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

Percent

| Variable  |                          | Ce                       | entral tendenc           | ey <sup>1</sup>          |                          |                          |                          | Range <sup>2</sup>       |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| v arrable                                       | 2010                     | 2011                     | 2012                     | 2013                     | Longer run               | 2010                     | 2011                     | 2012                     | 2013                     | Longer run               |
| Change in real GDP June projection              | 2.4 to 2.5<br>3.0 to 3.5 | 3.0 to 3.6<br>3.5 to 4.2 | 3.6 to 4.5<br>3.5 to 4.5 | 3.5 to 4.6<br>n/a to n/a | 2.5 to 2.8<br>2.5 to 2.8 | 2.3 to 2.5<br>2.9 to 3.8 | 2.5 to 4.0<br>2.9 to 4.5 | 2.6 to 4.7<br>2.8 to 5.0 | 3.0 to 5.0<br>n/a to n/a | 2.4 to 3.0<br>2.4 to 3.0 |
| Unemployment rate  June projection              | 9.5 to 9.7<br>9.2 to 9.5 | 8.9 to 9.1<br>8.3 to 8.7 | 7.7 to 8.2<br>7.1 to 7.5 | 6.9 to 7.4<br>n/a to n/a | 5.0 to 6.0<br>5.0 to 5.3 | 9.4 to 9.8<br>9.0 to 9.9 | 8.2 to 9.3<br>7.6 to 8.9 | 7.0 to 8.7<br>6.8 to 7.9 | 5.9 to 7.9 n/a to n/a    | 5.0 to 6.3<br>5.0 to 6.3 |
| PCE inflation June projection                   | 1.2 to 1.4<br>1.0 to 1.1 | 1.1 to 1.7<br>1.1 to 1.6 | 1.1 to 1.8<br>1.0 to 1.7 | 1.2 to 2.0<br>n/a to n/a | 1.6 to 2.0<br>1.7 to 2.0 | 1.1 to 1.5<br>0.9 to 1.8 | 0.9 to 2.2<br>0.8 to 2.4 | 0.6 to 2.2<br>0.5 to 2.2 | 0.4 to 2.0<br>n/a to n/a | 1.5 to 2.0<br>1.5 to 2.0 |
| Core PCE inflation <sup>3</sup> June projection | 1.0 to 1.1<br>0.8 to 1.0 | 0.9 to 1.6<br>0.9 to 1.3 | 1.0 to 1.6<br>1.0 to 1.5 | 1.1 to 2.0<br>n/a to n/a |                          | 0.9 to 1.4<br>0.7 to 1.5 | 0.7 to 2.0<br>0.6 to 2.4 | 0.6 to 2.0<br>0.4 to 2.2 | 0.5 to 2.0 n/a to n/a    |                          |

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 June projections were made in conjunction with the FOMC meeting on June 22-23, 2010.

- 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**

|                    | Central Tendency | Range      |
|--------------------|------------------|------------|
| Change in Real GDP | 2.7 to 2.7       | 2.7 to 2.7 |
| PCE Inflation      | 1.0 to 1.0       | 1.0 to 1.0 |
| Core PCE Inflation | 1.1 to 1.1       | 1.1 to 1.1 |

# **Participants' Projections**

| Projection | Change in Real GDP | <b>PCE Inflation</b> | <b>Core PCE Inflation</b> |
|------------|--------------------|----------------------|---------------------------|
| 1          | 2.7                | 1.0                  | 1.1                       |
| 2          | 2.7                | 1.0                  | 1.1                       |
| 3          | 2.7                | 1.0                  | 1.1                       |
| 4          | 2.7                | 1.0                  | 1.1                       |
| 5          | 2.7                | 1.0                  | 1.1                       |
| 6          | 2.7                | 1.0                  | 1.1                       |
| 7          | 2.7                | 1.0                  | 1.1                       |
| 8          | 2.7                | 1.0                  | 1.1                       |
| 9          | 2.7                | 1.0                  | 1.1                       |
| 10         | 2.7                | 1.0                  | 1.1                       |
| 11         | 2.7                | 1.0                  | 1.1                       |
| 12         | 2.7                | 1.0                  | 1.1                       |
| 13         | 2.7                | 1.0                  | 1.1                       |
| 14         | 2.7                | 1.0                  | 1.1                       |
| 15         | 2.7                | 1.0                  | 1.1                       |
| 16         | 2.7                | 1.0                  | 1.1                       |
| 17         | 2.7                | 1.0                  | 1.1                       |
| 18         | 2.7                | 1.0                  | 1.1                       |

<sup>\*</sup> 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> | Range      |
|--------------------|-------------------------|------------|
| Change in Real GDP | 2.1 to 2.3              | 1.9 to 2.3 |
| PCE Inflation      | 1.4 to 1.8              | 1.2 to 2.0 |
| Core PCE Inflation | 0.9 to 1.1              | 0.7 to 1.7 |

# **Participants' Projections**

| Projection | Change in Real GDP | <b>PCE Inflation</b> | <b>Core PCE Inflation</b> |
|------------|--------------------|----------------------|---------------------------|
| 1          | 2.1                | 1.8                  | 0.9                       |
| 2          | 1.9                | 1.4                  | 0.7                       |
| 3          | 2.3                | 1.6                  | 0.7                       |
| 4          | 2.1                | 1.8                  | 1.3                       |
| 5          | 2.3                | 1.6                  | 0.9                       |
| 6          | 2.1                | 1.4                  | 0.9                       |
| 7          | 2.1                | 1.6                  | 1.1                       |
| 8          | 1.9                | 1.6                  | 0.9                       |
| 9          | 2.1                | 1.6                  | 1.1                       |
| 10         | 2.3                | 1.2                  | 0.9                       |
| 11         | 1.9                | 1.2                  | 0.9                       |
| 12         | 2.3                | 1.8                  | 1.7                       |
| 13         | 2.1                | 1.4                  | 0.9                       |
| 14         | 2.1                | 2.0                  | 0.9                       |
| 15         | 2.1                | 1.2                  | 0.9                       |
| 16         | 2.3                | 1.4                  | 1.1                       |
| 17         | 2.1                | 1.4                  | 1.1                       |
| 18         | 2.1                | 1.6                  | 1.1                       |

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

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

| Projection | Year | Change in Real GDP | Unemployment Rate | PCE Inflation | Core PCE Inflation |
|------------|------|--------------------|-------------------|---------------|--------------------|
| ,          |      | · ·                |                   |               |                    |
| 1          | 2010 | 2.4                | 9.7               | 1.4           | 1.0                |
| 2          | 2010 | 2.3                | 9.5               | 1.2           | 0.9                |
| 3          | 2010 | 2.5                | 9.7               | 1.3           | 0.9                |
| 4          | 2010 | 2.4                | 9.7               | 1.4           | 1.2                |
| 5          | 2010 | 2.5                | 9.6               | 1.3           | 1.0                |
| 6          | 2010 | 2.4                | 9.5               | 1.2           | 1.0                |
| 7          | 2010 | 2.4                | 9.7               | 1.3           | 1.1                |
| 8          | 2010 | 2.3                | 9.7               | 1.3           | 1.0                |
| 9          | 2010 | 2.4                | 9.7               | 1.3           | 1.1                |
| 10         | 2010 | 2.5                | 9.6               | 1.1           | 1.0                |
| 11         | 2010 | 2.3                | 9.8               | 1.1           | 1.0                |
| 12         | 2010 | 2.5                | 9.4               | 1.4           | 1.4                |
| 13         | 2010 | 2.4                | 9.7               | 1.2           | 1.0                |
| 14         | 2010 | 2.4                | 9.5               | 1.5           | 1.0                |
| 15         | 2010 | 2.4                | 9.6               | 1.1           | 1.0                |
| 16         | 2010 | 2.5                | 9.7               | 1.2           | 1.1                |
| 17         | 2010 | 2.4                | 9.6               | 1.2           | 1.1                |
| 18         | 2010 | 2.4                | 9.7               | 1.3           | 1.1                |
|            |      |                    |                   |               |                    |
| 1          | 2011 | 2.5                | 9.2               | 1.7           | 1.6                |
| 2          | 2011 | 3.5                | 9.1               | 0.9           | 0.8                |
| 3          | 2011 | 3.6                | 9.0               | 0.9           | 0.7                |
| 4          | 2011 | 3.5                | 9.1               | 1.3           | 1.1                |
| 5          | 2011 | 3.5                | 9.0               | 1.2           | 1.0                |
| 6          | 2011 | 3.0                | 8.9               | 1.4           | 1.3                |
| 7          | 2011 | 3.2                | 9.0               | 1.5           | 1.2                |
| 8          | 2011 | 3.6                | 9.0               | 1.0           | 0.9                |
| 9          | 2011 | 3.7                | 9.0               | 1.1           | 0.8                |
| 10         | 2011 | 3.6                | 8.9               | 1.1           | 1.0                |
| 11         | 2011 | 4.0                | 8.3               | 1.4           | 1.2                |
| 12         | 2011 | 3.4                | 8.2               | 2.2           | 1.8                |
| 13         | 2011 | 3.1                | 9.3               | 1.2           | 1.0                |
| 14         | 2011 | 3.4                | 9.0               | 2.0           | 2.0                |
| 15         | 2011 | 3.4                | 9.0               | 1.3           | 1.1                |
| 16         | 2011 | 3.0                | 9.0               | 1.8           | 1.8                |
| 17         | 2011 | 2.6                | 9.1               | 1.3           | 1.0                |
| 18         | 2011 | 3.6                | 9.0               | 1.1           | 1.0                |

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

| Projection | Year | Change in Real GDP | Unemployment Rate | PCE Inflation | Core PCE Inflation |
|------------|------|--------------------|-------------------|---------------|--------------------|
| ,          |      | · ·                | , ,               |               |                    |
| 1          | 2012 | 2.6                | 8.7               | 2.0           | 1.8                |
| 2          | 2012 | 3.6                | 8.4               | 1.2           | 1.0                |
| 3          | 2012 | 4.6                | 7.7               | 0.6           | 0.6                |
| 4          | 2012 | 4.2                | 8.2               | 1.4           | 1.2                |
| 5          | 2012 | 4.5                | 7.9               | 1.0           | 1.0                |
| 6          | 2012 | 3.2                | 8.1               | 1.5           | 1.5                |
| 7          | 2012 | 4.0                | 8.0               | 1.5           | 1.4                |
| 8          | 2012 | 4.7                | 7.9               | 1.1           | 1.0                |
| 9          | 2012 | 4.2                | 8.1               | 1.2           | 0.9                |
| 10         | 2012 | 4.1                | 8.0               | 1.5           | 1.5                |
| 11         | 2012 | 4.5                | 7.0               | 1.8           | 1.6                |
| 12         | 2012 | 3.2                | 7.2               | 2.2           | 2.0                |
| 13         | 2012 | 4.3                | 8.4               | 1.1           | 1.0                |
| 14         | 2012 | 4.4                | 8.0               | 1.5           | 1.5                |
| 15         | 2012 | 4.0                | 8.0               | 1.5           | 1.4                |
| 16         | 2012 | 4.0                | 8.2               | 2.0           | 2.0                |
| 17         | 2012 | 4.4                | 8.0               | 1.4           | 1.1                |
| 18         | 2012 | 4.7                | 7.1               | 1.2           | 1.2                |
|            |      |                    |                   |               |                    |
| 1          | 2013 | 3.0                | 7.9               | 2.0           | 2.0                |
| 2          | 2013 | 3.3                | 7.9               | 1.5           | 1.2                |
| 3          | 2013 | 4.5                | 6.9               | 0.4           | 0.5                |
| 4          | 2013 | 4.2                | 7.1               | 1.4           | 1.3                |
| 5          | 2013 | 4.5                | 6.9               | 1.1           | 1.1                |
| 6          | 2013 | 3.5                | 7.2               | 1.8           | 1.8                |
| 7          | 2013 | 4.0                | 7.0               | 1.5           | 1.4                |
| 8          | 2013 | 4.7                | 7.1               | 1.2           | 1.1                |
| 9          | 2013 | 4.5                | 7.1               | 1.3           | 1.0                |
| 10         | 2013 | 3.8                | 7.3               | 2.0           | 2.0                |
| 11         | 2013 | 5.0                | 5.9               | 2.0           | 2.0                |
| 12         | 2013 | 3.0                | 6.5               | 2.0           | 2.0                |
| 13         | 2013 | 4.7                | 7.1               | 1.2           | 1.2                |
| 14         | 2013 | 3.8                | 7.0               | 1.5           | 1.5                |
| 15         | 2013 | 3.8                | 7.0               | 1.6           | 1.6                |
| 16         | 2013 | 4.0                | 7.5               | 2.0           | 2.0                |
| 17         | 2013 | 4.6                | 7.4               | 1.4           | 1.2                |
| 18         | 2013 | 4.6                | 6.1               | 1.4           | 1.3                |

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

| Projection | Year | Change in Real GDP | Unemployment Rate | PCE Inflation | Core PCE Inflation |
|------------|------|--------------------|-------------------|---------------|--------------------|
|            |      |                    |                   |               |                    |
| 1          | LR   | 2.5                | 6.3               | 1.9           |                    |
| 2          | LR   | 2.6                | 6.0               | 2.0           |                    |
| 3          | LR   | 2.5                | 5.3               | 2.0           |                    |
| 4          | LR   | 2.5                | 5.2               | 2.0           |                    |
| 5          | LR   | 2.5                | 5.3               | 2.0           |                    |
| 6          | LR   | 2.5                | 5.2               | 2.0           |                    |
| 7          | LR   | 2.5                | 6.0               | 1.5           |                    |
| 8          | LR   | 2.5                | 5.2               | 2.0           |                    |
| 9          | LR   | 2.5                | 5.3               | 2.0           |                    |
| 10         | LR   | 2.8                | 5.5               | 1.5           |                    |
| 11         | LR   | 2.4                | 5.0               | 2.0           |                    |
| 12         | LR   | 2.8                | 5.8               | 1.7           |                    |
| 13         | LR   | 2.8                | 5.0               | 2.0           |                    |
| 14         | LR   | 2.8                | 6.0               | 1.5           |                    |
| 15         | LR   | 2.5                | 5.5               | 1.8           |                    |
| 16         | LR   | 3.0                | 5.0               | 2.0           |                    |
| 17         | LR   | 2.5                | 5.0               | 2.0           |                    |
| 18         | LR   | 3.0                | 5.2               | 1.6           |                    |

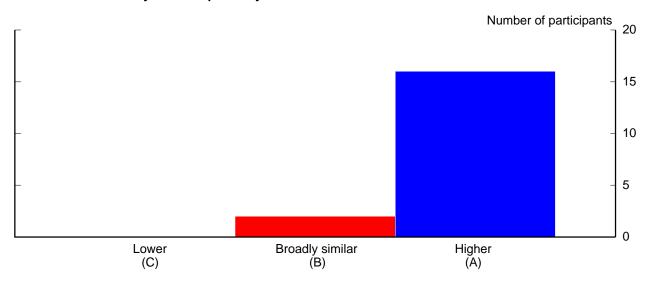
Percent Change in real GDP Central tendency of projections Range of projections Actual 2 2010 2005 2007 2008 2009 2011 Longer run Percent Unemployment rate **—** 10 6 - 5 2007 2010 Longer run 2005 2006 2008 2009 2011 2012 2013 Percent PCE inflation — 3 - 2 1 Longer run 2005 2006 2007 2008 2009 2010 2011 2012 2013 Percent Core PCE inflation — 3 - 2 - 1 2008 2010 2011 2012 2013 2005 2006 2007 2009

Figure 1. Central tendencies and ranges of economic projections, 2010-13 and over the longer run

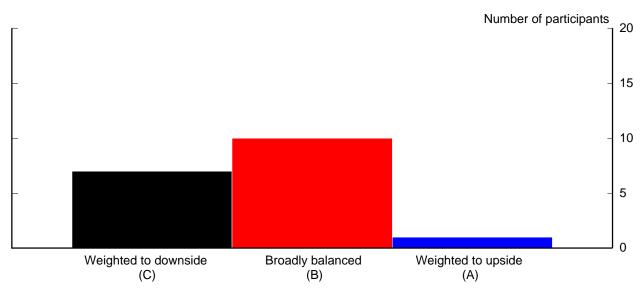
 $Note: \ Definitions \ of \ variables \ are \ in \ the \ notes \ to \ table \ 1. \ The \ data \ for \ the \ actual \ values \ of \ the \ variables \ are \ annual.$ 

# **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.



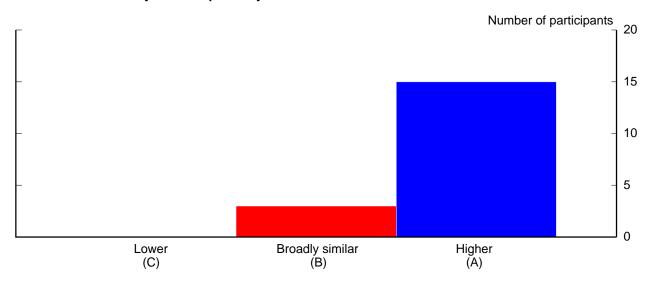
2(b): Please indicate your judgment of the risk weighting around your projections.



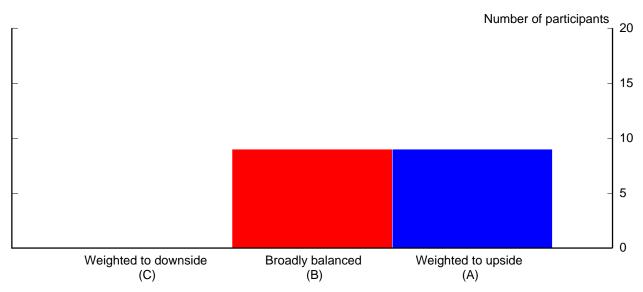
| Respondent | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | <u>8</u> | <u>9</u> | <u>10</u> | <u>11</u> | <u>12</u> | <u>13</u> | <u>14</u> | <u>15</u> | <u>16</u> | <u>17</u> | <u>18</u> |
|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2(a)       | A        | A        | A        | A        | A        | A        | B        | A        | A        | A         | A         | A         | A         | B         | A         | A         | A         | A         |
| 2(b)       | B        | C        | C        | B        | C        | B        | B        | C        | C        | B         | C         | B         | B         | B         | B         | B         | A         | 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.



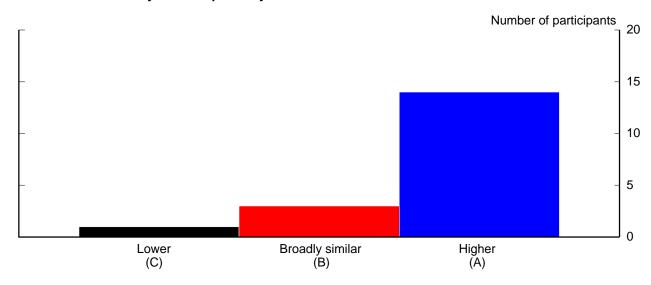
2(b): Please indicate your judgment of the risk weighting around your projections.



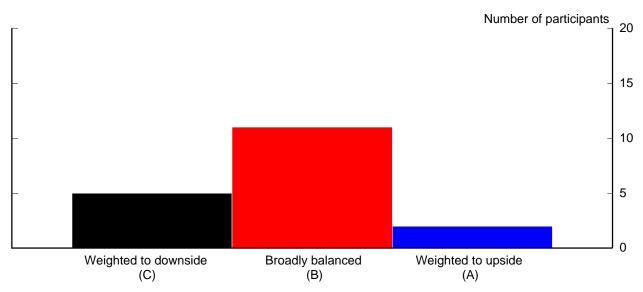
| Respondent | 1 | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | <u>8</u> | <u>9</u> | <u>10</u> | <u>11</u> | <u>12</u> | <u>13</u> | <u>14</u> | <u>15</u> | <u>16</u> | <u>17</u> | <u>18</u> |
|------------|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2(a)       | A | A        | A        | A        | A        | A        | B        | A        | A        | A         | A         | B         | A         | B         | A         | A         | A         | A         |
| 2(b)       | B | A        | A        | A        | A        | B        | B        | A        | A        | B         | A         | B         | A         | B         | B         | B         | B         | A         |

# **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.



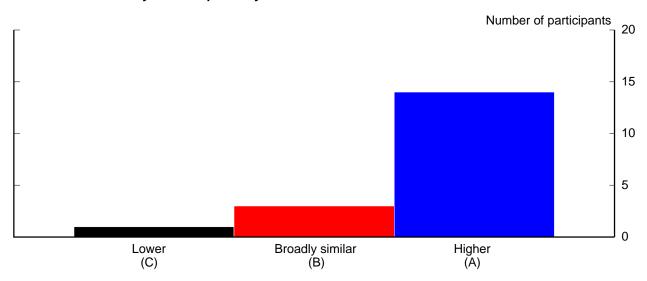
2(b): Please indicate your judgment of the risk weighting around your projections.



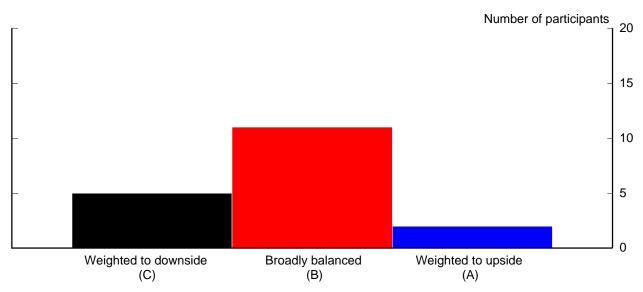
| Respondent   | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | 8      | <u>9</u> | <u>10</u> | <u>11</u> | <u>12</u> | <u>13</u> | <u>14</u> | <u>15</u> | <u>16</u> | <u>17</u> | <u>18</u> |
|--------------|----------|----------|----------|----------|----------|----------|----------|--------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2(a)<br>2(b) | A<br>B   | A<br>C   | A<br>C   | A<br>C   | A<br>B   | A<br>C   | СВ       | A<br>B | ВВ       | A<br>B    | A<br>C    | A<br>A    | A<br>A    | B<br>B    | A<br>B    | A<br>B    | B<br>B    | A<br>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.



| Respondent   | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | 8      | <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> | <u>18</u> |
|--------------|----------|----------|----------|----------|----------|----------|----------|--------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 2(a)<br>2(b) | A<br>B   | A<br>C   | A<br>C   | A<br>C   | A<br>B   | A<br>C   | СВ       | A<br>B | ВВ       | A<br>B    | A<br>C    | A<br>A    | A<br>A    | B<br>B    | A<br>B    | A<br>B    | B<br>B    | A<br>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:

Expect convergence to take somewhat longer

#### Respondent 2:

We anticipate that the convergence process will take about five to six years.

#### Respondent 3:

Convergence to the real economy's equilibrium and to the inflation objective within five years requires lower long-term interest rates than what is assumed in the baseline outlook. As a result, while the economy is anticipated to revert back to maximum employment within a five years horizon, inflation is likely to remain below the target.

#### Respondent 4:

N/A

#### Respondent 5:

I expect the convergence process will be similar to that outlined in the long-run projection reported

in the Tealbook, with the output and unemployment gaps reaching zero in about five years, and the PCE price inflation rate reaching its long-run value of 2 percent in six to seven years.

# Respondent 6:

N/A

# Respondent 7:

N/A

### Respondent 8:

I expect, as in Tealbook, that inflation may take longer than five to six years to return to the 2% level I consider most consistent with our dual mandate.

#### Respondent 9:

N/A

# Respondent 10:

Given the recession's depth, uncertainty in the business community about government programs and regulatory change, higher prospective marginal tax rates, and the difficult adjustments that are needed, convergence may well require the full six years.

#### Respondent 11:

By 2015-16 potential growth is 2.4%, down from our current estimate of 2.5-2.7%, as the baby boomers retire. A reasonable estimate for the long-run unemployment rate is 4% to 6%. 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 2016.

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 12:

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

# Respondent 13:

N/A

#### Respondent 14:

I anticipate that the convergence process for real GDP growth will be substantially shorter than 5-6 years, perhaps on the order of 3-4 years for real growth (with a period of overshoot of real growth in the interim during recovery), and an overshoot (above 1.5%) 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 15:

In light of the severity of the recession and the historical norms of jobless recoveries and recoveries that follow financial crises, the convergence process for unemployment will likely take longer than five to six years. In addition, I am concerned that further monetary stimulus and delay in removing extraordinary policy accommodation will lead to financial imbalances that could eventually destabilize the economy and further prolong the convergence process. These same monetary forces could also cause long-term inflation expectations to become unanchored and lengthen the convergence process.

#### Respondent 16:

unemployment may take considerably longer

# Respondent 17:

My view has been that, In light of the severity and breadth of shocks to the economy and the consequent significant impacts on government, firm, and household behavior, the convergence process may well extend beyond five or six years to something closer to a total of eight years. At this point, we are a couple of years into that process, so an additional five or six years from the present now seems about right.

# Respondent 18:

# 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:

Higher uncertainty caused, in part, by adoption of nonstandard policies.

#### Respondent 2:

No Comment.

# Respondent 3:

N/A

# Respondent 4:

The liquidity trap conditions that we find ourselves in today add substantial uncertainty to the outlooks for both growth and inflation. There are few historical precedents to inform us how an economy evolves under such conditions, including how it responds to the unconventional policies we must use to address these conditions. Potential changes in fiscal policies also add uncertainty to the outlook, though these are a larger issue for the medium and longer-term forecast than the near-term projection.

#### Respondent 5:

The aftereffects of the financial crisis, turmoil in Europe, and uncertainty regarding the effects of unconventional monetary policy increase uncertainty regarding the outlook for economic growth relative to the past 20 years. The heightened risks to the outlook for economic activity, as well as the elevated variability of commodity prices, increase uncertainty regarding the outlook for inflation.

#### Respondent 6:

N/A

#### Respondent 7:

Inflation expectations would be more firmly anchored under an appropriate monetary policy, and uncertainty would therefore be lower than the trailing 20-year average.

#### Respondent 8:

I judge the outlook for GDP growth and unemployment to be unusually uncertain due to the challenges and asymmetric downside risks associated with the presence of the zero bound, and increased reliance on nonconventional policies with uncertain multipliers. Fiscal contraction in many advanced economies creates risks to the outlook and the possibility of further shocks to the financial system

# Respondent 9:

N/A

#### Respondent 10:

N/A

#### Respondent 11:

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 12:

Financial market conditions continue to improve and the economy is in recovery. However, the soft patch

this summer has led me to revise down my near-term forecast and contributes to some increased uncertainty in my forecast. In addition, the effect of the extraordinary monetary policy in place and uncertainties surrounding the future path of policy, including the timing of the exit from accommodative policy, contribute to uncertainty around my inflation forecast.

#### Respondent 13:

N/A

# Respondent 14:

N/A

#### Respondent 15:

The uncertainty surrounding my projections remains higher than normal. I generally agree with Tealbook's assessment of the sources of uncertainty, but I would add fiscal policy to the list. Various aspects of fiscal policy – such as questions of fiscal sustainability, the expiration of the Bush tax cuts, and indexation of the AMT – add considerable uncertainty to the outlook. The public's uncertainty about the conduct of monetary policy is also adding to uncertainty in the economic outlook.

# Respondent 16:

volatility was unusually low over the past 20 years

# Respondent 17:

N/A

#### Respondent 18:

# 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:

No comment.

Respondent 3:

N/A

#### Respondent 4:

Even though we see the risks to GDP growth as broadly balanced, we believe the unemployment rate outlook risks are weighted to the upside. Firms have displayed an unusual ability to squeeze out gains in labor productivity during the recession and early expansion. We see a possibility that going forward we could be surprised again at firms' ability to meet increases in demand with further gains in output per worker. We also see an upside risk to the unemployment rate forecast from a faster-than-anticipated recovery in labor force participation,

The potential additional slack associated with the upside risk to the unemployment rate implies a corresponding downside risk to our inflation outlook. In addition, there is a downside risk to inflation if the continued low readings on actual inflation show through to some downward movement in inflation expectations.

# Respondent 5:

The limited appetite for further fiscal stimulus both in the United States and abroad means that fiscal policy actions are unlikely to damp future negative shocks to the economy. In addition, the anticipated recovery of the housing market may take much longer than we expect. As a result, the risks to the outlook for economic activity are weighted somewhat to the downside. Correspondingly, the risks to the outlook for the unemployment rate are weighted to the upside. The inflation risks appear to be roughly balanced.

# Respondent 6:

N/A

Respondent 7:

N/A

#### Respondent 8:

The fact that monetary policy is constrained by the zero bound and fiscal policy is constrained by the need to address unsustainable longer-term budget deficits creates an asymmetry in the ability of policymakers to respond to upside and downside shocks, resulting in risks to growth that are weighted to the downside and risks to unemployment that are weighted to the upside.

# Respondent 9:

The assumed pickup in growth in 2011 and beyond remains hypothetical; there is little actual evidence that that is happening. Re inflation, the dollar, commodities pose an upside risk, but there is also some risk of more disinflation, which is not at all uncommon following deep recessions.

#### Respondent 10:

N/A

## Respondent 11:

Quantitative judgment based on the difference between the projection and the expected value from the FRBNY forecast distribution.

#### Respondent 12:

The incoming data has led me to shade down my near-term path for growth compared to my June forecast. Going forward, I view the risks to growth as balanced and inflation as weighted to the upside. Historical patterns in the data suggest the rebound might be stronger than my baseline forecast. 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:

N/A

# Respondent 14:

N/A

#### Respondent 15:

See forecast narrative.

#### Respondent 16:

inflation risks are considerable

#### Respondent 17:

N/A

# Respondent 18:

# **Appropriate Monetary Policy**

3. Does your view of the appropriate path for monetary policy differ materially from that assumed by the staff in the Tealbook?

YES NO 8 10

# Respondent 1: Yes

Would prefer balance sheet to grow substantially less, and its level to fall materially faster than Staff forecast

# Respondent 2: No

N/A

# Respondent 3: Yes

The forecast is conditioned on approximately the same short- and long-term interest rates assumptions as in the Tealbook. But this path for the interest rates is not consistent with achieving the dual mandate's goals over a 5-year horizon.

# Respondent 4: No

The Tealbook policy assumptions seem highly probable given the views expressed to date by the Committee. For forecasting, it does not seem constructive to assume a markedly different policy construct—such as the Committee providing a more explicit numerical inflation guide in order to influence private-sector expectations— even if we think such a policy would help achieve our policy mandates.

#### Respondent 5: No

N/A

#### Respondent 6: No

N/A

#### Respondent 7: Yes

I believe that under an appropriate monetary policy the committee would adopt a numerical inflation objective. In accordance with that objective, the committee would want to begin to shrink the size of the Federal Reserve's balance sheet by sometime in 2012.

#### Respondent 8: Yes

I assume that the LSAP program is expanded to around \$1 trillion next year, as currently assumed by markets

# Respondent 9: No

N/A

## Respondent 10: Yes

Purchases of longer-term Treasuries are unlikely to have a significant economic impact apart from whatever signal they might send about the future path of the funds rate. Indeed, insofar as they add to uncertainty about the future conduct of monetary policy and reduce the pressure to address fiscal and other imbalances, such purchases may actually adversely affect the economy. The FOMC would be better off clarifying the circumstances that will lead it to start raising rates.

#### Respondent 11: No

#### Respondent 12: Yes

My forecast continues to assume a less accommodative policy than in the Tealbook baseline. I view the appropriate monetary policy as one that begins raising the funds rate sometime in the second half of 2011.

#### Respondent 13: No

N/A

### Respondent 14: Yes

While the pattern of recovery from the 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 and allow the SOMA portfolio to run off sooner than assumed in the Tealbook. In the interim, depending on how the economy evolves, it may be appropriate to accelerate or slow down the growth of the SOMA portfolio.

# Respondent 15: Yes

In my view, under the appropriate path, policy would immediately begin the normalization process. I would not engage in another round of quantitative easing, I would remove the commitment to maintaining the funds rate target at exceptionally low levels for an extended period, and I would allow our balance sheet to shrink as mortgage-backed securities are redeemed. Early next year, I would raise the funds rate target to 1 percent.

#### Respondent 16: No

If inflation stays around its current level, then I would say yes. If we continue to see ongoing disinflation over the next 6 months to a year, we will need to view the "Seven Perils" trap as a real possibility, and adjust policy accordingly.

Respondent 17: No

N/A

Respondent 18: No

# Forecast Narratives

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

#### Respondent 1:

Strength and duration of recovery negatively impacted by current macroeconomic policies

#### Respondent 2:

Fundamental uncertainty over the strength and viability of the recovery restrains consumer spending and makes businesses reluctant to hire and undertake large-scale investment projects. In particular, I expect business investment in equipment and software to slow considerably following a strong first half when businesses made necessary capital purchases that were deferred during the recession. Business spending on structures also continues to be hampered by high vacancy rates and ongoing credit problems in commercial real estate.

The principle risk to my outlook is posed by a small probability that inflation expectations become dominated by deflationary concerns which leads to significant disinflation. In that event, further disinflation could have adverse consequences on economic activity.

# Respondent 3:

Incoming data are consistent with an economy expanding at a pace somewhat below potential on average in the second half of this year. This represents a setback compared to previous expectations of an economy making some modest progress already this year towards reducing the large activity gap. In this regard, it is especially striking that final sales have grown by less than one percent on average per quarter so far this year. While we continue to expect the recovery to remain on track, expectations for a sizable pickup in economic activity have been pushed further out into the future.

Labor market conditions remain dismal. The long spells of unemployment that many workers are now experiencing increase the concerns about the possibility of skill depreciation and of a lower probability of a successful job search. Firms so far have been reluctant to hire, focusing instead on efficiency gains. While it is likely that there is now considerable pent-up demand for labor, it may take time before firms become more confident about the durability of the recovery and increase the pace of hiring. So far, the large amount of slack in labor markets has put significant downward pressure on wages. Unless firms step up their pace of hiring considerably, this could delay the transition from public to privately generated sources of income that is needed to sustain the recovery.

Housing activity remains weak and is projected to contribute only modestly to the recovery in both 2011 and 2012. Too, the recent mortgage documentation problems are increasing the downside risks to the housing sector's outlook. Consumer spending has been growing modestly so far in the recovery. Limited increases in private sources of income and the waning fiscal stimulus, together with the lingering effects of earlier declines in wealth, are likely to restrain growth in consumer spending over the forecast horizon. The persistently low readings of consumer confidence are also a source of concern, as they raise the possibility of further retrenchments in spending if economic conditions do not improve noticeably.

Bank loans are still contracting, and the unwinding of tight banking standards is still modest.

Overall, credit conditions are likely to remain tight over the forecast horizon for some consumers and businesses. The headwinds to the recovery from credit and a waning fiscal stimulus are compounded by a monetary policy stance that is much less accommodative than it should be as a result of the zero-lower bound on nominal interest rates. Optimal control simulations continue to suggest that the Federal funds rate should be 400 basis points below actual, an indication that the drag to activity from monetary policy is substantial.

In all, we expect the economy to grow only modestly above potential next year. By the end of next year, the unemployment rate is projected to be at 9 percent. A more vigorous pace of growth is only expected in 2012. By the end of 2012, however, the unemployment rate is still above  $7\frac{1}{2}$  percent. Given the projected sizable slack in labor markets over the forecast horizon, the rate of core inflation remains well below target.

Risks to the outlook are still tilted to the downside. Moreover, these downside risks are much more costly than the potential upside. Recent inflation data continue to indicate that the possibility of deflation over the forecast horizon is more than a tail event.

#### Respondent 4:

The incoming data and anecdotal evidence suggest that over the near term growth will continue near the anemic pace seen in the second and third quarters of this year. But other signals point to a pick up in growth as we head into 2011: businesses are going forward with replacement demand delayed during the recession; the inventory restocking cycle did not appear to overshoot medium-run targets; and the saving rate appears to have plateaued. In addition, with the exception of small business lending by banks, capital market conditions are supportive of growth. Monetary policy is accommodative. Over time, increasing household and business confidence should add momentum to the recovery.

Nonetheless, relative to the depth of the recession, the recovery will be moderate by historical standards. For some time, borrowers without access to capital markets will likely continue to have trouble convincing banks that they have positive NPV projects on a risk-adjusted basis. The overhangs in residential and commercial real estate will take a good deal of time to work off. And frictions in labor markets will probably contribute to sluggish growth in employment.

#### Respondent 5:

Labor markets are improving very gradually and a modest recovery in economic activity is in train. Although financial conditions have improved owing in part to the expectation of further monetary stimulus, financial intermediation remains impaired, which will hold back the pace of recovery. In addition, households are repairing balance sheets that have been badly weakened by equity and housing losses and massive debt accumulation. Monetary stimulus and improvements in banking and financial market conditions provide key drivers for economic expansion over the next few years, while fiscal stimulus wanes. Significant slack in labor and goods markets will keep inflation low, but well-anchored inflation expectations should help avoid significant further disinflation.

### Respondent 6:

The incoming data and reports from business contacts remain broadly consistent with a growth trajectory that is quite restrained. Weakness in residential and commercial real estate is ongoing. Business and consumer attitudes are still extremely cautious, and slow spending growth by businesses and households is continuing to damp upward inflation.

Numerous headwinds are working against a broad-based recovery. For instance, small and young firms are still having difficulty accessing credit for growth. Problems such as slow and uneven sales, opportunities to reduce costs through increased productivity, structural adjustments in labor markets, and uncertainty over government policy; labor and environmental rules, tax policy, regulatory reform, and others, are retarding job creation. Over the near term, additional business spending appears likely to be geared toward activities such as expansion into foreign markets, targeted mergers and acquisition, and further increases in efficiency.

#### Respondent 7:

I believe that the pace of expansion will be moderate, led by consumer spending and business equipment investment; residential construction and state and local spending are likely to remain very weak for some

time; and nonresidential construction is likely to decline further. The stock of federal debt will grow much more rapidly than GDP under current legislation, leading to uncertainty on the nature and timing of fiscal policy actions that will put the stock of debt on a more sustainable path. That uncertainty could make firms and households more cautious in their spending plans.

#### Respondent 8:

The recovery has slowed very significantly as the impetus from inventory investment and fiscal stimulus has waned. Household spending remains constrained by very slow employment and sluggish wage gains, as well as the continuing need of households to repair their balance sheets. The housing market has yet to show evidence of any recovery and problems relating to mortgage documentation could create additional drags and strains in financial markets more generally. Over the medium term, I expect accommodative financial conditions, including the stimulus resulting from LSAP purchases, progress in balance sheet repair, and pent-up demand to support a somewhat stronger recovery beginning in 2011. However, I do not anticipate that the recovery will be robust in comparison with other postwar expansions due, in part, to the fact that the process of financial market healing is likely to be extended. I expect inflation to remain below mandate-consistent levels due to the large degree of labor market slack. But well-anchored inflation expectations should prevent the economy from slipping into deflation. Nevertheless, a decline in inflation expectations remains a risk going forward.

# Respondent 9:

The moderate economic recovery through the first quarter has slowed since the spring. The earliest stage of the recovery depended heavily on inventory adjustment (once monetary and banking policies achieved stabilization), fiscal policy, and to some extent the recovery of trade and global growth. Once these forces subsided, the economy's momentum depended on growth in private final demand. However, the speed of recovery has been limited by moderate growth in consumer spending, depressed conditions in both residential and nonresidential construction, the trade deficit (e.g, in Q2 and Q3 of this year), and waning fiscal stimulus. Consumption has in turn been restrained by persistent pessimism about the economy and the job market, lower wealth, and restrictive credit. We learned in the NIPA revisions that household saving is higher than thought; it seems to have stabilized at about 6 percent.

Conditions in capital markets have improved since the European crisis in the spring and are slowly normalizing, though risk premiums remain high in the equity market and in some other areas. (It may be that some of the risk aversion that came back during the sovereign crisis stays with us and has served to keep financial conditions a bit tighter than they otherwise would be.) Banks continue to stabilize as well, with improved capital positions (notwithstanding new risks from foreclosure documentation issues). However, credit conditions remain tight for small and startup businesses, in part because of the weakness of their balance sheets.

Private-sector hiring has been very slow, reflecting weak demand growth and uncertainty about the sustainability of the recovery on the part of employers. In the near term, economic growth may not be sufficient to bring the unemployment rate down materially. The risk of a double-dip recession is low, in part because cyclical sectors like housing are at rock bottom, but a failure of unemployment to decrease could increase the risk of a new period of weakness via effects on confidence. UI benefits have raised the unemployment rate a bit, but there is not much evidence of higher permanent structural unemployment arising from skills mismatch or similar factors. However, the depth of the recession in the labor market has resulted in high levels of long-term unemployment, who could become difficult to re-employ if weak conditions persist for a long time.

Core inflation, wage growth, and growth in unit labor costs remain very low, reflecting the extent of slack. Anchored inflation expectations, expectations of monetary policy expansion, and proximity to zero (which makes downward nominal rigidity and related factors more relevant) may limit the risk of significant further disinflation. Overall inflation will be higher than core, however, as the weaker dollar has been associated

with higher energy and commodity prices and higher import prices.

#### Respondent 10:

Growth is likely to pick up as we head into 2011, but not enough to cut quickly into labor-market slack. Partly the expected acceleration reflects a re-stabilization of residential investment following the expiration of the home-buyer tax credit. Partly it reflects previously deferred replacement demand for consumer durables and business equipment and software. However, many of the impediments to a stronger recovery are not significantly impacted by monetary policy. In consequence, businesses are not using their increased access to cheap credit to expand their domestic operations.

Risks to the outlook are substantial on both sides. Quantitative easing in the face of real impediments to rapid growth risks a build up of new imbalances. The financial sector remains vulnerable to delayed losses in residential real estate and to losses on consumer and commercial real estate loans. Increased bank capital requirements may slow the recovery in bank lending, much as in the early 1990s when Basel 1 was implemented. On the other hand, growth will benefit whenever headwinds finally begin to diminish, especially if, in the interim, U.S. industry has become more internationally competitive. If current markup estimates can be taken at face value—admittedly a very big "if"—then firms will have a strong incentive to hire and to expand production as uncertainties are resolved.

I expect continued low core inflation in the near term. Increases in internationally traded commodity prices may keep headline inflation somewhat above core. Farther out, I am concerned that monetary stimulus may be withdrawn too slowly to prevent inflation from rising above the rate I see as desirable over the long term. Large Federal Reserve purchases of longer term assets would increase these concerns.

## Respondent 11:

Our modal forecast for real GDP growth has anticipated for some time a slowing in the second half of 2010. This assessment was based on the expectation that the impulse from the fiscal stimulus and from an unusually pronounced inventory cycle would peak around mid-2010 and then begin to fade before a robust recovery of private final demand was in full swing. Data released over recent months indicate that this moderation has been more intense than expected, with the economy losing forward momentum over 2010Q3. We expect growth of real GDP in 2010 (Q4/Q4) of just 2.3%, down from 3% in late June. For the second half of 2010 we now anticipate growth just under 2% (annual rate), down from 2 $\frac{3}{4}$ % over the first half of the year. As this projected second half growth rate is below our estimate of the potential growth rate, some rise in the unemployment rate over that period is quite likely. Despite the lower growth outlook, core PCE inflation over the third quarter has been roughly in line with our expectations.

With the benefit of hindsight, it appears that the turmoil in financial markets associated with the flare up of the European sovereign debt crisis had a larger impact on the US economy than we expected. In addition to the direct effects of the decline in US equity prices, the increase in the exchange value of the dollar, and the increase in credit spreads, it is quite likely that these events elevated the already high degree of uncertainty among consumers and businesses. In addition, while it was widely anticipated that there would be a lull in housing market activity following the expiration of the home buyer tax credit, that lull has lasted much longer than anticipated despite the lowest mortgage interest rates since the mid-1950s. This is likely due to the fact that mortgage underwriting standards are significantly tighter than previously thought. In addition, internal survey data indicates that household expectations of future home price appreciation have continued to decline in recent months, which is also likely contributing to the depressed level of housing market activity.

Even though the growth and employment outlook for the second half of 2010 is weaker than anticipated last June, growth prospects for 2011 and 2012 have not been downgraded due largely to the improvement in financial conditions that has occurred since mid-summer, partly spurred by markets' assessment of a change in the FOMC's policy stance. From its recent low in early July, the S&P500 stock price index is up nearly 16 percent, nearly returning to late April levels. Mortgage interest rates have declined roughly 50 basis points

since June, to the lowest levels since the mid-1950s. As measured by the Senior Loan Officer Survey, bank lending standards have stopped tightening and have begun to ease modestly. Finally, the exchange value of the dollar, as measured by a broad index of currencies, is roughly six percent lower than in June and so well below the previously assumed path.

We expect that this improvement in financial conditions along with slow but steady improvement in underlying fundamentals will boost real GDP growth to around 4% in 2011 and about 5% in 2012-13, with the unemployment rate falling steadily to around 7% by the end of 2012. We expect a gradual strengthening of consumer spending and residential investment aided by an improving job market, an easing of underwriting standards, and a general increase in confidence. Indeed, our micro level analysis suggests that the household deleveraging process is far along. With an improving path for spending by the household sector, business investment is also likely to gradually strengthen. Continued favorable growth prospects among our major trading partners along with a lower exchange value of the dollar are expected to lead to a larger growth impulse from net exports than previously anticipated. Finally, with incomes rising, tax revenues to state and local governments are anticipated to recover and help put that sector in a more solid fiscal position.

Barring a significant decline in the level of the economy's potential output or its potential growth rate, our modal forecast for growth 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 from 1.7% in 2009. But by mid-2011 and into 2012, as final demand firms within the context of anchored inflation expectations, we expect core inflation to move up toward the "mandate consistent" range.

The balance of risks to our real activity projection remains skewed to the downside. As mentioned above, the US economy lost forward momentum over the summer months, and while we think this was just a pause, it still could be the precursor of a more substantial slowdown. Housing market activity remains very sluggish and there is evidence of renewed downward pressure on home prices. If sustained, a negative wealth effect through this channel could induce households to boost their desired saving and thereby result in a significantly lower trajectory for consumer spending. Another downside risk is that growth prospects among major trading partners in Europe turn out to be weaker than expected as the full force of fiscal contraction begins to be felt later this year and into 2011. US fiscal policy is also a source of risk to our forecast. While a reduction of fiscal stimulus in 2011 is widely anticipated, it is possible that the US could engage in a more aggressive fiscal consolidation.

An important risk over the medium term remains our assumption regarding the economy's potential growth rate. While labor productivity growth has slowed in the last couple of quarters consistent with our projection, we have not acquired any increased confidence in our long-run assumption on productivity growth. Given the low level of overall business investment and the apparent misallocation of labor and capital, the economy's potential growth rate may have slowed significantly. On the other hand, our analysis of recent labor market developments suggests a decline in the share of unemployment related to mismatch between job seekers and job openings.

The risks around the central scenario for inflation are also skewed to the downside. The downside risks to the growth projection combined with the possibility of no meaningful decline in potential implies downside risks to the inflation projection. Nevertheless, with the aggressive monetary policy response and the possibility of a stronger-than-expected rebound, there remains a risk of higher inflation than our modal projection.

The heightened uncertainty associated with the shape of recoveries from periods of banking and financial crisis, the uncertainty associated with the synchronization of global policy actions, and the lingering uncertainties associated with the peripheral European debt crisis result in greater uncertainty around our central projection compared to typical levels over the last twenty years.

#### Respondent 12:

The data on the economy have been weaker than what I anticipated in my June forecast. However, I see the recent weakness as a soft patch from which the economy is beginning to emerge.

In my view, the economy is in recovery and I expect an above-trend pace of 3.4 percent growth in 2011, about the same as in my June forecast. In 2012 and 2013 I expect growth to moderate somewhat, though it remains slightly above by my long-term trend. The labor market recovery is gradual — I expect the unemployment rate edges down to about 5.8 percent by the end of the forecast horizon, at which time it is at the natural rate of unemployment. I anticipate that inflation will rise into 2012 and then pull back a bit in 2013 in response to tighter monetary policy than anticipated in the Tealbook.

In my view, the substantial liquidity that is now in the financial system continues to imply a risk that inflation will rapidly accelerate to unacceptable levels and that inflation expectations may become unanchored. To ward off these developments, the FOMC will need to commence a steady tightening of monetary policy that begins some time in the second half of 2011.

#### Respondent 13:

N/A

### Respondent 14:

In 2011 through 2013 I anticipate that real growth will occur at greater than steady-state rates, reflecting normal cyclical patterns reinforced by a modest ongoing impact of the fiscal stimulus package, and the substantial monetary stimulus that has been in train since late 2008. I expect that beginning in 2013 real growth will slow and subsequently approach steady-state rates. I expect that core PCE inflation over all of 2010 to be close to, but somewhat below that of 2009 (as it is year-to-date) and intrayear fluctuations in food and energy prices will approximately net out, so that headline inflation will be close to the core rate over all of 2010. 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 the core and headline inflation will be roughly equal in the out years of the projection period.

# Respondent 15:

Overall, the economy continues to expand at a moderate pace. In light of the major re-balancing still underway, the pace and solid basis of recovery are encouraging. The economy appears to be making the transition from a recovery driven by temporary stimulus from fiscal policy and inventory adjustment to one propelled by sustainable consumer and business demand. Consumer spending is rising at a moderate pace, consistent with a sustainable and modest rate of recovery. Based on solid consumer demand, businesses are expanding investment in equipment and software, providing further impetus to GDP growth. Over time, as some of the uncertainties surrounding the outlook – about the strength and durability of demand, taxes, the implementation of health care and regulatory reform, and energy policies – diminish and consumers and businesses make further progress in de-leveraging, the pace of growth will pick up.

Under these economic conditions, I expect core consumer price inflation to remain low in the near term but to eventually move higher. Disinflationary pressure from the sharp recession will eventually dissipate and be dominated by the influences of rising commodity and producer prices, a depreciating dollar, and long-run inflation expectations that are anchored at more than 2 percent.

The risks surrounding the outlook remain considerable, although broadly balanced. Fiscal policy (including the expiration of the Bush tax cuts, extension of the AMT, and the longer-run unsustainability of policy), uncertainty about regulatory policies, and problems in real estate continue to pose downside risks to GDP

growth. The resiliency of the U.S. economy and traditional business cycle dynamics—the tendency of strong recoveries to follow severe recessions—pose upside risks.

As to inflation, in the near term, the severe recession and recent consumer price trends pose some small downside risks to core inflation. Based in part on trends in producer prices, I see little or no risk of deflation. Longer term, the expansion of our balance sheet and federal borrowing needs create a risk to the stability of long-term inflation expectations and, in turn, inflation. Just since the last FOMC meeting, talk of QE2 has pushed up TIPS-implied inflation compensation. In addition, there is a risk that monetary policy will remain too accommodative for too long, creating further upside risks to inflation.

#### Respondent 16:

inflation risks seem huge. The growth in public debt pushes toward high inflation. On the other hand, the Committee's commitment to low rates and/or labor market slack, pushes toward deflation.

#### Respondent 17:

Key factors include observation that the handoff of growth driver from fiscal stimulus and inventory rebuilding to a more self-sustaining increase in final demand has not gone smoothly. Continue to believe that the continued drag from commercial real estate, the uneven, nature of housing market recovery, continuing high levels of unemployment, and renewed uncertainty about global financial stress will likely prevent the recovery from accelerating beyond a moderate pace.

#### Respondent 18:

The economic recovery is proceeding at a subpar pace. The labor market remains sluggish. Reductions in employment, income and wealth have left many households with a need to repair severely distressed balance sheets. It is my sense that these households continue to face financial strains that run deeper than the aggregate data suggest and their financial repair process could take considerable time. At the same time, the economic effects of mortgage documentation problems will continue to strain the recovery of the housing market, whose health is a significant factor in a recovery of real growth. The uncertainty surrounding these mortgage market developments are clouding the certainty of a positive outlook and pose downside risks. Overall, the upturn in aggregate demand from consumption spending will be muted, and government spending will be constrained by state and local fiscal conditions. With economic activity projected to grow only modestly above potential, the unemployment rate gap is still very large by the end of next year. Given such a sizable slack in labor markets over the forecast horizon, the rate of core inflation remains well below target in 2011 and 2012..

# Forecast Narratives (continued)

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

#### Respondent 1:

Expect materially less benefit to the real economy from further balance sheet expansion. Expect Staff forecast of dollar trajectory to provide considerably less impetus to growth

#### Respondent 2:

My forecast calls for less growth in 2012 than in the Tealbook. In my forecast, 2012 marks the beginning of a return to the historical trend in real GDP growth. As a consequence, my unemployment rate projection is higher than the Tealbook's. However, my core inflation profile is very similar to the one in the Tealbook.

# Respondent 3:

The forecast for real activity is very similar to the Tealbook forecast. Core inflation, however, is projected to be lower than in the Tealbook. We model inflation as depending, among other factors, on near-term inflation expectations. In our outlook, these near-term inflation expectations are drifting down, thus lowering inflation. In the Tealbook, instead, inflation is more dependent on long-run inflation expectations, which the Tealbook expects to remain well anchored.

## Respondent 4:

We have slightly less robust growth in 2012 and 2013 than the Tealbook. While we think businesses will become more confident as the recovery proves itself to be solidly in place, we assume their overall level of risk aversion will remain high enough to impinge on capital spending and workforce expansion.

#### Respondent 5:

My forecast is broadly similar to the Tealbook projection.

#### Respondent 6:

I have assumed a lower level of potential output, resulting in an inflation path that is more responsive to growth over the near-term.

#### Respondent 7:

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 Tealbook.

#### Respondent 8:

N/A

#### Respondent 9:

Similar to Greenbook, but now a bit more pessimistic about the extent to which growth is likely to pick up in 2011 and 2012.

#### Respondent 10:

The Tealbook baseline forecast likely overestimates the domestic stimulus to be obtained further quantitative easing. It likely underestimates the drag on growth from prospective tax-rate increases and regulatory and fiscal uncertainties. It doesn't sufficiently recognize that the recent crisis and its aftermath have shaken the perception that the US and European economies are immune to economic crises with elements similar to those seen in emerging economies. The perceived decline in the relative risk of the emerging economies will provide firms with new incentives to shift operations there, to take advantage of relatively cheap skilled labor. As a result, investment and employment creation in the US economy will lose some its past dynamism.

#### Respondent 11:

We assume lower inflation persistence than does the Tealbook. Therefore, under the assumption of well-anchored inflation expectations, we project that inflation returns to within the "mandate consistent" range in 2012-3, whereas it remains below that range in the Tealbook. In addition, while our GDP and productivity growth rates are similar to those of the Tealbook and our labor force participation rates higher, we have a significantly lower unemployment rate by the end of 2011 and through 2012.

#### 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 2011-2013 than does the Tealbook. Given the strength of economic growth in my baseline forecast and the higher inflation path, the policy path is less accommodative over the forecast horizon.

# Respondent 13:

Residential investment does not begin to recover until mid 2012

#### Respondent 14:

Compared to the 70% confidence intervals for the Tealbook forecasts, the differences between the point estimates in the Tealbook baseline forecast and my projections are not different in any meaningful statistical sense. However I see higher inflation in the intermediate period before returning to the rate that I believe is consistent with appropriate monetary policy. In contrast the Tealbook forecast sees an "extended period" of very low inflation.

#### Respondent 15:

The key difference is the monetary policy path, which leads to some differences in the economic outlook. In my view, appropriate policy should follow a path considerably different than in Tealbook, to foster the longer-run stability of the economy. My preferred path of policy yields modestly slower GDP growth in 2011 and 2012. Nonetheless, core inflation is slightly higher in my forecast than in Tealbook, because I expect inflation to move toward long-term inflation expectations faster than it does in Tealbook. This difference in forecasts can be traced to differences in our views of the relative importance of inflation expectations (importantly affected by monetary policy) and economic slack for forecasting inflation.

#### Respondent 16:

I am less optimistic about the next four years.

#### Respondent 17:

Staff projections on job creation have now come closer to my views, so I no longer consider differences important. I am not as optimistic as the staff about equity prices over the next two years and continue to be less confident in the projected path of energy prices

# Respondent 18:

My forecast is broadly similar to the Tealbook projection. However, I am troubled by the uncertainty regarding the mortgage documentation problems which have the potential to act as a continuing drag on the resurgence of the housing market.

# 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:

On the whole, my November forecast is quite similar to the one prepared last quarter, but there are substantial differences between my current forecast and the one last submitted to the FOMC in June. Near term growth in real GDP is markedly weaker due to the downward adjustment to output as part of the July benchmark revisions and weaker-than-expected third quarter data. Also, improvements in the labor market have been slower to materialize than I had expected in June, causing me to mark up unemployment throughout the forecast horizon.

#### Respondent 3:

The near-term outlook has been revised down as a result of weaker-than-expected incoming data. For 2011 and 2012, the forecast has not changed much, but is now predicated on additional quantitative easing and thus on a lower trajectory for long-term interest rates.

# Respondent 4:

We were surprised by the weakness in overall economic activity in the second and third quarters. In part, this signals that business and consumer confidence is more fragile than we had thought. We now assume that such heightened risk aversion will weigh on the expansion into the projection period. The weaker actual and projected level of GDP implies a greater degree of resource slack than we had projected earlier, and has resulted in a markdown in our inflation outlook for 2011 and 2012.

#### Respondent 5:

Since June, the data on economic activity have been worse overall than we had expected and the pace of economic recovery has slowed considerably. We have therefore lowered our forecast of real GDP growth in the second half of 2010 by about 1-1/2 percentage points (annual rate). We have carried some of this weakness forward and now expect economic growth to be somewhat more subdued in 2011 than we previously anticipated. This reduction in the outlook for demand is only partially offset by our assumption of greater monetary stimulus. Consistent with the more pessimistic outlook for output, we have increased our forecast for the unemployment rate somewhat. The inflation data have come in a little higher than we expected. In addition, the exchange value of the dollar has weakened and oil prices have risen since June. We therefore raised our forecasts for core and overall inflation slightly.

#### Respondent 6:

My forecast for real activity in 2010 has been revised slightly lower in response to incoming data that have been a little weaker, on balance, than I had anticipated in June.

#### Respondent 7:

Data received since the last projection have been more sluggish than I had anticipated, resulting in a lower trajectory for real GDP and higher trajectory for unemployment. I view the indicators of weak employment growth and decelerating manufacturing activity as especially noteworthy. Other indicators, such as those for consumer spending, housing, and state and local government, have been broadly consistent with my outlook in June.

#### Respondent 8:

I have substantially lowered my 2010 GDP forecast and slightly lowered my 2011 GDP forecast in light of incoming data suggesting a less robust recovery. For the same reason, I have revised upward my projection

of unemployment. Movements in oil and commodity prices and the dollar have led me to revise up my 2010 projection of total PCE inflation.

## Respondent 9:

The second "stage" of the expansion was to be carried forward by reasonable growth in private final demand. But consumers have been somewhat more restrained than expected, which is closely related to the slowdown (also unexpected) in the labor market. So the main factor is the data flow, which suggests 1) less confidence on the part of consumers and employers than we were seeing earlier in the year and 2) a household deleveraging process that may be taking longer than expected. Greater-than-expected weakness in residential investment is also a factor.

#### Respondent 10:

I have marked down my growth forecasts for 2010 and 2011, somewhat, and correspondingly marked up my forecasts of the unemployment rate. Increasingly, impediments to growth seem likely to persist.

# Respondent 11:

Our current real GDP growth forecast for the second half of 2010 is below that of June, as the data releases since then have, on net, been weaker than expected, particularly for employment, housing and trade. Despite lower growth in 2010H2, growth prospects for 2011 and 2012 are essentially unchanged from June, owing in part to the improvement in financial conditions partly induced by the expectation of a new LSAP program. With the outlook for real growth essentially unchanged, there has not been any substantive change to the unemployment rate forecast. Similarly, our projected path for core PCE inflation is also essentially unchanged. The major change has been to our policy assumptions where we assume a LSAP of similar size to the Tealbook and a substantially longer period of the policy rate at the effective lower bound.

The near term balance of risks for both real GDP growth and core PCE inflation have improved since June. While there has been little change in the medium term assessment we have interpreted movements in inflation expectations measures as consistent with a lower risk of substantially higher inflation due to an unmooring of expectations.

#### Respondent 12:

The incoming data this summer were somewhat weaker than I expected. However, I view this as a temporary slowdown from which the economy is beginning to emerge.

# Respondent 13:

N/A

#### Respondent 14:

Real growth in recent months appears to be slower than I had previously forecast; consequently I have revised downward my projection for 2010, and I am now projecting a slower acceleration in real growth than I expected in the past. I have also revised up my projection of unemployment and now project a slower decline in the unemployment rate. I have also revised upward my long-term projection of the unemployment rate to incorporate some increase in structural unemployment associated with a different mix of output once labor markets fully recover. I have not revised my projections of inflation rates.

#### Respondent 15:

The primary driver of the changes in my forecast is the modestly slower pace of recovery that became clear since the last projection. With this slower pace of recovery in 2010, the economy enters 2011 with less momentum, and the decline in unemployment will be more gradual than anticipated in the last projection.

#### Respondent 16:

The incoming data has been weaker than I forecast in June.

# Respondent 17:

Incoming data, importantly including data with forward=-looking implications, somewhat weaker that anticipated, thereby shifting the weight I assign relevant factors more to those inhibiting accelerated growth. Having said that, as noted above, I weight towards the upside risks around my GDP projection, particularly for 2011.

# Respondent 18:

Number of participants June Tealbook November Tealbook 2010 November projections
June projections - 14 - 12 - 10 8 6 4 2 2.2-2.3 2.8-2.9 4.8-4.9 5.0-5.1 3.0-3.1 3.4-3.5 2.4-2.5 3.2-3.3 Percent range Number of participants November and June Tealbook 2011 - 16 — 14 10 4 2.8-3.2-3.3 3.4-3.5 3.6-3.7 4.4-4.5 4.6-4.7 4.8-4.9 5.0-5.1 Percent range Number of participants November Tealbook June Tealbook - 12 - 10 6 2.8-2.9 4.0-4.1 5.0-5.1 3.2-3.3 3.6-3.7 3.8-3.9 4.2-4.3 Percent range Number of participants November and June Tealbook 2013 14 - 12 8 6 4 2 2.2-4.4-4.5 2.4-2.5 2.6-2.7 2.8-2.9 3.0-3.1 3.2-3.3 3.4-3.5 3.6-3.7 3.8-3.9 4.0-4.1 4.2-4.3 4.6-4.8-4.9 5.0-5.1 Percent range Number of participants Longer run - 16 - 14 10 8 4.4-4.5 5.0-5.1 3.4-3.5 3.6-3.7 3.8-3.9 4.0-4.1 4.2-4.3 4.6-4.7 4.8-4.9

Figure 2.A. Distribution of participants' projections for the change in real GDP, 2010-13 and over the longer run

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

Percent range

Number of participants June November Tealbook Tealbook 2010 November projections
June projections 14 12 10 8 6 7.2- 7.4-7.3 7.5 9.2-9.3 Percent range Number of participants June November Tealbook Tealbook 2011 - 16 - 14 10 4 2 8.2-8.3 8.6-8.7 8.8-8.9 9.0-9.1 9.2-9.3 Percent range Number of participants June Tealbook November Tealbook **—** 2012 - 12 10 6 4 2 6.8-6.9 7.0-7.1 7.2-7.3 7.4-7.5 7.6- 7.8- 8.0-7.7 7.9 8.1 Percent range Number of participants November Tealbook June Tealbook 2013 14 - 12 8 6 4 2 5.6- 5.8- 6.0- 6.2- 6.4- 6.6- 6.8- 7.0- 7.2- 7.4- 7.6- 7.8- 8.0- 8.2- 8.4- 8.6- 5.7 5.9 6.1 6.3 6.5 6.7 6.9 7.1 7.3 7.5 7.7 7.9 8.1 8.3 8.5 8.7 Percent range Number of participants Longer run - 16 - 14 10 8 4 Percent range

Figure 2.B. Distribution of participants' projections for the unemployment rate, 2010-13 and over the longer run

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

Number of participants June Tealbook November Tealbook 2010 November projections
June projections - 14 - 12 10 8 6 2 0.3-0.4 0.7-1.9-2.0 2.3-2.4 0.5-0.6 2.1-2.2 1.1-1.2 1.3-1.4 Percent range Number of participants November Tealbook June 2011 - 16 - 14 10 8 4 0.3-0.4 0.5-0.7-0.8 0.9-1.0 1.1-1.3-1.4 Percent range Number of participants \_\_\_\_\_2012 June Tealbook - 12 - 10 6 0.3-0.4 0.7-0.9-1.0 1.5-1.6 2.1-2.2 2.3-2.4 1.1-1.2 1.3-1.4 1.9-2.0 Percent range Number of participants November and June Tealbook 2013 - 14 - 12 8 6 4 2 0.3-0.4 0.7-2.3-2.4 0.5-0.6 0.9-1.0 1.1-1.3-1.5-1.6 1.7-1.8 1.9-2.0 2.1-Percent range Number of participants - 16 - 14 10 8 4 0.3-0.4 0.5-0.6 0.7-0.8 0.9-1.0 1.1-1.2 1.9-2.0 2.1-2.2 2.3-2.4 Percent range

Figure 2.C. Distribution of participants' projections for PCE inflation, 2010-13 and over the longer run

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

2.3-2.4

2.1-2.2

Number of participants June Tealbook November Tealbook 2010 November projections
June projections - 12 - 10 8 6 0.3-0.4 0.5-0.6 0.9-1.0 1.9-2.0 2.3-2.4 2.1-2.2 1.1-1.2 Percent range Number of participants November Tealbook June 2011 - 16 10 8 4 0.3-0.4 0.7-0.8 0.9-1.0 1.1-1.2 2.1-Percent range Number of participants November and June Tealbook \_\_ 2012 \_\_ \_\_ \_\_ \_\_ - 12 - 10 6 0.3-0.4 0.7-0.8 0.9-1.0 1.5-1.6 1.9-2.0 1.1-1.2 1.3-1.4 Percent range Number of participants November and June Tealbook 2013 - 14 - 12

Figure 2.D. Distribution of participants' projections for core PCE inflation, 2010–13

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

0.7-0.8 0.9-1.0 1.1-

Percent range

1.3-

1.5-1.6 1.7-1.8 1.9-2.0

0.5-0.6

0.3-0.4