

# Board of Governors of the Federal Reserve System

*The Federal Reserve, the central bank of the United States, provides the nation with a safe, flexible, and stable monetary and financial system.*

## Accessible Material

### June 2012 Tealbook Tables and Charts

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### June 2012 Tealbook A Tables and Charts<sup>†</sup>

#### Domestic Economic Developments and Outlook

[Box:] Revisions to the Staff Projection since the Previous SEP

Staff Economic Projections Compared with the April Tealbook

Variable	2012		2012	2013	2014	Longer run
	H1	H2				
Real GDP <sup>1</sup>	1.8	1.9	1.9	2.2	3.1	2.5
April Tealbook	2.3	2.7	2.5	2.8	3.3	2.5
Unemployment rate <sup>2</sup>	8.2	8.2	8.2	8.0	7.7	5.2
April Tealbook	8.2	8.0	8.0	7.7	7.4	5.2
PCE inflation <sup>1</sup>	1.5	.8	1.2	1.5	1.5	2.0
April Tealbook	2.0	1.7	1.9	1.5	1.5	2.0
Core PCE inflation <sup>1</sup>	1.9	1.5	1.7	1.6	1.6	n.a.
April Tealbook	2.0	1.7	1.8	1.7	1.7	n.a.
Federal funds rate <sup>2</sup>	.15	.13	.13	.13	.50	4.25
April Tealbook	.12	.13	.13	.13	1.20	4.25
Memo:						
Federal funds rate, end of period	.13	.13	.13	.13	.50	4.25
April Tealbook	.13	.13	.13	.13	1.25	4.25

1. Percent change from final quarter of preceding period to final quarter of period indicated. [Return to table](#)

2. Percent, final quarter of period indicated. [Return to table](#)

n.a. Not available. [Return to table](#)

## Key Background Factors underlying the Baseline Staff Projection

### Figure: Federal Funds Rate

Line chart, by percent 2007 to 2014. Data are quarterly. There are three series, Current Tealbook, Previous Tealbook, and Market, expected rate. Current Tealbook begins in 2007 at about 5.25 and generally decreases to about 0.2 by 2009. It remains relatively constant here until about 2014 when it increases to about 0.5. Previous Tealbook follows the same path as Current Tealbook until about 2013 when it begins increasing. It increases to about 1.15 by 2014. Market, expected rate follows the same path as Current Tealbook until 2012. It increases to about 0.45 by 2014.

### Figure: Long-Term Interest Rates

Line chart, by percent, 2007 to 2014. Data are quarterly averages. There are six series, Current BBB corporate yield, Previous BBB corporate yield, Current Conforming mortgage rate, Previous Conforming mortgage rate, Current 10-year Treasury yield, and Previous 10-year Treasury yield. Current BBB corporate yield begins in 2007 at about 6.05 and generally increases to about 9.5 by 2009. It generally decreases to about 4.75 by 2012 and then generally increases to about 5.3 by 2014. Previous BBB corporate yield generally follows the same path as Current BBB corporate yield until 2012. It then increases to about 5.6 by 2014. Current Conforming mortgage rate begins in 2007 at about 6.05 and generally decreases to about 4 by 2012. It then generally increases to about 5 by 2014. Previous Conforming mortgage rate follows the same path as Current Conforming mortgage rate until 2012 when it begins increasing at a faster rate. It ends in 2014 at about 5.3. Current 10-year Treasury yield begins in 2007 at about 4.9 and generally decreases to about 1.9 by 2012. It then generally increases to about 3.7 by 2014. Previous 10-year Treasury yield follows the same path as Current 10-year Treasury yield until 2012 when it begins increasing at a faster rate. It ends in 2012 at about 3.95.

### Figure: Equity Prices

Line chart, by ratio scale where 2007:Q1 = 100, 2007 to 2014. Data are quarter-end. There are two series, Current Dow Jones U.S. Total Stock Market Index and Previous Dow Jones U.S. Total Stock Market Index. Current Dow Jones U.S. Total Stock Market Index begins in 2007:Q1 at about 100 and generally decreases to about 66 by 2009:Q1. It then generally increases to about 105 by 2012:Q1 and decreases to about 98 by 2012:Q3. It then generally increases to about 120 by 2014:Q4. Previous Dow Jones U.S. Total Stock Market Index follows the same path as Current Dow Jones U.S. Total Stock Market Index until 2012:Q2 when it begins increasing at a faster rate. It ends in 2014:Q4 at about 122.

### Figure: House Prices

Line chart, by ratio scale where 2007:Q1 = 100, 2007 to 2014. Data are quarterly. There are two series, Current CoreLogic index and Previous CoreLogic index. Current CoreLogic index begins in 2007 at about 100 and generally decreases to about 73 by 2009. It increases to about 75 by 2010 and then decreases to about 70 by 2011. It then generally increases to about 74.5 by 2014. Previous CoreLogic index generally follows the same path as Current CoreLogic index until 2011 when it begins increasing at a slower rate. It ends in 2014 at about 72.

### Figure: Crude Oil Prices

Line chart, by dollars per barrel, 2007 to 2014. Data are quarterly averages. There are four series, Current West Texas Intermediate, Previous West Texas Intermediate, Current Imported Oil, and Previous Imported oil. Current West Texas Intermediate begins in 2007 at about 59 and generally increases to about 125 by 2008. It decreases to about 43 by 2009 and then generally increases to about 105 by 2012. It decreases to about 85 by late 2012 where

it remains relatively constant until it ends at about 84 in 2014. Previous West Texas Intermediate generally follows the same path as Current West Texas Intermediate until 2012. It remains relatively constant at 105 and then decreases to about 99 by 2014. Current Imported oil begins in 2007 at about 56 and generally increases to about 119 by 2008. It decreases to about 43 by 2009 and then increases to about 112 by 2011. It then decreases to about 85 by 2012 and it remains relatively constant here until 2014. Previous Imported oil generally follows the same path as Current Imported oil until 2011 when begins increasing at a slower rate. It increases to about 108 by 2012 and then generally decreases to about 100 by 2014.

### Figure: Broad Real Dollar

Line chart, by ratio scale where 2007:Q1 = 100, 2007 to 2014. Data are quarterly averages. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 2007 at about 100 and generally decreases to about 89 by 2008. It increases to about 101 by 2009 and then generally decreases to about 85 by 2011. It increases to about 90 by 2012 and then generally decreases to 85 by 2014. Previous Tealbook generally follows the same path as Current Tealbook until 2012 when it begins decreasing at a faster rate. It ends in 2014 at about 84.

Note: Blue shading represents the projection period, which begins in 2012:Q2.

## [Box:] State and Local Government Fiscal Conditions

### Figure: State and Local Taxes

Line chart, by billions of nominal dollars, 2000 to 2014. Data are 4-quarter moving sum. The shaded area from 2012 to 2014 represents the forecasted period. There are two series, State and Local. State begins in 2000 at about 520 and generally increases to about 780 by 2008. It decreases to about 700 by 2010 and then generally increases to about 930 by 2014. Local begins in 2000 at about 330 and generally increases to about 590 by 2014.

Note: Starting in 2008:Q4 local taxes are adjusted to reflect a change in the sample. The shaded gray bars indicate periods of business recession as defined by the National Bureau of Economic Research: March 2001-November 2001, and December 2007-June 2009.

Source: Census Bureau and staff projection.

### Figure: Net Change in State and Local Employment

Bar chart, by thousands of jobs, monthly average, 2000 to 2012. The series begins in 2000 at about 24 and increases to about 45 by 2001. It decreases to 17 by 2002 then to zero in 2003. It increases to about 13 in 2004, to 14 in 2005, and to 15 in 2006. It then increases to about 20 by 2007 and remains constant here in 2008. It decreases to about -3 in 2009 then further decreases to about -25 by 2010. It increases to about -15 by 2011 and then increases to about -2 by 2012:H1.

Note: 2012:H1 is the average monthly change in the first 5 months of the year. The shaded gray bars indicate periods of business recession as defined by the National Bureau of Economic Research: March 2001-November 2001, and December 2007-June 2009.

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

### Figure: State and Local Real Construction

Line chart, by billions of chained (2005) dollars at an annual rate, ratio scale, 1995 to 2012. The series begins in 1995 at about 178 and generally increases to about 239 by 2001. It decreases to about 215 by 2005 and then increases to about 230 by 2008. It then decreases to about 182 by April 2012.

Note: Nominal construction put in place (CPIP) deflated by BEA prices through Q1 and by a staff projection thereafter. The shaded gray bars indicate periods of business recession as defined by the National Bureau of Economic Research: March 2001-November 2001, and December 2007-June 2009.

Source: Census Bureau.

### Figure: Contribution of State and Local Real Purchases to Real GDP Growth

Line chart, by percentage points, 1995 to 2013. Data are 4-quarter moving averages. There is a horizontal line at

zero. There is also a horizontal line at 0.25 representing the 1990-2007 average. The series begins in 1995 at about 0.35 and generally increases to about 0.65 by 1998. It generally decreases to about -0.08 by 2004 and then generally increase to about 0.2 by 2007. It generally decreases to about -0.33 by 2010 and then increases to about 0.18 by 2013.

Note: The shaded gray bars indicate periods of business recession as defined by the National Bureau of Economic Research: March 2001-November 2001, and December 2007-June 2009.

Source: Bureau of Economic Analysis and staff projection.

## Summary of the Near-Term Outlook

(Percent change at annual rate except as noted)

Measure	2012:Q1		2012:Q2		2012:Q3	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
<b>Real GDP</b>	<b>2.5</b>	<b>2.2</b>	<b>2.1</b>	<b>1.5</b>	<b>2.5</b>	<b>1.9</b>
Private domestic final purchases	2.4	3.3	3.2	2.3	3.3	2.7
Personal consumption expenditures	2.2	2.9	2.5	1.9	2.9	2.5
Residential investment	17.8	19.7	11.6	11.5	9.7	8.3
Business fixed investment	.6	2.8	6.1	2.5	4.5	2.8
Government purchases	.1	-4.0	-.9	-2.0	-1.0	-1.9
<i>Contributions to change in real GDP</i>						
Inventory investment <sup>1</sup>	.2	.1	-.4	.2	.2	.5
Net exports <sup>1</sup>	.3	.1	.0	-.3	-.3	-.4
<b>Unemployment Rate<sup>2</sup></b>	<b>8.2</b>	<b>8.2</b>	<b>8.2</b>	<b>8.2</b>	<b>8.1</b>	<b>8.2</b>
<b>PCE Chain Price Index</b>	<b>2.5</b>	<b>2.4</b>	<b>1.6</b>	<b>.6</b>	<b>1.8</b>	<b>.1</b>
Ex. food and energy	2.2	2.1	1.8	1.7	1.7	1.6

1. Percentage points. [Return to table](#)

2. Percent. [Return to table](#)

## Recent Nonfinancial Developments (1)

### Figure: Real GDP and GDI

Line chart, by 4-quarter percent change, 2003 to 2012. There is a horizontal line at zero. There are two series, Gross domestic product and Gross domestic income. Gross domestic product begins in 2003 at about 1.8 and generally increases to about 4.1 by 2004. It generally decreases to about -5 by 2009 and then increases to about 3.4 by 2010. It then generally decreases to about 2 by 2012:Q1. Gross domestic income begins in 2003 at about 1.7 and generally increases to about 3.95 by 2004. It generally decreases to about -5.2 by 2009 and then generally increases to about 4.2 by 2010. It then generally decreases to about 2 by 2012:Q1.

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

### Figure: Change in Private Payroll Employment

Line chart, by thousands of employees, 2003 to 2012. There is a horizontal line at zero. There are two series, Current Tealbook and 3-month moving average. Current Tealbook begins in 2003 at about 50 and generally increases to about 300 by 2005. It generally decreases to about -875 by 2009 and then generally increases to about 300 by 2011. It ends in 2012 at about 75. 3-month moving average generally follows the same exact path as Current Tealbook.

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

### **Figure: Unemployment Rate**

Line chart, by percent, 2003 to 2012. The series begins in 2003 at about 5.9 and generally decreases to about 4.5 by 2006. It generally increases to about 10 by 2009 and then generally decreases to about 8.1 by 2012.

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

### **Figure: Manufacturing IP excluding Motor Vehicles and Parts**

Line chart, by 3-month percent change, annual rate, 2003 to 2012. There is a horizontal line at zero. The series begins in 2003 at about 0.5 and generally increases to about 12.5 by 2005. It generally decreases to about -25 by 2008 and then generally increases to about 13 by 2009. It decreases to about 0 by 2010 and then generally increases to about 13 by 2011. It ends in April 2012 at about 1.5.

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

## **Recent Nonfinancial Developments (2)**

### **Figure: Production of Light Motor Vehicles**

Line chart, by millions of units, annual rate, 2003 to 2012. The series begins in 2003 at about 12.7 and generally decrease to about 3.75 by 2009. It then generally increases to about 10 by May 2012.

Source: Ward's Auto Infobank.

### **Figure: Sales of Light Motor Vehicles**

Line chart, by millions of units, annual rate, 2003 to 2012. The series begins in 2003 at about 16 and generally increase to about 20 by 2005. It generally decreases to about 9.5 by 2009 and then generally increases to about 14 by May 2012.

Source: Ward's Auto Infobank.

### **Figure: Real PCE Goods excluding Motor Vehicles**

Line chart, by billions of chained (2005) dollars, 2003 to 2012. The series begins in 2003 at about 2400 and generally increases to about 2950 by 2008. It decreases to about 2800 by 2009 and then generally increases to about 3100 by May 2012.

Note: Figures for March, April, and May are staff estimates based on available source data.

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

### **Figure: Single-Family Housing Starts**

Line chart, by thousands of units, annual rate, 2003 to 2012. There are two series, Starts and Adjusted permits. Starts begins in 2003 at about 1550 and generally increases to about 1800 by 2005. It generally decreases to about 350 by 2009 and then generally increases to about 590 by 2010. It then generally decreases to about 500 by April 2012. Adjusted permits generally follows the same path as Starts.

Note: Adjusted permits equal permits plus starts outside of permit-issuing areas.

Source: U.S. Census Bureau.



## Figure: Single-Family Home Sales

Line chart, by thousands of units, annual rate, 2003 to 2012. There are two series, New and Existing. New begins in 2003 at about 900 and generally increases to about 1250 by 2005. It generally decreases to about 300 by 2008 and then increases to about 850 by 2009. It decreases to about 150 by 2010 and then increases to about 550 by April 2012. Existing begins in 2003 at about 5500 and generally increases to about 6650 by 2005. It then generally decreases to about 3500 by April 2012.

Source: For existing, National Association of Realtors; for new, U.S. Census Bureau.

## Figure: Nondefense Capital Goods excluding Aircraft

Line chart, by billions of dollars, 2003 to 2012. There are two series, Orders and Shipments. Orders begins in 2003 at about 49 and generally increases to about 70 by 2008. It decreases to about 46 by 2009 and then increases to about 64 by April 2012. Shipments begins in 2003 at about 49 and generally increases to about 65 by 2008. It decreases to about 52 by 2009 and then increases to about 64 by April 2012.

Source: U.S. Census Bureau.

## Recent Nonfinancial Developments (3)

### Figure: Nonresidential Construction Put in Place

Line chart, by billions of chained (2005) dollars, 2003 to 2012. The series begins in 2003 at about 230 and generally increases to about 410 by 2008. It generally decreases to about 245 by 2011 and then generally increases to about 295 by April 2012.

Source: U.S. Census Bureau.

### Figure: Inventory Ratios excluding Motor Vehicles

Line chart, by months, 2003 to 2012. There are two series, Staff flow-of-goods system and Census book-value data. Staff flow-of-goods system begins in 2003 at about 1.6 and generally decreases to about 1.58 by 2006. It generally increases to about 1.64 by 2009 and then generally decreases to about 1.51 by April 2012. Census book-value data begins in 2003 at about 1.3 and generally decreases to about 1.19 by 2005. It generally increases to about 1.4 by 2009 and then generally decreases to about 1.21 by April 2012.

Note: Flow-of-goods system covers total industry excluding motor vehicles and parts, and inventories are relative to consumption. Census data cover manufacturing and trade excluding motor vehicles and parts, and inventories are relative to sales.

Source: U.S. Census Bureau; staff calculation.

### Figure: Defense Spending

Line chart, by billions of chained (2005) dollars, 2003 to 2012. There are two series, Unified (monthly) and NIPA (quarterly). Unified begins in 2003 at about 455 and generally increases to about 680 by 2010. It then generally decreases to about 645 by May 2012. NIPA begins in 2003 at about 455 and generally increases to about 645 by 2010. It then generally decreases to about 590 by 2012:Q1.

Note: The unified series is seasonally adjusted and deflated by BEA prices. The NIPA series excludes the consumption of fixed capital.

Source: *Monthly Treasury Statement*; U.S. Department of Commerce, Bureau of Economic Analysis.

### Figure: Exports and Non-Oil Imports

Line chart, by billions of dollars, 2003 to 2012. There are two series, Non-oil imports and Exports. Non-oil imports begins in 2003 at about 112 and generally increases to about 180 by 2008. It decreases to about 135 by 2009 and then generally increases to about 195 by April 2012. Exports begins in 2003 at about 80 and generally increases to about 165 by 2008. It decreases to about 125 by 2009 and then increase to about 185 by April 2012.

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



## Figure: Total PCE Prices

Line chart, by percent, 2003 to 2012. There is a horizontal line at zero. There are two series, 12-month change and 3-month change. 12-month change begins in 2003 at about 2 and generally increase to about 4.5 by 2008. It generally decreases to about -0.75 by 2009 and then generally increases to about 1.95 by April 2012. 3-month change begins in 2003 at about 2 and generally increases to about 8 by 2005. It generally decrease to about -9 by 2008 and then generally increases to about 5 by 2010. It generally decreases to about 0.5 by 2011 and then increases to about 2 by April 2012.

Note: 3-month changes are at an annual rate.

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

## Figure: PCE Prices excluding Food and Energy

Line chart, by percent, 2003 to 2012. There are two series, 12-month change and 3-month change. 12-month change begins in 2003 at about 1.8 and generally increases to about 2.5 by 2008. It decreases to about 1 by 2011 and then increases to about 1.9 by April 2012. 3-month change begins in 2003 at about 0.9 and generally increases to about 3.3 by 2006. It generally decreases to about 0.5 by 2009 and then generally increases to about 1.8 by April 2012.

Note: 3-month changes are at an annual rate.

Source: U.S. Department 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	2011	2012		2013	2014
		H1	H2		
<b>Real GDP</b>	<b>1.6</b>	<b>1.8</b>	<b>1.9</b>	<b>2.2</b>	<b>3.1</b>
Previous Tealbook	1.6	2.3	2.7	2.8	3.3
Final sales	1.5	1.6	1.6	1.9	2.9
Previous Tealbook	1.5	2.4	2.4	2.5	3.2
Personal consumption expenditures	1.6	2.4	2.6	2.3	3.2
Previous Tealbook	1.6	2.4	3.0	2.7	3.2
Residential investment	3.5	15.5	7.5	10.2	10.8
Previous Tealbook	3.5	14.6	8.2	9.3	13.0
Nonresidential structures	4.4	.1	-1.7	.7	2.1
Previous Tealbook	4.4	-1.6	.4	2.7	3.5
Equipment and software	9.6	3.6	4.9	5.6	5.9
Previous Tealbook	9.6	5.2	5.9	6.2	6.5
Federal purchases	-3.2	-4.3	-3.1	-4.1	-4.2
Previous Tealbook	-3.2	-.7	-2.6	-4.1	-4.4
State and local purchases	-2.5	-2.1	-.5	.5	1.3
Previous Tealbook	-2.5	-.2	.0	.7	2.1
Exports	4.7	4.0	3.4	3.7	5.5

Previous Tealbook	4.7	5.9	5.3	5.6	6.4
Imports	3.6	3.7	5.0	4.2	4.5
Previous Tealbook	3.6	3.7	5.2	4.2	4.9
	Contributions to change in real GDP (percentage points)				
Inventory change	.1	.2	.3	.3	.2
Previous Tealbook	.1	-.1	.3	.3	.1
Net exports	.0	-.1	-.4	-.2	.0
Previous Tealbook	.0	.1	-.2	.0	.0

## Figure: Real GDP

Line chart, by 4-quarter percent change, 1983 to 2014. There is a horizontal line at zero. The shaded area from 2012 to 2014 represents the forecasted period. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1983 at about 1.9 and generally increases to about 8.5 by 1984. It generally decreases to about -0.75 by 1991 and then generally increases to about 6 by 2000. It generally decreases to about -5 by 2009 and then increases to about 3.4 by 2010. It generally decreases to about 1.9 in 2011 and then increases to about 3 by 2014. Previous Tealbook follows the same path as Current Tealbook until 2012 when it begins increasing at a faster rate and ends in 2014 at about 3.2.

Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research: July 1990-March 1991, March 2001-November 2001, and December 2007-June 2009.

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

## Components of Final Demand

### Figure: Personal Consumption Expenditures

Line chart, by 4-quarter percent change, 2007 to 2014. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 2007 at about 2.8 and generally decreases to about -3 by 2009. It generally increases to about 3 by 2010 and then decreases to about 1.6 by 2011. It then generally increases to about 3.1 by 2014. Previous Tealbook generally follows the same path as Current Tealbook until 2012 when it begins increasing at a faster rate. It then ends in 2014 at about 3.15.

### Figure: Residential Investment

Line chart, by 4-quarter percent change, 2007 to 2014. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 2007 at about -19 and generally decreases to about -27 by 2009. It increases to about 5 by 2010 and then decreases to about -7 by 2011. It generally increases to about 12 by 2012 and then decreases to about 11 by 2014. Previous Tealbook generally follows the same path as Current Tealbook until 2013 when it begins to increase. It ends in 2014 at about 13.5.

### Figure: Equipment and Software

Line chart, by 4-quarter percent change, 2007 to 2014. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 2007 at about 3 and generally decreases to about -21 by 2009. It generally increases to about 17 by 2010 and then generally decreases to about 5.5 by 2014. Previous Tealbook generally follows the same path as Current Tealbook until 2012 when it begins decreasing at a slower rate. It ends in 2014 at about 6.

### Figure: Nonresidential Structures

Line chart, by 4-quarter percent change, 2007 to 2014. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 2007 at about 11 and increases to about 17.5 by 2008. It generally decreases to about -30 by 2009 and then generally increases to about 10 by 2011. It generally decreases to about -1 by 2012 and then increases to about 2.5 by 2014. Previous Tealbook generally follows the same path as Current Tealbook until 2012 when it begins increasing at a faster rate. It ends in 2014 at about 4.

### **Figure: Government Consumption & Investment**

Line chart, by 4-quarter percent change, 2007 to 2014. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 2007 at about 0.4 and generally increases to about 2.8 by 2008. It generally decreases to about -3 by 2012 and then generally increases to about -0.95 by 2014. Previous Tealbook generally follows the same path as Current Tealbook until 2012 when it begins increasing at a faster rate. It ends in 2014 at about -0.4.

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

### **Figure: Exports and Imports**

Line chart, by 4-quarter percent change, 2007 to 2014. There is a horizontal line at zero. There are four series, Current Exports, Previous Exports, Current Imports, and Previous Imports. Current Exports begins in 2007 at about 7.5 and generally decreases to about -14 by 2009. It generally increases to about 13 by 2010 and then generally decreases to about 5.5 by 2014. Previous Exports generally follows the same path as Current Exports until 2012 when it begins decreasing at a slower rate. It ends in 2014 at about 6. Current Imports begins in 2007 at about 4 and generally decreases to about -18 by 2009. It generally increases to about 17 by 2010 and then decreases to about 2.5 by 2011. It then generally increases to about 4.9 by 2014. Previous Imports generally follows the same path as Current Imports until 2013 when it increases at a faster rate. It ends in 2014 at about 5.

Note: Blue shading represents the projection period, which begins in 2012:Q1.

## **Aspects of the Medium-Term Projection**

### **Figure: Personal Saving Rate**

Line chart, by percent, 1995 to 2015. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about 6 and generally decreases to about 1.3 by 2005. It generally increases to about 6.2 by 2009 and then generally decreases to about 3.9 by 2015. Previous Tealbook generally follows the same path as Current Tealbook and ends in 2015 at about 4.

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

### **Figure: Wealth-to-Income Ratio**

Line chart, by ratio, 1995 to 2015. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about 4.8 and generally increases to about 6.2 by 1999. It generally decreases to about 5.05 by 2002 and then generally increases to about 6.43 by 2006. It decreases to about 4.75 by 2009 and then generally increases to about 5.3 by 2015. Previous Tealbook generally follows the same path as Current Tealbook until 2012 when it begins increasing at a slower rate. It ends in 2015 at about 5.2.

Note: Household net worth as a ratio to disposable personal income.

Source: For net worth, Federal Reserve Board, flow of funds data; for income, Department of Commerce, Bureau of Economic Analysis.

### **Figure: Single-Family Housing Starts**

Line chart, by millions of units, 1995 to 2015. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about 1.05 and generally increases to about 1.75 by 2006. It generally decreases to about 0.35 by 2009 and then generally increases to about 0.7 by 2015. Previous Tealbook generally follows the same path as Current Tealbook until 2014 when it begins increasing at a faster rate. It ends in 2015 at

about 0.75.

Source: U.S. Census Bureau.

Figure: Equipment and Software Spending

Line chart, by share of nominal GDP, 1995 to 2015. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about 8.1 and generally increases to about 9.6 by 2000. It generally decreases to about 6.4 by 2009 and then generally increase to about 8 by 2015. Previous Tealbook generally follows the same path as Current Tealbook.

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

Figure: Federal Surplus/Deficit

Line chart, by share of nominal GDP, 1995 to 2015. Data are 4-quarter moving averages. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about -2.8 and generally increases to about 2.2 by 2000. It generally decreases to about -10.5 by 2010 and then generally increases to about 4 by 2015. Previous Tealbook generally follows the same path as Current Tealbook.

Source: Monthly Treasury Statement.

Figure: Current Account Surplus/Deficit

Line chart, by share of nominal GDP, 1995 to 2015. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about -1.8 and generally decreases to about -6.5 by 2005. It generally increases to about -2.2 by 2009 and then generally decreases to about -3.8 by 2015. Previous Tealbook generally follows the same path as Current Tealbook until 2013 when it begins decreasing at a slower rate. It ends in 2015 at about -3.25.

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

Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research: March 2001-November 2001, and December 2007-June 2009. Blue shading represents the projection period, which begins in 2012:Q1.

Decomposition of Potential GDP

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

Measure	1974-1995	1996-2000	2001-2010	2011	2012	2013	2014
Potential real GDP	3.0	3.4	2.2	1.7	1.8	2.0	2.1
Previous Tealbook	3.0	3.4	2.2	1.7	2.0	2.1	2.3
Selected contributions <sup>1</sup>							
Structural labor productivity	1.4	2.6	2.2	1.5	1.4	1.6	1.7
Previous Tealbook	1.4	2.6	2.2	1.5	1.6	1.7	1.9
Capital deepening	.7	1.5	.7	.5	.5	.6	.7
Previous Tealbook	.7	1.5	.7	.6	.6	.8	.9
Multifactor productivity	.5	.8	1.2	.8	.8	.9	.9
Previous Tealbook	.5	.8	1.2	.8	.9	.9	.9
Structural hours	1.5	1.0	.6	.5	.6	.6	.6
Previous Tealbook	1.5	1.0	.6	.5	.6	.6	.6

Labor force participation	.4	.0	-.3	-.4	-.3	-.3	-.3
Previous Tealbook	.4	.0	-.3	-.4	-.3	-.3	-.3

Note: Components may not sum to totals because of rounding. 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. [Return to table](#)

## Figure: Structural and Actual Labor Productivity (Nonfarm business sector)

Line chart, by chained (2005) dollars per hour, 2001 to 2014. The shaded area from 2012:Q1 through 2014 represents the forecasted period. There are two series, Current Tealbook and Structural. Current Tealbook begins in 2011 at about 43.8 and generally increases to about 51 by 2009. It then increases to about 58 by 2014. Structural begins in 2001 at 44 and steadily increases to about 58 by 2014.

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

## Figure: Structural and Actual Labor Force Participation Rate

Line chart, by percent, 2001 to 2014. The shaded area from 2012:Q2 through 2014 represents the forecasted period. There are two series, Current Tealbook and Structural. Current Tealbook begins in 2001 at about 67.2 and generally decreases to about 66 by 2008. It then decreases to about 63.75 by 2012 where it remains relatively constant until 2014. Structural begins in 2001 at about 66.8 and generally decreases to about 63.85 by 2014.

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

## The Outlook for the Labor Market and Resource Utilization

(Percent change from final quarter of preceding period)

Measure	2011	2012		2013	2014
		H1	H2		
Output per hour, nonfarm business	.4	.2	.7	1.5	1.8
Previous Tealbook	.3	.6	1.7	1.7	1.9
Nonfarm private employment <sup>1</sup>	175	163	118	132	190
Previous Tealbook	175	193	193	186	191
Labor force participation rate <sup>2</sup>	64.0	63.7	63.7	63.7	63.7
Previous Tealbook	64.0	63.8	63.8	63.7	63.7
Civilian unemployment rate <sup>2</sup>	8.7	8.2	8.2	8.0	7.7
Previous Tealbook	8.7	8.2	8.0	7.7	7.4
Memo:					
GDP gap <sup>3</sup>	-4.5	-4.5	-4.5	-4.3	-3.4
Previous Tealbook	-4.8	-4.7	-4.3	-3.7	-2.7

1. Thousands, average monthly changes. [Return to table](#)

2. Percent, average for the final quarter in the period. [Return to table](#)

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. [Return to table](#)

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

## Figure: Nonfarm Private Employment (Average monthly changes)

Line chart, by thousands, 1995 to 2015. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about 210 and generally decreases to about -350 by 2001. It increases to about 300 by 2005 and then decreases to about -800 by 2009. It then generally increases to about 200 by 2015. Previous Tealbook generally follows the same path as Current Tealbook.

Source: U.S. Department of Labor, BLS.

## Figure: Unemployment Rate

Line chart, by percent, 1995 to 2015. There are four series, Current Tealbook, Previous Tealbook, NAIRU, and NAIRU with EEB adjustment. Current Tealbook begins in 1995 at about 5.6 and generally decreases to about 4 by 2000. It increases to about 6.2 by 2004 and then generally decreases to about 4.5 by 2006. It generally increases to about 10 by 2010 and then generally decreases to about 7.9 by 2015. Previous Tealbook generally follows the same path as Current Tealbook until 2012 when it begins decreasing at a faster rate. It ends in 2015 at about 7.3. NAIRU begins in 1995 at about 5 and remains relatively constant here until about 2009. It then increases to about 6 by 2010 where it remains relatively constant until 2015. NAIRU with EEB adjustment begins in 1995 at 5 and remains relatively constant here until about 2009. It increases to about 6.5 by 2010 and then decreases to about 6 by 2015.

Note: The EEB adjustment is the staff estimate of the effect of extended and emergency unemployment compensation programs on the NAIRU.

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

## Figure: GDP Gap

Line chart, by percent, 1995 to 2015. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about -2 and generally increases to about 3 by 2000. It generally decreases to about -2 by 2003 and then increases to about 1 by 2005. It decreases to about -6.3 by 2009 and then increases to about -3.25 by 2015. Previous Tealbook generally follows the same path as Current Tealbook until it begins increasing at a faster rate in 2013. It ends in 2015 at about -2.6.

Note: The GDP gap is the percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential. Blue shading represents the projection period, which begins in 2012:Q1.

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

## Figure: Manufacturing Capacity Utilization Rate

Line chart, by percent, 1995 to 2015. There is a horizontal line at 79 representing the average rate from 1972 to 2011. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about 84.5 and generally decreases to about 71 by 2001. It generally increases to about 79 by 2005 and then decreases to about 65 by 2009. It then increases to about 80 by 2015. Previous Tealbook generally follows the same path as Current Tealbook until it begins increasing at a faster rate in 2012. It ends in 2015 at about 81.5.

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

Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research: March 2001-November 2001, and December 2007-June 2009. Blue shading represents the projection period, which begins in 2012:Q2, except as noted.

## Inflation Projections

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

2012

Measure	2011	H1	H2	2013	2014
PCE chain-weighted price index	2.7	1.5	.8	1.5	1.5
Previous Tealbook	2.7	2.0	1.7	1.5	1.5
Food and beverages	5.2	1.4	1.6	1.5	1.4
Previous Tealbook	5.2	1.4	1.7	1.6	1.5
Energy	12.8	-4.8	-10.1	.7	-.4
Previous Tealbook	12.8	3.2	2.8	-1.1	-1.7
Excluding food and energy	1.8	1.9	1.5	1.6	1.6
Previous Tealbook	1.8	2.0	1.7	1.7	1.7
Prices of core goods imports <sup>1</sup>	4.3	1.2	-1.0	1.4	1.6
Previous Tealbook	4.3	.7	1.1	1.5	1.5

1. Core goods imports exclude computers, semiconductors, oil, and natural gas. [Return to table](#)

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

## Figure: Total PCE Prices

Line chart, by 4-quarter percent change, 1995 to 2015. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 1995 at about 2.4 and generally decreases to about 1 by 1999. It generally increases to about 4.5 by 2008 and then decreases to about -0.8 by 2009. It generally increases to about 3 by 2011 and then decreases to about 1.5 by 2015. Previous Tealbook generally follows the same path as Current Tealbook until 2012 when it begins decreasing at a slower rate. It ends in 2015 at about 1.5.

Note: Blue shading represents the projection period, which begins in 2012:Q1.

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

## Figure: PCE Prices excluding Food and Energy

Line chart, by 4-quarter percent change, 1995 to 2015. There are four series, Current Tealbook, Previous Tealbook, Current Market-based, and Previous Market-based. Current Tealbook begins in 1995 at about 2.5 and generally decrease to about 1.35 by 1998. It generally increases to about 2.5 by 2007 and then generally decreases to about 0.9 by 2011. It generally increases to about 1.75 by 2015. Previous Tealbook generally follows the same path as Current Tealbook and ends in 2015 at about 1.76. Current Market-based begins in 1995 at about 2.25 and generally decreases to about 1 by 1998. It generally increases to about 2.4 by 2006 and then generally decreases to about 0.75 by 2010. It then generally increases to about 1.6 by 2015. Previous Market-based generally follows the same path as Current Market-based and ends in 2015 at about 1.65.

Note: Blue shading represents the projection period, which begins in 2012:Q1.

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

## Figure: Compensation per Hour

Line chart, by 4-quarter percent change, 1995 to 2015. There is a horizontal line at zero. There are four series, Current Productivity and Costs, Previous Productivity and Costs, Current Employment cost index, and Previous Employment cost index. Current Productivity and Costs begins in 1995 at about 1.3 and generally increases to about 9 by 2000. It generally decreases to about 0 by 2009 and then increases to about 3 by 2015. Previous Productivity and Costs generally follows the same path as Current Productivity and Costs until 2012 when it begins increasing at a faster rate. It ends in 2015 at about 3.2. Current Employment cost index begins in 1995 at about 2.8 and generally increases to about 4.4 by 2000. It generally decreases to about 1.3 by 2010 and then increases to about 2.9 by 2015. Previous Employment cost index generally follows the same path as Current Employment cost



index.

Note: Blue shading represents the projection period, which begins in 2012:Q1.

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

## Figure: Long-Term Inflation Expectations

Line chart, by percent, 1995 to 2015. There are two series, Thomson Reuters/Michigan, next 5 to 10 years and SPG, next 10 years. Thomson Reuters/Michigan, next 5 to 10 years begins in 1995 at about 3.25 and generally decreases to about 2.5 by 2002. It generally increases to about 3.4 by 2010 and then decrease to about 2.75 by May 2013. SPF, next 10 years begins in 2007 at about 2 and generally increases to about 2.25 by 2009. It generally decreases to about 2 by 2010 and then increases to about 2.25 by 2013:Q2.

Note: The Survey of Professional Forecasters (SPF) projection is for the PCE price index.

Source: Thomson Reuters/University of Michigan Surveys of Consumers; Federal Reserve Bank of Philadelphia.

Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research: March 2001-November 2001, and December 2007-June 2009.

## The Long-Term Outlook

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

Measure	2012	2013	2014	2015	2016	2017
Real GDP	1.9	2.2	3.1	3.5	3.4	3.2
Previous Tealbook	2.5	2.8	3.3	3.6	3.5	3.4
Civilian unemployment rate <sup>1</sup>	8.2	8.0	7.7	7.1	6.5	5.9
Previous Tealbook	8.0	7.7	7.4	6.8	6.2	5.6
PCE prices, total	1.2	1.5	1.5	1.6	1.7	1.8
Previous Tealbook	1.9	1.5	1.5	1.7	1.7	1.9
Core PCE prices	1.7	1.6	1.6	1.7	1.8	1.8
Previous Tealbook	1.8	1.7	1.7	1.8	1.8	1.9
Federal funds rate <sup>1</sup>	.1	.1	.5	1.6	2.6	3.4
Previous Tealbook	.1	.1	1.2	2.3	3.1	3.8
10-year Treasury yield <sup>1</sup>	1.9	3.1	3.6	3.8	4.1	4.2
Previous Tealbook	2.8	3.7	3.9	4.1	4.2	4.4

1. Percent, average for the final quarter of the period. [Return to table](#)

## Figure: Real GDP

Line chart, by 4-quarter percent change, 2004 to 2020. There is a horizontal line at zero. There are four series, Current Real GDP, Previous Real GDP, Current Potential GDP, and Previous Potential GDP. Current Real GDP begins in 2004 at about 4 and generally decreases to about -5 by 2009. It generally increases to about 3.5 by 2010 and then decreases to about 1.75 by 2011. It generally increases to about 3.8 by 2014 and then generally decreases to about 2.3 by 2020. Previous Real GDP generally follows the same path as Current Real GDP. Current Potential GDP begins in 2004 at about 2.5 and generally decreases to about 1 by 2008. It then generally increases to about 2.3 by 2020. Previous Potential GDP generally follows the same path as Current Potential GDP but begins increasing at a slightly faster rate in 2008. It then generally increases to about 2.6 by 2020.

## Figure: Unemployment Rate

Line chart, by percent, 2004 to 2020. There are four series, Current Tealbook, Previous Tealbook, NAIRU, and NAIRU with EEB adjustment. Current Tealbook begins in 2004 at about 5.75 and generally decreases to about 4.4 by 2007. It generally increases to about 10 by 2010 and then generally decreases to about 5.3 by 2020. Previous Tealbook generally follows the same path as Current Tealbook until it begins decreasing at a faster rate in 2012. It ends in 2020 at about 5.25. NAIRU begins in 2004 at about 5 where it remains relatively constant until 2008. It increases to about 6 by 2009 and remains relatively constant here until 2014. It then decreases to about 5.3 by 2017 where it remains relatively constant until 2020. NAIRU with EEB adjustment begins in 2004 at about 5 where it remains relatively constant until 2008. It increases to about 6.4 by 2010 and then decreases to about 6 by 2013. It remains relatively constant here until 2014. It then decreases to about 5.3 by 2017 where it remains relatively constant until 2020.

## Figure: PCE Prices

Line chart, by 4-quarter percent change, 2004 to 2020. There are four series, Current Total PCE prices, Previous PCE prices, Current PCE prices excluding food and energy, and Previous PCE prices excluding food and energy. Current Total PCE Prices begins in 2004 at about 2 and generally increases to about 4.2 by 2007. It decreases to about -0.8 by 2009 and then generally increases to about 2.9 by 2011. It generally decreases to about 1 by 2012 and then generally increases to about 2 by 2020. Previous Total PCE prices generally follows the same pattern as Current Total PCE prices. Current PCE prices excluding food and energy begins in 2004 at about 1.9 and generally decreases to about 1 by 2011. It generally increases to about 1.9 by 2011 and then decreases to about 1.75 by 2012. It then generally increases to about 2 by 2020. Previous PCE prices excluding food and energy generally follows the same path as Current PCE prices excluding food and energy.

## Figure: Interest Rates

Line chart, by percent, 2004 to 2020. There are six series, Current BBB corporate, Previous BBB corporate, Current 10-year Treasury, Previous 10-year Treasury, Current Federal funds rate, and Previous Federal funds rate. Current BBB corporate begins in 2004 at about 5.4 and generally increases to about 9.5 by 2008. It generally decreases to about 4.5 by 2012 and then increases to about 6.2 by 2020. Previous BBB corporate generally follows the same path as Current BBB corporate. Current 10-year Treasury begins in 2004 at about 4.1 and generally increases to about 5 by 2006. It generally decreases to about 1.9 by 2012 and then generally increases to about 5.7 by 2020. Previous 10-year Treasury generally follows the same path as Current 10-year Treasury. Current Federal funds rate begins in 2004 at about 1 and generally increases to about 5.2 by 2007. It generally decreases to about 0.1 by 2009 where it remains relatively constant until 2013. It then increases to about 4.1 by 2020. Previous Federal funds rate generally follows the same path as Current Federal funds rate.

Note: In each panel, shading represents the projection period, which begins in 2012:Q2; dashed lines are the previous Tealbook.

## Evolution of the Staff Forecast

### Figure: Change in Real GDP

Line chart, by percent, quarter 4 over quarter 4, January 2010 to December 2012. The x-axis represents Tealbook publication date. There are four series, 2011, 2012, 2013, and 2014. 2011 begins on January 20, 2010 at about 4.8 and generally decrease to about 3.4 by September 15, 2010. It increases to about 3.8 by January 19, 2011 and then generally decreases to about 1.4 by September 14, 2011. It generally increases to about 1.5 by June 13, 2012. 2012 begins on September 15, 2011 at about 4.3 and generally decreases to about 2 by January 18, 2012. It generally increases to about 2.5 by April 18, 2012 and then generally decreases to about 1.8 by June 13, 2012. 2013 begins on September 14, 2011 at about 3.25 and generally decreases to about 2.2 by January 18, 2012. It generally increases to about 2.8 by April 18, 2012 and then decreases to about 2 by June 13, 2012. 2014 begins

on April 18, 2012 at about 3.25 and decreases to about 3.05 by June 13, 2012.

### **Figure: Unemployment Rate**

Line chart, by percent, fourth quarter, January 2010 to December 2012. The x-axis represents Tealbook publication date. There are four series, 2011, 2012, 2013, and 2014. 2011 begins on January 20, 2010 at about 8.2 and generally increase to about 9.15 by September 15, 2010. It generally decreases to about 8.6 by March 9, 2011 and then increases to about 9.1 by August 3, 2011. It then generally decreases to about 8.6 by June 13, 2012. 2012 begins on September 15, 2010 at about 8 and generally decreases to about 7.5 by March 9, 2011. It generally increases to about 8.5 by September 14, 2012 and then generally decreases to about 8.2 by June 13, 2012. 2013 begins on September 14, 2011 and generally decreases to about 7.7 by April 18, 2012. It then generally increases to about 8 by June 13, 2012. 2014 begins on April 18, 2012 at about 7.5 and increases to about 7.75 by June 13, 2012.

### **Figure: Change in PCE Prices excluding Food and Energy**

Line chart, by percent, Quarter 4 over Quarter 4, January 2010 to December 2012. The x-axis represents the Tealbook publication date. There are four series, 2011, 2012, 2013, and 2014. 2011 begins on January 20, 2010 at about 1.1 and generally decreases to about 0.8 by June 16, 2010. It generally increases to about 1.85 by September 14, 2011 and then generally decreases to about 1.75 by June 13, 2012. 2012 begins on September 15, 2010 at about 0.9 and generally increases to about 1.75 by April 18, 2012. It then decreases to about 1.6 by June 13, 2012. 2013 begins on September 14, 2011 at about 1.25 and generally increases to about 1.55 by April 18, 2012. It then decreases to about 1.5 by June 13, 2012. 2014 begins on April 18, 2012 at about 1.55 and decreases to about 1.5 by June 13, 2012.

## **International Economic Developments and Outlook**

### **[Box:] Recent Developments in the Euro Area**

#### **Figure: 10-Year Sovereign Bond Spreads**

Line chart, by basis points, 2011 to 2012. There are four series, Spain, Italy, Belgium, and France. Spain begins in early 2011 at about 240 and generally increases to about 470 by late 2011. It generally decreases to about 300 by early 2012 and then generally increases to about 525 by mid-2012. Italy begins in early 2011 at about 190 and generally increases to about 550 by late 2011. It generally decreases to about 290 by early 2012 and then increases to about 480 by mid-2012. Belgium begins in early 2011 at about 100 and generally increases to about 385 by late 2011. It generally decreases to about 120 by early 2012 and then increases to about 175 by mid-2012. France begins in early 2011 at about 40 and generally increases to about 200 by late 2011. It then generally decreases to about 125 by mid-2012.

Note: Relative to Germany.

Source: Bloomberg.

#### **Figure: Spanish Consumer Confidence**

Line chart, by net percent balance, 2007 to 2012. The series begins in 2007 at about -12.5 and generally decreases to about -47 by 2009. It generally increases to about -12 by 2011 and then decreases to about -34 by May 2012.

Source: European Commission.

## **Recent Foreign Indicators**

## Figure: Nominal Exports

Line chart, by log scale where January 2008 = 100, 2008 to 2012. There is a horizontal line at 100. There are three series, Foreign, AFE, and EME. Foreign begins in 2008 at about 100 and generally decreases to about 69 by 2009. It then generally increases to about 118 by 2012. AFE begins in 2008 at about 100 and generally decreases to about 68 by 2009. It then generally increases to about 105 by 2012. EME begins in 2008 at about 100 and generally decreases to about 70. It then generally increases to about 131 by 2012.

Note: EME excludes Venezuela.

## Figure: Industrial Production

Line chart, by log scale where January 2008 = 100, 2008 to 2012. There is a horizontal line at 100. There are three series, Foreign, AFE, and EME. Foreign begins in 2008 at about 100 and generally decreases to about 86 by 2009. It then generally increases to about 102.5 by 2012. AFE begins in 2008 at about 100 and generally decreases to about 85 by 2009. It then generally increases to about 94 by 2012. EME begins in 2008 at about 100 and generally decreases to about 88 by 2009. It then generally increases to about 114 by 2012.

Note: AFE excludes Australia and Switzerland. EME excludes Colombia, Hong Kong, Philippines, and Venezuela.

## Figure: Retail Sales

Line chart, by 12-month percent change, 2008 to 2012. There is a horizontal line at zero. There are three series, Foreign, AFE, and EME. Foreign begins in 2008 at about 5 and generally decreases to about -1.5 by 2009. It generally increases to about 6 by 2010 and then decreases to about 2.5 by 2012. AFE begins in 2008 at about 4.2 and generally decreases to about -4 by 2009. It generally increases to about 5 by 2010 and then generally decreases to about 2.5 by 2012. EME begins in 2008 at about 8 and generally decreases to about 3 by 2009. It generally increases to about 11 by 2010 and then decreases to about 7.5 by 2012.

Note: AFE excludes Australia and Switzerland. EME includes Brazil, China, Israel, Korea, Singapore, and Taiwan.

## Figure: Employment

Line chart, by 4-quarter percent change, 2008 to 2012. There is a horizontal line at zero. There are three series, Foreign, AFE, and EME. Foreign begins in 2008 at about 2 and generally decreases to about -1 by 2009. It increases to about 1.6 by 2010 and then decreases to about 1.2 by 2012. AFE begins in 2008 at about 1.85 and generally decreases to about -1.8 by 2009. It generally increases to about 1 by 2010 and then decreases to about 0.5 by 2012. EME begins in 2008 at about 3 and generally decreases to about 0.4 by 2009. It generally increases to about 3 by 2011 and then decreases to about 2 by 2012.

Note: EME excludes Argentina and Mexico.

## Figure: Consumer Prices: Advance Foreign Economies

Line chart, by 12-month percent change, 2008 to 2012. There is a horizontal line at zero. There are two series, Headline and Core. Headline begins in early 2008 at about 2.1 and increases to about 3.6 by late 2008. It decreases to about -0.9 by 2009 and then generally increases to about 2 by 2012. Core begins in 2008 at about 1.05 and generally decreases to about 0.8 by 2010. It then generally increases to about 1.4 by 2012.

Note: Excludes Australia, Sweden, and Switzerland. Core excludes all food and energy; staff calculation.

Source: Haver Analytics and CEIC.

## Figure: Consumer Prices: Emerging Market Economies

Line chart, by 12-month percent change, 2008 to 2012. There is a horizontal line at zero. There are three series, Headline, Excluding food - East Asia, and Excluding food - Latin America. Headline begins in early 2008 at about 5.6 and generally increases to about 6.6 by late 2008. It generally decreases to about 0.8 by 2009 and then increases to about 5.75 by 2011. It then generally decreases to about 3.8 by 2012. Excluding food - East Asia begins in early 2008 at about 3 and generally increases to about 4 by late 2008. It decreases to about -2 by 2009 and then increases to about 2.8 by 2011. It decreases to about 2 by 2012. Excluding food - Latin America begins in

2008 at about 3.8 and generally increases to about 5.8 by 2009. It then generally decreases to about 3.3 by 2012.

## The Foreign Outlook

(Percent change, annual rate)

	2011			2012				2013	2014
	H1	Q3	Q4	Q1	Q2	Q3	Q4		
Real GDP									
Total foreign	2.9	3.9	1.6	3.4	2.5	2.5	2.3	2.7	3.2
Previous Tealbook	3.0	3.9	1.4	3.2	2.9	2.8	2.9	3.2	3.6
Advanced foreign economies	.7	3.3	.4	1.5	1.0	.9	.5	1.2	1.9
Previous Tealbook	1.0	3.1	.2	1.2	1.1	1.1	1.3	1.8	2.4
Emerging market economies	5.3	4.6	2.8	5.5	4.1	4.2	4.2	4.3	4.6
Previous Tealbook	5.2	4.8	2.6	5.3	4.8	4.6	4.6	4.6	4.9
Consumer Prices									
Total foreign	3.8	3.0	2.8	2.6	2.3	2.0	2.2	2.2	2.5
Previous Tealbook	3.7	3.1	2.9	2.5	2.1	2.4	2.4	2.4	2.5
Advanced foreign economies	2.6	1.2	2.5	2.2	1.4	1.1	1.3	1.2	1.5
Previous Tealbook	2.7	1.1	2.5	2.1	1.5	1.4	1.4	1.3	1.4
Emerging market economies	4.8	4.5	3.0	3.0	3.0	2.8	2.9	3.1	3.2
Previous Tealbook	4.6	4.7	3.2	2.7	2.7	3.2	3.2	3.2	3.3

Note: Annualized percent change from final quarter of preceding period to final quarter of period indicated.

### Figure: Real GDP

Line chart, by percent change, annual rate, 2008 to 2014. There is a horizontal line at zero. There are two series, Current Tealbook and Previous Tealbook. Current Tealbook begins in 2008 at about 3 and generally decreases to about -9.5 by 2009. It generally increases to about 5.5 by 2010 and then generally decreases to about 2.4 by 2012. It then increases to about 3 by 2014. Previous Tealbook generally follows the same path as Current Tealbook.

There is a second line chart, by percent change, annual rate, 2008 to 2014. There is a horizontal line at zero. There are four series, Current Emerging market economies, Previous Emerging market economies, Current Advanced foreign economies, and Previous Advanced foreign economies. Current Emerging market economies begins in 2008 at about 5 and generally decreases to about -9 by early 2009. It generally increases to about 10 by mid-2009 and then generally decreases to about 4.8 by 2014. Previous Emerging market economies generally follows the same path as Current Emerging market economies. Current Advanced foreign economies begins in 2008 at about 1 and generally decreases to about 4 by 2010. It generally decreases to about 0 by 2011 and then generally increases to about 2.5 by 2014. Previous Advanced foreign economies generally follows the same path as Current Advanced foreign economies.

### Figure: Consumer Prices

Line chart, by percent change, annual rate, 2008 to 2014. There is a horizontal line at zero. There are two series,

Current Total foreign and Previous Total Foreign. Current Total foreign begins in 2008 at about 5 and generally decreases to about -1 by 2009. It then generally increases to about 4.75 by 2010 and then generally decreases to about 2.25 by 2014. Previous Total foreign generally follows the same path as Current Total foreign.

There is a second line chart, by percent change, annual rate, 2008 to 2014. There is a horizontal line at zero. There are four series, Current Emerging market economies, Previous Emerging market economies, Current Advanced foreign economies, and Previous Advanced foreign economies. Current Emerging market economies begins in 2008 at about 7 and generally decreases to about -0.4 by 2009. It then generally increases to about 6.2 by 2010 and then generally decreases to about 3.25 by 2014. Previous Emerging market economies generally follows the same path as Current Emerging market economies. Current Advanced foreign economies begins in early 2008 at about 2.6 and increases to about 4 by late 2008. It decreases to about -2.1 by 2009 and then generally increases to about 3.25 by 2010. It then generally decreases to about 1.6 by 2014. Previous Advanced foreign economies generally follows the same path as Current Advanced foreign economies.

Note: Blue shading represents the projection period, which begins in 2012:Q2.

## Evolution of Staff's International Forecast

### Figure: Total Foreign GDP

Line chart, by percent change, Quarter 4 over Quarter 4, January 2010 to December 2012. The x-axis represents Tealbook publication date. There are four series, 2011, 2012, 2013, and 2014. 2011 begins on January 20, 2010 at about 4 and generally decreases to about 3.5 by June 15, 2011. It then generally decreases to about 3 by June 13, 2012. 2012 begins on September 15, 2010 at about 3.5 and generally decreases to about 2.5 by December 7, 2011. It then generally increases to about 2.7 by June 13, 2012. 2013 begins on September 14, 2011 at about 3.3 and generally decreases to about 3 by December 7, 2011. It then increases to about 3.2 by April 18, 2012 and then decreases to about 2.7 by June 13, 2012. 2014 begins on April 18, 2012 at about 3.6 and generally decreases to about 3.1 by June 13, 2012.

### Figure: Total Foreign CPI

Line chart, by percent change, Quarter 4 over Quarter 4, January 2010 to December 2012. The x-axis represents Tealbook publication date. There are four series, 2011, 2012, 2013, and 2014. 2011 begins on January 20, 2010 at about 2 and generally increases to about 3.2 by April 20, 2011. It then increases to about 3.5 by June 13, 2012. 2012 begins on September 14, 2011 at about 2.2 where it remains relatively constant until about January 18, 2012. It increases to about 2.55 by March 7, 2012 and then decreases to about 2.3 by June 13, 2012. 2013 begins on September 14, 2011 at about 2.3 and generally decreases to about 2.25 by December 7, 2011. It remains relatively constant here until it decreases to about 2.2 by June 13, 2012. 2014 begins on April 18, 2012 at about 2.3 and generally increases to about 2.5 by June 13, 2012.

### Figure: U.S. Current Account Balance

Line chart, by percent of GDP, January 2010 to December 2012. The x-axis represents Tealbook publication date. There are four series, 2011, 2012, 2013, and 2014. 2011 begins on January 20, 2010 at about -3.1 and generally decreases to about -3.5 by December 8, 2010. It then generally increases to about -2.8 by June 15, 2011 and then generally decreases to about -3.4 by June 13, 2012. 2012 begins on September 15, 2010 at about -2.9 and generally increases to about -2 by June 15, 2011. It then generally decreases to about -3 by June 13, 2012. 2013 begins on September 14, 2011 at about -2 and generally decreases to about -3.75 by June 13, 2012. 2014 begins on April 18, 2012 at about -3.5 and generally decreases to about -4 by June 13, 2012.



# Financial Developments

## Policy Expectations and Treasury Yields

### Figure: Selected Interest Rates

Line chart, by percent, April 2012 to June 2012. There is a vertical line on April 25 marking the April FOMC, May 16 marking the April FOMC minutes, and May 31 marking the May employment report. There are two series, 10-year Treasury yield and 2-year Treasury yield. 10-year Treasury yield begins on April 24 at about 1.95 and generally decreases to about 1.75 by May 30. It decreases to about 1.42 by June 1 and then increases to about 1.65 by June 8. 2-year Treasury yield begins on April 24 at about 0.29 and generally increases to about .32 by May 18. It then generally decreases to about 0.29 by June 8.

Note: 5-minute intervals. 8:00 a.m. to 4:00 p.m. No adjustments for term premiums.

Source: Bloomberg.

### Figure: Long-Term Interest Rate Implied Volatility

Line chart, by percent, January 2010 to October 2012. Data are daily. There is a vertical line on April 2012 marking the April FOMC. The series begins in January 2010 at about 7 and generally increases to about 9 by January 2011. It generally decreases to about 4.2 by April 2012 and then increases to about 5.8 by June 12, 2012.

Note: Derived from options on 10-year Treasury note futures.

Source: Bloomberg.

### Figure: Implied Federal Funds Rate

Line chart, by percent, 2012 to 2015. There are four series, Mean: June 12, 2012, Mean: April 24, 2012, Mode: June 12, 2012, and Mode: April 24, 2012. Mean: June 12, 2012 begins in late 2012 at about 0.2 and generally increase to about 0.8 by 2015. Mean: April 24, 2012 begins in mid-2012 at about 0.2 and generally increases to about 1.05 by 2015. Mode: June 12, 2012 begins in late 2012 at about 0.2 and generally increases to about 0.25 by 2015. Mode: April 24, 2012 begins in mid-2012 at about 0.2 and generally increases to about 0.35 by 2015.

Note: Mean is estimated using overnight index swap quotes. Mode is estimated from the distribution of federal funds rate implied by interest rate caps. Both include a term premium of zero basis points per month.

Source: Bloomberg and CME group.

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

Bar chart, by percent, 2013 to 2016. There are two series, Recent: 21 respondents and April FOMC: 21 respondents. Recent: 21 respondents begins in 2013:Q3 at about 5 and remains at 5 in 2013:Q4. It decreases to 0 in 2014:Q1 and then generally increases to 23 by 2014:Q3. It then generally decreases to about 5 by 2015:Q2. It increases to 15 by 2015:Q3 and then decreases to 0 in 2015:Q4. It ends in 2012:Q1 at about 5. April FOMC: 21 respondents begins in 2013:Q1 at 0 and generally increases to 5 by 2013:Q2. It stays at 5 until 2013:Q4 when it decreases to 0 and then increases to about 15 by 2014:Q2. It increases to about 35 by 2014:Q3 and then decreases to about 10 by 2015:Q1. It decreases to about 5 by 2016:Q1 and then decreases to 0 by 2016:Q2 where it remains until the end.

Source: Desk's Dealer Survey from June 11, 2012.

### Figure: Inflation Compensation

Line chart, by percent, 2010 to 2012. Data are daily. There is a vertical line on April 2012 representing the April FOMC. There are two series, 5 to 10 years ahead and Next 5 years. 5 to 10 years ahead begins in early 2010 at about 3.25 and generally decreases to about 2.25 by mid-2010. It increases to about 3.2 by 2011 and then decreases to about 2.6 by June 2012. Next 5 years begins in early 2012 at about 2 and generally decreases to about 1.25 by mid-2010. It increases to about 2.25 by 2011 and then decreases to about 1.9 by June 2012.

Note: Estimates based on smoothed nominal inflation indexed Treasury yield curves. Next 5 years is adjusted for the indexation-lag (carry) effect.



## Foreign Developments

### Figure: Euro-Area 10-Year Government Bond Spreads

Line chart, by percentage points, 2011 to 2012. Data are daily. There is a vertical line on April 2012 marking the April FOMC. There are four series, Portugal, Spain, Ireland, and Italy. Portugal begins in early 2011 at about 4 and generally increases to about 16 by early 2012. It then decreases to about 9.3 by June 2012. Spain begins in early 2011 at about 2.4 and generally increases to about 4.3 by late 2011. It then increases to about 5.2 by June 2012. Ireland begins in early 2011 at about 6 and generally increases to about 11 by mid-2011. It then generally decreases to about 6 by June 2012. Italy begins in early 2011 at about 2 and generally increases to about 6 by late 2011. It then decreases to about 4.5 by June 2012.

Note: Spread over German bunds.

Source: Bloomberg.

### Figure: Bank CDS Premiums

Line chart, by basis points, 2011 to 2012. Data are daily. There is a vertical line on April 2012 marking the April FOMC. There are four series, Portugal, Spain, Ireland, and Italy. Portugal begins in early 2012 at about 700 and generally increase to about 1300 by late 2011. It then decreases to about 1000 by June 2012. Spain begins in early 2011 at about 400 and generally increases to about 500 by late 2011. It decrease to about 400 by early 2012 and then increases to about 500 by June 2012. Ireland begins in early 2012 at about 1100 and generally decreases to about 800 by mid-2011. It increases to about 1600 by late 2011 and then decreases to about 2000 by June 2012. Italy begins in early 2011 at about 200 and generally increases to about 650 by late 2011. It then generally decreases to about 500 by June 2012.

Source: Markit.

### Figure: Stock Prices Indexes

Line chart, by ratio scale where January 3, 2011 = 100, 2011 to 2012. There is a vertical line on April 2012 representing the April FOMC. Data are daily. There are four series, DJ Euro, Topix, DJ Euro Banks, and MSCI Emerging Markets. DJ Euro begins in early 2011 at about 100 and generally decreases to about 75 by late 2011. It generally increases to about 90 by early 2012 and then decreases to about 78 by June 2012. Topix begins in early 2011 at about 100 and generally decreases to about 80 by late 2011. It increases to about 95 by early 2012 and then decreases to about 80 by June 2012. DJ Euro Banks begins in early 2011 at about 100 and generally increases to about 120 by mid-2011. It generally decreases to about 55 by late 2011 and then increases to about 73 by early 2012. It ends in June 2012 at about 50. MSCI Emerging Markets begins in early 2011 at about 100 and generally decreases to about 75 by late 2011. It generally increases to about 90 by early 2012 and then decreases to about 79 by June 2012.

Source: Bloomberg.

### Figure: 10-Year Nominal Benchmark Yields

Line chart, by percent, 2011 to 2012. Data are daily. There is a vertical line on April 2012 representing the April FOMC. There are four series, Germany, United Kingdom, Japan, and Canada. Germany begins in early 2011 at about 2.99 and generally decreases to about 1.6 by late 2011. It then decreases to about 1.3 by June 2012. United Kingdom begins in early 2011 at about 3.5 and generally decreases to about 2.25 by late 2011. It then decreases to about 1.6 by June 2012. Japan begins in 2011 at about 1.15 and generally decreases to about 0.9 by June 2012. Canada begins in early 2011 at about 3.15 and generally decreases to about 2 by late 2011. It then decreases to about 1.8 by June 2012.

Source: Bloomberg.

## Figure: Dollar Exchange Rates

Line chart, by ratio scale where January 3, 2011 = 100, 2011 to 2012. There is a horizontal line at April 2012 representing the April FOMC. Data are daily. There are two series, Broad and Yen. Broad begins in early 2011 at about 100 and generally decreases to about 95 by mid-2011. It generally increases to about 104.5 by June 2012. Yen begins in early 2011 at about 100 and generally increases to about 105 by mid-2011. It generally decreases to about 93 by late 2011 and then increases to about 104.5 by early 2012. It ends in June 2012 at about 97.5.

There is a third series, Euro, by Euros per dollar, 2011 to 2012. Data are daily. The series begins in early 2011 at about 0.75 and generally decreases to about 0.68 by mid-2011. It then generally increases to about 0.8 by June 2012.

Source: Federal Reserve Board; Bloomberg.

## Figure: Foreign Net Purchases of U.S. Treasury Securities

Bar chart, by billions of dollars, annual rate, 2010 to 2012. There is a horizontal line at zero. There are two series, Official and Private. Approximate values are: 2010: Official 400 and Private 250; 2011:H1: Official 240 and Private -1; 2011:H2: Official 25 and Private 450; 2012:Q1: Official 500 and Private -5; April 2012: Official 225 and Private 200.

Source: Treasury International Capital data adjusted for staff estimates.

## [Box:] Recent Upward Pressure on Overnight Money Market Rates

### Figure: Money Market Rates

Line chart, by percent, 2011 to 2012. Data are daily. There is a horizontal line at zero. There are three series, Treasury GC repo, Federal funds effective, and Eurodollar effective. Treasury GC repo begins in May 2011 at about 0.06 and generally increases to about 0.17 by January 2012. It then increases to about 0.21 by May 2012. Federal funds effective begins in May 2011 at about 0.095 and generally decreases to about 0.075 by July 2011. It then generally increases to about 0.16 by May 2012. Eurodollar effective begins in May 2011 at about 0.105 and generally follows the same path as Federal funds effective.

Note: 4-week moving average.

Source: Federal Reserve Bank of New York and the Depository Trust & Clearing Corporation.

## Figure: Cumulative Changes in Publicly Held Short-Dated Treasury Securities

Bar chart, by billions of dollars, 2011 to 2012. Data are monthly. There are two series, Cumulative monthly MEP sales and Cumulative net Treasury issuance with less than 3 years remaining maturity. Cumulative monthly MEP sales begins in October 2011 at about 50 and steadily increases to about 375 by June 2012. Cumulative net Treasury issuance with less than 3 years remaining maturity begins in May 2011 at about -10 and generally decreases to about -25 by August 2011. It increases to 0 by September 2011 and then increases to about 75 by October 2011. It steadily increases to about 380 by February 2012 and then increases to about 450 by April 2012 where it remains until June 2012.

Source: Federal Reserve Bank of New York and the Department of the Treasury.

## Figure: Primary Dealer Net Treasury Positions

Bar chart, by billions of dollars, 2011 to 2012. There is a horizontal line at zero. Data are weekly. There are three series, Bills and coupons with less than 3 years remaining maturity, Coupons with greater than 3 years remaining maturity, and Net 4-week moving average. Bills and coupons with less than 3 years remaining maturity begins in May 2011 at about 40 and generally decreases to about 5 by July 2011. It increases to about 35 by August 2011 and then decreases to about 10 by September 2011. It increases to about 50 by November 2011 and continues to increase to about 110 by February 2012. It fluctuates between about 100 and 75 from February 2012 to April 2012.

It ends in May 2012 at about 65. Coupons with greater than 3 years remaining maturity begins in May 2011 at about -75 and generally increases to about -5 by August 2011. It increases to about 40 by September 2011 and then decreases to about -2 by October 2011. It increases to about 110 by February 2012 and then decreases to -5 by March 2012. It ends in May 2012 at about 100. Net 4-week moving average is a line series. It begins in May 2011 at about -40 and generally increases to about 40 by September 2011. It decreases to about 20 by October 2011 and then increases to about 80 by February 2012. It increases to about 107 by May 2012.

Source: Federal Reserve Bank of New York (FR2004).

## Short-Term Dollar Funding Markets and Financial Institutions

### Figure: Selected Spreads

Line chart, by basis points, 2010 to 2012. Data are daily. There is a vertical line at April 2012 representing the April FOMC. There are two series, 3-month LIBOR over OIS and USD 3x6 FRA-OIS. 3-month LIBOR over OIS begins in January 2010 at about 10 and generally increase to about 32 by September 2010. It decreases to about 10 by October 2010 and then generally increases to about 50 by January 2012. It ends in June 2012 at about 30. USD 3x6 FRA-OIS begins in January 2010 at about 12 and generally increases to about 69 by May 2010. It decreases to about 18 by March 2011 and then generally increases to about 68 by November 2011. It ends in June 2012 at about 35.

Note: USD 3x6 FRA-OIS spread is calculated from a LIBOR forward rate agreement (FRA) 3 to 6 months in the future and the implied forward overnight index swap (OIS) rate for the same period.

Source: Bloomberg.

### Figure: Dollar Funding Spread

Line chart, by basis points, 2010 to 2012. Data are daily. There is a vertical line at April 2012 representing the April FOMC. The series, 3-month euro-dollar implied basis swap, begins in April 2010 at about 26 and generally decreases to about 10 by June 2011. It generally increases to about 150 by October 2011 and then decreases to about 48 by June 2012.

Source: Bloomberg.

### Figure: Average Maturity for Unsecured Financial Commercial Paper Outstanding in the U.S. Market

Line chart, by days, 2010 to 2012. Data are weekly. There is a vertical line at April 2012 representing the April FOMC. There are two series, U.S. parent and European parent. U.S. parent begins in January 2010 at about 40 and generally decreases to about 35 by May 2010. It generally increases to about 50 by February 2011. It then increases to about 63 by April 2012 and ends in June 2012 at about 53. European parent begins in January 2010 at about 40 and generally decreases to about 35 by May 2010. It generally increases to about 56 by October 2010 and then generally decreases to about 32 by January 2012. It then increases to about 50 by June 2012.

Source: Federal Reserve Board staff calculations based on data from the Depository Trust & Clearing Corporation.

### Figure: Asset-Backed Commercial Paper Overnight Spreads

Line chart, by basis points, 2011 to 2012. Data are 5-day moving averages. There is a vertical line at April 2012 representing the April FOMC. There are three series, United States, Europe, and Other. United States begins in January 2011 at about 5 and generally increases to about 24 by January 2012. It then decreases to about 9 by June 2012. Europe begins in January 2011 at about 5 and generally increases to about 66 by December 2011. It then generally decreases to about 14.5 by June 2012. Other begins in January 2011 at about 4 and generally increases to about 7 by June 2012.

Note: Spreads computed over the AA nonfinancial rate. Other institutions include nonbanking institutions and banks domiciled outside Europe and the United States.

## Figure: Stock prices

Line chart, by index (December 31, 1991 = 100), 2010 to 2012. Data are daily. There is a vertical line at April 2012 representing the April FOMC. The series, Dow Jones Bank Index, begins in January 2010 at about 215 and generally increases to about 270 by May 2010. It generally decreases to about 145 by October 2011 and then increases to about 220 by March 2012. It ends in June 2012 at about 180.

There is a second series, S&P 500, by index (1941-43 = 10), 2010 to 2012. Data are daily. There is a vertical line at April 2012 representing the April FOMC. The series begins in January 2010 at about 1125 and generally increases to about 1300 by June 2011. It decreases to about 1100 by September 2011 and then increases to about 1280 by June 2012.

Source: Bloomberg.

## Figure: CDS Spreads of Large Bank Holding Companies

Line chart, by basis points, 2010 to 2012. Data are daily. There is a vertical line at April 2012 representing the April FOMC. There are six series, Citigroup, JPMorgan Chase, Wells Fargo, Goldman Sachs, Bank of America, and Morgan Stanley. Citigroup begins in January 2010 at about 150 and generally increases to about 380 by October 2011. It then decreases to about 280 by June 2012. JPMorgan Chase begins in January 2010 at about 45 and generally increases to about 190 by October 2011. It decreases to about 100 by March 2012 and then increases to about 175 by June 2012. Wells Fargo begins in January 2010 at about 90 and generally increases to about 180 by October 2011. It then decreases to about 110 by June 2012. Goldman Sachs begins in January 2010 at about 90 and generally increases to about 410 by November 2011. It then generally decreases to about 310 by June 2012. Bank of America begins in January 2010 at about 100 and generally increases to about 600 by September 2011. It then generally decreases to about 410 by June 2012.

Source: Markit.

## Other Domestic Asset Market Developments

### Figure: S&P 500 Stock Price Index

Line chart, by log scale where November 1, 2011 = 100, 2010 to 2012. Data are daily. There is a vertical line at April 2012 representing the April FOMC. The series begins in January 2010 at about 94 and generally increases to about 110 by March 2011. It decreases to about 90 by August 2011 and then increases to about 117 by February 2012. It ends in June 2012 at about 109.

Source: Bloomberg.

### Figure: Implied Volatility on S&P 500 (VIX)

Line chart, by percent, log scale, 2007 to 2012. Data are daily. There is a vertical line at April 2012 representing the April FOMC. The series begins in 2007 at about 7 and generally increases to about 80 by 2012. It decreases to about 17 by 2010 and then increases to about 50 by 2011. It then ends in June 2012 at about 25.

Source: Chicago Board Options Exchange.

### Figure: Equity Risk Premium

Line chart, by percent, 1992 to 2012. Data are monthly. There is a vertical line at April 2012 representing the April FOMC. There are two series, Expected 10-year real equity return and Expected real yield on 10-year Treasury. Expected 10-year real equity return begins in 1992 at about 7.9 and generally decreases to about 2.2 by 2000. It generally increases to about 12 by 2008 and then decreases to about 9 by June 2012. Expected real yield on 10-year Treasury begins in 1992 at about 4.2 and generally decreases to about 2.2 by 1999. It then decreases to about 0.75 by June 2012.

Note: Expected real yield on 10-year Treasury is off-the-run 10-year Treasury yield less Philadelphia Fed 10-year expected inflation. There are two plus signs at the end of each series denoting the latest observations using daily interest rates and stock prices and latest earnings data.

Source: Thomson Financial.

### Figure: S&P 500 Earnings per Share

Line chart, by dollars per share, 2000 to 2012. Data are quarterly. The series begins in 2000 at about 14 and generally increases to about 24 by 2007. It decreases to about 6 by 2008 and then generally increases to about 26 by 2012:Q1.

Note: Data are seasonally adjusted by staff.

Source: Thomson Financial.

### Figure: Corporate Bond Spreads

Line chart, by basis points, 2007 to 2012. Data are daily. There is a vertical line at April 2012 representing the April FOMC. There are two series, 10-year high-yield and 10-year BBB. 10-year high-yield begins in 2007 at about 260 and generally increases to about 1650 by 2008. It then generally decrease to about 600 by June 2012. 10-year BBB begins in 2007 at about 125 and generally increases to about 640 by 2008. It generally decreases to about 175 by 2010 and then increases to about 300 by June 2012.

Note: Measured relative to a smoothed nominal off-the-run Treasury yield curve.

Source: Merrill Lynch and staff estimates.

### Figure: Spread on 30-Day A2/P2 Commercial Paper

Line chart, by basis points, 2009 to 2012. Data are 5-day moving averages. There is a vertical line at April 2012 representing the April FOMC. The series begins in March 2009 at about 95 and generally decreases to about 15 by March 2010. It then generally increases to about 35 by June 2012.

Note: The A2/P2 spread is the A2/P2 nonfinancial rate minus the AA nonfinancial rate. There is a plus sign at the end of the series denoting the latest available single-day observation.

Source: Depository Trust & Clearing Corporation.

## Business Finance

### Figure: Selected Components of Net Debt Financing, Nonfinancial Firms

Bar chart, by billions of dollars, 2008 to 2012. Data are monthly rate. There are three series, C&I loans, Commercial paper, and Bonds. There is also a Total series presented as a line chart. The approximate values are: 2008: Bonds 18, C&I loans 28, Commercial paper 29, Total 29; 2009: Bonds 30, C&I loans -25, Commercial paper -30, Total 0; 2010: Bonds 31, C&I loans -5, Commercial paper 32, Total 29; 2011:H1: Bonds 31, C&I loans 40, Commercial paper 42, Total 42; 2011:H2: Bonds 27, C&I loans 40, Commercial paper 42, Total 42; 2012:Q1: Bonds 40, C&I loans 50, Commercial paper 0; Total 50; April 2012: Bonds 18, C&I loans 30, Commercial paper 38, Total 38; May 2012: Bonds 41, C&I loans 42, Commercial paper 43, Total 43.

Note: C&I loans and Commercial paper are on a period-end basis and seasonally adjusted.

Source: Depository Trust & Clearing Corporation; Thomson Financial; Federal Reserve Board.

### Figure: Gross Issuance of Institutional Leveraged Loans

Bar chart, by billions of dollars, 2008 to 2012. Data are monthly rate. The series begins in 2008 at about 5 and decreases to about 4 by 2009. It increases to about 18 by 2010 and then increases to about 34 by 2011:H1. It decreases to about 10 by 2011:H2 and then increase to about 20 by 2012:Q1.

Source: Reuters Loan Pricing Corporation.

### Figure: Selected Components of Net Equity Issuance, Nonfinancial Firms

Bar chart, by billions of dollars, 2008 to 2012. There is a horizontal line at zero. There are four series, Public issuance, Private issuance, Repurchases, and Cash mergers. There is also a Total series presented as a line chart. The approximate values are: 2008: Public issuance 25, Private issuance 24, Repurchases -26, Cash mergers -49, Total -24; 2009: Public issuance 20, Private issuance 18, Repurchases -15, Cash mergers -25, Total -1; 2010: Public issuance 19, Private issuance 15, Repurchases -25, Cash mergers -30, Total -25; 2011:H1: Public issuance 20, Private issuance 15, Repurchases -27, Cash mergers -40, Total -27; 2011:H2: Public issuance 17, Private issuance 15, Repurchases -30, Cash mergers -52, Total -34; 2012:Q1 estimate: Public issuance 20, Private issuance 15, Repurchases -32, Cash mergers -48, Total -31.

Source: Thomson Financial, Investment Benchmark Report; Money Tree Report by PricewaterhouseCoopers, National Venture Capital Association, and Venture Economics.

## Figure: Financial Ratios for Nonfinancial Corporations

Line chart, by ratio, 1992 to 2012. There are two series, Debt over total assets and Liquid assets over total assets. Debt over total assets begins in 1992 at about 0.33 and generally decreases to about 0.275 by 1996. It generally increases to about 0.3 by 2001 and then decreases to about 0.24 by 2004. It increases to about 0.285 by 2008 and then decreases to about 0.255 by 2012:Q1 preliminary. Liquid assets over total assets begins in 1992 at about 0.055 and generally increases to about 0.1 by 2004. It decreases to about 0.089 by 2008 and then increases to about 0.109 by 2012:Q1 preliminary.

Note: Data are annual through 1999 and quarterly thereafter.

Source: Compustat.

## Figure: Bond Ratings Changes of Nonfinancial Firms

Bar chart, by percent of outstandings, 1991 to 2012. Data are annual rate. There is a horizontal line at zero. There are two series, Upgrades and Downgrades. Upgrades begins in 1991 at about 10 and generally increases to about 20 by 1994. It decreases to about 5 by 2003 and then increases to about 10 by 2006. It increases to about 19 by May 2012. Downgrades begins in 1991 at about -33 and generally decreases to about -43 by 1992. It then increases to about -10 by 1997 and then decreases to about -38 by 2003. It increases to about -15 by 2008 and then increases to about -5 by May 2012.

Source: Calculated using data from Moody's Investors Service.

## Figure: CMBS Issuance

Bar chart, by billions of dollars, 2008 to 2012. Data are annual rate. There is a horizontal line at zero. The series begins in 2008 at about 12 and decreases to about 2 by 2009. It increases to about 10 in 2010 and then increases to about 32 by 2011:H1. It decreases to about 28 by 2011:H2 and then decreases to about 17 by 2012:Q1. It increases to about 35 by April 2012 and then increases to about 48 by May 2012.

Source: Commercial Mortgage Alert.

## Household Finance

### Figure: Mortgage Rate and MBS Yield

Line chart, by percent, 2007 to 2012. There is a vertical line at April 2012 representing the April FOMC. There are two series, 30-year conforming fixed mortgage rate and MBS yield. 30-year conforming fixed mortgage rate begins in 2007 at about 6.3 and generally decreases to about 3.6 by June 2012. MBS yield begins in 2007 at about 5.65 and generally decreases to about 3.6 by 2008. It increases to about 5.1 by 2009 and then generally decreases to about 2.6 by June 2012.

Note: For mortgage-backed securities (MBS) yield, the data are daily and consist of the Fannie Mae 30-year current-coupon rate; for mortgage rate, the data are weekly before 2010 and daily thereafter.

Source: For MBS yield, Barclays; for mortgage rate, Freddie Mac (before 2010) and Loansifter (after 2010).



## Figure: Refinance Activity

Line chart, by log scale where March 16, 1990 = 100, 2002 to 2012. Data are weekly. There is a vertical line at April 2012 marking the April FOMC. The series begins in 2002 at about 1900 and generally increases to about 10,600 by 2003. It generally decreases to about 2000 by 2006 and then increases to about 6000 by 2009. It decrease to about 2000 by 2010 and then generally increases to about 5,300 by June 2012.

Note: Seasonally adjusted by FRB staff.

Source: Mortgage Bankers Association.

## Figure: Prices of Existing Homes

Line chart, by index peak normalized to 100, 2005 to 2012. Data are monthly. The series begins in 2005 at about 86 and generally increases to about 100 by 2006. It generally decreases to about 73 by 2009 and then decrease to about 70 by April 2012.

Source: CoreLogic.

## Figure: Delinquencies on Prime Mortgages, Transition Rate

Line chart, by percent of loans, 2004 to 2012. There are two series, 3-month moving average and Monthly rate. 3-month moving average begins in 2004 at about 1.2 and generally decreases to about 0.82 by 2006. It generally increases to about 1.48 by 2009 and then decreases to about 1.05 by April 2012. Monthly rate begins in 2004 at about 1.08 and generally decreases to about 0.8 by 2006. It generally increases to about 1.77 by 2009 and then generally decreases to about 1.09 by April 2012.

Note: Percent of previously current mortgages that transition to being at least 30 days delinquent each month.

Source: LPS Applied Analytics.

## Figure: Consumer Credit

Line chart, by percent change, annual rate, 2004 to 2012. There is a horizontal line at zero. Data are 3-month moving averages. There are two series, Nonrevolving and Revolving. Nonrevolving begins in 2004 at about 5 and generally decrease to about -4 by 2008. It generally increases to about 12 by 2011 and then decreases to about 6.5 by April 2012. Revolving begins in 2004 at about 3 and generally increases to about 11 by 2007. It generally decreases to about -14 by 2010 and then increases to about 0 by April 2012.

Source: Federal Reserve Board.

## Figure: Gross Consumer ABS Issuance

Bar chart, by billions of dollars, 2007 to 2012. There are three series, Student loan, Credit card, and Auto. The approximate values are: 2007: Student loan 19, Credit card 14, Auto 6.5; 2008: Student loan 11, Credit card 8, Auto 3; 2009: Student loan: 11, Credit card 9, Auto 4.5; 2010: Student loan 6, Credit card 5, Auto 4.5; 2011: Student Loan 7, Credit card 6, Auto 5; 2012:Q1: Student loan 9, Credit card 8, Auto 7; 2012:A Student loan 13, Credit card 12; Auto 10; 2012:M: Student loan 9, Credit card 4.5, Auto 3.

Source: Inside MBS & ABS; Merrill Lynch; Bloomberg; Federal Reserve Board.

## Commercial Banking and Money

### Figure: Changes in Bank Credit

Line chart, by percent, 2005 to 2012. Data are 3-month change, a.r. There is a horizontal line at zero. There are two series, Total bank credit and C&I loans. Total bank credit begins in 2005 at about 10 and generally decreases to about -10 by 2009. It then generally increases to about 3 by May 2012. C&I loans begins in 2005 at about 12 and generally increases to about 28 by 2007. It decreases to about -27 by 2009 and then increases to about 10 by May 2012.



Source: Federal Reserve Board.

## Figure: Weighted-Average Small Business Loan Spreads, by Risk Category

Line chart, by percent, 1997 to 2012. Data are quarterly, by commitment date. There are three series, Classified, Moderate risk, and Low risk. Classified begins in 1997 at about 4 and generally decreases to about 3.5 by 2006. It increases to about 4.9 by 2009 and then decreases to about 4.7 by 2012:Q2. Moderate risk begins in 1997 at about 2.4 and generally decreases to about 3 by 2007. It then increases to about 4 by 2012:Q2. Low risk begins in 1997 at about 3.1 and generally decreases to about 2.35 by 2000. It increase to about 3.4 by 2003 and then decreases to about 2.5 by 2007. It then increases to about 3.5 by 2012:Q2.

Note: The rate on C&I loans at domestic banks drawn on commitments of less than \$1 million over a market interest rate on an instrument of comparable maturity. Moderate-risk loans are loans in the risk categories "acceptable" and "moderate" and loans without a risk rating. Low-risk loans are loans in the risk categories "minimal" and "low."

Source: Federal Reserve Board, Survey of Terms of Business Lending.

## Figure: Bank Holding Company Return on Assets

Line chart, by percent, 1997 to 2012. Data are quarterly, s.a.a.r. There is a horizontal line at zero. There are two series, Unadjusted and Adjusted. Unadjusted begins in 1997 at about 1.2 and decreases to about -1.5 by 2008. It then generally increases to about 0.5 by 2012:Q1. Adjusted begins in 2010 at about 0.5 and increase to about 0.75 by 2011. It then decreases to about 0.6 by 2012:Q1.

Note: Adjusted return on assets removes mortgage-related charges by Bank of America in 2011:Q2, debt valuation adjustment income effects between 2011:Q3 and 2012:Q1, and litigation provisions in 2011 and 2012. These adjustments assume a marginal tax rate of 35 percent and are not seasonally adjusted.

Source: Federal Reserve Board.

## Figure: Measures of Adequacy of Reserves, All Banks

Line chart, by percent, 1987 to 2012. Data are quarterly, s.a.a.r. There are two series, Reserves/delinquent loans and Reserves/net charge-offs. Reserves/delinquent loans begins in 1987 at about 27 and generally increases to about 90 by 1995. It generally decreases to about 65 by 2001 and then increases to about 92 by 2006. It then decreases to about 43 by 2012:Q1. Reserves/net charge-offs begins in 1987 at about 200 and generally increases to about 530 by 1993. It generally decrease to about 140 by 2001 and then increases to about 360 by 2006. It generally decreases to about 120 by 2009 and then increases to about 230 by 2012:Q1.

Source: Call Report.

## Growth of M2 and Its Components

Percent, s.a.a.r.

	M2	Liquid deposits	Small time deposits	Retail MMFs	Curr.
2011	9.7	15.4	-18.5	-2.1	8.8
2011:H2	12.1	17.9	-19.7	1.8	7.8
2012:Q1	8.4	12.4	-15.3	-11.1	10.5
Mar.	3.6	6.8	-23.4	-12.9	10.9
Apr.	5.3	8.5	-21.4	-2.8	6.8
May.(p)	4.1	6.8	-20.1	-3.0	5.2

Note: Retail MMFs are retail money market funds.

p Preliminary. [Return to table](#)

Source: Federal Reserve Board.

## Figure: Level of Liquid Deposits

Line chart, by trillions of dollars, 2008 to 2012. Data are weekly. There is a vertical line at April 2012 representing the April FOMC. The series begins in 2008 at about 4.5 and generally increases to about 7.5 by June 2012.

Note: Seasonally adjusted.

Source: Federal Reserve Board.

Note: The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research: July 1990-March 1991, March 2001-November 2001, and December 2007-June 2009.

## [Box:] Balance Sheet Developments over the Intermeeting Period

### Federal Reserve Balance Sheet

Billions of dollars

	Change since last FOMC	Current (06/11/12)
<b>Total assets</b>	<b>-26</b>	<b>2,853</b>
Selected assets:		
Liquidity programs for financial firms	-9	23
Primary, secondary, and seasonal credit	+0	+0
Foreign central bank liquidity swaps	-9	32
Term Asset-Backed Securities Loan Facility (TALF)	-1	5
Net portfolio holdings of Maiden Lane LLCs	-2	19
Maiden Lane	-0	4
Maiden Lane II*	-0	+0
Maiden Lane III	-2	15
Securities held outright**	-16	2,605
U.S. Treasury securities	-3	1,660
Agency debt securities	-1	93
Agency mortgage-backed securities	-11	852
<b>Total liabilities</b>	<b>-26</b>	<b>2,798</b>
Selected liabilities:		
Federal Reserve notes in circulation	9	1,066
Reverse repurchase agreements	-2	85
Foreign official and international accounts	-2	85
Others	0	0
Reserve balances of depository institutions***	100	1,552
Term deposits held by depository institutions	3	3

U.S. Treasury, General Account	-64	44
U.S. Treasury, Supplementary Financing Account	0	0
Other deposits	-73	24
<b>Total capital</b>	<b>+0</b>	<b>55</b>

Note: +0 (-0) denotes positive (negative) value rounded to zero. [Return to table](#)

\* In March 2012, proceeds from asset sales from the Maiden Lane II portfolio enabled the repayment of the remaining outstanding balances of loans from the Federal Reserve Bank of New York and American International Group to Maiden Lane IL A small cash balance will remain in Maiden Lane II for at least one year in order to accommodate any possible claims on the LLC and to meet trailing expenses and other obligations. [Return to table](#)

\*\* Par value. [Return to table](#)

\*\*\* Includes required clearing balances and overdrafts. Excludes as-of adjustments. [Return to table](#)

## Risks and Uncertainty

### Alternative Scenarios

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

Measure and scenario	2012		2013	2014	2015	2016-17
	H1	H2				
Real GDP						
Extended Tealbook baseline	1.8	1.9	2.2	3.1	3.5	3.3
European crisis with severe spillovers	1.7	-2.7	-3.6	1.9	4.5	4.7
Hard landing in China	1.7	1.1	1.1	2.8	4.0	3.9
Fiscal cliff	1.8	1.9	1.0	2.3	3.8	4.1
Faster recovery	1.8	2.7	3.9	3.4	2.8	2.6
Damaged labor market	1.8	1.7	2.0	2.6	2.9	2.4
Future labor market damage	1.8	1.9	2.0	2.7	2.9	2.6
Unemployment rate <sup>1</sup>						
Extended Tealbook baseline	8.2	8.2	8.0	7.7	7.1	5.9
European crisis with severe spillovers	8.2	8.8	10.9	11.4	10.4	7.9
Hard landing in China	8.2	8.3	8.6	8.5	7.9	6.3
Fiscal cliff	8.2	8.2	8.5	8.6	8.1	6.1
Faster recovery	8.2	8.1	7.2	6.5	6.2	5.8
Damaged labor market	8.2	8.2	8.2	8.0	7.8	7.5
Future labor market damage	8.2	8.3	8.3	8.2	7.9	7.4
Total PCE prices						
Extended Tealbook baseline	1.5	.8	1.5	1.5	1.6	1.8

European crisis with severe spillovers	1.4	-1.3	-.8	.7	1.8	2.2
Hard landing in China	1.4	.0	.4	.8	1.4	2.1
Fiscal cliff	1.5	.8	1.5	1.3	1.3	1.4
Faster recovery	1.5	.8	1.5	1.7	1.9	2.2
Damaged labor market	1.5	.9	1.8	2.1	2.4	2.5
Future labor market damage	1.5	.8	1.5	1.6	1.9	2.1
<i>Core PCE prices</i>						
Extended Tealbook baseline	1.9	1.5	1.6	1.6	1.7	1.8
European crisis with severe spillovers	1.9	.6	.2	.8	1.5	2.0
Hard landing in China	1.9	1.3	1.1	1.2	1.5	1.8
Fiscal cliff	1.9	1.5	1.6	1.4	1.4	1.4
Faster recovery	1.9	1.5	1.6	1.8	2.0	2.2
Damaged labor market	1.9	1.6	1.9	2.2	2.5	2.5
Future labor market damage	1.9	1.5	1.6	1.7	1.9	2.1
<i>Federal funds rate<sup>1</sup></i>						
Extended Tealbook baseline	.2	.1	.1	.5	1.6	3.4
European crisis with severe spillovers	.1	.1	.1	.1	.1	.8
Hard landing in China	.1	.1	.1	.1	.4	2.2
Fiscal cliff	.2	.1	.1	.1	.3	3.0
Faster recovery	.2	.4	1.5	2.6	3.0	3.7
Damaged labor market	.2	.2	.6	1.9	3.4	4.7
Future labor market damage	.2	.1	.1	1.0	2.7	4.0

1. Percent, average for the final quarter of the period. [Return to table](#)

## Forecast Confidence Intervals and Alternative Scenarios

### Confidence Intervals Based on FRB/US Stochastic Simulations

#### Figure: Real GDP

Line chart, by 4-quarter percent change, 2008 to 2017. There is a horizontal line at zero. There are nine series, Extended Tealbook baseline, European crisis with severe spillovers, Hard landing in China, Fiscal cliff, Faster recovery, Damaged labor market, Future labor market damage, 90 percent interval and 70 percent interval. Extended Tealbook baseline begins in 2008 at about 2 and generally decreases to about -5 by 2009. It increases to about 3.5 by 2010 and then generally decreases to about 1.5 by 2011. It then generally increases to about 3.2 by 2017. European crisis with severe spillovers begins in 2012 at about 2 and generally decreases to about -4 by 2013. It then generally increases to about 4.95 by 2017. Hard landing in China begins in 2012 at about 2 and generally decreases to about 1 by 2013. It then generally increases to about 3.95 by 2017. Fiscal cliff begins in 2012 at about 2 and generally decreases to about 1 by 2014. It then generally increases to about 4 by 2017. Faster recover begins in 2012 at about 2 and generally increases to about 4 by 2013. It then generally decreases to about 2.6 by 2017. Damaged labor market begins in 2012 at about 2 and generally increases to about 3 by 2014. It then decreases to about 2.5 by 2017. Future labor market damage begins in 2012 at about 2 and generally increases to

about 3 by 2014. It then generally decreases to about 2.5 by 2017. The other two series closely track each other throughout the chart, with the 90 percent interval being about 1.2 less than and greater than the 70 percent interval. The 70 percent interval starts at about 0.75 and 3 and increase to between 1.3 and 5 by 2014. It ends in 2017 at about 1.5 and 5.25.

### **Figure: Unemployment Rate**

Line chart, by percent, 2008 to 2017. There are nine series, Extended Tealbook baseline, European crisis with severe spillovers, Hard landing in China, Fiscal cliff, Faster recovery, Damaged labor market, Future labor market damage, 90 percent interval and 70 percent interval. Extended Tealbook baseline begins in 2008 at about 5 and generally increases to about 10 by 2009. It then generally decreases to about 6 by 2017. European crisis with severe spillovers begins in 2012 at about 8.25 and generally increase to about 11.5 by 2014. It then decreases to about 8 by 2017. Hard landing in China begins in 2012 at about 8.25 and generally increases to about 8.6 by 2014. It then generally decreases to about 6.3 by 2017. Fiscal cliff begins in 2012 at about 8.25 and generally increases to about 8.6 by 2014. It then generally decreases to about 6 by 2017. Faster recovery begins in 2012 at about 8.25 and generally decreases to about 5.8 by 2017. Damaged labor market begins in 2012 at about 8.25 and generally decreases to about 7.5 by 2017. Future labor market damage begins in 2012 at about 8.25 and generally decreases to about 7.5 by 2017. The other two series closely track each other throughout the chart, with the 90 percent interval being about 1.1 less than and 2 greater than the 70 percent interval. The 70 percent interval starts in 2012 at about 8 and 8.25 and generally increases to about 6.5 and 8.75 by 2014. It ends in 2017 at about 5 and 7.1.

### **Figure: PCE Prices excluding Food and Energy**

Line chart, by 4-quarter percent change, 2008 to 2017. There is a horizontal line at zero. There are nine series, Extended Tealbook baseline, European crisis with severe spillovers, Hard landing in China, Fiscal cliff, Faster recovery, Damaged labor market, Future labor market damage, 90 percent interval and 70 percent interval. Extended Tealbook baseline begins in 2008 at about 2.35 and generally decreases to about 1 by 2010. It generally increases to about 2 by 2012 and then decreases to about 1.8 by 2017. European crisis with severe spillovers begins in 2012 at about 2 and generally decreases to about 0.2 by 2013. It then generally increases to about 2.1 by 2017. Hard landing in China begins in 2012 at about 2 and generally decreases to about 1.15 by 2013. It then generally increases to about 1.9 by 2017. Fiscal cliff begins in 2012 at about 2 and generally decreases to about 1.5 by 2017. Faster recovery begins in 2012 at about 2 and generally increases to about 2.25 by 2017. Damaged labor market begins in 2012 at about 2 and generally increases to about 2.55 by 2017. Future labor market damage begins in 2012 at about 2 and generally increases to about 2.25 by 2017. The other two series closely track each other throughout the series, with the 90 percent interval being about 1 less than and greater than the 70 percent interval. The 70 percent interval begins in 2012 at about 1.5 and 2.25 and increases to about 0.8 and 2.5. It ends in 2017 at about 0.9 and 2.75.

### **Figure: Federal Funds Rate**

Line chart, by percent, 2008 to 2017. There are nine series, Extended Tealbook baseline, European crisis with severe spillovers, Hard landing in China, Fiscal cliff, Faster recovery, Damaged labor market, Future labor market damage, 90 percent interval and 70 percent interval. Extended Tealbook baseline begins in 2008 at about 3.1 and generally decreases to about 0.1 by 2009. It remains constant here until about 2014 when it begins increasing. It ends in 2017 at about 3.3. European crisis with severe spillovers begins in 2012 at about 0.1 where it remains constant until about 2016. It increases to about 0.8 by 2017. Hard landing in China begins in 2012 at about 0.1 where it remains constant until about 2015 when it begins increasing. It ends in 2017 at about 2.1. Fiscal cliff begins in 2012 at about 0.1 where it remains constant until about 2015 when it begins increasing. It ends in 2017 at about 3. Faster recovery begins in 2012 at about 0.1 and generally increases to about 3.75 by 2017. Damaged labor market begins in 2012 at about 0.1 where it remains constant until about 2013. It begins increasing and ends in 2017 at about 4.75. Future labor market damage begins in 2012 at about 0.1 where it remains constant until about 2014 when it begins increasing. It ends in 2017 at about 4. The other two series closely track each other throughout the series with the 90 percent interval being about 1.3 less than and greater than the 70 percent interval.

The 70 percent interval begins in 2012 at about 0.1 and 0.5 and increases to about 0.1 and 3 by 2014. It ends in 2017 at about 1.3 and 5.2.

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

Measure	2012	2013	2014	2015	2016	2017
<i>Real GDP (percent change, Q4 to Q4)</i>						
Projection	1.9	2.2	3.1	3.5	3.4	3.2
Confidence interval						
Tealbook forecast errors	.6-3.1	.4-3.9	...	...	...	...
FRB/US stochastic simulations	.9-2.9	.6-3.8	1.1-4.7	1.5-5.1	1.5-5.5	1.3-5.3
<i>Civilian unemployment rate (percent, Q4)</i>						
Projection	8.2	8.0	7.7	7.1	6.5	5.9
Confidence interval						
Tealbook forecast errors	7.7-8.7	7.2-8.8	...	...	...	...
FRB/US stochastic simulations	7.8-8.5	7.1-8.8	6.7-8.9	6.1-8.4	5.5-7.8	4.9-7.1
<i>PCE prices, total (percent change, Q4 to Q4)</i>						
Projection	1.2	1.5	1.5	1.6	1.7	1.8
Confidence interval						
Tealbook forecast errors	.4-1.9	.3-2.8	...	...	...	...
FRB/US stochastic simulations	.5-1.8	.5-2.6	.4-2.6	.4-2.8	.5-2.8	.6-3.0
<i>PCE prices excluding food and energy (percent change, Q4 to Q4)</i>						
Projection	1.7	1.6	1.6	1.7	1.8	1.8
Confidence interval						
Tealbook forecast errors	1.3-2.2	.9-2.3	...	...	...	...
FRB/US stochastic simulations	1.3-2.1	.8-2.4	.8-2.5	.7-2.6	.8-2.7	.9-2.8
<i>Federal funds rate (percent, Q4)</i>						
Projection	.1	.1	.5	1.6	2.6	3.4
Confidence interval						
FRB/US stochastic simulations	.1-.7	.1-1.6	.1-2.7	.1-3.6	.6-4.5	1.4-5.4

Note: Shocks underlying FRB/US stochastic simulations are randomly drawn from the 1969-2009 set of model equation residuals.

Intervals derived from Tealbook forecast errors are based on projections made from 1979-2009, except for PCE prices excluding food and energy, where the sample is 1981-2009.

... Not applicable. The Tealbook forecast horizon has typically extended about 2 years. [Return to table](#)

## Tealbook Forecast Compared with Blue Chip

(Blue Chip survey released June 10, 2012)

### **Figure: Real GDP**

Line chart, by percent change, annual rate, 2008 to 2013. There is a horizontal line at zero. There are three series, Blue chip consensus, Staff forecast, and Blue Chip top 10 and bottom 10 averages. Blue chip consensus begins in 2008:Q1 at about -1.9 and generally decreases to about -9 by 2008:Q4. It generally increases to about 3.9 by 2009:Q4 and then generally decreases to about 0.3 by 2011:Q1. It generally increases to about 3 by 2011:Q4 and then decreases 2.8 by 2013:Q4. Staff forecast generally follows the same path as Blue Chip consensus and ends in 2013:Q4 at about 2.5. Blue Chip top 10 and bottom 10 averages begins in 2011:Q4 between 1.8 and 2.6 and generally increases to between 2 and 4 by 2013:Q4.

### **Figure: Real PCE**

Line chart, by percent change, annual rate, 2008 to 2013. There is a horizontal line at zero. There are three series, Blue chip consensus, Staff forecast, and Blue Chip top 10 and bottom 10 averages. Blue chip consensus begins in 2008:Q1 at about -1 and generally decreases to about -5.2 by 2008:Q4. It generally increases to about 3.8 by 2010:Q4 and then decreases to about 1 by 2011:Q1. It then generally increases to about 2.5 by 2013:Q4. Staff forecast generally follows the same exact path as Blue chip consensus. Blue Chip top 10 and bottom 10 averages begins in 2011:Q4 at about 1.75 and 3 and increases to about 0.3 and 3 by 2012:Q4. It ends in 2013:Q4 at about 1.9 and 3.2.

### **Figure: Unemployment Rate**

Line chart, by percent, 2008 to 2013. There is a horizontal line at zero. There are three series, Blue chip consensus, Staff forecast, and Blue Chip top 10 and bottom 10 averages. Blue chip consensus begins in 2008 at about 5 and generally increases to about 9.85 by 2009. It then generally decreases to about 7.6 by 2013. Staff forecast follows the same path as Blue chip consensus until about 2012 when it starts decreases at a slower rate. It ends in 2013 at about 8. Blue chip top 10 and bottom 10 averages begins in 2012:Q1 at about 7.9 and 8.1 and increases to about 7.6 and 8 by 2012:Q4. It ends in 2013 at about 7 and 8.

### **Figure: Consumer Price Index**

Line chart, by percent change, annual rate, 2008 to 2013. There is a horizontal line at zero. There are three series, Blue chip consensus, Staff forecast, and Blue Chip top 10 and bottom 10 averages. Blue chip consensus begins in 2008:Q1 at about 4.15 and generally decreases to about -9.5 by 2008:Q4. It then generally fluctuates between -0.2 and 4 from 2009:Q1 to 2011:Q3. It then decreases to about 1.9 by 2013:Q4. Staff forecast generally follows the same path as Blue chip consensus until 2012 when it begins decreases at a faster rate. It ends in 2013:Q4 at about 1.8. Blue Chip top 10 and bottom 10 averages begins in 2012 at about 0.1 and 2.2 and ends in 2013:Q4 at about 1.8 and 3.1.

### **Figure: Treasury Bill Rate**

Line chart, by percent, 2008 to 2013. There is a horizontal line at zero. There are three series, Blue chip consensus, Staff forecast, and Blue Chip top 10 and bottom 10 averages. Blue chip consensus begins in 2008 at about 2.1 and generally decreases to about 0.1 by 2009. It then generally increases to about 0.4 by 2013. Staff forecast generally follows the same exact path as Blue chip consensus until it begins increasing at a slower rate in 2012. It ends in 2013 at about 0.2. Blue chip top 10 and bottom 10 averages begins in 2012:Q1 at about 0 and 0.2 and increases to about 0.1 and 0.5 by 2012:Q4. It then increases to about 0.1 and 0.85 by 2013:Q4.

### **Figure: 10-Year Treasury Yield**

Line chart, by percent, 2008 to 2013. There is a horizontal line at zero. There are three series, Blue chip consensus, Staff forecast, and Blue Chip top 10 and bottom 10 averages. Blue chip consensus begins in 2008 at about 3.6 and generally decreases to about 2.1 by 2011. It then generally increases to about 2.75 by 2013. Staff forecast generally follows the same exact path as Blue chip consensus until 2012 when it begins increasing at a faster rate. It ends in 2013 at about 2.9. Blue chip top 10 and bottom 10 averages begins in 2012:Q1 at about 1.6



and 2.1 and increases to about 1.8 and 2.5 by 2012:Q3. It then increases to about 2.1 and 3.55 by 2013:Q4.

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.

## Greensheets

### 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>	
		04/18/12	06/13/12	04/18/12	06/13/12	04/18/12	06/13/12	04/18/12	06/13/12	04/18/12	06/13/12
<i>Quarterly</i>											
2011:	Q1	3.1	3.1	.4	.4	3.9	3.9	1.6	1.6	9.0	9.0
	Q2	4.0	4.0	1.3	1.3	3.3	3.3	2.3	2.3	9.1	9.1
	Q3	4.4	4.4	1.8	1.8	2.3	2.3	2.1	2.1	9.1	9.1
	Q4	3.8	3.8	3.0	3.0	1.2	1.2	1.3	1.3	8.7	8.7
2012:	Q1	4.6	3.9	2.5	2.2	2.5	2.4	2.2	2.1	8.2	8.2
	Q2	3.5	2.8	2.1	1.5	1.6	.6	1.8	1.7	8.2	8.2
	Q3	4.3	4.2	2.5	1.9	1.8	.1	1.7	1.6	8.1	8.2
	Q4	4.5	3.5	2.9	1.9	1.7	1.5	1.7	1.5	8.0	8.2
2013:	Q1	4.0	3.4	2.4	1.7	1.6	1.6	1.7	1.6	7.9	8.1
	Q2	4.3	3.6	2.7	2.1	1.5	1.6	1.7	1.6	7.9	8.1
	Q3	4.5	3.8	2.9	2.3	1.5	1.5	1.7	1.6	7.8	8.0
	Q4	4.7	4.0	3.1	2.5	1.5	1.5	1.7	1.6	7.7	8.0
<i>Two-quarter<sup>2</sup></i>											
2011:	Q2	3.5	3.5	.8	.8	3.6	3.6	1.9	1.9	-5	-5
	Q4	4.1	4.1	2.4	2.4	1.8	1.8	1.7	1.7	-4	-4
2012:	Q2	4.1	3.3	2.3	1.8	2.0	1.5	2.0	1.9	-5	-5
	Q4	4.4	3.8	2.7	1.9	1.7	.8	1.7	1.5	-2	.0
2013:	Q2	4.2	3.5	2.5	1.9	1.6	1.6	1.7	1.6	-1	-1
	Q4	4.6	3.9	3.0	2.4	1.5	1.5	1.7	1.6	-2	-1
<i>Four-quarter<sup>3</sup></i>											
2010:Q4		4.7	4.7	3.1	3.1	1.3	1.3	1.0	1.0	-3	-3
2011:Q4		3.8	3.8	1.6	1.6	2.7	2.7	1.8	1.8	-9	-9
2012:Q4		4.2	3.6	2.5	1.9	1.9	1.2	1.8	1.7	-7	-5
2013:Q4		4.4	3.7	2.8	2.2	1.5	1.5	1.7	1.6	-3	-2
2014:Q4		5.0	4.6	3.3	3.1	1.5	1.5	1.7	1.6	-3	-3



<i>Tealbook</i>	10.3	15.7	5.2	.6	6.1	4.5	4.4	4.9	6.2	4.9
Equipment & software	6.2	16.2	7.5	3.7	3.4	4.6	5.1	3.7	5.6	6.6
<i>Previous Tealbook</i>	6.2	16.2	7.5	1.9	8.6	6.0	5.8	6.0	7.3	5.5
Nonres. structures	22.6	14.4	-.9	.3	-.2	-1.8	-1.5	.4	.7	.7
<i>Previous Tealbook</i>	22.6	14.4	-.9	-2.8	-.4	.2	.6	1.9	3.1	3.2
Net exports <sup>2</sup>	-416	-403	-411	-408	-415	-429	-440	-445	-454	-458
<i>Previous Tealbook</i> <sup>2</sup>	-416	-403	-411	-402	-399	-406	-408	-404	-401	-396
Exports	3.6	4.7	2.7	4.1	3.9	3.9	2.9	3.3	3.5	3.9
Imports	1.4	1.2	3.7	2.8	4.6	5.6	4.4	3.6	4.4	3.9
Gov't. cons. & invest.	-.9	-.1	-4.2	-4.0	-2.0	-1.9	-1.2	-1.0	-1.3	-1.6
<i>Previous Tealbook</i>	-.9	-.1	-4.2	.1	-.9	-1.0	-1.1	-1.1	-1.1	-1.3
Federal	1.9	2.1	-6.9	-5.9	-2.8	-3.6	-2.6	-3.0	-3.8	-4.7
Defense	7.0	5.0	-12.1	-8.3	-3.0	-4.2	-2.7	-3.3	-4.5	-5.8
Nondefense	-7.6	-3.8	4.5	-.8	-2.4	-2.4	-2.5	-2.4	-2.5	-2.5
State & local	-2.8	-1.6	-2.2	-2.7	-1.5	-.8	-.2	.3	.4	.5
Change in bus. inventories <sup>2</sup>	39	-2	52	58	65	79	81	83	91	100
<i>Previous Tealbook</i> <sup>2</sup>	39	-2	52	62	50	55	68	70	73	82
Nonfarm <sup>2</sup>	51	6	61	65	65	79	81	82	90	100
Farm <sup>2</sup>	-9	-6	-6	-7	0	1	1	1	1	1

1. Change from fourth quarter of previous year to fourth quarter of year indicated. [Return to table](#)

2. Billions of chained (2005) dollars. [Return to table](#)

## 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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Real GDP	2.8	2.4	2.2	-3.3	-.5	3.1	1.6	1.9	2.2	3.1
<i>Previous Tealbook</i>	2.8	2.4	2.2	-3.3	-.5	3.1	1.6	2.5	2.8	3.3
Final sales	2.7	2.8	2.4	-2.6	-.8	2.4	1.5	1.6	1.9	2.9

[illegible]

State & local	.4	1.2	1.2	-.9	-1.1	-1.7	-2.5	-1.3	.5	1.3
Change in bus. inventories <sup>1</sup>	50	59	28	-36	-145	59	35	71	98	133
<i>Previous Tealbook</i> <sup>1</sup>	50	59	28	-36	-145	59	35	59	82	113
Nonfarm <sup>1</sup>	50	63	29	-38	-144	61	44	72	97	132
Farm <sup>1</sup>	0	-4	-1	1	-1	-1	-7	-1	1	1

## Contributions to Changes in Real Gross Domestic Product

[illegible]

1. Change from fourth quarter of previous year to fourth quarter of year indicated. [Return to table](#)

## (Percent, annual rate except as noted)

[illegible]

<i>Tealbook</i>	3.3	2.3	1.2	2.5	1.6	1.8	1.7	1.6	1.5	1.5
Energy	15.0	3.3	-3.2	7.9	-16.1	-21.0	2.4	2.3	.7	.0
<i>Previous Tealbook</i>	15.0	3.3	-3.2	7.8	-1.3	3.9	1.7	-.2	-.8	-1.7
Food	6.4	4.7	3.3	1.3	1.5	1.7	1.5	1.5	1.5	1.4
<i>Previous Tealbook</i>	6.4	4.7	3.3	1.3	1.5	1.7	1.7	1.6	1.6	1.5
Ex. food & energy	2.3	2.1	1.3	2.1	1.7	1.6	1.5	1.6	1.6	1.6
<i>Previous Tealbook</i>	2.3	2.1	1.3	2.2	1.8	1.7	1.7	1.7	1.7	1.7
Ex. food & energy, market based	2.4	2.3	1.4	2.0	1.6	1.4	1.4	1.5	1.5	1.5
<i>Previous Tealbook</i>	2.4	2.3	1.4	2.0	1.7	1.6	1.6	1.6	1.6	1.6
CPI	4.4	3.1	1.3	2.5	.6	-.4	1.6	1.8	1.7	1.6
<i>Previous Tealbook</i>	4.4	3.1	1.3	2.5	1.8	2.0	1.7	1.6	1.6	1.5
Ex. food & energy	2.4	2.5	1.9	2.1	2.5	1.8	1.5	1.7	1.7	1.7
<i>Previous Tealbook</i>	2.4	2.5	1.9	2.1	2.2	1.8	1.7	1.7	1.8	1.8
ECI, hourly compensation <sup>2</sup>	3.2	1.4	2.1	1.7	2.3	2.5	2.5	2.6	2.5	2.6
<i>Previous Tealbook</i> <sup>2</sup>	3.2	1.4	1.8	2.5	2.5	2.6	2.6	2.7	2.7	2.8
Nonfarm business sector										
Output per hour	-.3	1.8	1.2	-.4	.8	.4	1.1	1.4	1.4	1.5
<i>Previous Tealbook</i>	-.3	1.8	1.0	-.5	1.7	1.4	1.9	1.2	1.6	1.9
Compensation per hour	-.5	5.7	-.4	.4	2.3	1.6	2.7	2.7	2.7	2.8
<i>Previous Tealbook</i>	-.5	5.7	3.7	1.8	2.5	2.8	2.8	2.8	2.8	2.9
Unit labor costs	-.1	3.9	-1.5	.9	1.5	1.2	1.7	1.3	1.3	1.2
<i>Previous Tealbook</i>	-.1	3.9	2.7	2.3	.8	1.4	.9	1.5	1.2	1.0
Core goods imports chain-wt. price index <sup>3</sup>	7.2	2.4	-.4	.4	2.0	-1.6	-.3	.9	1.4	1.6
<i>Previous Tealbook</i> <sup>3</sup>	7.2	2.4	-.4	.3	1.1	.7	1.5	1.5	1.5	1.5

1. Change from fourth quarter of previous year to fourth quarter of year indicated. [Return to table](#)



2. Private-industry workers. [Return to table](#)

3. Core goods imports exclude computers, semiconductors, oil, and natural gas. [Return to table](#)

## Changes in Prices and Costs

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

[illegible]

2. Core goods imports exclude computers, semiconductors, oil, and natural gas. [Return to table](#)

[illegible]

mfg. <sup>3</sup>	74.4	75.2	76.1	77.7	77.8	78.1	78.4	78.5	78.7	78.9
<i>Previous Tealbook</i> <sup>3</sup>	74.4	75.2	76.1	77.8	78.3	78.8	79.2	79.3	79.4	79.7
Housing starts <sup>6</sup>	.6	.6	.7	.7	.7	.7	.8	.8	.9	.9
Light motor vehicle sales <sup>6</sup>	12.1	12.4	13.4	14.5	14.0	14.3	14.4	14.5	14.7	14.9
<i>Income and saving</i>										
Nominal GDP <sup>5</sup>	4.0	4.4	3.8	3.9	2.8	4.2	3.5	3.4	3.6	3.8
Real disposable pers. income <sup>5</sup>	-5	.7	.2	.5	3.2	3.4	3.5	-1.3	2.8	2.9
<i>Previous Tealbook</i> <sup>5</sup>	-5	.7	1.7	.3	2.3	3.2	3.6	-.4	3.1	3.2
Personal saving rate <sup>3</sup>	4.8	4.6	4.2	3.6	3.9	4.0	4.2	3.4	3.5	3.6
<i>Previous Tealbook</i> <sup>3</sup>	4.8	4.6	4.5	4.1	4.0	4.1	4.2	3.5	3.6	3.7
Corporate profits <sup>7</sup>	13.7	6.9	3.5	1.8	6.2	.9	.3	-.8	-2.5	-2.6
Profit share of GNP <sup>3</sup>	12.7	12.8	12.8	12.7	12.8	12.7	12.7	12.5	12.4	12.2
Net federal saving <sup>8</sup>	-1,275	-1,161	-1,114	-1,000	-1,011	-954	-954	-768	-747	-727
Net state & local saving <sup>8</sup>	-40	-83	-81	-88	-61	-47	-38	-31	-14	-9
Gross national saving rate <sup>3</sup>	12.4	12.9	13.0	12.7	13.1	13.6	13.5	13.6	13.7	13.8
Net national saving rate <sup>3</sup>	-.4	.2	.3	.1	.5	1.1	1.0	1.1	1.1	1.2

1. Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise indicated. [Return to table](#)

2. Change, millions. [Return to table](#)

3. Percent; annual values are for the fourth quarter of the year indicated. [Return to table](#)

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. [Return to table](#)

5. Percent change, annual rate. [Return to table](#)

6. Level, millions; annual values are annual averages. [Return to table](#)

7. Percent change, annual rate, with inventory valuation and capital consumption adjustments. [Return to table](#)

8. Billions of dollars; annual values are annual averages. [Return to table](#)

## Other Macroeconomic Indicators

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

Item	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>Employment and production</i>									
Nonfarm payroll employment <sup>1</sup>	2.4	2.1	1.2	-2.8	-5.6	.8	1.8	1.7	1.5
Unemployment rate <sup>2</sup>	5.0	4.5	4.8	6.9	9.9	9.6	8.7	8.2	8.0
<i>Previous Tealbook</i> <sup>2</sup>	5.0	4.5	4.8	6.9	9.9	9.6	8.7	8.0	7.7
NAIRU <sup>2</sup>	5.0	5.0	5.0	5.3	6.0	6.0	6.0	6.0	6.0
<i>Previous Tealbook</i> <sup>2</sup>	5.0	5.0	5.0	5.3	6.0	6.0	6.0	6.0	6.0
GDP gap <sup>3</sup>	.6	.8	.9	-4.5	-6.1	-4.4	-4.5	-4.5	-4.3
<i>Previous Tealbook</i> <sup>3</sup>	.6	.8	.8	-4.5	-6.2	-4.7	-4.8	-4.3	-3.7
Industrial production <sup>4</sup>	2.3	2.1	2.5	-9.0	-5.7	6.3	4.0	3.9	2.4
<i>Previous Tealbook</i> <sup>4</sup>	2.3	2.1	2.5	-9.0	-5.7	6.3	4.0	4.6	2.6
Manufacturing industr. prod. <sup>4</sup>	3.4	1.8	2.8	-11.8	-6.5	6.5	4.2	4.1	2.5
<i>Previous Tealbook</i> <sup>4</sup>	3.4	1.8	2.8	-11.8	-6.5	6.5	4.2	5.1	2.8
Capacity utilization rate - mfg. <sup>2</sup>	78.4	78.2	78.2	69.7	67.0	73.1	76.1	78.4	79.2
<i>Previous Tealbook</i> <sup>2</sup>	78.4	78.2	78.2	69.7	67.0	73.1	76.1	79.2	79.9
Housing starts <sup>5</sup>	2.1	1.8	1.4	.9	.6	.6	.6	.7	.9
Light motor vehicle sales <sup>5</sup>	16.9	16.5	16.1	13.1	10.3	11.5	12.7	14.3	14.8
<i>Income and saving</i>									
Nominal GDP <sup>4</sup>	6.4	5.3	4.9	-1.2	.0	4.7	3.8	3.6	3.7
Real disposable pers. income <sup>4</sup>	.6	4.6	1.6	1.0	-2.4	3.5	.4	2.6	1.9
<i>Previous Tealbook</i> <sup>4</sup>	.6	4.6	1.6	1.0	-2.4	3.5	.8	2.4	2.3
Personal saving rate <sup>2</sup>	1.6	2.8	2.5	6.2	4.3	5.2	4.2	4.2	3.7
<i>Previous Tealbook</i> <sup>2</sup>	1.6	2.8	2.5	6.2	4.3	5.2	4.5	4.2	3.8
Corporate profits <sup>6</sup>	19.6	3.7	-8.1	-33.5	61.8	18.2	7.0	2.3	-2.1
Profit share of GNP <sup>2</sup>	11.8	11.6	10.1	6.8	11.0	12.4	12.8	12.7	12.0
Net federal saving <sup>7</sup>	-283	-204	-245	-613	-1218	-1274	-1188	-980	-739
Net state & local saving <sup>7</sup>	26	51	12	-72	-78	-25	-66	-58	-14
Gross national saving rate <sup>2</sup>	15.6	16.5	13.9	12.6	11.3	12.3	13.0	13.5	13.8
Net national saving rate <sup>2</sup>	3.6	4.4	1.7	-6	-1.9	-.4	.3	1.0	1.2

1. Change, millions. [Return to table](#)

2. Percent; values are for the fourth quarter of the year indicated. [Return to table](#)

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. [Return to table](#)

4. Percent change. [Return to table](#)

5. Level, millions; values are annual averages. [Return to table](#)

6. Percent change, with inventory valuation and capital consumption adjustments. [Return to table](#)

7. Billions of dollars; values are annual averages. [Return to table](#)

## Staff Projections of Federal Sector Accounts and Related Items

(Billions of dollars except as noted)

[illegible]

investment	165	153	145	135	161	160	164	159	152	151	
Gross saving less gross investment <sup>3</sup>	-1260	-1028	-790	-669	-1227	-1298	-1185	-1132	-1008	-1017	
<b>Fiscal indicators<sup>4</sup></b>											
High-employment (HEB) surplus/deficit	-994	-779	-528	-436	-966	-1030	-917	-871	-761	-773	
Change in HEB, percent of potential GDP	-.3	-1.5	-1.7	-.6	-.7	.3	-.8	-.3	-.7	.0	
Fiscal impetus (FI), percent of GDP	-0.3	-0.8	-1.2	-0.5	-0.6	0.4	-0.1	-1.0	-1.0	-0.8	
<i>Previous Tealbook</i>	<i>-0.3</i>	<i>-0.6</i>	<i>-1.2</i>	<i>-0.6</i>	<i>-0.6</i>	<i>0.4</i>	<i>-0.1</i>	<i>-1.0</i>	<i>-0.4</i>	<i>-0.7</i>	

1. Budget receipts, outlays, and surplus/deficit include corresponding social security (OASDI) categories. The OASDI surplus and the Postal Service surplus are excluded from the on-budget surplus and shown separately as off-budget, as classified under current law. [Return to table](#)

2. Other means of financing are checks issued less checks paid, accrued items, and changes in other financial assets and liabilities. [Return to table](#)

3. Gross saving is the current account surplus plus consumption of fixed capital of the general government as well as government enterprises. [Return to table](#)

4. 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 NAIRU. The sign on Change in HEB, as a percent of nominal potential GDP, is reversed. FI is the weighted difference of discretionary changes in federal spending and taxes in chained (2005) dollars, scaled by real GDP. The FI estimates are calendar year contributions to Q4/Q4 real GDP growth. Also, for FI and the change in HEB, positive values indicate aggregate demand stimulus. Quarterly figures for change in HEB and FI are not at annual rates. [Return to table](#)

a Actual. [Return to table](#)

## Change in Debt of the Domestic Nonfinancial Sectors

(Percent)

Period <sup>1</sup>	Households					State and local governments	Federal government	Memo: Nominal GDP
	Total	Total	Home mortgages	Consumer credit	Business			
<i>Year</i>								
2007	8.4	6.6	6.8	5.9	13.6	5.4	4.9	4.9
2008	5.9	-.1	-.5	.8	6.1	.7	24.2	-1.2
2009	3.1	-1.7	-1.4	-4.5	-2.3	3.9	22.7	.0
2010	4.1	-2.2	-2.9	-1.3	.8	2.2	20.2	4.7
2011	3.6	-1.5	-2.3	4.0	4.5	-1.9	11.4	3.8
2012	4.8	.5	-1.3	6.3	4.9	-0	11.2	3.6

2013		4.1	2.1	.7	7.1	4.3	.9	6.9	3.7
2014		4.0	2.2	.7	7.4	4.5	1.0	6.3	4.6
<i>Quarter</i>									
2010:	1	3.7	-2.8	-4.4	-3.1	.1	2.4	20.6	5.5
	2	3.7	-2.2	-2.6	-3.5	-2.0	-.5	22.5	5.4
	3	4.0	-2.2	-3.0	-.6	2.7	2.1	16.0	3.9
	4	4.6	-1.5	-1.7	2.2	2.3	4.8	16.4	4.2
2011:	1	2.4	-1.6	-2.2	3.5	4.1	-3.3	7.9	3.1
	2	2.4	-3.0	-3.1	3.4	5.0	-3.5	8.6	4.0
	3	4.5	-1.1	-2.3	2.3	3.8	.0	14.1	4.4
	4	4.9	-.2	-1.7	6.7	4.9	-1.0	13.1	3.8
2012:	1	4.7	-.4	-2.9	5.8	5.2	-1.8	12.4	3.9
	2	4.9	.1	-1.6	5.9	5.1	.6	11.6	2.8
	3	3.9	.9	-.6	6.3	4.6	.6	7.5	4.2
	4	5.2	1.5	.0	6.6	4.4	.6	11.6	3.5
2013:	1	4.6	2.1	.7	6.8	4.2	.9	8.9	3.4
	2	3.6	2.1	.7	6.9	4.1	.9	5.5	3.6
	3	3.1	2.1	.6	7.0	4.2	.9	3.6	3.8
	4	4.7	2.1	.6	7.0	4.3	.9	9.0	4.0

Note: Quarterly data are at seasonally adjusted annual rates.

1. Data after 2011:Q4 are staff projections. Changes are measured from end of the preceding period to end of period indicated except for annual nominal GDP growth, which is calculated from Q4 to Q4. [Return to table](#)

## Flow of Funds Projections: Highlights

(Billions of dollars at seasonally adjusted annual rates except as noted)

Category	2011	2012	2013	2014	2011		2012				C
					Q3	Q4	Q1	Q2	Q3	Q4	
Domestic nonfinancial sectors											
Net funds raised											
Total	854.8	1447.6	1289.6	1323.4	1070.5	1391.0	1470.2	1461.5	1160.6	1698.2	1
Net equity issuance	-473.4	-370.2	-340.0	-360.0	-617.7	-440.2	-340.8	-420.0	-360.0	-360.0	-
Net debt issuance	1328.2	1817.8	1629.6	1683.4	1688.2	1831.2	1811.0	1881.5	1520.6	2058.2	1
Borrowing indicators											
Debt (percent of GDP) <sup>1</sup>	248.6	249.7	251.7	251.2	247.3	247.8	248.4	249.7	249.8	250.5	



Borrowing (percent of GDP)	8.8	11.6	10.0	10.0	11.1	12.0	11.7	12.1	9.7	13.0	
Households											
Net borrowing <sup>2</sup>	-191.0	67.5	272.7	298.1	-136.4	-26.6	-52.9	10.3	121.4	191.0	
Home mortgages	-232.6	-125.2	63.2	63.6	-230.0	-168.0	-286.7	-156.0	-58.3	0.0	
Consumer credit	96.6	157.9	190.2	212.2	56.5	164.8	144.6	150.4	163.0	173.6	
Debt/DPI (percent) <sup>3</sup>	112.3	108.6	106.5	103.8	111.2	110.7	109.8	108.8	108.0	107.0	
Business											
Financing gap <sup>4</sup>	-196.8	-123.7	52.0	165.7	-252.9	-191.3	-165.6	-137.8	-114.2	-77.3	
Net equity issuance	-473.4	-370.2	-340.0	-360.0	-617.7	-440.2	-340.8	-420.0	-360.0	-360.0	-
Credit market borrowing	509.8	577.8	528.5	574.8	440.9	565.7	617.5	605.5	552.3	535.6	
State and local governments											
Net borrowing	-58.6	-0.0	25.8	29.8	1.0	-29.1	-53.5	17.8	17.8	17.8	
Current surplus <sup>5</sup>	224.9	186.0	239.0	262.9	212.1	215.3	149.7	183.9	199.9	210.3	
Federal government											
Net borrowing	1067.9	1171.2	802.6	780.7	1382.6	1321.2	1300.0	1247.8	829.1	1313.8	1
Net borrowing (n.s.a.)	1067.9	1171.2	802.6	780.7	389.1	326.0	398.3	198.1	250.7	324.1	
Unified deficit (n.s.a.)	1251.4	1132.6	742.2	700.7	328.1	321.7	457.3	140.1	215.4	319.9	
Depository institutions											
Funds supplied	195.0	402.6	505.3	608.2	499.1	575.1	276.6	420.8	437.7	475.3	

Note: Data after 2011:Q4 are staff projections.

1. Average debt levels in the period (computed as the average of period-end debt positions) divided by nominal GDP. [Return to table](#)

2. Includes change in liabilities not shown in home mortgages and consumer credit. [Return to table](#)

3. Average debt levels in the period (computed as the average of period-end debt positions) divided by disposable personal income. [Return to table](#)

4. For corporations, excess of capital expenditures over U.S. internal funds. [Return to table](#)

## Foreign Real GDP and Consumer Prices: Selected Countries

(Quarterly percent changes at an annual rate)

Measure and country	Projected									
	2011				2012				2013	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Real GDP<sup>1</sup></b>										
Total foreign	3.5	2.3	3.9	1.6	3.4	2.5	2.5	2.3	2.5	2.6
<i>Previous Tealbook</i>	3.6	2.4	3.9	1.4	3.2	2.9	2.8	2.9	3.0	3.1
Advanced foreign economies	1.7	-2	3.3	.4	1.5	1.0	.9	.5	.8	1.0
Canada	3.6	-1.0	4.5	1.9	1.9	2.2	2.0	1.9	1.8	1.9
Japan	-7.7	-1.7	7.8	.1	4.7	2.3	1.2	.6	.9	1.1
United Kingdom	1.0	-2	2.3	-1.2	-1.3	-3	3.0	.1	1.1	1.4
Euro area	3.0	.6	.5	-1.3	-.0	-1.2	-1.5	-1.6	-1.0	-.5
Germany	5.5	1.1	2.3	-.7	2.1	.5	-.3	-.6	-.3	.2
Emerging market economies	5.6	5.0	4.6	2.8	5.5	4.1	4.2	4.2	4.3	4.3
Asia	7.7	5.0	5.1	2.6	6.3	5.2	5.4	5.3	5.5	5.5
Korea	5.3	3.4	3.4	1.3	3.5	3.2	3.3	3.3	3.4	3.5
China	9.1	9.5	10.0	7.8	7.4	7.4	7.8	7.8	7.9	7.9
Latin America	3.2	5.0	4.0	3.0	4.8	3.0	3.0	3.0	3.0	3.0
Mexico	2.0	5.7	4.8	2.9	5.3	3.0	2.9	2.9	2.9	2.9
Brazil	3.5	1.9	-.6	.6	.8	2.3	2.8	3.3	3.3	3.4
<b>Consumer prices<sup>2</sup></b>										
Total foreign	4.2	3.5	3.0	2.8	2.6	2.3	2.0	2.2	2.2	2.2
<i>Previous Tealbook</i>	4.1	3.4	3.1	2.9	2.5	2.1	2.4	2.4	2.4	2.4
Advanced foreign economies	3.0	2.3	1.2	2.5	2.2	1.4	1.1	1.3	1.2	1.2
Canada	3.3	3.4	1.0	2.9	2.1	1.8	1.3	1.7	1.8	1.8

Japan	.0	-.7	.1	-.7	2.3	-.2	-.3	-.3	-.2	-.2
United Kingdom	6.8	3.7	4.0	4.2	2.0	1.4	1.2	3.4	1.7	1.5
Euro Area	3.6	2.8	1.5	4.0	2.6	1.9	1.6	1.5	1.3	1.3
Germany	3.4	2.3	2.0	2.8	2.5	2.4	2.1	2.0	1.8	1.7
Emerging market economies	5.1	4.5	4.5	3.0	3.0	3.0	2.8	2.9	3.0	3.1
Asia	5.5	5.2	4.9	2.2	2.4	3.4	2.5	2.6	2.8	2.9
Korea	5.5	3.4	4.4	2.6	1.6	2.0	2.2	2.5	2.7	2.8
China	5.1	6.1	5.7	1.4	2.0	2.7	2.1	2.4	2.6	2.8
Latin America	3.7	2.9	3.9	5.2	4.6	2.1	3.5	3.7	3.7	3.6
Mexico	3.2	2.4	3.5	4.9	4.5	1.8	3.5	3.6	3.5	3.4
Brazil	7.8	6.8	6.2	6.0	4.0	3.7	4.5	4.8	5.0	5.2

1. Foreign GDP aggregates calculated using shares of U.S. exports. [Return to table](#)

2. Foreign CPI aggregates calculated using shares of U.S. non-oil imports. [Return to table](#)

## Foreign Real GDP and Consumer Prices: Selected Countries

(Percent change, Q4 to Q4)

Measure and country	2006	2007	2008	2009	2010	2011	Projected		
							2012	2013	2014
Real GDP <sup>1</sup>									
Total foreign	4.2	4.4	-.9	.9	4.4	2.8	2.7	2.7	3.2
<i>Previous Tealbook</i>	4.2	4.4	-.9	.9	4.4	2.8	2.9	3.2	3.6
Advanced foreign economies	2.6	2.6	-2.0	-1.4	2.8	1.3	1.0	1.2	1.9
Canada	1.9	2.5	-.7	-1.4	3.3	2.2	2.0	2.0	2.5
Japan	2.1	1.7	-4.8	-.6	3.3	-.5	2.2	1.1	1.4
United Kingdom	2.1	4.1	-5.4	-.8	1.7	.5	.4	1.6	2.5
Euro area	3.8	2.3	-2.2	-2.3	2.2	.7	-1.1	-.3	1.1
Germany	4.9	2.4	-1.9	-2.2	3.8	2.0	.4	.4	1.7
Emerging market economies	6.3	6.7	.4	3.6	6.2	4.5	4.5	4.3	4.6
Asia	7.8	8.8	.8	8.0	7.7	5.1	5.5	5.5	5.8
Korea	4.6	5.8	-3.2	6.3	5.0	3.4	3.3	3.6	4.2
China	12.8	13.7	7.7	11.4	9.6	9.1	7.6	7.9	8.1
Latin America	4.8	4.4	-.2	-.7	4.6	3.8	3.4	3.1	3.2
Mexico	4.1	3.5	-1.1	-2.1	4.3	3.9	3.5	2.9	3.0

Brazil	4.9	6.6	.9	5.2	5.3	1.4	2.3	3.5	4.0
<b>Consumer prices<sup>2</sup></b>									
Total foreign	2.2	3.7	3.3	1.3	3.2	3.4	2.3	2.2	2.5
<i>Previous Tealbook</i>	2.2	3.7	3.3	1.3	3.2	3.4	2.4	2.4	2.5
Advanced foreign economies	1.4	2.2	2.0	.2	1.7	2.2	1.5	1.2	1.5
Canada	1.4	2.5	1.8	.8	2.2	2.7	1.7	1.8	2.0
Japan	.3	.5	1.1	-2.0	-.3	-.3	.4	-.2	1.0
United Kingdom	2.7	2.1	3.9	2.2	3.4	4.7	2.0	1.6	1.6
Euro Area	1.8	2.9	2.3	.4	2.0	2.9	1.9	1.3	1.4
Germany	1.3	3.1	1.7	.3	1.6	2.6	2.2	1.6	1.7
Emerging market economies	2.9	5.1	4.6	2.1	4.3	4.3	2.9	3.1	3.2
Asia	2.4	5.5	3.6	1.3	4.3	4.4	2.7	2.9	3.1
Korea	2.1	3.4	4.5	2.4	3.2	4.0	2.1	2.8	3.0
China	2.1	6.7	2.5	.6	4.6	4.6	2.3	2.7	3.0
Latin America	4.1	4.2	6.7	3.9	4.4	3.9	3.5	3.7	3.7
Mexico	4.1	3.8	6.2	4.0	4.3	3.5	3.4	3.4	3.4
Brazil	3.1	4.3	6.3	4.3	5.6	6.7	4.2	5.3	5.4

1. Foreign GDP aggregates calculated using shares of U.S. exports. [Return to table](#)

2. Foreign CPI aggregates calculated using shares of U.S. non-oil imports. [Return to table](#)

## U.S. Current Account

### Quarterly Data

	Projected										
	2011				2012				2013		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
	<i>Billions of dollars, s.a.a.r.</i>										
<b>U.S. current account balance</b>	<b>-466.2</b>	<b>-479.1</b>	<b>-431.0</b>	<b>-517.3</b>	<b>-545.7</b>	<b>-494.9</b>	<b>-466.6</b>	<b>-501.9</b>	<b>-535.3</b>	<b>-523.6</b>	<b>-551.9</b>
<i>Previous Tealbook</i>	<i>-473.1</i>	<i>-493.7</i>	<i>-430.5</i>	<i>-496.4</i>	<i>-520.4</i>	<i>-478.3</i>	<i>-493.9</i>	<i>-522.0</i>	<i>-553.9</i>	<i>-521.0</i>	<i>-551.9</i>
Current account as percent of GDP	-3.1	-3.2	-2.8	-3.4	-3.5	-3.2	-3.0	-3.2	-3.3	-3.2	-3.4
<i>Previous Tealbook</i>	<i>-3.2</i>	<i>-3.3</i>	<i>-2.8</i>	<i>-3.2</i>	<i>-3.4</i>	<i>-3.1</i>	<i>-3.1</i>	<i>-3.3</i>	<i>-3.4</i>	<i>-3.2</i>	<i>-3.4</i>
Net goods & services	-548.9	-566.2	-539.3	-585.1	-604.0	-556.7	-509.2	-535.0	-563.9	-542.9	-591.9

Investment income, net	220.7	238.0	251.2	210.1	208.6	202.0	186.0	178.6	172.6	159.4	14
Direct, net	317.1	323.6	331.8	294.3	283.6	267.8	241.4	227.9	221.9	213.9	2
Portfolio, net	-96.4	-85.6	-80.6	-84.3	-75.0	-65.9	-55.3	-49.3	-49.3	-54.5	-6
Other income and transfers, net	-138.0	-150.9	-142.9	-142.2	-150.2	-140.1	-143.4	-145.5	-144.0	-140.1	-14

## Annual Data

								Projected		
	2006	2007	2008	2009	2010	2011	2012	2013	2014	
	Billions of dollars									
U.S. current account balance	-800.6	-710.3	-677.1	-374.4	-465.6	-473.4	-502.3	-549.6	-621.1	
Previous Tealbook	-800.6	-710.3	-677.1	-376.6	-470.9	-473.4	-503.6	-540.0	-574.7	
Current account as percent of GDP	-6.0	-5.1	-4.7	-2.7	-3.2	-3.1	-3.2	-3.4	-3.7	
Previous Tealbook	-6.0	-5.1	-4.7	-2.7	-3.2	-3.1	-3.2	-3.3	-3.3	
Net goods & services	-753.3	-696.7	-698.3	-379.2	-494.7	-559.9	-551.2	-561.2	-592.3	
Investment income, net	54.7	111.1	157.8	137.1	174.5	230.0	193.8	154.9	114.5	
Direct, net	174.0	244.6	284.3	262.2	280.6	316.7	255.2	214.6	213.1	
Portfolio, net	-119.4	-133.5	-126.5	-125.1	-106.2	-86.7	-61.4	-59.7	-98.6	
Other income and transfers, net	-102.0	-124.7	-136.6	-132.3	-145.3	-143.5	-144.8	-143.3	-143.3	

† Note: Data values for figures are rounded and may not sum to totals. [Return to text](#)

Last update: January 5, 2018



BOARD OF GOVERNORS *of the* FEDERAL RESERVE SYSTEM  
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# Board of Governors of the Federal Reserve System

*The Federal Reserve, the central bank of the United States, provides the nation with a safe, flexible, and stable monetary and financial system.*

## Accessible Material

### June 2012 Tealbook B Tables and Charts<sup>†</sup>

#### Monetary Policy Strategies

#### Policy Rules and the Staff Projection

#### Near-Term Prescriptions of Selected Policy Rules

	Constrained Policy		Unconstrained Policy	
	2012Q3	2012Q4	2012Q3	2012Q4
Taylor (1993) rule	1.52	1.59	1.52	1.59
<i>Previous Tealbook</i>	1.60	1.85	1.60	1.85
Taylor (1999) rule	0.13	0.13	-0.73	-0.64
<i>Previous Tealbook</i>	0.13	0.13	-0.67	-0.32
Outcome-based rule	0.13	0.13	0.04	-0.08
<i>Previous Tealbook</i>	0.13	0.17	0.11	0.17
First-difference rule	0.13	0.13	-0.07	-0.24
<i>Previous Tealbook</i>	0.26	0.40	0.26	0.40
Nominal income targeting rule	0.13	0.13	-0.41	-0.86
<i>Previous Tealbook</i>	0.13	0.13	-0.43	-0.85

#### Memo: Equilibrium and Actual Real Federal Funds Rate

Current Tealbook

Previous Tealbook

Tealbook-consistent FRB/US $r$ estimate	-2.9	-2.5
Actual real federal funds rate	-1.8	-1.8

## Key Elements of the Staff Projection

### Figure: GDP Gap

Line chart, by percent, 2012 to 2020. There are two series, "Current Tealbook" and "Previous Tealbook." The current Tealbook series begins at about -4.5 in 2012:Q1 and increases to end at about 0 in 2020:Q4. The previous Tealbook series begins at about -4.75 in 2012:Q1 and increases to end at about 0 in 2020:Q4.

### Figure: PCE Prices ex. Food and Energy

Line chart, by Four-quarter percent change, 2012 to 2020. There are two series, "Current Tealbook" and "Previous Tealbook." The current Tealbook series begins at about 1.9 in 2012:Q1 and increases to end at about 2.0 in 2020:Q4. The previous Tealbook series begins at about 1.9 in 2012:Q1 and increases to end at about 2.0 in 2020:Q4.

Note: For rules which have the 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 average value for the policy rate thus far in the quarter.

## Policy Rule Simulations

### Figure: Nominal Federal Funds Rate

Line chart, by percent, 2012 to 2020. There are five series, "Taylor (1993) rule," "Taylor (1999) rule," "Nominal income targeting rule," "First-difference rule," and "Tealbook baseline." All five series begins at about 0 in 2012:Q1. The Taylor (1993) rule series generally increases to about 1.5 in 2012:Q4. It generally increases to end about 4.25 at 2020:Q4. The other four series remain constant following each other until increasing to end at about 4.5 for the Taylor (1999) rule and Tealbook baseline in 2020:Q4. The nominal income targeting rule ends at about 4.75 in 2020:Q4 and the First-difference rule at about 4 in 2020:Q4.

### Figure: Real Federal Funds Rate

Line chart, by percent, 2012 to 2020. There are five series, "Taylor (1993) rule," "Taylor (1999) rule," "Nominal income targeting rule," "First-difference rule," and "Tealbook baseline." All five series begins at about -1.75 in 2012:Q1. The Taylor (1993) rule series generally increases to about 0 in 2012:Q4. It generally increases to end about 2.25 at 2020:Q4 along with the Taylor (1999) rule. The other three series remain constant following each other until increasing to end at about 2.5 for and Tealbook baseline in 2020:Q4. The nominal income targeting rule ends at about 2.6 in 2020:Q4 and the First-difference rule at about 2.1 in 2020:Q4.

### Figure: Unemployment Rate

Line chart, by percent, 2012 to 2020. There are five series, "Taylor (1993) rule," "Taylor (1999) rule," "Nominal income targeting rule," "First-difference rule," and "Tealbook baseline." All five series begins at about 8 in 2012:Q1. They follow each other to generally decrease to end at about 5.2 for the nominal income targeting rule in 2020:Q4. The other four series ends at about 5.5 in 2020:Q4.

### Figure: PCE Inflation (Four-quarter average)

Line chart, by percent, 2012 to 2020. Data are four-quarter averages. There is a horizontal line at 2. There are five series, "Taylor (1993) rule," "Taylor (1999) rule," "Nominal income targeting rule," "First-difference rule," and "Tealbook baseline." Taylor (1993) rule begins in 2012 at about 2.4 and generally decrease to about 0.7 by 2013. It then generally increases to end at about 1.99 by 2020. Taylor (1999) rule begins in 2012 at about 2.4 and generally



decreases to about 1.0 by 2013. It then generally increases to about 2.1 by 2020. Nominal income targeting rule begins in 2012 at about 2.4 and generally decreases to about 1.3 by 2013. It then generally increases to about 2.1 by 2020. First-difference rule begins in 2012 at about 2.4 and generally decreases to about 0.7 by 2013. It then generally increases to end at about 1.8 by 2020. Tealbook baseline begins in 2012 at about 2.4 and generally decreases to about 1.0 by 2013. It generally increases to end at about 2.0 in 2020.

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.

## Constrained vs. Unconstrained Optimal Control Policy

### Figure: Nominal Federal Funds Rate

Line chart, by percent 2012 to 2020. There are four series, "Current Tealbook: Constrained," "Previous Tealbook: Constrained," "Current Tealbook: Unconstrained," and "Tealbook baseline." Current Tealbook: Constrained begins in 2012 at about 0.1 and remains relatively constant here until 2014. It generally increases to end at about 4.1 in 2020. Previous Tealbook: Constrained generally follows the same exact path as Current Tealbook: Constrained, except it ends at about 4.9 in 2020. Current Tealbook: Unconstrained begins in 2012 at about 0.1 and generally decreases to about -2 by 2013. It then generally increases to end at about 4.3 by 2020. Tealbook baseline begins in 2012 at about 0.1 where it remains relatively constant until about 2013. It then generally increases to end about 4.25 by 2020.

### Figure: Real Federal Funds Rate

Line chart, by percent 2012 to 2020. There are four series, "Current Tealbook: Constrained," "Previous Tealbook: Constrained," "Current Tealbook: Unconstrained," and "Tealbook baseline." Current Tealbook: Constrained begins in 2012 at about -1.95 and generally decreases to about -2 by 2016. It then generally increases to end at about 2.9 by 2020. Previous Tealbook: Constrained generally follows the same path as Current Tealbook: Constrained. Current Tealbook: Unconstrained begins in 2012 at about -1.5 and generally decreases to about -4.5 by 2013. It then generally increases to end at about 2.5 by 2020. Tealbook baseline begins in 2012 at about -1.95 and generally increases to end at about 2.5 by 2020.

### Figure: Unemployment Rate

Line chart, by percent, 2012 to 2020. There are four series, "Current Tealbook: Constrained," "Previous Tealbook: Constrained," "Current Tealbook: Unconstrained," and "Tealbook baseline." All four series begin at about 8.25 in 2012. They follow about the same path and generally decrease to end together at about 5.5 in 2020.

### Figure: PCE Inflation

Line chart, by percent, 2012 to 2020. Data are four-quarter averages. There is a horizontal line at 2. There are four series, "Current Tealbook: Constrained," "Previous Tealbook: Constrained," "Current Tealbook: Unconstrained," and "Tealbook baseline." All four series begin at about 2.3 in 2012. Current Tealbook: Constrained decreases to about 1.3 in 2013. It then generally increases to end at about 2.1 in 2020. Previous Tealbook: Constrained remains constant and generally decreases to end at about 2.0 in 2020. Current Tealbook: Unconstrained decreases to about 1.3 in 2013. It then generally increases to end at about 2.0 in 2020. Tealbook baseline decreases to about 1.0 in 2013. It then generally increases to end at about 2.0 in 2020.

## Outcomes under Alternative Policies

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

Measure and scenario	H2	2012	2013	2014	2015	2016
<i>Real GDP</i>						
Extended Tealbook baseline	2.4	1.9	2.2	3.1	3.5	3.4
Taylor (1993)	2.4	1.7	1.6	2.8	3.6	3.7
Taylor (1999)	2.4	1.9	2.2	3.1	3.5	3.4
First-difference	2.4	1.8	1.9	2.8	3.4	3.4
Nominal income targeting	2.4	2.0	2.7	3.6	3.8	3.4
Constrained optimal control	2.4	2.1	3.1	3.9	4.0	3.5
<i>Unemployment rate<sup>1</sup></i>						
Extended Tealbook baseline	8.7	8.2	8.0	7.7	7.1	6.5
Taylor (1993)	8.7	8.2	8.3	8.2	7.6	6.9
Taylor (1999)	8.7	8.2	8.0	7.7	7.1	6.5
First-difference	8.7	8.2	8.1	8.0	7.5	6.8
Nominal income targeting	8.7	8.2	7.8	7.2	6.4	5.8
Constrained optimal control	8.7	8.2	7.6	6.9	6.0	5.3
<i>Total PCE prices</i>						
Extended Tealbook baseline	1.8	1.2	1.5	1.5	1.6	1.7
Taylor (1993)	1.8	1.1	1.3	1.3	1.4	1.5
Taylor (1999)	1.8	1.2	1.5	1.5	1.6	1.7
First-difference	1.8	1.1	1.3	1.2	1.3	1.4
Nominal income targeting	1.8	1.4	1.9	1.9	2.0	2.1
Constrained optimal control	1.8	1.4	2.0	2.1	2.1	2.2
<i>Core PCE prices</i>						
Extended Tealbook baseline	1.7	1.7	1.6	1.6	1.7	1.8
Taylor (1993)	1.7	1.6	1.4	1.4	1.5	1.6
Taylor (1999)	1.7	1.7	1.6	1.6	1.7	1.8
First-difference	1.7	1.6	1.4	1.3	1.4	1.5
Nominal income targeting	1.7	1.9	2.0	2.0	2.1	2.2
Constrained optimal control	1.7	1.9	2.1	2.2	2.2	2.3
<i>Federal funds rate<sup>1</sup></i>						
Extended Tealbook baseline	0.1	0.1	0.1	0.5	1.6	2.6
Taylor (1993)	0.1	1.4	1.0	1.3	2.0	2.7
Taylor (1999)	0.1	0.1	0.1	0.5	1.6	2.6
First-difference	0.1	0.1	0.1	0.9	1.8	2.8
Nominal income targeting	0.1	0.1	0.1	0.1	0.9	2.0
Constrained optimal control	0.1	0.1	0.1	0.1	0.1	1.0

## Unconstrained Optimal Control Policy: Alternative Weights on Policy Objectives

### Figure: Nominal Federal Funds Rate

Line chart, by percent 2012 to 2020. There are four series, "Equal weights (baseline)," "Low weight on unemployment gap variability," "Low weight on inflation deviation from 2%," "No weight on initial change in funds rate." All four series begin at about 0 in 2012. The no weight series generally decreases to about -5 in 2013. It then generally increases to end at about 4.5 in 2020. The other three series follow each other to generally increase to end at about 4.5 in 2020.

### Figure: Real Federal Funds Rate

Line chart, by percent 2012 to 2020. There are four series, "Equal weights (baseline)," "Low weight on unemployment gap variability," "Low weight on inflation deviation from 2%," "No weight on initial change in funds rate." All four series begin at about -2 in 2012. The no weight series generally decreases to about -7 in 2013. It then generally increases to end at about 2.5 in 2020. The other three series follow each other to generally increase to end at about 2.5 in 2020.

### Figure: Unemployment Rate

Line chart, by percent 2012 to 2020. There are four series, "Equal weights (baseline)," "Low weight on unemployment gap variability," "Low weight on inflation deviation from 2%," "No weight on initial change in funds rate." All four series begin at about 8.25 in 2012. They follow about the same path and generally decrease to end together at about 5.5 in 2020.

### Figure: PCE Inflation

Line chart, by percent, 2012 to 2020. Data are four-quarter averages. There is a horizontal line at 2. There are four series, "Equal weights (baseline)," "Low weight on unemployment gap variability," "Low weight on inflation deviation from 2%," "No weight on initial change in funds rate." All four series begin at about 2.3 in 2012. They all follow the same path to generally decrease at 1.2 in 2013. They all generally increase to end at various points in 2020. Equal weights ends at about 1.9. Low weight on unemployment ends at about 2.0. Low weight on inflation ends at about 2.2. No weight ends at about 1.9.

## Monetary Policy Alternatives

Table 1: Overview of Policy Alternatives for the June 20 FOMC Statement

Selected Elements	April Statement	June Alternatives		
		A	B and B'	C
Forward Rate Guidance				
	at least through late	at least through late 2014		at least through late 2014 OR at least through late 2013 OR consider range of

<i>Guidance</i>	2014	<b>OR</b> at least through mid-2015	unchanged	factors, including actual and projected labor market conditions, medium-term outlook for inflation, & risks to achievement of ... objectives
<b>Balance Sheet</b>				
<i>MEP</i>	continue its program as announced in September  (\$400 billion; complete by end of June 2012)	complete the program that it announced in September	continue to purchase at current pace Treasury securities with remaining maturities of 6 to 30 years and sell or redeem equal amount with remaining maturities of approx. 3 years or less, by end of 2012	complete the program that it announced in September
<i>Additional Purchases</i>	none	purchase an additional \$500 billion of agency MBS by the end of June 2013 <b>OR</b> begin purchasing agency MBS, initially at a rate of \$40 billion per month	none	none
<i>Reinvestment Policies</i>	principal payments of agency debt and MBS into agency MBS; Treasuries into Treasuries	unchanged	principal payments of agency debt and MBS into agency MBS; (suspend Treasury rollovers)	unchanged
<b>Future Policy Action</b>				
<i>Future Actions</i>	regularly review the size and composition of securities holdings; prepared to adjust holdings as appropriate to promote stronger recovery in context of price stability	regularly review size and composition of securities holdings; prepared to take further action as appropriate to promote a stronger economic recovery & more rapid improvement in labor market conditions in context of price stability <b>OR</b> will adjust pace of purchases and determine ultimate size of program as needed to...	prepared to take further action as appropriate to promote a stronger economic recovery & sustained improvement in labor market conditions in context of price stability	regularly review size and composition of securities holdings; prepared to adjust holdings as necessary to promote maximum employment & price stability

[Note: In the June FOMC Statement Alternatives, emphasis (strike-through) indicates strike-through text in the original document, and strong emphasis (bold) indicates bold red underlined text in the original document.]

## June FOMC Statement--Alternative A

1. Information received since the Federal Open Market Committee met in ~~March~~ **April** suggests that the economy has been expanding moderately **this year**. ~~Labor market conditions have improved~~ **However, growth in employment has slowed notably** in recent months, **and** the unemployment rate ~~has declined but~~

remains elevated. ~~Household spending and Business fixed investment have~~ **has** continued to advance. **Household spending appears to be rising at a somewhat slower pace than earlier in the year.** Despite some signs of improvement, the housing sector remains depressed. Inflation has ~~picked up~~ **declined** somewhat **more than anticipated**, mainly reflecting ~~higher~~ **lower** prices of crude oil and gasoline, ~~However,~~ **while** longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects economic growth to remain moderate over coming quarters ~~and then to pick up gradually.~~ Consequently, the Committee anticipates that the unemployment rate will decline ~~gradually~~ **only slowly** toward levels that it judges to be consistent with its dual mandate. **Furthermore**, strains in global financial markets continue to pose significant downside risks to the economic outlook. ~~The increase in oil and gasoline prices earlier this year is expected to affect inflation only temporarily, and~~ The Committee anticipates that ~~subsequently~~ **over the medium term** inflation will run at or below the rate that it judges most consistent with its dual mandate.

3. The Committee expects to maintain a highly accommodative stance for monetary policy. In particular, the Committee ~~decided today to~~ **will** keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates ~~that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant~~ **maintaining** exceptionally low levels for the federal funds rate at least through [ late 2014 | **mid-2015** ] **in order** to support a stronger economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate.

4. The Committee also decided to ~~continue its~~ **purchase an additional [ \$500 ] billion of agency mortgage-backed securities by the end of June 2013.** This program should put downward pressure on longer-term interest rates, support mortgage markets, and help to make broader financial conditions **more accommodative.** ~~The Committee will complete this month the~~ program to extend the average maturity of its holdings of securities ~~as that it announced in September.~~ The Committee is maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. The Committee will regularly review the size and composition of its securities holdings and is prepared to ~~adjust those holdings~~ **take further action** as appropriate to promote a stronger economic recovery **and more rapid improvement in labor market conditions** in a context of price stability.

**OR**

4'. The Committee also decided to ~~continue its~~ **begin purchasing additional agency mortgage-backed securities, initially at a rate of about [ \$40 ] billion per month.** The Committee will ~~regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as appropriate~~ **adjust the pace of purchases and determine the ultimate size of the program as needed** to promote a stronger economic recovery **and more rapid improvement in labor market conditions** in a context of price stability. **This program should put downward pressure on longer-term interest rates, support mortgage markets, and help to make broader financial conditions more accommodative.** ~~The Committee will complete this month the~~ program to extend the average maturity of its holdings of securities ~~as that it announced in September.~~ The Committee is maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction.

5. [ **The situation in Europe remains a source of stress in global financial markets. The Committee will continue to closely monitor European developments and their potential consequences for the economic recovery. The Federal Reserve will deploy its tools as necessary to address the effects of global financial strains on the U.S. financial system and economy.** ]

## June FOMC Statement--Alternative B

1. Information received since the Federal Open Market Committee met in ~~March~~ **April** suggests that the economy has been expanding moderately **this year.** ~~Labor market conditions have improved~~ **However,**

**growth in employment has slowed** in recent months, **and** the unemployment rate has declined but remains elevated. ~~Household spending and Business fixed investment have~~ **has** continued to advance. **Household spending appears to be rising at a somewhat slower pace than earlier in the year.** Despite some signs of improvement, the housing sector remains depressed. Inflation has ~~picked up somewhat~~ **declined**, mainly reflecting ~~higher~~ **lower** prices of crude oil and gasoline, ~~However, and~~ longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects economic growth to remain moderate over coming quarters and then to pick up **very** gradually. Consequently, the Committee anticipates that the unemployment rate will decline ~~gradually~~ **only slowly** toward levels that it judges to be consistent with its dual mandate. **Furthermore**, strains in global financial markets continue to pose significant downside risks to the economic outlook. ~~The increase in oil and gasoline prices earlier this year is expected to affect inflation only temporarily, and~~ The Committee anticipates that ~~subsequently~~ inflation **over the medium term** will run at or below the rate that it judges most consistent with its dual mandate.

3. To support a stronger economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate, the Committee expects to maintain a highly accommodative stance for monetary policy. In particular, the Committee decided today to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that economic conditions--including low rates of resource utilization and a subdued outlook for inflation over the medium run--are likely to warrant exceptionally low levels for the federal funds rate at least through late 2014.

4. The Committee also decided to continue **through the end of the year** its program to extend the average maturity of its holdings of securities ~~as announced in September.~~ **Specifically, the Committee intends to purchase Treasury securities with remaining maturities of 6 years to 30 years at the current pace and to sell or redeem an equal amount of Treasury securities with remaining maturities of approximately 3 years or less. This continuation of the maturity extension program should put downward pressure on longer-term interest rates and help to make broader financial conditions more accommodative.** The Committee is maintaining its existing ~~policies~~ **policy** of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities ~~and of rolling over maturing Treasury securities at auction.~~ The Committee ~~will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings~~ **take further action** as appropriate to promote a stronger economic recovery **and sustained improvement in labor market conditions** in a context of price stability.

5. [ **The situation in Europe remains a source of stress in global financial markets. The Committee will continue to closely monitor European developments and their potential consequences for the economic recovery. The Federal Reserve will deploy its tools as necessary to address the effects of global financial strains on the U.S. financial system and economy.** ]

## June FOMC Statement--Alternative B'

1. Information received since the Federal Open Market Committee met in ~~March~~ **April** suggests that the economy has been expanding moderately **this year.** ~~Labor market conditions have improved~~ **However, growth in employment has slowed** in recent months, **and** the unemployment rate ~~has declined but~~ remains elevated. ~~Household spending and Business fixed investment have~~ **has** continued to advance. **Household spending appears to be rising at a somewhat slower pace than earlier in the year.** Despite some signs of improvement, the housing sector remains depressed.

2. The Committee [ expects | **sees it as most likely** ] ~~that~~ economic growth ~~to~~ **will** remain moderate over coming quarters and then ~~to~~ pick up **very** gradually. Consequently, the Committee anticipates that the unemployment rate will decline ~~gradually~~ **only slowly** toward levels that it judges to be consistent with its dual mandate.

3. Inflation has ~~picked up somewhat~~ **declined**, mainly reflecting ~~higher~~ **lower** prices of crude oil and gasoline.



However, Longer-term inflation expectations have remained stable. The increase in oil and gasoline prices earlier this year is expected to affect inflation only temporarily and The Committee [ anticipates | **views it as most likely** ] that subsequently inflation **over the medium term** will run at or below the rate that it judges most consistent with its dual mandate.

4. **In the Committee's assessment, the risks to the outlook for growth in output and employment are primarily to the downside, while the risks to the outlook for inflation are roughly balanced.** Strains in global financial markets continue to pose significant downside risks to the economic outlook **for economic activity; these risks have become somewhat greater since earlier this year. The risk of a sharp increase in the prices of oil and other commodities, which could lead to temporarily higher inflation and temporarily weaker growth, has diminished recently.**

5. ~~To support a stronger economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate, the Committee expects to maintain a highly accommodative stance for monetary policy. In particular, The Committee decided today to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that economic conditions--including low rates of resource utilization and a subdued outlook for inflation over the medium run--are likely to warrant exceptionally low levels for the federal funds rate at least through late 2014.~~

6. The Committee also decided to continue **through the end of the year** its program to extend the average maturity of its holdings of securities ~~as announced in September. Specifically, the Committee intends to purchase Treasury securities with remaining maturities of 6 years to 30 years at the current pace and to sell or redeem an equal amount of Treasury securities with remaining maturities of approximately 3 years or less. This continuation of the maturity extension program should put downward pressure on longer-term interest rates and help to make broader financial conditions more accommodative.~~ The Committee is maintaining its existing ~~policies~~ **policy** of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities ~~and of rolling over maturing Treasury securities at auction.~~

7. ~~Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee's action today is intended to support a stronger economic recovery and mitigate downside risks, thereby fostering a faster return of the unemployment rate to mandate-consistent levels, while maintaining inflation near its 2 percent objective in the medium term. The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings~~ **take further action** as appropriate to promote a stronger economic recovery **and sustained improvement in labor market conditions** in a context of price stability.

8. **[ The situation in Europe remains a source of stress in global financial markets. The Committee will continue to closely monitor European developments and their potential consequences for the economic recovery. The Federal Reserve will deploy its tools as necessary to address the effects of global financial strains on the U.S. financial system and economy. ]**

## June FOMC Statement--Alternative C

1. Information received since the Federal Open Market Committee met in ~~March~~ **April** suggests that the economy has been expanding moderately, **and** labor-market conditions have improved, **on balance, this year** in recent months. The unemployment rate ~~has declined but remains elevated. Household spending and business fixed investment have~~ **Private domestic demand has** continued to advance. ~~Despite some signs of improvement, the housing sector remains depressed. Inflation has picked up~~ **declined** somewhat, mainly reflecting ~~higher~~ **lower** prices of crude oil and gasoline, ~~However,~~ **and** longer-term inflation expectations have remained stable.

2. Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. The Committee expects economic growth to remain moderate over coming quarters and then to pick up gradually. Consequently, the Committee anticipates that the unemployment rate will decline gradually toward levels that it judges to be consistent with its dual mandate. Strains in global financial markets continue



to pose significant downside risks to the economic outlook. The increase in oil and gasoline prices earlier this year is expected to affect inflation only temporarily, and The Committee anticipates that subsequently inflation **over the medium term** will run at or below **about** the rate that it judges most consistent with its dual mandate.

3. To support a ~~stronger~~ **sustainable** economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate, the Committee expects to maintain a highly accommodative stance for monetary policy. In particular, the Committee decided today to keep the target range for the federal funds rate at 0 to 1/4 percent and currently anticipates that economic conditions--including low rates of resource utilization and a subdued outlook for inflation over the medium run--are likely to warrant exceptionally low levels for the federal funds rate at least through late [ 2014 | **2013** ].

**OR**

3'. To support a ~~stronger~~ **sustainable** economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate, the Committee expects to maintain a highly accommodative stance for monetary policy. In particular, the Committee decided today to keep the target range for the federal funds rate at 0 to 1/4 percent ~~and currently anticipates that economic conditions--including low rates of resource utilization and a subdued outlook for inflation over the medium run--are likely to warrant exceptionally low levels for the federal funds rate at least through late 2014.~~ **As rates of resource utilization rise toward levels consistent with maximum employment, the Committee eventually will need to make monetary policy less accommodative in order to ensure that the economy expands at a sustainable pace and to prevent inflation from persistently exceeding its longer-run objective. In determining the appropriate time to increase its target for the federal funds rate, the Committee will consider a range of factors, including actual and projected labor market conditions, the medium-term outlook for inflation, and the risks to the achievement of the Committee's objectives.**

4. The Committee also decided to ~~continue its~~ **complete at the end of this month** the program to extend the average maturity of its holdings of securities ~~as that it~~ announced in September. The Committee is maintaining its existing policies of reinvesting principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage-backed securities and of rolling over maturing Treasury securities at auction. The Committee will regularly review the size and composition of its securities holdings and is prepared to adjust those holdings as ~~appropriate~~ **necessary** to promote ~~a stronger economic recovery in a context of~~ **maximum employment and price stability.**

Long-Run Projections of the Balance Sheet and Monetary Base

Figure: Total Assets

Line chart, by billions of dollars, 2006 to 2020. Data are monthly. There are four series, "Alt A," "Alt B and B'," "Alt C," and "April Alt B." All four series begin at about 900 in 2006. They all follow the same path to generally increase to about 2500 in 2012. The Alt A series generally increases to about 3000 in 2014. It then generally decreases to end at about 2000 in 2020. The Alt B and B' series generally decreases to about 1600 in 2018. It then generally increases to end at about 2000 in 2020. The Alt C series generally decreases to about 1700 in 2016. It then generally increases to end at about 2000 in 2020. The April Alt B series generally decreases to about 1600 in 2017. It then generally increases to end at about 2000 in 2020.

Growth Rates for the Monetary Base

Date	Alternative B and B'	Alternative A	Alternative C	Memo: April Alternative B
	Percent, annual rate			
	Monthly			

Jan-12	9.2	9.2	9.2	9.2
Feb-12	17.8	17.8	17.8	17.8
Mar-12	3.1	3.1	3.1	3.1
Apr-12	-12.2	-12.2	-12.2	-23.8
May-12	-8.8	-8.8	-8.8	2.5
Jun-12	7.9	7.4	7.2	13.8
Jul-12	22.5	19.3	19.3	1.3
Aug-12	10.7	9.9	5.7	5.7
Sep-12	-3.4	4.7	-8.3	-6.2
Quarterly				
2011 Q1	36.8	36.8	36.8	36.8
2011 Q2	69.3	69.3	69.3	69.3
2011 Q3	21.0	21.0	21.0	21.0
2011 Q4	-5.9	-5.9	-5.9	-5.9
2012 Q1	5.5	5.5	5.5	5.5
2012 Q2	-2.5	-2.6	-2.6	-3.3
2012 Q3	10.3	9.9	7.4	4.4
2012 Q4	-0.5	10.8	-5.1	-5.3
Annual - Q4 to Q4				
2010	0.9	0.9	0.9	0.9
2011	32.9	32.9	32.9	32.9
2012	3.2	6.0	1.3	0.3
2013	0.2	13.9	-3.8	-0.2
2014	-1.0	-3.0	-9.8	-2.4
2015	-6.6	-11.9	-13.1	-10.8
2016	-16.6	-20.2	-21.0	-19.6
2017	-18.1	-22.2	-3.3	-15.9
2018	-6.3	-4.5	5.0	5.2

Note: Not seasonally adjusted.

## Growth Rates for M2

(Percent, seasonally adjusted annual rate)

Tealbook Forecast *	
Monthly Growth Rates	
Jan-12	15.9
Feb-12	3.1

Mar-12	3.6
Apr-12	5.3
May-12	4.0
Jun-12	7.8
Jul-12	4.5
Aug-12	4.2
Sep-12	4.2
Oct-12	3.9
Nov-12	4.0
Dec-12	4.0
Quarterly Growth Rates	
2012 Q1	8.4
2012 Q2	4.7
2012 Q3	5.1
2012 Q4	4.0
2013 Q1	1.9
2013 Q2	2.3
2013 Q3	3.2
2013 Q4	3.2
2014 Q1	3.4
2014 Q2	3.3
2014 Q3	0.5
2014 Q4	-1.4
Annual Growth Rates	
2012	5.7
2013	2.7
2014	1.4

\* This forecast is consistent with nominal GDP and interest rates in the Tealbook Book A baseline forecast. Actual data through May 2012; projections thereafter. [Return to table](#)

[Note: In the June 2012 Directive Alternatives, emphasis (strike-through) indicates strike-through text in the original document, and strong emphasis (bold) indicates bold red underlined text in the original document.]

## June 2012 Directive--Alternative A

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to 1/4 percent. The Committee directs the Desk to continue the maturity extension program it began in September to purchase, by the end of June 2012, Treasury securities with remaining maturities of approximately 6 years to 30 years with a total face value of \$400 billion, and

to sell Treasury securities with remaining maturities of 3 years or less with a total face value of \$400 billion. **[ The Committee also directs the Desk to execute purchases of agency mortgage-backed securities by the end of June 2013 in order to increase the total face value of domestic securities held in the System Open Market Account to approximately \$3.1 trillion. | The Committee also directs the Desk to execute purchases of agency mortgage-backed securities in order to increase the total face value of domestic securities held in the System Open Market Account by approximately \$40 billion per month. ]** The Committee also directs the Desk to maintain its existing policies of rolling over maturing Treasury securities into new issues and of reinvesting principal payments on all agency debt and agency mortgage-backed securities in the System Open Market Account in agency mortgage-backed securities ~~in order to maintain the total face value of domestic securities at approximately \$2.6 trillion.~~ The Committee directs the Desk to engage in dollar roll **and coupon swap** transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

## June 2012 Directive--Alternative B or B'

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to 1/4 percent. The Committee directs the Desk to continue the maturity extension program it began in September to purchase, by the end of June 2012, Treasury securities with remaining maturities of ~~approximately 6 years to 30 years~~ with a total face value of \$400 billion, and to sell Treasury securities with remaining maturities of 3 years or less with a total face value of \$400 billion.

**Following the conclusion of these purchases, the Committee directs the Desk to purchase Treasury securities with remaining maturities of 6 years to 30 years with a total face value of about \$267 billion by the end of December 2012, and to sell or redeem Treasury securities with remaining maturities of approximately 3 years or less with a total face value of about \$267 billion. For the duration of this program, the Committee directs the Desk to suspend its current policy** ~~The Committee also directs the Desk to maintain its existing policies of rolling over maturing Treasury securities into new issues. and~~ **The Committee directs the Desk to maintain its existing policy** of reinvesting principal payments on all agency debt and agency mortgage-backed securities in the System Open Market Account in agency mortgage-backed securities. ~~in order to~~ **These actions should** maintain the total face value of domestic securities at approximately \$2.6 trillion. The Committee directs the Desk to engage in dollar roll transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

## June 2012 Directive--Alternative C

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee seeks conditions in reserve markets consistent with federal funds trading in a range from 0 to 1/4 percent. The Committee directs the Desk to continue the maturity extension program it began in September to purchase, by the end of June 2012, Treasury securities with remaining maturities of approximately 6 years to 30 years with a total face value of \$400 billion, and to sell Treasury securities with remaining maturities of 3 years or less with a total face value of \$400 billion. The Committee also directs the Desk to maintain its existing policies of rolling over maturing Treasury securities into new issues and of reinvesting principal payments on all agency debt and agency mortgage-backed securities in the System Open Market Account in agency mortgage-backed securities in order to maintain the total face value of domestic securities at approximately \$2.6 trillion. The Committee directs the Desk to engage in dollar roll

transactions as necessary to facilitate settlement of the Federal Reserve's agency MBS transactions. The System Open Market Account Manager and the Secretary will keep the Committee informed of ongoing developments regarding the System's balance sheet that could affect the attainment over time of the Committee's objectives of maximum employment and price stability.

## Explanatory Notes

### A. Policy Rules Used in "Monetary Policy Strategies"

The table below gives the expressions for the selected policy rules used in "Monetary Policy Strategies." In the table,  $R_t$  denotes the nominal federal funds rate for quarter  $t$ , while the right-hand-side variables include the staff's projection of trailing four-quarter core PCE inflation for the current quarter and three quarters ahead ( $\pi$  and  $\pi_{t+3|t}$ ), the output gap estimate for the current period as well as its one-quarter-ahead forecast ( $gap_t$  and  $gap_{t+1|t}$ ) and the forecast of the three-quarter-ahead annual change in the output gap ( $\Delta^4 gap_{t+3|t}$ ). The value of policymakers' long-run inflation objective, denoted  $\pi^*$ , is 2 percent. The nominal income targeting rule responds to the nominal income gap, which is defined as the difference between nominal income  $yn_t$  (100 times the log of the level of nominal GDP) and a target value  $yn^t$  (100 times the log of potential nominal GDP), where potential nominal GDP is defined as potential real GDP multiplied by a price target equal to the actual GDP deflator in the fourth quarter of 2007 and growing thereafter at a steady rate of 2 percent per year.<sup>1</sup>

Rule	Specification
Taylor (1993) rule	$R_t = 2.25 + \pi_t + 0.5(\pi_t - \pi^*) + 0.5gap_t$
Taylor (1999) rule	$R_t = 2.25 + \pi_t + 0.5(\pi_t - \pi^*) + gap_t$
Outcome-based rule	$R_t = 1.2R_{t-1} - 0.39R_{t-2} + 0.19[0.79 + 1.73\pi_t + 3.66gap_t - 2.72gap_{t-1}]$
First-difference rule	$R_t = R_{t-1} + 0.5(\pi_{t+3 t} - \pi^*) + 0.5\Delta^4 gap_{t+3 t}$
Nominal income targeting rule	$R_t = 0.75R_{t-1} + 0.25(2.25 + \pi^* + yn_t - yn^t)$

1. See Christopher Erceg, Michael T. Kiley, and J. David López-Salido (2011) for analysis of this rule. The nominal GDP targeting rule in "Monetary Policy Strategies" differs slightly from the rule studied in that memo in setting the target equal to potential nominal GDP (rather than applying a growth rate to actual nominal GDP for the final quarter of 2007) and in having an interest-rate smoothing coefficient of 0.75 (a more standard value than the 0.9 value employed in the memo). Background on the relationship between simple interest-rate rules and nominal income targeting is provided in Bennett T. McCallum and Edward Nelson (1999) and Athanasios Orphanides (2003). [Return to text](#)

### D. Long-Run Projections of the Balance Sheet and Monetary Base

#### 10-Year Treasury Term Premium Effect

Date	Alternatives B and B'	Alternative A	Alternative C	Memo: April Alternative B
	Basis Points Quarterly Averages			
2012 Q2	-71	-77	-53	-61
2012 Q3	-68	-74	-50	-58
2012 Q4	-65	-71	-46	-55
2013 Q1	-62	-68	-43	-51

2013 Q2	-58	-64	-39	-48
2013 Q3	-54	-60	-36	-45
2013 Q4	-50	-56	-33	-41
2014 Q1	-47	-51	-30	-38
2014 Q2	-43	-47	-27	-35
2014 Q3	-40	-43	-25	-32
2014 Q4	-37	-39	-23	-29
2015 Q1	-34	-36	-21	-27
2015 Q2	-31	-33	-19	-24
2015 Q3	-28	-29	-17	-22
2015 Q4	-26	-27	-15	-20
2016 Q1	-24	-24	-14	-18
2016 Q2	-22	-21	-13	-16
2016 Q3	-20	-19	-12	-15
2016 Q4	-18	-17	-11	-13
2017 Q1	-16	-16	-10	-12
2017 Q2	-15	-14	-9	-11
2017 Q3	-14	-13	-9	-10
2017 Q4	-13	-11	-9	-10
2018 Q1	-12	-10	-8	-9
2018 Q2	-11	-10	-8	-8
2018 Q3	-10	-9	-8	-8
2018 Q4	-10	-8	-8	-8
2019 Q1	-9	-8	-7	-7
2019 Q2	-9	-7	-7	-7
2019 Q3	-8	-7	-7	-7
2019 Q4	-8	-7	-6	-6
2020 Q1	-7	-6	-6	-6
2020 Q2	-7	-6	-6	-5
2020 Q3	-6	-5	-5	-5
2020 Q4	-6	-5	-5	-5

## Federal Reserve Balance Sheet: End-of-Year Projections -- Alternative B

Billions of dollars

	May 31, 2012	2012	2014	2016	2018	2020
<b>Total assets</b>	2,849	2,894	2,798	2,190	1,800	2,000

Selected assets						
Liquidity programs for financial firms	22	15	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0
Central bank liquidity swaps	22	15	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	5	3	1	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	19	19	15	12	7	4
Securities held outright	2,606	2,593	2,547	1,986	1,636	1,860
U.S. Treasury securities	1,661	1,653	1,653	1,430	1,426	1,860
Agency debt securities	93	77	39	16	2	0
Agency mortgage-backed securities	852	863	855	539	207	0
Net portfolio holdings of TALF LLC	1	1	1	0	0	0
Total other assets	195	264	234	192	157	135
<b>Total liabilities</b>	<b>2,794</b>	<b>2,833</b>	<b>2,716</b>	<b>2,081</b>	<b>1,657</b>	<b>1,810</b>
Selected liabilities						
Federal Reserve notes in circulation	1,068	1,111	1,253	1,390	1,539	1,693
Reverse repurchase agreements	70	70	70	70	70	70
Deposits with Federal Reserve Banks	1,636	1,633	1,375	604	30	30
Reserve balances held by depository institutions	1,499	1,543	1,370	599	25	25
U.S. Treasury, General Account	112	90	5	5	5	5
Other Deposits	25	0	0	0	0	0
Interest of Federal Reserve Notes due to U.S. Treasury	2	0	0	0	0	0
<b>Total capital</b>	<b>55</b>	<b>62</b>	<b>82</b>	<b>108</b>	<b>143</b>	<b>189</b>

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

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

## Federal Reserve Balance Sheet: End-of-Year Projections -- Alternative A

Billions of dollars

	May 31, 2012	2012	2014	2016	2018	2020
<b>Total assets</b>	<b>2,849</b>	<b>3,019</b>	<b>3,176</b>	<b>2,246</b>	<b>1,800</b>	<b>2,000</b>
Selected assets						
Liquidity programs for financial firms	22	15	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0
Central bank liquidity swaps	22	15	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	5	3	1	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	19	19	15	12	7	4

Securities held outright	2,606	2,771	2,962	2,078	1,670	1,892
U.S. Treasury securities	1,661	1,652	1,597	1,223	1,345	1,892
Agency debt securities	93	77	39	16	2	0
Agency mortgage-backed securities	852	1,042	1,327	839	323	0
Net portfolio holdings of TALF LLC	1	1	1	0	0	0
Total other assets	195	211	197	156	123	104
<b>Total liabilities</b>	<b>2,794</b>	<b>2,957</b>	<b>3,095</b>	<b>2,138</b>	<b>1,657</b>	<b>1,811</b>
Selected liabilities						
Federal Reserve notes in circulation	1,068	1,111	1,253	1,390	1,539	1,693
Reverse repurchase agreements	70	70	70	70	70	70
Deposits with Federal Reserve Banks	1,636	1,757	1,754	660	30	30
Reserve balances held by depository institutions	1,499	1,667	1,749	655	25	25
U.S. Treasury, General Account	112	90	5	5	5	5
Other Deposits	25	0	0	0	0	0
Interest of Federal Reserve Notes due to U.S. Treasury	2	0	0	0	0	0
<b>Total capital</b>	<b>55</b>	<b>62</b>	<b>82</b>	<b>108</b>	<b>143</b>	<b>189</b>

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

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

## Federal Reserve Balance Sheet: End-of-Year Projections -- Alternative C

Billions of dollars

	May 31, 2012	2012	2014	2016	2018	2020
<b>Total assets</b>	<b>2,849</b>	<b>2,830</b>	<b>2,399</b>	<b>1,685</b>	<b>1,800</b>	<b>2,000</b>
Selected assets						
Liquidity programs for financial firms	22	15	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0
Central bank liquidity swaps	22	15	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	5	3	1	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	19	19	15	12	7	4
Securities held outright	2,606	2,591	2,211	1,535	1,680	1,893
U.S. Treasury securities	1,661	1,652	1,537	1,182	1,641	1,893
Agency debt securities	93	77	39	16	1	0
Agency mortgage-backed securities	852	863	635	336	37	0
Net portfolio holdings of TALF LLC	1	1	1	0	0	0
Total other assets	195	201	171	138	113	103
<b>Total liabilities</b>	<b>2,794</b>	<b>2,768</b>	<b>2,317</b>	<b>1,576</b>	<b>1,657</b>	<b>1,811</b>



Selected liabilities						
Federal Reserve notes in circulation	1,068	1,111	1,253	1,390	1,539	1,693
Reverse repurchase agreements	70	70	70	70	70	70
Deposits with Federal Reserve Banks	1,636	1,569	976	99	30	30
Reserve balances held by depository institutions	1,499	1,478	971	94	25	25
U.S. Treasury, General Account	112	90	5	5	5	5
Other Deposits	25	0	0	0	0	0
Interest of Federal Reserve Notes due to U.S. Treasury	2	0	0	0	0	0
<b>Total capital</b>	<b>55</b>	<b>62</b>	<b>82</b>	<b>108</b>	<b>143</b>	<b>189</b>

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

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

† Note: Data values for figures are rounded and may not sum to totals. [Return to text](#)

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