking into account the reduction in the unemployment rate since the last round.

Respondent 14: The contours of my forecast have not significantly changed since the last SEP. Given incoming data, I have increased by forecast for real GDP growth in 2013. I have also reduced my forecast for the unemployment rate in 2013 and carried that reduction into 2014.

Respondent 15: Labor market conditions have improved faster than expected, partly reflecting revised data. Household balance sheets look stronger with ongoing increases in equity and house values, and labor income is growing faster than thought. Presumably as a result, consumption growth has picked up from Q3 by more than I expected. Residential construction, on the other hand, has apparently been hurt more by higher (but still low) mortgage rates and the overall decline in affordability than I expected. Longer-term interest rates have risen somewhat. I have not changed my growth forecast much but I have a bit more confidence in a moderate 2014 pickup. I lowered my unemployment projections and my natural rate estimate to reflect more rapid than expected declines in unemployment.

Inflation readings have been moderately lower than expected, for reasons that are partly idiosyncratic (e.g., medical care prices) but partly unexplained. I lowered my inflation forecasts slightly.

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: See answer to 4(a)

Forecast Narratives (continued)

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

Respondent 1: The key differences are: 1) the Tealbook has more rapid growth in 2015 and 2016 than I forecast; 2) the Tealbook has a much lower natural rate of unemployment than I forecast; and 3) the Tealbook forecasts a monotonic convergence of inflation to the FOMC's target, while I project a temporary overshooting.

Respondent 2: My growth, unemployment, and inflation projections are essentially the same as the Tealbook for 2013 and 2014. My growth projection tracks 1/2 percentage point under the Tealbook in 2015 and 2016. 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 is, on average, 1/4 percentage point higher than the Tealbook in 2015 and 2016.

Respondent 3: I see a somewhat faster rise in inflation than is called for in the Tealbook. The higher inflation combines with an assumed normalization of the natural real interest rate (due to balance-sheet repair, greater confidence in growth prospects, and the easing of fiscal and regulatory drags), to produce a more rapid increase in the funds rate than is assumed in the Tealbook baseline forecast.

Respondent 4: Our forecast for real GDP growth in 2014-15 is modestly below that of the Tealbook, but those differences are not particularly significant. More substantively, 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, while our forecast has the saving rate roughly flat over the forecast horizon. The Tealbook projects slower growth in business fixed investment in 2015 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 contrast, the Tealbook forecasts stronger growth in residential investment, as it assumes that stronger income growth and higher confidence will overcome higher mortgage rates to a greater extent than we assume. The Tealbook also has a higher net export contribution in 2015: the differences are largely in imports, which probably reflects a higher income elasticity for that year than that implied in the Tealbook forecast.

For 2016, real GDP growth in our projection is almost one percentage point below the Tealbook forecast. This difference reflects that in our forecast, unemployment is close to the longer-run natural rate at the end of 2015 whereas the Tealbook has a larger gap that still needs to be closed.

Although both forecasts have unemployment at its longer-run natural rate at the end of 2016, the projected path of the unemployment rate in the Tealbook is somewhat above our forecast over most of the forecast horizon. 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.

Although we have marked down our inflation forecast modestly, we still 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 over the near term, but beyond that we see total and core inflation rising more quickly to near 2% than does the Tealbook.

On the real side, the uncertainty and risk assessments differ between the Tealbook and our projection. We continue to see uncertainty around the real GDP and unemployment forecasts as 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 real activity above normal levels (even the more elevated normal levels now associated with the 20-year window of forecast errors). Over the near term, we see the risks to real activity as balanced whereas the Tealbook sees them skewed to the downside: the difference seems to reflect that we place somewhat more probability on headwinds receding faster than anticipated. Over the longer term, we agree with the Tealbook assessment of downside risks for real GDP growth. Our views on the uncertainty and risk assessment for inflation are similar to those in the Tealbook.

Respondent 5: N/A

Respondent 6: My forecast calls for higher inflation and tighter monetary policy over the forecast horizon than the Tealbook.

Respondent 7: I believe that the level of GDP is near its trend, and that there will not be much growth above trend. I expect inflation to reach 2 percent more quickly than the Tealbook.

Respondent 8: My forecast is broadly similar to the Tealbook projection.

Respondent 9: My forecast is broadly similar to the Tealbook. I expect that GDP growth will pick up and proceed at above-trend rates from 2014 through 2016, which will bring the unemployment rate down to a level near its natural rate by the end of 2016 and pull inflation up toward our 2 percent long-term objective.

Respondent 10: We assume that the first increase in the funds rate will occur early in 2016, three quarters later than the Tealbook. Our rate of increase after liftoff is similar. Accordingly, at the end of the projection period our assumed level of the funds rate is only reaches 1.25 percent. We also assume a slightly bigger LSAP than the Tealbook.

While our outlook for GDP growth is close to the Tealbook's, we assume a slightly faster pace of growth for potential output over the projection period. This leaves us with an output gap of about 1 percent by the end of the projection period and an unemployment rate that is about 1/2 percentage point above the NAIRU.

Respondent 11: The two forecasts are similar both in terms of real activity and inflation. However, our forecast is conditioned on greater monetary policy stimulus, as the federal funds rate is not expected to increase until the beginning of 2016.

Respondent 12: N/A

Respondent 13: They are quite similar through 2015, especially with respect to the unemployment rate. I have GDP growth a touch slower, implicitly because I am just a bit more pessimistic with respect to productivity growth. By 2016, my unemployment forecast lies somewhat above that in the Tealbook, as I have in mind a higher value of the natural rate. So once unemployment gets down into the 6.0 to 5.8 range, I see futher progress as potentially coming more slowly.

Respondent 14: The key difference between my forecast and Tealbook is that I do not see consumption growth as high as in Tealbook. As a result, I see slower economic growth over the forecast horizon (but still above trend) and, therefore, a slightly higher unemployment rate. I also expect inflation to rise more quickly than Tealbook and will average 2 percent in 2015 and 2016.

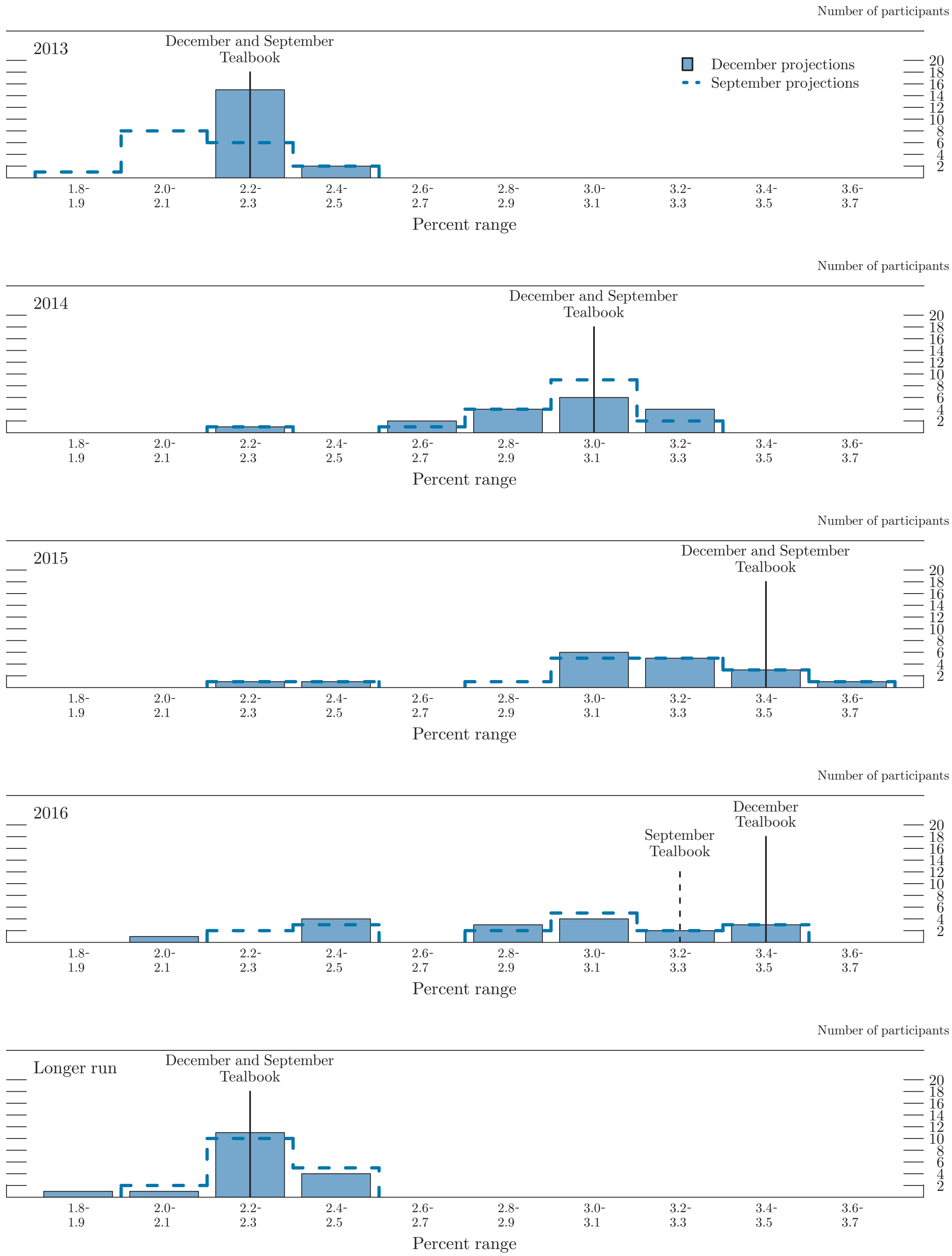
Respondent 15: I moved my natural rate estimate toward that of the TB and lowered my long-run funds rate.

My forecast is similar to the Tealbook but slightly more pessimistic on both growth and unemployment. We have yet to see a marked pickup so headwinds must still be operative. Housing may be less of a driver than hoped. Also, financial conditions may be a little tighter going forward. I have inflation moving toward 2.0 just a little more quickly than the TB, but recent data are pushing me in the TB's direction.

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).

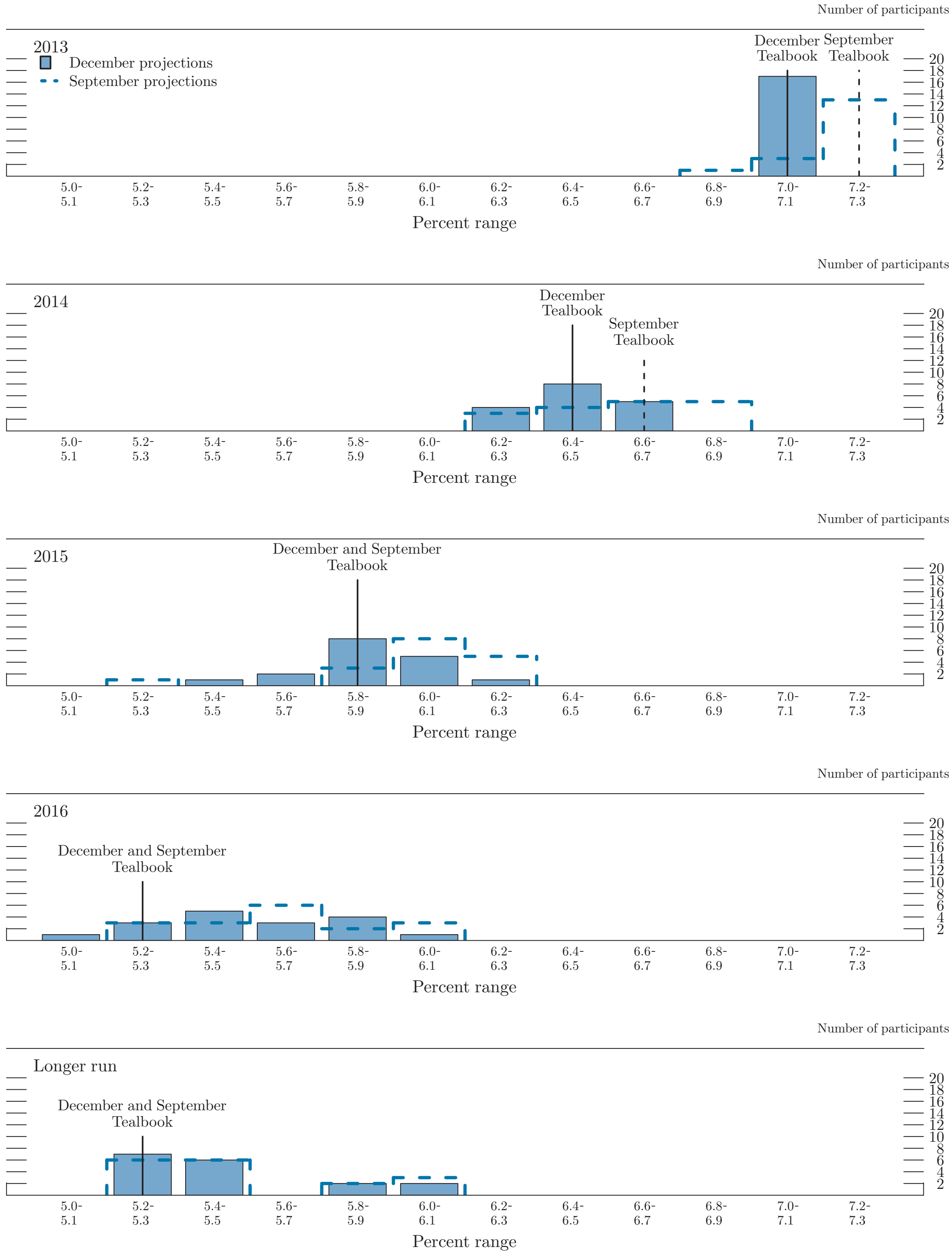
Respondent 17: I am slightly less optimistic on growth prospects for 2015 and 2016, but not so much as to constitute an important difference.

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



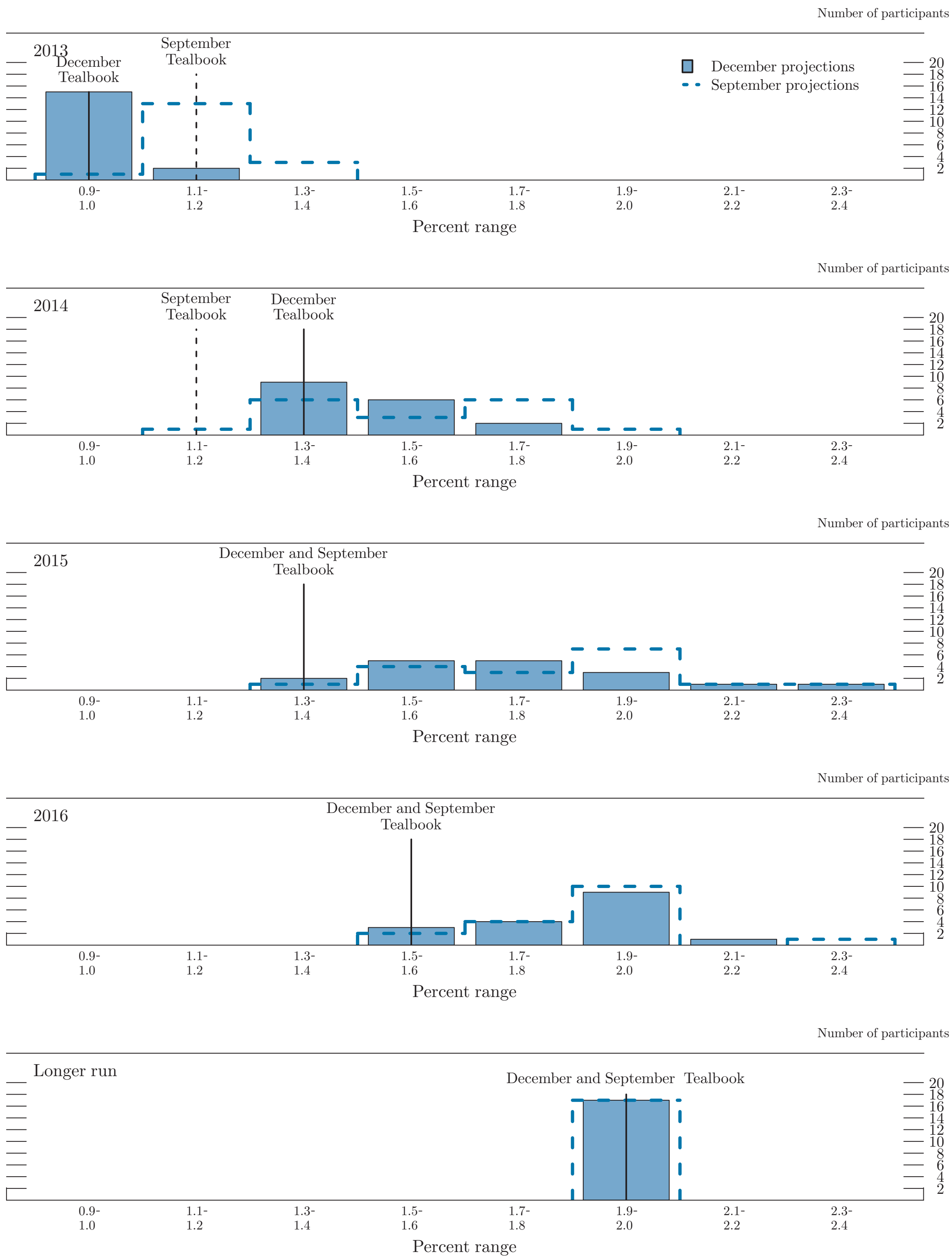
NOTE: Definitions of variables are in the general note to table 1.

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



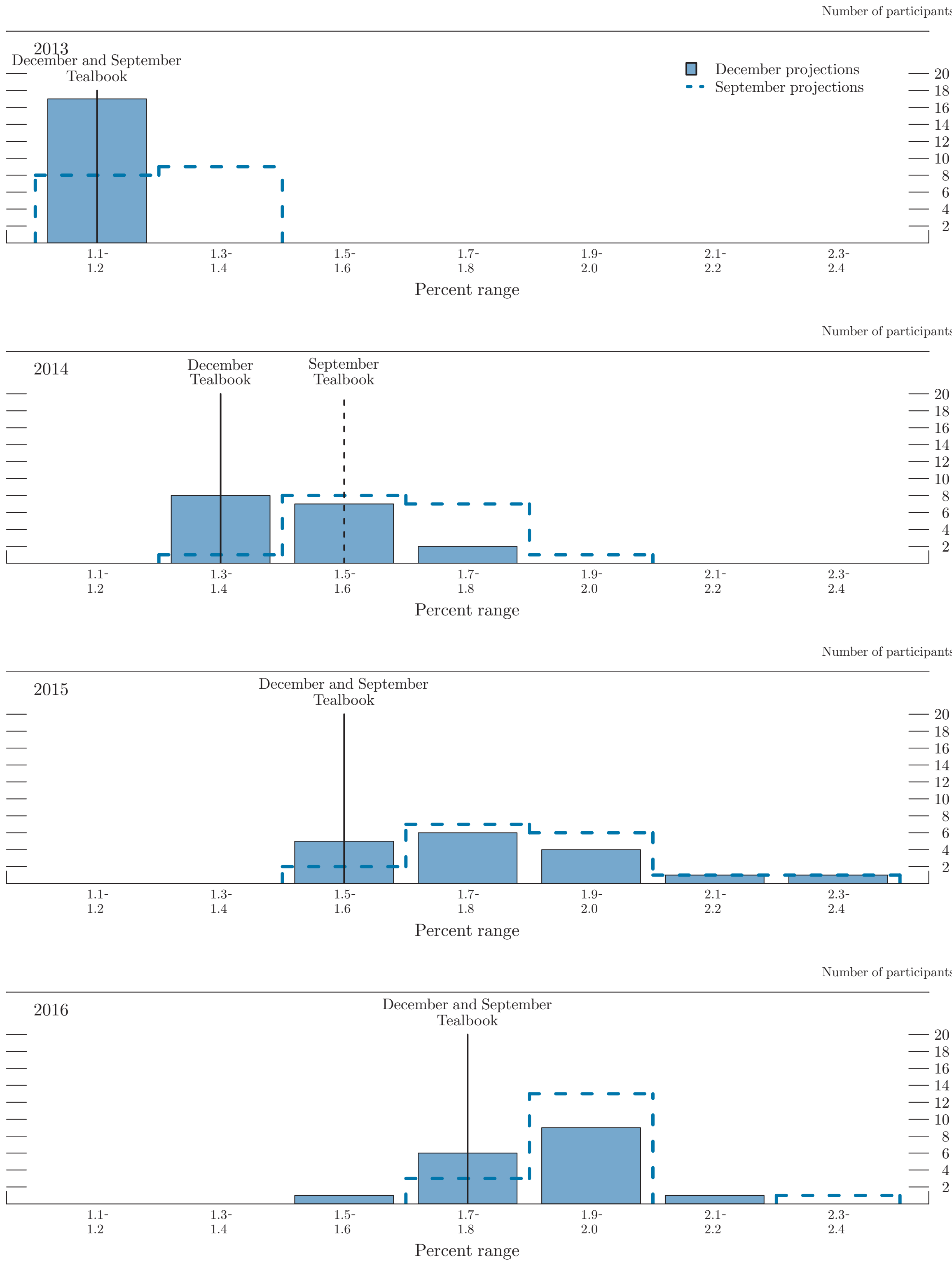
NOTE: Definitions of variables are in the general note to table 1.

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



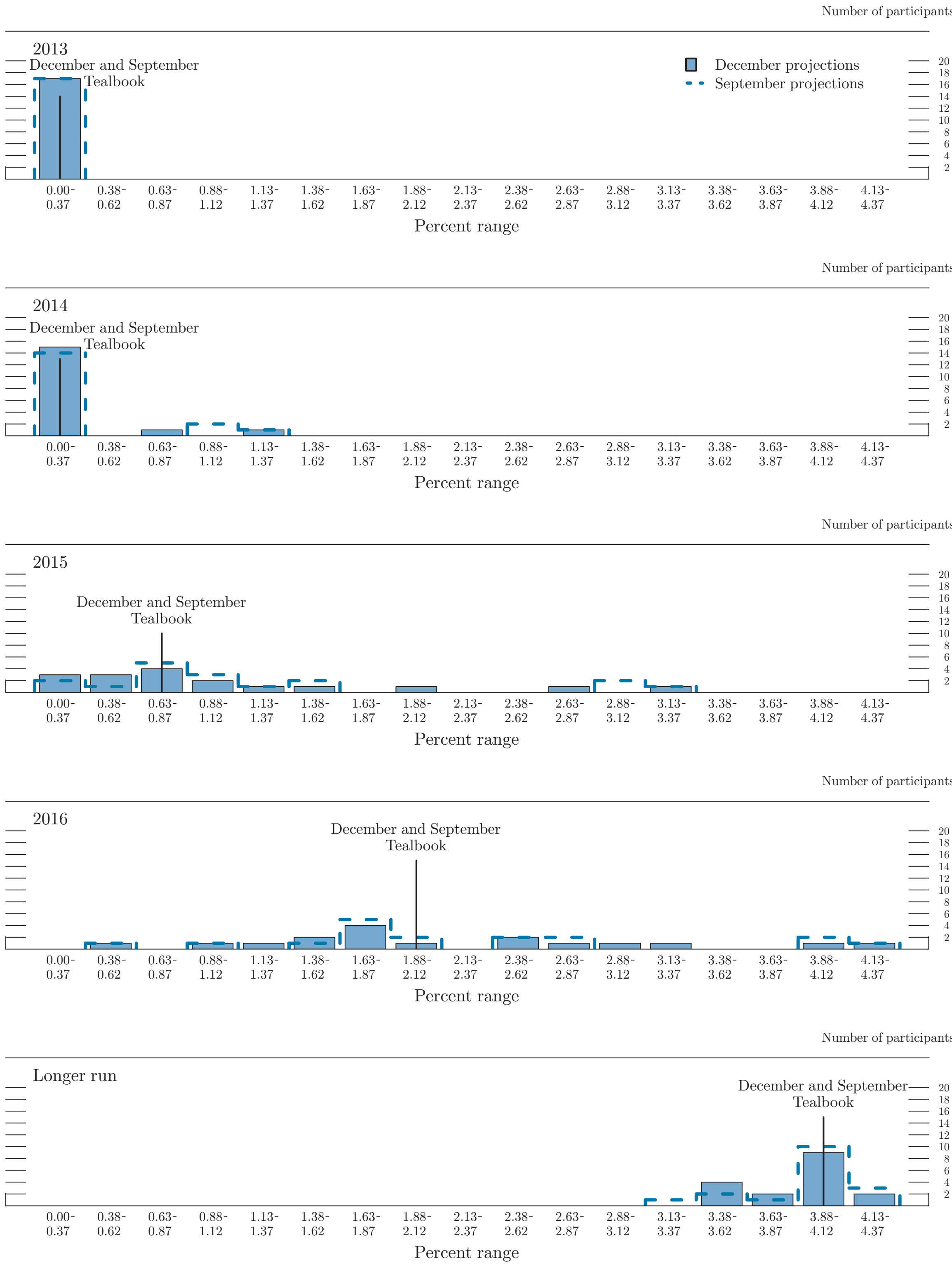
NOTE: Definitions of variables are in the general note to table 1.

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



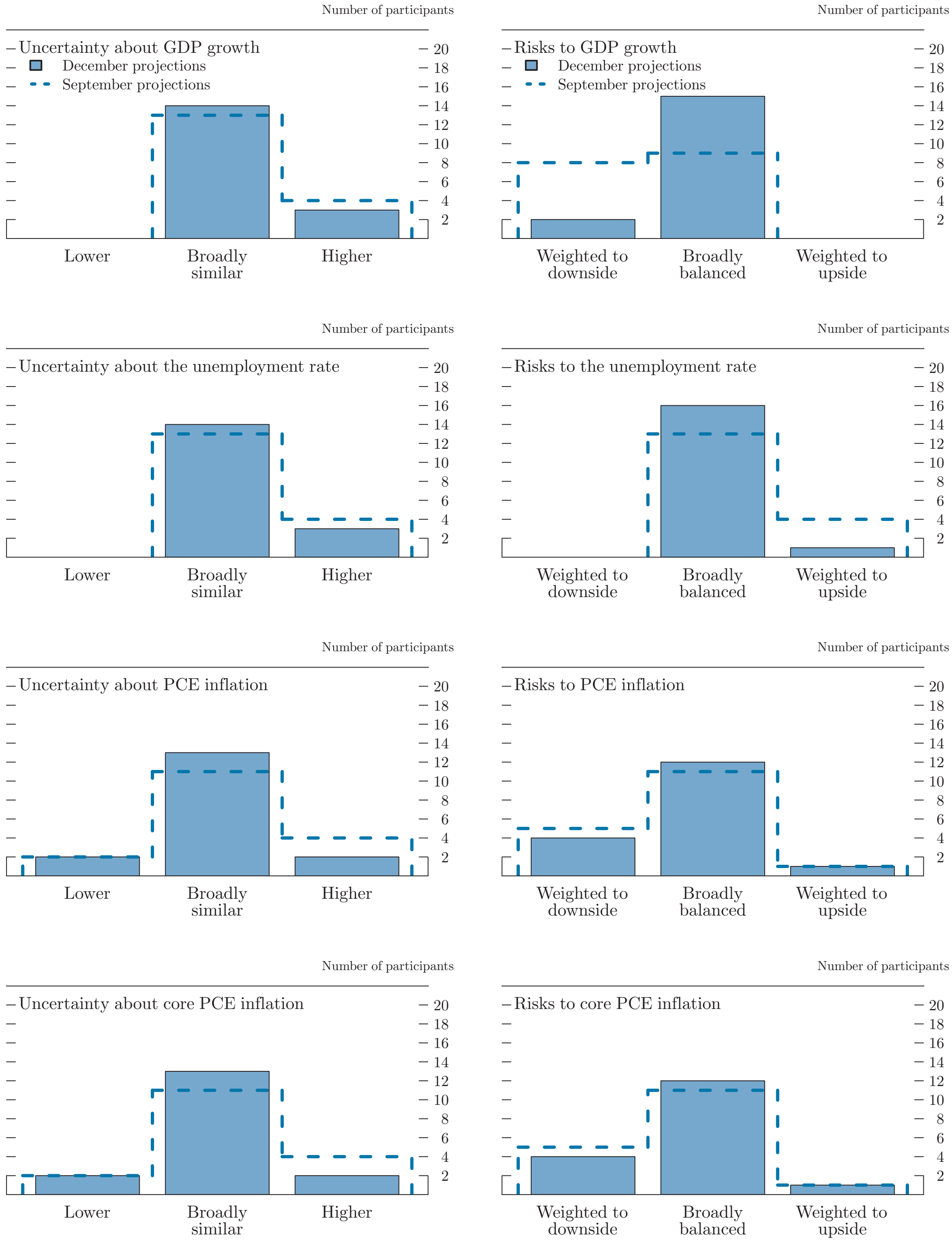
Note: Definitions of variables are in the general note to table 1.

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



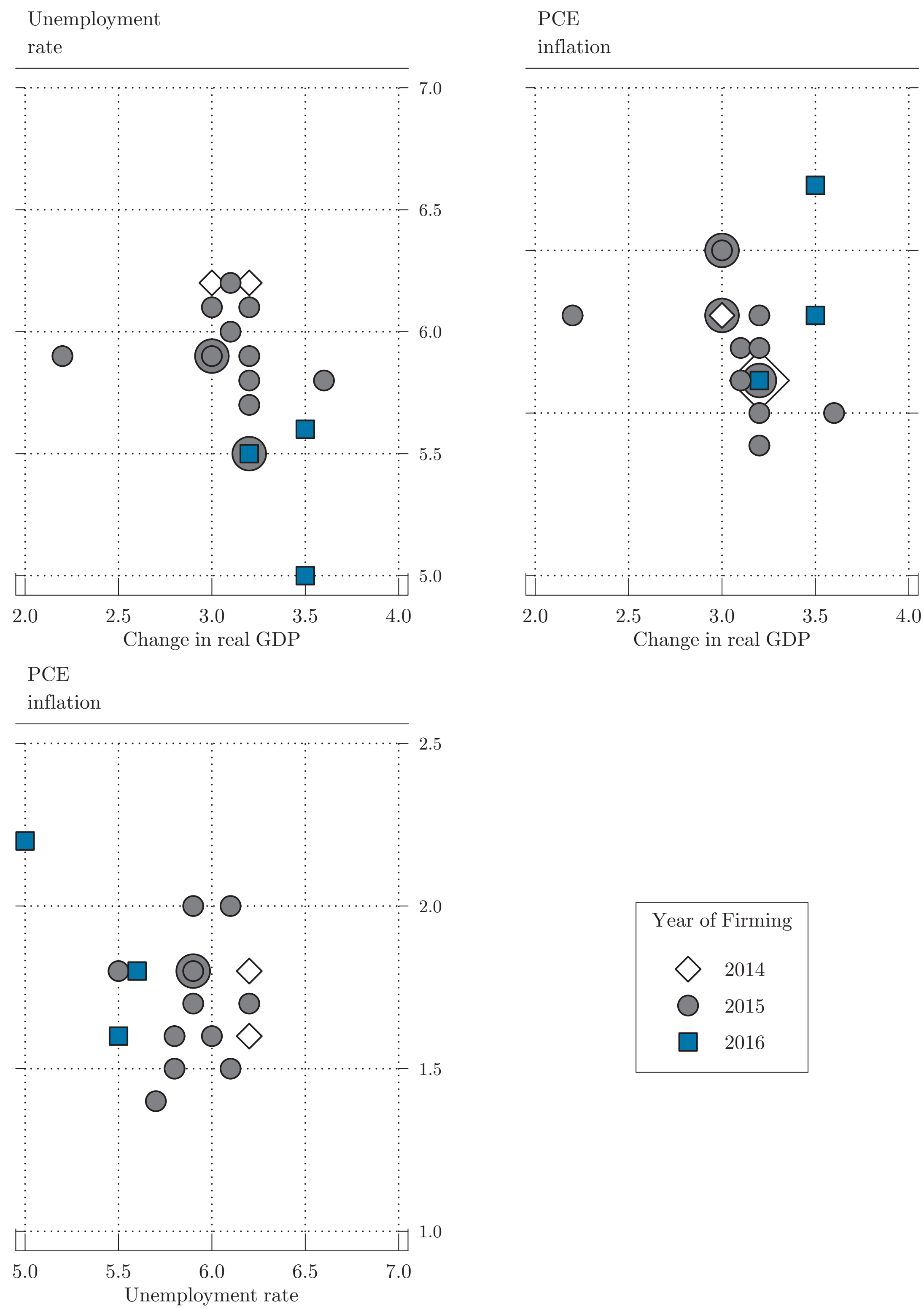
NOTE: The target federal funds rate is measured as the level of the target rate at the end of the calendar year or in the longer run.

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.