

### **Prefatory Note**

The attached document represents the most complete and accurate version available based on original files from the FOMC Secretariat at the Board of Governors of the Federal Reserve System.

Please note that some material may have been redacted from this document if that material was received on a confidential basis. Redacted material is indicated by occasional gaps in the text or by gray boxes around non-text content. All redacted passages are exempt from disclosure under applicable provisions of the Freedom of Information Act.

Class II FOMC – Restricted (FR)

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# Report to the FOMC on Economic Conditions and Monetary Policy



## Book A

### Economic and Financial Conditions: Current Situation and Outlook

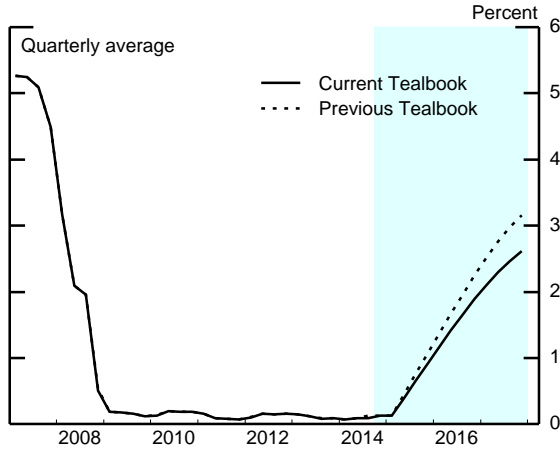
October 22, 2014

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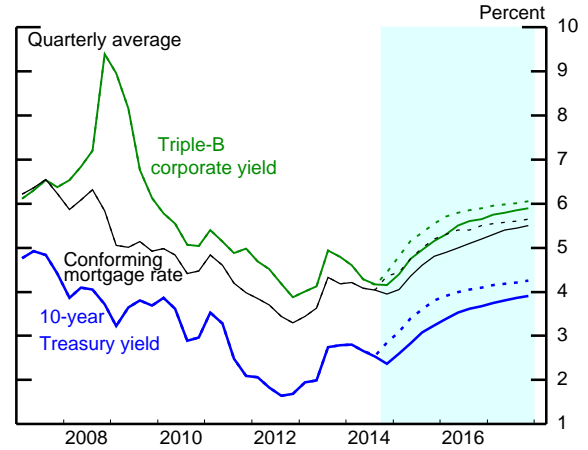
Prepared for the Federal Open Market Committee  
by the staff of the Board of Governors of the Federal Reserve System

## Key Background Factors underlying the Baseline Staff Projection

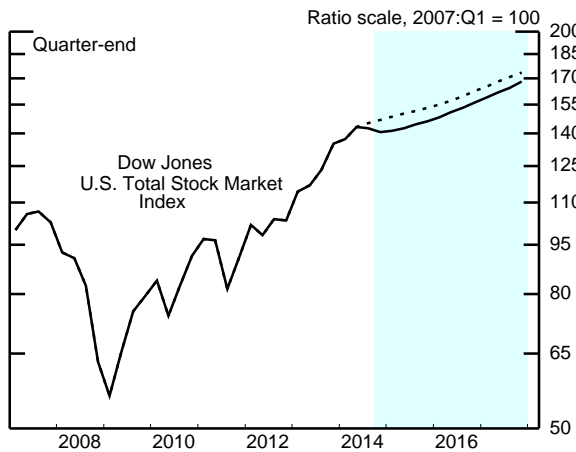
Federal Funds Rate



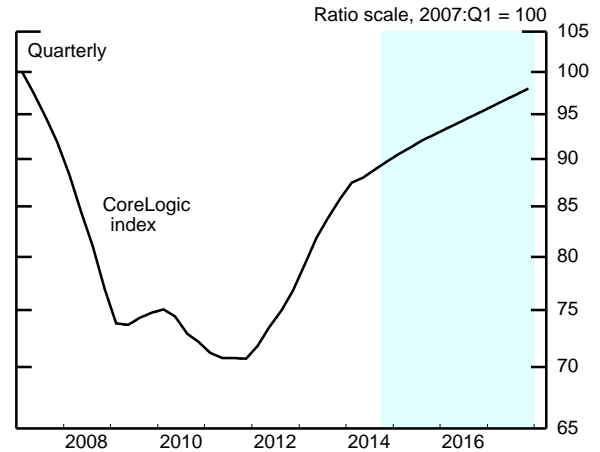
Long-Term Interest Rates



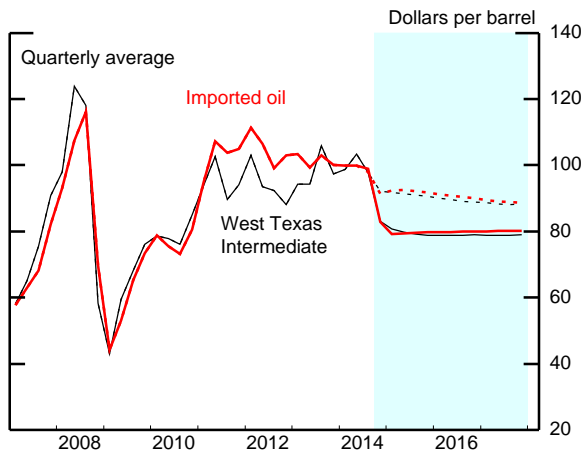
Equity Prices



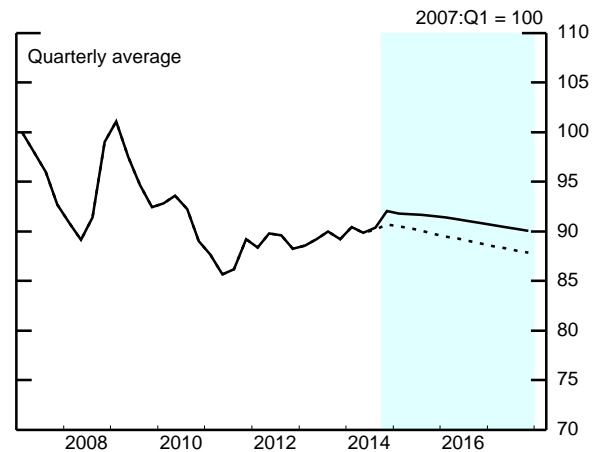
House Prices



Crude Oil Prices



Broad Real Dollar



### Summary of the Near-Term Outlook

(Percent change at annual rate except as noted)

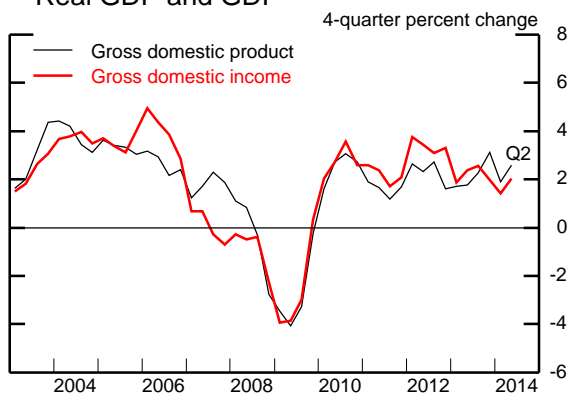
| Measure                                    | 2014:Q2           |                  | 2014:Q3           |                  | 2014:Q4           |                  |
|--|-------------------|------------------|-------------------|------------------|-------------------|------------------|
|  | Previous Tealbook | Current Tealbook | Previous Tealbook | Current Tealbook | Previous Tealbook | Current Tealbook |
| <b>Real GDP</b>                            | <b>4.4</b>        | <b>4.6</b>       | <b>2.8</b>        | <b>2.7</b>       | <b>3.0</b>        | <b>3.0</b>       |
| Private domestic final purchases           | 3.7               | 3.8              | 2.9               | 2.8              | 3.9               | 3.5              |
| Personal consumption expenditures          | 2.5               | 2.5              | 2.0               | 1.9              | 3.4               | 3.4              |
| Residential investment                     | 8.6               | 8.8              | 9.9               | 8.0              | 11.8              | 5.5              |
| Nonres. private fixed investment           | 9.5               | 9.7              | 6.1               | 6.7              | 4.1               | 3.7              |
| Government purchases                       | 1.7               | 1.7              | -1.0              | 1.5              | -.1               | -1.6             |
| <i>Contributions to change in real GDP</i> |                   |                  |                   |                  |                   |                  |
| Inventory investment <sup>1</sup>          | 1.2               | 1.4              | .1                | -.6              | -.1               | .4               |
| Net exports <sup>1</sup>                   | -.3               | -.3              | .5                | .6               | -.2               | -.1              |
| <b>Unemployment rate<sup>2</sup></b>       | <b>6.2</b>        | <b>6.2</b>       | <b>6.1</b>        | <b>6.1</b>       | <b>5.9</b>        | <b>5.8</b>       |
| <b>PCE chain price index</b>               | <b>2.3</b>        | <b>2.3</b>       | <b>1.3</b>        | <b>1.2</b>       | <b>.9</b>         | <b>-.2</b>       |
| Ex. food and energy                        | 2.0               | 2.0              | 1.5               | 1.4              | 1.4               | 1.2              |

1. Percentage points.

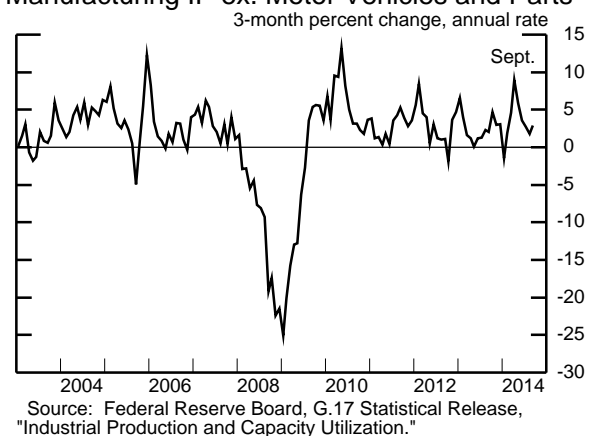
2. Percent.

### Recent Nonfinancial Developments (1)

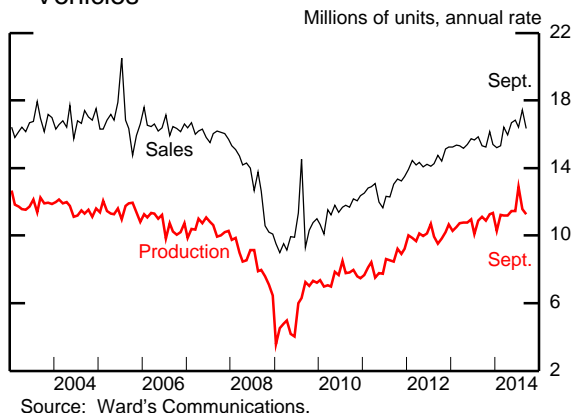
#### Real GDP and GDI



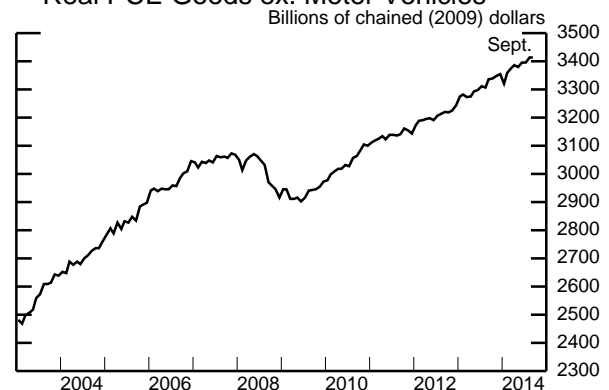
#### Manufacturing IP ex. Motor Vehicles and Parts



#### Sales and Production of Light Motor Vehicles



#### Real PCE Goods ex. Motor Vehicles



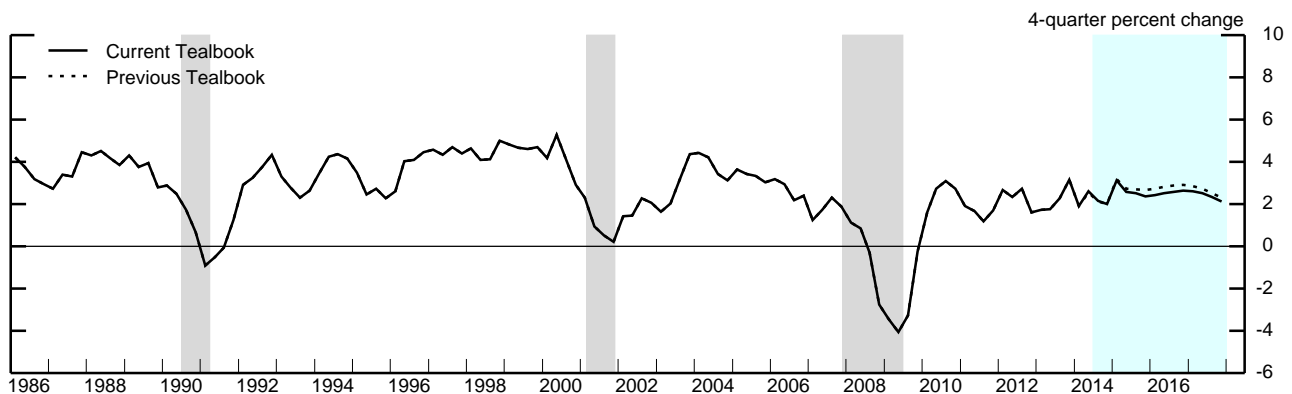
Note: Figures for July, August, and September 2014 are staff estimates based on available source data.

Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

**Projections of Real GDP and Related Components**  
(Percent change at annual rate from final quarter  
of preceding period except as noted)

| Measure  | 2014       | 2014       |            | 2015       | 2016       | 2017       |
|--|------------|------------|------------|------------|------------|------------|
|  |            | H1         | H2         |            |            |            |
| <b>Real GDP</b>  | <b>2.0</b> | <b>1.2</b> | <b>2.8</b> | <b>2.4</b> | <b>2.6</b> | <b>2.1</b> |
| Previous Tealbook  | 2.0        | 1.1        | 2.9        | 2.7        | 2.9        | 2.3        |
| Final sales  | 2.0        | 1.1        | 2.9        | 2.3        | 2.6        | 2.4        |
| Previous Tealbook  | 2.0        | 1.1        | 2.9        | 2.6        | 2.9        | 2.5        |
| Personal consumption expenditures                          | 2.3        | 1.9        | 2.6        | 3.0        | 2.7        | 2.4        |
| Previous Tealbook  | 2.3        | 1.8        | 2.7        | 3.0        | 2.8        | 2.5        |
| Residential investment                                     | 4.1        | 1.5        | 6.7        | 9.5        | 9.7        | 7.3        |
| Previous Tealbook  | 6.0        | 1.4        | 10.8       | 11.0       | 10.7       | 6.0        |
| Nonresidential structures                                  | 4.2        | 7.6        | .9         | -2.4       | .6         | .4         |
| Previous Tealbook  | 6.8        | 7.8        | 5.9        | -7         | 1.1        | .7         |
| Equipment and intangibles                                  | 5.7        | 5.0        | 6.5        | 2.7        | 3.6        | 2.6        |
| Previous Tealbook  | 4.8        | 4.8        | 4.9        | 3.1        | 4.2        | 3.0        |
| Federal purchases  | -1.3       | -.5        | -2.1       | -3.6       | -1.4       | -1.0       |
| Previous Tealbook  | -2.0       | -.5        | -3.4       | -3.3       | -1.1       | -.8        |
| State and local purchases                                  | 1.1        | 1.0        | 1.3        | 1.5        | 1.8        | 2.0        |
| Previous Tealbook  | 1.2        | 1.1        | 1.3        | 1.5        | 1.8        | 2.0        |
| Exports  | 2.3        | .4         | 4.3        | 3.7        | 4.4        | 5.0        |
| Previous Tealbook  | 2.2        | .3         | 4.0        | 4.4        | 5.1        | 5.4        |
| Imports  | 4.3        | 6.7        | 1.9        | 4.1        | 4.5        | 3.8        |
| Previous Tealbook  | 4.4        | 6.5        | 2.3        | 4.0        | 4.6        | 3.9        |
| Contributions to change in real GDP<br>(percentage points) |            |            |            |            |            |            |
| Inventory change   | .0         | .1         | -.1        | .1         | .1         | -.3        |
| Previous Tealbook  | .0         | .0         | .0         | .1         | .1         | -.2        |
| Net exports  | -.4        | -1.0       | .3         | -.2        | -.1        | .1         |
| Previous Tealbook  | -.4        | -1.0       | .2         | -.1        | -.1        | .1         |

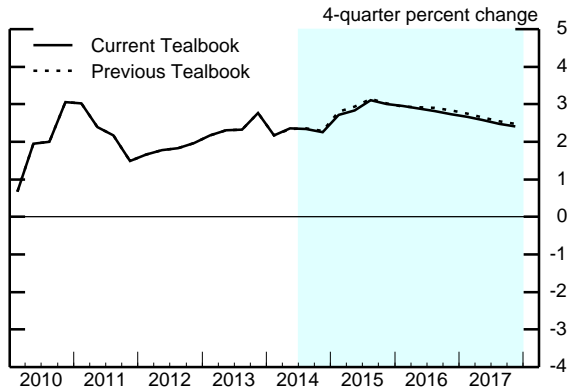
### Real GDP



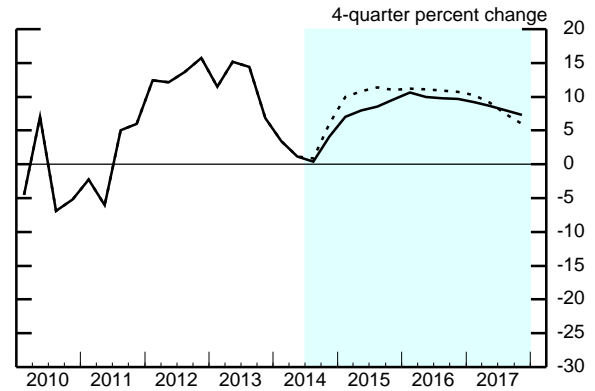
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

## Components of Final Demand

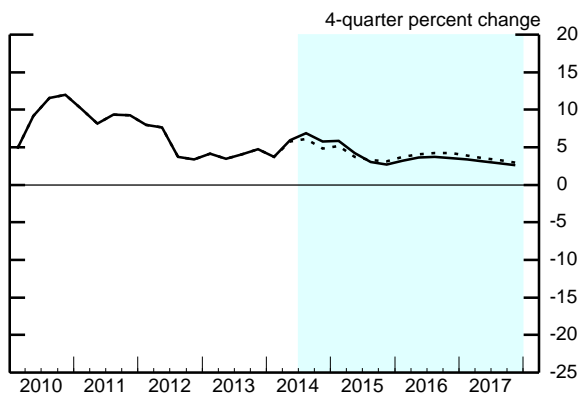
Personal Consumption Expenditures



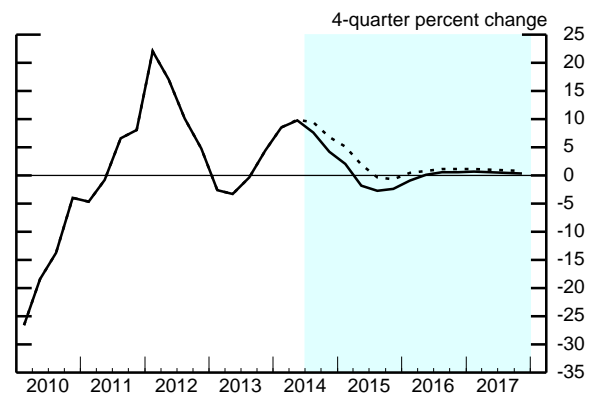
Residential Investment



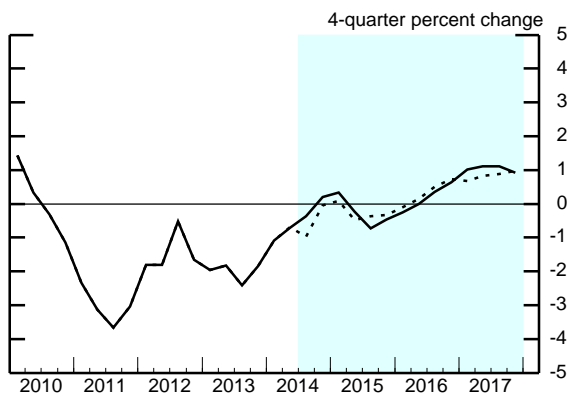
Equipment and Intangibles



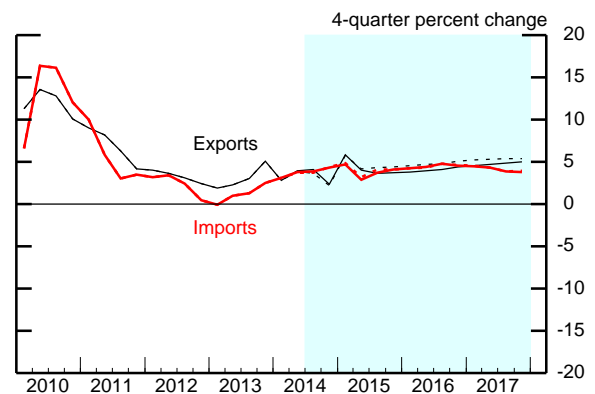
Nonresidential Structures



Government Consumption & Investment

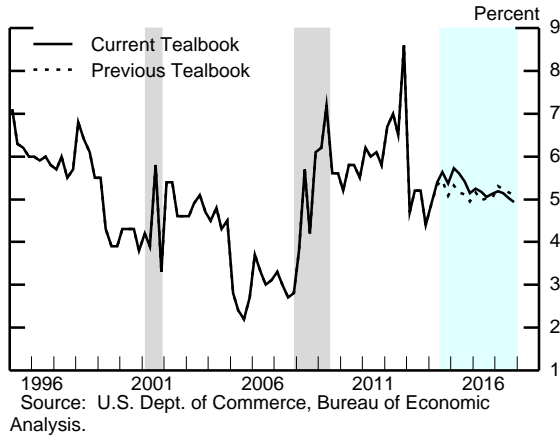


Exports and Imports

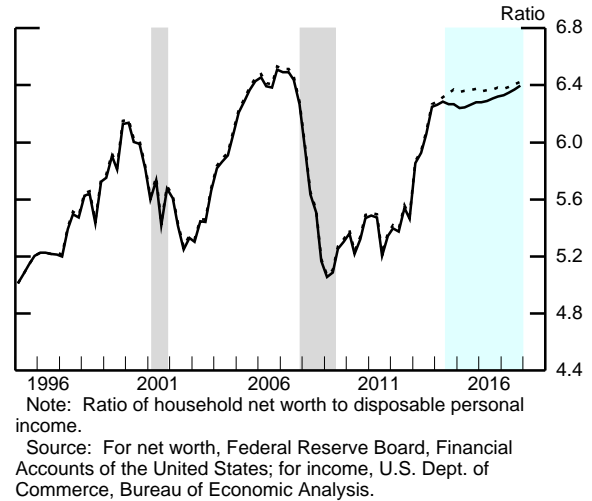


## Aspects of the Medium-Term Projection

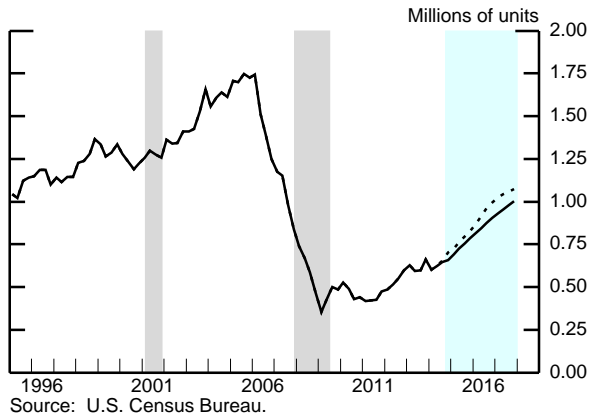
Personal Saving Rate



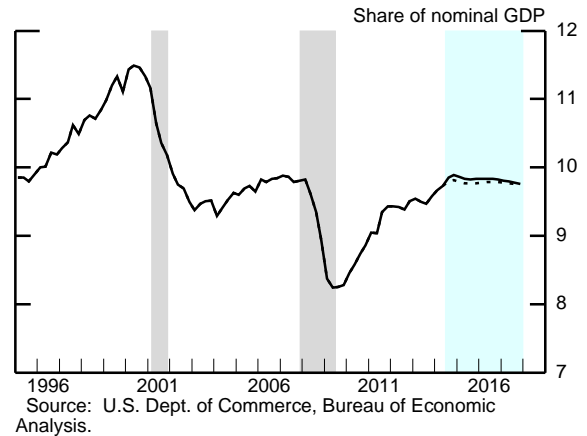
Wealth-to-Income Ratio



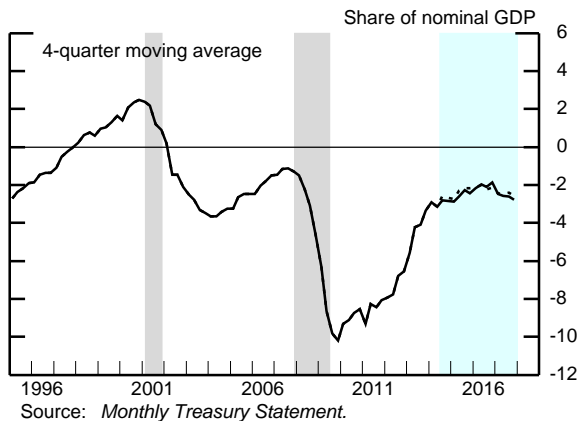
Single-Family Housing Starts



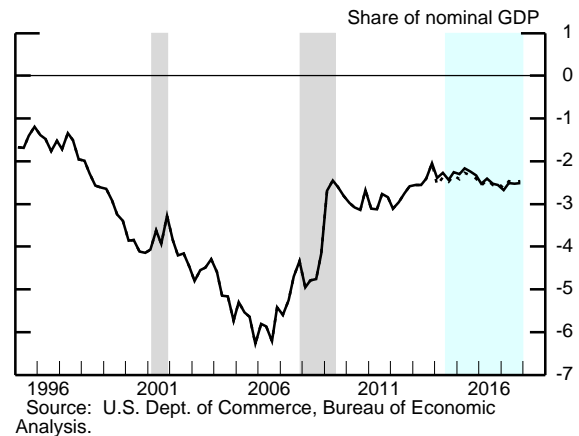
Equipment and Intangibles Spending



Federal Surplus/Deficit



Current Account Surplus/Deficit



Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

### Decomposition of Potential GDP

(Percent change, Q4 to Q4, except as noted)

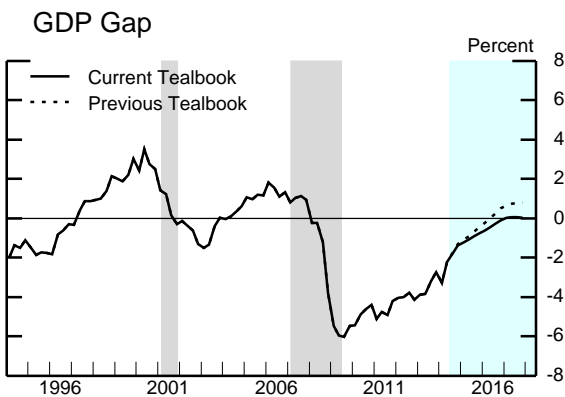
| Measure                                    | 1974-95 | 1996-2000 | 2001-07 | 2008-10 | 2011-13 | 2014 | 2015 | 2016 | 2017 |
|--|---------|-----------|---------|---------|---------|------|------|------|------|
| Potential real GDP                         | 3.1     | 3.4       | 2.6     | 1.7     | 1.6     | .6   | 1.7  | 1.9  | 2.0  |
| Previous Tealbook                          | 3.1     | 3.4       | 2.6     | 1.7     | 1.6     | .5   | 1.7  | 1.9  | 2.0  |
| <i>Selected contributions<sup>1</sup></i>  |         |           |         |         |         |      |      |      |      |
| Structural labor productivity <sup>2</sup> | 1.6     | 2.9       | 2.8     | 1.5     | 1.2     | .7   | 1.7  | 1.8  | 1.9  |
| Previous Tealbook                          | 1.6     | 2.9       | 2.8     | 1.5     | 1.2     | .6   | 1.7  | 1.8  | 1.9  |
| Capital deepening                          | .7      | 1.5       | .9      | .4      | .4      | .7   | .7   | .8   | .8   |
| Multifactor productivity                   | .7      | 1.1       | 1.6     | .9      | .7      | -.1  | .9   | 1.0  | 1.0  |
| Structural hours                           | 1.5     | 1.0       | .7      | .2      | .6      | .2   | .3   | .3   | .3   |
| Previous Tealbook                          | 1.5     | 1.0       | .7      | .2      | .6      | .2   | .3   | .3   | .3   |
| Labor force participation                  | .4      | .0        | -.3     | -.4     | -.5     | -.8  | -.5  | -.5  | -.5  |
| Previous Tealbook                          | .4      | .0        | -.3     | -.4     | -.5     | -.8  | -.5  | -.5  | -.5  |
| Memo:                                      |         |           |         |         |         |      |      |      |      |
| GDP gap <sup>3</sup>                       | -1.8    | 2.5       | .9      | -4.4    | -2.8    | -1.4 | -.8  | -.1  | .0   |
| Previous Tealbook                          | -1.8    | 2.5       | .9      | -4.4    | -2.8    | -1.3 | -.4  | .5   | .8   |

Note: For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.

1. Percentage points.

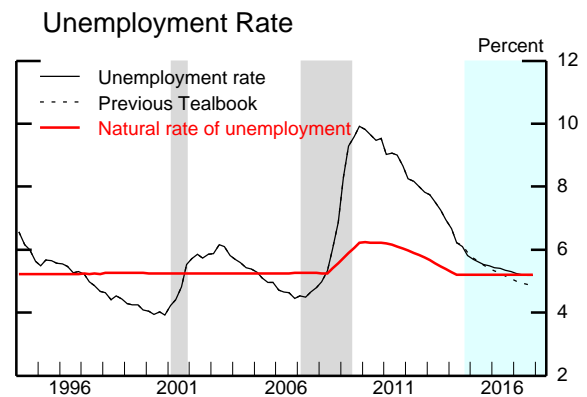
2. Total business sector.

3. Percent difference between actual and potential GDP in the final quarter of the period indicated. A negative number indicates that the economy is operating below potential.

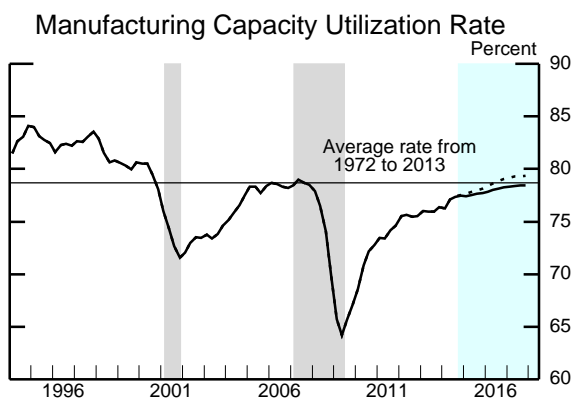


Note: The GDP gap is the percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential.

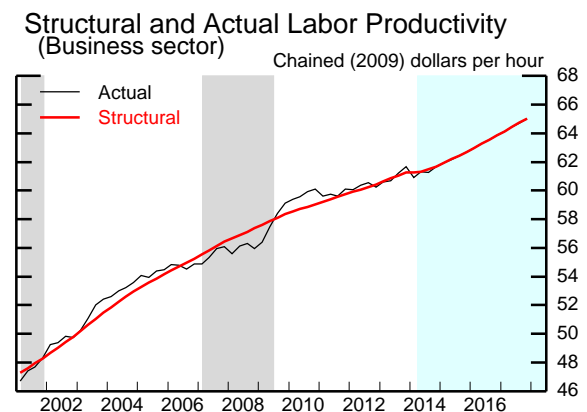
Source: U.S. Dept. of Commerce, BEA; staff assumptions.



Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.



Source: Federal Reserve Board, G.17 Statistical Release, "Industrial Production and Capacity Utilization."



Source: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce, Bureau of Economic Analysis; staff assumptions.

Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.



**The Outlook for the Labor Market**

| Measure                                     | 2014 | 2014 |      | 2015 | 2016 | 2017 |
|---|------|------|------|------|------|------|
|   |      | H1   | H2   |      |      |      |
| Output per hour, business <sup>1</sup>      | .0   | -1.1 | 1.1  | 1.7  | 1.8  | 1.9  |
| Previous Tealbook                           | .0   | -1.3 | 1.3  | 1.7  | 1.8  | 1.9  |
| Nonfarm private employment <sup>2</sup>     | 220  | 222  | 218  | 151  | 161  | 112  |
| Previous Tealbook                           | 211  | 222  | 200  | 180  | 180  | 130  |
| Labor force participation rate <sup>3</sup> | 62.7 | 62.8 | 62.7 | 62.6 | 62.4 | 62.2 |
| Previous Tealbook                           | 62.8 | 62.8 | 62.8 | 62.6 | 62.4 | 62.2 |
| Civilian unemployment rate <sup>3</sup>     | 5.8  | 6.2  | 5.8  | 5.5  | 5.3  | 5.2  |
| Previous Tealbook                           | 5.9  | 6.2  | 5.9  | 5.4  | 5.1  | 4.9  |

1. Percent change from final quarter of preceding period at annual rate.

2. Thousands, average monthly changes.

3. Percent, average for the final quarter in the period.

Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

**Inflation Projections**

(Percent change at annual rate from final quarter of preceding period)

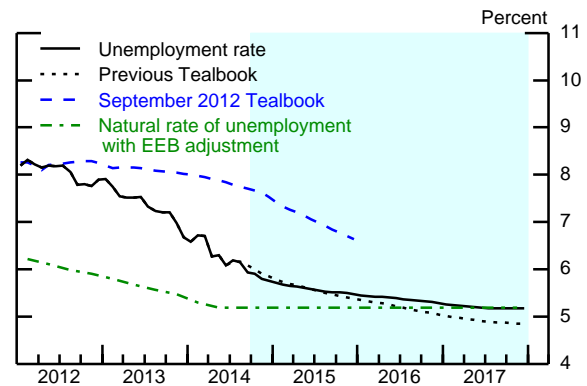
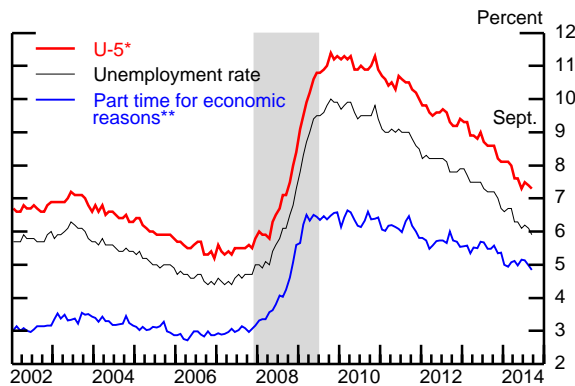
| Measure                                   | 2014 | 2014 |       | 2015 | 2016 | 2017 |
|---|------|------|-------|------|------|------|
|   |      | H1   | H2    |      |      |      |
| PCE chain-weighted price index            | 1.2  | 1.9  | .5    | 1.4  | 1.6  | 1.7  |
| Previous Tealbook                         | 1.5  | 1.8  | 1.1   | 1.5  | 1.6  | 1.7  |
| Food and beverages                        | 2.7  | 2.9  | 2.5   | 1.0  | 1.5  | 1.8  |
| Previous Tealbook                         | 2.2  | 2.9  | 1.5   | .9   | 1.5  | 1.8  |
| Energy                                    | -5.5 | 4.6  | -14.7 | -1.1 | 1.2  | .9   |
| Previous Tealbook                         | -.9  | 4.6  | -6.0  | .6   | -.1  | .2   |
| Excluding food and energy                 | 1.5  | 1.6  | 1.3   | 1.5  | 1.6  | 1.8  |
| Previous Tealbook                         | 1.5  | 1.6  | 1.5   | 1.6  | 1.7  | 1.8  |
| Prices of core goods imports <sup>1</sup> | .6   | 1.5  | -.3   | .4   | 1.2  | 1.2  |
| Previous Tealbook                         | 1.0  | 1.5  | .5    | 1.1  | 1.3  | 1.3  |

1. Core goods imports exclude computers, semiconductors, oil, and natural gas.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

# Labor Market Developments and Outlook (1)

## Measures of Labor Underutilization



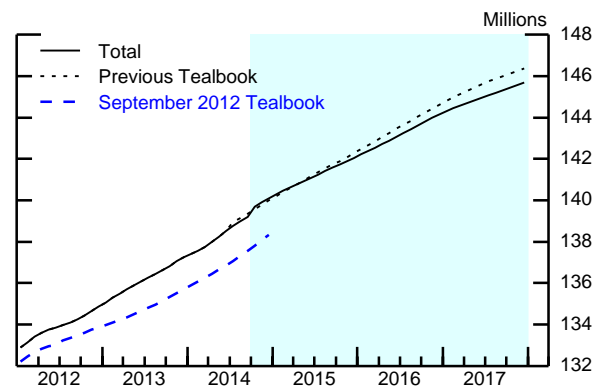
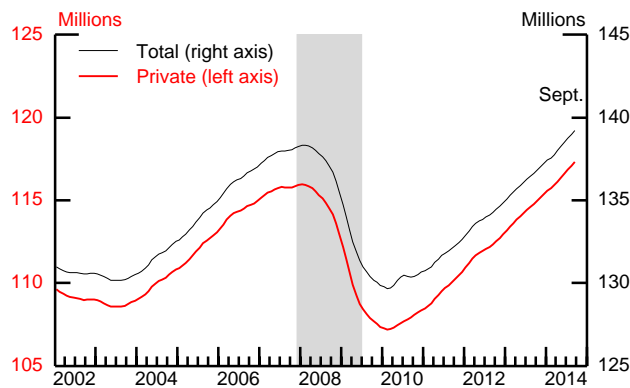
\* U-5 measures total unemployed persons plus all marginally attached to the labor force, as a percent of the labor force plus persons marginally attached to the labor force.

\*\* Percent of Current Population Survey employment.

EEB Extended and emergency unemployment benefits.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

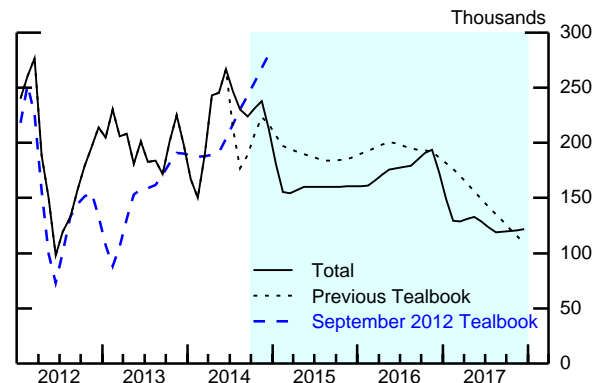
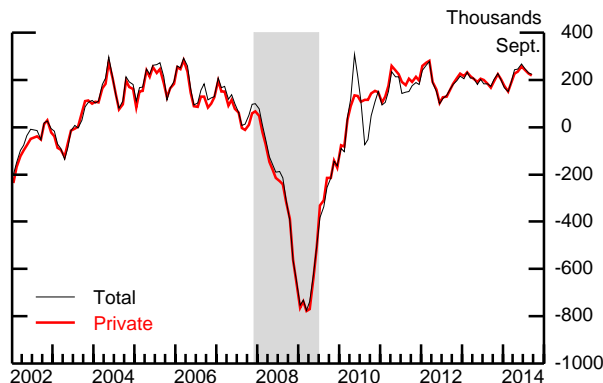
## Level of Payroll Employment\*



\* 3-month moving averages in history; average levels in each quarter during the forecast period.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

## Change in Payroll Employment\*



\* 3-month moving averages in history; average monthly changes in each quarter during the forecast period.

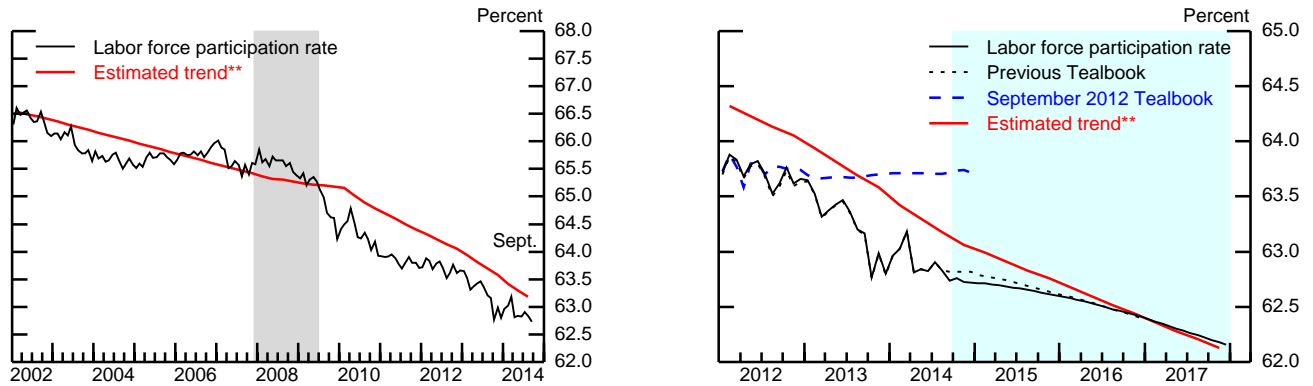
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Note: In September 2012, judgmental projections were prepared through 2015 for the Summary of Economic Projections variables, including the unemployment rate, while projections for other variables, including the labor force participation rate and payroll employment, were prepared only through 2014. This exhibit therefore reports a 2015 projection from the September 2012 Tealbook only for the unemployment rate.

The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

## Labor Market Developments and Outlook (2)

Labor Force Participation Rate\*

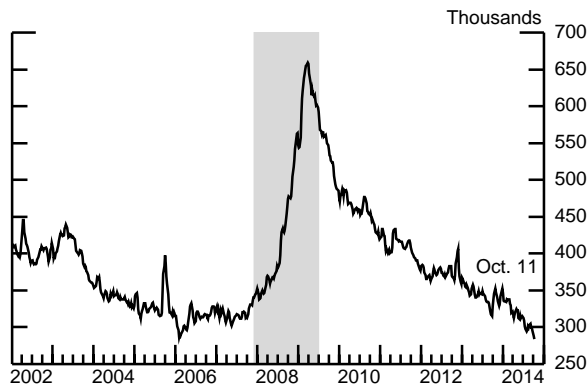


\* Published data adjusted by staff to account for changes in population weights.

\*\* Includes staff estimate of the effect of extended and emergency unemployment benefits.

Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

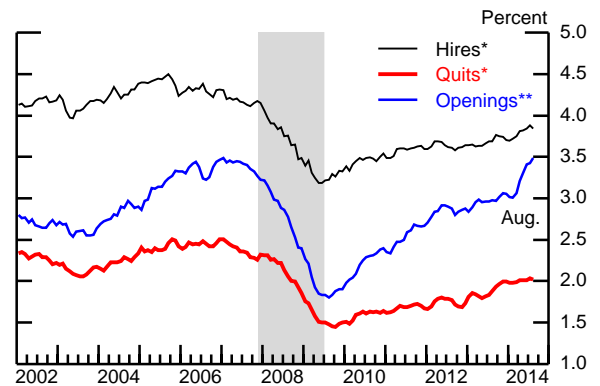
Initial Unemployment Insurance Claims\*



\* 4-week moving average.

Source: U.S. Department of Labor, Employment and Training Administration.

Private Hires, Quits, and Job Openings

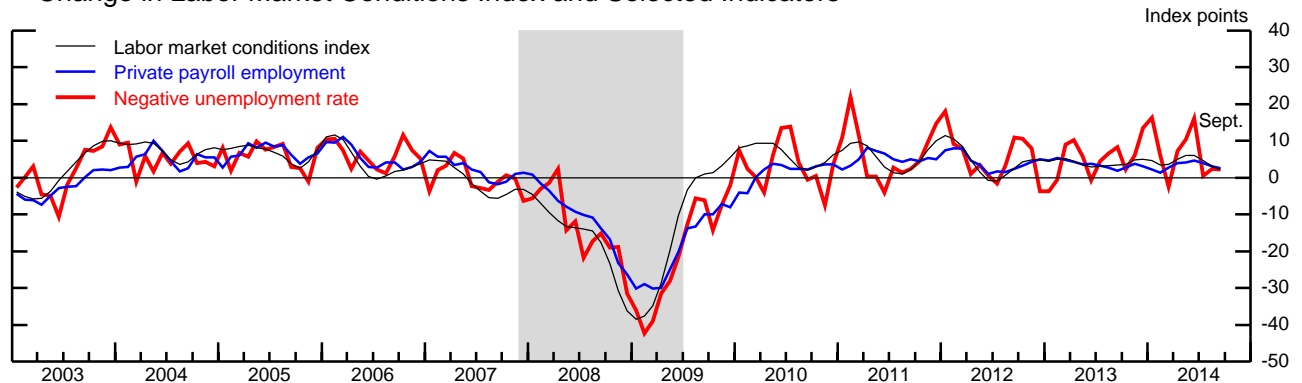


\* Percent of private nonfarm payroll employment, 3-month moving average.

\*\* Percent of private nonfarm payroll employment plus unfilled jobs, 3-month moving average.

Source: Job Openings and Labor Turnover Survey.

Change in Labor Market Conditions Index and Selected Indicators\*



Note: Labor market conditions index estimated by staff; indexes for unemployment rate and private payroll employment are standardized deviations from estimated trend.

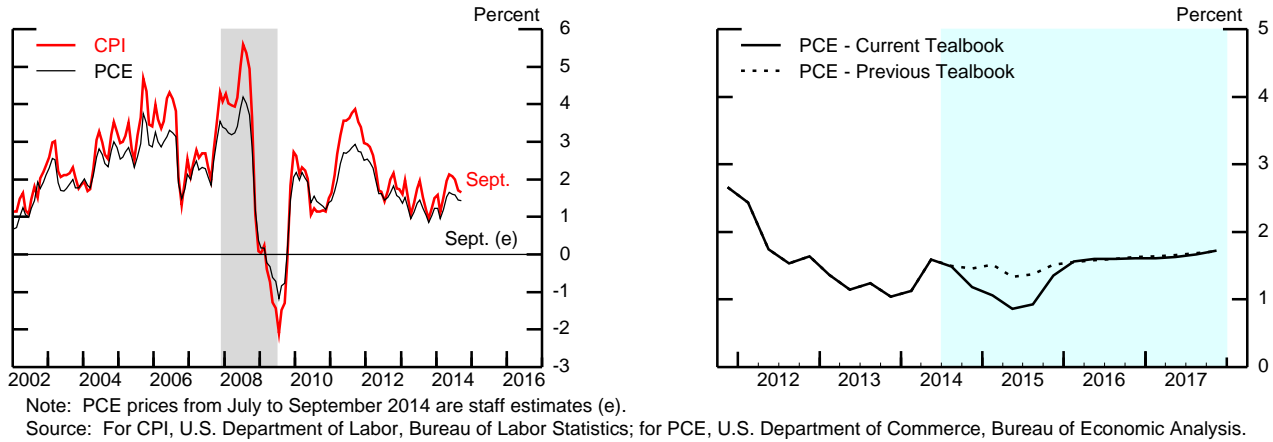
\* 3-month moving average.

Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

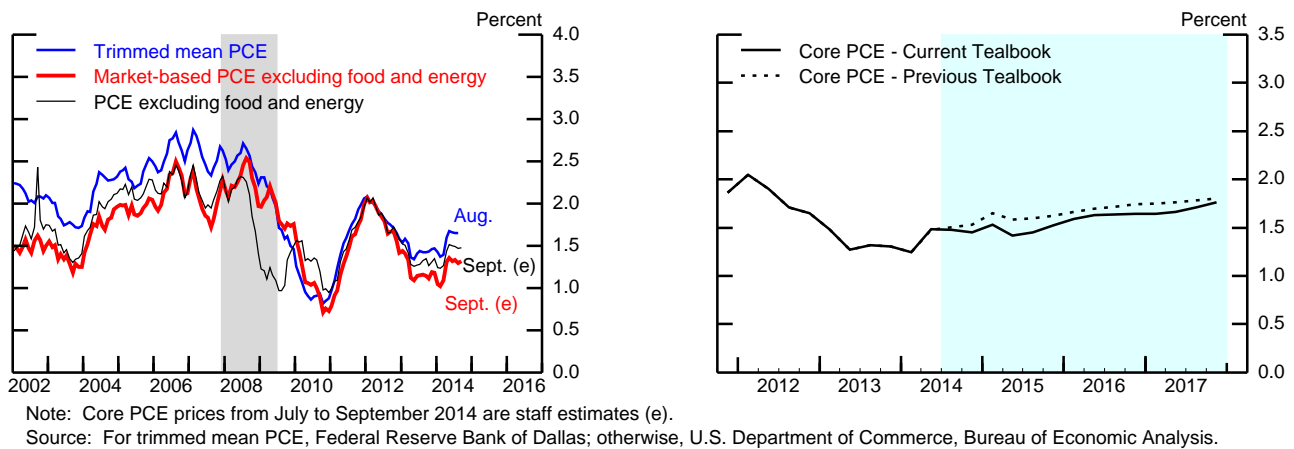
## Inflation Developments and Outlook (1)

(Percent change from year-earlier period)

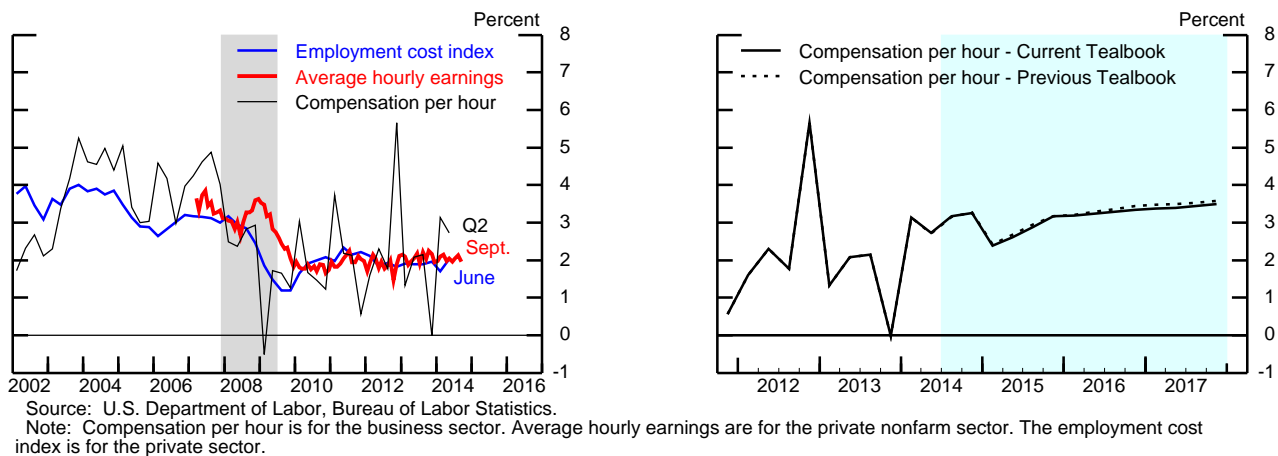
### Headline Consumer Price Inflation



### Measures of Underlying PCE Price Inflation



### Labor Cost Growth



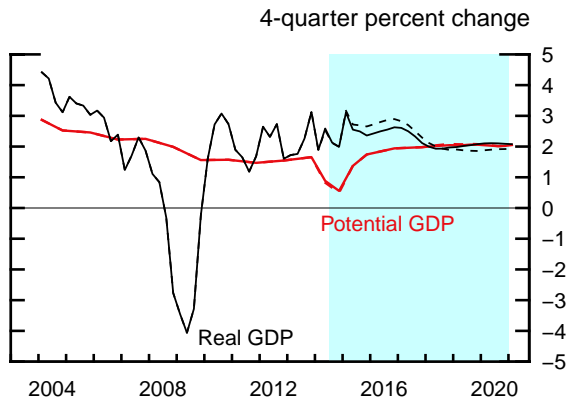
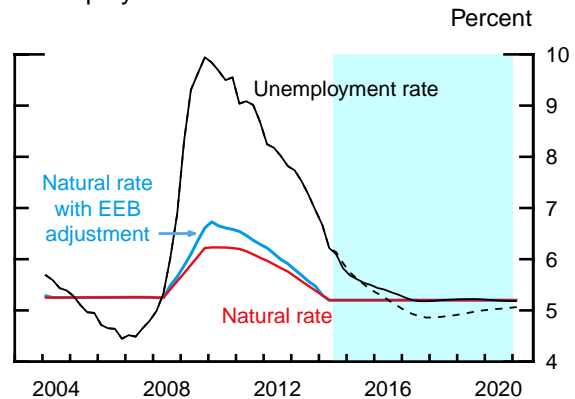
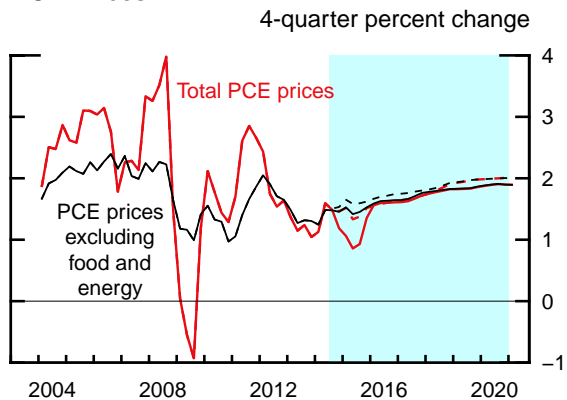
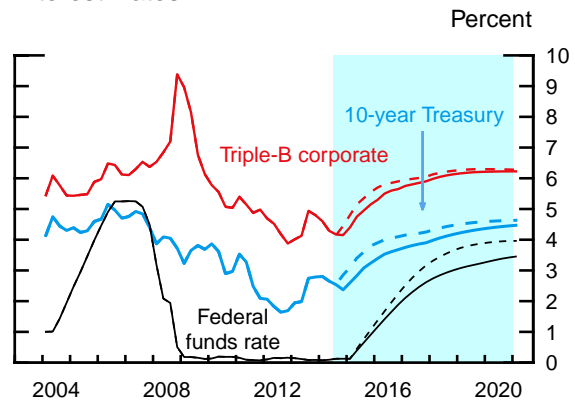
Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

**The Long-Term Outlook**

(Percent change, Q4 to Q4, except as noted)

| Measure                                 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Longer run |
|---|------|------|------|------|------|------|------------|
| Real GDP                                | 2.0  | 2.4  | 2.6  | 2.1  | 2.0  | 2.1  | 2.0        |
| Previous Tealbook                       | 2.0  | 2.7  | 2.9  | 2.3  | 1.9  | 1.9  | 2.0        |
| Civilian unemployment rate <sup>1</sup> | 5.8  | 5.5  | 5.3  | 5.2  | 5.2  | 5.2  | 5.2        |
| Previous Tealbook                       | 5.9  | 5.4  | 5.1  | 4.9  | 4.9  | 5.0  | 5.2        |
| PCE prices, total                       | 1.2  | 1.4  | 1.6  | 1.7  | 1.8  | 1.9  | 2.0        |
| Previous Tealbook                       | 1.5  | 1.5  | 1.6  | 1.7  | 1.9  | 2.0  | 2.0        |
| Core PCE prices                         | 1.5  | 1.5  | 1.6  | 1.8  | 1.8  | 1.9  | 2.0        |
| Previous Tealbook                       | 1.5  | 1.6  | 1.7  | 1.8  | 1.9  | 2.0  | 2.0        |
| Federal funds rate <sup>1</sup>         | .1   | .9   | 1.9  | 2.6  | 3.0  | 3.2  | 3.8        |
| Previous Tealbook                       | .1   | 1.1  | 2.3  | 3.2  | 3.7  | 3.9  | 3.8        |
| 10-year Treasury yield <sup>1</sup>     | 2.4  | 3.2  | 3.7  | 3.9  | 4.2  | 4.3  | 4.6        |
| Previous Tealbook                       | 2.8  | 3.8  | 4.1  | 4.3  | 4.5  | 4.6  | 4.6        |

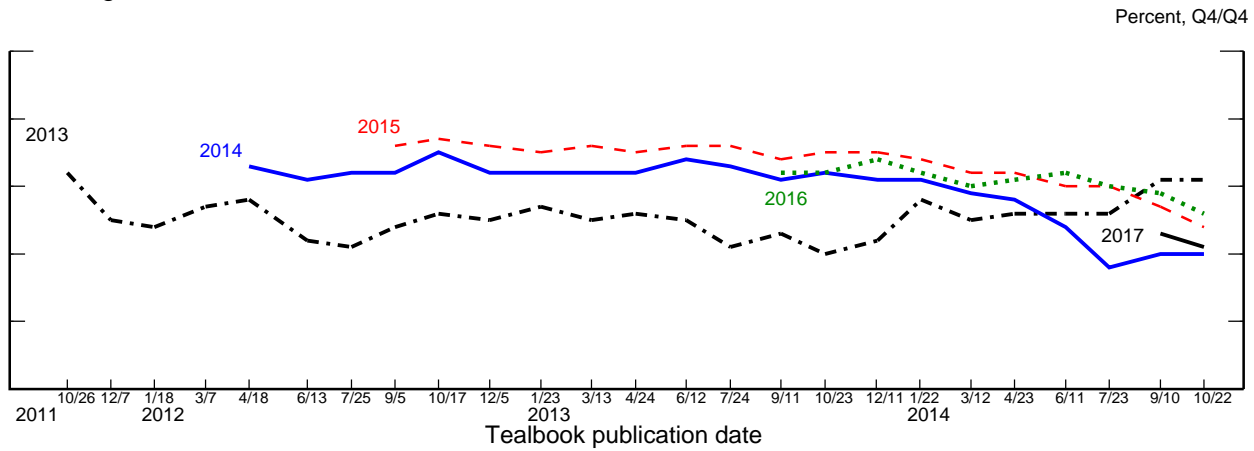
1. Percent, average for the final quarter of the period.

**Real GDP****Unemployment Rate****PCE Prices****Interest Rates**

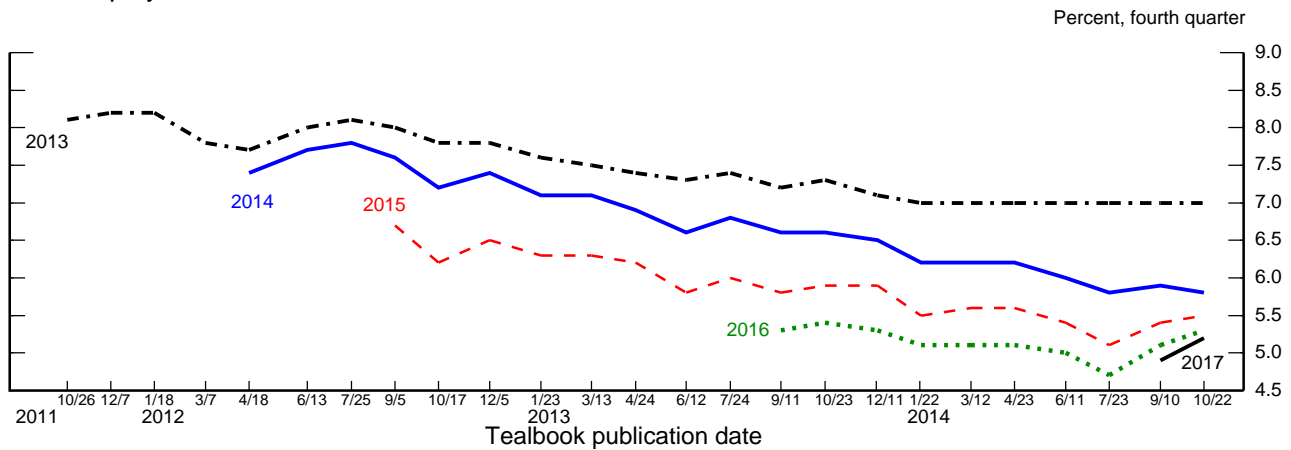
Note: In each panel, shading represents the projection period, and dashed lines are the previous Tealbook.

## Evolution of the Staff Forecast

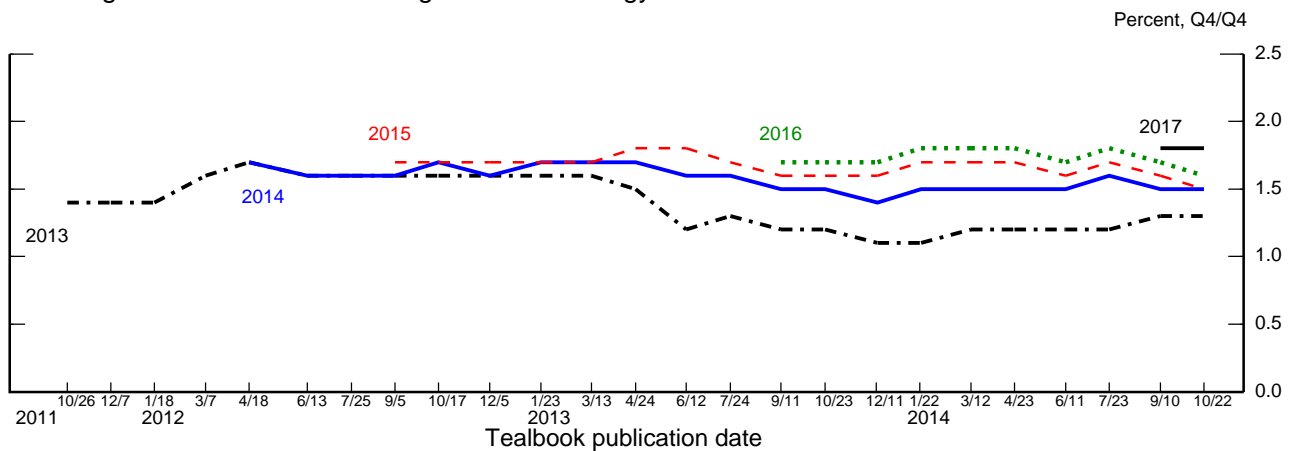
### Change in Real GDP



### Unemployment Rate



### Change in PCE Prices excluding Food and Energy



## The Foreign GDP Outlook

### Real GDP\*

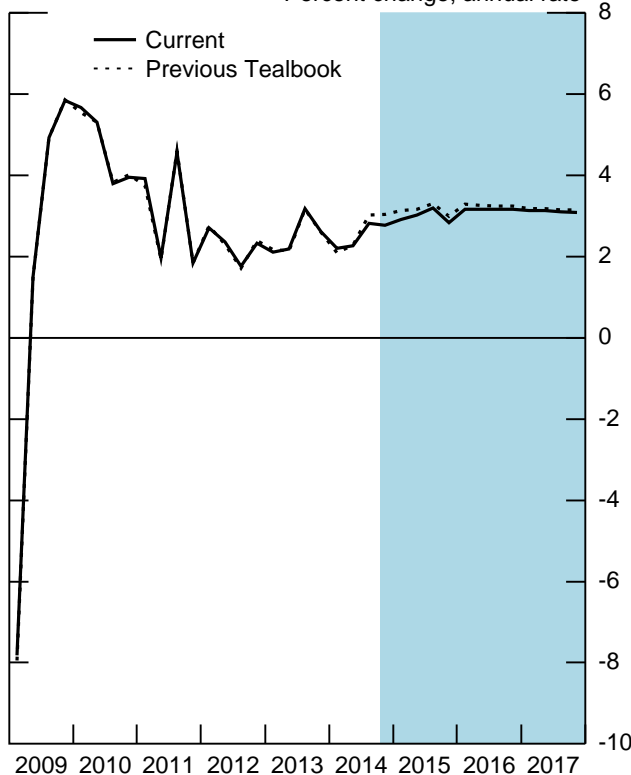
Percent change, annual rate

|                                      | 2013       | 2014       |            |            |            | 2015       | 2016       | 2017       |
|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                                      |            | Q1         | Q2         | Q3         | Q4         |            |            |            |
| <b>1. Total Foreign</b>              | <b>2.5</b> | <b>2.2</b> | <b>2.3</b> | <b>2.8</b> | <b>2.8</b> | <b>3.0</b> | <b>3.2</b> | <b>3.1</b> |
| <i>Previous Tealbook</i>             | 2.5        | 2.1        | 2.3        | 3.0        | 3.0        | 3.2        | 3.3        | 3.2        |
| <b>2. Advanced Foreign Economies</b> | <b>1.9</b> | <b>1.9</b> | <b>1.1</b> | <b>1.9</b> | <b>1.8</b> | <b>2.0</b> | <b>2.1</b> | <b>2.1</b> |
| <i>Previous Tealbook</i>             | 2.0        | 1.8        | 1.0        | 2.1        | 2.1        | 2.1        | 2.2        | 2.1        |
| 3. Canada                            | 2.7        | 0.9        | 3.1        | 2.5        | 2.4        | 2.5        | 2.5        | 2.3        |
| 4. Euro Area                         | 0.4        | 1.2        | 0.3        | 0.7        | 0.8        | 1.5        | 1.9        | 2.0        |
| 5. Japan                             | 2.4        | 6.0        | -7.1       | 2.1        | 1.5        | 0.4        | 1.1        | 1.1        |
| 6. United Kingdom                    | 2.7        | 3.0        | 3.7        | 2.8        | 2.5        | 2.4        | 2.4        | 2.3        |
| <b>7. Emerging Market Economies</b>  | <b>3.1</b> | <b>2.6</b> | <b>3.5</b> | <b>3.7</b> | <b>3.7</b> | <b>4.0</b> | <b>4.2</b> | <b>4.1</b> |
| <i>Previous Tealbook</i>             | 3.0        | 2.4        | 3.6        | 3.9        | 4.0        | 4.2        | 4.3        | 4.2        |
| 8. China                             | 7.6        | 6.2        | 7.7        | 7.7        | 7.2        | 7.0        | 7.0        | 6.9        |
| 9. Emerging Asia ex. China           | 3.6        | 2.5        | 3.2        | 3.7        | 3.8        | 4.2        | 4.3        | 4.1        |
| 10. Mexico                           | 0.6        | 1.8        | 4.2        | 3.7        | 3.5        | 3.5        | 3.6        | 3.6        |
| 11. Brazil                           | 2.2        | -0.6       | -2.4       | 0.4        | 1.4        | 1.8        | 2.1        | 2.2        |

\* GDP aggregates weighted by shares of U.S. merchandise exports.

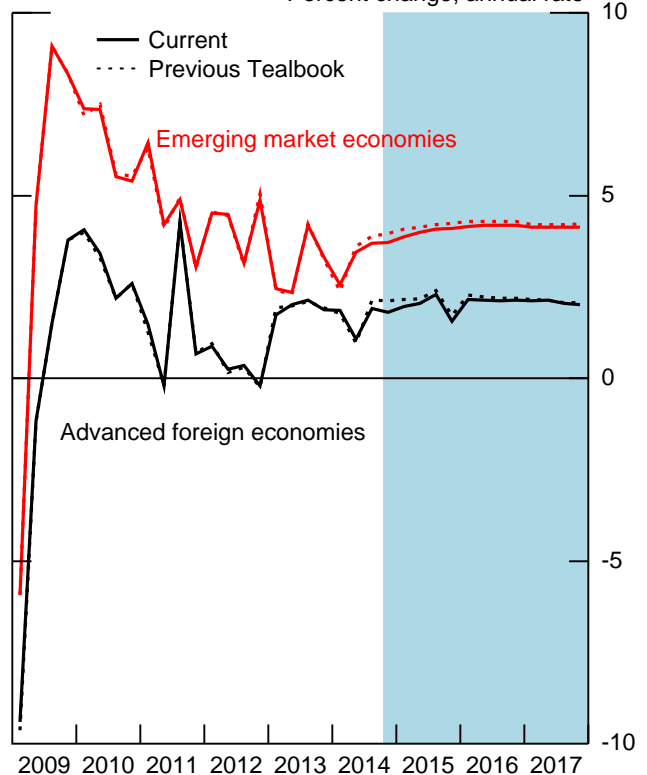
### Total Foreign GDP

Percent change, annual rate



### Foreign GDP

Percent change, annual rate



## The Foreign Inflation Outlook

### Consumer Prices\*

Percent change, annual rate

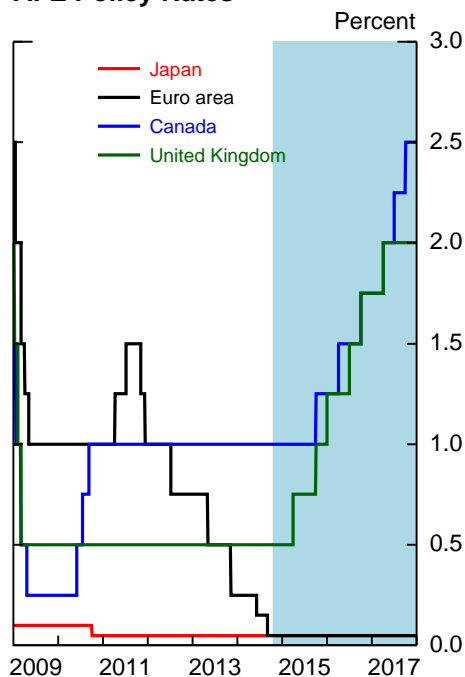
|                                      | 2013       | 2014       |            |            |            | 2015       | 2016       | 2017       |
|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                                      |            | Q1         | Q2         | Q3         | Q4         |            |            |            |
| <b>1. Total Foreign</b>              | <b>2.3</b> | <b>2.0</b> | <b>3.1</b> | <b>2.1</b> | <b>1.7</b> | <b>2.5</b> | <b>2.6</b> | <b>2.6</b> |
| <i>Previous Tealbook</i>             | 2.3        | 2.0        | 3.0        | 2.4        | 2.4        | 2.6        | 2.6        | 2.6        |
| <b>2. Advanced Foreign Economies</b> | <b>1.0</b> | <b>1.1</b> | <b>3.2</b> | <b>1.1</b> | <b>0.3</b> | <b>1.5</b> | <b>1.6</b> | <b>1.7</b> |
| <i>Previous Tealbook</i>             | 1.0        | 1.1        | 3.3        | 1.2        | 1.2        | 1.7        | 1.6        | 1.7        |
| 3. Canada                            | 1.0        | 2.8        | 3.7        | 1.3        | 0.2        | 1.5        | 1.9        | 2.0        |
| 4. Euro Area                         | 0.8        | 0.2        | 0.4        | 0.6        | 0.4        | 1.2        | 1.5        | 1.6        |
| 5. Japan                             | 1.4        | 0.4        | 9.4        | 1.5        | 0.1        | 2.1        | 1.2        | 1.3        |
| 6. United Kingdom                    | 2.1        | 1.2        | 1.8        | 1.6        | 1.0        | 1.7        | 1.9        | 2.0        |
| <b>7. Emerging Market Economies</b>  | <b>3.4</b> | <b>2.6</b> | <b>2.9</b> | <b>2.8</b> | <b>2.9</b> | <b>3.3</b> | <b>3.3</b> | <b>3.3</b> |
| <i>Previous Tealbook</i>             | 3.3        | 2.7        | 2.8        | 3.3        | 3.3        | 3.4        | 3.3        | 3.3        |
| 8. China                             | 2.9        | 0.8        | 2.0        | 2.2        | 1.9        | 3.0        | 3.0        | 3.0        |
| 9. Emerging Asia ex. China           | 3.4        | 2.9        | 3.1        | 1.8        | 3.2        | 3.5        | 3.5        | 3.5        |
| 10. Mexico                           | 3.7        | 4.8        | 3.3        | 4.4        | 3.5        | 3.3        | 3.3        | 3.3        |
| 11. Brazil                           | 5.9        | 6.5        | 7.4        | 6.2        | 6.2        | 5.6        | 5.5        | 5.5        |

\* CPI aggregates weighted by shares of U.S. non-oil imports.

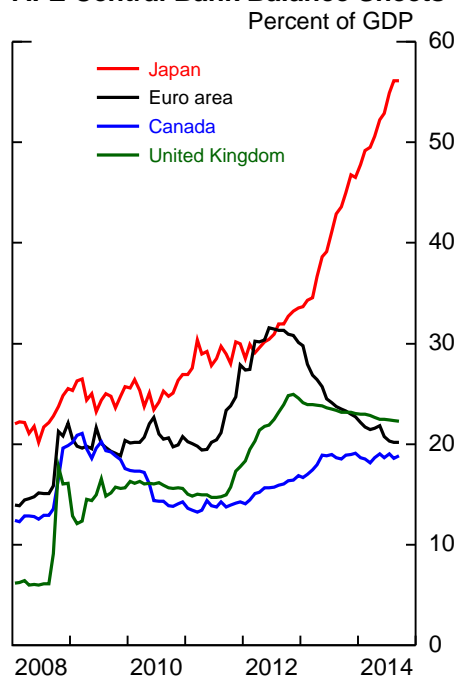
Int'l Econ Devel &amp; Outlook

## Foreign Monetary Policy

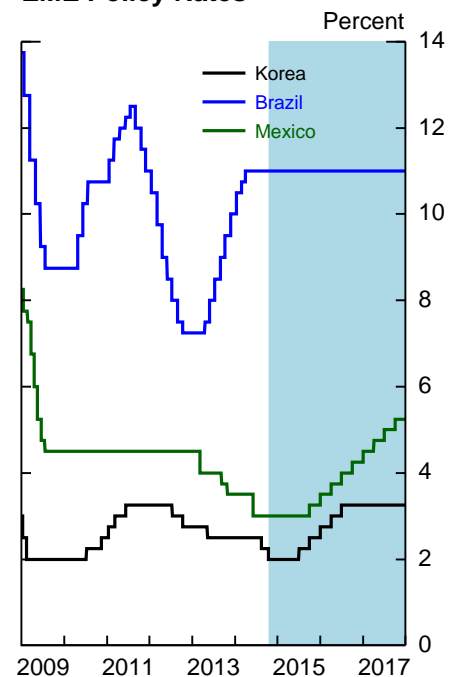
### AFE Policy Rates



### AFE Central Bank Balance Sheets



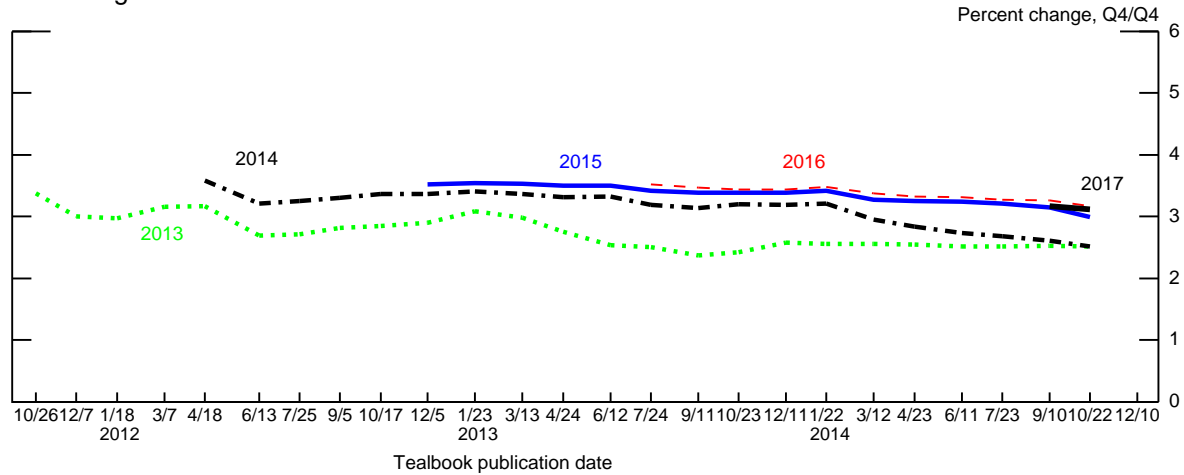
### EME Policy Rates



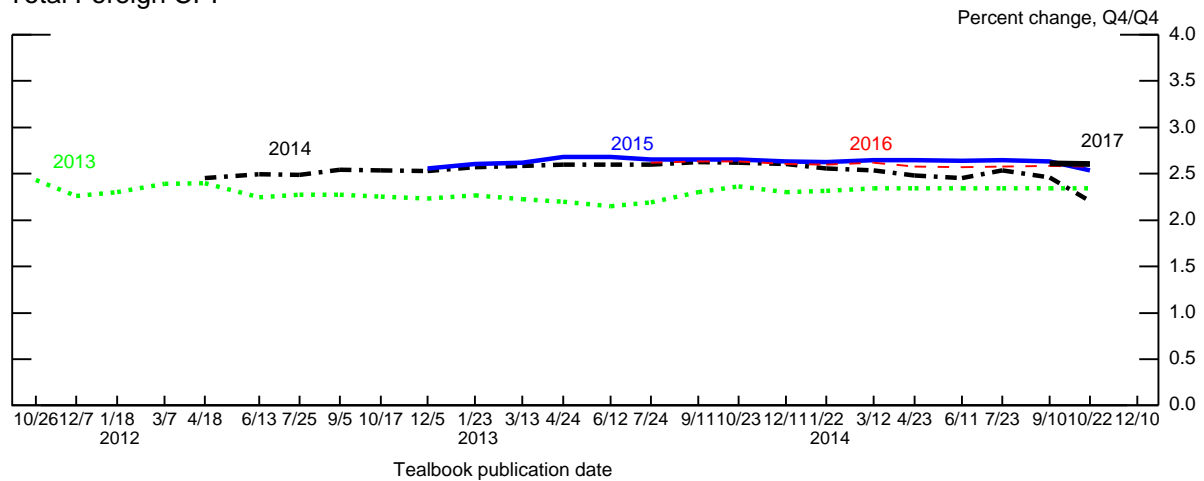


## Evolution of Staff's International Forecast

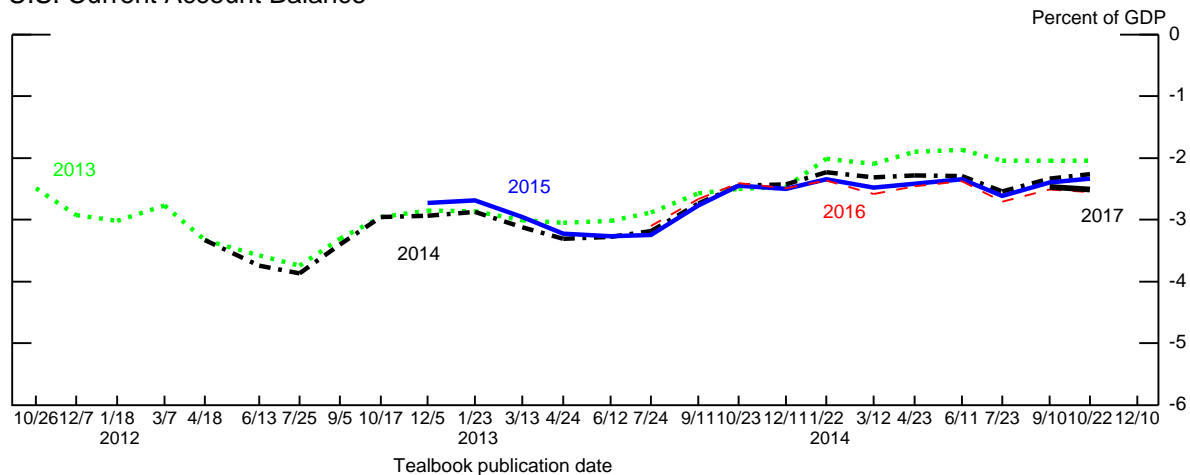
Total Foreign GDP



Total Foreign CPI

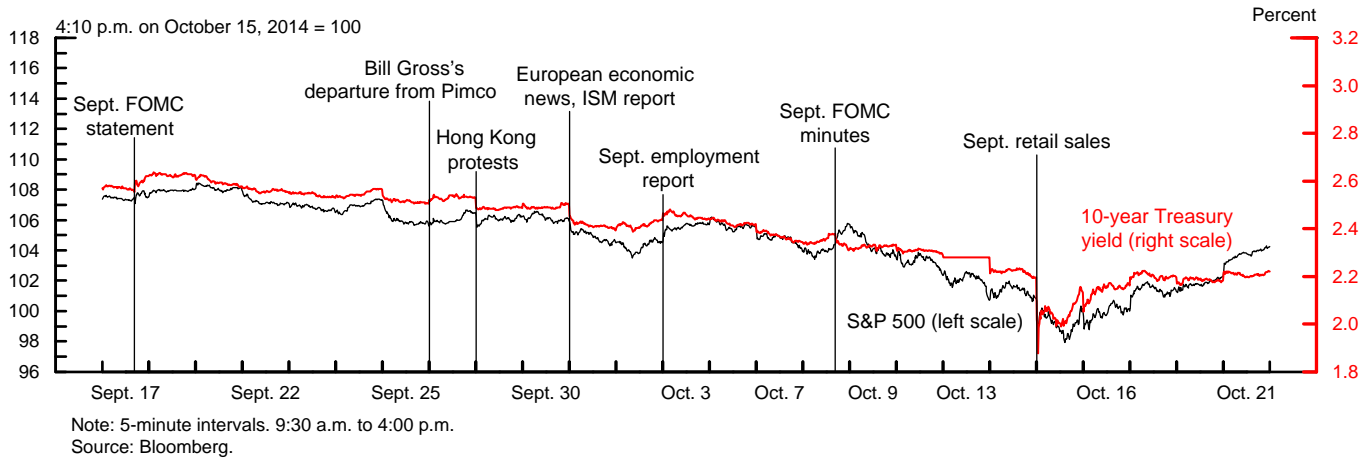


U.S. Current Account Balance

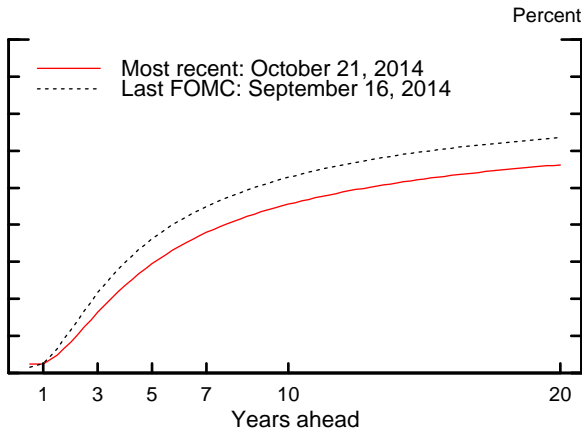


## Treasury Yields and Policy Expectations

### 10-Year Treasury Yield and S&P 500 Index

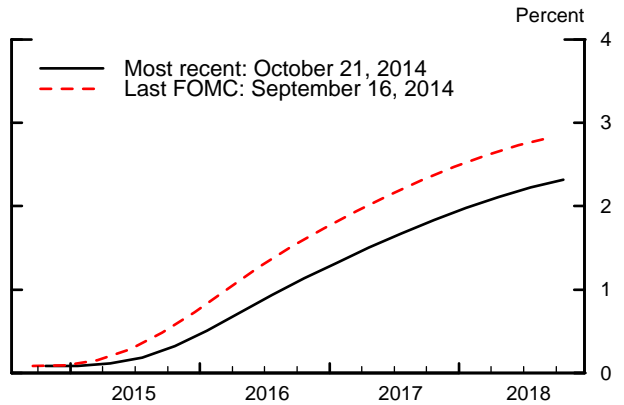


### Treasury Yield Curve



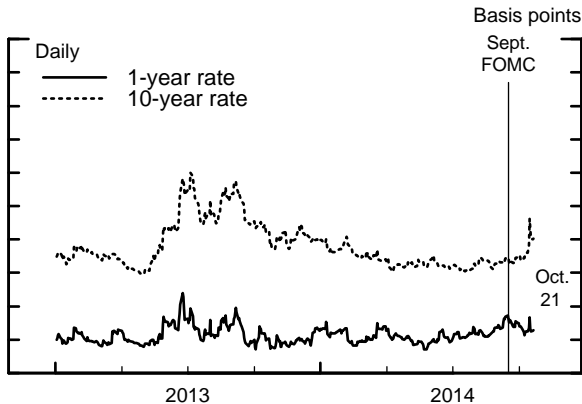
Note: Smoothed yield curve estimated from off-the-run Treasury coupon securities. Yields shown are those on notional par Treasury securities with semiannual coupons.  
Source: Federal Reserve Board.

### Implied Federal Funds Rate



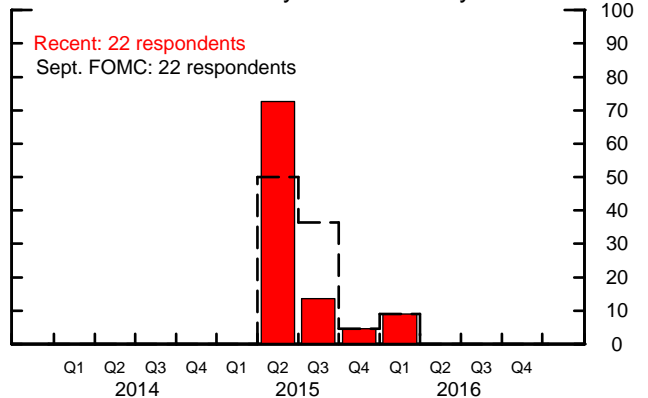
Note: Path is estimated using OIS quotes with a spline approach and a term premium of zero basis points.  
Source: Bloomberg; staff estimation.

### Implied Volatility



Note: Implied volatility is based on options on the swap rate expiring in 3 months.  
Source: Staff calculations from Barclays data.

### Distribution of Modal Timing of First Rate Increase from the Desk's Primary Dealer Survey



Source: Desk's primary dealer survey from October 20, 2014.

**Alternative Scenarios**

(Percent change, annual rate, from end of preceding period except as noted)

| Measure and scenario                   | 2014 |     | 2015 | 2016 | 2017 | 2018-19 |
|--|------|-----|------|------|------|---------|
|  | H1   | H2  |      |      |      |         |
| <i>Real GDP</i>                        |      |     |      |      |      |         |
| Extended Tealbook baseline             | 1.2  | 2.8 | 2.4  | 2.6  | 2.1  | 2.0     |
| Increased financial turbulence         | 1.2  | 2.1 | 1.1  | 1.7  | 1.7  | 2.2     |
| Faster recovery with higher inflation  | 1.2  | 3.5 | 3.6  | 3.5  | 2.4  | 1.8     |
| No room to grow                        | 1.2  | 2.8 | 1.7  | 1.3  | .6   | .8      |
| Lower long-term inflation expectations | 1.2  | 2.8 | 2.5  | 3.0  | 2.7  | 2.0     |
| Stronger dollar                        | 1.2  | 2.8 | 1.8  | 2.4  | 2.2  | 2.2     |
| Weaker foreign growth                  | 1.2  | 2.8 | 2.0  | 2.2  | 2.0  | 2.4     |
| <i>Unemployment rate<sup>1</sup></i>   |      |     |      |      |      |         |
| Extended Tealbook baseline             | 6.2  | 5.8 | 5.5  | 5.3  | 5.2  | 5.2     |
| Increased financial turbulence         | 6.2  | 5.9 | 6.1  | 6.3  | 6.4  | 6.1     |
| Faster recovery with higher inflation  | 6.2  | 5.7 | 4.9  | 4.3  | 4.1  | 4.4     |
| No room to grow                        | 6.2  | 5.8 | 5.5  | 5.6  | 5.9  | 6.3     |
| Lower long-term inflation expectations | 6.2  | 5.8 | 5.5  | 5.1  | 4.7  | 4.7     |
| Stronger dollar                        | 6.2  | 5.8 | 5.7  | 5.7  | 5.6  | 5.5     |
| Weaker foreign growth                  | 6.2  | 5.8 | 5.6  | 5.6  | 5.6  | 5.4     |
| <i>Total PCE prices</i>                |      |     |      |      |      |         |
| Extended Tealbook baseline             | 1.9  | .5  | 1.4  | 1.6  | 1.7  | 1.8     |
| Increased financial turbulence         | 1.9  | .5  | 1.4  | 1.6  | 1.7  | 1.7     |
| Faster recovery with higher inflation  | 1.9  | .4  | 1.5  | 1.9  | 2.3  | 2.5     |
| No room to grow                        | 1.9  | .5  | 1.6  | 2.0  | 2.1  | 2.1     |
| Lower long-term inflation expectations | 1.9  | .5  | 1.2  | 1.4  | 1.5  | 1.6     |
| Stronger dollar                        | 1.9  | .0  | .7   | 1.4  | 1.6  | 1.8     |
| Weaker foreign growth                  | 1.9  | .3  | .7   | 1.0  | 1.3  | 2.0     |
| <i>Core PCE prices</i>                 |      |     |      |      |      |         |
| Extended Tealbook baseline             | 1.6  | 1.3 | 1.5  | 1.6  | 1.8  | 1.8     |
| Increased financial turbulence         | 1.6  | 1.3 | 1.5  | 1.6  | 1.8  | 1.7     |
| Faster recovery with higher inflation  | 1.6  | 1.2 | 1.6  | 1.9  | 2.4  | 2.5     |
| No room to grow                        | 1.6  | 1.3 | 1.7  | 2.0  | 2.2  | 2.1     |
| Lower long-term inflation expectations | 1.6  | 1.3 | 1.3  | 1.4  | 1.6  | 1.6     |
| Stronger dollar                        | 1.6  | 1.2 | 1.0  | 1.4  | 1.7  | 1.7     |
| Weaker foreign growth                  | 1.6  | 1.3 | 1.3  | 1.3  | 1.6  | 1.8     |
| <i>Federal funds rate<sup>1</sup></i>  |      |     |      |      |      |         |
| Extended Tealbook baseline             | .1   | .1  | .9   | 1.9  | 2.6  | 3.2     |
| Increased financial turbulence         | .1   | .1  | .1   | .1   | .1   | .1      |
| Faster recovery with higher inflation  | .1   | .1  | 1.5  | 3.1  | 4.5  | 5.4     |
| No room to grow                        | .1   | .1  | 1.6  | 3.1  | 3.7  | 3.6     |
| Lower long-term inflation expectations | .1   | .1  | .1   | .2   | 1.7  | 3.3     |
| Stronger dollar                        | .1   | .1  | .6   | 1.4  | 2.1  | 2.9     |
| Weaker foreign growth                  | .1   | .1  | .7   | 1.4  | 1.9  | 2.7     |

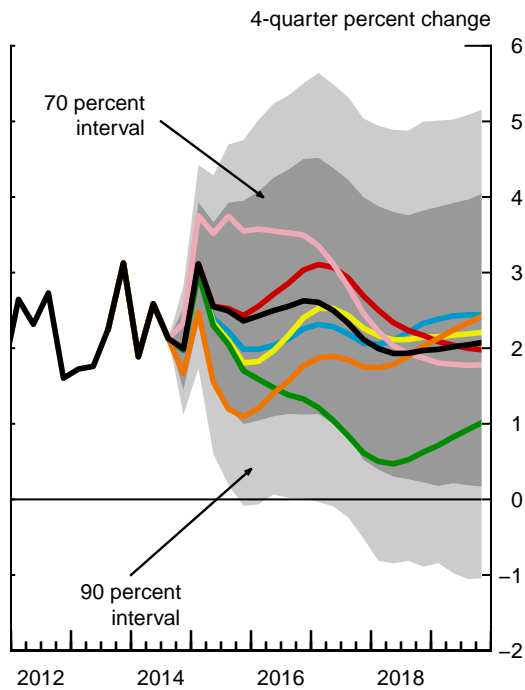
1. Percent, average for the final quarter of the period.

## Forecast Confidence Intervals and Alternative Scenarios

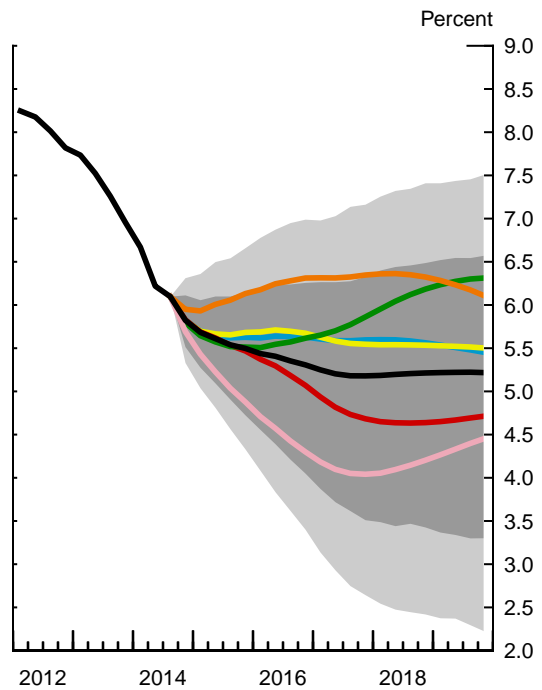
Confidence Intervals Based on FRB/US Stochastic Simulations

- Extended Tealbook baseline
- No room to grow
- Stronger dollar
- Increased financial turbulence
- Lower long-term inflation expectations
- Weaker foreign growth
- Faster recovery with higher inflation

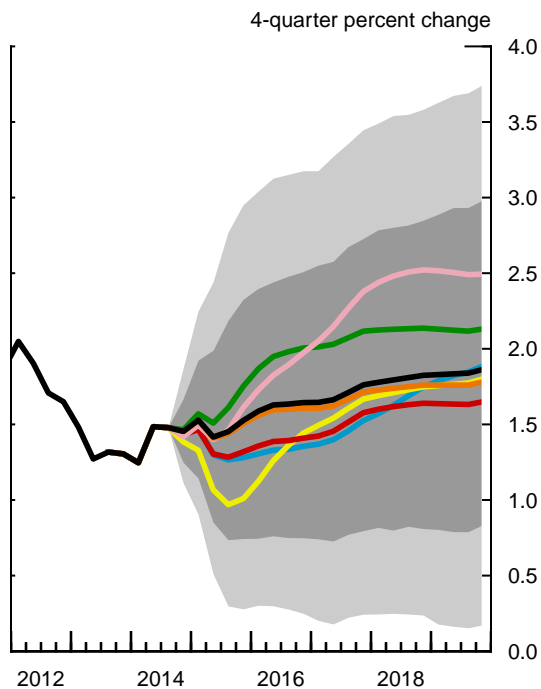
Real GDP



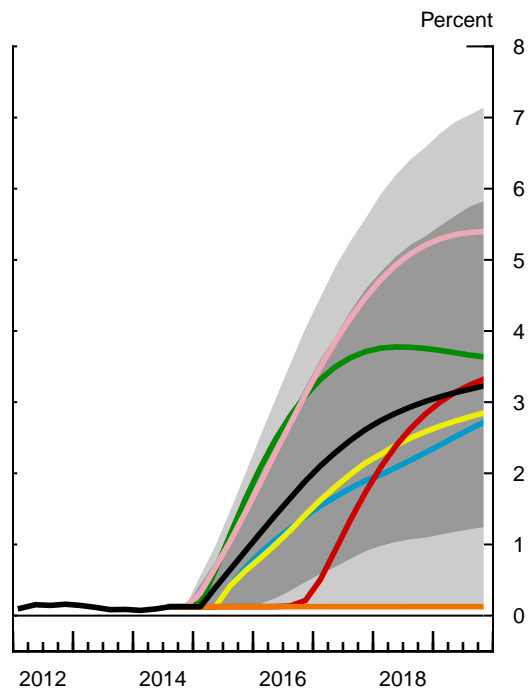
Unemployment Rate



PCE Prices excluding Food and Energy



Federal Funds Rate



**Selected Tealbook Projections and 70 Percent Confidence Intervals Derived  
from Historical Tealbook Forecast Errors and FRB/US Simulations**

| Measure   | 2014    | 2015    | 2016    | 2017    | 2018    | 2019    |
|---|---------|---------|---------|---------|---------|---------|
| <i>Real GDP</i><br>(percent change, Q4 to Q4)                                 |         |         |         |         |         |         |
| Projection  | 2.0     | 2.4     | 2.6     | 2.1     | 2.0     | 2.1     |
| Confidence interval   |         |         |         |         |         |         |
| Tealbook forecast errors  | 1.5–2.5 | .7–4.1  | .7–4.5  | ...     | ...     | ...     |
| FRB/US stochastic simulations   | 1.5–2.5 | 1.0–4.0 | 1.1–4.5 | .5–4.0  | .2–3.8  | .2–4.1  |
| <i>Civilian unemployment rate</i><br>(percent, Q4)                            |         |         |         |         |         |         |
| Projection  | 5.8     | 5.5     | 5.3     | 5.2     | 5.2     | 5.2     |
| Confidence interval   |         |         |         |         |         |         |
| Tealbook forecast errors  | 5.7–5.9 | 4.8–6.2 | 4.1–6.5 | ...     | ...     | ...     |
| FRB/US stochastic simulations   | 5.5–6.1 | 4.7–6.1 | 4.0–6.3 | 3.5–6.3 | 3.4–6.5 | 3.3–6.6 |
| <i>PCE prices, total</i><br>(percent change, Q4 to Q4)                        |         |         |         |         |         |         |
| Projection  | 1.2     | 1.4     | 1.6     | 1.7     | 1.8     | 1.9     |
| Confidence interval   |         |         |         |         |         |         |
| Tealbook forecast errors  | 1.0–1.4 | .2–2.5  | .6–2.6  | ...     | ...     | ...     |
| FRB/US stochastic simulations   | .9–1.5  | .5–2.3  | .5–2.7  | .6–2.9  | .7–3.0  | .7–3.1  |
| <i>PCE prices excluding<br/>food and energy</i><br>(percent change, Q4 to Q4) |         |         |         |         |         |         |
| Projection  | 1.5     | 1.5     | 1.6     | 1.8     | 1.8     | 1.9     |
| Confidence interval   |         |         |         |         |         |         |
| Tealbook forecast errors  | 1.2–1.7 | .9–2.1  | .9–2.4  | ...     | ...     | ...     |
| FRB/US stochastic simulations   | 1.2–1.7 | .7–2.3  | .7–2.5  | .8–2.7  | .8–2.8  | .8–3.0  |
| <i>Federal funds rate</i><br>(percent, Q4)                                    |         |         |         |         |         |         |
| Projection  | .1      | .9      | 1.9     | 2.6     | 3.0     | 3.2     |
| Confidence interval   |         |         |         |         |         |         |
| FRB/US stochastic simulations   | .1–.1   | .1–1.6  | .5–3.2  | .9–4.6  | 1.1–5.3 | 1.2–5.8 |

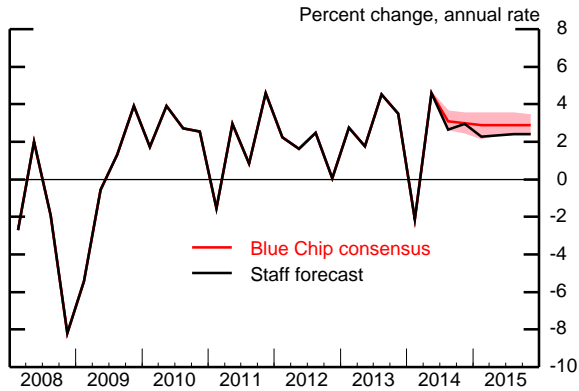
Note: Shocks underlying FRB/US stochastic simulations are randomly drawn from the 1969–2013 set of model equation residuals.

Intervals derived from Tealbook forecast errors are based on projections made from 1979 to 2013, except for PCE prices excluding food and energy, where the sample is 1981–2013.

... Not applicable. The Tealbook forecast horizon has typically extended about 2 years.

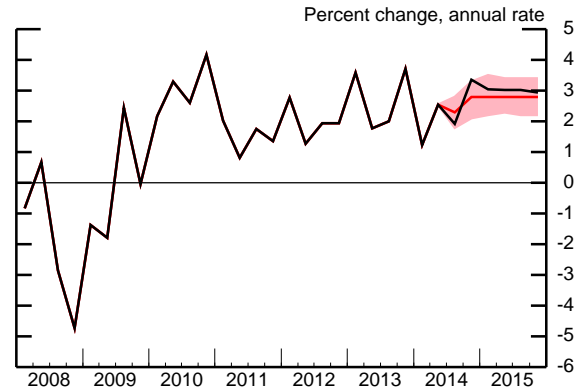
## Tealbook Forecast Compared with Blue Chip (Blue Chip survey released October 10, 2014)

Real GDP

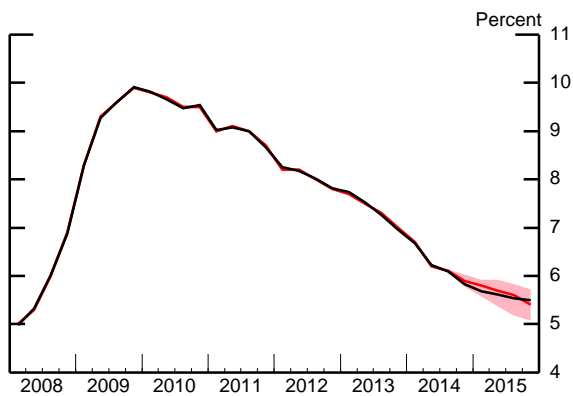


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

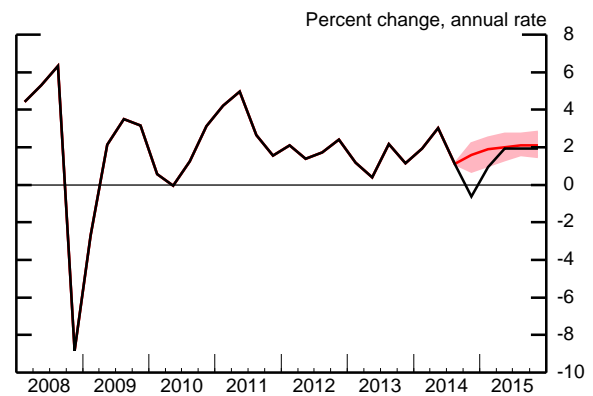
Real PCE



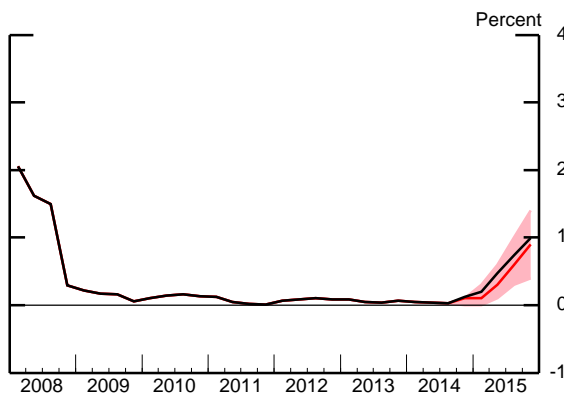
Unemployment Rate



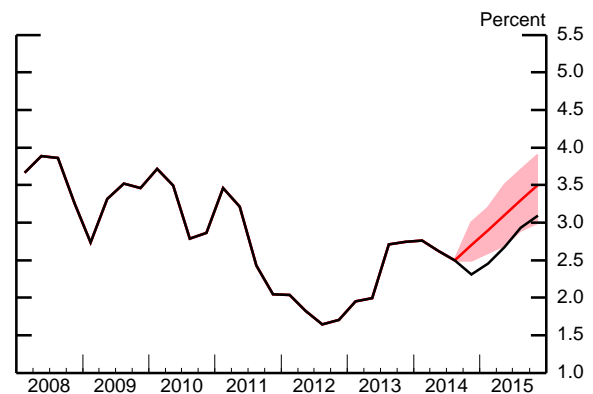
Consumer Price Index



Treasury Bill Rate



10-Year Treasury Yield



Note: The yield is for on-the-run Treasury securities. Over the forecast period, the staff's projected yield is assumed to be 15 basis points below the off-the-run yield.

**Assessment of Key Macroeconomic Risks (1)****Probability of Inflation Events**

(4 quarters ahead—2015:Q3)

| Probability that the 4-quarter change in total PCE prices will be ... | Staff | FRB/US | EDO | BVAR |
|---|-------|--------|-----|------|
| <i>Greater than 3 percent</i>   |       |        |     |      |
| Current Tealbook  | .02   | .02    | .10 | .06  |
| Previous Tealbook   | .04   | .04    | .11 | .06  |
| <i>Less than 1 percent</i>  |       |        |     |      |
| Current Tealbook  | .54   | .46    | .30 | .17  |
| Previous Tealbook   | .33   | .31    | .29 | .15  |

**Probability of Unemployment Events**

(4 quarters ahead—2015:Q3)

| Probability that the unemployment rate will ... | Staff | FRB/US | EDO | BVAR |
|---|-------|--------|-----|------|
| <i>Increase by 1 percentage point</i>           |       |        |     |      |
| Current Tealbook                                | .02   | .01    | .21 | .01  |
| Previous Tealbook                               | .01   | .01    | .20 | .01  |
| <i>Decrease by 1 percentage point</i>           |       |        |     |      |
| Current Tealbook                                | .27   | .27    | .07 | .30  |
| Previous Tealbook                               | .31   | .26    | .08 | .30  |

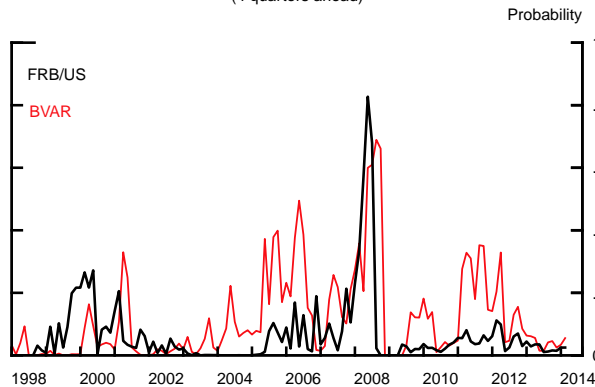
**Probability of Near-Term Recession**

| Probability that real GDP declines in each of 2014:Q4 and 2015:Q1 | Staff | FRB/US | EDO | BVAR | Factor Model |
|---|-------|--------|-----|------|--------------|
| Current Tealbook  | .04   | .02    | .02 | .02  | .07          |
| Previous Tealbook   | .03   | .02    | .02 | .02  | .07          |

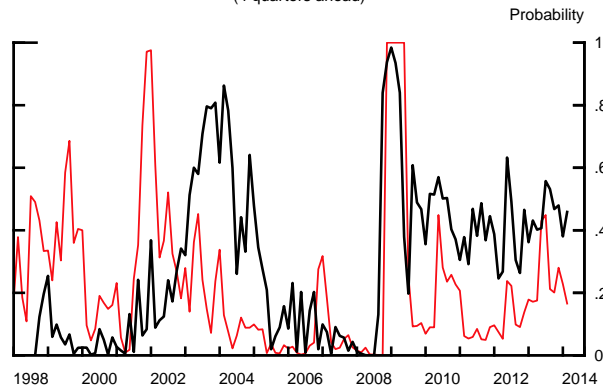
Note: "Staff" represents Tealbook forecast errors applied to the Tealbook baseline; baselines for FRB/US, BVAR, EDO, and the factor model are generated by those models themselves, up to the current-quarter estimate. Data for the current quarter are taken from the staff estimate for the second Tealbook in each quarter; if the second Tealbook for the current quarter has not yet been published, the preceding quarter is taken as the latest historical observation.

## Assessment of Key Macroeconomic Risks (2)

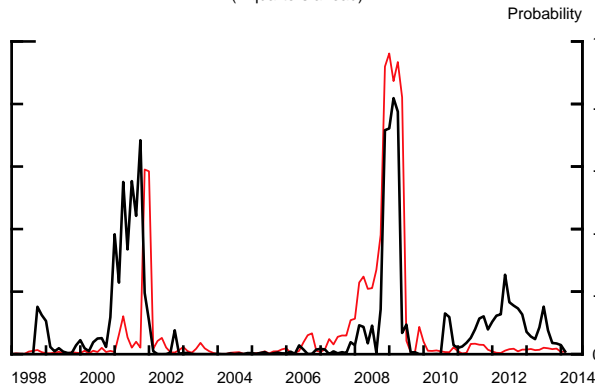
Probability that Total PCE Inflation Is above 3 Percent  
(4 quarters ahead)



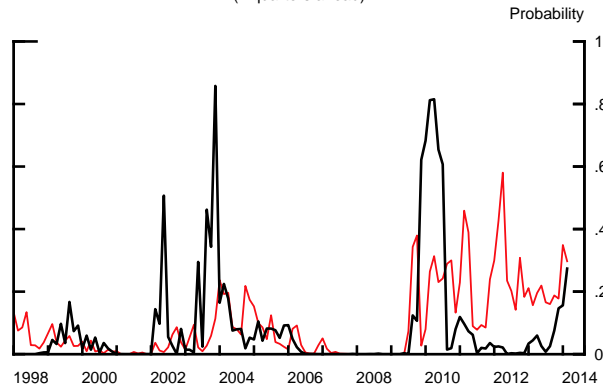
Probability that Total PCE Inflation Is below 1 Percent  
(4 quarters ahead)



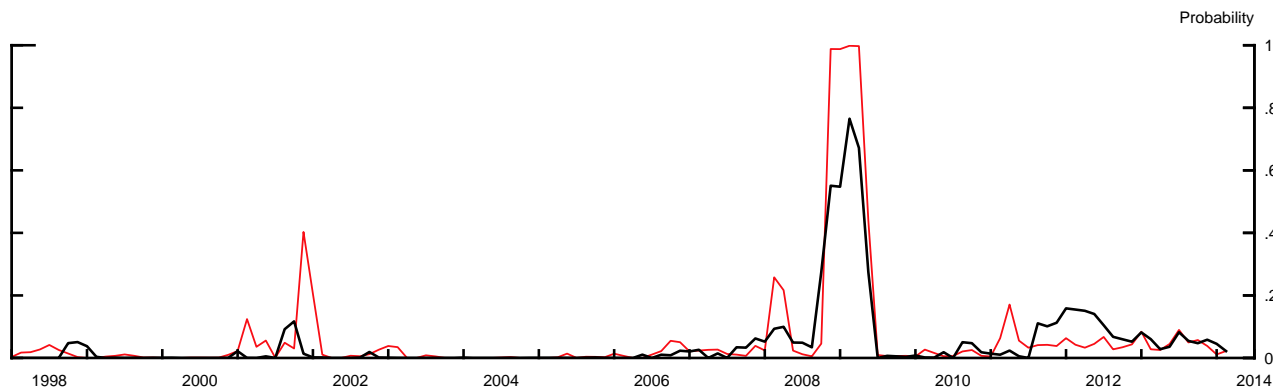
Probability that the Unemployment Rate Increases 1 ppt  
(4 quarters ahead)



Probability that the Unemployment Rate Decreases 1 ppt  
(4 quarters ahead)



Probability that Real GDP Declines in Each of the Next Two Quarters



Note: See notes on facing page. Recession and inflation probabilities for FRB/US and the BVAR are real-time estimates. See Robert J. Tetlow and Brian Ironside (2007), "Real-Time Model Uncertainty in the United States: The Fed, 1996–2003," *Journal of Money, Credit and Banking*, vol. 39 (October), pp. 1533–61.



**Changes in GDP, Prices, and Unemployment**  
(Percent, annual rate except as noted)

| Interval                        | Nominal GDP |          | Real GDP |          | PCE price index |          | Core PCE price index |          | Unemployment rate <sup>1</sup> |          |
|---------------------------------|-------------|----------|----------|----------|-----------------|----------|----------------------|----------|--------------------------------|----------|
|                                 | 09/10/14    | 10/22/14 | 09/10/14 | 10/22/14 | 09/10/14        | 10/22/14 | 09/10/14             | 10/22/14 | 09/10/14                       | 10/22/14 |
| <i>Quarterly</i>                |             |          |          |          |                 |          |                      |          |                                |          |
| 2014:Q1                         | -8          | -8       | -2.1     | -2.1     | 1.4             | 1.4      | 1.2                  | 1.2      | 6.7                            | 6.7      |
| Q2                              | 6.6         | 6.8      | 4.4      | 4.6      | 2.3             | 2.3      | 2.0                  | 2.0      | 6.2                            | 6.2      |
| Q3                              | 4.5         | 4.1      | 2.8      | 2.7      | 1.3             | 1.2      | 1.5                  | 1.4      | 6.1                            | 6.1      |
| Q4                              | 4.6         | 4.2      | 3.0      | 3.0      | .9              | -2       | 1.4                  | 1.2      | 5.9                            | 5.8      |
| 2015:Q1                         | 4.4         | 3.9      | 2.5      | 2.3      | 1.6             | .9       | 1.7                  | 1.5      | 5.7                            | 5.7      |
| Q2                              | 4.3         | 4.1      | 2.6      | 2.3      | 1.6             | 1.5      | 1.7                  | 1.5      | 5.6                            | 5.6      |
| Q3                              | 4.4         | 4.2      | 2.7      | 2.4      | 1.5             | 1.5      | 1.6                  | 1.6      | 5.5                            | 5.5      |
| Q4                              | 4.5         | 4.1      | 2.8      | 2.4      | 1.4             | 1.5      | 1.5                  | 1.5      | 5.4                            | 5.5      |
| 2016:Q1                         | 4.7         | 4.5      | 2.8      | 2.5      | 1.7             | 1.7      | 1.9                  | 1.7      | 5.3                            | 5.4      |
| Q2                              | 4.7         | 4.4      | 2.9      | 2.6      | 1.7             | 1.7      | 1.8                  | 1.7      | 5.3                            | 5.4      |
| Q3                              | 4.7         | 4.4      | 3.0      | 2.7      | 1.6             | 1.6      | 1.6                  | 1.6      | 5.2                            | 5.4      |
| Q4                              | 4.6         | 4.4      | 2.9      | 2.7      | 1.5             | 1.5      | 1.6                  | 1.6      | 5.1                            | 5.3      |
| <i>Two-quarter<sup>2</sup></i>  |             |          |          |          |                 |          |                      |          |                                |          |
| 2014:Q2                         | 2.8         | 2.9      | 1.1      | 1.2      | 1.8             | 1.9      | 1.6                  | 1.6      | -8                             | -8       |
| Q4                              | 4.6         | 4.2      | 2.9      | 2.8      | 1.1             | .5       | 1.5                  | 1.3      | -3                             | -4       |
| 2015:Q2                         | 4.4         | 4.0      | 2.5      | 2.3      | 1.6             | 1.2      | 1.7                  | 1.5      | -3                             | -2       |
| Q4                              | 4.4         | 4.1      | 2.8      | 2.4      | 1.5             | 1.5      | 1.6                  | 1.5      | -2                             | -1       |
| 2016:Q2                         | 4.7         | 4.5      | 2.8      | 2.6      | 1.7             | 1.7      | 1.8                  | 1.7      | -1                             | -1       |
| Q4                              | 4.7         | 4.4      | 3.0      | 2.7      | 1.6             | 1.5      | 1.6                  | 1.6      | -2                             | -1       |
| <i>Four-quarter<sup>3</sup></i> |             |          |          |          |                 |          |                      |          |                                |          |
| 2013:Q4                         | 4.6         | 4.6      | 3.1      | 3.1      | 1.0             | 1.0      | 1.3                  | 1.3      | -8                             | -8       |
| 2014:Q4                         | 3.7         | 3.5      | 2.0      | 2.0      | 1.5             | 1.2      | 1.5                  | 1.5      | -1.1                           | -1.2     |
| 2015:Q4                         | 4.4         | 4.0      | 2.7      | 2.4      | 1.5             | 1.4      | 1.6                  | 1.5      | -5                             | -3       |
| 2016:Q4                         | 4.7         | 4.4      | 2.9      | 2.6      | 1.6             | 1.6      | 1.7                  | 1.6      | -3                             | -2       |
| 2017:Q4                         | 4.1         | 4.0      | 2.3      | 2.1      | 1.7             | 1.7      | 1.8                  | 1.8      | -2                             | -1       |
| <i>Annual</i>                   |             |          |          |          |                 |          |                      |          |                                |          |
| 2013                            | 3.7         | 3.7      | 2.2      | 2.2      | 1.2             | 1.2      | 1.3                  | 1.3      | 7.4                            | 7.4      |
| 2014                            | 3.7         | 3.7      | 2.1      | 2.1      | 1.4             | 1.3      | 1.4                  | 1.4      | 6.2                            | 6.2      |
| 2015                            | 4.6         | 4.2      | 2.8      | 2.6      | 1.4             | 1.1      | 1.6                  | 1.5      | 5.6                            | 5.6      |
| 2016                            | 4.6         | 4.3      | 2.8      | 2.5      | 1.6             | 1.6      | 1.7                  | 1.6      | 5.2                            | 5.4      |
| 2017                            | 4.4         | 4.2      | 2.6      | 2.4      | 1.7             | 1.7      | 1.8                  | 1.7      | 4.9                            | 5.2      |

1. Level, except for two-quarter and four-quarter intervals.
2. Percent change from two quarters earlier; for unemployment rate, change is in percentage points.
3. Percent change from four quarters earlier; for unemployment rate, change is in percentage points.

Greensheets

Changes in Real Gross Domestic Product and Related Items  
(Percent, annual rate except as noted)

| Item  | 2014         |              |              |    | 2015         |              |              |              | 2016 |              |              |              | 2014 <sup>1</sup> | 2015 <sup>1</sup> | 2016 <sup>1</sup> | 2017 <sup>1</sup> |              |
|---|--------------|--------------|--------------|----|--------------|--------------|--------------|--------------|------|--------------|--------------|--------------|-------------------|-------------------|-------------------|-------------------|--------------|
|   | Q2           | Q3           | Q4           | Q4 | Q1           | Q2           | Q3           | Q4           | Q1   | Q2           | Q3           | Q4           |                   |                   |                   |                   |              |
|   |              |              |              |    |              |              |              |              |      |              |              |              |                   |                   |                   |                   |              |
| Real GDP<br><i>Previous Tealbook</i>  | 4.6<br>4.4   | 2.7<br>2.8   | 3.0<br>3.0   |    | 2.3<br>2.5   | 2.3<br>2.6   | 2.4<br>2.7   | 2.4<br>2.8   |      | 2.5<br>2.8   | 2.6<br>2.9   | 2.7<br>3.0   | 2.7<br>2.9        | 2.0<br>2.0        | 2.4<br>2.7        | 2.6<br>2.9        | 2.1<br>2.3   |
| Final sales<br><i>Previous Tealbook</i>   | 3.2<br>3.1   | 3.3<br>2.8   | 2.6<br>3.1   |    | 2.1<br>2.6   | 2.4<br>2.5   | 2.5<br>2.6   | 2.3<br>2.7   |      | 2.6<br>2.9   | 2.6<br>2.9   | 2.5<br>2.8   | 2.6<br>2.9        | 2.0<br>2.0        | 2.3<br>2.6        | 2.6<br>2.9        | 2.4<br>2.5   |
| Priv. dom. final purch.<br><i>Previous Tealbook</i>                               | 3.8<br>3.7   | 2.8<br>2.9   | 3.5<br>3.9   |    | 2.7<br>3.2   | 3.1<br>3.2   | 3.2<br>3.2   | 3.2<br>3.3   |      | 3.2<br>3.4   | 3.1<br>3.4   | 3.0<br>3.3   | 2.9<br>3.1        | 2.8<br>2.9        | 3.0<br>3.2        | 3.1<br>3.3        | 2.6<br>2.6   |
| Personal cons. expend.<br><i>Previous Tealbook</i>                                | 2.5<br>2.5   | 1.9<br>2.0   | 3.4<br>3.4   |    | 3.0<br>3.3   | 3.0<br>3.0   | 3.0<br>2.9   | 2.9<br>3.0   |      | 2.8<br>2.9   | 2.8<br>2.9   | 2.7<br>2.8   | 2.6<br>2.7        | 2.3<br>2.3        | 3.0<br>3.0        | 2.7<br>2.8        | 2.4<br>2.5   |
| Durables  | 14.1         | 7.8          | 9.8          |    | 8.3          | 7.2          | 7.2          | 7.4          |      | 6.1          | 6.3          | 6.0          | 5.4               | 8.6               | 7.5               | 6.0               | 3.8          |
| Nondurables   | 2.2          | .8           | 1.7          |    | 2.1          | 2.4          | 2.4          | 2.2          |      | 1.8          | 2.1          | 2.1          | 2.3               | 1.2               | 2.3               | 2.1               | 2.2          |
| Services  | .9           | 1.3          | 2.9          |    | 2.5          | 2.6          | 2.5          | 2.4          |      | 2.6          | 2.4          | 2.4          | 2.3               | 1.6               | 2.5               | 2.4               | 2.2          |
| Residential investment<br><i>Previous Tealbook</i>                                | 8.8<br>8.6   | 8.0<br>9.9   | 5.5<br>11.8  |    | 6.1<br>9.7   | 12.4<br>11.9 | 10.5<br>12.1 | 9.3<br>10.4  |      | 10.4<br>10.7 | 9.8<br>11.1  | 9.6<br>11.4  | 9.1<br>9.6        | 4.1<br>6.0        | 9.5<br>11.0       | 9.7<br>10.7       | 7.3<br>6.0   |
| Nonres. priv. fixed invest.<br><i>Previous Tealbook</i>                           | 9.7<br>9.5   | 6.7<br>6.1   | 3.7<br>4.1   |    | .1<br>1.0    | .9<br>2.1    | 2.2<br>2.7   | 2.9<br>3.2   |      | 2.9<br>3.8   | 3.1<br>3.6   | 2.9<br>3.3   | 2.6<br>3.2        | 5.4<br>5.3        | 1.5<br>2.2        | 2.9<br>3.5        | 2.1<br>2.4   |
| Equipment & intangibles<br><i>Previous Tealbook</i>                               | 8.9<br>8.5   | 7.9<br>5.2   | 5.0<br>4.6   |    | 1.8<br>2.4   | 2.1<br>2.8   | 3.2<br>3.5   | 3.6<br>3.8   |      | 3.7<br>4.6   | 3.8<br>4.4   | 3.6<br>4.0   | 3.2<br>3.8        | 5.7<br>4.8        | 2.7<br>3.1        | 3.6<br>4.2        | 2.6<br>3.0   |
| Nonres. structures<br><i>Previous Tealbook</i>                                    | 12.6<br>12.9 | 2.6<br>9.3   | -7<br>2.6    |    | -5.5<br>-3.6 | -3.3<br>-4   | -1.3<br>.0   | .5<br>1.1    |      | .4<br>1.1    | .6<br>1.0    | .5<br>1.0    | .6<br>1.2         | 4.2<br>6.8        | -2.4<br>-7        | .6<br>1.1         | .4<br>.7     |
| Net exports <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup>                 | -460<br>-459 | -436<br>-440 | -440<br>-447 |    | -446<br>-450 | -450<br>-452 | -455<br>-452 | -467<br>-458 |      | -475<br>-461 | -480<br>-464 | -491<br>-472 | -492<br>-467      | -446<br>-448      | -454<br>-453      | -484<br>-466      | -489<br>-459 |
| Exports   | 11.1         | 5.6          | 3.0          |    | 3.6          | 3.8          | 4.0          | 3.3          |      | 4.1          | 4.3          | 4.5          | 4.6               | 2.3               | 3.7               | 4.4               | 5.0          |
| Imports   | 11.3         | .7           | 3.1          |    | 4.0          | 3.7          | 4.0          | 4.6          |      | 4.6          | 4.4          | 5.3          | 3.8               | 4.3               | 4.1               | 4.5               | 3.8          |
| Gov't. cons. & invest.<br><i>Previous Tealbook</i>                                | 1.7<br>1.7   | 1.5<br>-1.0  | -1.6<br>-1   |    | -.2<br>-.3   | -.6<br>-.6   | -.5<br>-.5   | -.5<br>.0    |      | .6<br>.7     | .4<br>.4     | .9<br>1.0    | .6<br>.9          | .2<br>.0          | -.5<br>-.3        | .6<br>.7          | .9<br>1.0    |
| Federal   | -.9          | 2.1          | -6.2         |    | -2.9         | -4.0         | -3.8         | -3.8         |      | -1.2         | -1.9         | -.6          | -1.8              | -1.3              | -3.6              | -1.4              | -1.0         |
| Defense   | .9           | 5.2          | -8.3         |    | -3.3         | -4.8         | -4.5         | -4.7         |      | -1.7         | -2.9         | -1.5         | -2.7              | -1.7              | -4.3              | -2.2              | -1.6         |
| Nondefense  | -3.8         | -2.8         | -2.6         |    | -2.3         | -2.6         | -2.6         | -2.3         |      | -.4          | -.3          | .8           | -.2               | -.7               | -2.4              | .0                | .0           |
| State & local   | 3.4          | 1.2          | 1.4          |    | 1.4          | 1.5          | 1.5          | 1.5          |      | 1.6          | 1.7          | 1.9          | 2.0               | 1.1               | 1.5               | 1.8               | 2.0          |
| Change in priv. inventories <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup> | 85<br>78     | 61<br>80     | 76<br>77     |    | 83<br>75     | 82<br>76     | 80<br>81     | 84<br>87     |      | 82<br>83     | 83<br>83     | 89<br>94     | 95<br>96          | 64<br>67          | 82<br>80          | 87<br>89          | 68<br>79     |

1. Change from fourth quarter of previous year to fourth quarter of year indicated.

2. Billions of chained (2009) dollars.

**Changes in Real Gross Domestic Product and Related Items**  
(Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise noted)

| Item  | 2008           | 2009           | 2010         | 2011         | 2012         | 2013         | 2014         | 2015         | 2016         | 2017         |
|---|----------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Real GDP<br><i>Previous Tealbook</i>  | -2.8<br>-2.8   | -2<br>-2       | 2.7<br>2.7   | 1.7<br>1.7   | 1.6<br>1.6   | 3.1<br>3.1   | 2.0<br>2.0   | 2.4<br>2.7   | 2.6<br>2.9   | 2.1<br>2.3   |
| Final sales<br><i>Previous Tealbook</i>   | -2.1<br>-2.1   | -4<br>-4       | 2.0<br>2.0   | 1.5<br>1.5   | 2.1<br>2.1   | 2.6<br>2.6   | 2.0<br>2.0   | 2.3<br>2.6   | 2.6<br>2.9   | 2.4<br>2.5   |
| Priv. dom. final purch.<br><i>Previous Tealbook</i>                               | -4.1<br>-4.1   | -2.4<br>-2.4   | 3.5<br>3.5   | 2.6<br>2.6   | 2.6<br>2.6   | 3.2<br>3.2   | 2.8<br>2.9   | 3.0<br>3.2   | 3.1<br>3.3   | 2.6<br>2.6   |
| Personal cons. expend.<br><i>Previous Tealbook</i>                                | -2.0<br>-2.0   | -2<br>-2       | 3.1<br>3.1   | 1.5<br>1.5   | 2.0<br>2.0   | 2.8<br>2.8   | 2.3<br>2.3   | 3.0<br>3.0   | 2.7<br>2.8   | 2.4<br>2.5   |
| Durables  | -12.9          | 2.5            | 9.3          | 4.8          | 7.5          | 5.9          | 8.6          | 7.5          | 6.0          | 3.8          |
| Nondurables   | -2.7           | -2             | 3.3          | 4            | 1.0          | 2.5          | 1.2          | 2.3          | 2.1          | 2.2          |
| Services  | .3             | -8             | 2.0          | 1.4          | 1.5          | 2.4          | 1.6          | 2.5          | 2.4          | 2.2          |
| Residential investment<br><i>Previous Tealbook</i>                                | -24.3<br>-24.3 | -10.8<br>-10.8 | -5.2<br>-5.2 | 6.0<br>6.0   | 15.8<br>15.8 | 6.9<br>6.9   | 4.1<br>6.0   | 9.5<br>11.0  | 9.7<br>10.7  | 7.3<br>6.0   |
| Nonres. priv. fixed invest.<br><i>Previous Tealbook</i>                           | -8.9<br>-8.9   | -12.2<br>-12.2 | 8.1<br>8.1   | 9.0<br>9.0   | 3.7<br>3.7   | 4.7<br>4.7   | 5.4<br>5.3   | 1.5<br>2.2   | 2.9<br>3.5   | 2.1<br>2.4   |
| Equipment & intangibles<br><i>Previous Tealbook</i>                               | -11.8<br>-11.8 | -6.0<br>-6.0   | 12.0<br>12.0 | 9.2<br>9.2   | 3.3<br>3.3   | 4.8<br>4.8   | 5.7<br>4.8   | 2.7<br>3.1   | 3.6<br>4.2   | 2.6<br>3.0   |
| Nonres. structures<br><i>Previous Tealbook</i>                                    | -1.2<br>-1.2   | -27.1<br>-27.1 | -4.0<br>-4.0 | 8.0<br>8.0   | 4.8<br>4.8   | 4.4<br>4.4   | 4.2<br>6.8   | -2.4<br>-7   | .6<br>1.1    | .4<br>.7     |
| Net exports <sup>1</sup><br><i>Previous Tealbook</i> <sup>1</sup>                 | -558<br>-558   | -395<br>-395   | -459<br>-459 | -459<br>-459 | -452<br>-452 | -420<br>-420 | -446<br>-448 | -454<br>-453 | -484<br>-466 | -489<br>-459 |
| Exports   | -2.8           | .8             | 10.1         | 4.2          | 2.4          | 5.1          | 2.3          | 3.7          | 4.4          | 5.0          |
| Imports   | -6.0           | -6.2           | 12.0         | 3.5          | .4           | 2.5          | 4.3          | 4.1          | 4.5          | 3.8          |
| Gov't. cons. & invest.<br><i>Previous Tealbook</i>                                | 3.3<br>3.3     | 2.3<br>2.3     | -1.1<br>-1.1 | -3.0<br>-3.0 | -1.7<br>-1.7 | -1.9<br>-1.9 | .2<br>.0     | -.5<br>-.3   | .6<br>.7     | .9<br>1.0    |
| Federal   | 8.4            | 3.9            | 3.2          | -4.0         | -2.6         | -6.3         | -1.3         | -3.6         | -1.4         | -1.0         |
| Defense   | 9.4            | 3.6            | 2.0          | -4.1         | -4.9         | -6.1         | -1.7         | -4.3         | -2.2         | -1.6         |
| Nondefense  | 6.5            | 4.6            | 5.5          | -3.9         | 1.4          | -6.6         | -7           | -2.4         | .0           | .0           |
| State & local   | .2             | 1.3            | -4.0         | -2.3         | -1.0         | 1.2          | 1.1          | 1.5          | 1.8          | 2.0          |
| Change in priv. inventories <sup>1</sup><br><i>Previous Tealbook</i> <sup>1</sup> | -34<br>-34     | -148<br>-148   | 58<br>58     | 38<br>38     | 57<br>57     | 64<br>64     | 64<br>67     | 82<br>80     | 87<br>89     | 68<br>79     |

1. Billions of chained (2009) dollars.

**Contributions to Changes in Real Gross Domestic Product**  
(Percentage points, annual rate except as noted)

| Item  | 2014       |            |            | 2015       |            |            |            | 2016       |            |            |            | 2014 <sup>1</sup> | 2015 <sup>1</sup> | 2016 <sup>1</sup> | 2017 <sup>1</sup> |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------------|-------------------|-------------------|-------------------|
|   | Q2         | Q3         | Q4         | Q1         | Q2         | Q3         | Q4         | Q1         | Q2         | Q3         | Q4         |                   |                   |                   |                   |
| Real GDP<br><i>Previous Tealbook</i>                    | 4.6<br>4.4 | 2.7<br>2.8 | 3.0<br>3.0 | 2.3<br>2.5 | 2.3<br>2.6 | 2.4<br>2.7 | 2.4<br>2.8 | 2.5<br>2.8 | 2.6<br>2.9 | 2.7<br>3.0 | 2.7<br>2.9 | 2.0<br>2.0        | 2.4<br>2.7        | 2.6<br>2.9        | 2.1<br>2.3        |
| Final sales<br><i>Previous Tealbook</i>                 | 3.2<br>3.2 | 3.3<br>2.8 | 2.6<br>3.1 | 2.1<br>2.6 | 2.4<br>2.5 | 2.5<br>2.6 | 2.3<br>2.7 | 2.6<br>2.9 | 2.6<br>2.8 | 2.5<br>2.7 | 2.6<br>2.9 | 2.0<br>2.0        | 2.3<br>2.6        | 2.6<br>2.8        | 2.4<br>2.5        |
| Priv. dom. final purch.<br><i>Previous Tealbook</i>     | 3.2<br>3.1 | 2.4<br>2.5 | 2.9<br>3.2 | 2.3<br>2.7 | 2.6<br>2.7 | 2.7<br>2.7 | 2.7<br>2.8 | 2.7<br>2.9 | 2.6<br>2.9 | 2.6<br>2.8 | 2.5<br>2.6 | 2.3<br>2.4        | 2.6<br>2.7        | 2.6<br>2.8        | 2.2<br>2.2        |
| Personal cons. expend.<br><i>Previous Tealbook</i>      | 1.8<br>1.7 | 1.3<br>1.4 | 2.3<br>2.3 | 2.1<br>2.2 | 2.1<br>2.0 | 2.0<br>2.0 | 2.0<br>2.0 | 1.9<br>2.0 | 1.9<br>2.0 | 1.9<br>1.9 | 1.8<br>1.8 | 1.5<br>1.6        | 2.0<br>2.1        | 1.9<br>1.9        | 1.6<br>1.7        |
| Durables  | 1.0        | .6         | .7         | .6         | .5         | .5         | .6         | .5         | .5         | .5         | .4         | .6                | .6                | .5                | .3                |
| Nondurables   | .3         | .1         | .3         | .3         | .4         | .4         | .3         | .3         | .3         | .3         | .3         | .2                | .3                | .3                | .3                |
| Services  | .4         | .6         | 1.3        | 1.1        | 1.2        | 1.2        | 1.1        | 1.2        | 1.1        | 1.1        | 1.0        | .7                | 1.1               | 1.1               | 1.0               |
| Residential investment<br><i>Previous Tealbook</i>      | .3<br>.3   | .2<br>.3   | .2<br>.4   | .2<br>.3   | .4<br>.4   | .3<br>.4   | .3<br>.4   | .4<br>.4   | .3<br>.4   | .3<br>.4   | .3<br>.4   | .1<br>.2          | .3<br>.4          | .3<br>.4          | .3<br>.2          |
| Nonres. priv. fixed invest.<br><i>Previous Tealbook</i> | 1.2<br>1.2 | .8<br>.8   | .5<br>.5   | .0<br>.1   | .1<br>.3   | .3<br>.3   | .4<br>.4   | .4<br>.5   | .4<br>.5   | .4<br>.4   | .3<br>.4   | .7<br>.7          | .2<br>.3          | .4<br>.4          | .3<br>.3          |
| Equipment & intangibles<br><i>Previous Tealbook</i>     | .8<br>.8   | .8<br>.5   | .5<br>.4   | .2<br>.2   | .2<br>.3   | .3<br>.3   | .4<br>.4   | .4<br>.4   | .4<br>.4   | .4<br>.4   | .3<br>.4   | .5<br>.5          | .3<br>.3          | .3<br>.4          | .3<br>.3          |
| Nonres. structures<br><i>Previous Tealbook</i>          | .4<br>.4   | .1<br>.3   | .0<br>.1   | -.2<br>-.1 | -.1<br>.0  | .0<br>.0   | .0<br>.0   | .0<br>.0   | .0<br>.0   | .0<br>.0   | .0<br>.0   | .1<br>.2          | -.1<br>.0         | .0<br>.0          | .0<br>.0          |
| Net exports<br><i>Previous Tealbook</i>                 | -.3<br>-.3 | .6<br>.5   | -.1<br>-.2 | -.2<br>-.1 | -.1<br>-.1 | -.1<br>.0  | -.3<br>-.1 | -.2<br>-.1 | -.1<br>-.1 | -.2<br>-.2 | .0<br>.1   | -.4<br>-.4        | -.2<br>-.1        | -.1<br>-.1        | .1<br>.1          |
| Exports   | 1.4        | .7         | .4         | .5         | .5         | .5         | .4         | .5         | .6         | .6         | .6         | .3                | .5                | .6                | .7                |
| Imports   | -1.8       | -.1        | -.5        | -.6        | -.6        | -.6        | -.7        | -.7        | -.7        | -.8        | -.6        | -.7               | -.6               | -.7               | -.6               |
| Gov't. cons. & invest.<br><i>Previous Tealbook</i>      | .3<br>.3   | .3<br>-.2  | -.3<br>.0  | .0<br>.0   | -.1<br>-.1 | -.1<br>.0  | -.1<br>.0  | .1<br>.1   | .1<br>.1   | .2<br>.2   | .1<br>.2   | .0<br>.0          | -.1<br>-.1        | .1<br>.1          | .2<br>.2          |
| Federal   | -.1        | .1         | -.4        | -.2        | -.3        | -.3        | -.3        | -.1        | -.1        | .0         | -.1        | -.1               | -.2               | -.1               | -.1               |
| Defense   | .0         | .2         | -.4        | -.1        | -.2        | -.2        | -.2        | -.1        | -.1        | -.1        | -.1        | -.1               | -.2               | -.1               | -.1               |
| Nondefense  | -.1        | -.1        | -.1        | -.1        | -.1        | -.1        | -.1        | .0         | .0         | .0         | .0         | .0                | -.1               | .0                | .0                |
| State & local   | .4         | .1         | .2         | .2         | .2         | .2         | .2         | .2         | .2         | .2         | .2         | .1                | .2                | .2                | .2                |
| Change in priv. inventories<br><i>Previous Tealbook</i> | 1.4<br>1.2 | -.6<br>.1  | .4<br>-.1  | .2<br>-.1  | .0<br>.0   | -.1<br>.1  | .1<br>.2   | -.1<br>-.1 | .0<br>.0   | .2<br>.3   | .2<br>.1   | .0<br>.0          | .1<br>.1          | .1<br>.1          | -.3<br>-.2        |

1. Change from fourth quarter of previous year to fourth quarter of year indicated.

**Changes in Prices and Costs**  
(Percent, annual rate except as noted)

| Item   | 2014       |              |               | 2015        |            |            |            | 2016       |            |            |            | 2014 <sup>1</sup> | 2015 <sup>1</sup> | 2016 <sup>1</sup> | 2017 <sup>1</sup> |
|--|------------|--------------|---------------|-------------|------------|------------|------------|------------|------------|------------|------------|-------------------|-------------------|-------------------|-------------------|
|  | Q2         | Q3           | Q4            | Q1          | Q2         | Q3         | Q4         | Q1         | Q2         | Q3         | Q4         |                   |                   |                   |                   |
|  |            |              |               |             |            |            |            |            |            |            |            |                   |                   |                   |                   |
| GDP chain-wt. price index<br><i>Previous Tealbook</i>  | 2.1<br>2.1 | 1.4<br>1.6   | 1.2<br>1.6    | 1.6<br>1.9  | 1.7<br>1.7 | 1.7<br>1.6 | 1.6<br>1.6 | 1.9<br>1.9 | 1.8<br>1.8 | 1.7<br>1.7 | 1.6<br>1.6 | 1.5<br>1.7        | 1.6<br>1.7        | 1.7<br>1.8        | 1.8<br>1.8        |
| PCE chain-wt. price index<br><i>Previous Tealbook</i>  | 2.3<br>2.3 | 1.2<br>1.3   | -2<br>.9      | .9<br>1.6   | 1.5<br>1.6 | 1.5<br>1.5 | 1.5<br>1.4 | 1.7<br>1.7 | 1.7<br>1.7 | 1.6<br>1.6 | 1.5<br>1.5 | 1.2<br>1.5        | 1.4<br>1.5        | 1.6<br>1.6        | 1.7<br>1.7        |
| Energy<br><i>Previous Tealbook</i>   | 5.2<br>5.2 | -4.1<br>-4.0 | -24.0<br>-8.0 | -9.8<br>1.0 | 2.1<br>1.0 | 2.1<br>.4  | 1.6<br>.1  | 1.2<br>-1  | 1.2<br>.0  | 1.2<br>.1  | 1.0<br>-2  | -5.5<br>-9        | -1.1<br>.6        | 1.2<br>-1         | .9<br>.2          |
| Food<br><i>Previous Tealbook</i>   | 4.5<br>4.5 | 3.1<br>2.2   | 2.0<br>.9     | 1.0<br>.8   | .9<br>.8   | 1.0<br>.9  | 1.2<br>1.1 | 1.4<br>1.4 | 1.5<br>1.5 | 1.5<br>1.5 | 1.5<br>1.5 | 2.7<br>2.2        | 1.0<br>.9         | 1.5<br>1.5        | 1.8<br>1.8        |
| Ex. food & energy<br><i>Previous Tealbook</i>  | 2.0<br>2.0 | 1.4<br>1.5   | 1.2<br>1.4    | 1.5<br>1.7  | 1.6<br>1.7 | 1.5<br>1.6 | 1.5<br>1.5 | 1.7<br>1.9 | 1.7<br>1.8 | 1.6<br>1.6 | 1.6<br>1.6 | 1.5<br>1.5        | 1.5<br>1.6        | 1.6<br>1.7        | 1.8<br>1.8        |
| Ex. food & energy, market based<br><i>Previous Tealbook</i>                                    | 1.8<br>1.8 | 1.4<br>1.6   | 1.2<br>1.4    | 1.5<br>1.7  | 1.5<br>1.7 | 1.6<br>1.6 | 1.5<br>1.5 | 1.8<br>1.9 | 1.7<br>1.8 | 1.6<br>1.6 | 1.6<br>1.6 | 1.3<br>1.5        | 1.5<br>1.6        | 1.6<br>1.7        | 1.8<br>1.8        |
| CPI<br><i>Previous Tealbook</i>  | 3.0<br>3.0 | 1.1<br>1.4   | -6<br>1.0     | .9<br>1.9   | 1.9<br>1.9 | 1.9<br>1.8 | 1.9<br>1.8 | 1.9<br>1.9 | 2.0<br>1.9 | 1.9<br>1.9 | 1.9<br>1.9 | 1.3<br>1.8        | 1.7<br>1.9        | 1.9<br>1.9        | 2.0<br>2.0        |
| Ex. food & energy<br><i>Previous Tealbook</i>  | 2.5<br>2.5 | 1.3<br>1.7   | 1.6<br>1.9    | 2.0<br>2.1  | 2.0<br>2.2 | 2.0<br>2.1 | 2.0<br>2.1 | 2.1<br>2.2 | 2.1<br>2.2 | 2.0<br>2.1 | 2.0<br>2.1 | 1.8<br>1.9        | 2.0<br>2.1        | 2.0<br>2.1        | 2.1<br>2.1        |
| ECI, hourly compensation <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup>                 | 3.4<br>3.4 | 2.3<br>2.3   | 2.5<br>2.5    | 2.8<br>2.8  | 2.7<br>2.7 | 2.7<br>2.8 | 2.7<br>2.8 | 3.3<br>3.3 | 3.1<br>3.1 | 3.1<br>3.1 | 3.1<br>3.2 | 2.3<br>2.3        | 2.7<br>2.7        | 3.1<br>3.2        | 3.3<br>3.4        |
| Business sector  |            |              |               |             |            |            |            |            |            |            |            |                   |                   |                   |                   |
| Output per hour<br><i>Previous Tealbook</i>  | 2.9<br>2.5 | -3<br>1.1    | 2.6<br>1.5    | 1.6<br>1.4  | 1.6<br>1.6 | 1.7<br>1.8 | 1.7<br>1.8 | 1.8<br>1.7 | 1.8<br>1.7 | 1.8<br>1.9 | 1.9<br>1.8 | .0<br>.0          | 1.7<br>1.7        | 1.8<br>1.8        | 1.9<br>1.9        |
| Compensation per hour<br><i>Previous Tealbook</i>  | 2.2<br>2.1 | 2.0<br>2.0   | 2.0<br>2.2    | 3.4<br>3.4  | 3.1<br>3.1 | 3.1<br>3.1 | 3.1<br>3.1 | 3.5<br>3.6 | 3.3<br>3.4 | 3.3<br>3.4 | 3.3<br>3.4 | 3.2<br>3.3        | 3.2<br>3.2        | 3.3<br>3.4        | 3.5<br>3.6        |
| Unit labor costs<br><i>Previous Tealbook</i>   | -7<br>-4   | 2.3<br>.9    | -6<br>.7      | 1.7<br>1.9  | 1.5<br>1.5 | 1.4<br>1.2 | 1.3<br>1.3 | 1.7<br>1.9 | 1.4<br>1.6 | 1.4<br>1.5 | 1.4<br>1.6 | 3.2<br>3.3        | 1.5<br>1.5        | 1.5<br>1.6        | 1.6<br>1.7        |
| Core goods imports chain-wt. price index <sup>3</sup><br><i>Previous Tealbook</i> <sup>3</sup> | .2<br>.2   | .5<br>.9     | -1.1<br>.1    | -9<br>.5    | .6<br>1.2  | .9<br>1.3  | 1.1<br>1.3 | 1.3<br>1.5 | 1.2<br>1.3 | 1.2<br>1.3 | 1.2<br>1.3 | .6<br>1.0         | .4<br>1.1         | 1.2<br>1.3        | 1.2<br>1.3        |

1. Change from fourth quarter of previous year to fourth quarter of year indicated.

2. Private-industry workers.

3. Core goods imports exclude computers, semiconductors, oil, and natural gas.

Greensheets

Changes in Prices and Costs

(Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise noted)

| Item   | 2008         | 2009         | 2010       | 2011         | 2012       | 2013         | 2014       | 2015       | 2016       | 2017       |
|--|--------------|--------------|------------|--------------|------------|--------------|------------|------------|------------|------------|
| GDP chain-wt. price index<br><i>Previous Tealbook</i>  | 1.9<br>1.9   | .4<br>.4     | 1.8<br>1.8 | 1.9<br>1.9   | 1.8<br>1.8 | 1.4<br>1.4   | 1.5<br>1.7 | 1.6<br>1.7 | 1.7<br>1.8 | 1.8<br>1.8 |
| PCE chain-wt. price index<br><i>Previous Tealbook</i>  | 1.5<br>1.5   | 1.2<br>1.2   | 1.3<br>1.3 | 2.7<br>2.7   | 1.6<br>1.6 | 1.0<br>1.0   | 1.2<br>1.5 | 1.4<br>1.5 | 1.6<br>1.6 | 1.7<br>1.7 |
| Energy<br><i>Previous Tealbook</i>   | -8.2<br>-8.2 | 2.3<br>2.3   | 6.4<br>6.4 | 12.0<br>12.0 | 2.1<br>2.1 | -2.6<br>-2.6 | -5.5<br>-9 | -1.1<br>.6 | 1.2<br>-1  | .9<br>.2   |
| Food<br><i>Previous Tealbook</i>   | 6.9<br>6.9   | -1.8<br>-1.8 | 1.3<br>1.3 | 5.1<br>5.1   | 1.2<br>1.2 | .7<br>.7     | 2.7<br>2.2 | 1.0<br>.9  | 1.5<br>1.5 | 1.8<br>1.8 |
| Ex. food & energy<br><i>Previous Tealbook</i>  | 1.6<br>1.6   | 1.4<br>1.4   | 1.0<br>1.0 | 1.9<br>1.9   | 1.6<br>1.6 | 1.3<br>1.3   | 1.5<br>1.5 | 1.5<br>1.6 | 1.6<br>1.7 | 1.8<br>1.8 |
| Ex. food & energy, market based<br><i>Previous Tealbook</i>                                    | 2.2<br>2.2   | 1.8<br>1.8   | .7<br>.7   | 1.9<br>1.9   | 1.5<br>1.5 | 1.2<br>1.2   | 1.3<br>1.5 | 1.5<br>1.6 | 1.6<br>1.7 | 1.8<br>1.8 |
| CPI<br><i>Previous Tealbook</i>  | 1.6<br>1.6   | 1.5<br>1.5   | 1.2<br>1.2 | 3.3<br>3.3   | 1.9<br>1.9 | 1.2<br>1.2   | 1.3<br>1.8 | 1.7<br>1.9 | 1.9<br>1.9 | 2.0<br>2.0 |
| Ex. food & energy<br><i>Previous Tealbook</i>  | 2.0<br>2.0   | 1.8<br>1.8   | .6<br>.6   | 2.2<br>2.2   | 1.9<br>1.9 | 1.7<br>1.7   | 1.8<br>1.9 | 2.0<br>2.1 | 2.0<br>2.1 | 2.1<br>2.1 |
| ECL, hourly compensation <sup>1</sup><br><i>Previous Tealbook</i> <sup>1</sup>                 | 2.4<br>2.4   | 1.2<br>1.2   | 2.1<br>2.1 | 2.2<br>2.2   | 1.8<br>1.8 | 2.0<br>2.0   | 2.3<br>2.3 | 2.7<br>2.7 | 3.1<br>3.2 | 3.3<br>3.4 |
| Business sector<br>Output per hour<br><i>Previous Tealbook</i>                                 | -2<br>-2     | 5.6<br>5.6   | 1.7<br>1.7 | .0<br>.0     | .3<br>.3   | 2.4<br>2.4   | .0<br>.0   | 1.7<br>1.7 | 1.8<br>1.8 | 1.9<br>1.9 |
| Compensation per hour<br><i>Previous Tealbook</i>  | 2.9<br>2.9   | 1.3<br>1.3   | 1.2<br>1.2 | .6<br>.6     | 5.7<br>5.7 | .0<br>.0     | 3.2<br>3.3 | 3.2<br>3.2 | 3.3<br>3.4 | 3.5<br>3.6 |
| Unit labor costs<br><i>Previous Tealbook</i>   | 3.2<br>3.2   | -4.2<br>-4.2 | -4<br>-4   | .6<br>.6     | 5.4<br>5.4 | -2.3<br>-2.3 | 3.2<br>3.3 | 1.5<br>1.5 | 1.5<br>1.6 | 1.6<br>1.7 |
| Core goods imports chain-wt. price index <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup> | 3.9<br>3.9   | -1.9<br>-1.9 | 2.3<br>2.3 | 4.3<br>4.3   | .2<br>.2   | -1.0<br>-1.0 | .6<br>1.0  | .4<br>1.1  | 1.2<br>1.3 | 1.2<br>1.3 |

1. Private-industry workers.

2. Core goods imports exclude computers, semiconductors, oil, and natural gas.

## Other Macroeconomic Indicators

| Item  | 2014 |      |      |      | 2015 |      |      |      | 2016 |      |      |      | 2014 <sup>1</sup> | 2015 <sup>1</sup> | 2016 <sup>1</sup> | 2017 <sup>1</sup> |
|---|------|------|------|------|------|------|------|------|------|------|------|------|-------------------|-------------------|-------------------|-------------------|
|   | Q2   | Q3   | Q4   | Q1   | Q2   | Q3   | Q4   | Q1   | Q2   | Q3   | Q4   |      |                   |                   |                   |                   |
|   |      |      |      |      |      |      |      |      |      |      |      |      |                   |                   |                   |                   |
| <i>Employment and production</i>              |      |      |      |      |      |      |      |      |      |      |      |      |                   |                   |                   |                   |
| Nonfarm payroll employment <sup>2</sup>       | .8   | .7   | .7   | .6   | .5   | .5   | .5   | .5   | .5   | .5   | .6   | 2.6  | 2.0               | 2.1               | 1.6               |                   |
| Unemployment rate <sup>3</sup>                | 6.2  | 6.1  | 5.8  | 5.7  | 5.6  | 5.5  | 5.5  | 5.4  | 5.4  | 5.4  | 5.3  | 5.8  | 5.5               | 5.3               | 5.2               |                   |
| <i>Previous Tealbook<sup>3</sup></i>          | 6.2  | 6.1  | 5.9  | 5.7  | 5.6  | 5.5  | 5.4  | 5.3  | 5.3  | 5.2  | 5.1  | 5.9  | 5.4               | 5.1               | 4.9               |                   |
| Natural rate of unemployment <sup>3</sup>     | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2               | 5.2               | 5.2               |                   |
| <i>Previous Tealbook<sup>3</sup></i>          | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2  | 5.2               | 5.2               | 5.2               |                   |
| GDP gap <sup>4</sup>                          | -2.2 | -1.8 | -1.4 | -1.2 | -1.1 | -9   | -8   | -6   | -5   | -3   | -1   | -1.4 | -8                | -1                | .0                |                   |
| <i>Previous Tealbook<sup>4</sup></i>          | -2.2 | -1.8 | -1.3 | -1.1 | -9   | -7   | -4   | -2   | .0   | .3   | .5   | -1.3 | -4                | .5                | .8                |                   |
| Industrial production <sup>5</sup>            | 5.5  | 3.2  | 4.0  | 2.1  | 3.0  | 2.1  | 1.7  | 3.0  | 2.8  | 2.7  | 2.6  | 4.1  | 2.2               | 2.7               | 2.0               |                   |
| <i>Previous Tealbook<sup>5</sup></i>          | 5.5  | 3.0  | 3.2  | 3.5  | 3.6  | 2.5  | 2.2  | 3.4  | 3.2  | 3.0  | 2.9  | 3.9  | 2.9               | 3.1               | 2.3               |                   |
| Manufacturing industr. prod. <sup>5</sup>     | 6.8  | 3.5  | 3.1  | 1.8  | 2.6  | 2.6  | 2.6  | 2.8  | 2.9  | 2.8  | 2.7  | 3.7  | 2.4               | 2.8               | 2.2               |                   |
| <i>Previous Tealbook<sup>5</sup></i>          | 6.8  | 3.8  | 3.0  | 2.6  | 3.1  | 3.0  | 3.1  | 3.3  | 3.6  | 3.3  | 3.1  | 3.7  | 3.0               | 3.3               | 2.6               |                   |
| Capacity utilization rate - mfg. <sup>3</sup> | 77.1 | 77.3 | 77.5 | 77.4 | 77.5 | 77.6 | 77.7 | 77.8 | 78.0 | 78.2 | 78.3 | 77.5 | 77.7              | 78.3              | 78.4              |                   |
| <i>Previous Tealbook<sup>3</sup></i>          | 77.1 | 77.4 | 77.6 | 77.6 | 77.8 | 78.0 | 78.2 | 78.4 | 78.6 | 78.9 | 79.0 | 77.6 | 78.2              | 79.0              | 79.3              |                   |
| Housing starts <sup>6</sup>                   | 1.0  | 1.0  | 1.0  | 1.1  | 1.1  | 1.2  | 1.2  | 1.3  | 1.3  | 1.4  | 1.4  | 1.0  | 1.1               | 1.3               | 1.5               |                   |
| Light motor vehicle sales <sup>6</sup>        | 16.5 | 16.7 | 16.6 | 16.6 | 16.6 | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 | 16.4 | 16.6              | 16.7              | 16.6              |                   |
| <i>Income and saving</i>                      |      |      |      |      |      |      |      |      |      |      |      |      |                   |                   |                   |                   |
| Nominal GDP <sup>5</sup>                      | 6.8  | 4.1  | 4.2  | 3.9  | 4.1  | 4.2  | 4.1  | 4.5  | 4.4  | 4.4  | 4.4  | 3.5  | 4.0               | 4.4               | 4.0               |                   |
| Real disposable pers. income <sup>5</sup>     | 4.4  | 3.2  | 2.3  | 4.7  | 2.5  | 2.2  | 1.8  | 3.3  | 2.5  | 2.2  | 2.9  | 3.3  | 2.8               | 2.7               | 2.2               |                   |
| <i>Previous Tealbook<sup>5</sup></i>          | 4.2  | 2.5  | 2.0  | 4.4  | 2.3  | 2.7  | 2.3  | 3.8  | 2.2  | 3.0  | 2.6  | 3.0  | 2.9               | 2.9               | 2.6               |                   |
| Personal saving rate <sup>3</sup>             | 5.4  | 5.6  | 5.4  | 5.7  | 5.6  | 5.4  | 5.1  | 5.2  | 5.2  | 5.1  | 5.1  | 5.4  | 5.1               | 5.1               | 4.9               |                   |
| <i>Previous Tealbook<sup>3</sup></i>          | 5.3  | 5.4  | 5.1  | 5.3  | 5.2  | 5.1  | 5.0  | 5.2  | 5.0  | 5.0  | 5.0  | 5.1  | 5.0               | 5.0               | 5.1               |                   |
| Corporate profits <sup>7</sup>                | 38.3 | 3.9  | .1   | 1.6  | 2.9  | 3.7  | .4   | 5.1  | 3.2  | 3.0  | 3.4  | -8   | 2.1               | 3.7               | 3.0               |                   |
| Profit share of GNP <sup>3</sup>              | 12.0 | 12.0 | 11.9 | 11.8 | 11.8 | 11.8 | 11.7 | 11.7 | 11.7 | 11.7 | 11.6 | 11.9 | 11.7              | 11.6              | 11.5              |                   |
| Net federal saving <sup>8</sup>               | -584 | -493 | -467 | -489 | -472 | -475 | -458 | -511 | -492 | -499 | -516 | -526 | -473              | -504              | -573              |                   |
| Net state & local saving <sup>8</sup>         | -227 | -253 | -235 | -230 | -229 | -222 | -216 | -205 | -211 | -205 | -205 | -239 | -224              | -206              | -194              |                   |
| Gross national saving rate <sup>3</sup>       | 18.3 | 18.5 | 18.5 | 18.7 | 18.7 | 18.7 | 18.6 | 18.5 | 18.7 | 18.6 | 18.7 | 18.5 | 18.6              | 18.7              | 18.7              |                   |
| Net national saving rate <sup>3</sup>         | 3.2  | 4.2  | 4.2  | 4.3  | 4.3  | 4.3  | 4.1  | 4.0  | 4.1  | 4.1  | 4.1  | 4.2  | 4.1               | 4.1               | 3.9               |                   |

1. Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise indicated.

2. Change, millions.

3. Percent; annual values are for the fourth quarter of the year indicated.

4. Percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential. Annual values are for the fourth quarter of the year indicated.

5. Percent change, annual rate.

6. Level, millions; annual values are annual averages.

7. Percent change, annual rate, with inventory valuation and capital consumption adjustments.

8. Billions of dollars; annual values are annual averages.

## Greensheets

## Other Macroeconomic Indicators

(Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise noted)

| Item  | 2008  | 2009   | 2010   | 2011   | 2012   | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|-------|--------|--------|--------|--------|------|------|------|------|------|
| <i>Employment and production</i>              |       |        |        |        |        |      |      |      |      |      |
| Nonfarm payroll employment <sup>1</sup>       | -2.8  | -5.6   | .8     | 2.0    | 2.2    | 2.4  | 2.6  | 2.0  | 2.1  | 1.6  |
| Unemployment rate <sup>2</sup>                | 6.9   | 9.9    | 9.5    | 8.7    | 7.8    | 7.0  | 5.8  | 5.5  | 5.3  | 5.2  |
| <i>Previous Tealbook<sup>2</sup></i>          | 6.9   | 9.9    | 9.5    | 8.7    | 7.8    | 7.0  | 5.9  | 5.4  | 5.1  | 4.9  |
| Natural rate of unemployment <sup>2</sup>     | 5.6   | 6.2    | 6.2    | 6.0    | 5.8    | 5.4  | 5.2  | 5.2  | 5.2  | 5.2  |
| <i>Previous Tealbook<sup>2</sup></i>          | 5.6   | 6.2    | 6.2    | 6.0    | 5.8    | 5.4  | 5.2  | 5.2  | 5.2  | 5.2  |
| GDP gap <sup>3</sup>                          | -3.8  | -5.5   | -4.4   | -4.2   | -4.1   | -2.8 | -1.4 | -8   | -1   | .0   |
| <i>Previous Tealbook<sup>3</sup></i>          | -3.8  | -5.5   | -4.4   | -4.2   | -4.1   | -2.8 | -1.3 | -4   | .5   | .8   |
| Industrial production <sup>4</sup>            | -8.9  | -5.5   | 6.2    | 3.2    | 3.2    | 3.3  | 4.1  | 2.2  | 2.7  | 2.0  |
| <i>Previous Tealbook<sup>4</sup></i>          | -8.9  | -5.5   | 6.2    | 3.2    | 3.2    | 3.3  | 3.9  | 2.9  | 3.1  | 2.3  |
| Manufacturing industr. prod. <sup>4</sup>     | -11.6 | -6.1   | 6.4    | 3.1    | 3.5    | 2.9  | 3.7  | 2.4  | 2.8  | 2.2  |
| <i>Previous Tealbook<sup>4</sup></i>          | -11.6 | -6.1   | 6.4    | 3.1    | 3.5    | 2.9  | 3.7  | 3.0  | 3.3  | 2.6  |
| Capacity utilization rate - mfg. <sup>2</sup> | 70.0  | 67.1   | 72.7   | 74.6   | 75.5   | 76.4 | 77.5 | 77.7 | 78.3 | 78.4 |
| <i>Previous Tealbook<sup>2</sup></i>          | 70.0  | 67.1   | 72.7   | 74.6   | 75.5   | 76.4 | 77.6 | 78.2 | 79.0 | 79.3 |
| Housing starts <sup>5</sup>                   | .9    | .6     | .6     | .6     | .8     | .9   | 1.0  | 1.1  | 1.3  | 1.5  |
| Light motor vehicle sales <sup>5</sup>        | 13.1  | 10.4   | 11.5   | 12.7   | 14.4   | 15.5 | 16.4 | 16.6 | 16.7 | 16.6 |
| <i>Income and saving</i>                      |       |        |        |        |        |      |      |      |      |      |
| Nominal GDP <sup>4</sup>                      | -9    | .1     | 4.6    | 3.6    | 3.5    | 4.6  | 3.5  | 4.0  | 4.4  | 4.0  |
| Real disposable pers. income <sup>4</sup>     | 1.1   | -7     | 2.6    | 1.7    | 5.0    | -1.9 | 3.3  | 2.8  | 2.7  | 2.2  |
| <i>Previous Tealbook<sup>4</sup></i>          | 1.1   | -7     | 2.6    | 1.7    | 5.0    | -1.9 | 3.0  | 2.9  | 2.9  | 2.6  |
| Personal saving rate <sup>2</sup>             | 6.1   | 5.6    | 5.5    | 5.8    | 8.6    | 4.4  | 5.4  | 5.1  | 5.1  | 4.9  |
| <i>Previous Tealbook<sup>2</sup></i>          | 6.1   | 5.6    | 5.5    | 5.8    | 8.6    | 4.4  | 5.1  | 5.0  | 5.0  | 5.1  |
| Corporate profits <sup>6</sup>                | -30.8 | 53.7   | 18.0   | 6.8    | 3.8    | 4.7  | -8   | 2.1  | 3.7  | 3.0  |
| Profit share of GNP <sup>2</sup>              | 6.9   | 10.6   | 12.0   | 12.3   | 12.4   | 12.4 | 11.9 | 11.7 | 11.6 | 11.5 |
| Net federal saving <sup>7</sup>               | -634  | -1,249 | -1,329 | -1,244 | -1,079 | -649 | -526 | -473 | -504 | -573 |
| Net state & local saving <sup>7</sup>         | -165  | -272   | -237   | -216   | -233   | -225 | -239 | -224 | -206 | -194 |
| Gross national saving rate <sup>2</sup>       | 14.9  | 14.6   | 15.2   | 16.1   | 17.8   | 17.9 | 18.5 | 18.6 | 18.7 | 18.7 |
| Net national saving rate <sup>2</sup>         | -1.6  | -1.7   | -4     | .8     | 2.8    | 3.0  | 4.2  | 4.1  | 4.1  | 3.9  |

1. Change, millions.

2. Percent; values are for the fourth quarter of the year indicated.

3. Percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential.

Values are for the fourth quarter of the year indicated.

4. Percent change.

5. Level, millions; values are annual averages.

6. Percent change, with inventory valuation and capital consumption adjustments.

7. Billions of dollars; values are annual averages.



**Staff Projections of Federal Sector Accounts and Related Items**  
(Billions of dollars except as noted)

| Item   | Fiscal year |        |        |        | 2014            |                 |        |        | 2015   |        |        |        | 2016   |        |        |        |
|--|-------------|--------|--------|--------|-----------------|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|  | 2014        | 2015   | 2016   | 2017   | Q1 <sup>a</sup> | Q2 <sup>a</sup> | Q3     | Q4     | Q1     | Q2     | Q3     | Q4     | Q1     | Q2     | Q3     | Q4     |
| <b>Unified budget</b>                            |             |        |        |        |                 |                 |        |        |        |        |        |        |        |        |        |        |
| Receipts   | 3,021       | 3,261  | 3,433  | 3,552  | 656             | 938             | 760    | 737    | 678    | 1,024  | 822    | 765    | 723    | 1,086  | 859    | 796    |
| Outlays  | 3,504       | 3,667  | 3,824  | 4,061  | 897             | 890             | 878    | 922    | 927    | 933    | 884    | 987    | 926    | 961    | 950    | 981    |
| Surplus/deficit                                  | -483        | -406   | -392   | -509   | -241            | 47              | -117   | -185   | -249   | 92     | -63    | -222   | -203   | 125    | -92    | -185   |
| <i>Previous Tealbook</i>                         | -444        | -392   | -421   | -471   | -241            | 47              | -78    | -193   | -258   | 119    | -59    | -195   | -256   | 139    | -108   | -181   |
| Means of financing:                              |             |        |        |        |                 |                 |        |        |        |        |        |        |        |        |        |        |
| Borrowing  | 798         | 432    | 512    | 629    | 262             | -46             | 211    | 202    | 273    | -136   | 93     | 252    | 233    | -95    | 122    | 215    |
| Cash decrease                                    | -70         | 88     | 0      | 0      | 20              | 3               | -19    | -4     | 18     | 74     | 0      | 0      | 0      | 0      | 0      | 0      |
| Other <sup>1</sup>                               | -244        | -115   | -120   | -120   | -42             | -4              | -74    | -13    | -42    | -30    | -30    | -30    | -30    | -30    | -30    | -30    |
| Cash operating balance, end of period            | 158         | 70     | 70     | 70     | 142             | 139             | 158    | 162    | 144    | 70     | 70     | 70     | 70     | 70     | 70     | 70     |
| <b>NIPA federal sector</b>                       |             |        |        |        |                 |                 |        |        |        |        |        |        |        |        |        |        |
| Receipts   | 3,285       | 3,504  | 3,677  | 3,837  | 3,243           | 3,292           | 3,400  | 3,419  | 3,490  | 3,534  | 3,575  | 3,609  | 3,657  | 3,699  | 3,745  | 3,789  |
| Expenditures                                     | 3,829       | 3,980  | 4,167  | 4,395  | 3,803           | 3,875           | 3,893  | 3,886  | 3,979  | 4,005  | 4,050  | 4,067  | 4,168  | 4,190  | 4,244  | 4,305  |
| Consumption expenditures                         | 956         | 950    | 948    | 966    | 957             | 956             | 961    | 951    | 955    | 950    | 945    | 941    | 950    | 950    | 952    | 952    |
| Defense  | 611         | 609    | 605    | 614    | 610             | 610             | 618    | 609    | 612    | 608    | 605    | 602    | 607    | 606    | 606    | 605    |
| Nondefense                                       | 345         | 342    | 343    | 352    | 347             | 345             | 343    | 341    | 343    | 342    | 340    | 339    | 343    | 344    | 346    | 347    |
| Other spending                                   | 2,873       | 3,030  | 3,219  | 3,430  | 2,846           | 2,920           | 2,932  | 2,936  | 3,023  | 3,055  | 3,105  | 3,127  | 3,218  | 3,241  | 3,292  | 3,352  |
| Current account surplus                          | -544        | -476   | -490   | -558   | -560            | -584            | -493   | -467   | -489   | -472   | -475   | -458   | -511   | -492   | -499   | -516   |
| Gross investment                                 | 258         | 250    | 243    | 243    | 251             | 255             | 260    | 254    | 252    | 249    | 246    | 244    | 243    | 242    | 242    | 241    |
| Gross saving less gross investment <sup>2</sup>  | -529        | -446   | -445   | -506   | -539            | -565            | -478   | -444   | -462   | -440   | -439   | -417   | -468   | -445   | -451   | -465   |
| <b>Fiscal indicators</b>                         |             |        |        |        |                 |                 |        |        |        |        |        |        |        |        |        |        |
| High-employment (HEB)                            |             |        |        |        |                 |                 |        |        |        |        |        |        |        |        |        |        |
| surplus/deficit <sup>3</sup>                     | -368.4      | -375.5 | -415.0 | -509.6 | -343.4          | -414.1          | -357.9 | -349.2 | -387.8 | -376.8 | -388.3 | -376.0 | -430.3 | -418.5 | -435.3 | -461.0 |
| Change in HEB, percent of potential GDP          | -1.2        | .0     | .1     | .4     | -1.1            | .4              | -.3    | -.1    | .2     | -.1    | .0     | -.1    | .3     | -.1    | .1     | .1     |
| Fiscal impetus (FI), percent of GDP <sup>4</sup> | -1.1        | .0     | .2     | .2     | -.5             | .1              | .3     | -.3    | -.3    | .0     | .1     | .1     | .1     | .1     | .2     | .2     |
| <i>Previous Tealbook</i>                         | -2.2        | .0     | .2     | .2     | -.6             | .0              | -.2    | -.1    | -.3    | .0     | .1     | .2     | .1     | .1     | .3     | .3     |
| Federal purchases                                | -1.1        | -2.2   | -1.1   | -1.1   | .0              | -1.1            | .1     | -.4    | -.2    | -.3    | -.3    | -.3    | -.1    | -.1    | .0     | -1.1   |
| State and local purchases                        | .1          | .2     | .2     | .2     | -.1             | .4              | .1     | .2     | .2     | .2     | .2     | .2     | .2     | .2     | .2     | .2     |
| Taxes and transfers                              | -2.2        | .1     | .1     | .0     | -.4             | -.3             | .0     | .0     | -.2    | .1     | .1     | .2     | .0     | .1     | .1     | .1     |

1. Other means of financing include checks issued less checks paid, accrued items, and changes in other financial assets and liabilities.

2. Gross saving is the current account surplus plus consumption of fixed capital of the general government as well as government enterprises.

3. HEB is gross saving less gross investment (NIPA) of the federal government in current dollars, with cyclically sensitive receipts and outlays adjusted to the staff's measure of potential output and the natural rate of unemployment. The sign on Change in HEB, as a percent of nominal potential GDP, is reversed. Quarterly figures for change in HEB are not at annual rates.

4. Fiscal impetus measures the contribution to growth of real GDP from fiscal policy actions at the general government level (excluding multiplier effects). It equals the sum of the direct contributions to real GDP growth from changes in federal purchases and state and local purchases, plus the estimated contribution from real consumption and investment that is induced by discretionary policy changes in transfers and taxes.

a Actual.

**Foreign Real GDP and Consumer Prices: Selected Countries**  
(Quarterly percent changes at an annual rate)

| Measure and country                | 2014 |      |     |     | 2015 |     |     |      | 2016 |     |     |     |
|------------------------------------|------|------|-----|-----|------|-----|-----|------|------|-----|-----|-----|
|                                    | Q1   | Q2   | Q3  | Q4  | Q1   | Q2  | Q3  | Q4   | Q1   | Q2  | Q3  | Q4  |
| <b>Real GDP<sup>1</sup></b>        |      |      |     |     |      |     |     |      |      |     |     |     |
| Total foreign                      | 2.2  | 2.3  | 2.8 | 2.8 | 2.9  | 3.0 | 3.2 | 2.8  | 3.2  | 3.2 | 3.2 | 3.2 |
| <i>Previous Tealbook</i>           | 2.1  | 2.3  | 3.0 | 3.0 | 3.1  | 3.2 | 3.3 | 3.0  | 3.3  | 3.3 | 3.3 | 3.3 |
| Advanced foreign economies         | 1.9  | 1.1  | 1.9 | 1.8 | 2.0  | 2.1 | 2.3 | 1.6  | 2.2  | 2.1 | 2.1 | 2.1 |
| Canada                             | .9   | 3.1  | 2.5 | 2.4 | 2.4  | 2.5 | 2.5 | 2.5  | 2.5  | 2.5 | 2.4 | 2.4 |
| Japan                              | 6.0  | -7.1 | 2.1 | 1.5 | 1.4  | 1.1 | 2.9 | -3.7 | 1.5  | .9  | 1.0 | 1.1 |
| United Kingdom                     | 3.0  | 3.7  | 2.8 | 2.5 | 2.4  | 2.4 | 2.4 | 2.4  | 2.4  | 2.4 | 2.4 | 2.4 |
| Euro area                          | 1.2  | .3   | .7  | .8  | 1.3  | 1.5 | 1.6 | 1.7  | 1.7  | 1.9 | 1.9 | 1.9 |
| Germany                            | 2.7  | -6   | .7  | 1.2 | 1.7  | 1.7 | 1.9 | 2.0  | 2.0  | 2.0 | 2.0 | 2.0 |
| Emerging market economies          | 2.6  | 3.5  | 3.7 | 3.7 | 3.9  | 4.0 | 4.1 | 4.1  | 4.2  | 4.2 | 4.2 | 4.2 |
| Asia                               | 3.9  | 4.9  | 5.2 | 5.0 | 5.2  | 5.2 | 5.2 | 5.2  | 5.3  | 5.3 | 5.3 | 5.3 |
| Korea                              | 3.8  | 2.0  | 3.9 | 3.9 | 4.0  | 4.0 | 4.0 | 4.0  | 4.0  | 4.0 | 4.0 | 4.0 |
| China                              | 6.2  | 7.7  | 7.7 | 7.2 | 7.1  | 7.1 | 7.0 | 7.0  | 7.0  | 7.0 | 7.0 | 7.0 |
| Latin America                      | 1.4  | 2.5  | 2.6 | 2.7 | 2.8  | 3.0 | 3.2 | 3.2  | 3.2  | 3.3 | 3.3 | 3.3 |
| Mexico                             | 1.8  | 4.2  | 3.7 | 3.5 | 3.4  | 3.5 | 3.6 | 3.6  | 3.6  | 3.6 | 3.6 | 3.6 |
| Brazil                             | -6   | -2.4 | .4  | 1.4 | 1.6  | 1.8 | 2.0 | 2.0  | 2.1  | 2.1 | 2.1 | 2.1 |
| <b>Consumer prices<sup>2</sup></b> |      |      |     |     |      |     |     |      |      |     |     |     |
| Total foreign                      | 2.0  | 3.1  | 2.1 | 1.7 | 2.2  | 2.4 | 2.5 | 3.0  | 2.6  | 2.6 | 2.6 | 2.6 |
| <i>Previous Tealbook</i>           | 2.0  | 3.0  | 2.4 | 2.4 | 2.5  | 2.5 | 2.5 | 3.0  | 2.6  | 2.6 | 2.6 | 2.6 |
| Advanced foreign economies         | 1.1  | 3.2  | 1.1 | .3  | .8   | 1.2 | 1.4 | 2.5  | 1.5  | 1.6 | 1.6 | 1.7 |
| Canada                             | 2.8  | 3.7  | 1.3 | .2  | .8   | 1.6 | 1.7 | 1.8  | 1.9  | 1.9 | 1.9 | 1.9 |
| Japan                              | .4   | 9.4  | 1.5 | .1  | .3   | .9  | 1.0 | 6.3  | 1.1  | 1.2 | 1.2 | 1.3 |
| United Kingdom                     | 1.2  | 1.8  | 1.6 | 1.0 | 1.6  | 1.6 | 1.8 | 1.9  | 1.8  | 1.9 | 1.9 | 2.0 |
| Euro area                          | .2   | .4   | .6  | .4  | 1.0  | 1.1 | 1.3 | 1.3  | 1.4  | 1.4 | 1.5 | 1.6 |
| Germany                            | .2   | .4   | 1.8 | .5  | 1.3  | 1.4 | 1.5 | 1.6  | 1.7  | 1.7 | 1.7 | 1.7 |
| Emerging market economies          | 2.6  | 2.9  | 2.8 | 2.9 | 3.3  | 3.4 | 3.3 | 3.3  | 3.3  | 3.3 | 3.3 | 3.3 |
| Asia                               | 1.6  | 2.4  | 2.0 | 2.4 | 3.2  | 3.2 | 3.2 | 3.2  | 3.2  | 3.2 | 3.2 | 3.2 |
| Korea                              | 1.4  | 2.2  | .6  | 2.8 | 3.3  | 3.2 | 3.2 | 3.2  | 3.3  | 3.3 | 3.3 | 3.3 |
| China                              | .8   | 2.0  | 2.2 | 1.9 | 2.9  | 3.0 | 3.0 | 3.0  | 3.0  | 3.0 | 3.0 | 3.0 |
| Latin America                      | 5.3  | 4.3  | 4.9 | 4.0 | 3.7  | 3.8 | 3.8 | 3.8  | 3.7  | 3.7 | 3.7 | 3.7 |
| Mexico                             | 4.8  | 3.3  | 4.4 | 3.5 | 3.2  | 3.3 | 3.3 | 3.3  | 3.3  | 3.3 | 3.3 | 3.3 |
| Brazil                             | 6.5  | 7.4  | 6.2 | 6.2 | 5.6  | 5.6 | 5.6 | 5.6  | 5.5  | 5.5 | 5.5 | 5.5 |

<sup>1</sup> Foreign GDP aggregates calculated using shares of U.S. exports.

<sup>2</sup> Foreign CPI aggregates calculated using shares of U.S. non-oil imports.

**Foreign Real GDP and Consumer Prices: Selected Countries**  
(Percent change, Q4 to Q4)

| Measure and country                | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | -----Projected----- |      |      |  |
|------------------------------------|------|------|------|------|------|------|---------------------|------|------|--|
|                                    |      |      |      |      |      |      | 2015                | 2016 | 2017 |  |
| <b>Real GDP<sup>1</sup></b>        |      |      |      |      |      |      |                     |      |      |  |
| Total foreign                      | 1.0  | 4.7  | 3.1  | 2.3  | 2.5  | 2.5  | 3.0                 | 3.2  | 3.1  |  |
| <i>Previous Tealbook</i>           | .9   | 4.7  | 3.0  | 2.3  | 2.5  | 2.6  | 3.2                 | 3.3  | 3.2  |  |
| Advanced foreign economies         | -1.4 | 3.1  | 1.5  | .3   | 1.9  | 1.7  | 2.0                 | 2.1  | 2.1  |  |
| Canada                             | -1.4 | 3.6  | 2.4  | 1.0  | 2.7  | 2.2  | 2.5                 | 2.5  | 2.3  |  |
| Japan                              | -.6  | 3.5  | .2   | -.3  | 2.4  | .5   | .4                  | 1.1  | 1.1  |  |
| United Kingdom                     | -1.5 | 2.2  | 1.5  | .4   | 2.7  | 3.0  | 2.4                 | 2.4  | 2.3  |  |
| Euro area                          | -2.4 | 2.3  | .7   | -.9  | .4   | .8   | 1.5                 | 1.9  | 2.0  |  |
| Germany                            | -3.0 | 4.4  | 2.4  | .1   | 1.1  | 1.0  | 1.8                 | 2.0  | 1.9  |  |
| Emerging market economies          | 3.9  | 6.4  | 4.6  | 4.3  | 3.1  | 3.4  | 4.0                 | 4.2  | 4.1  |  |
| Asia                               | 7.8  | 8.0  | 5.0  | 5.5  | 5.1  | 4.7  | 5.2                 | 5.3  | 5.2  |  |
| Korea                              | 4.9  | 6.1  | 3.0  | 2.1  | 3.6  | 3.4  | 4.0                 | 4.0  | 3.9  |  |
| China                              | 11.3 | 9.7  | 8.7  | 7.7  | 7.6  | 7.2  | 7.0                 | 7.0  | 6.9  |  |
| Latin America                      | .0   | 4.7  | 4.1  | 3.2  | 1.2  | 2.3  | 3.1                 | 3.3  | 3.3  |  |
| Mexico                             | -1.2 | 4.5  | 4.2  | 3.3  | .6   | 3.3  | 3.5                 | 3.6  | 3.6  |  |
| Brazil                             | 5.3  | 5.3  | 1.3  | 1.8  | 2.2  | -.3  | 1.8                 | 2.1  | 2.2  |  |
| <b>Consumer prices<sup>2</sup></b> |      |      |      |      |      |      |                     |      |      |  |
| Total foreign                      | 1.2  | 3.2  | 3.4  | 2.3  | 2.3  | 2.2  | 2.5                 | 2.6  | 2.6  |  |
| <i>Previous Tealbook</i>           | 1.2  | 3.2  | 3.4  | 2.3  | 2.3  | 2.5  | 2.6                 | 2.6  | 2.6  |  |
| Advanced foreign economies         | .2   | 1.7  | 2.2  | 1.3  | 1.0  | 1.4  | 1.5                 | 1.6  | 1.7  |  |
| Canada                             | .8   | 2.2  | 2.7  | .9   | 1.0  | 2.0  | 1.5                 | 1.9  | 2.0  |  |
| Japan                              | -2.0 | -.3  | -.3  | -.2  | 1.4  | 2.8  | 2.1                 | 1.2  | 1.3  |  |
| United Kingdom                     | 2.2  | 3.4  | 4.6  | 2.6  | 2.1  | 1.4  | 1.7                 | 1.9  | 2.0  |  |
| Euro area                          | .4   | 2.0  | 2.9  | 2.3  | .8   | .4   | 1.2                 | 1.5  | 1.6  |  |
| Germany                            | .3   | 1.6  | 2.6  | 2.0  | 1.3  | .7   | 1.4                 | 1.7  | 1.7  |  |
| Emerging market economies          | 2.0  | 4.3  | 4.3  | 3.1  | 3.4  | 2.8  | 3.3                 | 3.3  | 3.3  |  |
| Asia                               | 1.2  | 4.3  | 4.5  | 2.6  | 3.1  | 2.1  | 3.2                 | 3.2  | 3.2  |  |
| Korea                              | 2.4  | 3.2  | 3.9  | 1.7  | 1.1  | 1.7  | 3.3                 | 3.3  | 3.3  |  |
| China                              | .6   | 4.6  | 4.6  | 2.1  | 2.9  | 1.7  | 3.0                 | 3.0  | 3.0  |  |
| Latin America                      | 3.9  | 4.4  | 4.0  | 4.3  | 4.0  | 4.6  | 3.8                 | 3.7  | 3.6  |  |
| Mexico                             | 4.0  | 4.3  | 3.5  | 4.1  | 3.7  | 4.0  | 3.3                 | 3.3  | 3.3  |  |
| Brazil                             | 4.3  | 5.6  | 6.7  | 5.6  | 5.9  | 6.6  | 5.6                 | 5.5  | 5.5  |  |

<sup>1</sup> Foreign GDP aggregates calculated using shares of U.S. exports.

<sup>2</sup> Foreign CPI aggregates calculated using shares of U.S. non-oil imports.

Greensheets

U.S. Current Account

Quarterly Data

|                                     | 2014                                 |               |               |               | 2015          |               |               |               | 2016          |               |               |               |
|-------------------------------------|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                     | -----                                |               |               |               | -----         |               |               |               | -----         |               |               |               |
|                                     | Q1                                   | Q2            | Q3            | Q4            | Q1            | Q2            | Q3            | Q4            | Q1            | Q2            | Q3            | Q4            |
|                                     | <i>Billions of dollars, s.a.a.r.</i> |               |               |               |               |               |               |               |               |               |               |               |
| <b>U.S. current account balance</b> | <b>-408.5</b>                        | <b>-394.0</b> | <b>-426.1</b> | <b>-400.1</b> | <b>-409.9</b> | <b>-391.0</b> | <b>-407.3</b> | <b>-430.2</b> | <b>-468.8</b> | <b>-453.8</b> | <b>-481.3</b> | <b>-489.9</b> |
| <i>Previous Tealbook</i>            | <i>-435.5</i>                        | <i>-410.9</i> | <i>-434.4</i> | <i>-413.7</i> | <i>-433.7</i> | <i>-411.3</i> | <i>-425.9</i> | <i>-444.1</i> | <i>-481.0</i> | <i>-461.7</i> | <i>-487.8</i> | <i>-486.5</i> |
| Current account as percent of GDP   | -2.4                                 | -2.3          | -2.4          | -2.3          | -2.3          | -2.2          | -2.2          | -2.3          | -2.5          | -2.4          | -2.5          | -2.6          |
| <i>Previous Tealbook</i>            | <i>-2.6</i>                          | <i>-2.4</i>   | <i>-2.5</i>   | <i>-2.3</i>   | <i>-2.4</i>   | <i>-2.3</i>   | <i>-2.3</i>   | <i>-2.4</i>   | <i>-2.6</i>   | <i>-2.4</i>   | <i>-2.5</i>   | <i>-2.5</i>   |
| Net goods & services                | -498.1                               | -521.0        | -494.3        | -452.5        | -447.9        | -439.1        | -446.6        | -463.8        | -475.4        | -471.5        | -487.8        | -493.0        |
| Investment income, net              | 218.2                                | 221.7         | 210.1         | 192.3         | 190.1         | 181.4         | 175.3         | 167.2         | 158.7         | 151.1         | 142.5         | 136.7         |
| Direct, net                         | 292.8                                | 286.0         | 273.7         | 255.0         | 255.2         | 256.0         | 259.8         | 263.4         | 267.0         | 272.2         | 277.3         | 284.9         |
| Portfolio, net                      | -74.6                                | -64.3         | -63.6         | -62.7         | -65.1         | -74.5         | -84.5         | -96.2         | -108.3        | -121.2        | -134.8        | -148.3        |
| Other income and transfers, net     | -128.5                               | -94.7         | -141.9        | -140.0        | -152.1        | -133.4        | -136.0        | -133.6        | -152.1        | -133.4        | -136.0        | -133.6        |

Annual Data

|                                   | 2009                | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   |
|-----------------------------------|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                   | -----Projected----- |        |        |        |        |        |        |        |        |
|                                   | Billions of dollars |        |        |        |        |        |        |        |        |
| U.S. current account balance      | -380.8              | -443.9 | -459.3 | -460.8 | -400.3 | -407.2 | -409.6 | -473.5 | -504.1 |
| Previous Tealbook                 | -380.8              | -443.9 | -459.3 | -460.8 | -400.3 | -423.6 | -428.8 | -479.3 | -498.3 |
| Current account as percent of GDP | -2.6                | -3.0   | -3.0   | -2.9   | -2.4   | -2.3   | -2.3   | -2.5   | -2.6   |
| Previous Tealbook                 | -2.6                | -3.0   | -3.0   | -2.9   | -2.4   | -2.4   | -2.4   | -2.5   | -2.5   |
| Net goods & services              | -383.8              | -494.7 | -548.6 | -537.6 | -476.4 | -491.5 | -449.4 | -481.9 | -490.1 |
| Investment income, net            | 132.3               | 185.7  | 229.0  | 211.4  | 208.5  | 210.6  | 178.5  | 147.2  | 124.8  |
| Direct, net                       | 257.7               | 288.0  | 298.6  | 281.6  | 290.9  | 276.9  | 258.6  | 275.4  | 307.3  |
| Portfolio, net                    | -125.4              | -102.3 | -69.5  | -70.2  | -82.3  | -66.3  | -80.1  | -128.1 | -182.5 |
| Other income and transfers, net   | -129.3              | -135.0 | -139.8 | -134.6 | -132.4 | -126.3 | -138.8 | -138.8 | -138.8 |

Class I FOMC – Restricted Controlled (FR)

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# Report to the FOMC on Economic Conditions and Monetary Policy



## Book B

### Monetary Policy: Strategies and Alternatives

October 23, 2014

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Prepared for the Federal Open Market Committee  
by the staff of the Board of Governors of the Federal Reserve System

## Policy Rules and the Staff Projection

### Near-Term Prescriptions of Selected Policy Rules<sup>1</sup>

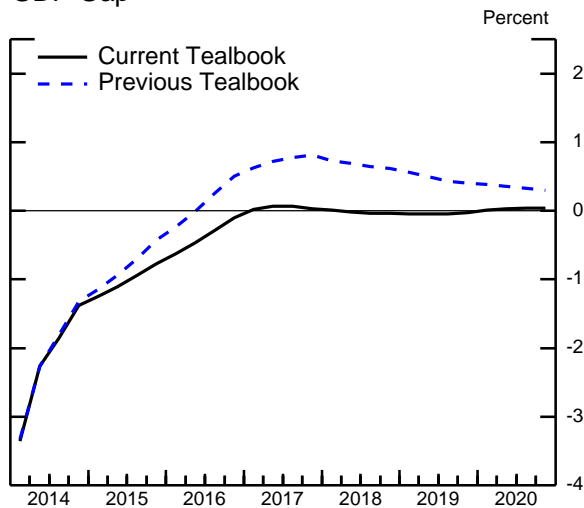
|                                  | 2014Q4       | 2015Q1       |
|----------------------------------|--------------|--------------|
| Taylor (1993) rule               | <b>2.25</b>  | <b>2.43</b>  |
| <i>Previous Tealbook</i>         | 2.39         | 2.66         |
| Taylor (1999) rule               | <b>1.57</b>  | <b>1.81</b>  |
| <i>Previous Tealbook</i>         | 1.73         | 2.09         |
| Inertial Taylor (1999) rule      | <b>0.34</b>  | <b>0.56</b>  |
| <i>Previous Tealbook outlook</i> | 0.37         | 0.63         |
| First-difference rule            | <b>0.30</b>  | <b>0.37</b>  |
| <i>Previous Tealbook outlook</i> | 0.47         | 0.72         |
| Nominal income targeting rule    | <b>-0.29</b> | <b>-0.58</b> |
| <i>Previous Tealbook outlook</i> | -0.22        | -0.41        |

### Memo: Equilibrium and Actual Real Federal Funds Rates<sup>2</sup>

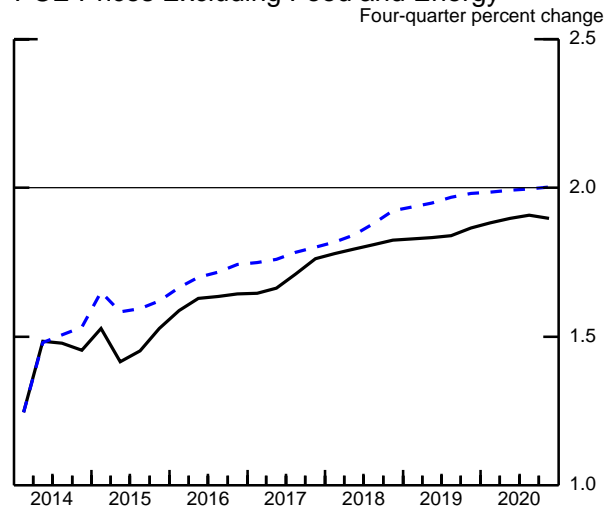
|   | Current<br>Tealbook | Current Quarter Estimate<br>as of Previous Tealbook | Previous<br>Tealbook |
|---|---------------------|---|----------------------|
| Tealbook-consistent FRB/US $r^*$ estimate | -1.28               | -0.84   | -0.85                |
| Actual real federal funds rate            | -1.34               |   | -1.34                |

## Key Elements of the Staff Projection

GDP Gap



PCE Prices Excluding Food and Energy

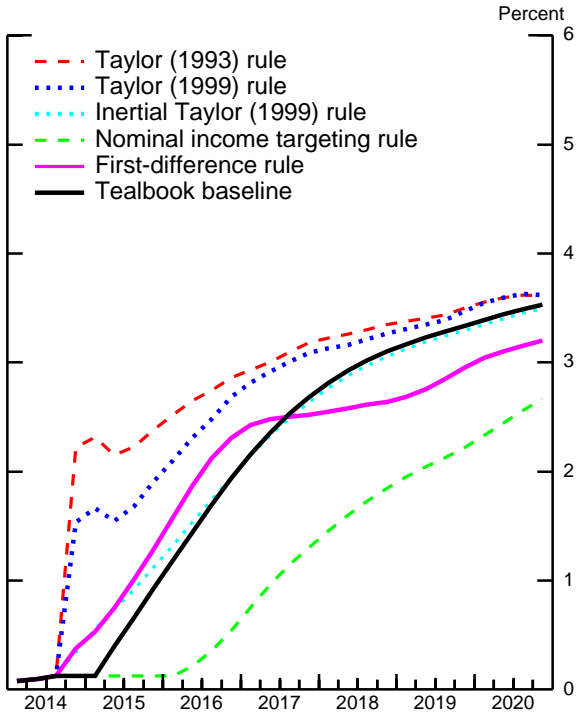


1. These near-term prescriptions are not constrained by the effective lower bound on the federal funds rate. For rules that have a lagged policy rate as a right-hand-side variable, the lines denoted "Previous Tealbook outlook" report rule prescriptions based on the previous Tealbook's staff outlook, but jumping off from the realized value for the policy rate last quarter.

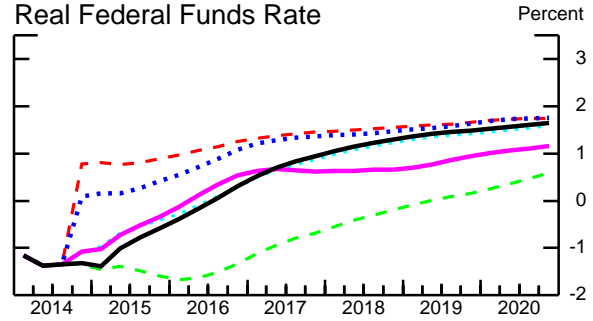
2. Estimates of  $r^*$  may change at the beginning of a quarter even when the staff outlook is unchanged because the twelve-quarter horizon covered by the calculation has rolled forward one quarter. Therefore, whenever the Tealbook is published early in the quarter, the memo includes an extra column labeled "Current Quarter Estimate as of Previous Tealbook" to facilitate comparison with the current Tealbook estimate.

## Policy Rule Simulations

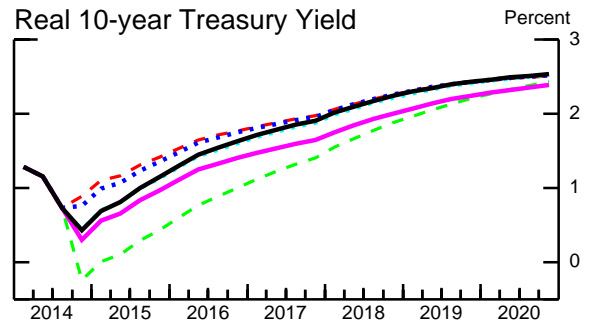
Effective Nominal Federal Funds Rate



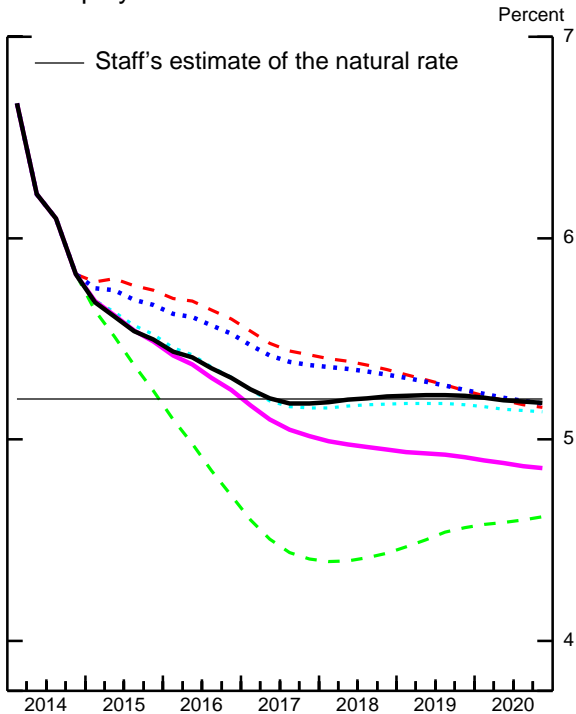
Real Federal Funds Rate



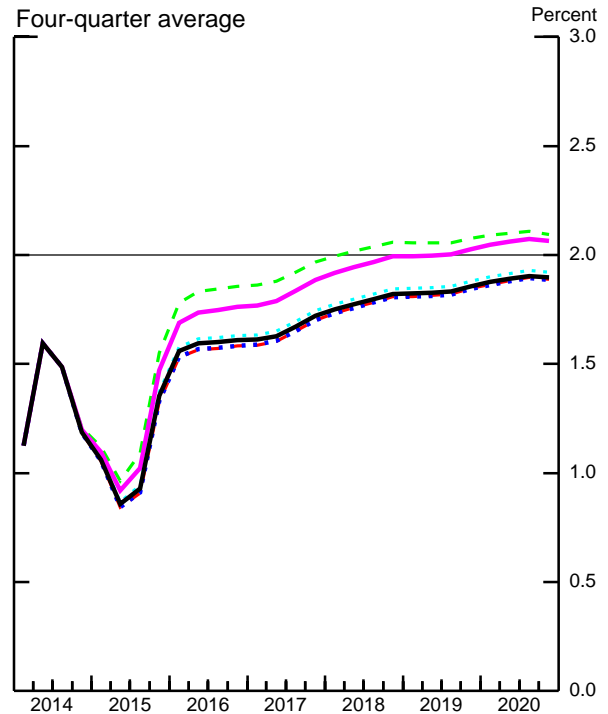
Real 10-year Treasury Yield



Unemployment Rate



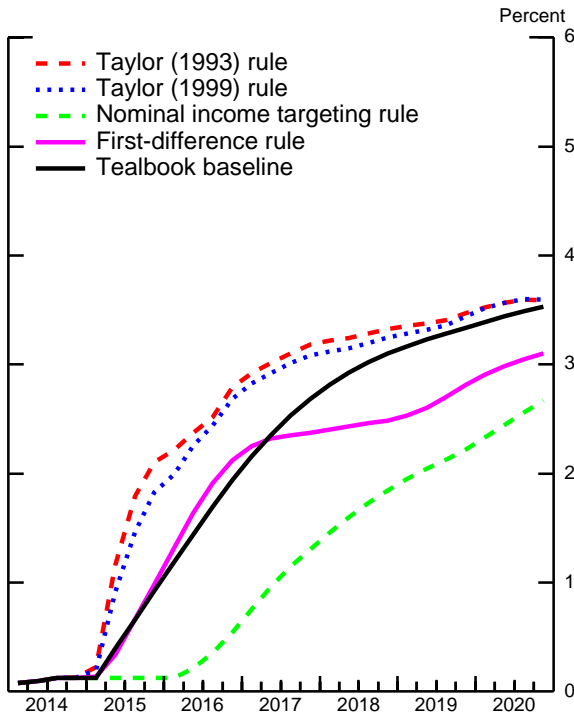
PCE Inflation  
Four-quarter average



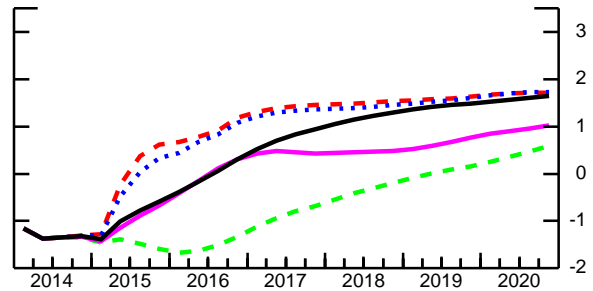
Note: The policy rule simulations in this exhibit are based on rules that respond to core inflation. This choice of rule specification was made in light of the tendency for current and near-term core inflation rates to outperform headline inflation rates as predictors of the medium-term behavior of headline inflation.

## Policy Rule Simulations with an Unemployment Rate Threshold

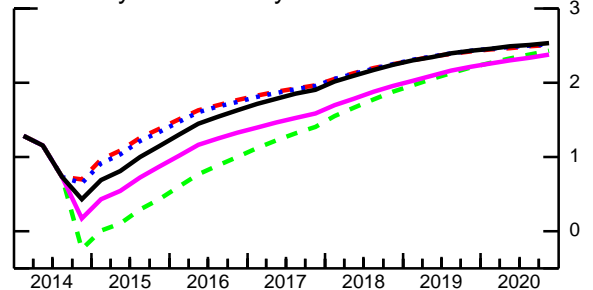
Effective Nominal Federal Funds Rate



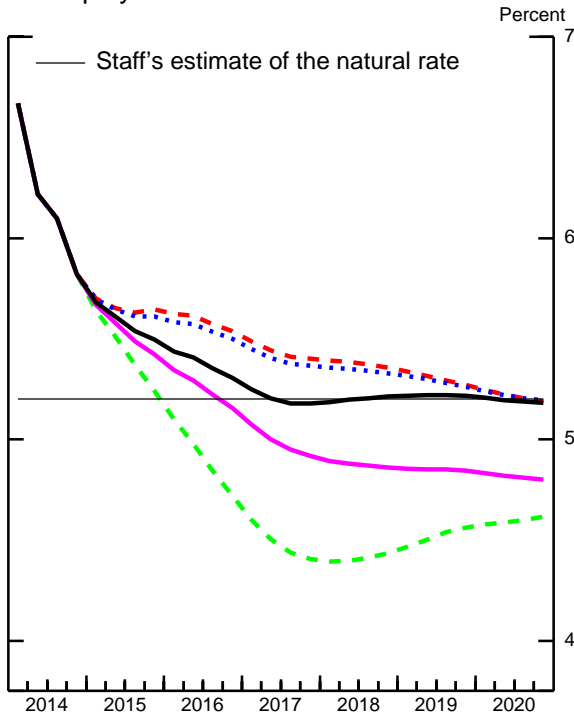
Real Federal Funds Rate



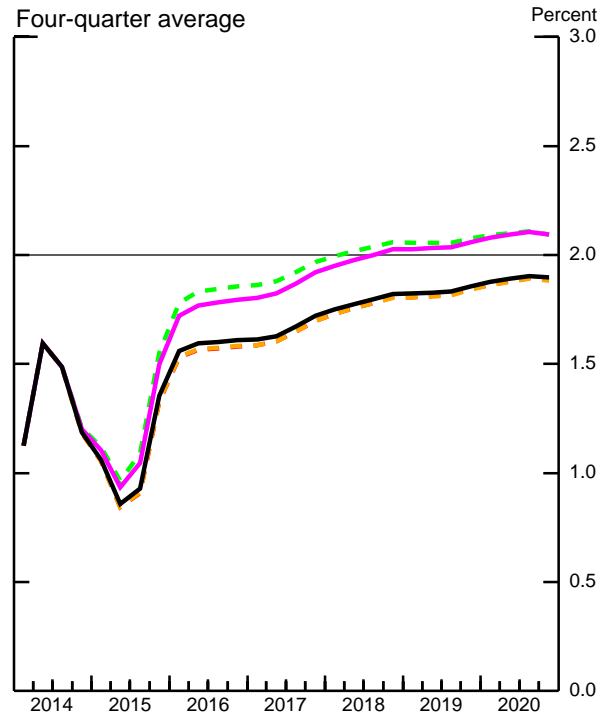
Real 10-year Treasury Yield



Unemployment Rate



PCE Inflation

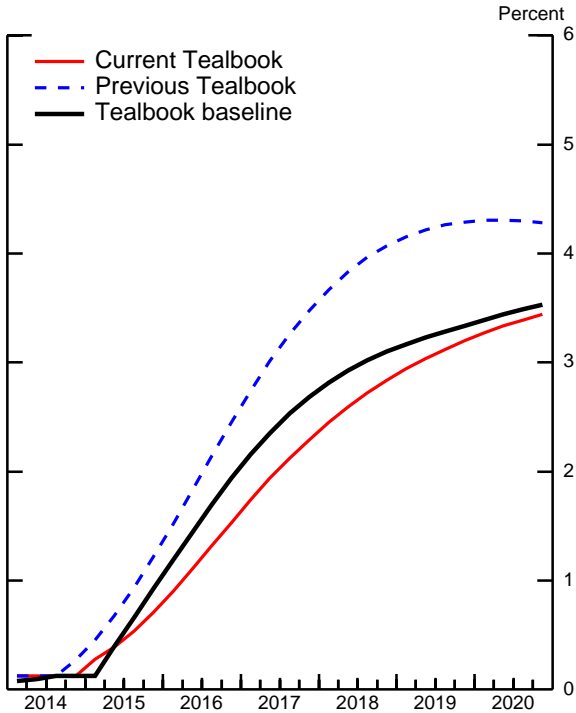


Note: The policy rule simulations in this exhibit keep the federal funds rate at an effective lower bound of 12½ basis points as long as the unemployment rate is 5.7 percent or more. Thereafter, the federal funds rate follows the prescriptions of the specified rule. A value of 5.7 percent was chosen because, in the Tealbook baseline, the unemployment rate crosses that level just before firming begins. In addition, the simulations are based on rules that respond to core inflation.

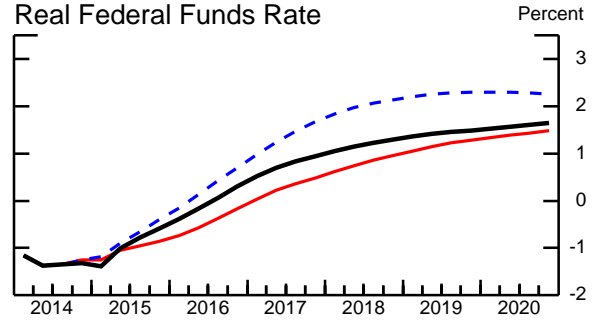


## Optimal Control Policy under Commitment

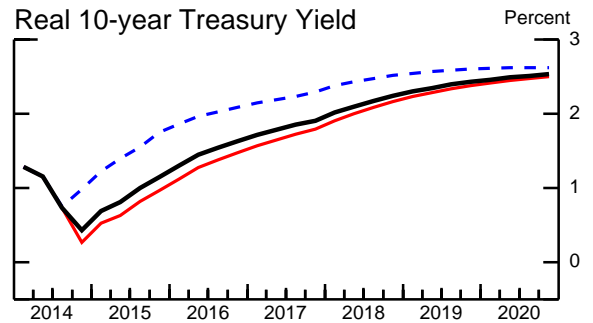
Effective Nominal Federal Funds Rate



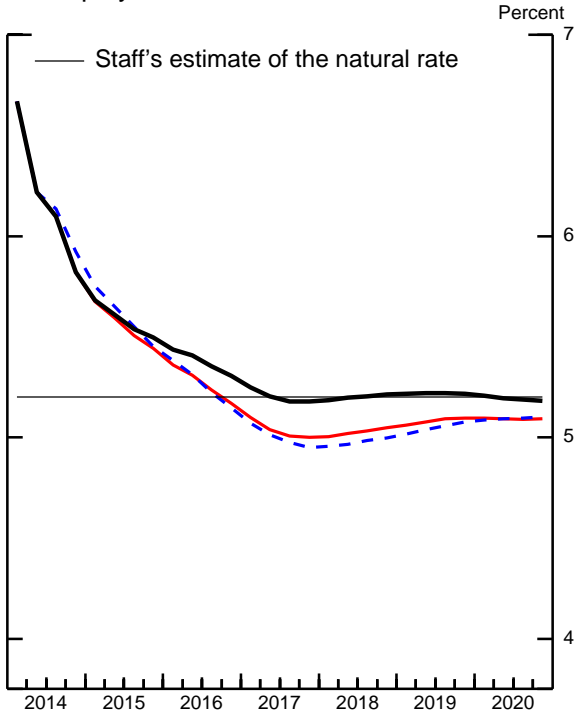
Real Federal Funds Rate



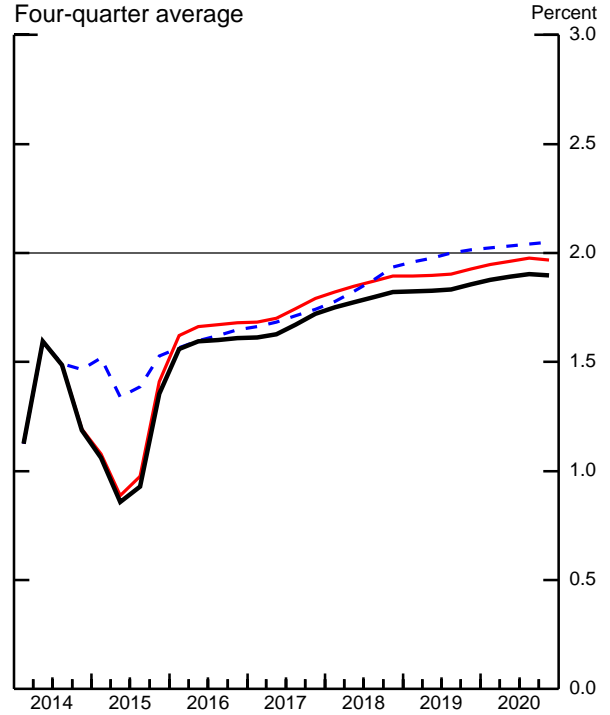
Real 10-year Treasury Yield



Unemployment Rate

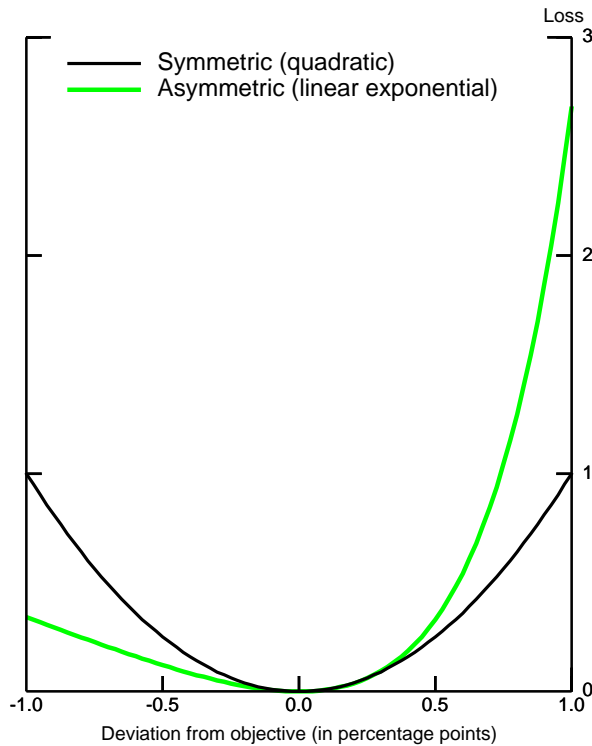


PCE Inflation  
Four-quarter average

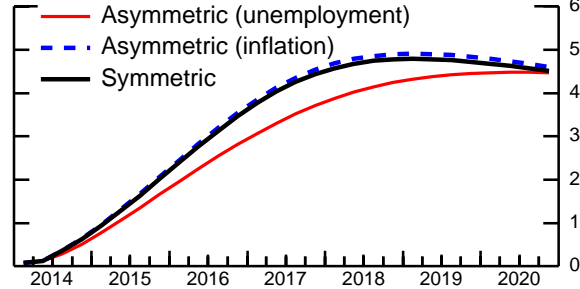


## Optimal Control Policy under Asymmetric Preferences (Conditional on July 2014 Tealbook)

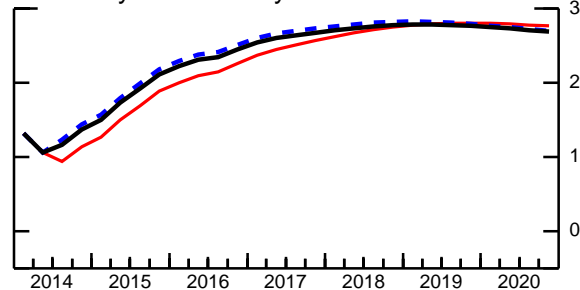
Loss Function



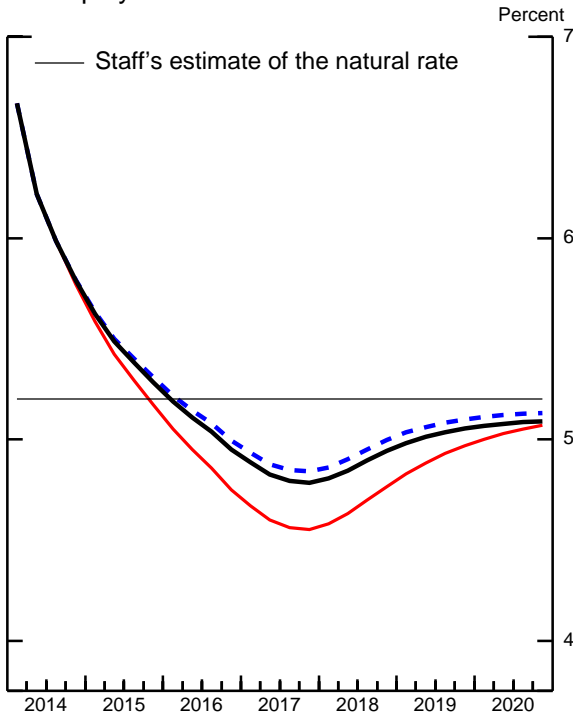
Effective Nominal Federal Funds Rate



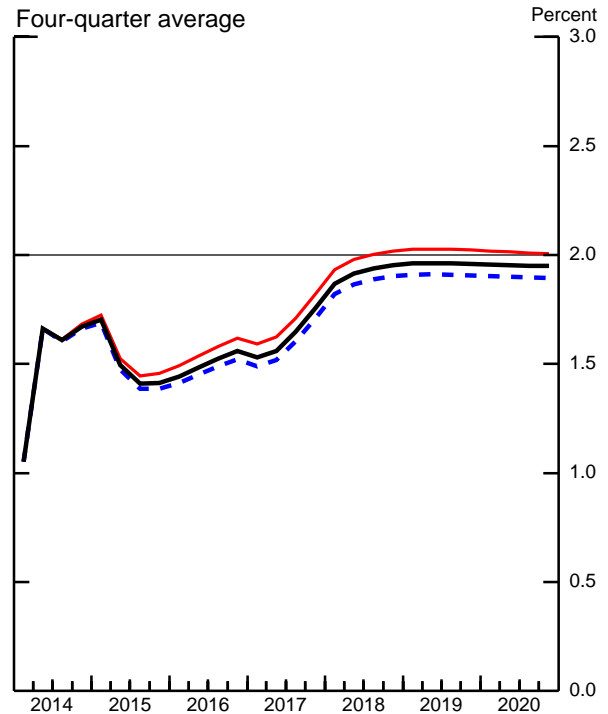
Real 10-year Treasury Yield



Unemployment Rate



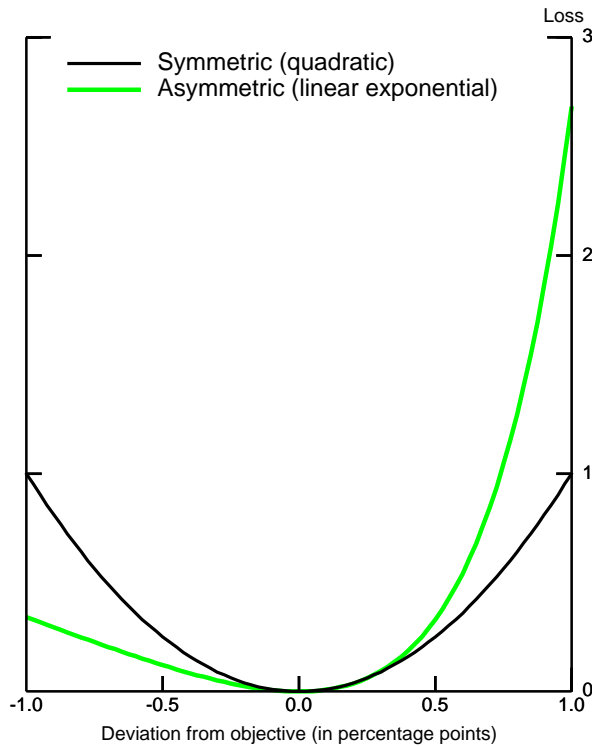
PCE Inflation



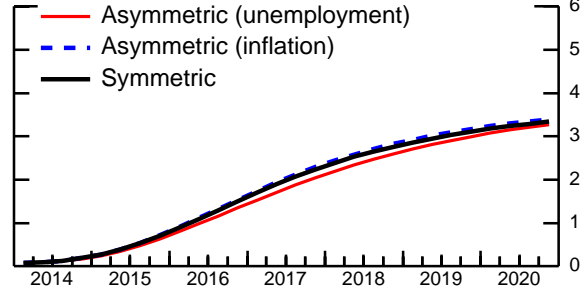
Note: In the simulation labeled “Symmetric,” policymakers are assumed to place equal weights on minimizing a discounted sum of squared deviations of inflation from 2 percent and of the unemployment rate from the staff’s estimate of the natural rate. In the simulations labeled “Asymmetric (unemployment)” and “Asymmetric (inflation),” policymakers are assumed to have, in place of the quadratic unemployment rate term and the quadratic inflation term, respectively, a loss function that takes the linear-exponential function form displayed in the upper-left panel under the label “Asymmetric (linear exponential).” In addition, all simulations embed the assumption that policymakers’ loss function includes a quadratic term that penalizes changes in the federal funds rate.

## Optimal Control Policy under Asymmetric Preferences (Conditional on October 2014 Tealbook)

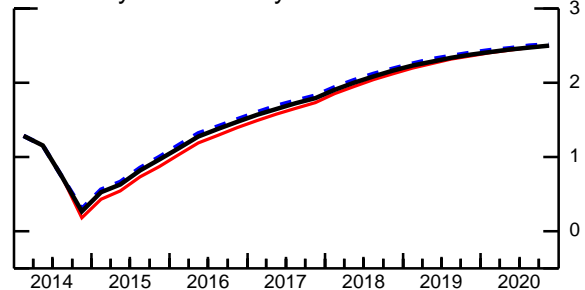
Loss Function



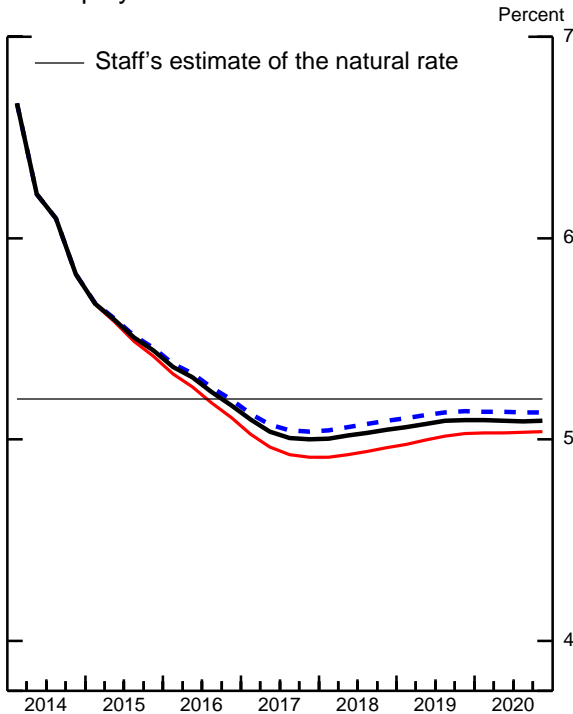
Effective Nominal Federal Funds Rate



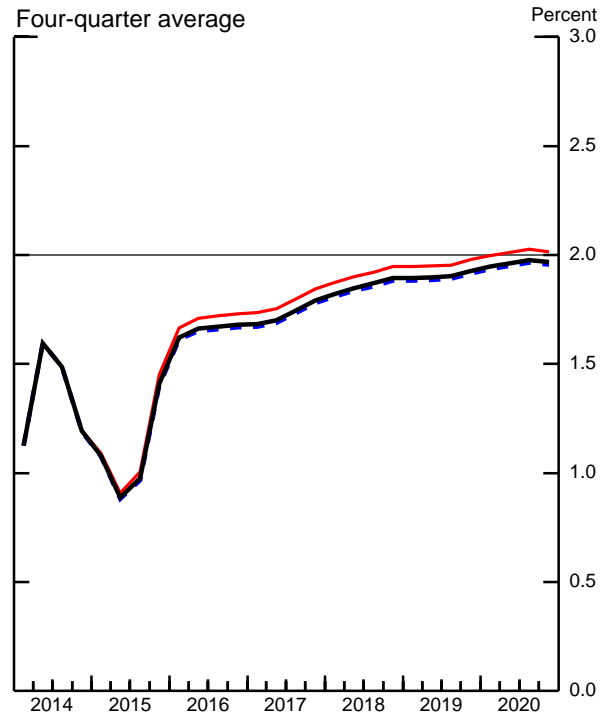
Real 10-year Treasury Yield



Unemployment Rate



PCE Inflation



Note: In the simulation labeled "Symmetric," policymakers are assumed to place equal weights on minimizing a discounted sum of squared deviations of inflation from 2 percent and of the unemployment rate from the staff's estimate of the natural rate. In the simulations labeled "Asymmetric (unemployment)" and "Asymmetric (inflation)," policymakers are assumed to have, in place of the quadratic unemployment rate term and the quadratic inflation term, respectively, a loss function that takes the linear-exponential function form displayed in the upper-left panel under the label "Asymmetric (linear exponential)." In addition, all simulations embed the assumption that policymakers' loss function includes a quadratic term that penalizes changes in the federal funds rate.

**Outcomes under Alternative Policies**

(Percent change, annual rate, from end of preceding period except as noted)

| Measure and policy                                      | 2014 |     | 2015 | 2016 | 2017 | 2018 |
|---|------|-----|------|------|------|------|
|   | H1   | H2  |      |      |      |      |
| <i>Real GDP</i>   |      |     |      |      |      |      |
| Extended Tealbook baseline <sup>1</sup>                 | 1.2  | 2.8 | 2.4  | 2.6  | 2.1  | 2.0  |
| Taylor (1993)   | 1.2  | 2.8 | 1.9  | 2.5  | 2.2  | 2.2  |
| Taylor (1999)   | 1.2  | 2.8 | 2.0  | 2.5  | 2.2  | 2.1  |
| Inertial Taylor (1999)                                  | 1.2  | 2.8 | 2.3  | 2.7  | 2.2  | 2.0  |
| First-difference  | 1.2  | 2.8 | 2.4  | 2.8  | 2.3  | 2.2  |
| Nominal income targeting                                | 1.2  | 2.8 | 3.0  | 3.3  | 2.5  | 2.0  |
| Optimal control   | 1.2  | 2.8 | 2.5  | 2.8  | 2.2  | 2.0  |
| <i>Unemployment rate<sup>2</sup></i>                    |      |     |      |      |      |      |
| Extended Tealbook baseline <sup>1</sup>                 | 6.2  | 5.8 | 5.5  | 5.3  | 5.2  | 5.2  |
| Taylor (1993)   | 6.2  | 5.8 | 5.7  | 5.6  | 5.4  | 5.3  |
| Taylor (1999)   | 6.2  | 5.8 | 5.7  | 5.5  | 5.4  | 5.3  |
| Inertial Taylor (1999)                                  | 6.2  | 5.8 | 5.5  | 5.3  | 5.2  | 5.2  |
| First-difference  | 6.2  | 5.8 | 5.5  | 5.2  | 5.0  | 5.0  |
| Nominal income targeting                                | 6.2  | 5.8 | 5.2  | 4.7  | 4.4  | 4.4  |
| Optimal control   | 6.2  | 5.8 | 5.4  | 5.2  | 5.0  | 5.0  |
| <i>Total PCE prices</i>                                 |      |     |      |      |      |      |
| Extended Tealbook baseline <sup>1</sup>                 | 1.9  | 0.5 | 1.4  | 1.6  | 1.7  | 1.8  |
| Taylor (1993)   | 1.9  | 0.5 | 1.3  | 1.6  | 1.7  | 1.8  |
| Taylor (1999)   | 1.9  | 0.5 | 1.3  | 1.6  | 1.7  | 1.8  |
| Inertial Taylor (1999)                                  | 1.9  | 0.5 | 1.4  | 1.6  | 1.7  | 1.8  |
| First-difference  | 1.9  | 0.6 | 1.5  | 1.8  | 1.9  | 2.0  |
| Nominal income targeting                                | 1.9  | 0.6 | 1.6  | 1.9  | 2.0  | 2.1  |
| Optimal control   | 1.9  | 0.5 | 1.4  | 1.7  | 1.8  | 1.9  |
| <i>Core PCE prices</i>                                  |      |     |      |      |      |      |
| Extended Tealbook baseline <sup>1</sup>                 | 1.6  | 1.3 | 1.5  | 1.6  | 1.8  | 1.8  |
| Taylor (1993)   | 1.6  | 1.3 | 1.5  | 1.6  | 1.7  | 1.8  |
| Taylor (1999)   | 1.6  | 1.3 | 1.5  | 1.6  | 1.7  | 1.8  |
| Inertial Taylor (1999)                                  | 1.6  | 1.3 | 1.5  | 1.7  | 1.8  | 1.8  |
| First-difference  | 1.6  | 1.3 | 1.6  | 1.8  | 1.9  | 2.0  |
| Nominal income targeting                                | 1.6  | 1.4 | 1.7  | 1.9  | 2.0  | 2.1  |
| Optimal control   | 1.6  | 1.3 | 1.6  | 1.7  | 1.8  | 1.9  |
| <i>Effective nominal federal funds rate<sup>2</sup></i> |      |     |      |      |      |      |
| Extended Tealbook baseline <sup>1</sup>                 | 0.1  | 0.1 | 0.9  | 1.9  | 2.7  | 3.1  |
| Taylor (1993)   | 0.1  | 2.2 | 2.4  | 2.9  | 3.2  | 3.3  |
| Taylor (1999)   | 0.1  | 1.5 | 1.9  | 2.7  | 3.1  | 3.3  |
| Inertial Taylor (1999)                                  | 0.1  | 0.3 | 1.1  | 1.9  | 2.6  | 3.1  |
| First-difference  | 0.1  | 0.4 | 1.3  | 2.3  | 2.5  | 2.6  |
| Nominal income targeting                                | 0.1  | 0.1 | 0.1  | 0.5  | 1.3  | 1.8  |
| Optimal control   | 0.1  | 0.2 | 0.7  | 1.5  | 2.2  | 2.8  |

1. In the Tealbook baseline, the federal funds rate first departs from an effective lower bound of 12½ basis points two quarters after the end of the asset purchase program. Thereafter, the federal funds rate follows the prescriptions of the inertial Taylor (1999) rule.

2. Percent, average for the final quarter of the period.

### Outcomes under Alternative Policies with an Unemployment Rate Threshold<sup>1</sup>

(Percent change, annual rate, from end of preceding period except as noted)

| Measure and policy                                      | 2014 |     | 2015 | 2016 | 2017 | 2018 |
|---|------|-----|------|------|------|------|
|   | H1   | H2  |      |      |      |      |
| <i>Real GDP</i>   |      |     |      |      |      |      |
| Extended Tealbook baseline                              | 1.2  | 2.8 | 2.4  | 2.6  | 2.1  | 2.0  |
| Taylor (1993)   | 1.2  | 2.8 | 2.1  | 2.4  | 2.1  | 2.1  |
| Taylor (1999)   | 1.2  | 2.8 | 2.1  | 2.5  | 2.1  | 2.1  |
| First-difference  | 1.2  | 2.8 | 2.5  | 2.8  | 2.3  | 2.1  |
| Nominal income targeting                                | 1.2  | 2.8 | 3.0  | 3.3  | 2.5  | 2.0  |
| Optimal control   | 1.2  | 2.8 | 2.5  | 2.8  | 2.2  | 2.0  |
| <i>Unemployment rate<sup>2</sup></i>                    |      |     |      |      |      |      |
| Extended Tealbook baseline                              | 6.2  | 5.8 | 5.5  | 5.3  | 5.2  | 5.2  |
| Taylor (1993)   | 6.2  | 5.8 | 5.6  | 5.5  | 5.4  | 5.4  |
| Taylor (1999)   | 6.2  | 5.8 | 5.6  | 5.5  | 5.4  | 5.3  |
| First-difference  | 6.2  | 5.8 | 5.4  | 5.2  | 4.9  | 4.9  |
| Nominal income targeting                                | 6.2  | 5.8 | 5.2  | 4.7  | 4.4  | 4.4  |
| Optimal control   | 6.2  | 5.8 | 5.4  | 5.2  | 5.0  | 5.0  |
| <i>Total PCE prices</i>                                 |      |     |      |      |      |      |
| Extended Tealbook baseline                              | 1.9  | 0.5 | 1.4  | 1.6  | 1.7  | 1.8  |
| Taylor (1993)   | 1.9  | 0.5 | 1.3  | 1.6  | 1.7  | 1.8  |
| Taylor (1999)   | 1.9  | 0.5 | 1.3  | 1.6  | 1.7  | 1.8  |
| First-difference  | 1.9  | 0.6 | 1.5  | 1.8  | 1.9  | 2.0  |
| Nominal income targeting                                | 1.9  | 0.6 | 1.6  | 1.9  | 2.0  | 2.1  |
| Optimal control   | 1.9  | 0.5 | 1.4  | 1.7  | 1.8  | 1.9  |
| <i>Core PCE prices</i>                                  |      |     |      |      |      |      |
| Extended Tealbook baseline                              | 1.6  | 1.3 | 1.5  | 1.6  | 1.8  | 1.8  |
| Taylor (1993)   | 1.6  | 1.3 | 1.5  | 1.6  | 1.7  | 1.8  |
| Taylor (1999)   | 1.6  | 1.3 | 1.5  | 1.6  | 1.7  | 1.8  |
| First-difference  | 1.6  | 1.4 | 1.7  | 1.8  | 2.0  | 2.0  |
| Nominal income targeting                                | 1.6  | 1.4 | 1.7  | 1.9  | 2.0  | 2.1  |
| Optimal control   | 1.6  | 1.3 | 1.6  | 1.7  | 1.8  | 1.9  |
| <i>Effective nominal federal funds rate<sup>2</sup></i> |      |     |      |      |      |      |
| Extended Tealbook baseline                              | 0.1  | 0.1 | 0.9  | 1.9  | 2.7  | 3.1  |
| Taylor (1993)   | 0.1  | 0.1 | 2.1  | 2.8  | 3.2  | 3.3  |
| Taylor (1999)   | 0.1  | 0.1 | 1.8  | 2.7  | 3.1  | 3.2  |
| First-difference  | 0.1  | 0.1 | 1.0  | 2.1  | 2.4  | 2.5  |
| Nominal income targeting                                | 0.1  | 0.1 | 0.1  | 0.5  | 1.3  | 1.8  |
| Optimal control   | 0.1  | 0.2 | 0.7  | 1.5  | 2.2  | 2.8  |

1. With the exception of optimal control, monetary policy is specified to keep the federal funds rate at an effective lower bound of 12½ basis points as long as the unemployment rate is 5.7 percent or more. Once the threshold is crossed, the federal funds rate follows the prescriptions of the specified rule.

2. Percent, average for the final quarter of the period.

# Federal Reserve Balance Sheet

## End-of-Year Projections -- Alternative B

Billions of dollars

|  | <u>Sep 30, 2014</u> | <u>2015</u> | <u>2017</u> | <u>2019</u> | <u>2021</u> | <u>2023</u> | <u>2025</u> |
|--|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Total assets   | 4,450               | 4,458       | 3,661       | 2,671       | 2,209       | 2,402       | 2,620       |
| Selected assets  |                     |             |             |             |             |             |             |
| Loans and other credit extensions*                     | 2                   | 0           | 0           | 0           | 0           | 0           | 0           |
| Securities held outright                               | 4,188               | 4,213       | 3,455       | 2,497       | 2,056       | 2,264       | 2,495       |
| U.S. Treasury securities                               | 2,452               | 2,457       | 2,047       | 1,346       | 1,115       | 1,499       | 1,878       |
| Agency debt securities                                 | 40                  | 33          | 4           | 2           | 2           | 2           | 2           |
| Agency mortgage-backed securities                      | 1,696               | 1,723       | 1,404       | 1,148       | 939         | 763         | 615         |
| Unamortized premiums                                   | 209                 | 191         | 148         | 114         | 90          | 73          | 60          |
| Unamortized discounts                                  | -19                 | -17         | -13         | -10         | -8          | -7          | -6          |
| Total other assets                                     | 69                  | 71          | 71          | 71          | 71          | 71          | 71          |
| Total liabilities                                      | 4,393               | 4,399       | 3,589       | 2,580       | 2,093       | 2,255       | 2,434       |
| Selected liabilities                                   |                     |             |             |             |             |             |             |
| Federal Reserve notes in circulation                   | 1,246               | 1,351       | 1,520       | 1,651       | 1,797       | 1,959       | 2,138       |
| Reverse repurchase agreements                          | 410                 | 210         | 210         | 110         | 110         | 110         | 110         |
| Deposits with Federal Reserve Banks                    | 2,728               | 2,832       | 1,853       | 813         | 180         | 180         | 180         |
| Reserve balances held by depository institutions       | 2,537               | 2,751       | 1,773       | 733         | 100         | 100         | 100         |
| U.S. Treasury, General Account                         | 158                 | 75          | 75          | 75          | 75          | 75          | 75          |
| Other Deposits   | 32                  | 5           | 5           | 5           | 5           | 5           | 5           |
| Interest on Federal Reserve Notes due to U.S. Treasury | 3                   | 0           | 0           | 0           | 0           | 0           | 0           |
| Total capital  | 56                  | 60          | 72          | 92          | 116         | 147         | 186         |

Projections

Source: Federal Reserve H.4.1 statistical releases and staff calculations.

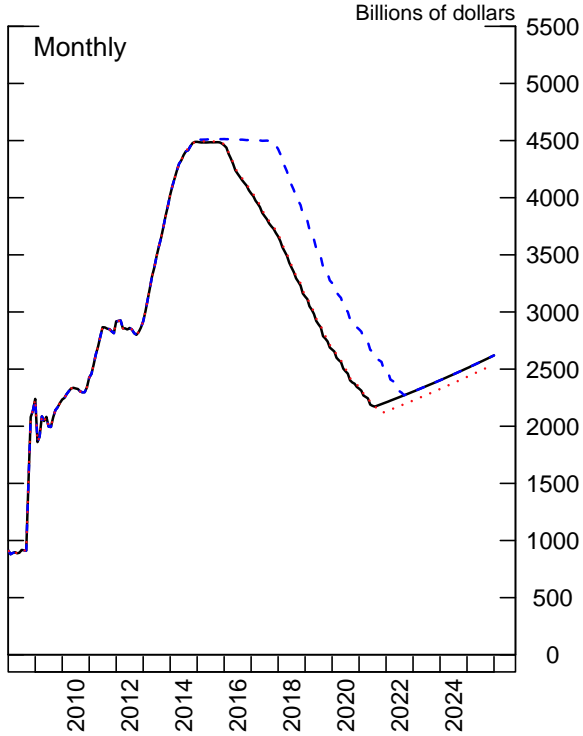
Note: Components may not sum to totals due to rounding.

\* Loans and other credit extensions includes primary, secondary, and seasonal credit; central bank liquidity swaps; Term Asset-Backed Securities Loan Facility (TALF); net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC; and net portfolio holdings of TALF LLC.

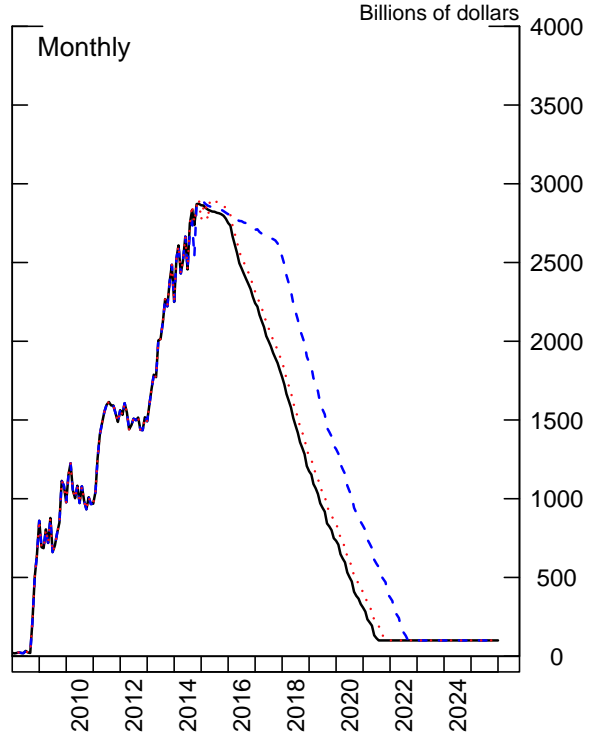
## Total Assets and Selected Balance Sheet Items

— Alternative B      ··· Alternative B September  
 - - - Alternative A

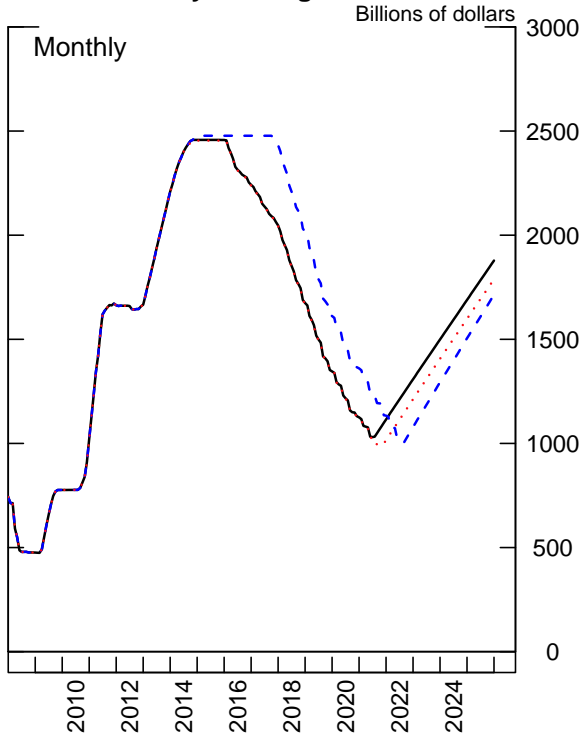
**Total Assets**



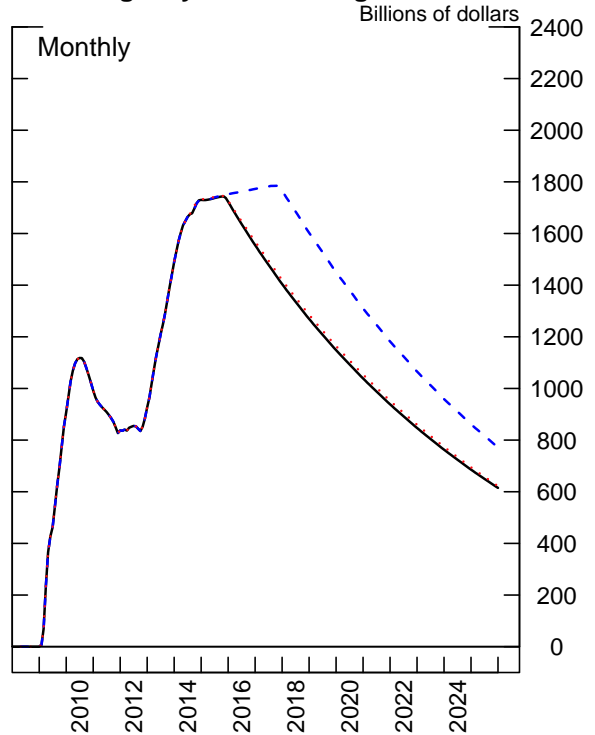
**Reserve Balances**



**SOMA Treasury Holdings**



**SOMA Agency MBS Holdings**

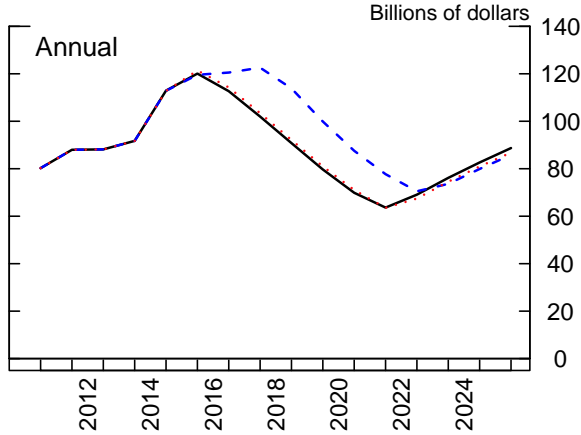


Projections

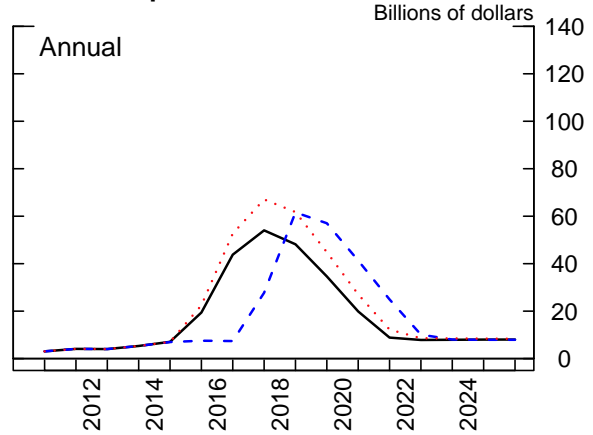
## Income Projections

— Alternative B  
- - Alternative A  
... Alternative B September

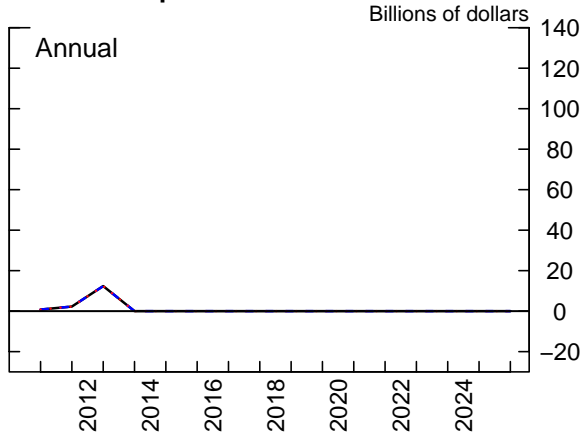
### Interest Income



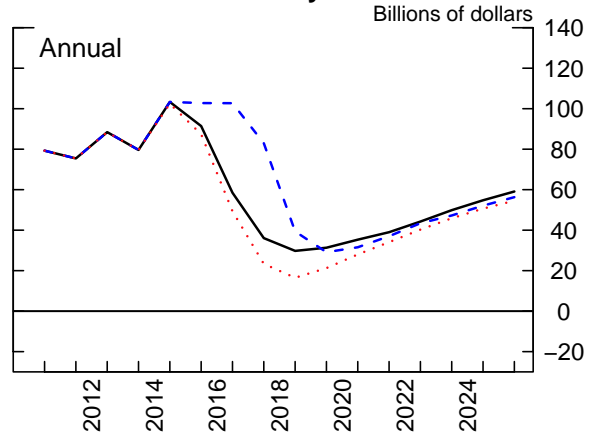
### Interest Expense



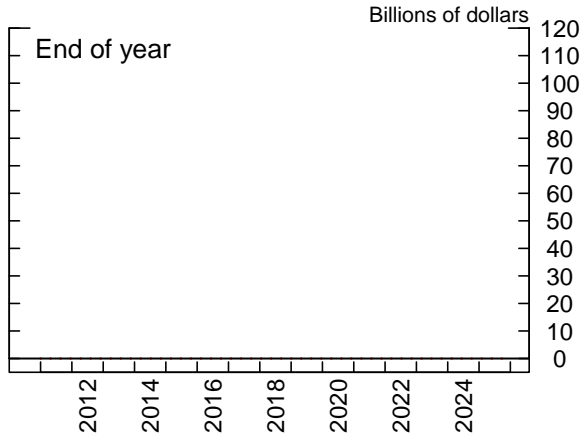
### Realized Capital Gains



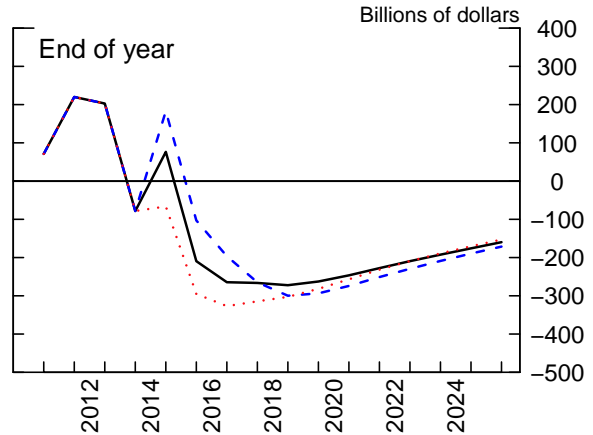
### Remittances to Treasury



### Deferred Asset



### Memo: Unrealized Gains/Losses



Projections



## Alternative Projections for the 10-Year Treasury Term Premium Effect

| Date | Alternative B | Alternative A | September<br>Alternative B |
|------|---------------|---------------|----------------------------|
|------|---------------|---------------|----------------------------|

## Basis Points

## Quarterly Averages

|          |      |      |      |
|----------|------|------|------|
| 2014: Q4 | -116 | -133 | -117 |
| 2015: Q1 | -111 | -128 | -111 |
| Q2       | -106 | -124 | -106 |
| Q3       | -101 | -119 | -101 |
| Q4       | -96  | -115 | -96  |
| 2016: Q1 | -91  | -111 | -91  |
| Q2       | -87  | -106 | -87  |
| Q3       | -82  | -102 | -82  |
| Q4       | -78  | -98  | -78  |
| 2017: Q4 | -63  | -80  | -63  |
| 2018: Q4 | -51  | -65  | -50  |
| 2019: Q4 | -42  | -52  | -41  |
| 2020: Q4 | -34  | -41  | -33  |
| 2021: Q4 | -28  | -33  | -27  |
| 2022: Q4 | -24  | -26  | -22  |
| 2023: Q4 | -19  | -21  | -18  |
| 2024: Q4 | -15  | -16  | -14  |
| 2025: Q4 | -10  | -11  | -10  |

## Alternative Projections for the Monetary Base

Percent change, annual rate; not seasonally adjusted

| Date | Alternative B | Alternative A | September<br>Alternative B |
|------|---------------|---------------|----------------------------|
|------|---------------|---------------|----------------------------|

*Quarterly*

|          |       |      |       |
|----------|-------|------|-------|
| 2014: Q4 | 31.6  | 32.4 | 7.9   |
| 2015: Q1 | 5.3   | 6.8  | 0.9   |
| Q2       | -0.2  | 0.1  | 6.4   |
| Q3       | 0.0   | 0.2  | 2.1   |
| Q4       | -0.8  | -0.1 | -1.0  |
| 2016: Q1 | -6.4  | -0.2 | -6.4  |
| Q2       | -12.7 | -0.4 | -13.1 |
| Q3       | -10.0 | -0.2 | -10.3 |
| Q4       | -8.4  | -0.4 | -8.7  |

*Annual*

|      |       |       |       |
|------|-------|-------|-------|
| 2017 | -9.6  | -1.0  | -10.1 |
| 2018 | -14.4 | -13.3 | -15.2 |
| 2019 | -13.1 | -13.5 | -13.9 |
| 2020 | -13.3 | -13.0 | -14.6 |
| 2021 | -7.4  | -12.8 | -12.4 |
| 2022 | 3.6   | -10.2 | 3.7   |
| 2023 | 3.7   | 3.7   | 4.2   |
| 2024 | 3.8   | 3.8   | 4.2   |
| 2025 | 3.8   | 3.8   | 4.1   |

Note: For years, Q4 to Q4; for quarters, calculated from corresponding average levels.

| M2 Monetary Aggregate Projections<br>(Percent change, annual rate; seasonally adjusted)* |      |      |
|--|------|------|
| <i>Quarterly</i>   |      |      |
| 2014:  | Q4   | 3.6  |
| 2015:  | Q1   | 2.3  |
|  | Q2   | -1.0 |
|  | Q3   | -3.2 |
|  | Q4   | -2.2 |
| 2016:  | Q1   | -0.7 |
|  | Q2   | 0.1  |
|  | Q3   | 0.7  |
|  | Q4   | 1.2  |
| 2017:  | Q1   | 1.5  |
|  | Q2   | 1.7  |
|  | Q3   | 2.0  |
|  | Q4   | 2.2  |
| <i>Annual</i>  |      |      |
|  | 2014 | 5.6  |
|  | 2015 | -1.0 |
|  | 2016 | 0.3  |
|  | 2017 | 1.9  |

Actual data through October 13, 2014; projections thereafter.

\*Quarterly growth rates are computed from quarter averages. Annual growth rates are fourth quarter over fourth quarter.