

**Table 1: Economic Projections of Federal Reserve Governors and Reserve Bank Presidents, January 2010**

Percent

Variable	Central tendency <sup>1</sup>				Range <sup>2</sup>			
	2010	2011	2012	Longer run	2010	2011	2012	Longer run
Change in real GDP. . . . .	2.8 to 3.5	3.4 to 4.5	3.5 to 4.5	2.5 to 2.8	2.3 to 4.0	2.7 to 4.7	3.0 to 5.0	2.4 to 3.0
November projection. . .	2.5 to 3.5	3.4 to 4.5	3.5 to 4.8	2.5 to 2.8	2.0 to 4.0	2.5 to 4.6	2.8 to 5.0	2.4 to 3.0
Unemployment rate. . . . .	9.5 to 9.7	8.2 to 8.5	6.6 to 7.5	5.0 to 5.2	8.6 to 10.0	7.2 to 8.8	6.1 to 7.6	4.9 to 6.3
November projection. . .	9.3 to 9.7	8.2 to 8.6	6.8 to 7.5	5.0 to 5.2	8.6 to 10.2	7.2 to 8.7	6.1 to 7.6	4.8 to 6.3
PCE inflation. . . . .	1.4 to 1.7	1.1 to 2.0	1.3 to 2.0	1.7 to 2.0	1.2 to 2.0	1.0 to 2.4	0.8 to 2.0	1.5 to 2.0
November projection. . .	1.3 to 1.6	1.0 to 1.9	1.2 to 1.9	1.7 to 2.0	1.1 to 2.0	0.6 to 2.4	0.2 to 2.3	1.5 to 2.0
Core PCE inflation <sup>3</sup> . . . . .	1.1 to 1.7	1.0 to 1.9	1.2 to 1.9		1.0 to 2.0	0.9 to 2.4	0.8 to 2.0	
November projection. . .	1.0 to 1.5	1.0 to 1.6	1.0 to 1.7		0.9 to 2.0	0.5 to 2.4	0.2 to 2.3	

NOTE: Projections of change in real gross domestic product (GDP) and 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 November projections were made in conjunction with the FOMC meeting on November 3-4, 2009.

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 1a**  
**Economic Projections for the First Half of 2010\***  
**(in percent)**

**Central Tendencies and Ranges**

	<b>Central Tendency</b>	<b>Range</b>
Change in Real GDP	2.8 to 3.4	1.8 to 3.8
PCE Inflation	1.5 to 1.8	0.7 to 2.0
Core PCE Inflation	1.1 to 1.6	1.0 to 2.0

**Participants' Projections**

<b>Projection</b>	<b>Change in Real GDP</b>	<b>PCE Inflation</b>	<b>Core PCE Inflation</b>
<b>1</b>	3.5	1.8	1.6
<b>2</b>	3.8	2.0	2.0
<b>3</b>	3.0	2.0	2.0
<b>4</b>	2.8	1.2	1.1
<b>5</b>	3.1	1.5	1.2
<b>6</b>	3.3	1.6	1.2
<b>7</b>	3.1	1.6	1.2
<b>8</b>	3.1	1.7	1.4
<b>9</b>	3.4	1.8	1.4
<b>10</b>	3.3	1.6	1.2
<b>11</b>	3.2	1.7	1.3
<b>12</b>	3.4	2.0	2.0
<b>13</b>	1.8	1.7	1.0
<b>14</b>	3.2	1.6	1.1
<b>15</b>	2.1	0.7	1.0
<b>16</b>	2.4	1.3	1.2
<b>17</b>	3.1	1.7	1.2

\* Growth and inflation are reported at annualized rates.

**Table 1b**  
**Economic Projections for the Second Half of 2010\***  
**(in percent)**

**Central Tendencies and Ranges**

	<b>Central Tendency</b>	<b>Range</b>
Change in Real GDP	2.8 to 3.8	2.5 to 4.2
PCE Inflation	1.2 to 1.7	1.1 to 2.0
Core PCE Inflation	1.1 to 1.6	0.8 to 2.0

**Participants' Projections**

<b>Projection</b>	<b>Change in Real GDP</b>	<b>PCE Inflation</b>	<b>Core PCE Inflation</b>
<b>1</b>	2.5	1.6	1.8
<b>2</b>	4.2	2.0	2.0
<b>3</b>	2.6	1.6	1.6
<b>4</b>	3.2	1.4	1.1
<b>5</b>	3.3	1.3	1.2
<b>6</b>	3.7	1.2	1.2
<b>7</b>	3.7	1.2	1.0
<b>8</b>	3.9	1.7	1.2
<b>9</b>	3.6	1.6	1.4
<b>10</b>	3.9	1.2	1.2
<b>11</b>	3.8	1.3	1.3
<b>12</b>	3.4	2.0	2.0
<b>13</b>	2.8	1.1	1.2
<b>14</b>	3.8	1.2	1.1
<b>15</b>	2.9	1.7	1.2
<b>16</b>	2.6	1.1	1.2
<b>17</b>	3.1	1.3	0.8

\* Projections for the second half of 2010 implied by participants' January projections for the first half of 2010 and for 2010 as a whole. Growth and inflation are reported at annualized rates.

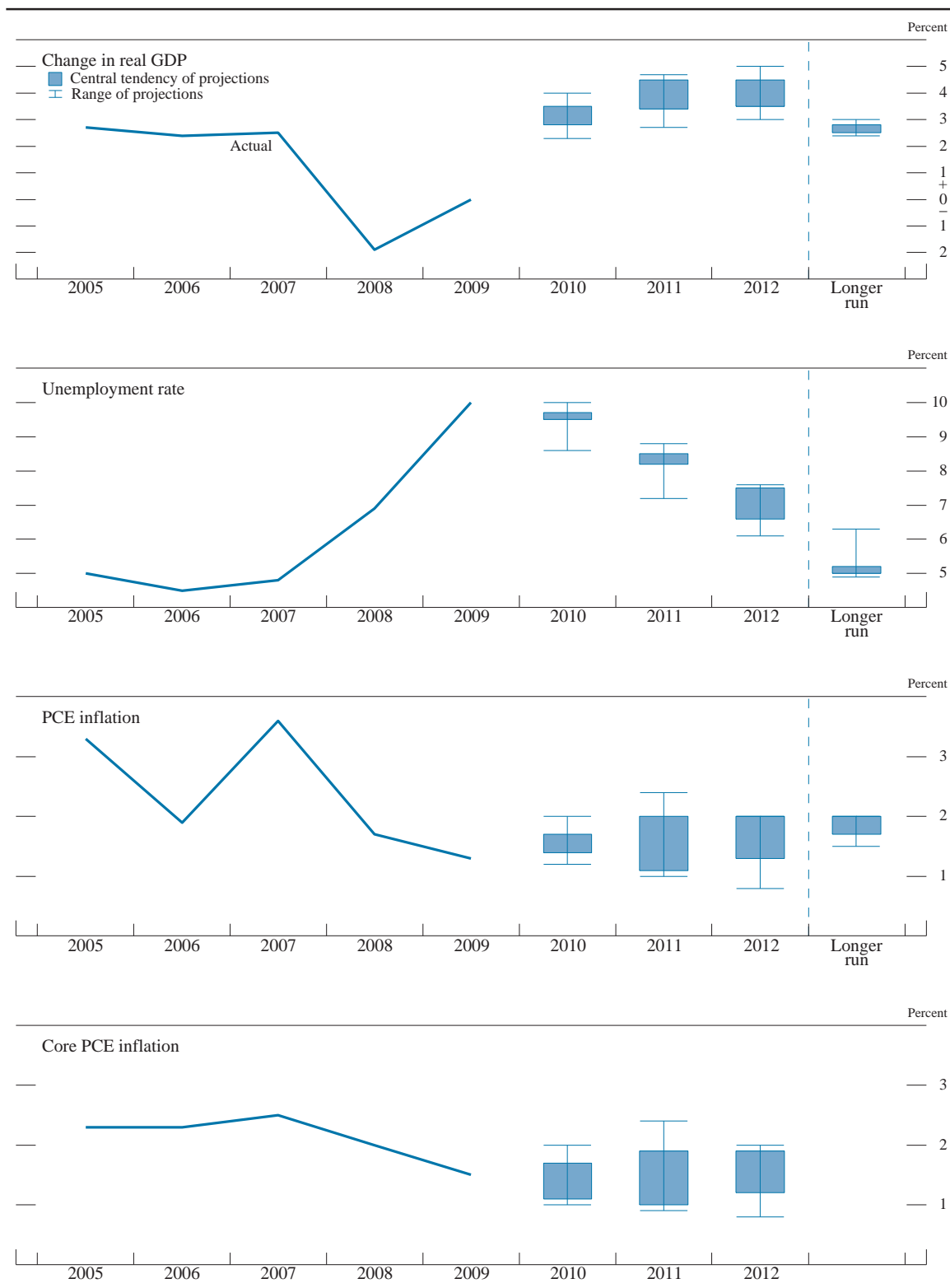
**Table 2: January Economic Projections  
(in percent)**

Projection	Year	Change in Real GDP	Unemployment Rate	PCE Inflation	Core PCE Inflation
1	2010	3.0	9.7	1.7	1.7
2	2010	4.0	9.2	2.0	2.0
3	2010	2.8	9.5	1.8	1.8
4	2010	3.0	9.7	1.3	1.1
5	2010	3.2	9.5	1.4	1.2
6	2010	3.5	9.5	1.4	1.2
7	2010	3.4	9.5	1.4	1.1
8	2010	3.5	9.5	1.7	1.3
9	2010	3.5	9.6	1.7	1.4
10	2010	3.6	9.5	1.4	1.2
11	2010	3.5	9.5	1.5	1.3
12	2010	3.4	8.6	2.0	2.0
13	2010	2.3	10.0	1.4	1.1
14	2010	3.5	9.5	1.4	1.1
15	2010	2.5	9.5	1.2	1.1
16	2010	2.5	9.7	1.2	1.2
17	2010	3.1	9.7	1.5	1.0
1	2011	3.2	8.8	2.0	1.9
2	2011	4.4	8.2	2.0	2.0
3	2011	3.4	8.3	2.0	2.0
4	2011	4.5	8.6	1.2	1.0
5	2011	4.2	8.5	1.4	1.3
6	2011	4.5	8.2	1.1	1.0
7	2011	4.3	8.5	1.0	0.9
8	2011	4.6	8.4	1.8	1.2
9	2011	4.0	8.4	1.5	1.4
10	2011	4.7	8.2	1.1	1.1
11	2011	4.5	8.2	1.7	1.5
12	2011	3.0	7.2	2.4	2.4
13	2011	4.1	8.1	1.6	1.5
14	2011	4.4	8.2	1.1	1.0
15	2011	4.3	7.8	1.8	1.5
16	2011	2.7	8.5	1.3	1.3
17	2011	4.5	8.7	1.5	1.0

**Table 2 (continued): January Economic Projections**

Projection	Year	Change in Real GDP	Unemployment Rate	PCE Inflation	Core PCE Inflation
1	2012	3.4	7.6	2.0	1.9
2	2012	3.5	7.2	1.5	1.5
3	2012	3.5	7.5	2.0	2.0
4	2012	4.5	7.0	1.5	1.2
5	2012	4.0	7.4	1.5	1.5
6	2012	4.3	6.6	1.3	1.2
7	2012	4.5	7.0	0.8	0.8
8	2012	4.8	6.9	1.8	1.2
9	2012	4.0	7.2	1.5	1.4
10	2012	4.5	6.1	1.3	1.2
11	2012	4.5	7.0	1.9	1.7
12	2012	3.0	6.5	2.0	2.0
13	2012	5.0	6.5	2.0	2.0
14	2012	4.4	6.8	1.0	1.0
15	2012	4.1	6.7	1.7	1.7
16	2012	3.0	7.6	1.5	1.5
17	2012	4.8	7.5	1.5	1.2
1	LR	2.5	6.3	2.0	
2	LR	2.8	5.3	1.5	
3	LR	3.0	5.0	2.0	
4	LR	2.5	4.9	2.0	
5	LR	2.5	5.0	1.8	
6	LR	2.8	5.0	2.0	
7	LR	2.5	5.0	2.0	
8	LR	2.6	5.2	2.0	
9	LR	2.7	5.0	1.5	
10	LR	2.8	5.0	2.0	
11	LR	2.5	5.2	2.0	
12	LR	2.8	5.3	1.7	
13	LR	2.4	5.0	2.0	
14	LR	2.5	5.0	2.0	
15	LR	2.6	5.0	2.0	
16	LR	2.5	5.2	2.0	
17	LR	2.8	5.0	1.5	

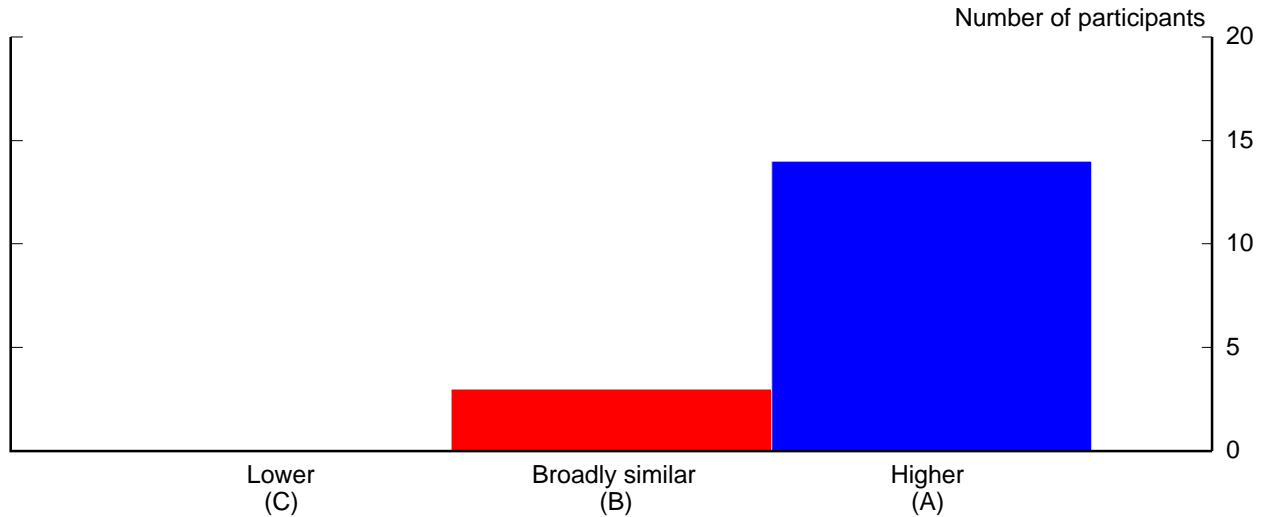
Figure 1. Central tendencies and ranges of economic projections, 2010–12 and over the longer run



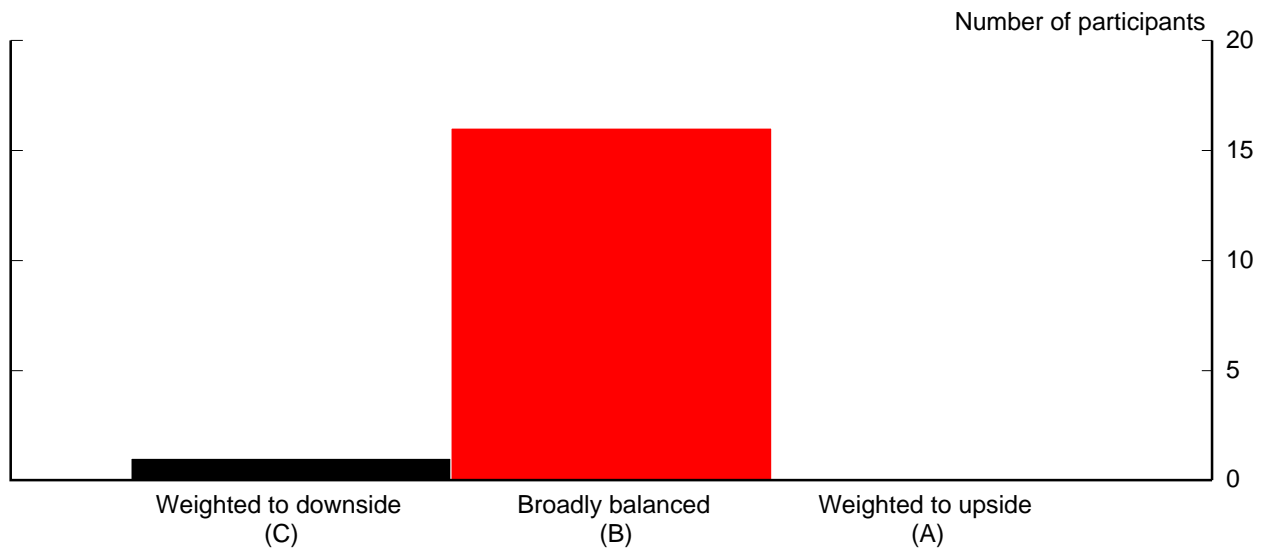
NOTE: Definitions of variables are in the notes to table 1. The data for the actual values of the variables are annual. The data for the change in real GDP, PCE inflation, and core PCE inflation shown for 2009 incorporate the advance estimate of GDP for the fourth quarter of 2009, which the Bureau of Economic Analysis released on January 29, 2010. This information was not available to FOMC meeting participants at the time of their meeting.

### 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.**

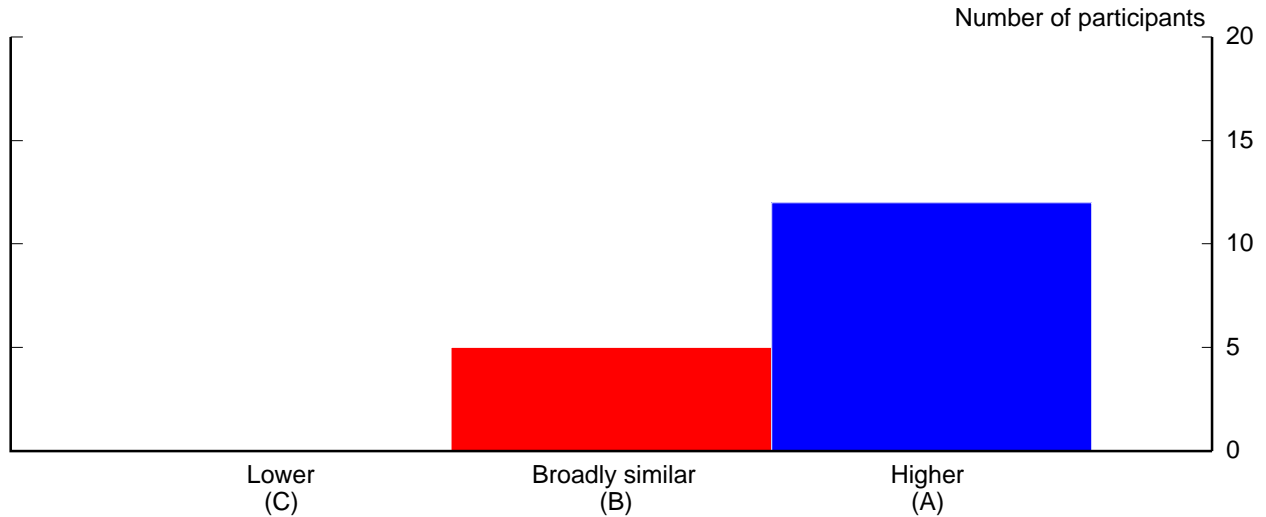


#### Individual Responses

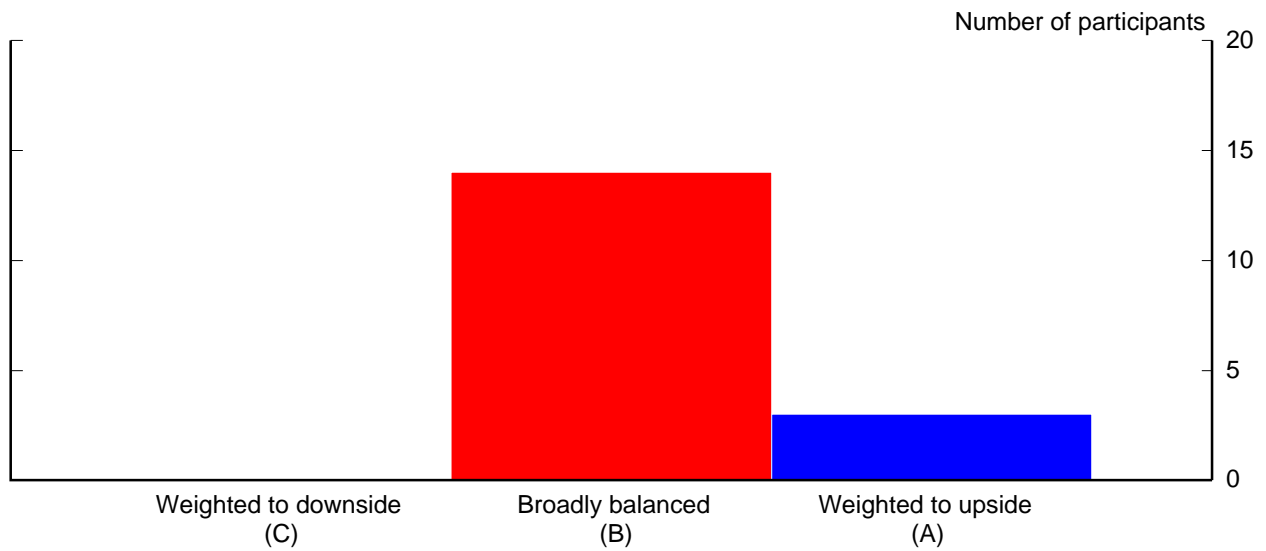
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	B	A	A	A	A	A	A	B	A	A	A	A	A	A	A	A
2(b)	B	B	B	B	B	B	B	B	B	B	B	B	C	B	B	B	B

### 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.**



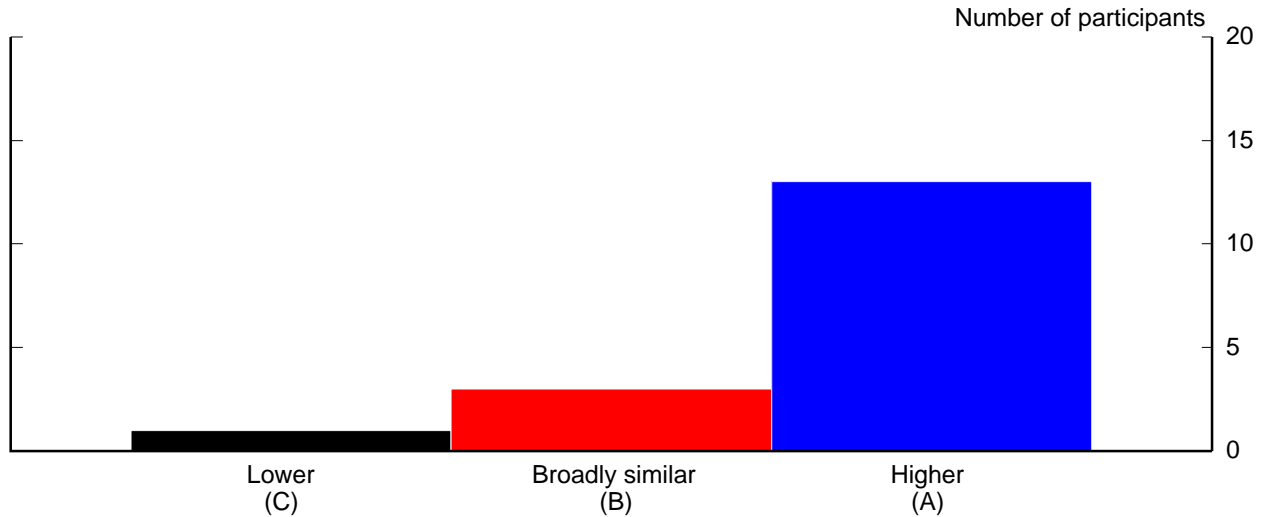
#### Individual Responses

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

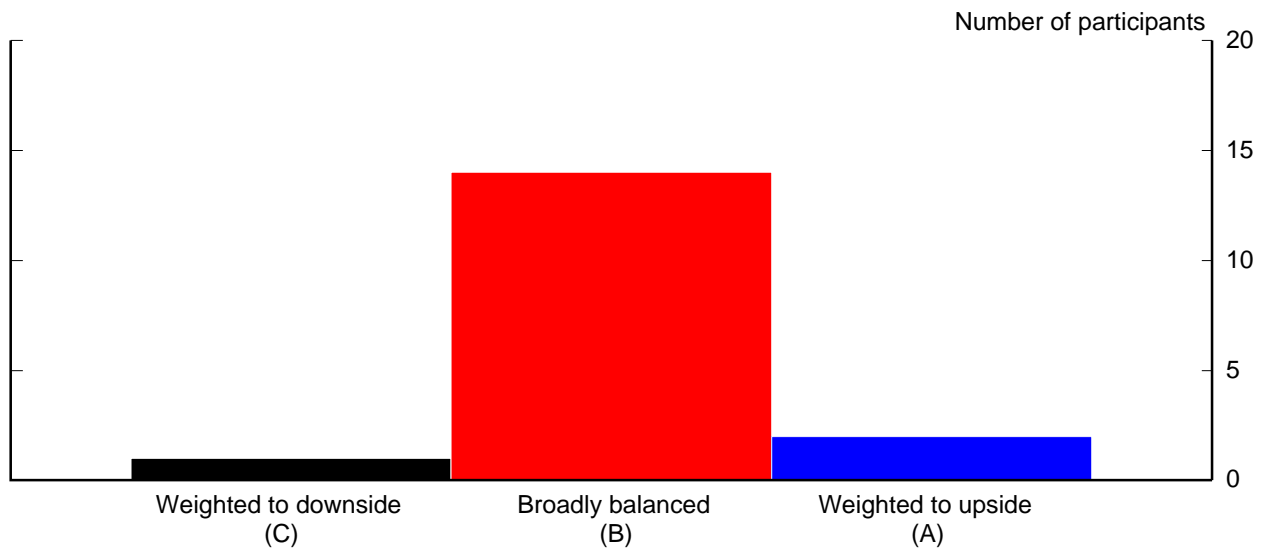


### Uncertainty and Risks - PCE Inflation

**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.**

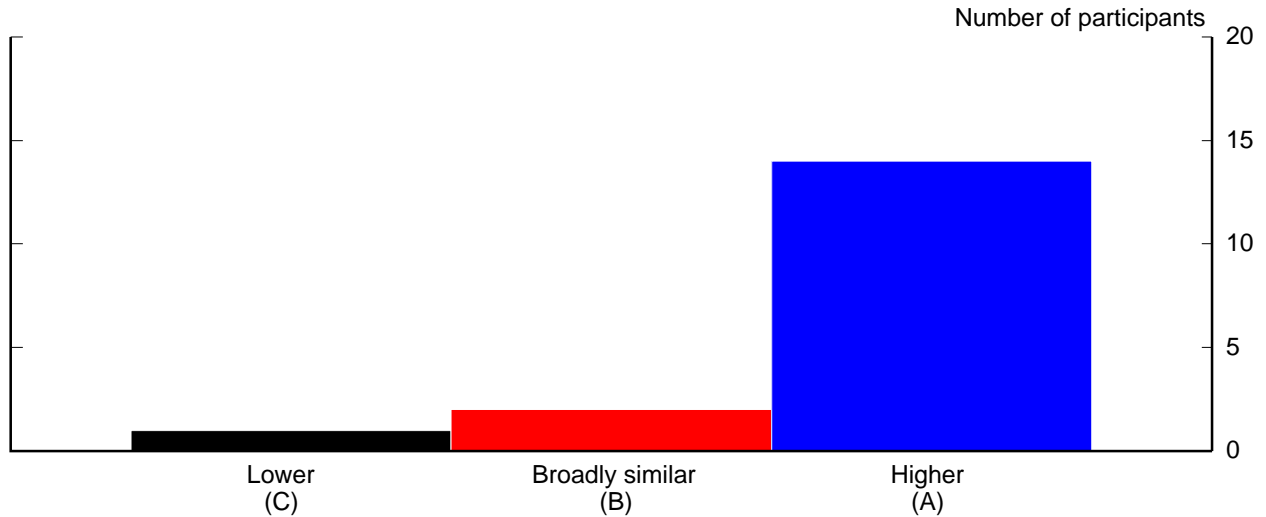


#### Individual Responses

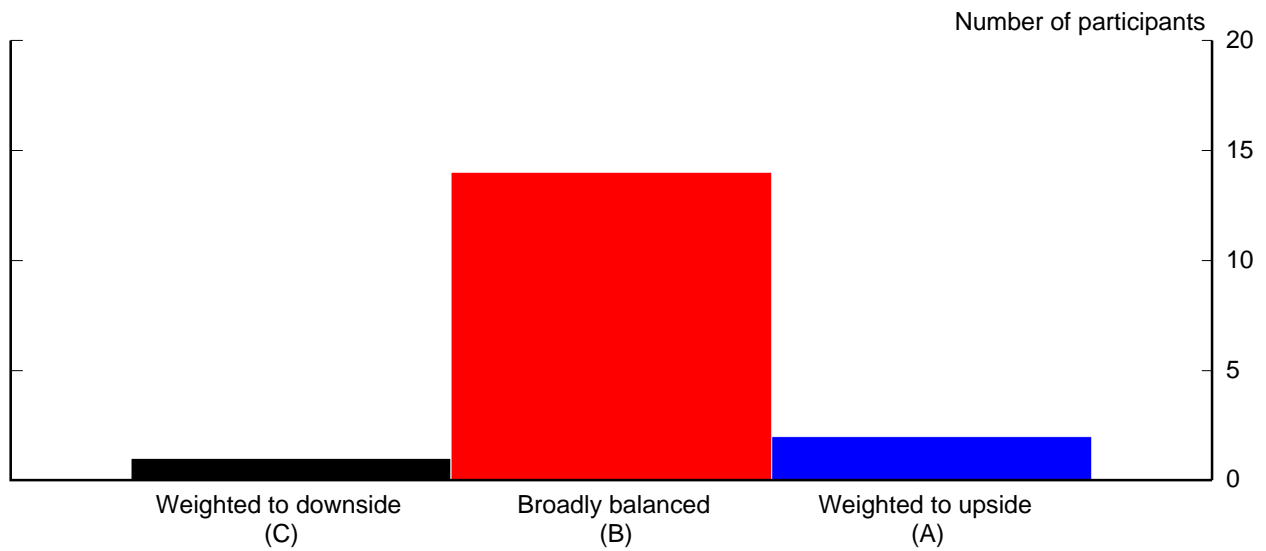
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	A	B	A	B	A	A	A	B	C	A	A	A	A	A	A	A	A
2(b)	B	B	A	B	B	B	C	B	B	B	B	A	B	B	B	B	B

### 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)	A	B	A	A	A	A	A	B	C	A	A	A	A	A	A	A	A
2(b)	B	B	A	B	B	B	C	B	B	B	B	A	B	B	B	B	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:**

Convergence process likely to take somewhat longer than 5 to 6 years

**Respondent 2:**

I anticipate that the convergence process for real GDP growth and inflation will be substantially shorter than 5-6 years, perhaps on the order of three years for real growth (with a period of overshoot of real growth in the interim during recovery), and an overshoot in the interim in inflation as a consequence of significant past growth in the monetary base supported by longer term asset purchases that cannot be sold off over a very short time period. I anticipate that the decline in the unemployment rate will lag behind the recovery of real growth.

**Respondent 3:**

It will take longer than 5 or 6 years for unemployment.

**Respondent 4:**

In light of the severity and breadth of shocks to the economy and the continuing, though reduced, risk of more to come, the convergence process may well extend beyond five or six years to something closer to eight years.

**Respondent 5:**

If appropriate policy is followed, I would expect convergence to occur within five to six years. However, I am concerned that delaying the removal of policy accommodation and the shrinkage of our balance sheet could result in long term inflation expectations becoming unanchored, leading to higher inflation and therefore more time would be required to reach our longer term objectives.

**Respondent 6:**

N/A

**Respondent 7:**

Convergence to the real economy's equilibrium and to the inflation objective within five years requires lower long-term interest rates in the near-term than what is assumed in the baseline outlook. As a result, while it is possible that the maximum employment goal will be achieved within a five-year horizon, inflation is likely to remain below the target.

**Respondent 8:**

N/A

**Respondent 9:**

N/A

**Respondent 10:**

N/A

**Respondent 11:**

N/A

**Respondent 12:**

The convergence process may be slightly shorter than 5-6 years.

**Respondent 13:**

By 2015-16 potential growth is 2.4%, down from our current estimate of 2.5-2.7%, as the babyboomers retire. A reasonable estimate for the long-run unemployment rate is 4.5% to 5.5%. We would expect, with appropriate policy and no further adverse shocks, unemployment to be in this range and the output gap to be around zero by 2015-16.

We assume long-term inflation expectations to be anchored around 2.5% on a CPI basis and the FOMC's inflation objective to be around 2% for the PCE deflator and around 2.5% for the CPI. Under these conditions, with the output gap around zero, we would expect PCE inflation of around 2%.

**Respondent 14:**

The convergence process will likely be longer than six years because of the current massive output gap, very low inflation, and limits on possible monetary stimulus resulting from the zero lower bound on interest rates.

**Respondent 15:**

At a 5-6 year horizon, the economy has yet to fully converge for output and unemployment. Given the substantial weakness in my near-term projection, the convergence process will likely take 7-8 years.

**Respondent 16:**

N/A

**Respondent 17:**

Given the depth of the recession, the damage inflicted on the financial sector, and the difficult domestic and global adjustments that are needed, convergence may well require the full five-to-six years.

## 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:**

Volatility was low in the past twenty years. It will be higher going forward.

**Respondent 4:**

N/A

**Respondent 5:**

N/A

**Respondent 6:**

The unprecedented circumstances of recovery from very deep recession and severely disrupted financial system, together with extraordinary monetary, fiscal, and regulatory responses imply great uncertainty about the actions of both the authorities and the private sector going forward. The unusual behavior of the unemployment rate relative to output growth and of inflation relative to the unemployment rate add to these uncertainties.

**Respondent 7:**

N/A

**Respondent 8:**

N/A

**Respondent 9:**

I believe that uncertainty regarding projections for GDP and unemployment are now about average. Inflation projections would be more firmly anchored under an appropriate monetary policy, and therefore uncertainty would be lower than the trailing 20-year average.

**Respondent 10:**

N/A

**Respondent 11:**

N/A

**Respondent 12:**

Financial market conditions continue to improve and the economy is in recovery. However, the impact of fiscal stimulus and its unwinding has raised uncertainty around my projected path for real output growth. In addition, the effect of the extraordinary monetary policy accommodation in place and the uncertainty about the timing of when we will exit from that accommodation have increased the uncertainty around my inflation forecast.

**Respondent 13:**

Quantitative judgment based on the standard deviation of the FRBNY forecast distribution for GDP growth

and core PCE inflation relative to the forecast errors over the last 20 years.

**Respondent 14:**

The extraordinary financial situation and unusual fiscal and monetary policies all increase uncertainty regarding the outlook for economic growth. In addition, the unexpected jump in the unemployment rate last year raises questions about the evolution of the labor market going forward. The heightened risks to the outlook for economic activity, as well as the elevated variability of commodity prices, raise uncertainty regarding the outlook for inflation.

**Respondent 15:**

N/A

**Respondent 16:**

N/A

**Respondent 17:**

N/A

## Uncertainty and Risks

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:**

Going forward into 2010 as the economy recovers from the recent recession and experiences the fiscal stimulus program as well as a substantial persistent increase in the monetary base, I believe that the risks to real growth and inflation will become weighted to the upside.

**Respondent 3:**

By “weighted to upside” for unemployment, I mean that I am concerned that unemployment might turn out to be even higher than my already pessimistic mean forecast.

**Respondent 4:**

N/A

**Respondent 5:**

In the near-term, the weakness of the economy and recent price trends pose some downside risks to core and overall inflation. However, in the medium to long term, the expansion of our balance sheet and increased public nervousness about increases in our balance sheet and federal borrowing create a risk to the stability of long-term inflation expectations, and therefore create upside risks to inflation. In addition, there is a risk that monetary policy will remain too accommodative for too long, creating further upside risks to inflation.

**Respondent 6:**

N/A

**Respondent 7:**

N/A

**Respondent 8:**

N/A

**Respondent 9:**

N/A

**Respondent 10:**

N/A

**Respondent 11:**

The incoming high-frequency data—as aggregated by summary statistics such as the CFNAI—are quite consistent with the near term projections for growth. However, looking later into 2010 and beyond, the degree of uncertainty is greater than it has been over the past 20 years. In part this reflects the severity of the recession and the resulting uncertainty over the endogenous cyclical dynamics of the recovery. The degree of repair necessary in the banking sector and the massive change in the Federal Reserve’s balance sheet also impart a greater-than-usual degree of uncertainty surrounding financial conditioning assumptions—both with regard to the most appropriate assumptions to make and the influence of those assumptions on economic activity and inflation expectations.

**Respondent 12:**

The incoming data have led me to revise up slightly my near-term path for growth compared to my October forecast. I view the risks to growth and the unemployment rate as roughly balanced. Over the longer term, inflation risk is tilted to the upside reflecting uncertainty about the timing and efficacy of the Fed's withdrawal of accommodation.

**Respondent 13:**

Quantitative judgment based on the difference between the projection and the expected value from the FRBNY forecast distribution. For inflation, risks are modestly to the downside in the near term and modestly to the upside in the medium to longer term.

**Respondent 14:**

N/A

**Respondent 15:**

N/A

**Respondent 16:**

The incoming data suggests a pace of spending and production that, if continued, would lead to GDP growth much stronger in the medium term than I have marked into my forecast. However, the economic environment remains fragile, and as a result I continue to judge the risks to my growth forecast as being broadly balanced.

**Respondent 17:**

N/A



## Appropriate Monetary Policy

### 3. Does your view of the appropriate path of interest rates differ materially from the interest rate assumed by the staff in the Greenbook?

**YES**

11

**NO**

6

**Respondent 1:** Yes

Expect policy rates to move sooner and with greater force than Greenbook forecast – closer to current market forecast

**Respondent 2:** Yes

While the pattern of recovery from the recent recession is uncertain, I believe that under appropriate monetary policy to maintain price stability we will have to move away from the current target range for the funds rate as part of the process of withdrawing from quantitative easing much sooner than assumed in the Greenbook forecast.

**Respondent 3:** No

The path of interest rates is likely to be appropriate. If expected inflation were to tick up appreciably, then we would have to re-evaluate.

**Respondent 4:** No

N/A

**Respondent 5:** Yes

I expect it will be necessary to begin raising the target for the federal funds rate in 2010, in contrast to the Greenbook assumption that the current target range is maintained until late 2011. Holding rates down so low for so long would invite asset imbalances and risk repeating past mistakes. In my judgment, appropriate policy will also involve taking steps to reduce the size of our balance sheet and normalize its composition in a timely manner. Finally, I also believe we need to change the language in our press statement from saying economic conditions “are likely to warrant exceptionally low levels of the federal funds rate for an extended period” to “are likely to warrant low levels of the federal funds rate for some time.”

**Respondent 6:** Yes

tightening begins in H1 2011 rather than H2.

**Respondent 7:** Yes

The forecast is conditioned on a somewhat lower path for the Federal funds rate in 2011 and 2012.

**Respondent 8:** Yes

Anticipate a modest move toward normalization in 2010:H2, further slow rate increases in 2011.

**Respondent 9:** Yes

I believe that under an appropriate monetary policy the committee would announce a numerical inflation objective. In order to achieve that objective, I believe that policy rates may well need to increase by the end of this year.

**Respondent 10:** No

N/A

**Respondent 11:** Yes

We assume the funds rate to be close to the path currently embedded in futures markets in 2010 and the first

part of 2011. We expect a slightly higher path for the funds rate than the markets do later in the projection period.

**Respondent 12:** Yes

My forecast continues to assume a less accommodative policy than in the Greenbook baseline. I view the appropriate monetary policy as one that raises the funds rate to about 2 percent by the end of 2010 and 3.5 percent by the end of 2011. By the end of 2012, I see the funds rate at about 4.5 percent.

**Respondent 13:** Yes

For 2010 identical. We assume the normalization of interest rates starts in 2011Q1 and continues at a faster rate in 2012. Because of differences in our inflation forecast, the difference in real rates is less substantial. Our views on the size of the balance sheet are close to the Greenbook assumption.

**Respondent 14:** No

N/A

**Respondent 15:** Yes

Yes. Due to a stronger inflation profile in my outlook, the federal funds rate begins to increase sooner than in the Greenbook.

**Respondent 16:** No

N/A

**Respondent 17:** No

No, but given the uncertainty regarding the outlook, we must be careful not to lock ourselves in to a particular rate or path for rates.

## Forecast Narratives

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

**Respondent 1:**

Pace of GDP growth significantly influenced by pace of improvement in labor incomes

**Respondent 2:**

The path of economic activity in the first three quarters of 2009 was consistent with my earlier expectation of a slowing contraction in the first half of the year, with output bottoming out in the middle of the year and recovery in the second half. Hence I have not revised my previous forecast for real growth in 2010. In 2010 and 2011 I anticipate that real growth will occur at greater than steady-state rates, reflecting normal cyclical patterns reinforced by a modest impact of the fiscal stimulus package and the impact of the substantial monetary stimulus that has been in train since late 2008. I expect that subsequently growth will slow and approach steady-state rates. I do not see inflation abating in the near future. While headline PCE inflation from the fourth quarter of 2008 through the third quarter of 2009 is slightly less than one percent at annual rates, recent increases in energy prices lead me to expect that the headline rate will approach the core rate as 2010 progresses. Subsequently, under appropriate monetary policy, inflation should approach my preferred long-run rate of 1.5 percent, though I believe that it will rise above that rate in an interim period. I do not believe that future energy shocks can be forecasted, so with available information I expect that core and headline inflation will be roughly equal in the out years of the projection period.

**Respondent 3:**

Financial markets have normalized.. However, unemployment remains high. At the same, hiring rates and job openings remain at historical lows. I see little chance for significant job growth in 2010. Large fiscal imbalances and large holdings of excess reserves create the possibility of a low-probability high inflation scenario.

**Respondent 4:**

Key factors include slow but steady spread of expectation that recovery has taken hold, but continuing likelihood of slow employment growth and consequent drag on consumption, drag from commercial real estate, and uneven nature of housing market recovery. Key uncertainty is timing of turnaround in credit availability for consumers and small businesses. The impact of diminution in effects of stimulus and of our LSAP program in first half of 2010 remain important uncertainties.

**Respondent 5:**

The economic outlook is improving and growth is likely to be above trend over the forecast horizon. Even so, the recovery is likely to be sluggish by historical standards. Growth in the first half of this year is driven in part by temporary factors, such as highly stimulative fiscal policy, inventory accumulation, and census hiring concentrated in the second quarter. However, with the tax credit for home buyers ending in the second quarter, and fiscal stimulus more generally slowing in the second half of this year, growth in the second half of 2010 and beyond requires a transition from growth driven by temporary factors to growth driven by private final demand. I expect such a transition to occur through a few channels: As firms exhaust productivity gains, hiring and new investment should pick up; then, as labor markets improve, consumer spending should also trend upward; and finally, strong foreign demand, particularly in Asia, should support export growth.

I expect core inflation to remain low but move higher over the forecast horizon. Disinflationary pressure from low resource utilization is currently being offset by stable inflation expectations, a decline in the dollar, and accommodative monetary policy. Over time, as the recovery continues, inflation is likely to move higher, to a level more in line with long-term inflation expectations.

While problems in commercial real estate pose downside risks to GDP growth, the easing of financial stress, the resiliency of the U.S. economy, and traditional business cycle dynamics—especially following a deep recession—may lead to even stronger consumer and business spending than anticipated. In the near term, the weakness of the economy and recent price trends pose some downside risks to core and overall inflation. However, in the medium to long term, the expansion of our balance sheet and increased public nervousness about increases in our balance sheet and federal borrowing create a risk to the stability of long-term inflation expectations, and therefore create upside risks to inflation. In addition, there is a risk that monetary policy will remain too accommodative for too long, creating further upside risks to inflation.

**Respondent 6:**

The growth rate of final demand strengthens gradually, supported by accommodative monetary policy, further improvement in financial conditions (including for bank credit), and a rebound on spending on houses, consumer durables, and business capital equipment from unsustainably low levels. Expansion is held back, especially in the next few quarters, by still-tight credit for some borrowers, and by caution and uncertainty resulting from the recent events and the still-developing governmental response. Upside risks include a faster rebound in household and business spending on durables and capital; downside risks include slower recovery of credit availability, especially from banks partly resulting from much tighter expected and actual capital and other requirements on them,

**Respondent 7:**

Recent data have been broadly in line with expectations. Average growth in final sales during the second half of 2009 was mildly positive, and the fluctuations in inventories have altered the projected quarterly pattern of GDP growth but not the assessment of the underlying strength of the economy. In this regard, the recovery in activity this year is likely to be relatively muted. Banking problems remain even if the banking crisis has passed. Lending standards continue to be tight as banks are unwilling to take on too much additional risk given the ongoing problems with existing loans. As a result, credit availability is likely to place constraints on both households' and firms' spending. Housing prices remain well off their peaks, and the desire to build a more meaningful buffer of savings may also dampen consumption in the near term. Growth in private sources of income, while expected to increase during the recovery, is still modest at this point and the high level of unemployment suggests only small advances in the wage rate over the forecast horizon. These factors, together with a waning support from the fiscal stimulus, are likely to result in a slow recovery in spending compared to past episodes. In addition, many businesses may expand investment only gradually, at least until they are more confident that the economy will continue expanding even after some of the stimulative government support winds down.

In all, we expect the ongoing recovery to make only a relatively small dent to the unemployment rate gap by the end of 2011. Given the sizable slack in the labor market over the forecast horizon, the rate of core inflation remains well below target in 2011 and 2012.

The risks to activity have become somewhat more balanced, but the downside risks at this point are much more costly than the potential upside, given that a faster-than-expected recovery is unlikely to generate meaningful inflationary pressures. The risks to inflation continue to be on the downside. Given the unemployment rate forecast, several accelerationist Phillips curve models would predict outright deflation over the course of the forecast horizon.

**Respondent 8:**

Firms have slowed inventory liquidation more quickly than expected, leading to a strong 09:Q4 and suggesting perhaps a bit more optimism on the part of firms about 2010. However, the broad outline of the forecast—a moderate recovery in 2010, picking up steam thereafter—remains the same, or perhaps just a bit stronger. Key to recovery is that private final demand take over from the inventory cycle and fiscal policy as the principle source of growth; it is early to tell whether that will occur, but recent growth in consumer

spending and firms' investment in equipment and software is encouraging. Global economic conditions continue to improve, especially in emerging markets. Manufacturing has been stronger (more so than services), perhaps reflecting strengthening foreign demands and the greater cyclical nature of the manufacturing sector. Housing remains relatively weak, with prices likely to fall a bit further and gains in construction moderate.

Outside of banking, financial conditions are approaching normal, with equity prices up, credit spreads tighter, money markets functioning well, and larger firms (including banks) having good access to public capital markets. Banks have continued to stabilize, except that regional and smaller banks still face serious concerns in commercial real estate. Bank credit has continued to contract, however, reflecting tight lending terms but also lower credit demand and weak borrower balance sheets. Presumably the continued tightness in bank lending is having the greatest effects on consumers and small businesses. Continued financial normalization and slow improvement in bank credit conditions will be needed for a sustainable recovery.

The labor market continues to be very weak, with no signs yet of significant hiring. Labor market weakness is also a risk to the recovery, as households are unlikely to regain confidence with unemployment so high. The relatively moderate expected pace of recovery suggests slow improvement in unemployment. However, the productivity gains of recent quarters, the result of cost-cutting, are unsustainable; some reversal of this trend might lead to somewhat better job growth than implied by the expected pace of output growth. Uncertainties about output and employment remain high, however, because of continuing financial restraint, political uncertainty, and the usual difficulties of forecasting around turning points.

Core inflation is likely to respond to slack, but the decline is likely to be relatively modest given the stability of inflation expectations. Energy and commodity prices will rise faster than other prices as the global economy strengthens, so that headline inflation will exceed core inflation. The dollar has shown greater stability recently. The stability of inflation expectations limits the amount of uncertainty one can have about the inflation forecast.

**Respondent 9:**

I believe that the pace of expansion will be solid, although less rapid than has often occurred in previous recoveries, due in part to further significant declines in nonresidential construction and low levels of activity in residential construction and autos. In addition, under current legislation the stock of federal debt will grow rapidly relative to GDP for the foreseeable future. There is considerable uncertainty on the nature and timing of the fiscal policy actions that will put the stock of debt onto a more sustainable path. That uncertainty, in combination with the likelihood of higher future taxes, is likely to make firms and households more cautious in their spending plans.

**Respondent 10:**

N/A

**Respondent 11:**

We continue to see important bimodal aspects to the forecast. The downside scenario is a function of slower-than-anticipated repair of the banking system and more persistent effects of depreciated worker skills and resulting difficulties in matching job applicants to labor demand. The upside scenario reflects greater-than-expected impulses from accommodative monetary policy and pent up demand from the recession. Our baseline forecast averages these cases.

**Respondent 12:**

The recent data on the economy has been broadly in line with what I anticipated in my October forecast.

In my view, the economy is now in recovery and I expect an above-trend pace of 3.4 percent growth in 2010 as recovery dynamics take hold. I expect growth slightly above trend in 2011 and 2012. The labor market recovery is gradual — I expect the unemployment rate edges down to about 6.5 percent by the end of

the forecast horizon, at which time it remains above the natural rate of unemployment by about 1 percentage point. I anticipate that inflation will rise into 2011 then pull back in 2012 in response to tighter monetary policy than anticipated in the Greenbook.

In my view, the substantial liquidity that is now in the financial system raises the 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 that begins some time in 2010.

### **Respondent 13:**

In our central projection, the recovery of the US economy began in 2009Q3 after a post WWII record four-quarter decline of real GDP of nearly 4%. Indeed, at this writing it appears that real GDP rose 3.7% (annual rate) over the second half of 2009, somewhat stronger than expected last October. After falling 1.7% over the preceding four quarters, real personal consumption expenditures increased 2.8% (annual rate) in 2009Q3, led by a significant increase in light-weight vehicle sales fueled by the “cash for clunkers” program. Similarly, single-family housing starts rose by nearly 40% from 2009Q1 to 2009Q3, reflecting a larger-than-anticipated response to the first time home buyer tax credit as well as the success of the Fed’s purchases of agency MBS in lowering mortgage interest rates. Despite a very low capacity utilization rate, business investment in new equipment and software eked out a modest gain in Q3 and looks to have increased at a roughly 10% annual rate in Q4, likely due in part to the pending expiration of the bonus depreciation provision in the stimulus bill. Finally, the economy experienced an unusually large inventory cycle that we estimate to have contributed a full 2 percentage points to growth over the second half of 2009.

Despite the stronger-than-expected second half growth of real GDP, labor market conditions turned out to be roughly as expected. Based on available data, it appears that productivity growth remained very high in 2009Q4 and that hours worked continued to decline, although at a much slower rate than over the preceding seven quarters. The unemployment rate averaged 10.0% in the fourth quarter, slightly below our expectations, due to a steeper than expected decline of the labor force participation rate.

The PCE deflator probably increased at a  $2\frac{1}{2}\%$  annual rate in the second half of 2009 after being essentially zero over the first half of the year. This is somewhat higher than we previously expected due to larger than assumed increases of energy prices. The overall rate of increase of the core PCE deflator over the second half of 2009 was in line with our expectations, at a 1.2% annual rate versus 1.6% over the first half of 2009. This is consistent with our view that the high degree to which resources are underutilized has put downward pressure on core inflation.

For 2010 we have raised our projected growth rate to  $2\frac{1}{4}\%$  (Q4/Q4) from 2%, reflecting an upward revision to labor compensation which feeds through into somewhat more rapid growth of real consumer spending. This still is very sluggish growth for the first full year of recovery and is below the consensus. As before, we expect the first half of the year to be notably weaker than the second half. As growth in 2010 remains below our estimate of potential, we expect the unemployment rate to rise to about  $10\frac{1}{4}\%$  by midyear. A key feature of our modal forecast is that the current cycle is qualitatively different from the typical post WWII cycle such that we are unlikely to see the robust growth of consumer spending that normally occurs over the first year of recovery. A major factor for this relatively tepid growth is the large declines in employment and hours during the recession, which will continue to impact household income. In addition, the household sector continues to have a substantial debt overhang, the effects of the stimulus bill on taxes and transfers are largely behind us, and energy prices have increased from their recent lows. While equity and home prices have recovered somewhat, we estimate that as of 2009Q4 the ratio of household net worth to disposable income remains over 20 percent below its peak. Finally, while financial conditions appear to be gradually easing, we expect credit availability to be tight relative to the standards of the recent past.

A second key feature of our modal forecast is that while it appears that the correction in housing production is over, it is unlikely that we will experience the surge of residential investment typical of the early stages of post WWII recoveries. In addition to tightened mortgage underwriting standards, a large number of homes will continue to come onto the market through the foreclosure process. Finally, new construction of multifamily units has moved downward reflecting excess supply of condos and high rental vacancy rates. With consumption and residential investment recovering only gradually—in conjunction with historically low capacity utilization rates, rapidly rising retail and office vacancy rates, and sharply declining prices for commercial real estate—any recovery of business investment in new equipment and software and new structures is likely to be weak. Also contributing to the relatively tepid growth expected for 2010 is the ongoing structural adjustment taking place in state and local governments which is expected to result in significant declines in employment in this sector for much of the first half of the year. Finally, while growth prospects for our trading partners have generally improved, suggesting a continued rebound of exports, the modest upgrade in final demand as the US recovers will be associated with rising imports. Thus, while net exports will not be a major drag on growth, they are unlikely to be a major positive contributor to growth over the forecast horizon.

By the second half of 2010 and into 2011 we expect the recovery to gather steam with growth of 4% (Q4/Q4) in 2011, placing the level of real GDP very close to the consensus forecast. We expect the recovery to gather further momentum in 2012 with a 5% growth in GDP and a fall in the unemployment rate below 7%. Underlying this projection is the expectation that financial market functioning continues to return to a more normal state and that consumer and business confidence and the general appetite for risk continue to recover. With household income and balance sheets improving and credit flowing more normally, the substantial pent-up demand for consumer durables, housing, and business equipment and software will start to be satisfied. Moreover, the structural adjustments of state and local governments and of the commercial real estate sector will likely have run their course by that time.

Barring a significant decline in (either or both) the level of the economy's potential output or its potential growth rate, this point forecast implies that a large output gap will persist over most of the forecast horizon. Accordingly, we expect core inflation to slow to around 1% (Q4/Q4) in 2010. But by late 2010 and into 2011, as final demand firms within the context of anchored inflation expectations, we expect core inflation to move up to within the "mandate consistent" range.

The risks to our central projection for real activity are somewhat more balanced than in October but remain skewed to the downside. A key downside risk is that the loss of income and wealth suffered by the household sector induces a steeper-than-expected increase of the personal saving rate, keeping consumer spending weaker for longer. The sharp decrease in the prime age employment to population ratio during the current cycle, combined with the large share of workers nearing retirement age, makes this risk particularly acute. Finally, an important risk over the medium term is the uncertainty surrounding our assumption of the economy's potential growth rate. On the one hand, given the weakness of business investment and the necessary reallocation of labor and capital, the economy's potential growth rate may have slowed significantly. On the other hand, current estimates of labor productivity continue to surprise to the upside. Another source of risk to the forecast is fiscal policy. Under current law many of the tax provisions enacted in 2001 and 2003 are scheduled to expire at the end of 2010. The outcome of the debate over these provisions could potentially have a significant impact on both growth prospects and inflation expectations. Finally, relatively modest changes in variables such as productivity growth, the participation rate, and the average work week could have a significant impact on the path of the unemployment rate.

The risks around the central scenario for inflation are relatively balanced. Clearly, the downside risk to the growth projection combined with the possibility of no meaningful decline in potential implies downside risk to the inflation projection. In contrast, with the aggressive global monetary and fiscal policy response to the financial crisis, there is a risk of higher inflation.

The heightened uncertainty associated with the shape of recoveries from periods of banking and financial crisis as well as the uncertainty associated with the timing and synchronization of the removal of global policy accommodation result in greater uncertainty around our central projection compared to typical levels over the last twenty years.

**Respondent 14:**

Although labor markets remain very weak, recent economic indicators suggest that a moderate recovery is in train. Financial conditions have improved; however, the process of repairing the banking and financial sectors will proceed slowly, and financial intermediation will remain impaired for some time and will hold back the pace of recovery. In addition, households are in the midst of repairing balance sheets that have been weakened by equity and housing losses and debt accumulation. Fiscal and monetary stimulus provide key drivers for recovery this year. Significant slack in labor and goods markets will keep inflation low, but well-anchored inflation expectations should help avoid sustained deflation.

**Respondent 15:**

The consumer continues to be under considerable strain well into 2010 and possibly beyond, facing a weak labor market, high debt burdens, and tight credit conditions. A renewed respect for economic uncertainty in the wake of the recession also produces a stronger precautionary saving motive further restraining consumer spending. Although business equipment spending recovers in 2010, many firms delay purchases to await further resolution in demand uncertainty limiting the strength of the rebound compared to historical norms. Business spending on structures continues to contract in 2010 hampered by high vacancy rates and ongoing credit problems in commercial real estate. The robust resumption of foreign growth, notably from Asia, supports both strong export and import growth in the near-term.

My forecast assumes that inflation expectations will remain “anchored” near current levels of roughly 2% throughout the forecast period. However, considerable uncertainty surrounds this assumption. Incoming data indicating further and substantial core price deceleration balances worries of an impending inflationary episode due to the Federal Reserve’s balance sheet actions that could move expectations higher.

**Respondent 16:**

The influence of fiscal and monetary stimulus is expected to moderate during 2010 in an environment where the supply of credit to households and small businesses remains constrained as banks deal with continuing problems. These forces, and ongoing uncertainty over the general business environment, will restrain business investment and jobs creation relative to a more typical recovery experience. In addition, I anticipate an elevated personal savings rate that will dampen spending as households attempt to rebuild their balance sheets. I assume that adverse forces affecting economic growth over the medium-term are also weighing, somewhat, on economic potential.

**Respondent 17:**

Recent developments have been encouraging, but much of the recent growth impetus has come from fiscal stimulus and a slowing rate of inventory liquidation, which will carry us only so far. Significant retardants remain. For example, the drag from delayed losses in residential real estate coupled with consumer and commercial real estate losses threatens to delay a recovery in credit availability, and the uncertainty created by a plethora of new economic and regulatory initiatives is discouraging commitments to expansion of employment and CAPEX in the U.S.



## Forecast Narratives (continued)

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

**Respondent 1:**

N/A

**Respondent 2:**

Compared to the 70% confidence intervals indicated for the Greenbook forecasts, the differences between the point estimates in the Greenbook baseline forecasts and my forecasts are not different in any meaningful statistical sense. However the time path of my projections does differ from the Greenbook baseline, in that I see stronger near-term growth than that in the Greenbook baseline in 2010, slightly weaker real growth than the Greenbook in 2011 and real growth subsequently tapering off in 2012. This contrasts with the higher real growth rates that the Greenbook shows in 2011 and 2012. I see inflation higher in the intermediate period before returning to the rate that I believe is consistent with appropriate monetary policy. In contrast, the Greenbook forecast sees inflation declining and persisting at very low rates for “an extended period”.

**Respondent 3:**

N/A

**Respondent 4:**

I continue to be moderately more pessimistic on job creation, with concomitant effects on some other variables.

**Respondent 5:**

I believe that we will need to be normalize policy sooner and more aggressively than in Greenbook. Holding rates so low through late 2011 will invite asset imbalances and lead to a problematic rise in inflation expectations and, eventually, inflation. With a more restrictive fiscal policy, I expect real GDP growth will be somewhat slower than in Greenbook and the unemployment rate will be somewhat higher. Even with a less accommodative monetary policy, I expect inflation to be higher in 2011 and 2012.

**Respondent 6:**

slightly slower growth and lower inflation. assumed constant exchange rate and slight uptilt in household saving rate.

**Respondent 7:**

We expect a somewhat slower recovery in activity and employment than in the Greenbook. As concerns inflation, we expect core inflation to be lower than in the Greenbook as a result of a more meaningful trade-off between inflation and unemployment.

**Respondent 8:**

Similar to the Greenbook; perhaps slightly more pessimistic in the near term due to concerns about the labor market and bank credit.

**Respondent 9:**

I believe that under an appropriate monetary policy the public’s inflation expectations would be well anchored, and the inflation path would be higher than in the Greenbook. An appropriate monetary policy might place policy rates on an upward trajectory by year-end.

**Respondent 10:**

N/A

**Respondent 11:**

Despite similar GDP growth forecast, we do not see the unemployment rate falling as sharply in 2012. We are putting more weight on the possibility that the erosion of worker skills due to the long duration of unemployment spells in this recession will prove a more persistent drag on labor markets than assumed by the Greenbook.

**Respondent 12:**

My inflation forecast is less influenced by the degree of resource utilization in the economy and so I project a higher pace of inflation over 2010-2012 than does the Greenbook. Given the strength of economic growth in my forecast and the higher inflation path, the policy path is less accommodative over the forecast horizon.

**Respondent 13:**

We assume lower inflation persistence than does the GB. Thus, for our medium-term inflation outlook we project inflation within the “mandate-consistent” range in late 2011 under the assumption of well-anchored inflation expectations.

**Respondent 14:**

My forecast is very similar to the Greenbook forecast.

**Respondent 15:**

My forecast calls for considerably slower growth in 2010 largely due to a weaker business fixed investment profile. Despite weaker growth, my outlook entails higher core PCE inflation in the second half of 2010 and beyond. My assumption of stable inflation expectations in the neighborhood of 2% and a notionally smaller measure of excess capacity pulls the inflation rate upward as the economy recovers, and into the 1.7-2% range by the end of 2012.

**Respondent 16:**

My forecast for unemployment and inflation is reasonably well aligned to the Greenbook baseline. However, I project a more restrained pace of real GDP growth that is reflected across most expenditure categories, and particularly business fixed investment, where I judge uncertainties about the business environment and access to credit to be especially constraining.

**Respondent 17:**

The Greenbook baseline forecast underestimates the drag on the economy arising from the uncertainty created by new economic and regulatory initiatives. It does not take into account inducements deriving from regulatory and taxation initiatives for corporations and investors to invest in more promising markets abroad at the expense of job creation and CAPEX at home. It may also underestimate future upward pressure on commodity prices and headline inflation due to a strengthening world economy.

## Forecast Narratives (continued)

4(d). Please describe the key factors causing your forecast to change since the previous quarter's projections.

**Respondent 1:**

N/A

**Respondent 2:**

Recent measures of economic activity appear to be evolving as I had expected in my projections from last quarter, hence I have not revised my projected path of real output for 2010. My forecasts for the unemployment rate are unchanged, as are my inflation forecasts (headline and Core PCE) for 2010 and beyond.

**Respondent 3:**

I am more pessimistic about unemployment because I have been looking at the turnover data in JOLTS.

**Respondent 4:**

Continued overall improving trend over the last quarter strengthens my expectation of modestly above trend growth in 2010, though the unexpectedly large GDP increase in Q4 has likely pulled some growth from the early part of 2010

**Respondent 5:**

My forecasts have not changed appreciably since the November FOMC meeting. However, there have been some minor timing changes.

**Respondent 6:**

no material difference. economic activity and core inflation tracking reasonably closely to expectations.

**Respondent 7:**

There were only small changes to both the real and the inflation outlook.

**Respondent 8:**

Incoming data have generally been positive, making me slightly more optimistic and also a bit more confident about the outlook. Financial markets generally continue to improve and the banking system is a bit stronger. My concerns about a jobless recovery remain but have diminished somewhat, since firms have cut costs so deeply that they are likely to need to hire to meet new orders.

**Respondent 9:**

My forecast is very similar to the one submitted last fall. One small change is that PCE inflation is higher early this year due to energy prices.

**Respondent 10:**

N/A

**Respondent 11:**

Our forecast is very close to last quarter's. We increased our projection for total PCE inflation a couple of tenths in response to higher oil prices.

**Respondent 12:**

N/A

**Respondent 13:**

Releases since the end of October were on net broadly consistent with our central scenario. The most

significant changes in the output forecast were produced by the revisions to labor compensation in the first half of 2009. For our inflation forecast the main change was in our assessment of the upside risks to inflation. The level of concern about the potential inflationary impact of large government deficits and an enlarged Federal Reserve balance sheet has lead us to increase the level of inflation associated with a temporary unanchoring of inflation expectations.

**Respondent 14:**

Since October, economic news and financial conditions have been about what I had anticipated, and my forecasts for real activity and inflation are little changed.

**Respondent 15:**

A quicker resolution of the inventory cycle compared to my previous outlook shifts some GDP growth from the first half of 2010 into the fourth quarter of 2009. The underlying weaknesses that I had previously identified remain, and will likely produce a weaker recovery relative to historical norms.

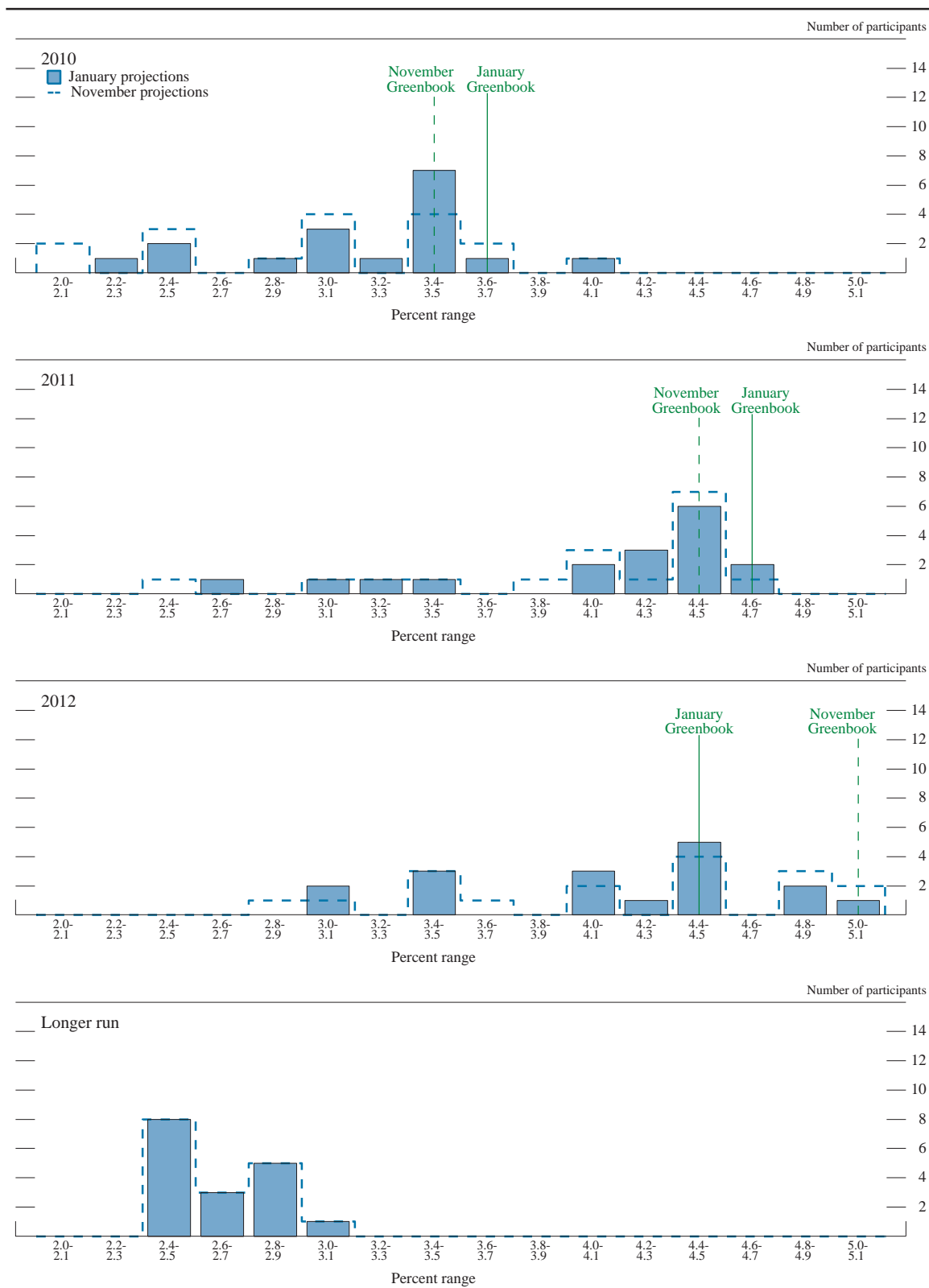
**Respondent 16:**

I have pushed up my growth estimate for the fourth quarter of 2009 on the basis of the stronger Incoming data. As a result, I have also marginally increased my real GDP growth forecast relative to the previous quarter's projection.

**Respondent 17:**

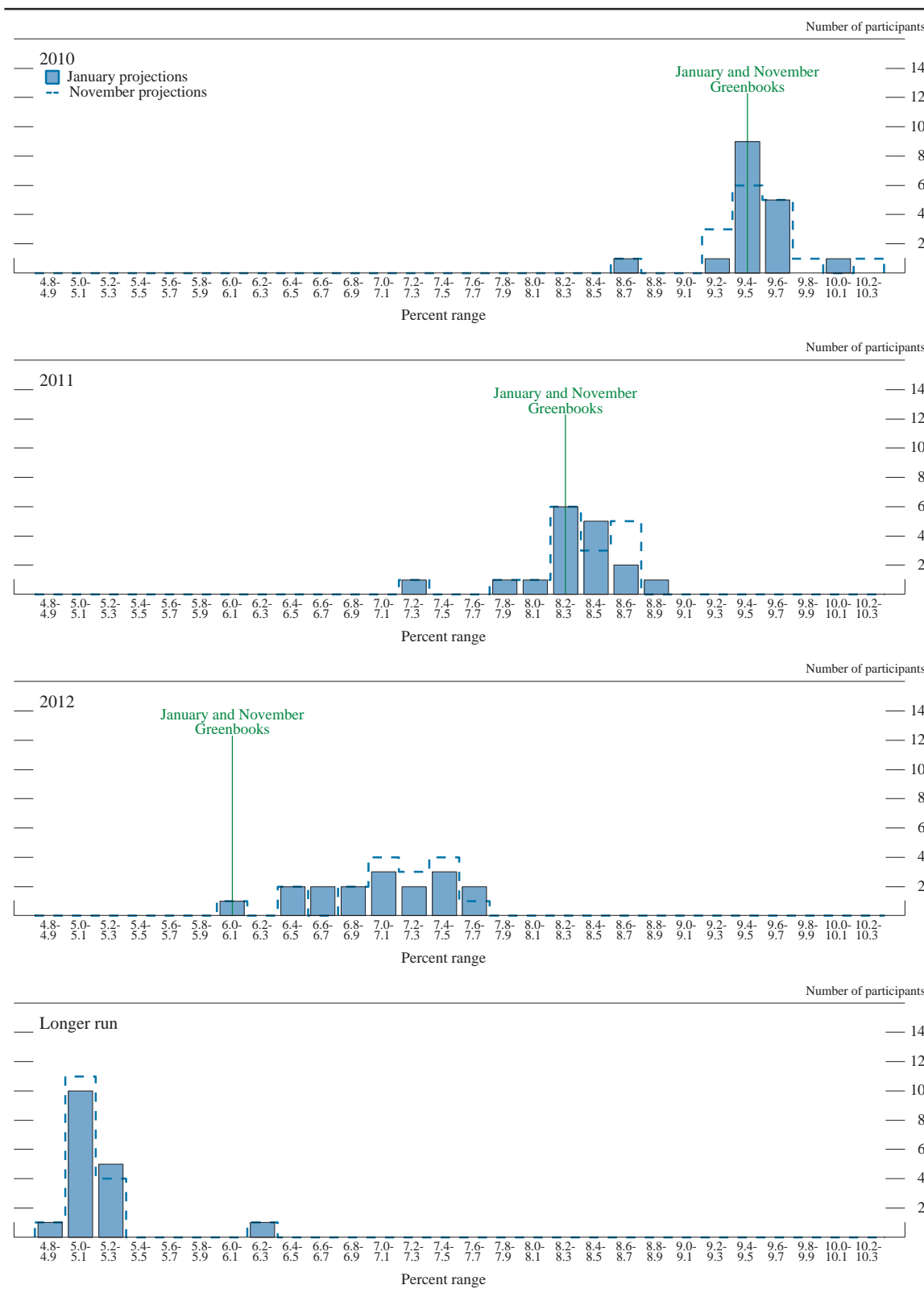
Recent reports confirm growth in household incomes and consumer purchases, the stabilization of residential investment, the beginnings of an upturn in business equipment and software investment, and the elimination of the negative growth contribution from cuts in business inventories. Job cuts and the tightening of bank lending standards may soon be ending. Consequently, the near-term outlook for real activity has brightened.

Figure 2.A. Distribution of participants' projections for the change in real GDP, 2010–12 and over the longer run



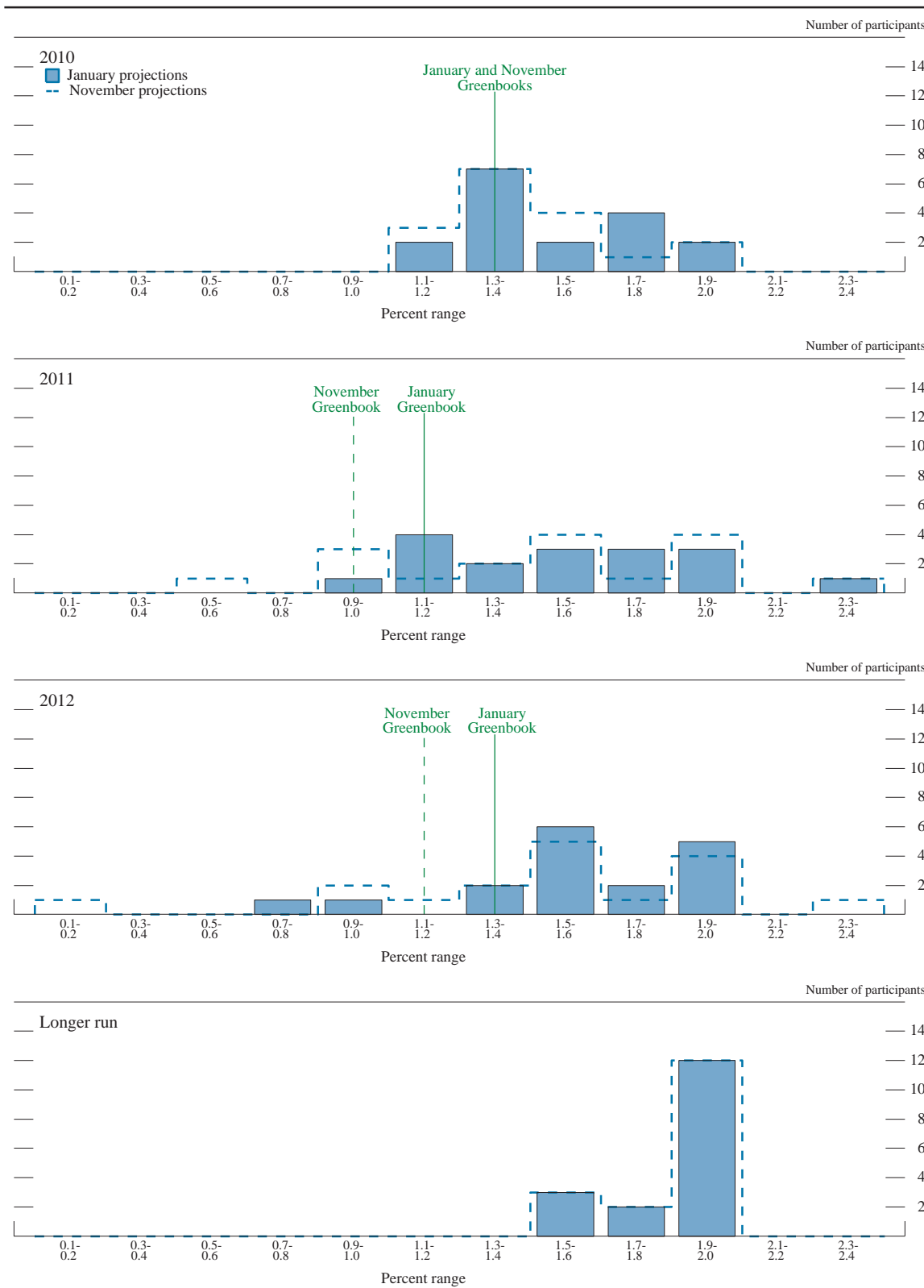
NOTE: Definitions of variables are in the general note to table 1.

Figure 2.B. Distribution of participants' projections for the unemployment rate, 2010–12 and over the longer run



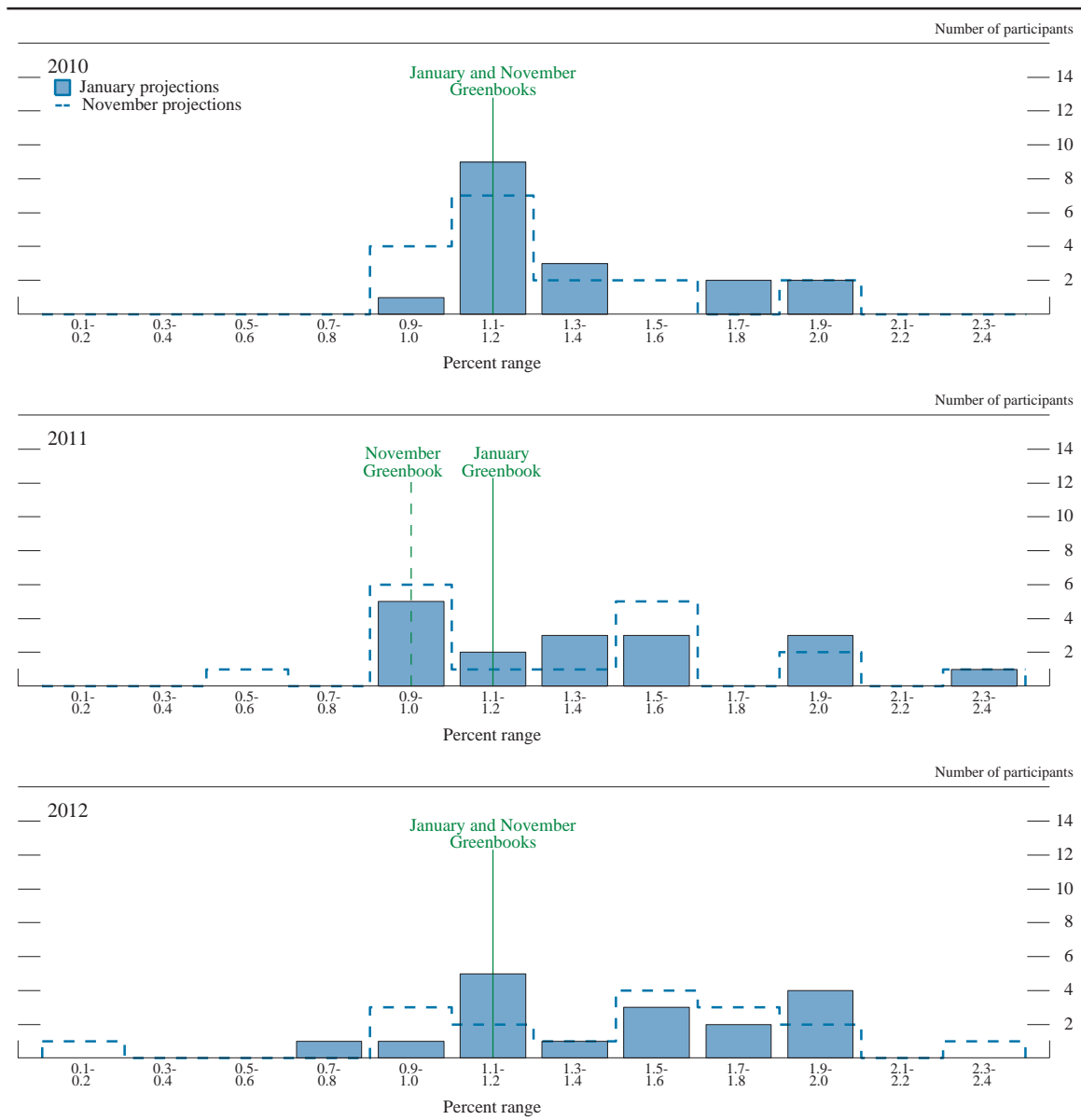
NOTE: Definitions of variables are in the general note to table 1.

Figure 2.C. Distribution of participants' projections for PCE inflation, 2010–12 and over the longer run



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

Figure 2.D. Distribution of participants' projections for core PCE inflation, 2010–12



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