

**Table 1: Economic Projections of Federal Reserve Governors and Reserve Bank Presidents <sup>1</sup>**

	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>Central Tendencies</b>			
Real GDP Growth	1.0 to 1.6	2.0 to 2.8	2.5 to 3.0
<i>April projections</i>	<i>0.3 to 1.2</i>	<i>2.0 to 2.8</i>	<i>2.6 to 3.1</i>
Unemployment Rate	5.5 to 5.7	5.3 to 5.8	5.0 to 5.6
<i>April projections</i>	<i>5.5 to 5.7</i>	<i>5.2 to 5.7</i>	<i>4.9 to 5.5</i>
PCE Inflation	3.8 to 4.2	2.0 to 2.3	1.8 to 2.0
<i>April projections</i>	<i>3.1 to 3.4</i>	<i>1.9 to 2.3</i>	<i>1.8 to 2.0</i>
Core PCE Inflation	2.2 to 2.4	2.0 to 2.2	1.8 to 2.0
<i>April projections</i>	<i>2.2 to 2.4</i>	<i>1.9 to 2.1</i>	<i>1.7 to 1.9</i>
<b>Ranges</b>			
Real GDP Growth	0.9 to 1.8	1.9 to 3.0	2.0 to 3.5
<i>April projections</i>	<i>0.0 to 1.5</i>	<i>1.8 to 3.0</i>	<i>2.0 to 3.4</i>
Unemployment Rate	5.5 to 5.8	5.2 to 6.1	5.0 to 5.8
<i>April projections</i>	<i>5.3 to 6.0</i>	<i>5.2 to 6.3</i>	<i>4.8 to 5.9</i>
PCE Inflation	3.4 to 4.6	1.7 to 3.0	1.6 to 2.1
<i>April projections</i>	<i>2.8 to 3.8</i>	<i>1.7 to 3.0</i>	<i>1.5 to 2.0</i>
Core PCE Inflation	2.0 to 2.5	1.8 to 2.3	1.5 to 2.0
<i>April projections</i>	<i>1.9 to 2.5</i>	<i>1.7 to 2.2</i>	<i>1.3 to 2.0</i>

1. Projections of real GDP growth, PCE inflation and core PCE inflation are fourth-quarter-to-fourth-quarter growth rates, i.e. percentage changes from the fourth quarter of the prior year to the fourth quarter of the indicated year. PCE inflation and core PCE inflation are the percentage rates of change in the price index for personal consumption expenditures and the price index for personal consumption expenditures excluding food and energy, respectively. Each participant's projections are based on his or her assessment of appropriate monetary policy. The range for each variable in a given year includes all participants' projections, from lowest to highest, for that variable in the given year; the central tendencies exclude the three highest and three lowest projections for each variable in each year.

**Table 1a**  
**Economic Projections for the First Half of 2008\***

**Central Tendencies and Ranges**

	<b>Central Tendency</b>	<b>Range</b>
Real GDP Growth	1.2 to 1.4	1.0 to 1.5
Total PCE Inflation	3.7 to 4.0	3.6 to 4.6
Core PCE Inflation	2.1 to 2.2	2.0 to 2.4

**Participants' Projections**

<b>Projection</b>	<b>Real GDP Growth</b>	<b>Total PCE Inflation</b>	<b>Core PCE Inflation</b>
<b>1</b>	1.50	4.60	2.40
<b>2</b>	1.20	3.70	2.10
<b>3</b>	1.40	4.00	2.20
<b>4</b>	1.10	3.60	2.00
<b>5</b>	1.30	3.70	2.10
<b>6</b>	1.40	3.80	2.10
<b>7</b>	1.40	3.80	2.20
<b>8</b>	1.30	3.80	2.20
<b>9</b>	1.20	4.10	2.40
<b>10</b>	1.40	3.80	2.10
<b>11</b>	1.00	4.30	2.20
<b>12</b>	1.40	3.80	2.00
<b>13</b>	1.40	3.70	2.10
<b>14</b>	1.50	3.80	2.40
<b>15</b>	1.40	3.80	2.10
<b>16</b>	1.40	3.80	2.10
<b>17</b>	1.40	3.80	2.10

\* Growth and inflation are reported at annualized rates.

**Table 1b**  
**Economic Projections for the Second Half of 2008\***

**Central Tendencies and Ranges**

	<b>Central Tendency</b>	<b>Range</b>
Real GDP Growth	0.6 to 2.1	0.4 to 2.2
Total PCE Inflation	3.6 to 4.6	3.2 to 4.8
Core PCE Inflation	2.3 to 2.5	2.0 to 2.6

**Participants' Projections**

<b>Projection</b>	<b>Real GDP Growth</b>	<b>Total PCE Inflation</b>	<b>Core PCE Inflation</b>
<b>1</b>	1.30	4.60	2.40
<b>2</b>	1.40	3.90	2.30
<b>3</b>	0.60	3.60	2.40
<b>4</b>	2.10	3.20	2.00
<b>5</b>	2.10	3.30	2.50
<b>6</b>	0.40	4.80	2.50
<b>7</b>	1.00	4.60	2.60
<b>8</b>	1.10	4.20	2.20
<b>9</b>	2.20	4.10	2.60
<b>10</b>	1.60	4.20	2.30
<b>11</b>	1.00	4.10	2.40
<b>12</b>	1.00	4.20	2.40
<b>13</b>	0.40	4.50	2.30
<b>14</b>	2.10	3.20	2.60
<b>15</b>	1.60	4.60	2.50
<b>16</b>	1.60	4.40	2.50
<b>17</b>	0.60	4.60	2.50

\* Projections for the second half of 2008 implied by participants' June projections for the first half of 2008 and for 2008 as a whole. Growth and inflation are reported at annualized rates.

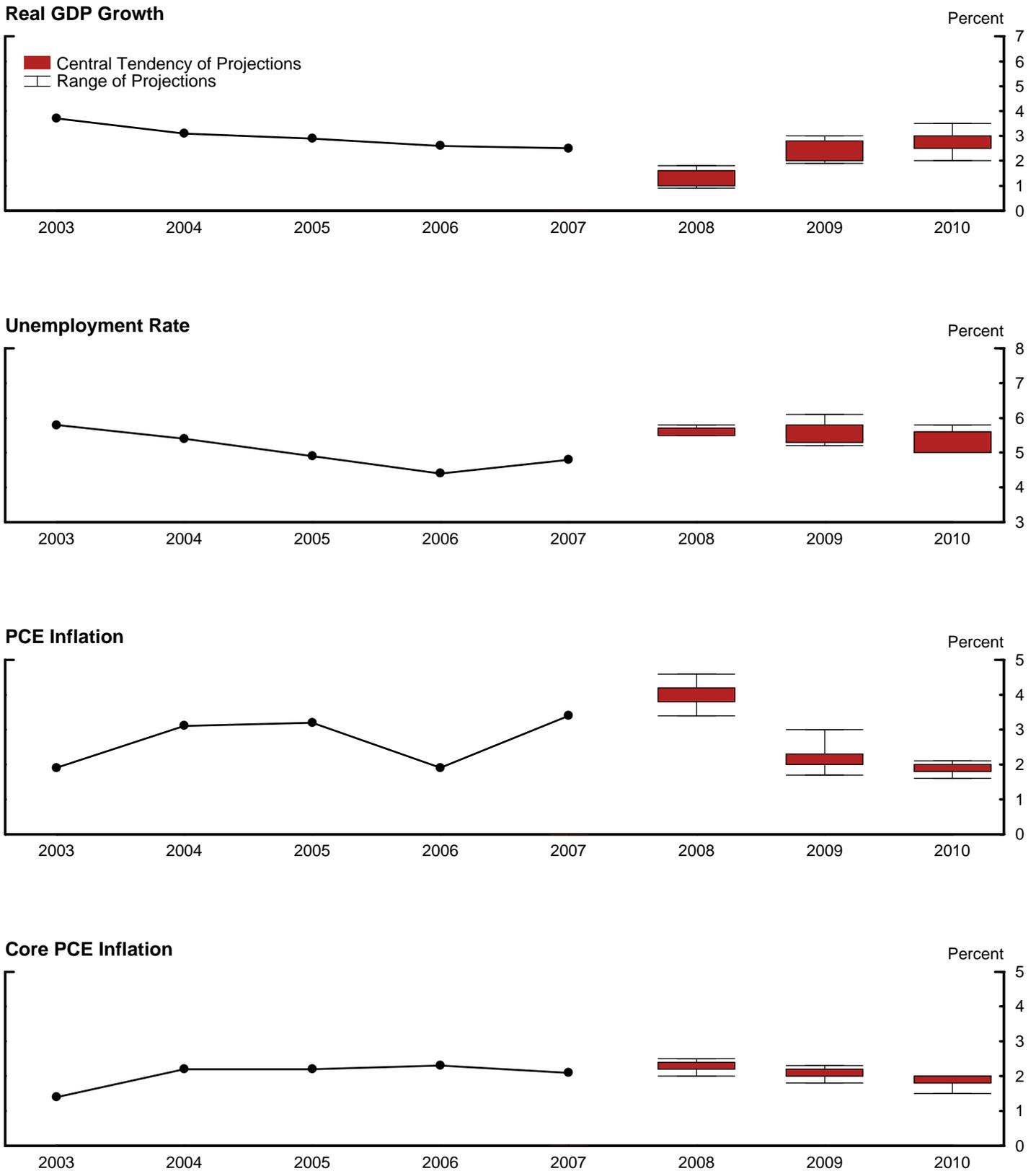
**Table 2: June Economic Projections**

Respondent	Year		GDP Growth	Unemployment Rate	Total PCE Inflation	Core PCE Inflation
1	2008		1.4	5.7	4.6	2.4
2	2008		1.3	5.6	3.8	2.2
3	2008		1.0	5.5	3.8	2.3
4	2008		1.6	5.6	3.4	2.0
5	2008		1.7	5.5	3.5	2.3
6	2008		0.9	5.8	4.3	2.3
7	2008		1.2	5.7	4.2	2.4
8	2008		1.2	5.6	4.0	2.2
9	2008		1.7	5.6	4.1	2.5
10	2008		1.5	5.5	4.0	2.2
11	2008		1.0	5.7	4.2	2.3
12	2008		1.2	5.5	4.0	2.2
13	2008		0.9	5.6	4.1	2.2
14	2008		1.8	5.5	3.5	2.5
15	2008		1.5	5.5	4.2	2.3
16	2008		1.5	5.7	4.1	2.3
17	2008		1.0	5.8	4.2	2.3
1	2009		2.0	5.6	2.5	2.3
2	2009		2.3	5.6	2.1	2.1
3	2009		2.0	5.8	2.8	2.1
4	2009		3.0	5.4	1.7	1.8
5	2009		2.5	5.6	2.2	2.2
6	2009		2.2	5.7	2.1	2.1
7	2009		2.4	5.3	2.2	2.2
8	2009		2.2	5.8	2.0	2.0
9	2009		2.7	5.3	2.2	2.0
10	2009		2.8	5.4	1.9	1.9
11	2009		2.7	5.6	2.3	2.0
12	2009		2.6	5.4	2.0	2.0
13	2009		2.0	5.8	2.0	2.1
14	2009		3.0	5.2	3.0	2.2
15	2009		2.8	5.3	2.1	2.1
16	2009		2.0	5.4	2.3	2.3
17	2009		1.9	6.1	2.0	1.9

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

Respondent	Year		GDP Growth	Unemployment Rate	Total PCE Inflation	Core PCE Inflation
1	2010		2.0	5.4	2.0	2.0
2	2010		2.5	5.6	1.8	1.8
3	2010		2.8	5.5	2.0	2.0
4	2010		2.6	5.2	1.8	1.8
5	2010		2.5	5.6	2.0	2.0
6	2010		3.2	5.4	1.9	1.8
7	2010		2.9	5.1	1.9	2.0
8	2010		3.0	5.6	1.8	1.8
9	2010		2.7	5.1	1.7	1.7
10	2010		3.5	5.0	1.9	1.9
11	2010		2.6	5.4	2.1	1.9
12	2010		2.9	5.1	1.8	1.8
13	2010		2.8	5.7	2.0	2.0
14	2010		2.7	5.0	2.0	1.5
15	2010		3.1	5.0	1.9	1.9
16	2010		2.5	5.0	1.9	1.9
17	2010		3.0	5.8	1.6	1.5

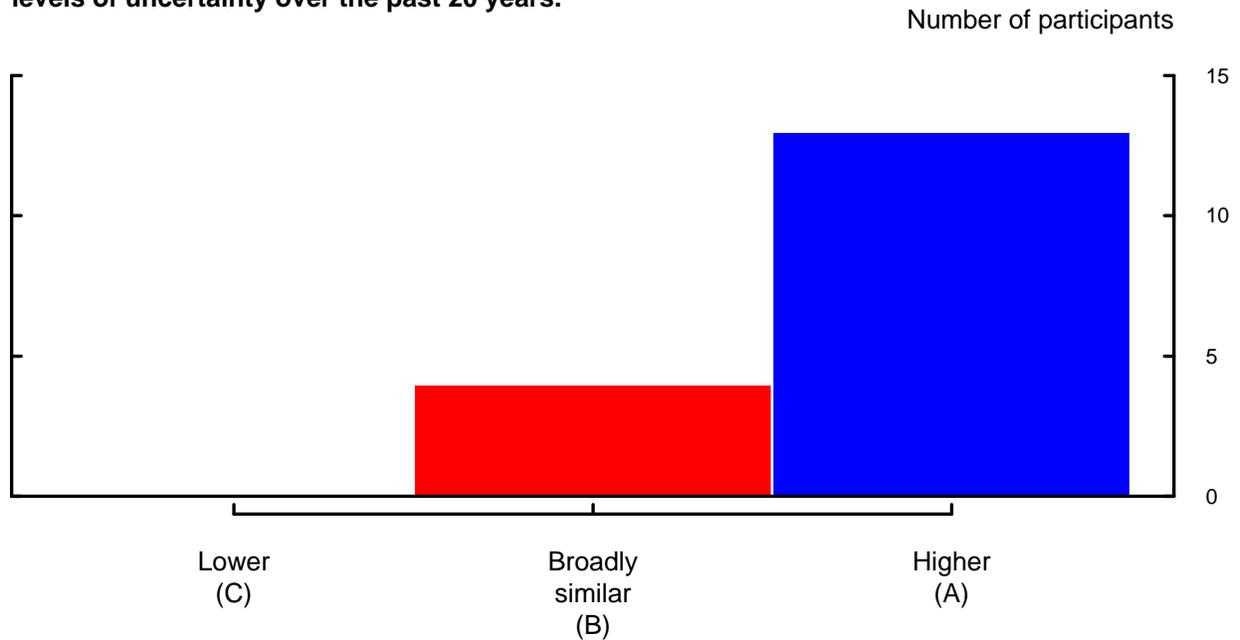
### Chart 1: Central Tendencies and Ranges of Economic Projections\*



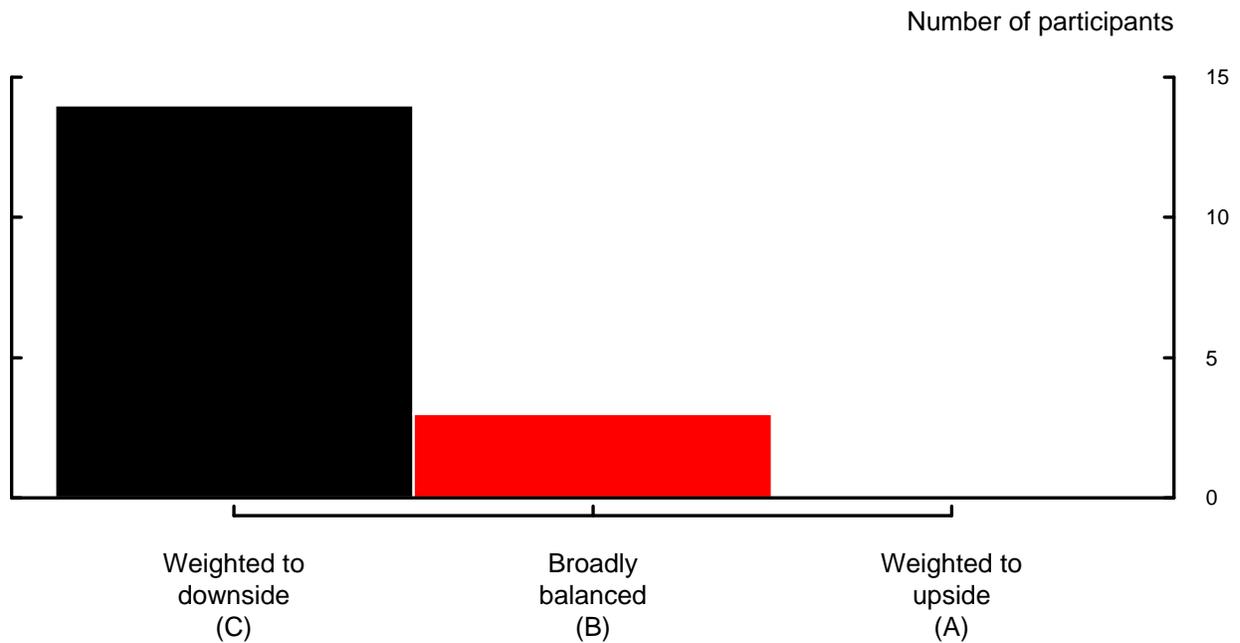
\* See notes to Table 1 for variable definitions.

### 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.**

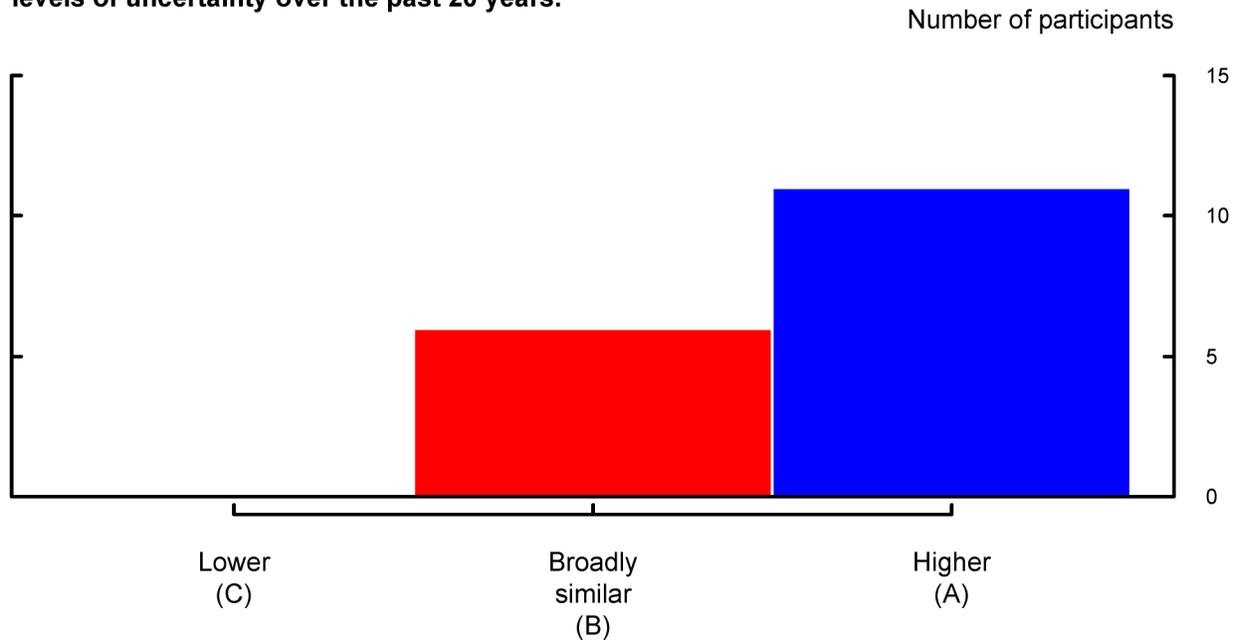


**Individual Responses**

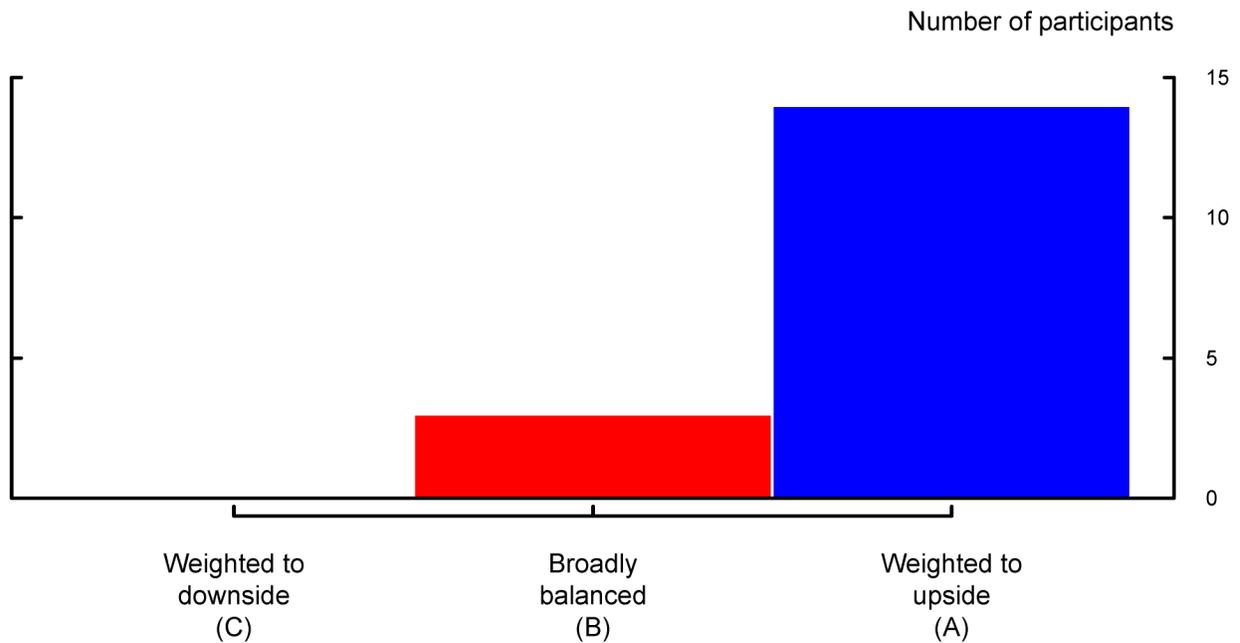
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	A	B	A	A	B	A	A	A	B	A	A	A	A	B	A	A	A
2(b)	B	C	C	C	C	C	C	C	B	C	C	C	C	B	C	C	C

### 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.**

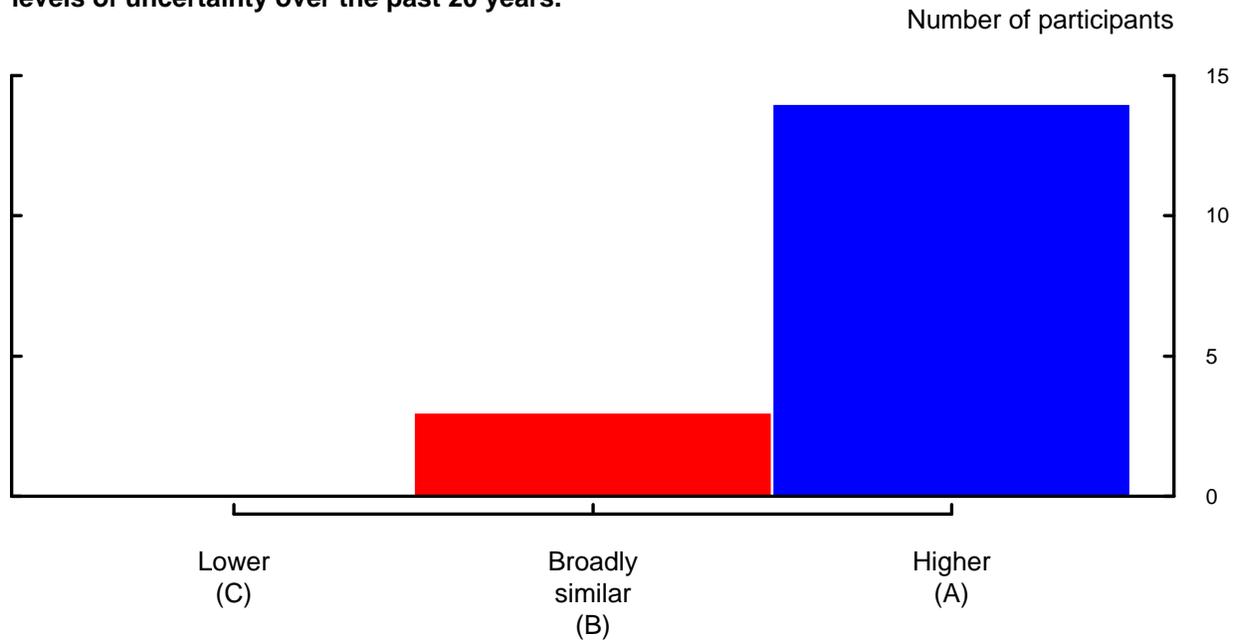


**Individual Responses**

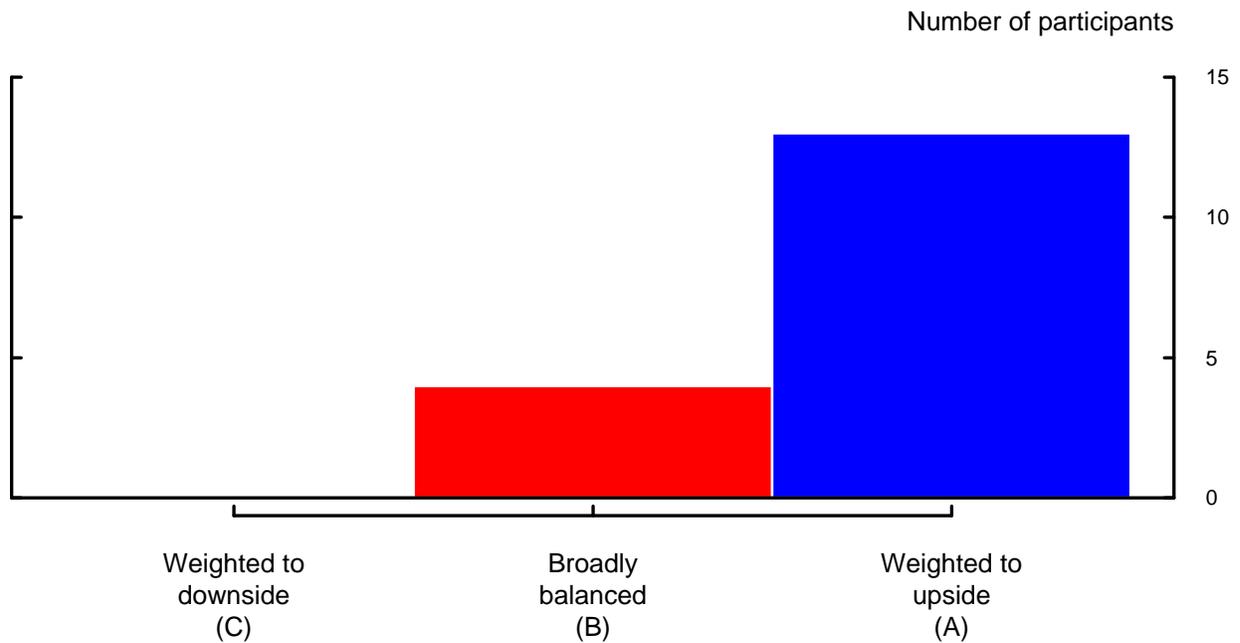
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	B	B	A	A	B	A	A	B	B	A	A	A	A	B	A	A	A
2(b)	B	A	A	A	A	A	A	A	B	A	A	A	A	B	A	A	A

### Uncertainty and Risks - Total 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.

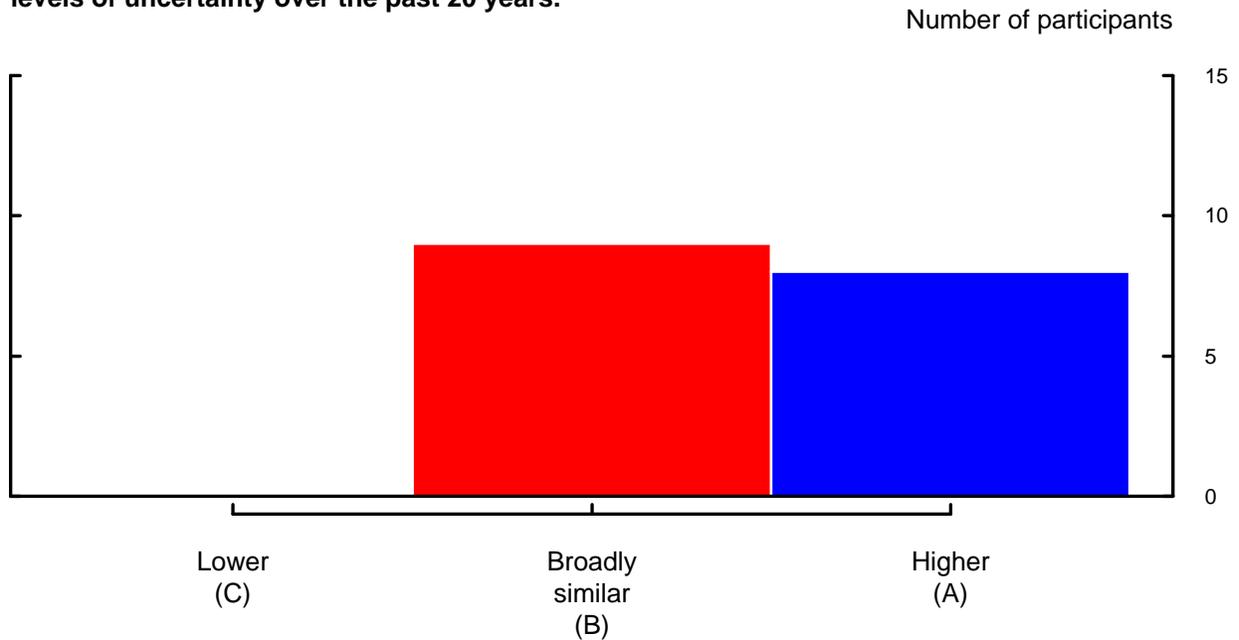


#### Individual Responses

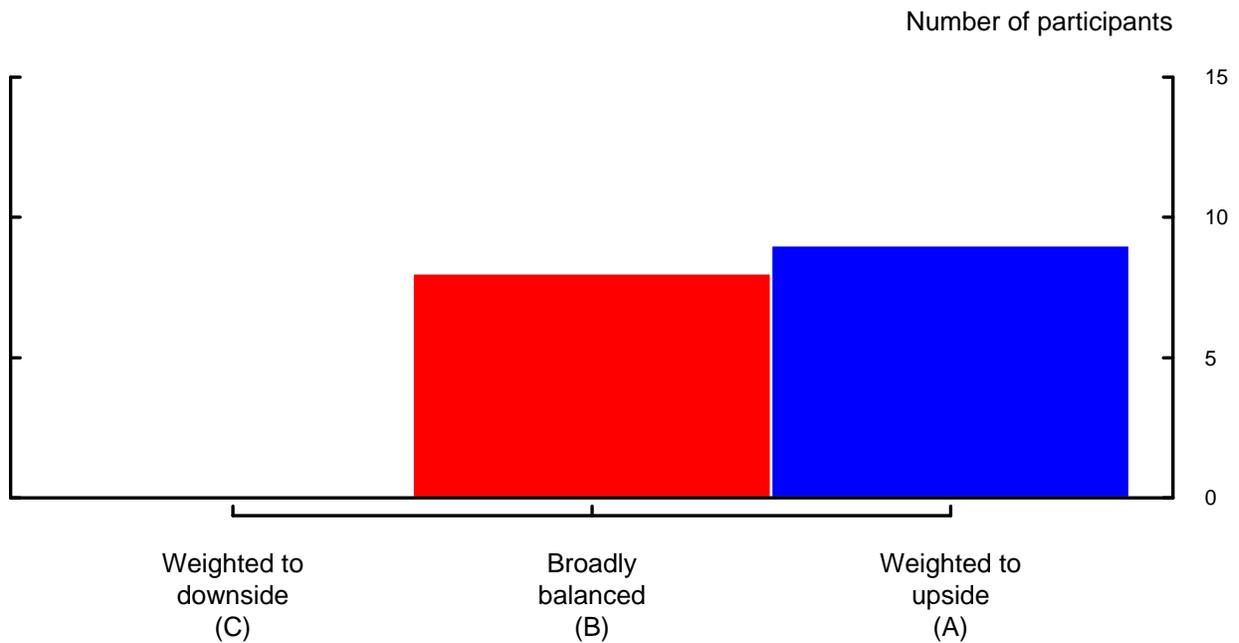
Respondent	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2(a)	A	A	A	A	A	A	A	A	B	A	A	A	A	B	A	A	B
2(b)	A	A	A	A	A	A	A	B	A	A	A	A	B	B	A	A	B

### 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	A	A	A	B	B	A	B	B	B	A	A	B	B	B	A	B
2(b)	A	A	A	B	A	B	A	B	A	B	A	A	B	B	B	A	B

## 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 standard deviation of FRBNY forecast distribution for GDP growth and core PCE inflation relative to those reported in Reifschneider and Tulip.

**Respondent 5:**

N/A

**Respondent 6:**

Uncertainty regarding growth and unemployment stems from the difficult-to-predict nature of both the financial crisis and the housing correction. Large swings in energy and other commodity prices make PCE inflation unusually difficult to predict.

**Respondent 7:**

N/A

**Respondent 8:**

The persistent run-up in energy and food prices, and highly uncertain prospects for prices of these commodities, implies greater uncertainty associated with my projections of PCE inflation. There is also greater uncertainty surrounding my projections of GDP growth in comparison with the experience of the past 20 years because of persistent strains in financial markets and on large financial institutions and because it is unclear if consumer spending, in particular, will be sustained over the next several quarters.

**Respondent 9:**

N/A

**Respondent 10:**

N/A

**Respondent 11:**

No Comment.

**Respondent 12:**

The size and persistence of the financial and oil shocks and the housing cycle raise the level of uncertainty around our projections for real economic activity. The elevation in some measures of inflation expectations, as well as the increased volatility in commodities prices, also raise the level of uncertainty about our inflation projections.

**Respondent 13:**

N/A

**Respondent 14:**

N/A

**Respondent 15:**

Uncertainties about the path for financial market improvement hence for financial conditions and about oil prices result in heightened uncertainty about GDP and overall inflation.

**Respondent 16:**

N/A

**Respondent 17:**

The uncertainty attached to my projections for GDP and unemployment over the next four quarters is above average, after which uncertainty returns to average. The uncertainty surrounding inflation projections is about average, reflecting higher uncertainty about commodity prices offset by lower uncertainty associated with appropriate monetary policy.

## 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:**

N/A

**Respondent 3:**

N/A

**Respondent 4:**

Quantitative judgment based on the difference between projection and expected value from FRBNY forecast distribution. Upside risk to total inflation from risks to conditioning assumption on future oil prices and refining margins.

**Respondent 5:**

While we still believe the risks to growth are weighted to the downside, we believe those risks have diminished over the past two months. This reflects the lack of evidence that a negative feedback loop is in train—the scenario that had presented the largest down side risk to the outlook in April.

We continue to see the risk of a larger-than-expected passthrough of energy and other commodity price increases to core inflation and inflationary expectations.

**Respondent 6:**

N/A

**Respondent 7:**

N/A

**Respondent 8:**

Although less likely than formerly, there remains a nontrivial probability that the economy will contract in the second half of the year because the number of "identifiable negatives" is high.

**Respondent 9:**

My growth forecast is essentially the same as in the April projection and risks to growth remain balanced. I've revised up my near-term inflation forecast. Given the monetary policy accommodation in the pipeline, the year-to-date data on inflation and inflation expectations, and the recent behavior of oil and commodity prices, inflation risks remain to the upside.

**Respondent 10:**

N/A

**Respondent 11:**

No Comment.

**Respondent 12:**

Despite recent upside surprises for real growth, we continue to view the risks to the forecast distribution for economic activity as skewed toward weakness, as the credit crunch boosts a recessionary tail risk. An

upside risk to overall inflation is consistent with a possible continuation of the recent surprising run-up in energy and food prices. Despite recent downside surprises for core inflation, we view the risks to the forecast for core inflation as somewhat skewed to the upside, as commodity price passthrough may finally come to fruition.

**Respondent 13:**

As in my last projection, although I see somewhat more downside risk on GDP growth (and upside risk on unemployment), I do not see the skewness to be very large because the tail risk is much lower than it was in the first quarter of the year.

**Respondent 14:**

N/A

**Respondent 15:**

Growth risks are skewed to the downside by the possibilities that financial conditions do not improve along the assumed path, that global monetary policies are tightened appreciably to counter the potential effects of recent increases in oil prices on inflation expectations, and that the depressed level of consumer and business confidence begins to show through more to spending. The upside risk to overall inflation results from the greater possibility that oil prices continue to rise, dragging along inflation expectations. With respect to core inflation the upside oil and downside growth risks tend to offset.

**Respondent 16:**

N/A

**Respondent 17:**

The risk to real growth is weighted to the downside in the second half of this year, due to the possibility of a weaker fundamental trend in consumer spending emerging after the effects of the stimulus checks wear off, and the possibility of a greater than expected weakness in business fixed investment.

## 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**

15

**NO**

2

**Respondent 1:** Yes

Expect rate increases substantially more aligned with current market forecast

**Respondent 2:** Yes

I assume the federal funds rate is raised 25 basis points at this meeting, and then reaches 3 percent by the end of this year and 4.25 percent by the end of 2009.

**Respondent 3:** Yes

Achieving an acceptable path for inflation likely requires a more restrictive policy than is assumed in the Greenbook.

**Respondent 4:** Yes

Target federal funds rate held at 2.0% through the end of 2008Q3. By the end of 2009, it renormalizes back to 3.75%, then 4.25% by mid-2010. In the near-term the risks around this path are balanced but in the medium term they are to the upside.

**Respondent 5:** Yes

Our funds rate assumption is close to that embedded in futures markets. Specifically, we assume the funds rate will be 2-1/2 percent in 2008:Q4 and 3-3/4 percent in 2009:Q4

**Respondent 6:** No

Slightly more aggressive in raising rates late in 2008 and during 2009, higher terminal point in 2009.

**Respondent 7:** Yes

I assume a somewhat greater increase in the federal funds rate during 2009 and the possibility of increasing rates before the end of 2008.

**Respondent 8:** Yes

I expect the Federal funds rate target to increase earlier than indicated in the Greenbook and to rise modestly more rapidly as well.

**Respondent 9:** Yes

My policy path is considerably steeper than the Greenbook baseline policy path assumption. My forecast calls for the funds rate to begin rising in 2008Q3. It reaches 2.75 percent by the end of 2008 and 4.5 percent by the end of 2009. The funds rate remains at 4.5 percent in 2010. In my view, in order to keep inflation from rising and keep inflation expectations anchored, the FOMC needs to be aggressive in taking back the insurance it has put in place.

**Respondent 10:** Yes

Appropriate monetary policy requires an easier stance in 2009 than what is assumed in the Greenbook.

**Respondent 11:** Yes

My path for the fed funds rate is based on a Taylor-rule specification. It calls for a trajectory that begins to rise in the fourth quarter of 2008 and remains somewhat higher than the Greenbook path through 2009.

**Respondent 12:** Yes

I assume that the federal funds rate edges up to 2-1/4 percent at the end of 2008, and then gradually rises to 3 percent in 2009:Q4 and to 4-1/4 percent in 2010:Q4.

**Respondent 13:** Yes

Because I think the delayed credit recovery scenario is most likely and do not think that inflation expectations are likely to blow out, I have the fed funds rate increasing by less than the greenbook baseline and more in line with the delayed credit recovery scenario.

**Respondent 14:** Yes

My judgement is that the FOMC will need to raise interest rates more aggressively than the path projected in the June 2008 Greenbook in order to achieve a goal of 1.5 percent on core PCE inflation in 2010.

**Respondent 15:** No

N/A

**Respondent 16:** Yes

My baseline assumption is that the funds rate will remain at 2 percent over the balance of 2008, and then increase to the 4 to 4-1/2 percent range by sometime in 2010.

**Respondent 17:** Yes

Under appropriate policy the funds rate is likely to increase sooner than in the Greenbook. Recent statements by Federal Reserve officials have bolstered expectations that the FOMC will react promptly to inflation pressures, and market have built in two rate increases this year as a result. I believe the Committee will find it too damaging to its credibility to disappoint those expectations, despite rising unemployment and lingering financial market "strains."

## Forecast Narratives

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

**Respondent 1:**

Significant uncertainty for 2H 2008 with respect to impact on financial institution weakness on broader economy

**Respondent 2:**

(1) I expect growth to be below trend through the end of 2008, reflecting continuing declines in residential investment and high energy prices. Tight financial conditions linger and restrain growth somewhat through early 2009. Strong export growth—driven by a decline in the dollar and strong foreign growth—provides near-term support. Finally, continued high energy prices pose a downside risk to growth.

(2) Over time, I expect economic growth to be driven by an accommodative monetary policy, tax rebates, a less rapid pace of decline in housing, and stable or falling energy prices.

(3) I expect inflation to moderate gradually over the forecast horizon due to a leveling off of food and energy prices, and due to faster removal of policy accommodation and the insurance taken out against financial turmoil. Since I assume the effect of slack on inflation is modest at best, I do not expect near-term economic weakness to contribute to a rapid decline in inflation.

(4) Despite below trend growth, an accommodative monetary policy, higher energy and commodity prices, greater dollar depreciation, and a possible loosening of the anchoring of long-term inflation expectations pose considerable upside risks to the expected moderation in core and overall inflation.

**Respondent 3:**

Commodity-price increases soon begin bleeding over into core inflation and inflation expectations. Policy responds with a series of rate increases during the second half of 2008. The housing and financial sectors undergo a long, drawn out convalescence. Banks gradually repair their fragile balance sheets.

**Respondent 4:**

Our central projection has the US economy experiencing a weak recovery from the subdued growth in the first part of 2008. Growth remains near its potential rate through 2009-10 implying we see only a narrowing rather than a complete closing of the output gap in this period. Although we judge the economy will just skirt a recession, the chance of a recession remains high.

Within the central scenario the bulk of the correction in housing will be completed by mid-2009 and residential investments large drag on GDP will be over by the end of 2008. The decline in housing prices will continue through the end of 2009 with about a 12% peak to trough drop using the OFHEO repeat sales index (purchase only). Net exports provide a boost to GDP growth in 2008 and 2009.

We project a continued very gradual moderation in core inflation with total inflation running well above core in the summer of 2008 but then moving in line with the core projection. This path is based on inflation expectations remaining well-contained, our assessment of the FOMC inflation objective, and the opening of an output gap in 2008 along with little evidence higher energy and food costs are passing-through to labor compensation.

The risks to our central projection are substantial. The main short-term one is that the ongoing turmoil in financial markets further restricts the supply of credit, exacerbating contractionary forces which in turn leads to a further tightening of credit conditions and so on. Over the medium term a major risk is that

trend productivity growth will differ from our conditioning assumption. A related risk on the downside is a steeper-than-assumed rise of the personal saving rate resulting from wealth effects.

For core inflation, we see the risks as roughly balanced and for total inflation to the upside. There are risks on the downside if a recession occurs. However, potential pass-through of higher costs stemming from higher energy and commodity prices, and the decline in the exchange value of the dollar pose upside risks. Further, the behavior of some measures of inflation expectations over the last few months continues to suggest that private agents might have less confidence in the FOMC's commitment to price stability than in previous periods during the 2000s expansion when total inflation was running above core.

The combination of this risk profile, the heightened uncertainty present around potential turning points and the ongoing volatility in financial and commodity markets produces elevated uncertainty around our central projection compared to typical levels.

**Respondent 5:**

We assume that financial headwinds and reduced purchasing power due to higher energy prices will hold growth below potential over the course of 2008.

The financial headwinds are assumed to dissipate as we move forward, as institutions build on the progress they have already made in coping with problem assets and in raising new capital. The speed at which these headwinds ease presents a two-sided risk to the forecast.

Increases in consumer energy prices are assumed to peak relatively soon; this assumption relies on current quotes from futures markets, which have proved to be poor predictors. The associated uncertainty over the prospects for energy prices presents a risk to both the growth and inflation outlooks.

Under our forecast for growth, the economy maintains a modest degree of resource slack throughout the projection period. This slack is viewed as necessary to offset the cost pressures from energy and other commodity prices and to help keep inflationary expectations in check. The ability of the slack to offset the other pressures on inflation is another source of uncertainty and risk to the inflation forecast.

**Respondent 6:**

Consumption spending was surprisingly strong in Q2. Seems likely to be much weaker in H2, reflecting falling real income and wealth, the waning effects of the rebates, high energy prices, tight credit, and poor sentiment. Residential investment will continue weak and nonresidential investment will slow considerably from recent pace. Exports will continue to support growth and the negative impact of residential construction on GDP may begin to wane by Q4, but overall the second half now looks weaker than the first half. Financial conditions will remain stressed with periods of improvement and retreat. A technical recession probably began in the first half of 2008, based on monthly data. The jump in the unemployment rate in May was probably overstated but unemployment will rise as growth remains very slow. Growth will be slow until the second half of 2009 (above trend in 2010) and job creation will lag, as in previous downturns.

Inflation depends critically on commodity prices, which are very difficult to predict. The best guess is for stabilization or more moderate increases in energy prices, which will lead headline inflation to slow toward the end of this year. There will be more passthrough to core than in the past, as the increases in raw materials will be perceived as persistent rather than transitory. Slack in the labor market, slowing wage growth, decent productivity growth, slightly tighter markups, modest increases in rents will keep core inflation from rising much.

**Respondent 7:**

The persistence in the increases in a number of commodity prices, particularly energy, have led me to increase my assessment of the uncertainty surrounding forecasts of both headline and core inflation. The risks due to the housing market and the impact of the financial turmoil – and a continuing concern about a lingering negative feedback between the two – also lead to my assessment of high uncertainty surrounding forecasts of real GDP and unemployment.

**Respondent 8:**

My outlook for '08 and '09 continues to be influenced by the "headwinds" episode of the early 1990s and the extensive time required to work off excess inventories in the housing sector. However, I expect that these problems will have diminished appreciably by 2010 and that the economy will expand at a pace modestly above trend in that year. With appropriate monetary policy, I expect core inflation to decline to an acceptable rate by 2010.

**Respondent 9:**

The recent data on the economy have been only slightly better than assumed in my April forecast. I continue to assume trend growth of 2.7 percent but there remains considerable uncertainty around that number. I expect the economy to pick up at the end of 2008 and get back to trend growth in 2009 as the housing correction unwinds and financial markets stabilize. I continue to assume a relatively small impact of tax rebates on consumer spending in 2008. Given the recent behavior of oil prices and other commodity and import prices, and the monetary policy easing already in place, there may be more upward pressure on headline and core inflation over the forecast horizon than in my baseline forecast. This would necessitate more aggressive monetary policy than in my baseline to restrain expectations and bring inflationary pressures back to a rate consistent with my long-run goal.

**Respondent 10:**

We maintain a weak outlook for GDP growth over the course of this year. While consumer expenditures in April and May were stronger than expected, we view the current strength in consumption as temporary, with more consumption now coming at the expense of less consumption for the remainder of the year. The consumption fundamentals remain weak. The labor market is contracting, households net worth is decreasing, and soaring energy prices are limiting discretionary spending. Moreover, longer-term yields have increased noticeably and credit markets remain tight. In this context, the fiscal stimulus provides only a partial offset. We expect the pace of economic activity over the second half of this year to be only slightly faster than in the first half the result of a diminishing drag to growth from residential investment. In the first half of 2009, growth is still slightly below potential, as households expenditures remain constrained by declining net worth associated with falling house prices. The economy is then expected to grow significantly above potential in 2009:H2 and in 2010, when households net worth starts to stabilize and the underlying monetary stimulus to all interest-sensitive components of demand becomes more apparent.

The unemployment rate peaks at 5.6 percent at the beginning of 2009, and is then on a downward trajectory for the rest of the forecast horizon. Inflation is responsive to the slack emerging in labor markets. As a result, inflation is projected to decline slightly below 2 percent by the end of 2010. This occurs even when factoring into the forecast some pass-through from high energy prices into core inflation.

Risks to economic activity continue to be skewed to the downside. While there have been improvements in financial markets, conditions have yet to return to normal. Tighter credit markets have the potential to exert more restraint on spending than is currently embedded in our baseline forecast. In addition, the continued fragility in financial markets leaves credit markets vulnerable to event risks.

The risks to the outlook for core inflation are broadly balanced. We rely on an economically meaningful short-run tradeoff between inflation and unemployment. While there is uncertainty surrounding the extent of this tradeoff, an unemployment rate well above the natural rate for some considerable period of time has historically been associated with declines in inflation.

**Respondent 11:**

The large inventory of unsold homes and higher foreclosure rates continues to weigh heavily on the residential housing market, dampening the growth rate of the economy as a whole. My below-trend projection for output contributes to my forecast for declining inflation rates, especially the core rate, but I also see evidence supporting that view in the less worker bargaining power scenario from Greenbook.

Although downside risks to output growth remain, the primary risks to this forecast are for higher input prices and inflation expectations.

**Respondent 12:**

Financial conditions remain tight, with elevated risk spreads and tightening of credit availability. The associated credit crunch will likely restrict the pace of economic activity over the next year. In addition, housing activity has shown few signs of stabilizing, labor market conditions continue to deteriorate, and consumer and business spending are likely to remain subdued. Hence, the risk that the economy might fall into recession remains elevated despite the resilience shown so far by consumers and the recent upside surprises to the GDP growth.

Recent readings on core inflation have been better than expected, although energy price increases have pushed headline inflation to uncomfortable levels. Despite increases in some measures of inflation expectations, I still, on balance, view inflation expectations as fairly well anchored. Going forward, weaker growth in the U.S. economy should generate more slack in product and labor markets, thereby putting some downward pressure on inflation. In addition, I expect commodity prices to level out around their current levels, but risks are to the upside.

I assume that monetary policy remains quite accommodative over the next year, helping support growth even after the fiscal stimulus ends. In particular, the funds rate remains at 2 percent until the fourth quarter of 2008, and then rises gradually to its equilibrium rate of  $4\frac{1}{4}$  percent by the end of 2010. Monetary policy, along with robust exports, helps push growth modestly above trend in 2009 and 2010. The unemployment rate remains fairly steady at about 5-1/2 percent until the middle of 2009 and then begins to drop toward the NAIRU of 4-3/4 percent. Core PCE inflation is elevated in the second half of 2008 and early in 2009, reflecting some pass-through from the surge in energy and food prices. Core inflation then declines gradually to 1-3/4 percent by the end of 2010, which I view as consistent with price stability.

**Respondent 13:**

Although I see a much lower probability that the credit markets will deteriorate substantially in the future because I think we are likely to have turned the corner in this episode of financial disruption, I think that the clean up in the credit markets will take a long time because they won't get back to normal until there has been a recapitalization of financial institutions, which will be a slow process. I thus find the delayed credit recovery scenario (which I think of as having similarity to the "headwinds" period of the early 1990s) to be the most likely scenario. This is why I have slower GDP growth and higher unemployment than the greenbook baseline. I am a little more sanguine on the inflation outlook than the greenbook because I think there has been only a slight deterioration in long-run inflation expectations, which I view as a key driving factor of the inflation process. I am concerned that inflation expectations could rise a little bit, but also see the downside risk on GDP growth. Thus I see the inflation risk as balanced.

**Respondent 14:**

The threat of severe damage to the intermediation sector due to ongoing turmoil in financial markets has receded. There is still some residual probability associated with this event, but it is substantially lower than it was earlier this year. This retreating probability is shaping private sector expectations for 2008 and 2009. The FOMC's pre-emptive moves made earlier this year were designed in part to mitigate against a particularly poor real economic performance during the spring and summer of 2008. That performance has been stronger than anticipated, leading to a more robust economy and a more worrisome inflation outlook

than envisioned earlier in the year.

**Respondent 15:**

The forces restraining growth this year—tight credit availability as lenders conserve capital and liquidity, decreases in housing prices and activity, and oil price increases—slowly recede over the next 1-1/2 years, so that economic growth next year begins to exceed the growth rate of potential, given an accommodative stance of policy. The assumed leveling off of oil prices and persistent output gap reverse the increase in inflation and any incipient rise in inflation expectations from the near-term elevation of headline inflation. Policy is tightened gradually to forestall overshooting and cap inflation at just under 2 percent.

**Respondent 16:**

Based on positive incoming data my 2008 GDP forecast is notably higher than in April. However, I still expect the housing and financial markets to exert a significant drag on real activity for the balance of the year and into 2009. As a result, my GDP growth forecast for 2009 is similar to my last submission. The possibility that financial market turmoil could flare up again, the possibility that nonresidential construction could deteriorate more than I expect, and the uncertain effect of rising energy prices on consumer and business spending convince me that in the near term the risks to real GDP growth remain weighted to the down-side.

Although I assume that oil prices will stabilize at current levels, rapid increases in oil and food prices over the first half of 2008 will lead to average headline inflation being close to 4 percent in 2008. I also assume that inflationary pressures will unwind relatively slowly in 2009, a judgment that is reinforced by anecdotal reports on pricing from businesses in my district, along with the recent uptick in some measures of inflation expectations. These developments suggest to me that inflationary risks remain weighted to the upside.

**Respondent 17:**

The economy has slowed significantly but I now believe it has not entered and likely will not enter a recession. Temporary fiscal stimulus is providing a temporary boost to activity, but that's likely to wear off and commercial construction is likely to soften significantly before the end of the year. Recovery is likely to be slow in 2009.

Headline inflation is too high, and likely to rise in the near term as commodity price increases work their way through. Inflation expectations appear to remain stable for now, although they lie above levels consistent with inflation objectives below 2 percent. Appropriate policy works to restore price stability in a reasonably timely manner. Commodity price volatility will pose continuing challenges for that endeavor.

## Forecast Narratives (continued)

### 4(b). Please describe the key judgements and assumptions affecting your economic projections in the final projection year.

**Respondent 1:**

On path of returning to trend levels, but not at steady-state at end of projection period. Tax policy, trade policy and regulatory policy uncertainty expected to impact 2009 and 2010 economic performance negatively

**Respondent 2:**

(1) Economic growth returns to potential in 2010. Demographic changes contribute to a fall in potential growth in 2009 and 2010. Potential growth is estimated to fall from 2.7 percent currently, to 2.6 percent in 2009 and 2.5 percent in 2010.

(2) Core PCE inflation approaches desired levels by 2010.

(3) Monetary policy begins to tighten this year and reaches neutral by the end of 2009.

**Respondent 3:**

Because of the slow recovery of the housing and financial sectors, the unemployment rate remains elevated through the end of 2010.

**Respondent 4:**

We assume that long-term inflation expectations are between 2-2.5% on a CPI basis and the FOMC's inflation objective to be 1.5-2.0% for the PCE deflator and 2-2.5% for the CPI. Potential growth is 2.6% (in 2010 the retirement of baby boomers begins to have a perceptible impact on labor input), and that the output gap opens in 2008 and narrows in 2009-10. Our extended forecast also includes some implicit judgments about the likely ranges for the NAIRU and the neutral policy rate. Those judgments put the neutral policy rate in the region of 3.75% to 4.75% absent the current disruptions in financial markets and the NAIRU between 4.5% to 5%.

**Respondent 5:**

We assume a modest degree of slack will be necessary to insure that inflation will fall below 2 percent as we move beyond the forecast horizon. Accordingly, under appropriate policy, we do not see growth exceeding our estimate of potential (which is 2.6 percent) in 2010. This leaves our projection for the unemployment rate in 2010:Q4 at 5.6 percent, somewhat above our assumption for the NAIRU (which is 5.0 percent).

**Respondent 6:**

The growth estimate for 2010 is above my estimate of potential growth, which is about 2.8, as it reflects a cyclical recovery. The unemployment rate in 2010 is above my estimate of the NAIRU (around 4.8) because job growth will lag the recovery. The core inflation projection in 2010 reflects my views on the operational definition of price stability; I have the overall inflation rate in 2010 slightly higher reflecting continued momentum in food and energy prices.

**Respondent 7:**

My judgments and assumptions are largely consistent with those in the Greenbook, except that I assume the federal funds rate is higher in 2009 and 2010.

**Respondent 8:**

The financial headwinds will have diminished significantly by 2010 and the adjustment in housing will be largely complete, permitting the underlying resilience and flexibility of the economy to show through. Monetary policy will have acted, and will be positioned, to resist any material deterioration in inflation

expectations or appreciable acceleration in core inflation.

**Respondent 9:**

Real output is growing at about a trend pace of 2.7 percent in 2010, the unemployment rate is about at its natural rate of 5 to 5.25 percent, and inflation is running above my long-term goal of 1.5 percent. As mentioned in 4(a), accommodative monetary policy may lead to upward pressure on core inflation and raises the risk that inflation expectations begin to move upward. If this happens, monetary policy would have to tighten more in 2009 than in my baseline forecast and possibly remain above a neutral rate in 2010 to keep inflation and inflation expectations from rising.

**Respondent 10:**

Potential GDP growth is  $2\frac{1}{2}$  percent. The NAIRU is  $4\frac{3}{4}$  percent. The target inflation rate is 2.0 percent.

**Respondent 11:**

I have defined appropriate policy over this horizon as one that is consistent with achieving PCE inflation slightly less than 2 percent and I have adopted assumptions for labor productivity and employment growth that are consistent with potential GDP growth of 2.6 percent.

**Respondent 12:**

In 2010, my forecast shows inflation that is consistent with price stability. By the end of 2010, real GDP growth, the unemployment rate, and the real funds rate are at or near their long-run sustainable levels.

**Respondent 13:**

Long-run inflation objective at 2%, NAIRU at 4.75% and potential GDP same as in greenbook.

**Respondent 14:**

The 2010 numbers place output growth at the steady state rate and core inflation at target. Overall PCE inflation remains elevated because of longer-term relative price changes in the energy sector.

**Respondent 15:**

potential output increases at 2.5 percent; the NAIRU is 4.75 percent; inflation a little below 2 percent is consistent with price stability.

**Respondent 16:**

My 2010 projection for real GDP growth roughly corresponds to my estimate of potential growth.

My 2010 projection for headline inflation is in the range of my preferred long-run inflation rate.

**Respondent 17:**

Trend real GDP growth is around 2.7 percent, and the average realized PCE inflation rate in 2010 under an appropriate monetary policy is 1.5 percent.

## Forecast Narratives (continued)

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

**Respondent 1:**

Expect weaker growth and higher inflation in 2009 than GB forecasts

**Respondent 2:**

(1) My outlook for growth in 2008 is less pessimistic than Greenbook. In particular, I expect real GDP growth will remain stable in the second half while Greenbook expects a significant decrease in growth. For core inflation, I am more concerned about the upside risks than appears to be the case in Greenbook.

(2) I expect a faster removal of policy accommodation and the insurance taken out against financial turmoil than Greenbook, with the federal funds rate reaching neutral (approximately 4 1/4 percent) by the end of 2009. As a result, I expect real GDP growth will be at potential in 2010, rather than significantly above potential as forecast in Greenbook. I also expect core PCE inflation will be lower in 2010 than Greenbook.

**Respondent 3:**

Core inflation follows a path similar to that in the Greenbook baseline forecast, but only because policy is tightened more quickly. Continuing increases in food and energy prices mean that headline inflation retreats more gradually than in the Greenbook. Persistent headwinds from high energy prices and the recapitalization of the banking system imply an extended period of sluggish growth.

**Respondent 4:**

We project slightly higher trend growth of hours worked mainly because we assume that the secular decline in the labor force participation rate will occur later and more slowly than in the GB. We assume lower inflation persistence than does the GB. In terms of the short-term forecast we project lower core and total inflation in 2008H2. The difference for total inflation appears to be driven by lower assumptions on energy prices (we assume average oil prices slightly below current future prices) and markups by refiners.

**Respondent 5:**

We do not think that negative influences from credit conditions and higher energy prices are severe enough to reduce growth in 2008:H2 to the degree assumed in the Greenbook. We also think that a more aggressive path of policy tightening will be necessary to keep inflation and inflationary expectations in check.

**Respondent 6:**

My estimate of potential growth was above the Greenbook until this round; staff have moved their estimate up close to mine in this iteration. I am a bit more pessimistic about near-term growth because I see recession dynamics taking hold and expect significant restraint from credit conditions.

**Respondent 7:**

No important differences.

**Respondent 8:**

The differences are minor.

**Respondent 9:**

I assume the labor force grows at about 0.8 percent per year. Nonfarm payroll employment declines in 2008Q2, is flat in 2008Q3, and rises by an average of about 54 thousand jobs per month in 2008Q4. The Greenbook has payrolls declining by about 33 thousand jobs per month in 2008Q3 and 2008Q4. In my forecast, employment rebounds to a better than 120 thousand jobs per month pace in 2009 and 2010. The

Greenbook has weaker employment growth than this.

**Respondent 10:**

We concur with the Greenbook that activity is likely to remain weak at least for the rest of this year, and possibly also for the first half of 2009.

Differences in the inflation outlook are slightly more significant, and they are essentially the result of our lower implied sacrifice ratio.

**Respondent 11:**

Over the balance of the forecast horizon, my projections for output and inflation are broadly similar to the Greenbook.

**Respondent 12:**

The broad contours of the forecast are similar to the Greenbooks. The most important differences are that I am slightly more optimistic on inflation, reflecting my view that inflation expectations have drifted upwards by less than the Greenbook has assumed; and because I expect the economy to converge to its long-run values more quickly than Greenbook assumes.

**Respondent 13:**

I see a somewhat slower recovery because I think the clean up of the financial system will take a long time and will be a drag (headwind) on growth along the lines of the delayed credit recovery scenario.

**Respondent 14:**

Relative to the June Greenbook, this forecast envisions a stronger real economy and a more challenging inflation scenario. The path for the federal funds rate would have to rise more aggressively in this forecast if the 2010 outcomes are to be achieved.

**Respondent 15:**

less recessionary tendencies in the second half of this year; a reversal of the recent upcreep in inflation expectations once energy prices level off.

**Respondent 16:**

NA

**Respondent 17:**

The key difference is a more hawkish policy assumption which results in a more subdued recovery and lower final year inflation.

## Forecast Narratives (continued)

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

**Respondent 1:**

No material changes

**Respondent 2:**

My outlook for first half growth has been revised upwards despite higher energy prices. The upward revision reflects first quarter growth that is stronger than I expected and an upward revision to my estimate of second quarter growth. However, my outlook for growth in 2009 and 2010 is relatively unchanged. My outlook for PCE inflation in the first half is somewhat higher and my outlook for core PCE inflation is somewhat lower than last time, again reflecting recent economic developments.

**Respondent 3:**

More-resilient-than-expected consumer spending is responsible for an upward revision to near-term GDP growth.

**Respondent 4:**

In April we projected the US economy would experience a mild recession in the first half of the year. Relative to our April forecast, the labor market has been stronger (we view the out-sized jump in the unemployment rate in May as a seasonal quirk), household spending outside of autos has been firmer, business spending has been little better and housing data has not been materially worse than our forecast. These data combined with the confirmed strength of net exports makes it most likely a recession has been avoided. In addition, if a recession still does occur it is more likely to be mild.

Incoming data since April were consistent with our core inflation forecast in the near term but higher energy prices have slightly increased the forecast for core in 2008H2. Energy prices have continued to surprise on the upside and we have increased the forecast for total inflation and now assess the risks to the upside in the near term.

The policy path underlying our central projection is unchanged in the near-term but we have slightly steepened the assumed path for renormalization of real interest rates in light of the tentative signs of stabilization and projected higher readings on total inflation.

**Respondent 5:**

The incoming data on the real economy and the improvements in financial market conditions have caused us to mark up our outlook for growth in 2008. We feel these changes more than offset the dampening influence on demand from higher energy prices. That said, the higher prices for energy and other commodities and the increasing risk that inflation expectations have moved up a bit have caused us to raise our forecasts for both total and core PCE.

**Respondent 6:**

Modest improvement in financial markets and stronger-than-expected incoming data led me to raise my growth forecast for 2008, especially the first half. Otherwise the general contour of my forecast is not much changed.

**Respondent 7:**

My main changes are in a higher real GDP forecast for 2008 and higher headline inflation in 2008. Both of these have been driven by the data received since the last FOMC. My longer term projections remain little changed. I also have changed the increased the uncertainty around the inflation outlook given the movements in commodity prices, particularly energy.

**Respondent 8:**

There are three changes worth noting. My forecast of real growth for 2008 is back up (approximately) to the January projection, reflecting the better-than-anticipated performance of the economy in the first half of this year. And, in light of somewhat better prospects for 2008, I raised my outlook for growth in 2009 marginally as well. Finally, PCE inflation in 2008 is expected to run higher than earlier anticipated because of developments in energy and other commodity prices.

**Respondent 9:**

The incoming data on the real economy have largely been consistent with my April projection. However, recent readings on inflation, inflation expectations, oil prices, and other commodity prices have led me to revise upward my estimate of near-term inflation. Consequently, my path for the funds rate is steeper than in the last forecast. I now assume the FOMC begins raising the funds rate in 2008Q3. Accommodative monetary policy risks unanchoring inflation expectations so the funds rate needs to increase over the forecast horizon to 4.5 percent by the end of 2009.

**Respondent 10:**

The differences are small. More growth in the first half of this year comes at the expense of less growth in 2008:H2. Consequently, the outlook for economic activity this year is unchanged. Over the remaining of the forecast horizon, we project some more labor market slack than previously thought. This additional slack offsets pressures to core inflation stemming from higher energy prices. As a result, the outlook for core inflation has not changed materially.

**Respondent 11:**

Incoming data led me to revise up my projections for BFI and PCE in the first half of 2008. Higher prices for energy and some other commodity have caused me to increase my headline inflation projections throughout the balance of the forecast period.

**Respondent 12:**

Recent data on second-quarter activity have been stronger than I expected, and readings on core inflation have been a bit lower than I expected. However, the surge in commodity prices (particularly the roughly \$25/barrel jump in the path of oil prices) has boosted my 2008 forecast for headline inflation substantially, and my 2008 forecast for core inflation modestly. Higher energy prices will also dampen growth a bit in the second half of 2008 and early 2009. Taken together, I have raised my forecast for real GDP growth in 2008 by about  $\frac{1}{2}$  percentage point and reduced it in 2009 by about 0.1 percentage point. At the same time, I have raised my PCE inflation forecast for 2008 by a bit less than 1 percentage point, with a more modest increase in 2009. However, the pass-through of higher food and energy prices remains fairly modest, and my core inflation forecast in 2009 has edged up only slightly.

**Respondent 13:**

My forecast has only changed because of the stronger growth we have been seeing in this quarter. However, as with the greenbook, I see some payback and so have lower growth in 2009 and 2010. I have raised my inflation forecast (only slightly for core) because of higher energy prices and a slight uptick (10 basis points) in long-run expected inflation.

**Respondent 14:**

Some of the news on headline inflation has been worse than anticipated in the previous forecast, but much of the forecast remains the same.

**Respondent 15:**

Stronger than expected growth in the first half of this year and a greater rise in oil prices account for the higher growth rate and higher headline inflation for 2008. Rates of increase in output and prices and unemployment rates for 2009 and 2010 are not materially different from my previous projections.

**Respondent 16:**

As a result of generally positive incoming data I have revised up my 2008 H1 real GDP forecast by 150 basis points. However, I assume that the effects of higher energy prices offset these positive surprises in the second half of the year, leaving my 2008 H2 forecast essentially unchanged.

As a result of continued increases in energy prices I have revised my 2008 headline inflation forecast higher by 90 basis points. In addition, hints of increases in inflation expectations and accumulating reports I have received about anticipated cost-based pricing decisions by businesses leads to me to raise my 2009 forecast for both core and headline inflation by 20 basis points. These developments also cause me to assume a steeper trajectory for the funds rate during 2009 in order to return inflation to my preferred range in 2010.

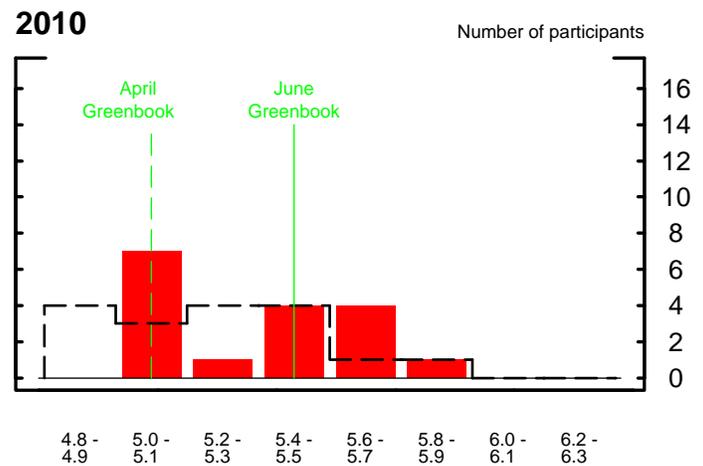
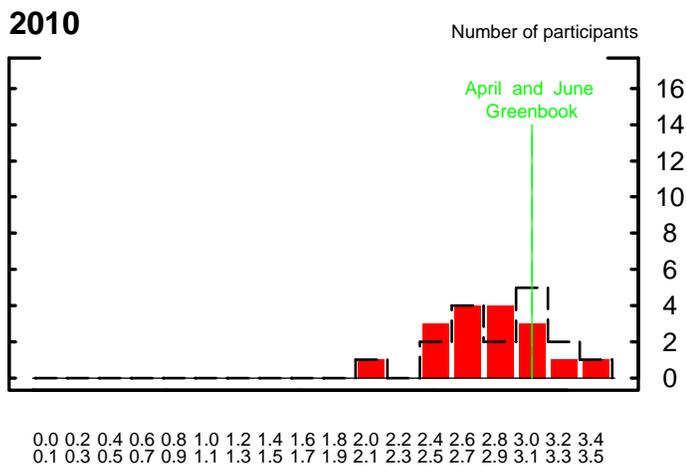
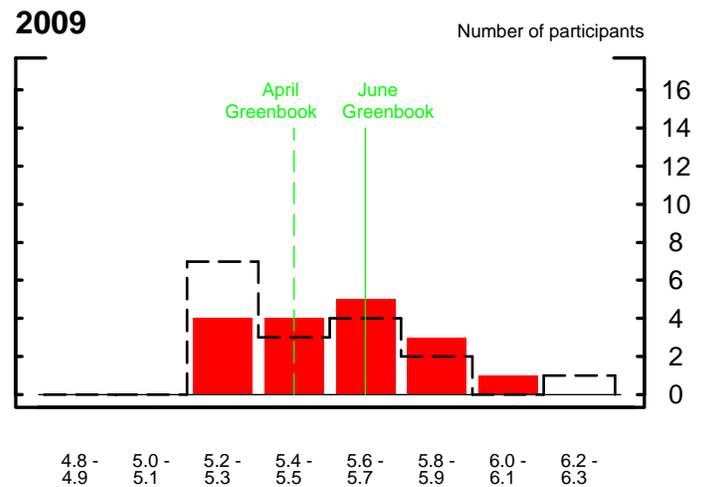
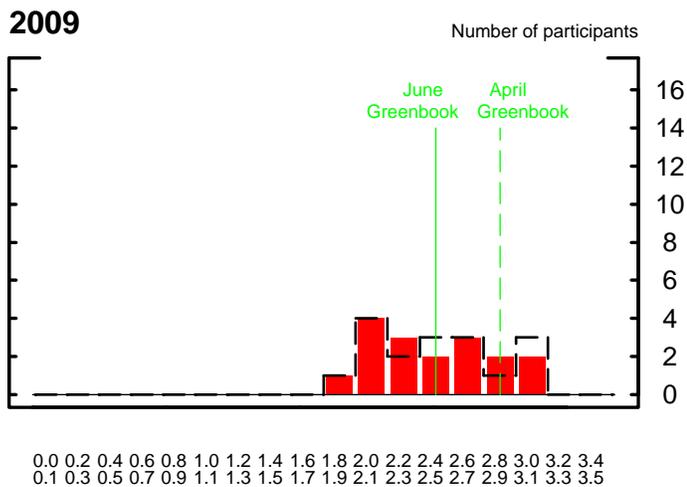
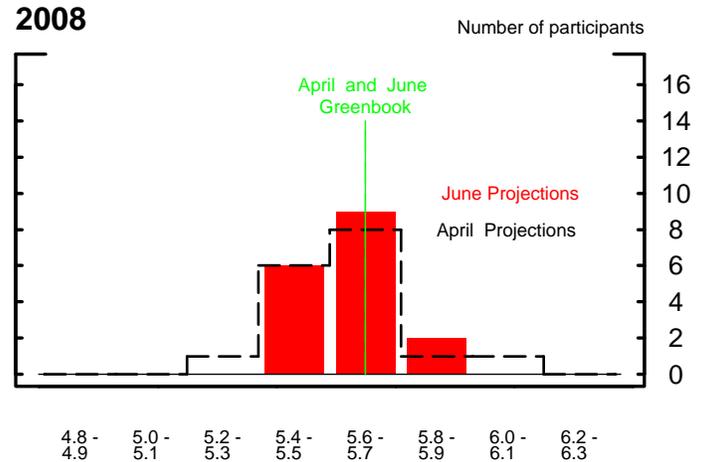
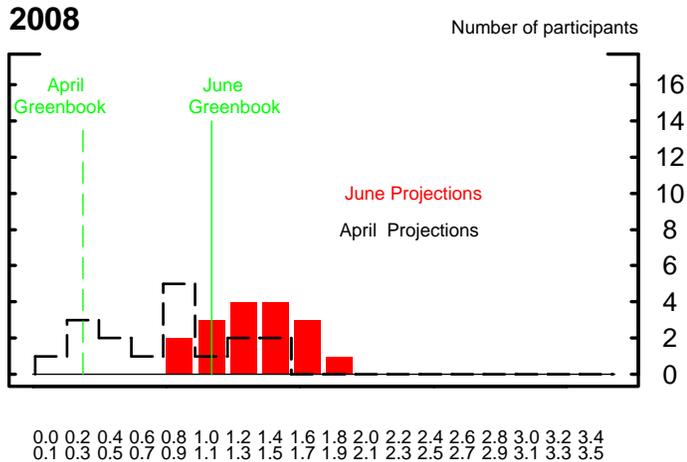
**Respondent 17:**

Unexpectedly favorable data on household spending, personal income, private nonresidential construction and new orders have led me to raise my forecasts for consumption and business fixed investment. Unfavorable readings on inflation and inflation expectations have led me to mark up my inflation and policy rate forecasts as well.

**Chart 2(a): Distribution of Participants' Projections (percent)**

**Real GDP**

**Unemployment Rate**



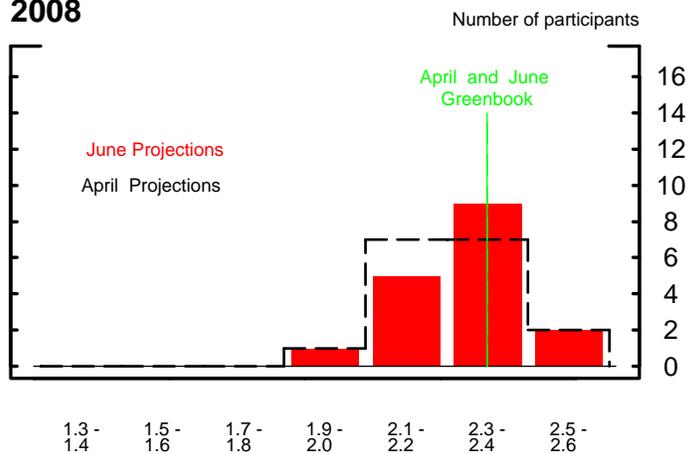
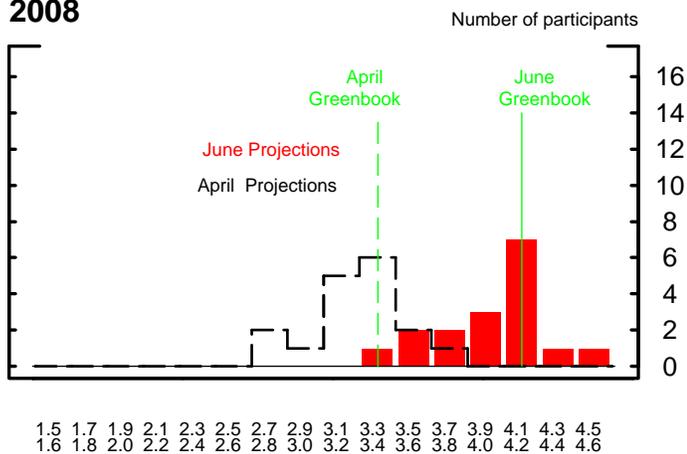
**Chart 2(b): Distribution of Participants' Projections (percent)**

**PCE Inflation**

**Core PCE Inflation**

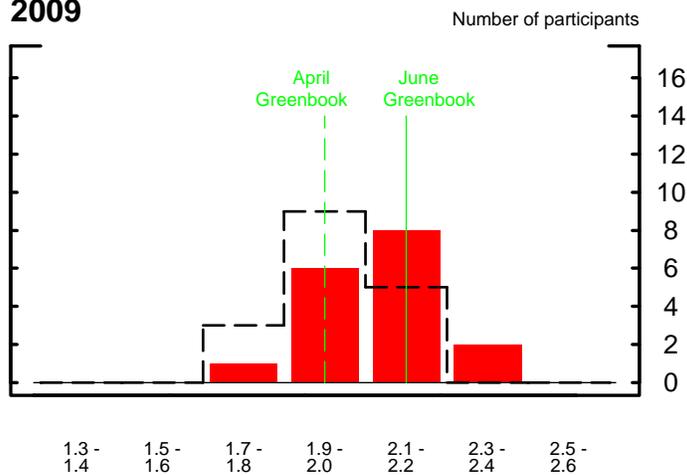
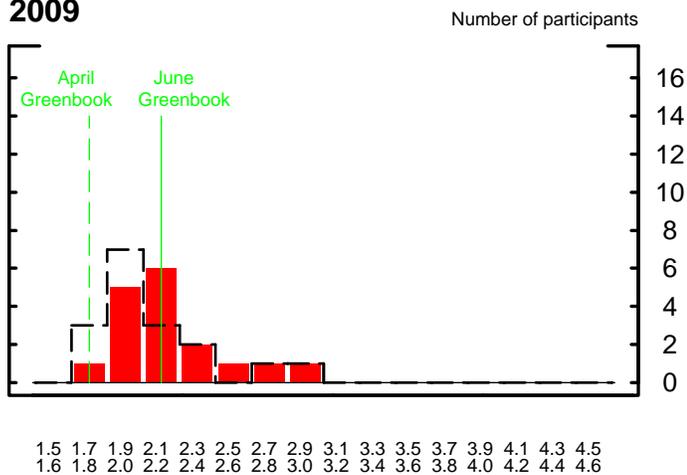
**2008**

**2008**



**2009**

**2009**



**2010**

**2010**

