

### **Prefatory Note**

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

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

Class II FOMC – Restricted (FR)

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# Report to the FOMC on Economic Conditions and Monetary Policy



## Book A

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

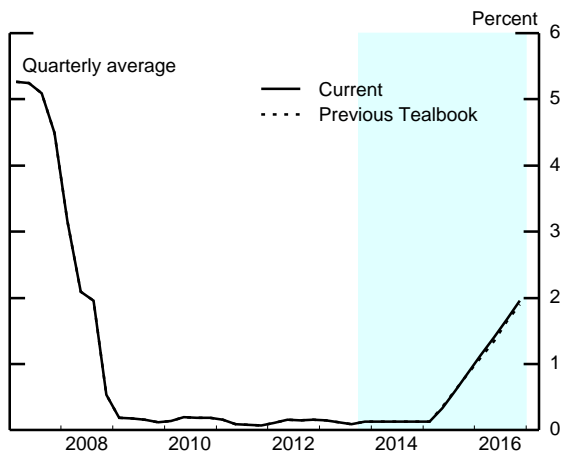
October 23, 2013

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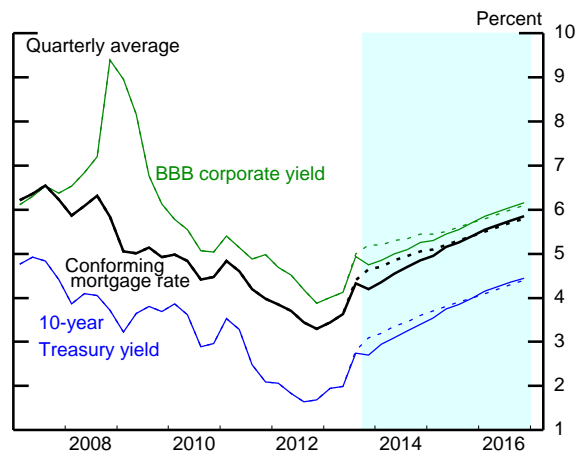
Prepared for the Federal Open Market Committee  
by the staff of the Board of Governors of the Federal Reserve System

## Key Background Factors underlying the Baseline Staff Projection

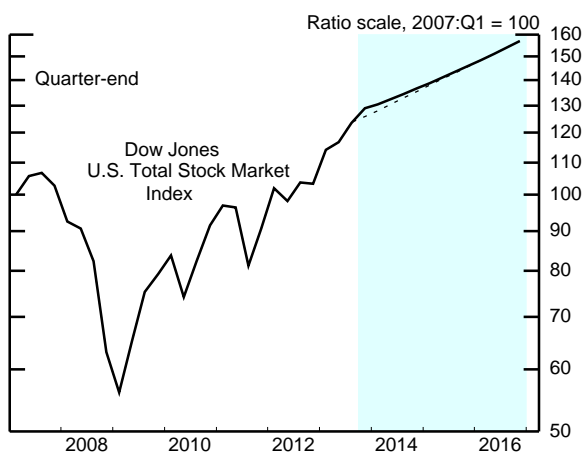
### Federal Funds Rate



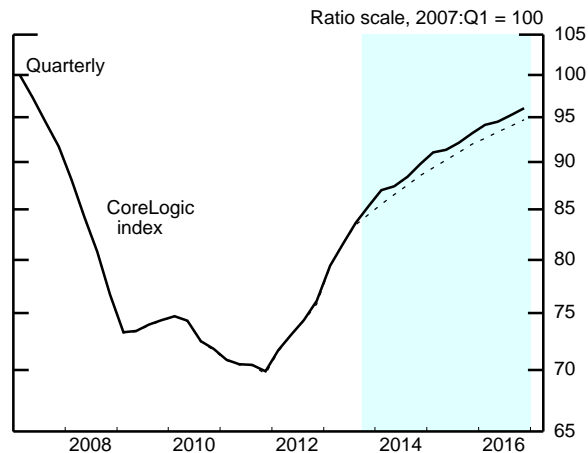
### Long-Term Interest Rates



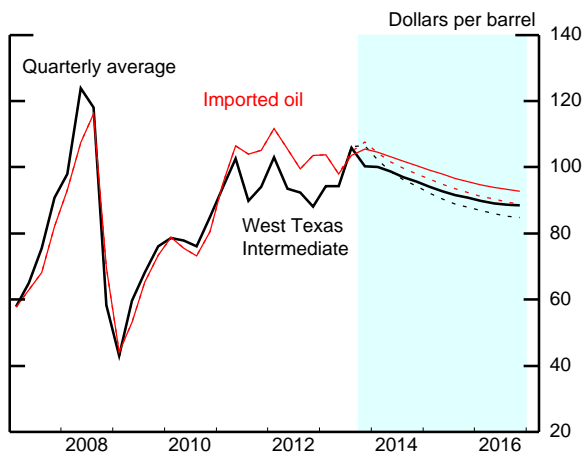
### Equity Prices



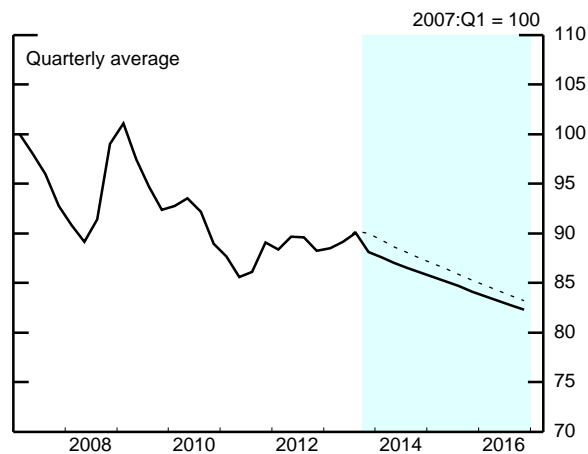
### House Prices



### Crude Oil Prices



### Broad Real Dollar



### Summary of the Near-Term Outlook

(Percent change at annual rate except as noted)

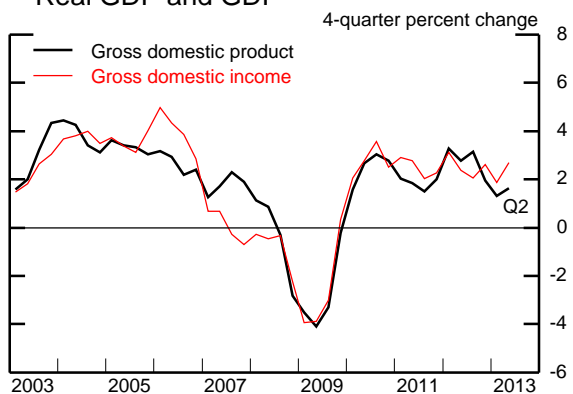
Measure	2013:H1		2013:Q3		2013:Q4	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
<b>Real GDP</b>	<b>2.0</b>	<b>1.8</b>	<b>2.2</b>	<b>2.2</b>	<b>2.7</b>	<b>2.1</b>
Private domestic final purchases	2.2	2.1	2.3	2.1	3.7	3.0
Personal consumption expenditures	2.2	2.0	2.0	1.5	3.1	2.6
Residential investment	13.3	13.4	2.6	7.8	12.0	11.0
Nonres. private fixed investment	-.2	-.1	3.7	4.0	5.1	3.6
Government purchases	-2.3	-2.3	-2.5	-1.7	-2.7	-4.2
<i>Contributions to change in real GDP</i>						
Inventory investment <sup>1</sup>	.8	.7	.4	.8	.2	.0
Net exports <sup>1</sup>	-.1	-.2	.4	.0	-.1	.4
<b>Unemployment rate<sup>2</sup></b>	<b>7.5</b>	<b>7.5</b>	<b>7.3</b>	<b>7.3</b>	<b>7.2</b>	<b>7.3</b>
<b>PCE chain price index</b>	<b>.6</b>	<b>.5</b>	<b>1.9</b>	<b>2.0</b>	<b>1.3</b>	<b>1.1</b>
Ex. food and energy	1.1	1.0	1.5	1.5	1.3	1.4

1. Percentage points.

2. Percent. For 2013:H1, the 2013:Q2 value is shown.

### Recent Nonfinancial Developments (1)

Real GDP and GDI



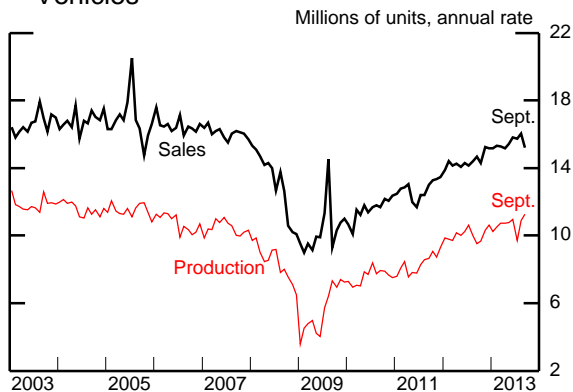
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Manufacturing IP ex. Motor Vehicles and Parts



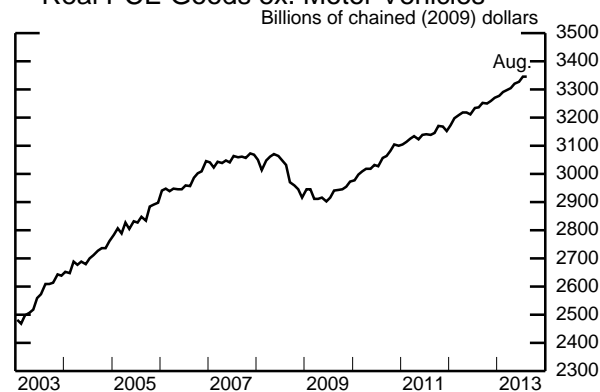
Source: Federal Reserve Board, G.17 Statistical Release, "Industrial Production and Capacity Utilization."

Sales and Production of Light Motor Vehicles



Source: Ward's Auto Infobank.

Real PCE Goods ex. Motor Vehicles



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

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

Measure	2013	2013		2014	2015	2016
		H1	H2			
<b>Real GDP</b>	<b>2.0</b>	<b>1.8</b>	<b>2.2</b>	<b>3.2</b>	<b>3.5</b>	<b>3.2</b>
Previous Tealbook	2.3	2.0	2.5	3.1	3.4	3.2
Final sales	1.5	1.1	1.8	3.3	3.7	3.3
Previous Tealbook	1.7	1.3	2.2	3.1	3.6	3.5
Personal consumption expenditures	2.0	2.0	2.1	3.4	3.8	3.1
Previous Tealbook	2.4	2.2	2.6	3.6	3.8	3.1
Residential investment	11.4	13.4	9.4	17.5	14.1	5.8
Previous Tealbook	10.2	13.3	7.2	15.8	14.8	8.9
Nonresidential structures	-.1	-6.5	6.7	2.5	2.9	2.6
Previous Tealbook	-1.0	-6.4	4.6	2.7	2.7	2.5
Equipment and intangibles	2.4	1.9	3.0	5.6	6.1	5.5
Previous Tealbook	3.0	1.7	4.4	5.3	5.9	5.7
Federal purchases	-6.8	-5.1	-8.6	-4.3	-3.8	.0
Previous Tealbook	-5.8	-5.1	-6.5	-5.4	-3.8	.0
State and local purchases	.2	-.4	.9	.3	1.1	1.5
Previous Tealbook	-.2	-.4	.1	.3	1.1	1.5
Exports	3.7	3.2	4.2	5.1	6.5	6.9
Previous Tealbook	3.5	3.2	3.8	4.4	6.1	7.0
Imports	3.0	3.7	2.3	3.8	5.1	4.7
Previous Tealbook	2.8	3.4	2.1	4.4	5.1	4.6
Contributions to change in real GDP (percentage points)						
Inventory change	.5	.7	.4	.0	-.1	-.1
Previous Tealbook	.5	.8	.3	.0	-.2	-.2
Net exports	.0	-.2	.2	.1	.0	.2
Previous Tealbook	.0	-.1	.2	-.1	.0	.2

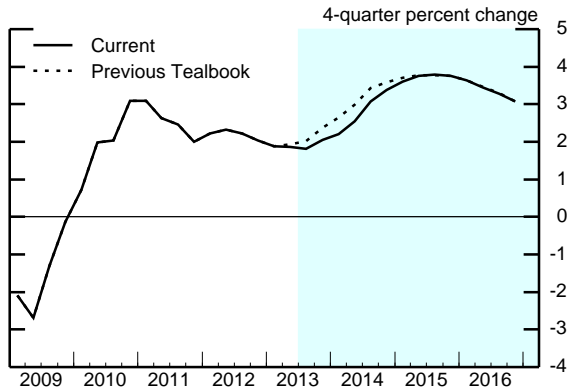
### Real GDP



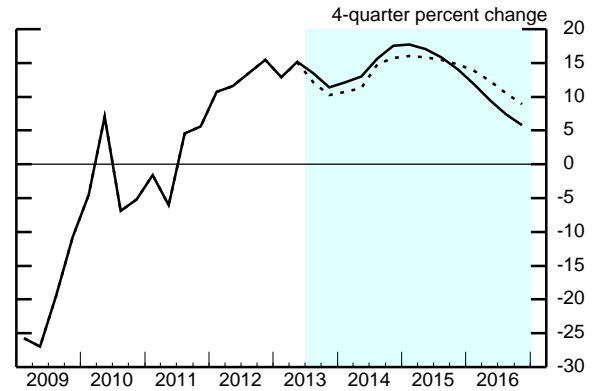
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

## Components of Final Demand

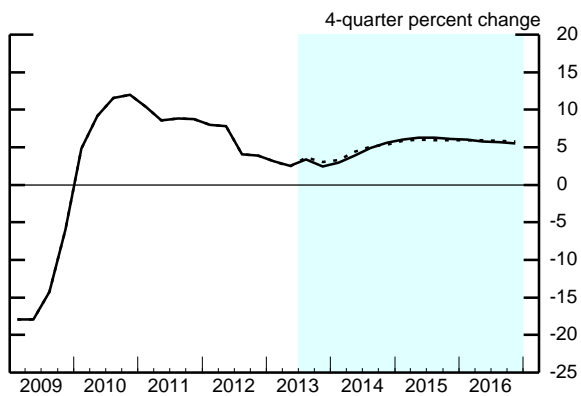
Personal Consumption Expenditures



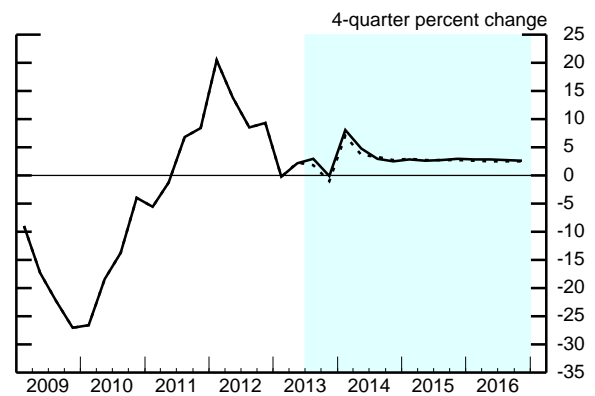
Residential Investment



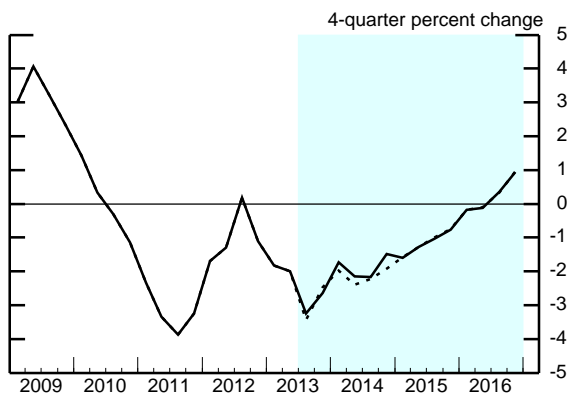
Equipment and Intangibles



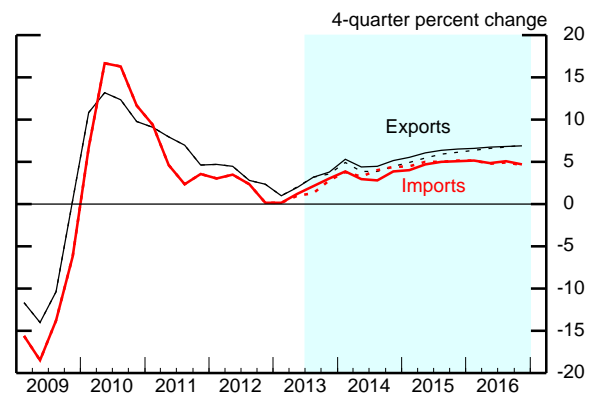
Nonresidential Structures



Government Consumption & Investment

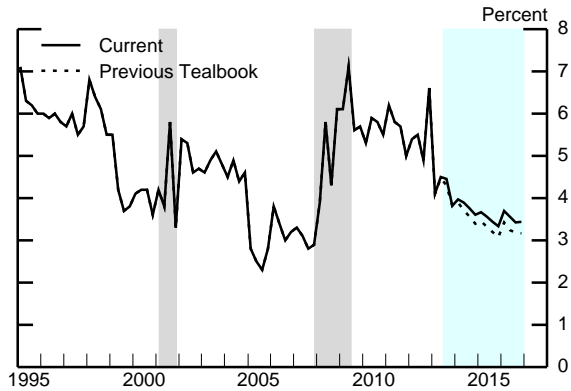


Exports and Imports



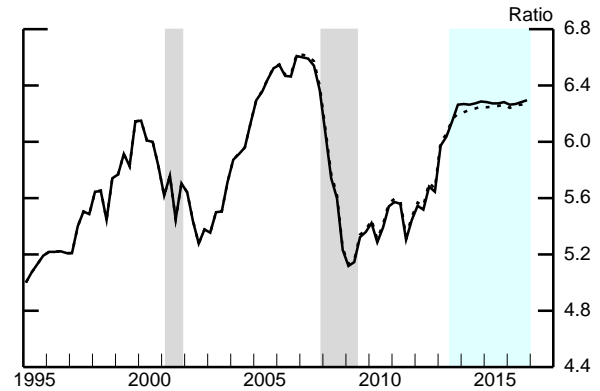
## Aspects of the Medium-Term Projection

Personal Saving Rate



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

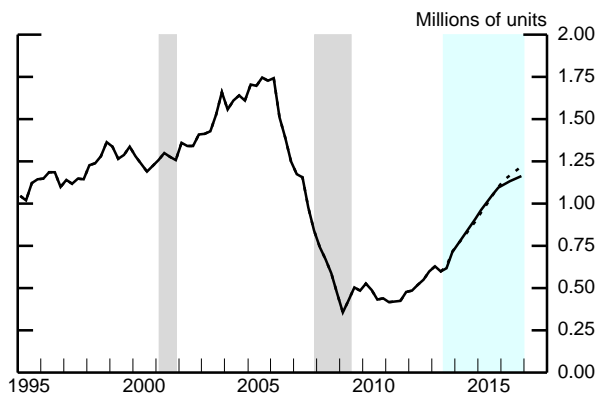
Wealth-to-Income Ratio



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

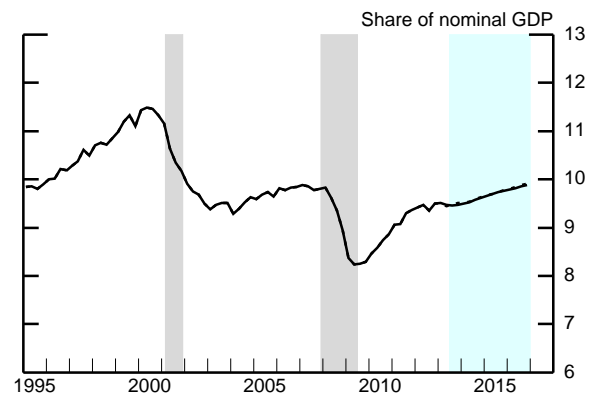
Source: For net worth, Federal Reserve Board, flow of funds data; for income, U.S. Dept. of Commerce, Bureau of Economic Analysis.

Single-Family Housing Starts



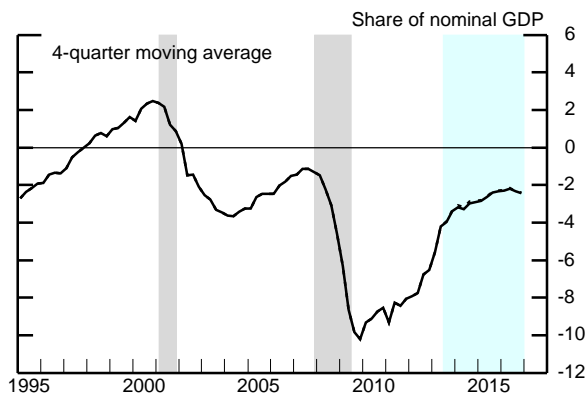
Source: U.S. Census Bureau.

Equipment and Intangibles Spending



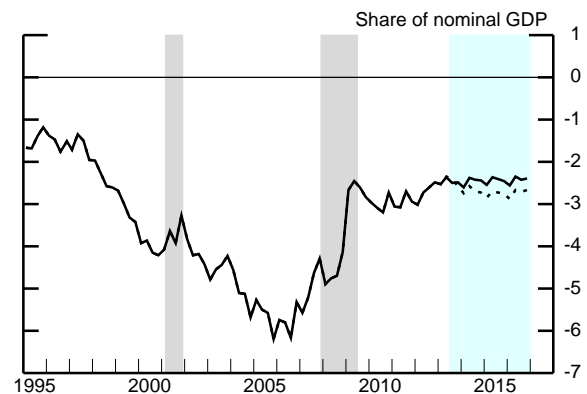
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Federal Surplus/Deficit



Source: *Monthly Treasury Statement*.

Current Account Surplus/Deficit



Source: U.S. Dept. 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.

**Decomposition of Potential GDP**  
(Percent change, Q4 to Q4, except as noted)

Measure	1974-95	1996-2000	2001-11	2012	2013	2014	2015	2016
Potential real GDP	3.1	3.4	2.2	1.9	2.1	2.2	2.2	2.1
Previous Tealbook	3.1	3.4	2.2	1.9	2.1	2.2	2.2	2.1
<i>Selected contributions<sup>1</sup></i>								
Structural labor productivity <sup>2</sup>	1.5	2.7	2.2	1.4	1.5	1.7	1.8	1.9
Previous Tealbook	1.5	2.7	2.2	1.4	1.5	1.7	1.8	1.9
Structural hours	1.5	1.0	.6	.7	.7	.6	.6	.5
Previous Tealbook	1.5	1.0	.6	.7	.7	.6	.6	.5
Labor force participation	.4	.0	-.3	-.3	-.5	-.3	-.3	-.3
Previous Tealbook	.4	.0	-.3	-.3	-.5	-.3	-.3	-.3
<b>Memo:</b>								
GDP gap <sup>3</sup>	-2.4	1.9	-3.6	-3.6	-3.6	-2.6	-1.3	-.3
Previous Tealbook	-2.4	1.9	-3.6	-3.6	-3.4	-2.5	-1.3	-.2

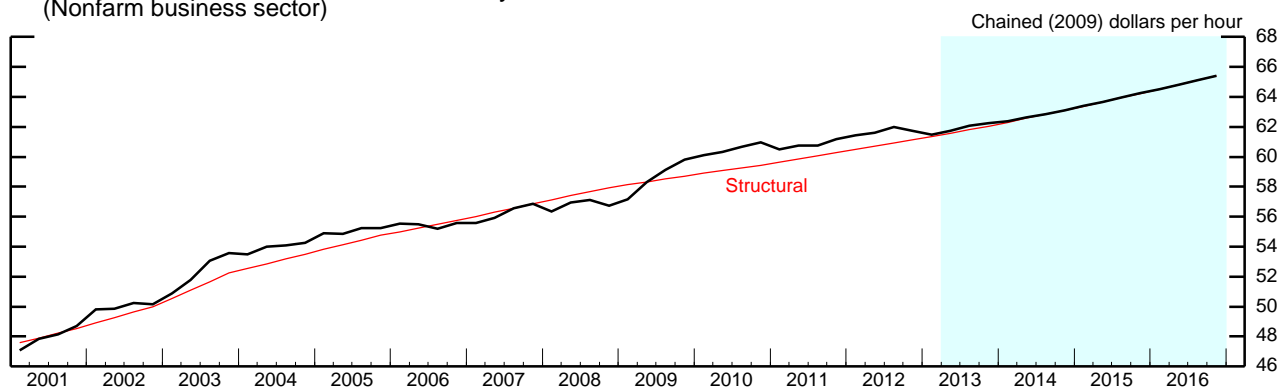
Note: For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.

1. Percentage points.

2. Because of substantial revisions from the Bureau of Economic Analysis to productive investment as part of the latest comprehensive revision, staff estimates of the components of structural productivity are not available for this Tealbook.

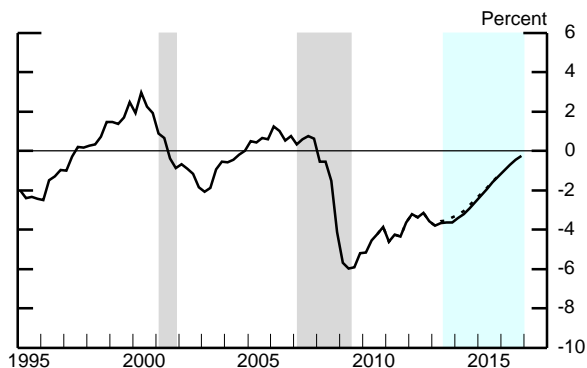
3. Percent difference between actual and potential GDP in the final quarter of the period indicated. A negative number indicates that the economy is operating below potential.

**Structural and Actual Labor Productivity**  
(Nonfarm business sector)



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

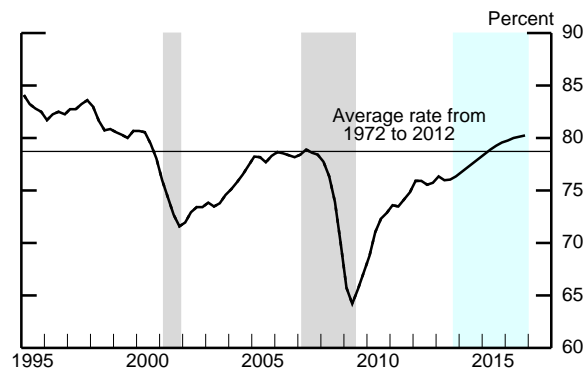
**GDP Gap**



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

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

**Manufacturing Capacity Utilization Rate**



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.



**The Outlook for the Labor Market**

Measure	2013	2013		2014	2015	2016
		H1	H2			
Output per hour, nonfarm business <sup>1</sup>	.8	.0	1.7	1.4	1.8	1.9
Previous Tealbook	1.1	.3	1.9	1.4	1.5	1.8
Nonfarm private employment <sup>2</sup>	173	201	145	199	245	195
Previous Tealbook	181	201	162	202	241	198
Labor force participation rate <sup>3</sup>	63.2	63.4	63.2	63.2	63.1	63.0
Previous Tealbook	63.3	63.4	63.3	63.3	63.2	63.1
Civilian unemployment rate <sup>3</sup>	7.3	7.5	7.3	6.6	5.9	5.4
Previous Tealbook	7.2	7.5	7.2	6.6	5.8	5.3

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

2. Thousands, average monthly changes.

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

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

**Inflation Projections**

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

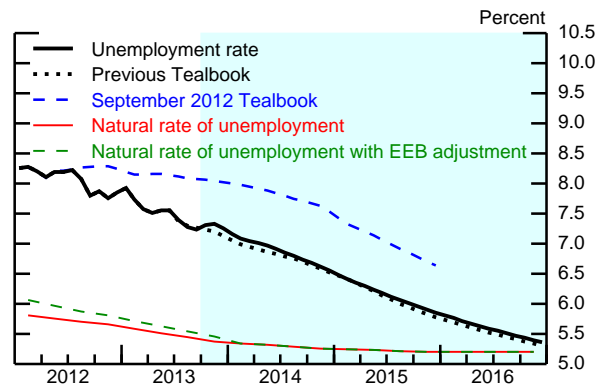
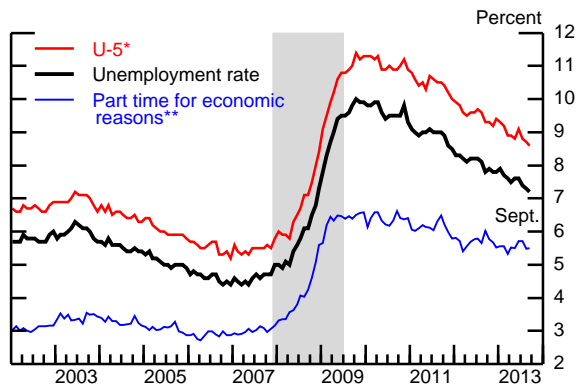
Measure	2013	2013		2014	2015	2016
		H1	H2			
PCE chain-weighted price index	1.0	.5	1.6	1.4	1.5	1.6
Previous Tealbook	1.1	.6	1.6	1.2	1.4	1.6
Food and beverages	1.1	.9	1.2	.6	1.3	1.4
Previous Tealbook	.9	.9	1.0	.7	1.3	1.4
Energy	-2.4	-7.8	3.2	-.7	-1.1	-.5
Previous Tealbook	-1.1	-7.7	6.0	-3.1	-1.4	-.7
Excluding food and energy	1.2	1.0	1.5	1.5	1.6	1.7
Previous Tealbook	1.2	1.1	1.4	1.5	1.6	1.7
Prices of core goods imports <sup>1</sup>	-1.1	-1.0	-1.1	1.7	1.6	1.6
Previous Tealbook	-1.0	-1.0	-1.0	1.5	1.5	1.6

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

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

## Labor Market Developments and Outlook

### Measures of Labor Underutilization



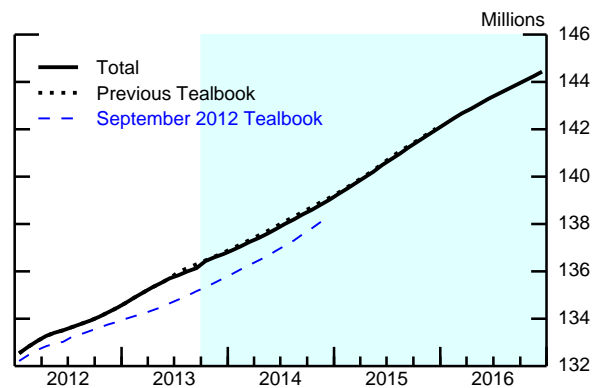
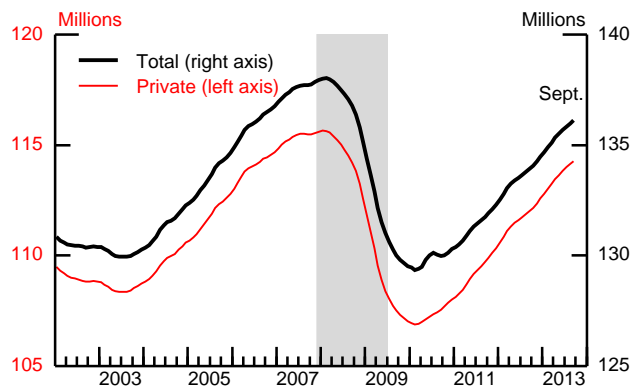
\* U-5 measures total unemployed plus all marginally attached to the labor force, as a percent of the labor force plus persons marginally attached to the labor force.

\*\* Percent of Current Population Survey employment.

EEB Extended and emergency unemployment benefits.

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

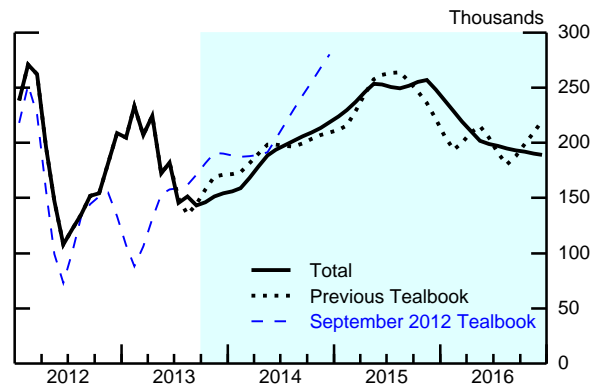
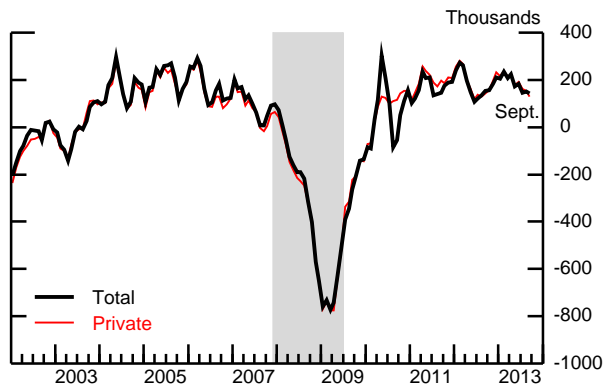
### Level of Payroll Employment\*



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

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

### Change in Payroll Employment\*



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

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

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

**Labor Market Data and Projections**

Indicator	Aug. 2012 <sup>1</sup>	Projection for mid-2014 <sup>2</sup> in the Tealbook dated:			
		Sept. 2012	Dec. 2012	Sept. 2013 <sup>3</sup>	Oct. 2013 <sup>3</sup>
Unemployment rate (percent)	8.1	7.8	7.6	6.8	6.9
Labor force participation rate (percent)	63.5	63.7	63.7	63.3	63.2
<i>Monthly change in payroll employment (thousands, three-month averages)</i>					
Total	94	212	197	197	194
Private	109	210	195	205	202
Level of total payroll employment (millions)	133.3	137.0	137.1	138.0	137.9
Total hours worked (percent change) <sup>4</sup>	1.0	2.3	2.0	2.5	2.4
Total hours worked (billions) <sup>4</sup>	184.6	190.3	190.8	193.0	193.0

1. The figures for August 2012 refer to data as originally published in the September employment situation release along with the staff's real-time translation of those data into hours worked. These were the latest available data at the time of the September FOMC meeting.

2. Calculated as the mean of the 2014:Q2 and 2014:Q3 projections.

3. Projections of payrolls and hours worked include the effects of the benchmark revision to the payroll survey.

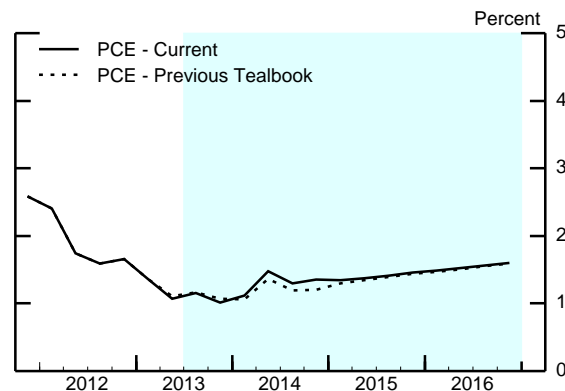
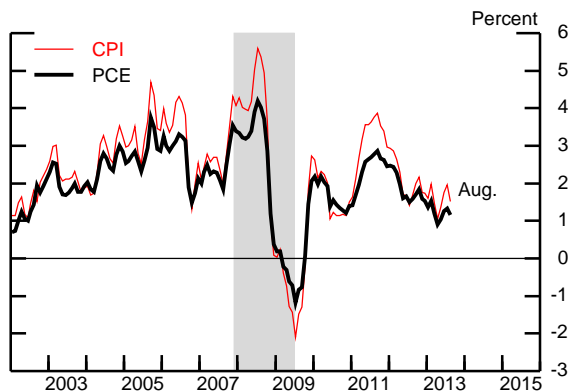
4. Total hours worked are aggregate hours in the nonfarm business sector. Because that series is available only on a quarterly basis, the August 2012 figures refer to the quarterly percent change and level in 2012:Q3. The percent changes and levels in hours are at annual rates.

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

## Inflation Developments and Outlook

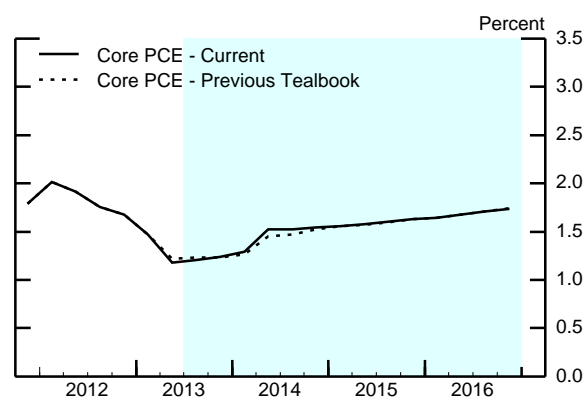
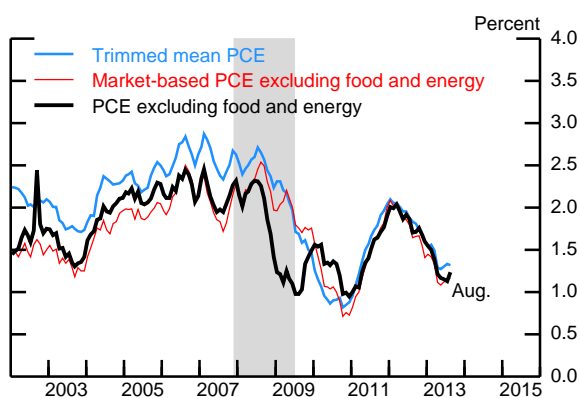
(Percent change from year-earlier period)

### Headline Consumer Price Inflation



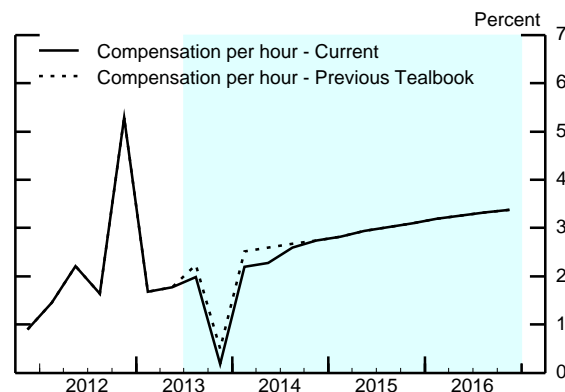
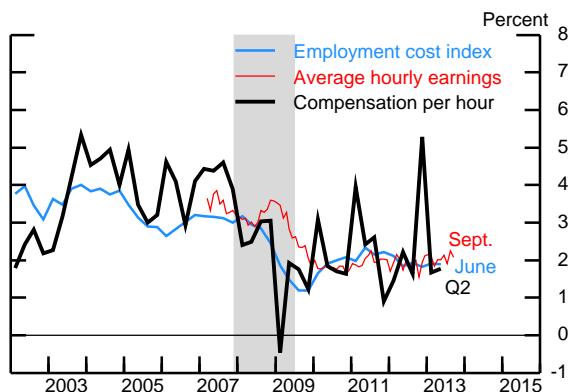
Source: For CPI, U.S. Department of Labor, Bureau of Labor Statistics; for PCE, U.S. Department of Commerce, Bureau of Economic Analysis.

### Measures of Underlying PCE Price Inflation



Source: For trimmed mean PCE, Federal Reserve Bank of Dallas; otherwise, U.S. Department of Commerce, Bureau of Economic Analysis.

### Labor Cost Growth (Private Industry)



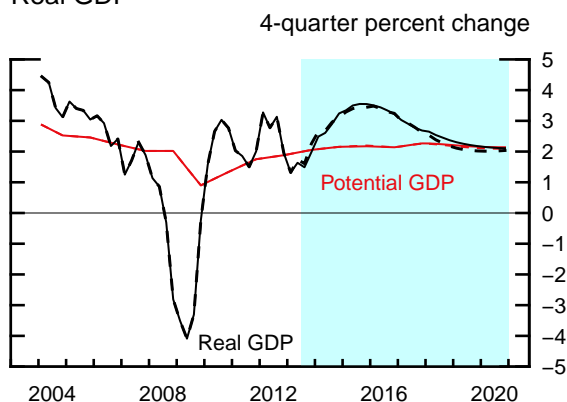
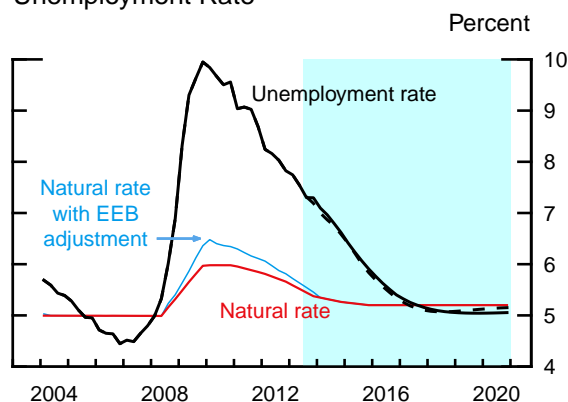
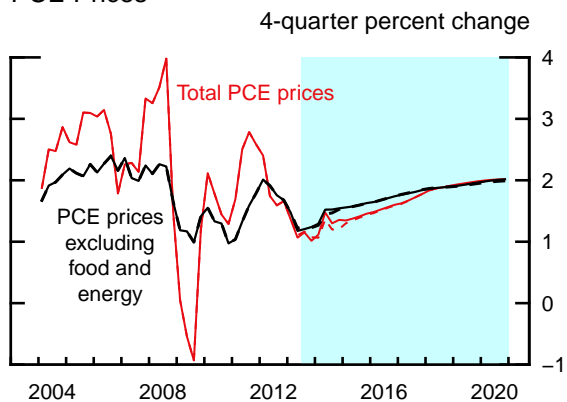
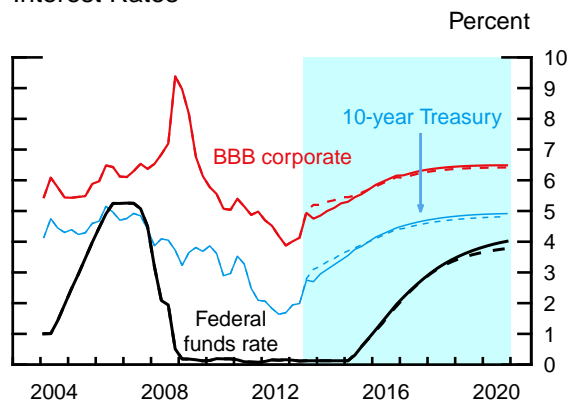
Note: The compensation per hour value for 2013:Q2 is a staff estimate.  
Source: U.S. Department of Labor, Bureau of Labor Statistics.

**The Long-Term Outlook**

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

Measure	2013	2014	2015	2016	2017	2018	Longer run
Real GDP	2.0	3.2	3.5	3.2	2.7	2.4	2.3
Previous Tealbook	2.3	3.1	3.4	3.2	2.6	2.2	2.3
Civilian unemployment rate <sup>1</sup>	7.3	6.6	5.9	5.4	5.2	5.1	5.2
Previous Tealbook	7.2	6.6	5.8	5.3	5.1	5.1	5.2
PCE prices, total	1.0	1.4	1.5	1.6	1.8	1.9	2.0
Previous Tealbook	1.1	1.2	1.4	1.6	1.8	1.9	2.0
Core PCE prices	1.2	1.5	1.6	1.7	1.8	1.9	2.0
Previous Tealbook	1.2	1.5	1.6	1.7	1.8	1.9	2.0
Federal funds rate <sup>1</sup>	.1	.1	.9	2.0	2.8	3.4	4.0
Previous Tealbook	.1	.1	.8	1.9	2.8	3.3	4.0
10-year Treasury yield <sup>1</sup>	2.7	3.4	4.0	4.4	4.7	4.8	4.8
Previous Tealbook	3.1	3.6	4.0	4.4	4.6	4.7	4.8

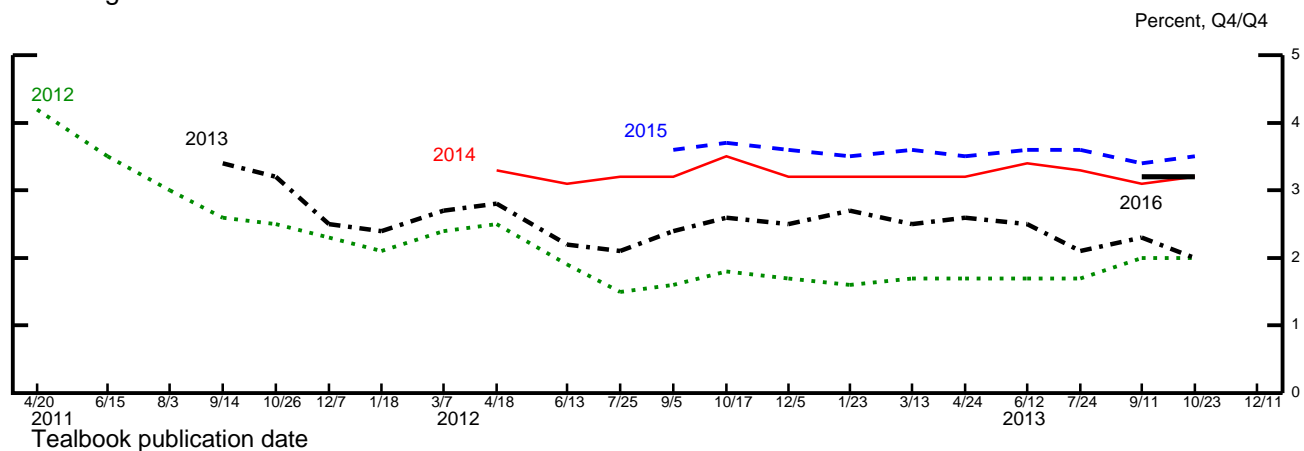
1. Percent, average for the final quarter of the period.

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

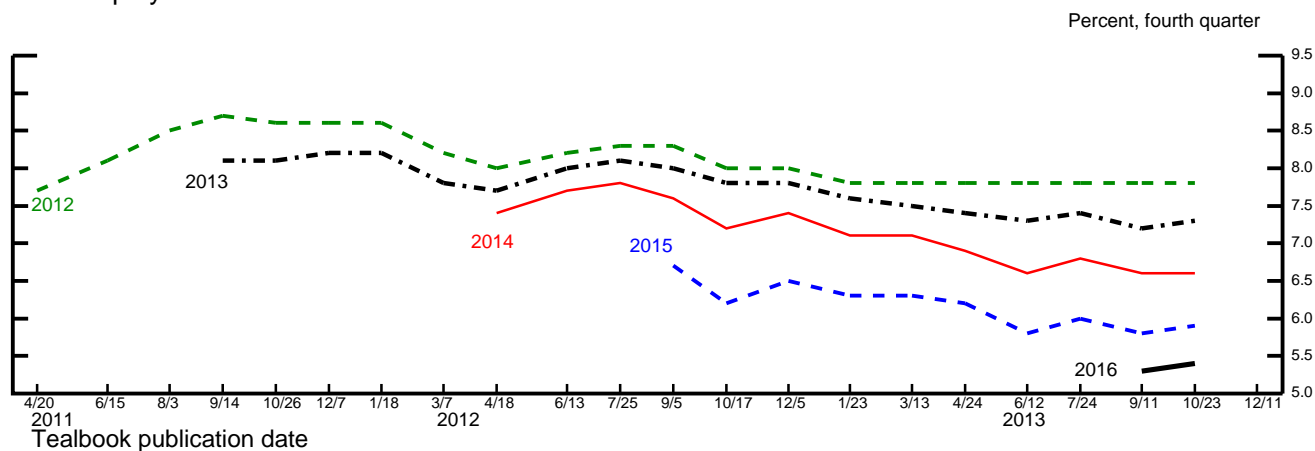
Note: In each panel, shading represents the projection period, and dashed lines are the previous Tealbook.

## Evolution of the Staff Forecast

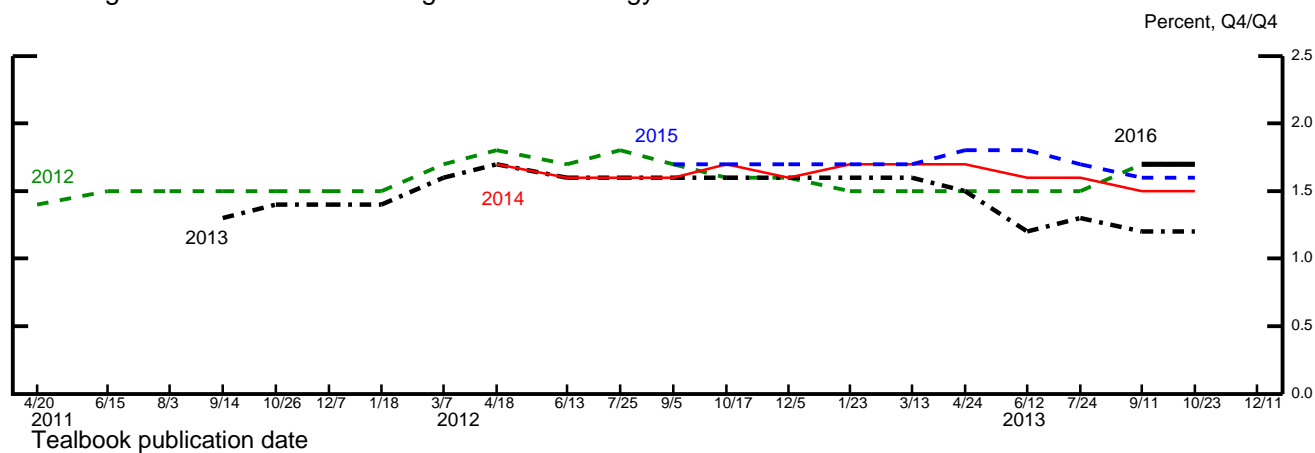
### Change in Real GDP



### Unemployment Rate



### Change in PCE Prices excluding Food and Energy



## The Foreign GDP Outlook

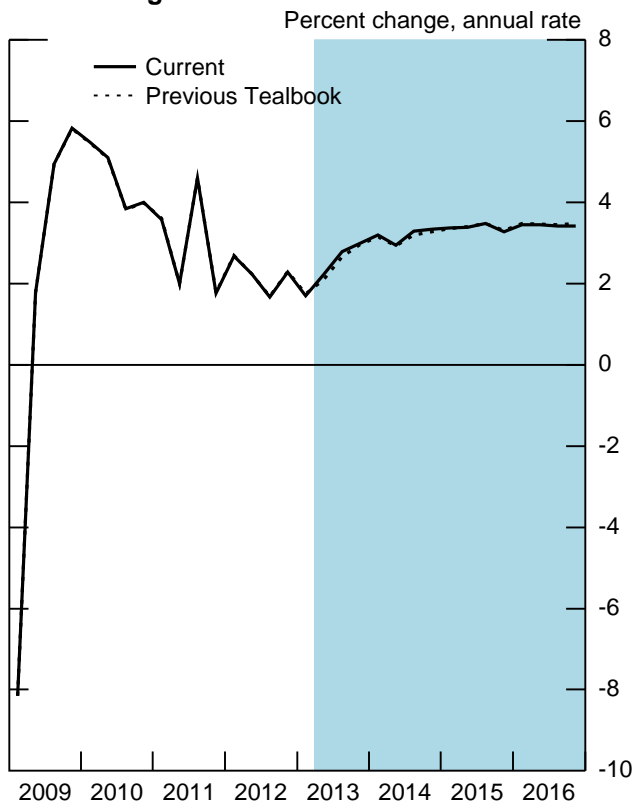
### Real GDP\*

Percent change, annual rate

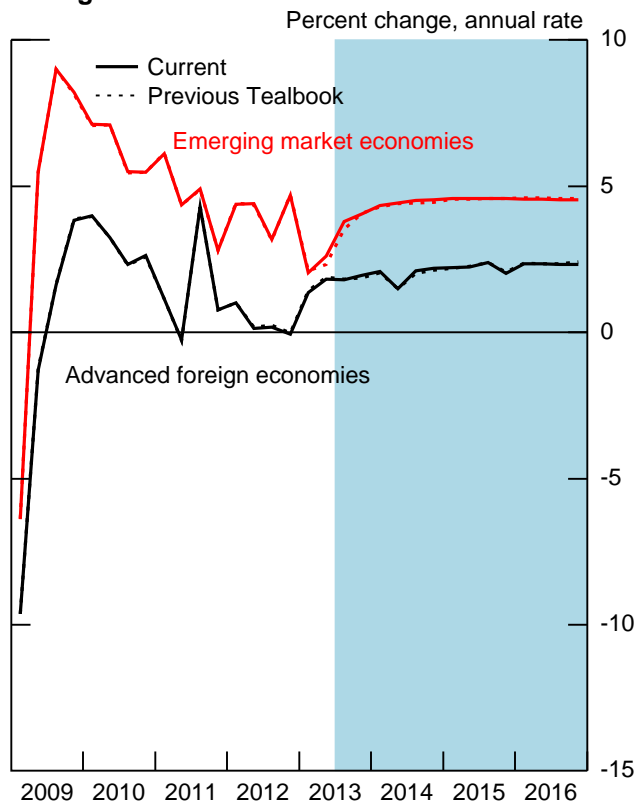
	2013				2014		2015	2016
	Q1	Q2	Q3	Q4	H1	H2		
<b>1. Total Foreign</b>	<b>1.7</b>	<b>2.2</b>	<b>2.8</b>	<b>3.0</b>	<b>3.1</b>	<b>3.3</b>	<b>3.4</b>	<b>3.4</b>
<i>Previous Tealbook</i>	<i>1.8</i>	<i>2.1</i>	<i>2.7</i>	<i>3.0</i>	<i>3.0</i>	<i>3.2</i>	<i>3.4</i>	<i>3.5</i>
<b>2. Advanced Foreign Economies</b>	<b>1.4</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>	<b>1.8</b>	<b>2.1</b>	<b>2.2</b>	<b>2.3</b>
<i>Previous Tealbook</i>	<i>1.4</i>	<i>1.9</i>	<i>1.8</i>	<i>1.9</i>	<i>1.8</i>	<i>2.1</i>	<i>2.2</i>	<i>2.4</i>
3. Canada	2.2	1.7	2.6	2.1	2.4	2.6	2.6	2.7
4. Euro Area	-0.9	1.1	0.4	1.0	1.2	1.5	1.9	2.0
5. Japan	4.1	3.8	2.1	3.4	0.4	1.9	0.8	1.2
6. United Kingdom	1.5	2.7	2.4	2.5	2.3	2.4	2.5	2.5
<b>7. Emerging Market Economies</b>	<b>2.1</b>	<b>2.6</b>	<b>3.8</b>	<b>4.1</b>	<b>4.4</b>	<b>4.5</b>	<b>4.6</b>	<b>4.6</b>
<i>Previous Tealbook</i>	<i>2.1</i>	<i>2.3</i>	<i>3.5</i>	<i>4.1</i>	<i>4.3</i>	<i>4.4</i>	<i>4.6</i>	<i>4.6</i>
8. China	6.5	7.5	9.4	8.1	7.8	7.7	7.6	7.5
9. Emerging Asia ex. China	1.8	3.8	3.8	4.0	4.0	4.4	4.6	4.6
10. Mexico	0.1	-2.9	2.2	3.0	3.7	3.7	3.6	3.4
11. Brazil	2.6	6.0	0.0	1.7	2.9	3.3	3.5	3.5

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

### Total Foreign GDP



### Foreign GDP



## The Foreign Inflation Outlook

### Consumer Prices\*

Percent change, annual rate

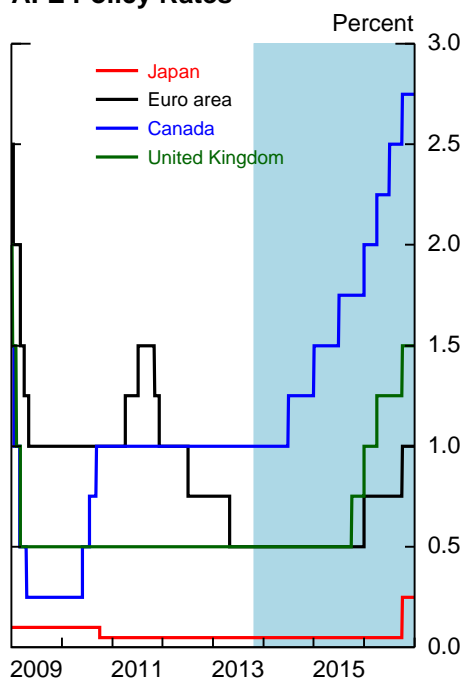
	2013				2014		2015	2016
	Q1	Q2	Q3	Q4	H1	H2		
<b>1. Total Foreign</b>	<b>2.2</b>	<b>1.9</b>	<b>2.8</b>	<b>2.6</b>	<b>2.8</b>	<b>2.5</b>	<b>2.7</b>	<b>2.6</b>
<i>Previous Tealbook</i>	2.2	1.9	2.6	2.6	2.8	2.5	2.7	2.6
<b>2. Advanced Foreign Economies</b>	<b>0.9</b>	<b>0.4</b>	<b>2.1</b>	<b>1.4</b>	<b>2.1</b>	<b>1.5</b>	<b>1.8</b>	<b>1.8</b>
<i>Previous Tealbook</i>	0.9	0.5	1.9	1.5	2.1	1.5	1.8	1.8
3. Canada	1.6	0.0	1.6	1.7	1.8	1.8	1.8	2.1
4. Euro Area	0.7	0.6	1.9	1.4	1.3	1.4	1.5	1.7
5. Japan	-0.4	0.8	2.9	0.7	4.6	0.8	2.5	1.4
6. United Kingdom	2.3	1.5	3.1	3.0	1.7	2.2	2.0	1.8
<b>7. Emerging Market Economies</b>	<b>3.3</b>	<b>3.0</b>	<b>3.3</b>	<b>3.5</b>	<b>3.3</b>	<b>3.3</b>	<b>3.3</b>	<b>3.3</b>
<i>Previous Tealbook</i>	3.3	3.0	3.1	3.4	3.3	3.3	3.3	3.3
8. China	3.2	2.1	3.4	3.0	3.0	3.0	3.0	3.0
9. Emerging Asia ex. China	3.5	1.8	3.9	4.1	3.4	3.4	3.4	3.4
10. Mexico	3.2	5.3	2.0	3.6	3.5	3.4	3.4	3.4
11. Brazil	7.0	5.8	4.6	5.5	5.7	5.3	5.3	5.3

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

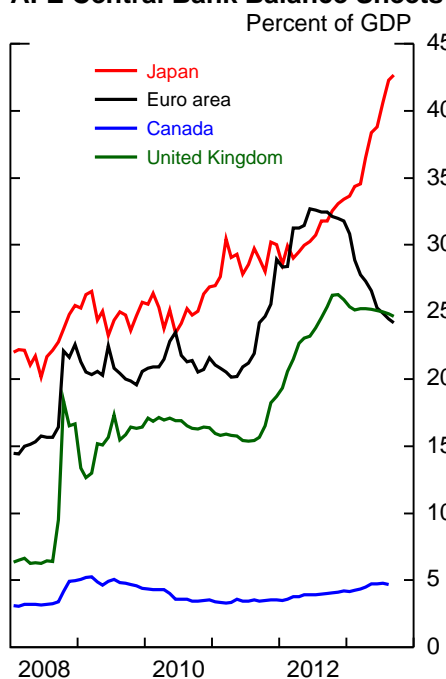
Int'l Econ Devel &amp; Outlook

## Foreign Monetary Policy

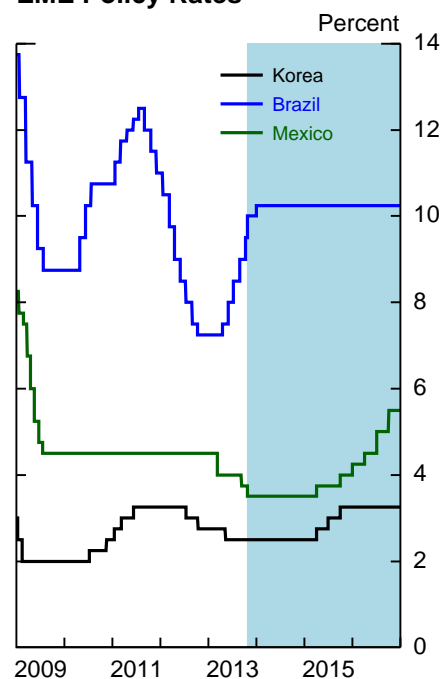
### AFE Policy Rates



### AFE Central Bank Balance Sheets



### EME Policy Rates





**Alternative Scenarios**

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

Measure and scenario	2013	2014	2015	2016	2017-18
	H2				
<i>Real GDP</i>					
Extended Tealbook baseline	2.2	3.2	3.5	3.2	2.5
Faster recovery	2.6	4.0	4.1	3.4	2.4
Supply-side damage	2.1	2.9	2.6	2.0	1.7
Consumer restraint	2.2	2.5	2.3	2.7	2.8
Low inflation	2.2	3.0	2.9	3.0	2.9
EME financial crisis	2.1	2.0	3.3	3.6	2.8
Higher global growth	2.3	3.7	3.8	3.1	2.2
<i>Unemployment rate<sup>1</sup></i>					
Extended Tealbook baseline	7.3	6.6	5.9	5.4	5.1
Faster recovery	7.3	6.2	5.2	4.6	4.6
Supply-side damage	7.3	6.2	5.1	4.8	5.2
Consumer restraint	7.3	6.8	6.7	6.7	6.2
Low inflation	7.3	6.7	6.2	5.9	5.1
EME financial crisis	7.3	7.0	6.5	5.9	5.3
Higher global growth	7.3	6.4	5.5	5.0	4.9
<i>Total PCE prices</i>					
Extended Tealbook baseline	1.6	1.4	1.5	1.6	1.8
Faster recovery	1.6	1.4	1.5	1.7	1.9
Supply-side damage	1.6	1.6	1.9	2.0	2.2
Consumer restraint	1.6	1.4	1.4	1.4	1.5
Low inflation	1.3	.5	.3	.2	.3
EME financial crisis	1.3	.1	1.2	1.8	2.2
Higher global growth	1.8	2.1	2.2	1.9	1.7
<i>Core PCE prices</i>					
Extended Tealbook baseline	1.5	1.5	1.6	1.7	1.9
Faster recovery	1.5	1.5	1.6	1.8	2.0
Supply-side damage	1.5	1.7	2.0	2.1	2.3
Consumer restraint	1.5	1.5	1.5	1.5	1.6
Low inflation	1.2	.6	.4	.3	.4
EME financial crisis	1.5	1.1	1.3	1.7	2.1
Higher global growth	1.5	1.7	1.9	2.0	2.0
<i>Federal funds rate<sup>1</sup></i>					
Extended Tealbook baseline	.1	.1	.9	2.0	3.4
Faster recovery	.1	.2	1.7	3.1	4.5
Supply-side damage	.1	.4	2.3	3.6	4.3
Consumer restraint	.1	.1	.1	.1	1.1
Low inflation	.1	.1	.1	.4	1.3
EME financial crisis	.1	.1	.1	1.2	3.3
Higher global growth	.1	.1	1.4	2.8	4.0

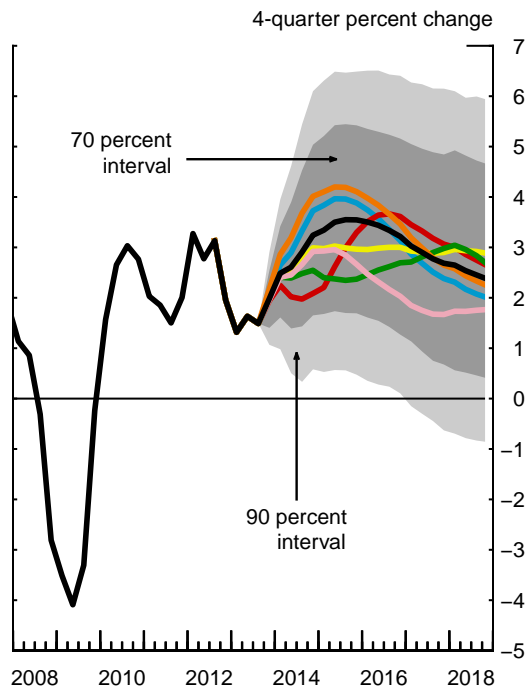
1. Percent, average for the final quarter of the period.

## Forecast Confidence Intervals and Alternative Scenarios

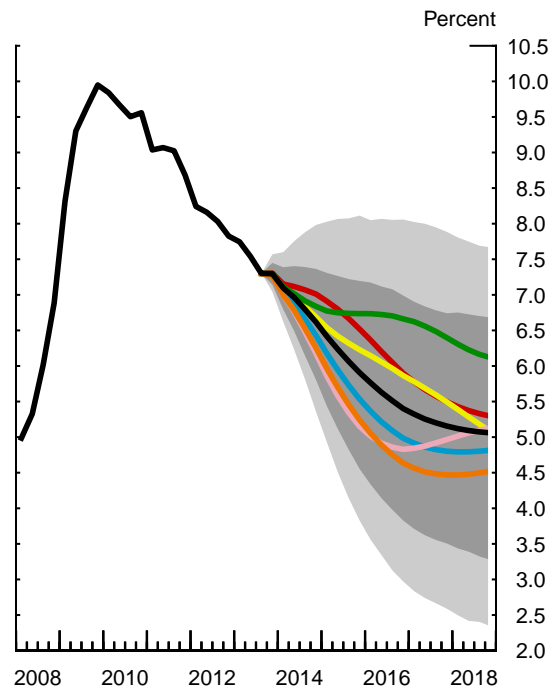
Confidence Intervals Based on FRB/US Stochastic Simulations

- Extended Tealbook baseline
- Consumer restraint
- EME financial crisis
- Faster recovery
- Low inflation
- Higher global growth
- Supply-side damage

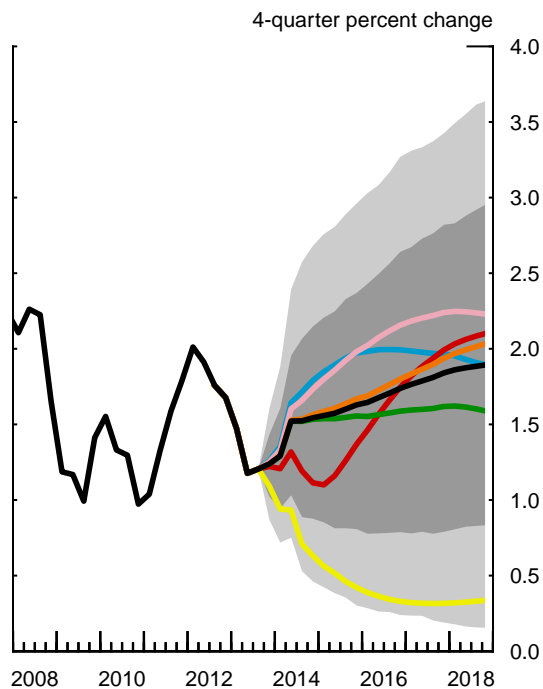
Real GDP



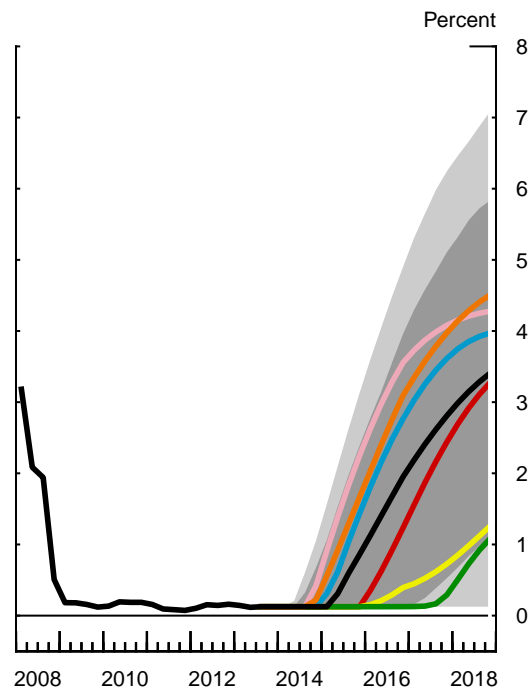
Unemployment Rate



PCE Prices excluding Food and Energy



Federal Funds Rate



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

Measure	2013	2014	2015	2016	2017	2018
<i>Real GDP</i> (percent change, Q4 to Q4)						
Projection	2.0	3.2	3.5	3.2	2.7	2.4
Confidence interval						
Tealbook forecast errors	1.5–2.5	1.5–5.0	1.5–5.5	...	...	...
FRB/US stochastic simulations	1.4–2.5	1.7–5.0	1.7–5.4	1.3–5.2	.7–4.8	.4–4.6
<i>Civilian unemployment rate</i> (percent, Q4)						
Projection	7.3	6.6	5.9	5.4	5.2	5.1
Confidence interval						
Tealbook forecast errors	7.2–7.4	5.9–7.3	4.9–6.9	...	...	...
FRB/US stochastic simulations	7.1–7.4	5.8–7.4	4.6–7.2	3.8–7.0	3.5–6.7	3.3–6.7
<i>PCE prices, total</i> (percent change, Q4 to Q4)						
Projection	1.0	1.4	1.5	1.6	1.8	1.9
Confidence interval						
Tealbook forecast errors	.8–1.2	.1–2.6	.2–2.7	...	...	...
FRB/US stochastic simulations	.7–1.4	.5–2.3	.4–2.5	.4–2.7	.6–2.9	.7–3.1
<i>PCE prices excluding food and energy</i> (percent change, Q4 to Q4)						
Projection	1.2	1.5	1.6	1.7	1.8	1.9
Confidence interval						
Tealbook forecast errors	1.0–1.5	.9–2.2	.8–2.4	...	...	...
FRB/US stochastic simulations	1.0–1.4	.9–2.1	.8–2.4	.8–2.6	.8–2.8	.8–3.0
<i>Federal funds rate</i> (percent, Q4)						
Projection	.1	.1	.9	2.0	2.8	3.4
Confidence interval						
FRB/US stochastic simulations	.1–.1	.1–.7	.1–2.4	.1–4.0	.5–5.1	1.1–5.8

Note: Shocks underlying FRB/US stochastic simulations are randomly drawn from the 1969–2012 set of model equation residuals.

Intervals derived from Tealbook forecast errors are based on projections made from 1979 to 2012, except for PCE prices excluding food and energy, where the sample is 1981–2012.

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

**Alternative Projections**  
(Percent change, Q4 to Q4, except as noted)

Measure and projection	2013		2014		2015	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
<i>Real GDP</i>						
Staff	2.3	2.0	3.1	3.2	3.4	3.5
FRB/US	1.7	1.5	1.8	2.2	2.3	2.6
EDO	2.2	2.1	3.0	3.1	3.0	3.0
Blue Chip	2.1	2.0	2.8	2.8	...	...
<i>Unemployment rate<sup>1</sup></i>						
Staff	7.2	7.3	6.6	6.6	5.8	5.9
FRB/US	7.4	7.4	7.9	7.4	7.9	7.1
EDO	7.5	7.4	7.3	7.2	7.1	7.0
Blue Chip	7.3	7.3	6.8	6.8	...	...
<i>Total PCE prices</i>						
Staff	1.1	1.0	1.2	1.4	1.4	1.5
FRB/US	1.0	.9	.8	.9	.8	1.0
EDO	1.1	1.1	1.4	1.3	1.5	1.5
Blue Chip <sup>2</sup>	1.5	1.4	2.0	2.0	...	...
<i>Core PCE prices</i>						
Staff	1.2	1.2	1.5	1.5	1.6	1.6
FRB/US	1.2	1.2	1.1	1.1	1.0	1.1
EDO	1.2	1.2	1.4	1.3	1.5	1.5
Blue Chip	...	...	...	...	...	...
<i>Federal funds rate<sup>1</sup></i>						
Staff	.1	.1	.1	.1	.8	.9
FRB/US	.1	.1	.1	.1	.1	.1
EDO	.4	.4	1.4	1.4	2.1	2.1
Blue Chip <sup>3</sup>	.1	.1	.2	.2	...	...

Note: Blue Chip forecast completed on October 10, 2013.

1. Percent, average for Q4.

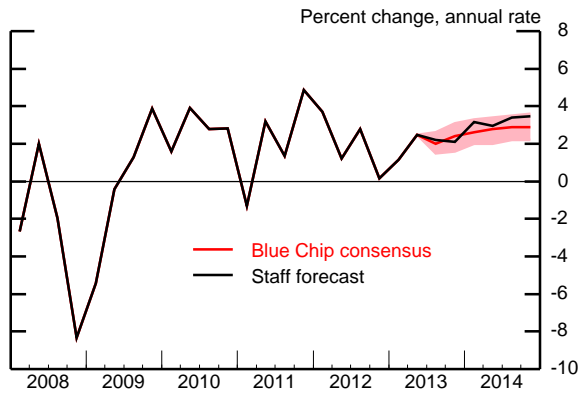
2. Consumer price index.

3. Treasury bill rate.

... Not applicable. The Blue Chip forecast typically extends about 2 years.

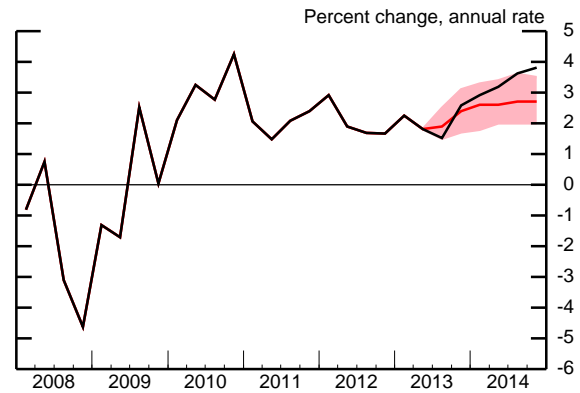
## Tealbook Forecast Compared with Blue Chip (Blue Chip survey released October 10, 2013)

Real GDP

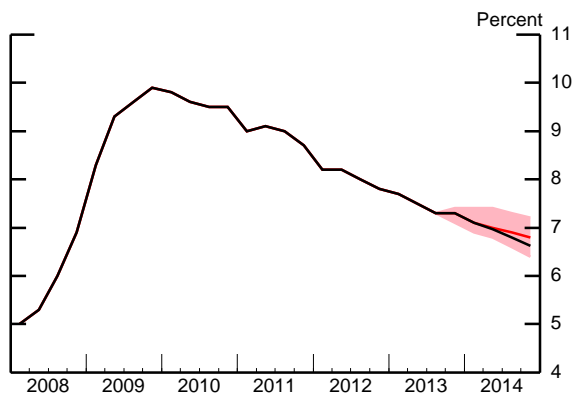


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

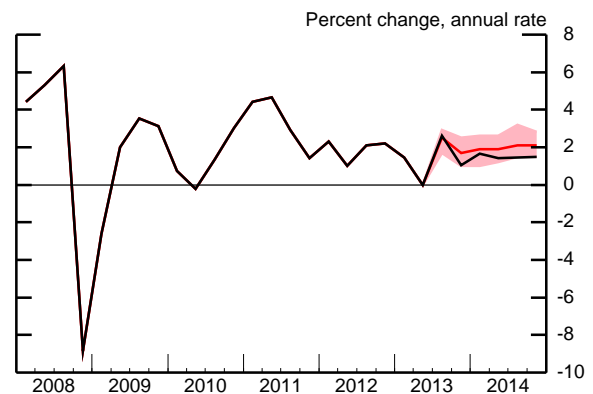
Real PCE



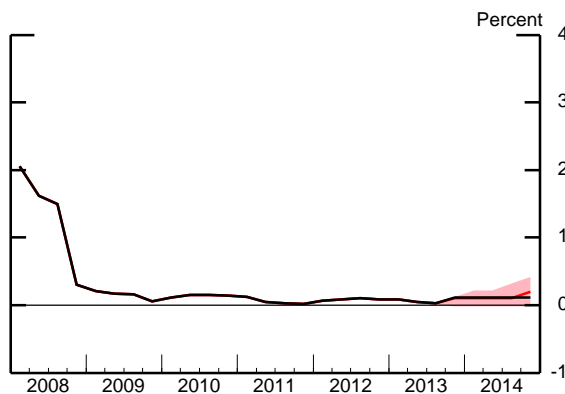
Unemployment Rate



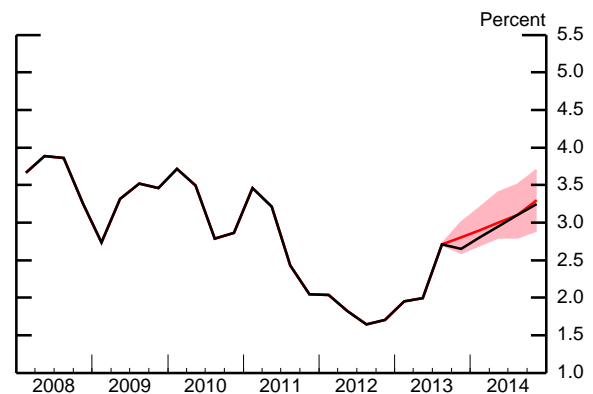
Consumer Price Index



Treasury Bill Rate



10-Year Treasury Yield



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

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

(4 quarters ahead—2014:Q3)

Probability that the 4-quarter change in total PCE prices will be ...	Staff	FRB/US	EDO	BVAR
<i>Greater than 3 percent</i>				
Current Tealbook	.03	.01	.06	.05
Previous Tealbook	.02	.01	.06	.04
<i>Less than 1 percent</i>				
Current Tealbook	.34	.53	.36	.20
Previous Tealbook	.39	.56	.37	.21

**Probability of Unemployment Events**

(4 quarters ahead—2014:Q3)

Probability that the unemployment rate will ...	Staff	FRB/US	EDO	BVAR
<i>Increase by 1 percentage point</i>				
Current Tealbook	.01	.08	.19	.02
Previous Tealbook	.01	.15	.19	.02
<i>Decrease by 1 percentage point</i>				
Current Tealbook	.21	.03	.21	.19
Previous Tealbook	.25	.01	.21	.16

**Probability of Near-Term Recession**

Probability that real GDP declines in each of 2013:Q4 and 2014:Q1	Staff	FRB/US	EDO	BVAR	Factor Model
Current Tealbook	.02	.05	.05	.06	.09
Previous Tealbook	.02	.08	.04	.05	.09

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

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

Interval	Nominal GDP		Real GDP		PCE price index		Core PCE price index		Unemployment rate <sup>1</sup>	
	09/11/13	10/23/13	09/11/13	10/23/13	09/11/13	10/23/13	09/11/13	10/23/13	09/11/13	10/23/13
<i>Quarterly</i>										
2013:Q1	2.8	2.8	1.1	1.1	1.1	1.1	1.4	1.4	7.7	7.7
Q2	3.7	3.1	2.9	2.5	.0	-1	.8	.6	7.5	7.5
Q3	4.2	4.2	2.2	2.2	1.9	2.0	1.5	1.5	7.3	7.3
Q4	4.1	3.3	2.7	2.1	1.3	1.1	1.3	1.4	7.2	7.3
2014:Q1	4.2	4.4	2.7	3.2	1.0	1.5	1.5	1.6	7.0	7.1
Q2	4.5	4.5	3.0	3.0	1.2	1.3	1.5	1.6	6.9	7.0
Q3	4.8	4.9	3.4	3.4	1.3	1.3	1.5	1.5	6.7	6.8
Q4	4.8	5.0	3.3	3.5	1.3	1.3	1.5	1.5	6.6	6.6
2015:Q1	5.0	5.4	3.4	3.6	1.4	1.4	1.6	1.6	6.4	6.4
Q2	5.1	5.2	3.5	3.6	1.4	1.4	1.6	1.6	6.2	6.2
Q3	5.2	5.3	3.5	3.6	1.4	1.5	1.6	1.6	6.0	6.1
Q4	5.0	5.1	3.4	3.4	1.5	1.5	1.6	1.6	5.8	5.9
<i>Two-quarter<sup>2</sup></i>										
2013:Q2	3.3	3.0	2.0	1.8	.6	.5	1.1	1.0	-3	-3
Q4	4.1	3.8	2.5	2.2	1.6	1.6	1.4	1.5	-3	-2
2014:Q2	4.3	4.4	2.9	3.1	1.1	1.4	1.5	1.6	-3	-3
Q4	4.8	4.9	3.4	3.4	1.3	1.3	1.5	1.5	-3	-4
2015:Q2	5.1	5.3	3.4	3.6	1.4	1.4	1.6	1.6	-4	-4
Q4	5.1	5.2	3.4	3.5	1.5	1.5	1.6	1.6	-4	-3
<i>Four-quarter<sup>3</sup></i>										
2012:Q4	3.8	3.8	2.0	2.0	1.7	1.7	1.7	1.7	-9	-9
2013:Q4	3.7	3.4	2.3	2.0	1.1	1.0	1.2	1.2	-6	-5
2014:Q4	4.6	4.7	3.1	3.2	1.2	1.4	1.5	1.5	-6	-7
2015:Q4	5.1	5.2	3.4	3.5	1.4	1.5	1.6	1.6	-8	-7
2016:Q4	5.0	5.0	3.2	3.2	1.6	1.6	1.7	1.7	-5	-5
<i>Annual</i>										
2012	4.6	4.6	2.8	2.8	1.8	1.8	1.8	1.8	8.1	8.1
2013	3.3	3.1	1.7	1.6	1.2	1.1	1.3	1.3	7.4	7.5
2014	4.3	4.2	2.9	2.8	1.2	1.3	1.4	1.5	6.8	6.9
2015	5.0	5.1	3.4	3.5	1.4	1.4	1.6	1.6	6.1	6.2
2016	5.0	5.1	3.4	3.4	1.5	1.5	1.7	1.7	5.5	5.6

1. Level, except for two-quarter and four-quarter intervals.

2. Percent change from two quarters earlier; for unemployment rate, change is in percentage points.

3. Percent change from four quarters earlier; for unemployment rate, change is in percentage points.

## Changes in Real Gross Domestic Product and Related Items

(Percent, annual rate except as noted)

Item	2013			2014				2015				2013 <sup>1</sup>	2014 <sup>1</sup>	2015 <sup>1</sup>	2016 <sup>1</sup>
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2013 <sup>1</sup>	2014 <sup>1</sup>	2015 <sup>1</sup>	2016 <sup>1</sup>
Real GDP	2.5	2.2	2.1	3.2	3.0	3.4	3.5	3.6	3.6	3.6	3.4	2.0	3.2	3.5	3.2
<i>Previous Tealbook</i>	2.9	2.2	2.7	2.7	3.0	3.4	3.3	3.4	3.5	3.5	3.4	2.3	3.1	3.4	3.2
Final sales	2.1	1.4	2.2	2.9	3.0	3.6	3.7	3.8	3.7	3.8	3.6	1.5	3.3	3.7	3.3
<i>Previous Tealbook</i>	2.4	1.9	2.5	2.5	3.0	3.4	3.5	3.6	3.5	3.8	3.7	1.7	3.1	3.6	3.5
Priv. dom. final purch.	2.6	2.1	3.0	3.5	4.0	4.5	4.6	4.6	4.6	4.4	4.2	2.3	4.2	4.5	3.5
<i>Previous Tealbook</i>	2.9	2.3	3.7	3.7	4.2	4.5	4.5	4.5	4.5	4.5	4.4	2.6	4.2	4.4	3.6
Personal cons. expend.	1.8	1.5	2.6	2.9	3.2	3.6	3.8	3.8	3.8	3.8	3.6	2.0	3.4	3.8	3.1
<i>Previous Tealbook</i>	2.1	2.0	3.1	3.3	3.5	3.8	3.8	3.8	3.8	3.8	3.7	2.4	3.6	3.8	3.1
Durables	6.2	6.7	8.1	9.3	9.4	9.8	10.2	9.1	8.7	8.6	8.3	6.7	9.7	8.7	6.3
Nondurables	1.6	2.6	2.2	2.1	2.4	2.8	2.9	3.0	3.1	3.0	2.9	2.3	2.5	3.0	2.5
Services	1.2	.3	1.8	2.2	2.4	2.9	3.1	3.2	3.2	3.2	3.1	1.2	2.6	3.2	2.7
Residential investment	14.2	7.8	11.0	15.9	17.7	18.3	18.3	16.8	14.9	13.5	11.2	11.4	17.5	14.1	5.8
<i>Previous Tealbook</i>	14.1	2.6	12.0	14.7	16.3	16.3	15.9	15.9	15.3	14.6	13.4	10.2	15.8	14.8	8.9
Nonres. priv. fixed invest.	4.7	4.0	3.6	3.8	5.0	5.4	5.4	5.3	5.6	5.4	5.2	1.8	4.9	5.4	4.9
<i>Previous Tealbook</i>	4.4	3.7	5.1	3.2	4.9	5.6	5.3	5.1	5.2	5.2	5.3	2.1	4.7	5.2	5.0
Equipment & intangibles	1.3	2.4	3.5	4.5	5.3	6.3	6.4	6.0	6.4	6.2	5.9	2.4	5.6	6.1	5.5
<i>Previous Tealbook</i>	.9	3.6	5.2	3.6	5.3	6.4	6.0	5.8	5.9	6.0	6.1	3.0	5.3	5.9	5.7
Nonres. structures	17.6	9.6	3.9	1.6	4.0	2.1	2.3	2.8	3.0	2.9	2.9	-.1	2.5	2.9	2.6
<i>Previous Tealbook</i>	18.1	4.2	5.0	1.8	3.5	2.7	2.8	2.9	2.7	2.6	2.5	-1.0	2.7	2.7	2.5
Net exports <sup>2</sup>	-424	-425	-410	-410	-408	-402	-399	-395	-397	-392	-389	-420	-405	-394	-372
<i>Previous Tealbook</i> <sup>2</sup>	-420	-406	-408	-416	-421	-426	-425	-425	-433	-428	-426	-414	-422	-428	-409
Exports	8.0	5.2	3.3	4.7	4.4	5.5	6.0	6.3	6.5	6.7	6.4	3.7	5.1	6.5	6.9
Imports	6.9	4.3	.3	3.9	3.3	3.7	4.4	4.7	5.8	4.9	4.9	3.0	3.8	5.1	4.7
Gov't. cons. & invest.	-.4	-1.7	-4.2	-.6	-2.1	-1.8	-1.5	-1.0	-.8	-.8	-.4	-2.6	-1.5	-.8	.9
<i>Previous Tealbook</i>	-.4	-2.5	-2.7	-2.3	-2.1	-1.8	-1.5	-9	-.8	-.7	-.5	-2.5	-1.9	-.7	1.0
Federal	-1.6	-6.2	-10.9	-1.9	-5.7	-5.1	-4.6	-4.2	-3.9	-3.9	-3.1	-6.8	-4.3	-3.8	.0
Defense	-.6	-7.0	-9.5	-5.4	-6.3	-5.7	-5.3	-4.9	-4.2	-3.9	-3.3	-7.2	-5.6	-4.1	-1.1
Nondefense	-3.1	-5.0	-13.1	4.0	-4.6	-4.2	-3.6	-3.2	-3.4	-3.9	-2.7	-6.3	-2.2	-3.3	-.1
State & local	.4	1.4	.4	.3	.3	.3	.4	1.0	1.1	1.1	1.1	.2	.3	1.1	1.5
Change in priv. inventories <sup>2</sup>	57	82	81	94	93	87	78	77	74	68	63	65	88	70	59
<i>Previous Tealbook</i> <sup>2</sup>	58	75	81	95	97	97	91	90	91	81	69	64	95	83	51
Nonfarm <sup>2</sup>	33	64	62	79	80	74	65	74	72	66	60	45	75	68	57
Farm <sup>2</sup>	19	19	19	15	13	13	13	2	2	2	2	18	13	2	2

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

2. Billions of chained (2009) dollars.



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

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP <i>Previous Tealbook</i>	1.9 1.9	-2.8 -2.8	-2 -2	2.8 2.8	2.0 2.0	2.0 2.0	2.0 2.3	3.2 3.1	3.5 3.4	3.2 3.2
Final sales <i>Previous Tealbook</i>	2.0 2.0	-2.2 -2.2	-4 -4	2.0 2.0	1.8 1.8	2.5 2.5	1.5 1.7	3.3 3.1	3.7 3.6	3.3 3.5
Priv. dom. final purch. <i>Previous Tealbook</i>	.8 .8	-4.1 -4.1	-2.3 -2.3	3.5 3.5	3.0 3.0	2.9 2.9	2.3 2.6	4.2 4.2	4.5 4.4	3.5 3.6
Personal cons. expend. <i>Previous Tealbook</i>	1.5 1.5	-2.0 -2.0	-1 -1	3.1 3.1	2.0 2.0	2.0 2.0	2.0 2.4	3.4 3.6	3.8 3.8	3.1 3.1
Durables	4.1	-12.9	2.5	9.3	5.7	7.8	6.7	9.7	8.7	6.3
Nondurables	.1	-2.7	.2	3.3	.7	1.6	2.3	2.5	3.0	2.5
Services	1.5	.2	-6	2.1	1.9	1.3	1.2	2.6	3.2	2.7
Residential investment <i>Previous Tealbook</i>	-21.3 -21.3	-24.3 -24.3	-10.8 -10.8	-5.2 -5.2	5.6 5.6	15.5 15.5	11.4 10.2	17.5 15.8	14.1 14.8	5.8 8.9
Nonres. priv. fixed invest. <i>Previous Tealbook</i>	7.1 7.1	-8.9 -8.9	-12.2 -12.2	8.1 8.1	8.6 8.6	5.0 5.0	1.8 2.1	4.9 4.7	5.4 5.2	4.9 5.0
Equipment & intangibles <i>Previous Tealbook</i>	3.9 3.9	-11.8 -11.8	-6.0 -6.0	12.0 12.0	8.7 8.7	3.9 3.9	2.4 3.0	5.6 5.3	6.1 5.9	5.5 5.7
Nonres. structures <i>Previous Tealbook</i>	17.1 17.1	-1.2 -1.2	-27.1 -27.1	-4.0 -4.0	8.3 8.3	9.3 9.3	-1 -1.0	2.5 2.7	2.9 2.7	2.6 2.5
Net exports <sup>1</sup> <i>Previous Tealbook</i> <sup>1</sup>	-704 -704	-547 -547	-392 -392	-463 -463	-446 -446	-431 -431	-420 -414	-405 -422	-394 -428	-372 -409
Exports	9.8	-2.9	.4	9.8	4.6	2.4	3.7	5.1	6.5	6.9
Imports	.7	-5.9	-6.2	11.7	3.5	.1	3.0	3.8	5.1	4.7
Gov't. cons. & invest. <i>Previous Tealbook</i>	1.8 1.8	3.3 3.3	2.3 2.3	-1.1 -1.1	-3.3 -3.3	-1.1 -1.1	-2.6 -2.5	-1.5 -1.9	-.8 -.7	.9 1.0
Federal	2.7	8.4	3.9	3.2	-3.9	-2.3	-6.8	-4.3	-3.8	.0
Defense	2.5	9.4	3.6	2.0	-4.2	-5.0	-7.2	-5.6	-4.1	-1.1
Nondefense	2.9	6.5	4.6	5.5	-3.3	2.6	-6.3	-2.2	-3.3	.1
State & local	1.2	.2	1.3	-4.0	-2.8	-.3	.2	.3	1.1	1.5
Change in priv. inventories <sup>1</sup> <i>Previous Tealbook</i> <sup>1</sup>	36 36	-34 -34	-148 -148	58 58	34 34	58 58	65 64	88 95	70 83	59 51
Nonfarm <sup>1</sup>	37	-35	-146	66	40	69	45	75	68	57
Farm <sup>1</sup>	-1	1	-2	-7	-4	-7	18	13	2	2

1. Billions of chained (2009) dollars.

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

Item	2013			2014				2015				2013 <sup>1</sup>	2014 <sup>1</sup>	2015 <sup>1</sup>	2016 <sup>1</sup>
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Real GDP <i>Previous Tealbook</i>	2.5 2.9	2.2 2.2	2.1 2.7	3.2 2.7	3.0 3.0	3.4 3.4	3.5 3.3	3.6 3.4	3.6 3.5	3.6 3.5	3.4 3.4	2.0 2.3	3.2 3.1	3.5 3.4	3.2 3.2
Final sales <i>Previous Tealbook</i>	2.1 2.4	1.4 1.9	2.1 2.5	2.9 2.4	3.0 3.0	3.5 3.4	3.7 3.5	3.8 3.6	3.7 3.5	3.7 3.8	3.6 3.7	1.5 1.7	3.3 3.1	3.7 3.6	3.3 3.5
Priv. dom. final purch. <i>Previous Tealbook</i>	2.2 2.4	1.8 1.9	2.5 3.1	3.0 3.1	3.3 3.5	3.7 3.8	3.9 3.8	3.9 3.8	3.9 3.8	3.8 3.8	3.6 3.7	2.0 2.2	3.5 3.5	3.8 3.8	3.0 3.1
Personal cons. expend. <i>Previous Tealbook</i>	1.2 1.5	1.1 1.4	1.8 2.1	2.0 2.3	2.2 2.4	2.5 2.6	2.6 2.6	2.6 2.6	2.6 2.6	2.6 2.6	2.5 2.5	1.4 1.6	2.3 2.5	2.6 2.6	2.1 2.1
Durables	.5	.5	.6	.7	.7	.7	.8	.7	.7	.7	.6	.5	.7	.7	.5
Nondurables	.3	.4	.4	.3	.4	.4	.4	.5	.5	.5	.4	.4	.4	.5	.4
Services	.5	.2	.8	1.0	1.1	1.3	1.4	1.5	1.5	1.5	1.4	.6	1.2	1.4	1.2
Residential investment <i>Previous Tealbook</i>	.4 .4	.2 .1	.3 .4	.5 .4	.6 .5	.6 .5	.6 .5	.6 .6	.5 .5	.5 .5	.4 .5	.3 .3	.6 .5	.5 .5	.2 .4
Nonres. priv. fixed invest. <i>Previous Tealbook</i>	.6 .5	.5 .5	.4 .6	.5 .4	.6 .6	.7 .7	.7 .6	.6 .6	.7 .6	.7 .6	.7 .7	.2 .3	.6 .6	.7 .6	.6 .6
Equipment & intangibles <i>Previous Tealbook</i>	.1 .1	.2 .3	.3 .5	.4 .3	.5 .5	.6 .6	.6 .6	.6 .5	.6 .6	.6 .6	.6 .6	.2 .3	.5 .5	.6 .6	.5 .6
Nonres. structures <i>Previous Tealbook</i>	.4 .4	.3 .1	.1 .1	.0 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.1 .1	.0 .0	.1 .1	.1 .1	.1 .1
Net exports <i>Previous Tealbook</i>	-1 .0	.0 .4	.4 -1	.0 -2	.1 -1	.1 -1	.1 .0	.1 .0	-1 -2	.1 .1	.1 .0	.0 .0	.1 -1	.0 .0	.2 .2
Exports	1.0	.7	.4	.6	.6	.7	.8	.8	.9	.9	.9	.5	.7	.9	.9
Imports	-1.1	-7	.0	-6	-5	-6	-7	-8	-9	-8	-8	-5	-6	-8	-8
Gov't. cons. & invest. <i>Previous Tealbook</i>	-1 -1	-3 -5	-8 -5	-1 -4	-4 -4	-3 -3	-3 -3	-2 -2	-1 -1	-1 -1	-1 -1	-5 -5	-3 -4	-1 -1	.2 .2
Federal	-1	-5	-8	-1	-4	-4	-3	-3	-3	-2	-2	-5	-4	-1	.2
Defense	-1	-5	-8	-1	-4	-4	-3	-3	-3	-2	-2	-5	-3	-2	.0
Nondefense	.0	-3	-4	-2	-3	-2	-2	-2	-2	-2	-1	-3	-2	-2	.0
State & local	-1 .1	-1 .2	-4 .1	.1 .0	-1 .0	-1 .0	-1 .0	-1 .1	-1 .1	-1 .1	-1 .1	-2 .0	-1 .0	-1 .1	.0 .2
Change in priv. inventories <i>Previous Tealbook</i>	.4 .6	.8 .4	.0 .2	.3 .3	-1 .0	-2 .0	-3 -1	-2 -2	-1 .0	-2 -2	-1 -3	.5 .5	.0 .0	-1 -2	-1 -2
Nonfarm	.3	.8	-1	.5	.0	-2	-2	.2	-1	-2	-1	.3	.0	.0	-1
Farm	.1	-1	.0	-2	-1	.0	.0	-4	.0	.0	.0	.2	-1	-1	.0

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

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

Item	2013			2014				2015				2013 <sup>1</sup>	2014 <sup>1</sup>	2015 <sup>1</sup>	2016 <sup>1</sup>
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
GDP chain-wt. price index <i>Previous Tealbook</i>	.6 .8	2.0 1.9	1.2 1.3	1.2 1.4	1.5 1.5	1.4 1.4	1.5 1.4	1.7 1.6	1.6 1.6	1.6 1.6	1.6 1.6	1.3 1.4	1.4 1.4	1.6 1.6	1.7 1.7
PCE chain-wt. price index <i>Previous Tealbook</i>	-1 .0	2.0 1.9	1.1 1.3	1.5 1.0	1.3 1.2	1.3 1.3	1.3 1.3	1.4 1.4	1.4 1.4	1.5 1.5	1.5 1.5	1.0 1.1	1.4 1.2	1.5 1.4	1.6 1.6
Energy <i>Previous Tealbook</i>	-11.9 -11.9	11.1 10.6	-4.2 1.5	1.3 -5.4	-1.5 -3.1	-1.2 -2.1	-1.2 -1.7	-1.0 -1.3	-1.3 -1.7	-1.2 -1.5	-1.0 -1.1	-2.4 -1.1	-7 -3.1	-1.1 -1.4	-5 -7
Food <i>Previous Tealbook</i>	.5 .5	1.5 1.2	.9 .8	.6 .6	.6 .6	.7 .7	.7 .8	1.0 1.1	1.3 1.3	1.3 1.3	1.4 1.4	1.1 .9	.6 .7	1.3 1.3	1.4 1.4
Ex. food & energy <i>Previous Tealbook</i>	.6 .8	1.5 1.5	1.4 1.3	1.6 1.5	1.6 1.5	1.5 1.5	1.5 1.5	1.6 1.6	1.6 1.6	1.6 1.6	1.6 1.6	1.2 1.2	1.5 1.5	1.6 1.6	1.7 1.7
Ex. food & energy, market based <i>Previous Tealbook</i>	.5 .6	1.5 1.5	1.2 1.2	1.5 1.5	1.6 1.5	1.5 1.5	1.5 1.5	1.6 1.6	1.6 1.6	1.6 1.6	1.6 1.6	1.2 1.2	1.5 1.5	1.6 1.6	1.7 1.7
CPI <i>Previous Tealbook</i>	.0 .0	2.6 2.5	1.0 1.5	1.7 1.0	1.4 1.3	1.5 1.4	1.5 1.4	1.6 1.6	1.6 1.6	1.6 1.6	1.6 1.5	1.3 1.4	1.5 1.3	1.6 1.6	1.7 1.7
Ex. food & energy <i>Previous Tealbook</i>	1.4 1.4	1.8 1.8	1.7 1.6	1.8 1.8	1.8 1.8	1.8 1.8	1.9 1.9	2.0 2.0	1.9 1.9	1.9 1.9	1.8 1.8	1.7 1.7	1.8 1.8	1.9 1.9	1.9 1.9
ECL, hourly compensation <sup>2</sup> <i>Previous Tealbook</i> <sup>2</sup>	2.4 2.4	2.4 2.4	2.4 2.4	2.5 2.5	2.5 2.5	2.6 2.6	2.6 2.6	2.7 2.7	2.7 2.7	2.7 2.7	2.7 2.7	2.2 2.2	2.5 2.5	2.7 2.7	3.0 3.0
Nonfarm business sector Output per hour <i>Previous Tealbook</i>	1.8 2.5	2.2 2.7	1.1 1.1	.9 1.1	1.4 1.3	1.6 1.6	1.6 1.5	1.8 1.4	1.6 1.6	1.9 1.7	1.8 1.5	.8 1.1	1.4 1.4	1.8 1.5	1.9 1.8
Compensation per hour <i>Previous Tealbook</i>	2.3 2.3	1.5 2.5	2.3 2.6	2.7 2.7	2.7 2.7	2.8 2.8	2.9 2.9	3.0 3.0	3.1 3.1	3.1 3.1	3.2 3.2	.2 .5	2.7 2.7	3.1 3.1	3.4 3.4
Unit labor costs <i>Previous Tealbook</i>	.5 -1	-7 -1	1.2 1.5	1.7 1.6	1.2 1.3	1.2 1.2	1.2 1.4	1.2 1.6	1.5 1.5	1.2 1.4	1.4 1.7	-7 -6	1.3 1.4	1.3 1.6	1.5 1.5
Core goods imports chain-wt. price index <sup>3</sup> <i>Previous Tealbook</i> <sup>3</sup>	-2.4 -2.5	-3.0 -2.3	.8 .2	1.9 1.1	1.5 1.5	1.8 1.8	1.5 1.5	1.6 1.6	1.6 1.5	1.6 1.5	1.6 1.5	-1.1 -1.0	1.7 1.5	1.6 1.5	1.6 1.6

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

2. Private-industry workers.

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

## Greensheets

## Changes in Prices and Costs

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

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
GDP chain-wt. price index <i>Previous Tealbook</i>	2.5 2.5	1.9 1.9	.4 .4	1.8 1.8	1.8 1.8	1.8 1.8	1.3 1.4	1.4 1.4	1.6 1.6	1.7 1.7
PCE chain-wt. price index <i>Previous Tealbook</i>	3.3 3.3	1.5 1.5	1.2 1.2	1.3 1.3	2.6 2.6	1.7 1.7	1.0 1.1	1.4 1.2	1.5 1.4	1.6 1.6
Energy <i>Previous Tealbook</i>	19.1 19.1	-8.2 -8.2	2.3 2.3	6.4 6.4	11.7 11.7	2.1 2.1	-2.4 -1.1	-7 -3.1	-1.1 -1.4	-5 -7
Food <i>Previous Tealbook</i>	4.9 4.9	6.9 6.9	-1.8 -1.8	1.3 1.3	5.1 5.1	1.2 1.2	1.1 .9	.6 .7	1.3 1.3	1.4 1.4
Ex. food & energy <i>Previous Tealbook</i>	2.2 2.2	1.6 1.6	1.4 1.4	1.0 1.0	1.8 1.8	1.7 1.7	1.2 1.2	1.5 1.5	1.6 1.6	1.7 1.7
Ex. food & energy, market based <i>Previous Tealbook</i>	2.1 2.1	2.2 2.2	1.8 1.8	.7 .7	1.9 1.9	1.5 1.5	1.2 1.2	1.5 1.5	1.6 1.6	1.7 1.7
CPI <i>Previous Tealbook</i>	4.0 4.0	1.6 1.6	1.5 1.5	1.2 1.2	3.3 3.3	1.9 1.9	1.3 1.4	1.5 1.3	1.6 1.6	1.7 1.7
Ex. food & energy <i>Previous Tealbook</i>	2.3 2.3	2.0 2.0	1.7 1.7	.6 .6	2.2 2.2	1.9 1.9	1.7 1.7	1.8 1.8	1.9 1.9	1.9 1.9
ECL, hourly compensation <sup>1</sup> <i>Previous Tealbook</i> <sup>1</sup>	3.0 3.0	2.4 2.4	1.2 1.2	2.1 2.1	2.2 2.2	1.8 1.8	2.2 2.2	2.5 2.5	2.7 2.7	3.0 3.0
Nonfarm business sector Output per hour <i>Previous Tealbook</i>	2.3 2.3	-2 -2	5.4 5.4	1.9 1.9	.4 .4	.9 .9	.8 1.1	1.4 1.4	1.8 1.5	1.9 1.8
Compensation per hour <i>Previous Tealbook</i>	3.9 3.9	3.0 3.0	1.2 1.2	1.6 1.6	.9 .9	5.3 5.3	.2 .5	2.7 2.7	3.1 3.1	3.4 3.4
Unit labor costs <i>Previous Tealbook</i>	1.6 1.6	3.2 3.2	-4.0 -4.0	-3 -3	.5 .5	4.4 4.4	-7 -6	1.3 1.4	1.3 1.6	1.5 1.5
Core goods imports chain-wt. price index <sup>2</sup> <i>Previous Tealbook</i> <sup>2</sup>	3.0 3.0	3.9 3.9	-1.9 -1.9	2.3 2.3	4.2 4.2	.1 .1	-1.1 -1.0	1.7 1.5	1.6 1.5	1.6 1.6

1. Private-industry workers.

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

## Other Macroeconomic Indicators

Item	2013			2014			2015				2013 <sup>1</sup>	2014 <sup>1</sup>	2015 <sup>1</sup>	2016 <sup>1</sup>
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
<i>Employment and production</i>														
Nonfarm payroll employment <sup>2</sup>	.6	.4	.5	.5	.5	.6	.6	.7	.7	.8	.8	2.1	2.2	2.9
Unemployment rate <sup>3</sup>	7.5	7.3	7.3	7.1	7.0	6.8	6.6	6.4	6.2	6.1	5.9	7.3	6.6	5.9
<i>Previous Tealbook<sup>3</sup></i>	7.5	7.3	7.2	7.0	6.9	6.7	6.6	6.4	6.2	6.0	5.8	7.2	6.6	5.8
Natural rate of unemployment <sup>3</sup>	5.5	5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.4	5.3	5.2
<i>Previous Tealbook<sup>3</sup></i>	5.5	5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.4	5.3	5.2
GDP gap <sup>4</sup>	-3.7	-3.6	-3.6	-3.4	-3.2	-2.9	-2.6	-2.3	-1.9	-1.6	-1.3	-3.6	-2.6	-1.3
<i>Previous Tealbook<sup>4</sup></i>	-3.6	-3.5	-3.4	-3.2	-3.0	-2.7	-2.5	-2.2	-1.9	-1.5	-1.3	-3.4	-2.5	-1.3
Industrial production <sup>5</sup>	.7	2.2	4.5	4.9	4.7	3.4	3.7	4.4	4.0	3.0	3.5	2.9	4.2	3.7
<i>Previous Tealbook<sup>5</sup></i>	.4	2.5	5.6	5.9	5.0	4.0	3.4	4.3	4.1	3.7	3.8	3.1	4.6	4.0
Manufacturing industr. prod. <sup>5</sup>	-4	1.8	3.3	4.2	4.2	4.0	4.1	4.4	4.5	4.0	3.8	2.4	4.1	4.2
<i>Previous Tealbook<sup>5</sup></i>	-7	2.2	4.0	4.5	3.9	3.5	3.6	4.1	4.5	3.9	4.1	2.6	3.9	4.2
Capacity utilization rate - mfg. <sup>3</sup>	76.0	76.0	76.3	76.8	77.2	77.6	78.0	78.5	78.9	79.3	79.6	76.3	78.0	79.6
<i>Previous Tealbook<sup>3</sup></i>	75.9	76.0	76.5	77.0	77.4	77.7	78.1	78.5	78.9	79.3	79.7	76.5	78.1	79.7
Housing starts <sup>6</sup>	.9	.9	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.5	1.6	.9	1.2	1.5
Light motor vehicle sales <sup>6</sup>	15.5	15.7	15.5	15.8	15.9	16.0	16.2	16.3	16.4	16.5	16.5	15.5	16.0	16.4
<i>Income and saving</i>														
Nominal GDP <sup>5</sup>	3.1	4.2	3.3	4.4	4.5	4.9	5.0	5.4	5.2	5.3	5.1	3.4	4.7	5.2
Real disposable pers. income <sup>5</sup>	3.5	1.1	-1	3.6	2.8	3.1	3.2	4.1	3.4	3.3	3.2	-9	3.2	3.5
<i>Previous Tealbook<sup>5</sup></i>	3.4	1.3	1.0	3.6	2.8	3.1	3.1	4.0	3.3	3.2	3.2	-7	3.1	3.4
Personal saving rate <sup>3</sup>	4.5	4.5	3.8	4.0	3.9	3.8	3.6	3.7	3.6	3.4	3.3	3.8	3.6	3.3
<i>Previous Tealbook<sup>3</sup></i>	4.5	4.3	3.8	3.9	3.7	3.6	3.4	3.5	3.3	3.2	3.1	3.8	3.4	3.1
Corporate profits <sup>7</sup>	13.9	-1.4	5.0	4.7	3.8	7.2	7.3	5.5	6.7	7.0	5.5	2.9	5.7	6.2
Profit share of GNP <sup>3</sup>	12.3	12.2	12.2	12.2	12.2	12.3	12.4	12.4	12.4	12.5	12.5	12.2	12.4	12.5
Net federal saving <sup>8</sup>	-660	-717	-772	-708	-690	-682	-672	-682	-662	-650	-637	-750	-688	-658
Net state & local saving <sup>8</sup>	-198	-216	-202	-203	-181	-172	-158	-153	-133	-128	-118	-211	-179	-133
Gross national saving rate <sup>3</sup>	17.6	17.5	17.7	17.7	17.9	18.0	18.2	18.2	18.4	18.5	18.6	17.7	18.2	18.6
Net national saving rate <sup>3</sup>	2.4	3.4	2.7	2.8	3.0	3.2	3.3	3.4	3.7	3.8	3.9	2.7	3.3	3.9

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

2. Change, millions.

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

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

5. Percent change, annual rate.

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

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

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

## Greensheets

## Other Macroeconomic Indicators

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

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<i>Employment and production</i>										
Nonfarm payroll employment <sup>1</sup>	1.2	-2.8	-5.6	.8	2.0	2.2	2.1	2.2	2.9	2.5
Unemployment rate <sup>2</sup>	4.8	6.9	9.9	9.5	8.7	7.8	7.3	6.6	5.9	5.4
<i>Previous Tealbook<sup>2</sup></i>	4.8	6.9	9.9	9.5	8.7	7.8	7.2	6.6	5.8	5.3
Natural rate of unemployment <sup>2</sup>	5.0	5.3	6.0	6.0	5.8	5.7	5.4	5.3	5.2	5.2
<i>Previous Tealbook<sup>2</sup></i>	5.0	5.3	6.0	6.0	5.8	5.7	5.4	5.3	5.2	5.2
GDP gap <sup>3</sup>	.6	-4.1	-5.2	-3.9	-3.6	-3.6	-3.6	-2.6	-1.3	-3
<i>Previous Tealbook<sup>3</sup></i>	.6	-4.1	-5.2	-3.9	-3.6	-3.6	-3.4	-2.5	-1.3	-2
Industrial production <sup>4</sup>	2.7	-8.9	-5.5	6.2	3.3	2.8	2.9	4.2	3.7	2.8
<i>Previous Tealbook<sup>4</sup></i>	2.7	-8.9	-5.5	6.2	3.3	2.8	3.1	4.6	4.0	3.5
Manufacturing industr. prod. <sup>4</sup>	2.9	-11.6	-6.1	6.4	3.3	2.8	2.4	4.1	4.2	3.2
<i>Previous Tealbook<sup>4</sup></i>	2.9	-11.6	-6.1	6.4	3.3	2.8	2.6	3.9	4.2	3.7
Capacity utilization rate - mfg. <sup>2</sup>	78.4	69.9	67.2	72.9	74.8	75.7	76.3	78.0	79.6	80.2
<i>Previous Tealbook<sup>2</sup></i>	78.4	69.9	67.2	72.9	74.8	75.7	76.5	78.1	79.7	80.8
Housing starts <sup>5</sup>	1.4	.9	.6	.6	.6	.8	.9	1.2	1.5	1.6
Light motor vehicle sales <sup>5</sup>	16.1	13.1	10.4	11.5	12.7	14.4	15.5	16.0	16.4	16.6
<i>Income and saving</i>										
Nominal GDP <sup>4</sup>	4.4	-1.0	.1	4.6	3.9	3.8	3.4	4.7	5.2	5.0
Real disposable pers. income <sup>4</sup>	1.2	1.1	-6	2.5	1.4	3.6	-9	3.2	3.5	3.2
<i>Previous Tealbook<sup>4</sup></i>	1.2	1.1	-6	2.5	1.4	3.6	-7	3.1	3.4	3.2
Personal saving rate <sup>2</sup>	2.9	6.1	5.7	5.5	5.0	6.6	3.8	3.6	3.3	3.4
<i>Previous Tealbook<sup>2</sup></i>	2.9	6.1	5.7	5.5	5.0	6.6	3.8	3.4	3.1	3.2
Corporate profits <sup>6</sup>	-9.0	-30.8	54.5	17.0	8.4	2.7	2.9	5.7	6.2	6.8
Profit share of GNP <sup>2</sup>	9.9	6.9	10.7	11.9	12.4	12.3	12.2	12.4	12.5	12.8
Net federal saving <sup>7</sup>	-267	-635	-1,250	-1,330	-1,248	-1,110	-750	-688	-658	-700
Net state & local saving <sup>7</sup>	-73	-165	-272	-237	-213	-253	-211	-179	-133	-101
Gross national saving rate <sup>2</sup>	16.3	15.0	14.7	15.2	15.8	16.9	17.7	18.2	18.6	18.9
Net national saving rate <sup>2</sup>	1.0	-1.6	-1.6	-4	.5	1.7	2.7	3.3	3.9	4.4

1. Change, millions.

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

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

Values are for the fourth quarter of the year indicated.

4. Percent change.

5. Level, millions; values are annual averages.

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

7. Billions of dollars; values are annual averages.

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

Item	Fiscal year				2013				2014				2015			
	2013	2014	2015	2016	Q1 <sup>a</sup>	Q2 <sup>a</sup>	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Unified budget</b>																
Receipts <sup>1</sup>	2,776	3,019	3,241	3,444	581	891	688	670	630	956	763	739	665	1,012	825	778
Outlays <sup>1</sup>	3,436	3,531	3,677	3,890	888	800	839	872	908	887	864	935	937	918	888	965
Surplus/deficit <sup>1</sup>	-660	-512	-436	-446	-307	91	-151	-202	-278	69	-101	-196	-272	94	-63	-187
<i>Previous Tealbook</i>	-653	-500	-428		-307	91	-143	-201	-270	69	-99	-196	-269	99	-62	-188
On-budget	-701	-546	-454	-450	-303	36	-123	-229	-262	16	-70	-219	-253	45	-28	-205
Off-budget	40	34	19	4	-4	55	-27	27	-16	53	-31	23	-19	49	-34	18
<b>Means of financing:</b>																
Borrowing	697	492	556	566	336	-17	64	291	62	8	131	226	302	-64	93	217
Cash decrease	-3	18	0	0	14	-56	46	8	58	-48	0	0	0	0	0	0
Other <sup>2</sup>	-34	1	-120	-120	-43	-18	40	-97	158	-30	-30	-30	-30	-30	-30	-30
Cash operating balance, end of period	88	70	70	70	79	135	88	80	22	70	70	70	70	70	70	70
<b>NIPA federal sector</b>																
Receipts	2,964	3,130	3,336	3,523	2,900	3,160	3,085	3,007	3,134	3,169	3,208	3,253	3,317	3,363	3,412	3,457
Expenditures	3,791	3,843	4,003	4,208	3,753	3,820	3,802	3,779	3,842	3,860	3,890	3,925	3,998	4,026	4,062	4,094
Consumption expenditures	978	936	913	912	982	976	961	951	940	931	923	916	917	912	906	902
Defense	618	593	580	579	620	616	606	600	595	590	586	581	583	580	577	575
Nondefense	360	343	332	333	363	360	355	350	345	341	337	334	335	332	329	327
Other spending	2,812	2,907	3,090	3,296	2,771	2,844	2,841	2,829	2,929	2,929	2,967	3,010	3,081	3,114	3,156	3,192
Current account surplus	-827	-713	-667	-685	-853	-660	-717	-772	-708	-690	-682	-672	-682	-662	-650	-637
Gross investment	277	260	246	239	273	277	275	268	261	257	254	250	247	245	242	240
Gross saving less gross investment <sup>3</sup>	-838	-702	-636	-642	-860	-670	-724	-770	-699	-676	-662	-648	-652	-629	-613	-597
<b>Fiscal indicators<sup>4</sup></b>																
High-employment (HEB) surplus/deficit	-632.7	-493.0	-491.1	-582.1	-649.4	-460.9	-510.9	-555.1	-480.8	-467.0	-469.1	-473.8	-494.5	-494.4	-501.9	-508.2
Change in HEB, percent of potential GDP	-2.2	-9	-1	.4	-1.6	-1.1	.3	.2	-4	-1	.0	.0	.1	.0	.0	.0
Fiscal impetus (FI), percent of GDP	-1.3	-6	-4	-1	-2.0	-7	-1.1	-1.4	-7	-8	-6	-4	-6	-4	-2	-2
<i>Previous Tealbook</i>	-1.2	-7	-4		-2.0	-7	-1.1	-1.0	-1.0	-8	-6	-4	-6	-4	-2	-2

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

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

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

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 natural rate of unemployment. 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 (2009) 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.

a Actual.

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

Measure and country	2013				2014				2015			
	-----				-----				-----			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Real GDP<sup>1</sup></b>												
Total foreign	1.7	2.2	2.8	3.0	3.2	2.9	3.3	3.3	3.4	3.4	3.5	3.3
<i>Previous Tealbook</i>	1.8	2.1	2.7	3.0	3.2	2.9	3.2	3.3	3.4	3.4	3.5	3.3
Advanced foreign economies	1.4	1.8	1.8	1.9	2.1	1.5	2.1	2.2	2.2	2.2	2.4	2.0
Canada	2.2	1.7	2.6	2.1	2.3	2.4	2.6	2.6	2.5	2.6	2.7	2.7
Japan	4.1	3.8	2.1	3.4	3.9	-2.9	1.9	2.0	1.6	1.1	2.2	-1.7
United Kingdom	1.5	2.7	2.4	2.5	2.3	2.2	2.3	2.5	2.5	2.5	2.6	2.6
Euro area	-9	1.1	.4	1.0	1.1	1.4	1.4	1.6	1.8	1.9	1.9	2.0
Germany	.0	2.9	1.3	1.7	1.8	1.9	2.0	2.1	2.2	2.4	2.5	2.5
Emerging market economies	2.1	2.6	3.8	4.1	4.3	4.4	4.5	4.5	4.6	4.6	4.6	4.6
Asia	3.4	5.1	5.7	5.4	5.3	5.4	5.5	5.5	5.6	5.7	5.6	5.6
Korea	3.4	4.5	4.0	3.7	3.6	3.9	4.1	4.2	4.3	4.5	4.6	4.6
China	6.5	7.5	9.4	8.1	7.9	7.8	7.8	7.7	7.7	7.7	7.6	7.6
Latin America	.7	.1	1.9	2.8	3.5	3.5	3.6	3.6	3.5	3.5	3.5	3.5
Mexico	.1	-2.9	2.2	3.0	3.7	3.7	3.7	3.7	3.6	3.6	3.6	3.6
Brazil	2.6	6.0	.0	1.7	2.8	3.1	3.3	3.3	3.5	3.5	3.5	3.5
<b>Consumer prices<sup>2</sup></b>												
Total foreign	2.2	1.9	2.8	2.6	2.5	3.1	2.5	2.5	2.5	2.5	2.6	3.0
<i>Previous Tealbook</i>	2.2	1.9	2.6	2.6	2.4	3.1	2.5	2.5	2.5	2.5	2.6	3.0
Advanced foreign economies	.9	.4	2.1	1.4	1.3	2.8	1.4	1.5	1.5	1.5	1.6	2.7
Canada	1.6	.0	1.6	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9
Japan	-4	.8	2.9	.7	.7	8.7	.7	.9	1.0	1.1	1.2	6.7
United Kingdom	2.3	1.5	3.1	3.0	1.7	1.6	1.7	2.7	1.7	1.7	1.8	2.8
Euro area	.7	.6	1.9	1.4	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6
Germany	1.4	.7	2.7	1.7	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8
Emerging market economies	3.3	3.0	3.3	3.5	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Asia	3.3	2.0	3.5	3.4	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.2
Korea	.6	.3	1.4	2.4	3.0	3.0	3.0	3.1	3.2	3.2	3.2	3.1
China	3.2	2.1	3.4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Latin America	3.5	5.4	2.6	3.9	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Mexico	3.2	5.3	2.0	3.6	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Brazil	7.0	5.8	4.6	5.5	5.7	5.6	5.4	5.3	5.3	5.3	5.3	5.3

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

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



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

Measure and country	2008	2009	2010	2011	2012	2013	Projected			
							2014	2015	2016	
<b>Real GDP<sup>1</sup></b>										
Total foreign	-7	.9	4.6	3.0	2.2	2.4	3.2	3.4	3.4	3.4
<i>Previous Tealbook</i>	-7	.9	4.6	3.0	2.2	2.4	3.1	3.4		
Advanced foreign economies	-1.5	-1.5	3.0	1.5	.3	1.7	2.0	2.2	2.3	2.3
Canada	.1	-1.4	3.6	2.4	1.0	2.2	2.5	2.6	2.7	2.7
Japan	-4.8	-.5	3.5	.1	.3	3.3	1.2	.8	1.2	1.2
United Kingdom	-4.3	-2.5	1.8	1.1	-.2	2.3	2.3	2.5	2.5	2.5
Euro area	-2.1	-2.3	2.3	.7	-1.0	.4	1.3	1.9	2.0	2.0
Germany	-1.8	-2.2	4.2	2.2	.3	1.5	1.9	2.4	2.5	2.5
Emerging market economies	.3	3.9	6.3	4.5	4.2	3.1	4.5	4.6	4.6	4.6
Asia	.8	8.0	7.8	4.9	5.3	4.9	5.4	5.6	5.6	5.6
Korea	-3.2	6.3	5.0	3.4	1.4	3.9	3.9	4.5	4.5	4.5
China	7.6	11.3	9.7	8.7	7.8	7.8	7.8	7.6	7.5	7.5
Latin America	-4	-.1	4.7	4.0	3.1	1.4	3.5	3.5	3.4	3.4
Mexico	-1.3	-1.2	4.4	4.1	3.2	.6	3.7	3.6	3.4	3.4
Brazil	.9	5.3	5.3	1.4	1.4	2.5	3.1	3.5	3.5	3.5
<b>Consumer prices<sup>2</sup></b>										
Total foreign	3.3	1.2	3.2	3.4	2.3	2.4	2.6	2.7	2.6	2.6
<i>Previous Tealbook</i>	3.3	1.2	3.2	3.4	2.3	2.3	2.6	2.7		
Advanced foreign economies	2.0	.2	1.7	2.2	1.3	1.2	1.8	1.8	1.8	1.8
Canada	1.8	.8	2.2	2.7	.9	1.2	1.8	1.8	2.1	2.1
Japan	1.1	-2.0	-.2	-.3	-.2	1.0	2.7	2.5	1.4	1.4
United Kingdom	3.9	2.2	3.4	4.6	2.6	2.5	1.9	2.0	1.8	1.8
Euro area	2.3	.4	2.0	2.9	2.3	1.2	1.3	1.5	1.7	1.7
Germany	1.7	.3	1.6	2.6	2.0	1.6	1.7	1.8	1.9	1.9
Emerging market economies	4.6	2.1	4.3	4.3	3.1	3.3	3.3	3.3	3.3	3.3
Asia	3.7	1.3	4.3	4.5	2.6	3.0	3.1	3.2	3.2	3.2
Korea	4.5	2.4	3.2	3.9	1.7	1.2	3.0	3.2	3.2	3.2
China	2.5	.6	4.7	4.6	2.1	2.9	3.0	3.0	3.0	3.0
Latin America	6.6	3.9	4.4	4.0	4.3	3.9	3.7	3.7	3.7	3.7
Mexico	6.2	4.0	4.3	3.5	4.1	3.5	3.4	3.4	3.4	3.4
Brazil	6.2	4.2	5.6	6.7	5.6	5.7	5.5	5.3	5.3	5.3

<sup>1</sup> Foreign GDP aggregates calculated using shares of U.S. exports.<sup>2</sup> Foreign CPI aggregates calculated using shares of U.S. non-oil imports.

## U.S. Current Account

## Quarterly Data

	2013				2014				Projected-----2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	<i>Billions of dollars, s.a.a.r.</i>											
<b>U.S. current account balance</b>	<b>-419.6</b>	<b>-395.6</b>	<b>-421.0</b>	<b>-423.9</b>	<b>-447.6</b>	<b>-413.2</b>	<b>-426.9</b>	<b>-435.3</b>	<b>-459.7</b>	<b>-432.5</b>	<b>-446.6</b>	<b>-458.7</b>
<i>Previous Tealbook</i>	-420.5	-393.4	-406.9	-438.6	-473.3	-448.5	-474.9	-487.7	-514.3	-494.3	-505.9	-518.2
Current account as percent of GDP	-2.5	-2.4	-2.5	-2.5	-2.6	-2.4	-2.4	-2.4	-2.6	-2.4	-2.4	-2.5
<i>Previous Tealbook</i>	-2.5	-2.4	-2.4	-2.6	-2.8	-2.6	-2.7	-2.7	-2.9	-2.7	-2.7	-2.8
Net goods & services	-490.5	-471.1	-491.3	-498.1	-501.7	-474.5	-477.0	-482.6	-482.7	-463.6	-465.3	-472.5
Investment income, net	211.6	221.1	220.1	215.5	212.2	202.4	194.8	188.6	181.2	172.3	163.4	155.1
Direct, net	276.6	279.9	289.6	300.1	300.7	300.0	300.0	303.6	308.1	312.3	318.0	324.9
Portfolio, net	-65.0	-58.9	-69.5	-84.6	-88.5	-97.6	-105.1	-115.0	-127.0	-140.1	-154.6	-169.8
Other income and transfers, net	-140.6	-145.5	-149.8	-141.3	-158.1	-141.1	-144.7	-141.3	-158.1	-141.1	-144.7	-141.3

## Annual Data

	Projected-----										
	2008	2009	2010	2011	2012	2013	2014	2015	2016		
	<i>Billions of dollars</i>										
<b>U.S. current account balance</b>	<b>-681.3</b>	<b>-381.6</b>	<b>-449.5</b>	<b>-457.7</b>	<b>-440.4</b>	<b>-415.0</b>	<b>-430.8</b>	<b>-449.4</b>	<b>-471.2</b>		
<i>Previous Tealbook</i>	-681.3	-381.6	-449.5	-457.7	-440.4	-414.8	-471.1	-508.2			
Current account as percent of GDP	-4.6	-2.6	-3.0	-2.9	-2.7	-2.5	-2.5	-2.4	-2.4		
<i>Previous Tealbook</i>	-4.6	-2.6	-3.0	-2.9	-2.7	-2.5	-2.7	-2.8			
Net goods & services	-702.3	-383.7	-499.4	-556.8	-534.7	-487.8	-483.9	-471.0	-451.4		
Investment income, net	157.8	132.3	185.7	240.7	232.3	217.1	199.5	168.0	126.5		
Direct, net	284.3	257.7	288.0	310.6	293.5	286.6	301.1	315.8	338.8		
Portfolio, net	-126.5	-125.4	-102.3	-69.8	-61.2	-69.5	-101.5	-147.9	-212.3		
Other income and transfers, net	-136.9	-130.2	-135.8	-141.6	-138.0	-144.3	-146.3	-146.3	-146.3		

Class I FOMC – Restricted Controlled (FR)

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# Report to the FOMC on Economic Conditions and Monetary Policy



## Book B Monetary Policy: Strategies and Alternatives

October 24, 2013

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

## Policy Rules and the Staff Projection

### Near-Term Prescriptions of Selected Policy Rules

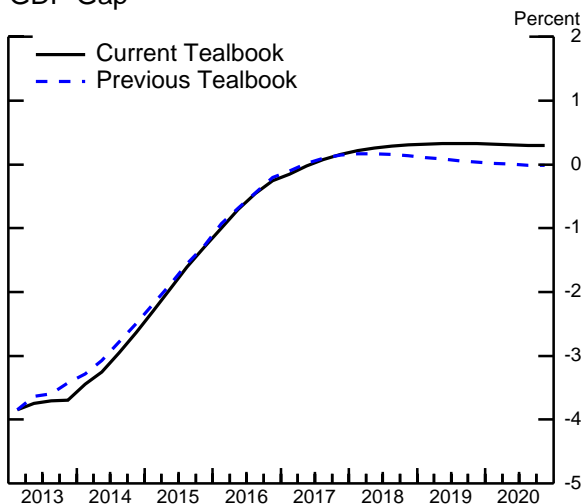
	Constrained Policy		Unconstrained Policy	
	2013Q4	2014Q1	2013Q4	2014Q1
Taylor (1993) rule	<b>1.05</b>	<b>1.23</b>	<b>1.05</b>	<b>1.23</b>
<i>Previous Tealbook</i>	1.18	1.28	1.18	1.28
Taylor (1999) rule	<b>0.13</b>	<b>0.13</b>	<b>-0.77</b>	<b>-0.47</b>
<i>Previous Tealbook</i>	0.13	0.13	-0.51	-0.33
Inertial Taylor (1999) rule	<b>0.13</b>	<b>0.13</b>	<b>-0.01</b>	<b>-0.08</b>
<i>Previous Tealbook outlook</i>	0.13	0.13	0.03	-0.02
Outcome-based rule	<b>0.13</b>	<b>0.13</b>	<b>-0.03</b>	<b>-0.04</b>
<i>Previous Tealbook outlook</i>	0.13	0.13	0.10	0.08
First-difference rule	<b>0.25</b>	<b>0.54</b>	<b>0.25</b>	<b>0.54</b>
<i>Previous Tealbook outlook</i>	0.25	0.47	0.25	0.47
Nominal income targeting rule	<b>0.13</b>	<b>0.13</b>	<b>-0.79</b>	<b>-1.45</b>
<i>Previous Tealbook outlook</i>	0.13	0.13	-0.70	-1.32

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

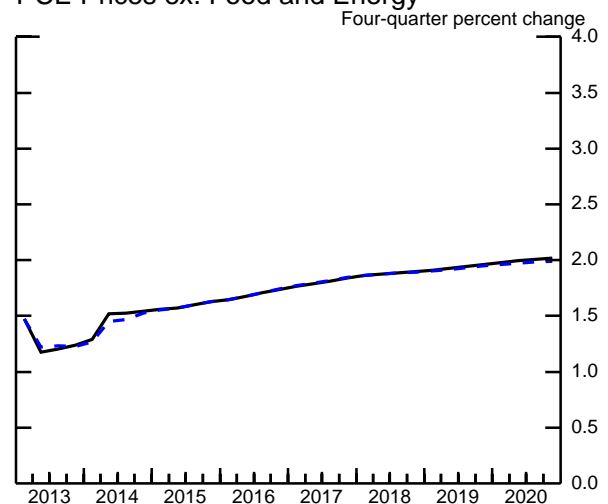
	Current Tealbook	Current Quarter Estimate as of <i>Previous Tealbook</i>	<i>Previous Tealbook</i>
Tealbook-consistent FRB/US $r^*$ estimate	-1.44	-1.42	-1.60
Actual real federal funds rate	-1.07		-1.09

## Key Elements of the Staff Projection

GDP Gap

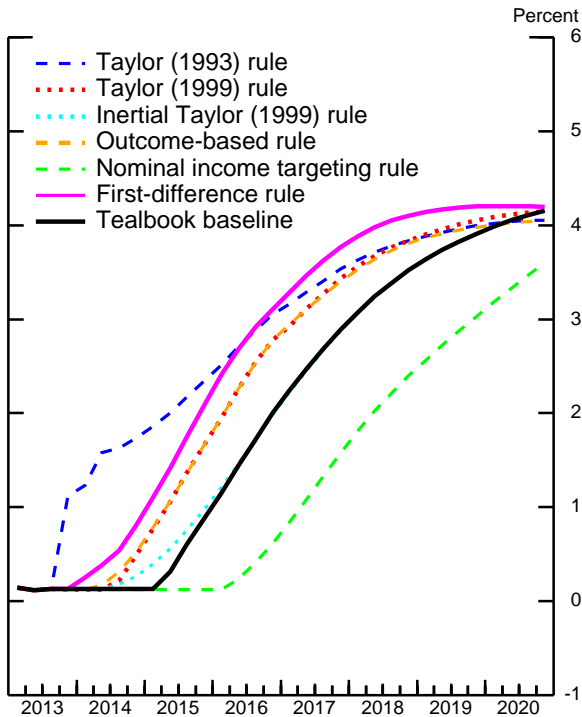


PCE Prices ex. Food and Energy

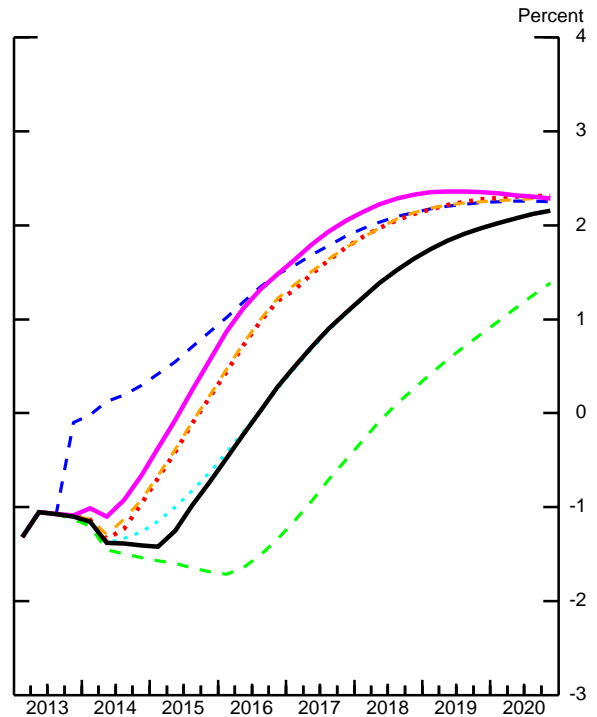


## Policy Rule Simulations without Thresholds

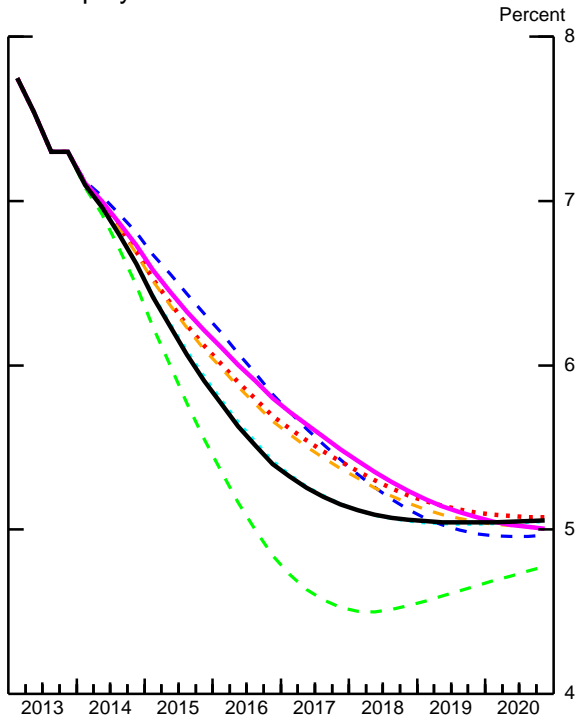
Effective Nominal Federal Funds Rate



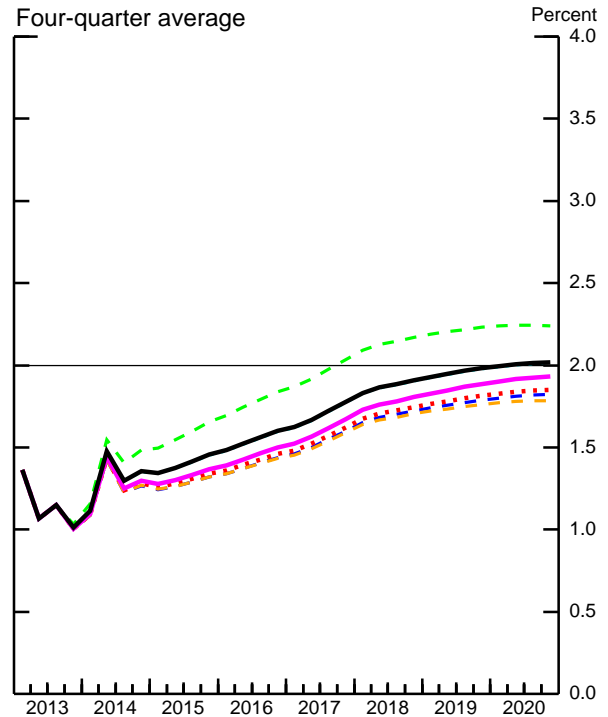
Real Federal Funds Rate



Unemployment Rate



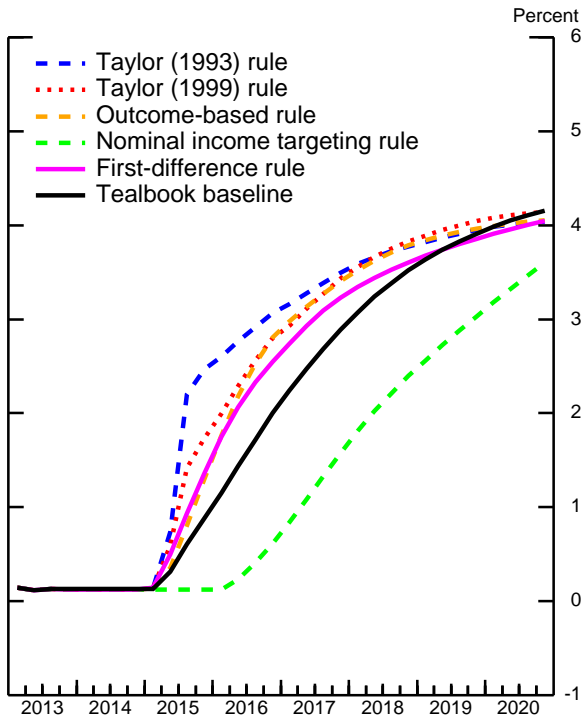
PCE Inflation  
Four-quarter average



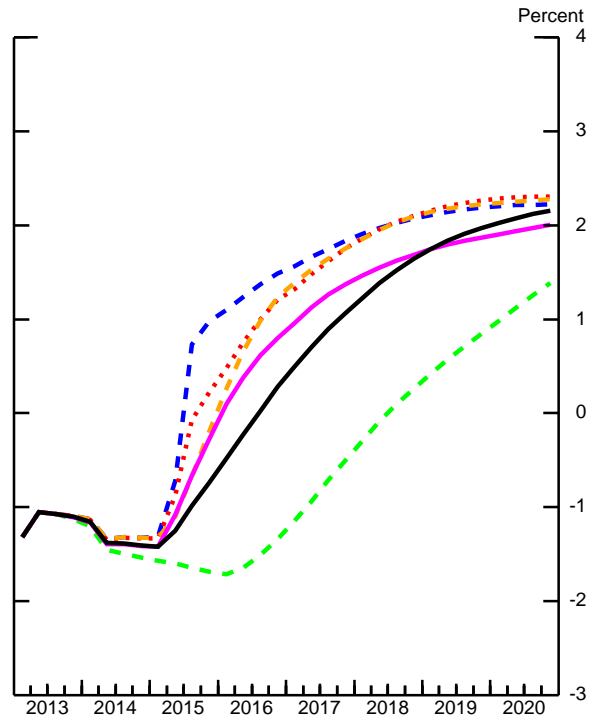
Note: The policy rule simulations in this exhibit are based on rules that respond to core inflation. This choice of rule specification was made in light of the tendency for current and near-term core inflation rates to outperform headline inflation rates as predictors of the medium-term behavior of headline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

## Policy Rule Simulations with Thresholds

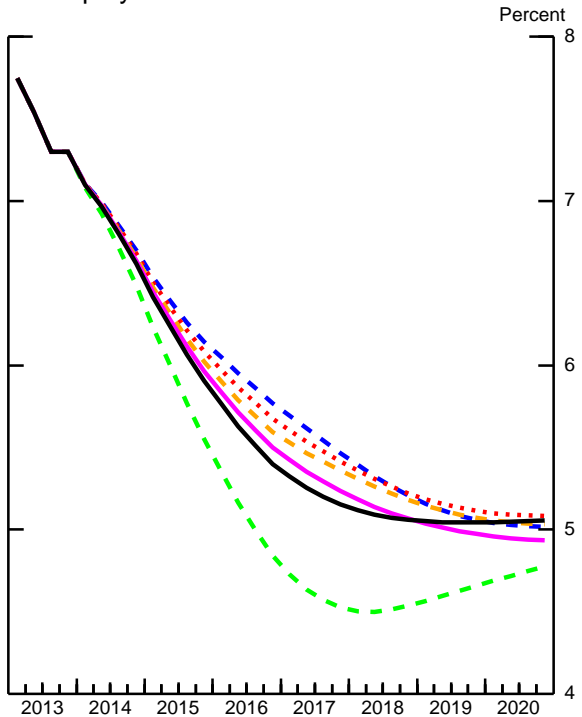
Effective Nominal Federal Funds Rate



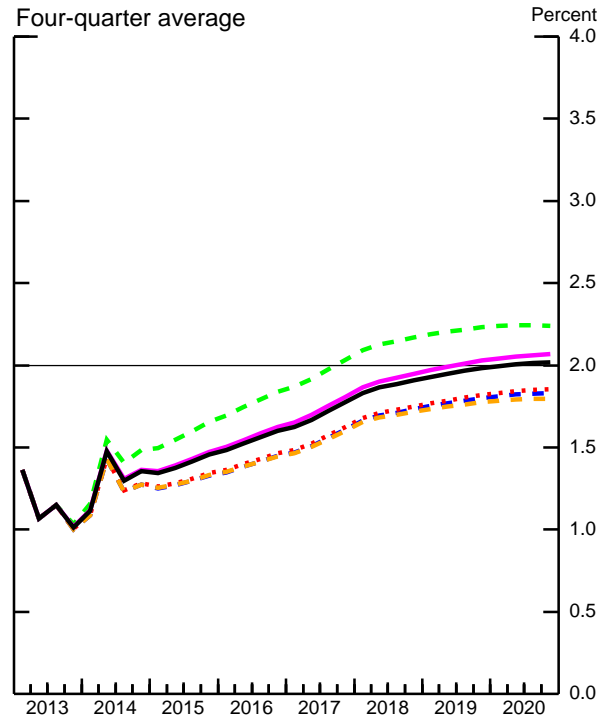
Real Federal Funds Rate



Unemployment Rate



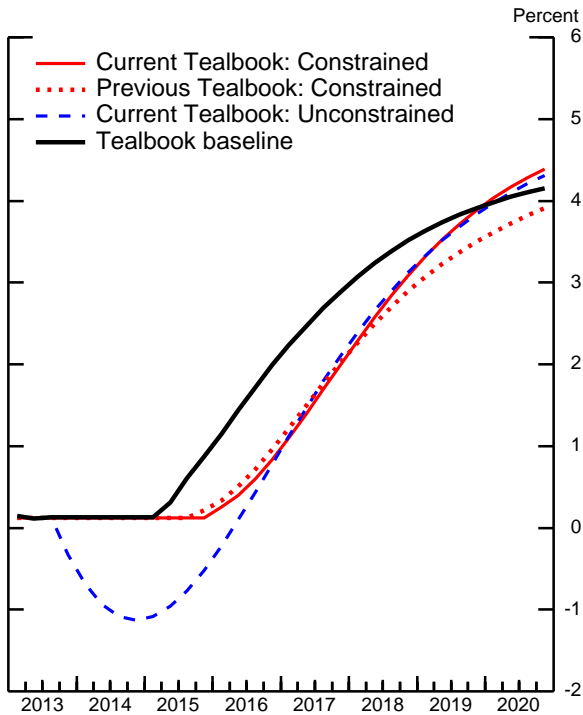
PCE Inflation  
Four-quarter average



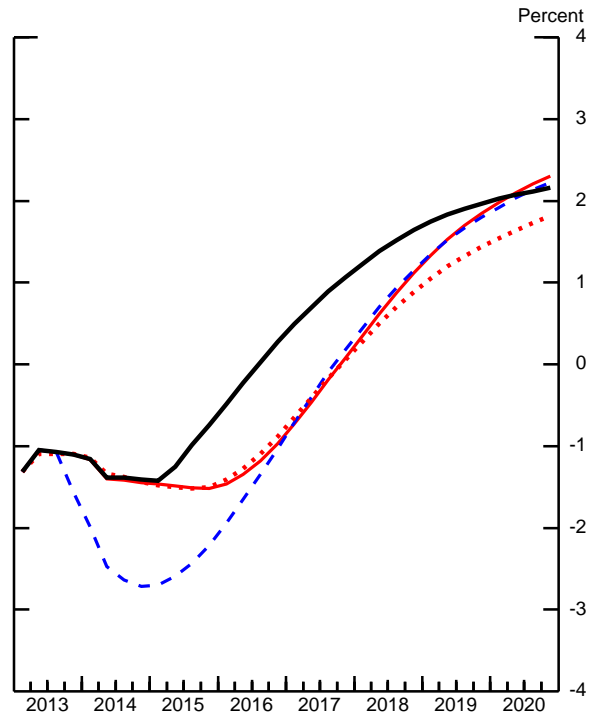
Note: The policy rule simulations in this exhibit are based on rules that respond to core inflation. This choice of rule specification was made in light of the tendency for current and near-term core inflation rates to outperform headline inflation rates as predictors of the medium-term behavior of headline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

## Constrained versus Unconstrained Optimal Control Policy

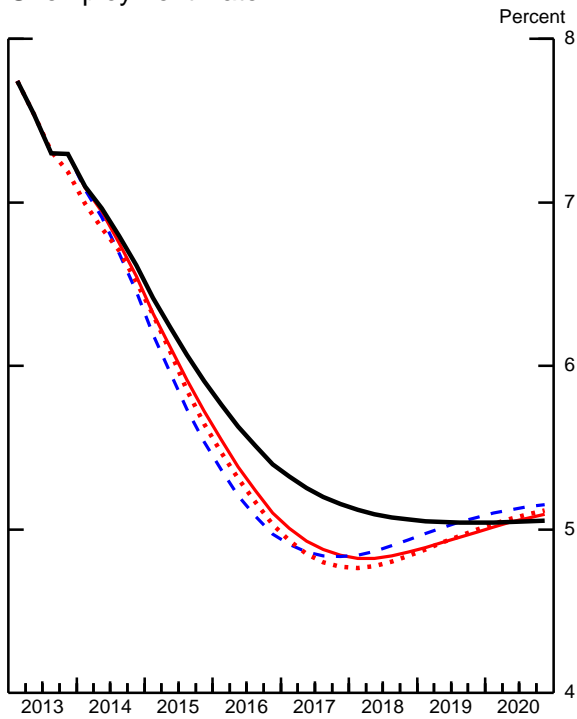
Effective Nominal Federal Funds Rate



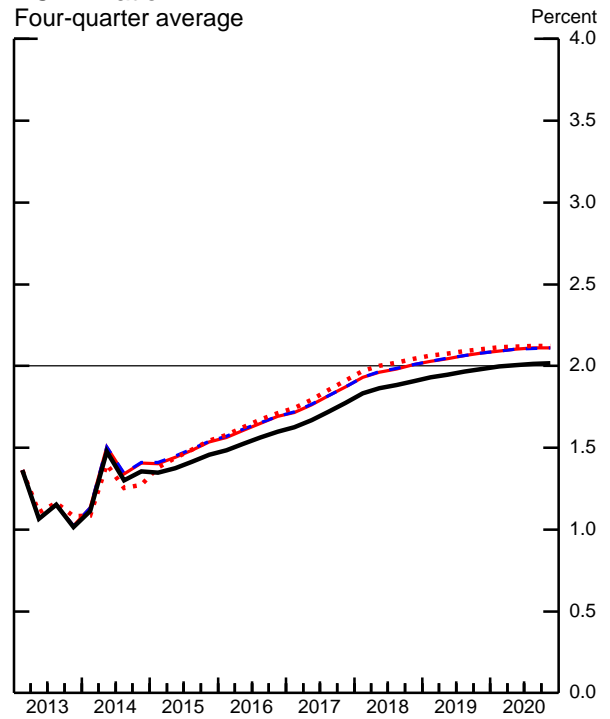
Real Federal Funds Rate



Unemployment Rate



PCE Inflation  
Four-quarter average



## Outcomes under Alternative Policies without Thresholds

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

Measure and scenario	2013		2014	2015	2016	2017
	H1	H2				
<i>Real GDP</i>						
Extended Tealbook baseline <sup>1</sup>	1.8	2.2	3.2	3.5	3.2	2.7
Taylor (1993)	1.8	2.2	2.7	3.2	3.2	2.9
Taylor (1999)	1.8	2.2	3.0	3.3	3.1	2.8
Inertial Taylor (1999)	1.8	2.2	3.2	3.5	3.2	2.7
Outcome based	1.8	2.2	3.0	3.3	3.1	2.8
First difference	1.8	2.2	2.9	3.2	3.1	2.8
Nominal income targeting	1.8	2.2	3.6	4.0	3.6	2.8
Constrained optimal control	1.8	2.2	3.4	3.8	3.5	2.7
<i>Unemployment rate<sup>2</sup></i>						
Extended Tealbook baseline <sup>1</sup>	7.5	7.3	6.6	5.9	5.4	5.2
Taylor (1993)	7.5	7.3	6.8	6.3	5.8	5.4
Taylor (1999)	7.5	7.3	6.7	6.1	5.7	5.4
Inertial Taylor (1999)	7.5	7.3	6.6	5.9	5.4	5.2
Outcome based	7.5	7.3	6.7	6.1	5.7	5.4
First difference	7.5	7.3	6.7	6.2	5.8	5.5
Nominal income targeting	7.5	7.3	6.5	5.6	4.8	4.5
Constrained optimal control	7.5	7.3	6.6	5.7	5.1	4.8
<i>Total PCE prices</i>						
Extended Tealbook baseline <sup>1</sup>	0.5	1.6	1.4	1.5	1.6	1.8
Taylor (1993)	0.5	1.5	1.3	1.3	1.4	1.6
Taylor (1999)	0.5	1.5	1.3	1.3	1.5	1.6
Inertial Taylor (1999)	0.5	1.6	1.4	1.5	1.6	1.8
Outcome based	0.5	1.5	1.3	1.3	1.4	1.6
First difference	0.5	1.5	1.3	1.4	1.5	1.7
Nominal income targeting	0.5	1.6	1.5	1.7	1.8	2.0
Constrained optimal control	0.5	1.6	1.4	1.5	1.7	1.9
<i>Core PCE prices</i>						
Extended Tealbook baseline <sup>1</sup>	1.0	1.5	1.5	1.6	1.7	1.8
Taylor (1993)	1.0	1.5	1.5	1.5	1.6	1.7
Taylor (1999)	1.0	1.5	1.5	1.5	1.6	1.7
Inertial Taylor (1999)	1.0	1.5	1.5	1.6	1.7	1.8
Outcome based	1.0	1.5	1.5	1.5	1.6	1.7
First difference	1.0	1.5	1.5	1.5	1.6	1.7
Nominal income targeting	1.0	1.5	1.7	1.8	2.0	2.1
Constrained optimal control	1.0	1.5	1.6	1.7	1.8	1.9
<i>Effective nominal federal funds rate<sup>2</sup></i>						
Extended Tealbook baseline <sup>1</sup>	0.1	0.1	0.1	0.9	2.0	2.9
Taylor (1993)	0.1	1.1	1.7	2.3	3.0	3.5
Taylor (1999)	0.1	0.1	0.5	1.7	2.8	3.4
Inertial Taylor (1999)	0.1	0.1	0.3	1.0	2.0	2.9
Outcome based	0.1	0.1	0.5	1.7	2.8	3.4
First difference	0.1	0.1	0.8	2.1	3.1	3.8
Nominal income targeting	0.1	0.1	0.1	0.1	0.6	1.6
Constrained optimal control	0.1	0.1	0.1	0.2	0.8	2.0

1. Policy in the Tealbook baseline keeps the federal funds rate at an effective lower bound of 12.5 basis points as long as the unemployment rate is above 6.5 percent and projected one-year-ahead inflation is less than 2.5 percent. Once either threshold is crossed, the federal funds rate follows the prescription of the inertial Taylor (1999) rule.

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



**Outcomes under Alternative Policies with Thresholds<sup>1</sup>**  
(Percent change, annual rate, from end of preceding period except as noted)

Measure and scenario	2013		2014	2015	2016	2017
	H1	H2				
<i>Real GDP</i>						
Extended Tealbook baseline <sup>1</sup>	1.8	2.2	3.2	3.5	3.2	2.7
Taylor (1993)	1.8	2.2	3.0	3.2	3.0	2.8
Taylor (1999)	1.8	2.2	3.1	3.3	3.1	2.7
Outcome based	1.8	2.2	3.1	3.4	3.0	2.7
First difference	1.8	2.2	3.2	3.5	3.1	2.8
Nominal income targeting	1.8	2.2	3.6	4.0	3.6	2.8
Constrained optimal control	1.8	2.2	3.4	3.8	3.5	2.7
<i>Unemployment rate<sup>2</sup></i>						
Extended Tealbook baseline <sup>1</sup>	7.5	7.3	6.6	5.9	5.4	5.2
Taylor (1993)	7.5	7.3	6.7	6.1	5.8	5.5
Taylor (1999)	7.5	7.3	6.7	6.1	5.7	5.4
Outcome based	7.5	7.3	6.7	6.0	5.6	5.4
First difference	7.5	7.3	6.6	6.0	5.5	5.2
Nominal income targeting	7.5	7.3	6.5	5.6	4.8	4.5
Constrained optimal control	7.5	7.3	6.6	5.7	5.1	4.8
<i>Total PCE prices</i>						
Extended Tealbook baseline <sup>1</sup>	0.5	1.6	1.4	1.5	1.6	1.8
Taylor (1993)	0.5	1.5	1.3	1.3	1.4	1.6
Taylor (1999)	0.5	1.5	1.3	1.3	1.5	1.6
Outcome based	0.5	1.5	1.3	1.3	1.4	1.6
First difference	0.5	1.6	1.4	1.5	1.6	1.8
Nominal income targeting	0.5	1.6	1.5	1.7	1.8	2.0
Constrained optimal control	0.5	1.6	1.4	1.5	1.7	1.9
<i>Core PCE prices</i>						
Extended Tealbook baseline <sup>1</sup>	1.0	1.5	1.5	1.6	1.7	1.8
Taylor (1993)	1.0	1.5	1.5	1.5	1.6	1.7
Taylor (1999)	1.0	1.5	1.5	1.5	1.6	1.7
Outcome based	1.0	1.5	1.5	1.5	1.6	1.7
First difference	1.0	1.5	1.6	1.6	1.8	1.9
Nominal income targeting	1.0	1.5	1.7	1.8	2.0	2.1
Constrained optimal control	1.0	1.5	1.6	1.7	1.8	1.9
<i>Effective nominal federal funds rate<sup>2</sup></i>						
Extended Tealbook baseline <sup>1</sup>	0.1	0.1	0.1	0.9	2.0	2.9
Taylor (1993)	0.1	0.1	0.1	2.5	3.1	3.5
Taylor (1999)	0.1	0.1	0.1	1.7	2.8	3.4
Outcome based	0.1	0.1	0.1	1.3	2.8	3.4
First difference	0.1	0.1	0.1	1.4	2.5	3.2
Nominal income targeting	0.1	0.1	0.1	0.1	0.6	1.6
Constrained optimal control	0.1	0.1	0.1	0.2	0.8	2.0

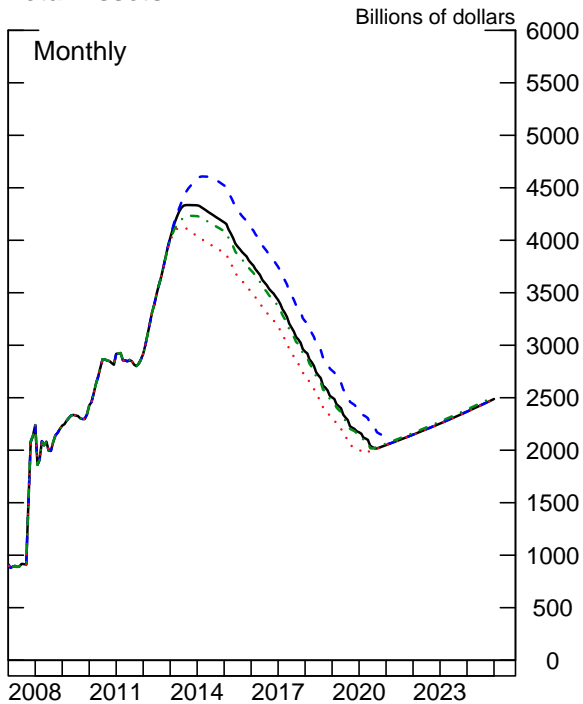
1. With the exception of constrained optimal control, monetary policy is specified to keep the federal funds rate at an effective lower bound of 12.5 basis points as long as the unemployment rate is above 6.5 percent and projected one-year-ahead inflation is less than 2.5 percent. Once either of these thresholds is crossed, the federal funds rate follows the prescriptions of the specified rule. Policy in the Tealbook baseline also uses these threshold conditions and switches to the inertial Taylor (1999) rule once either of these thresholds is crossed.

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

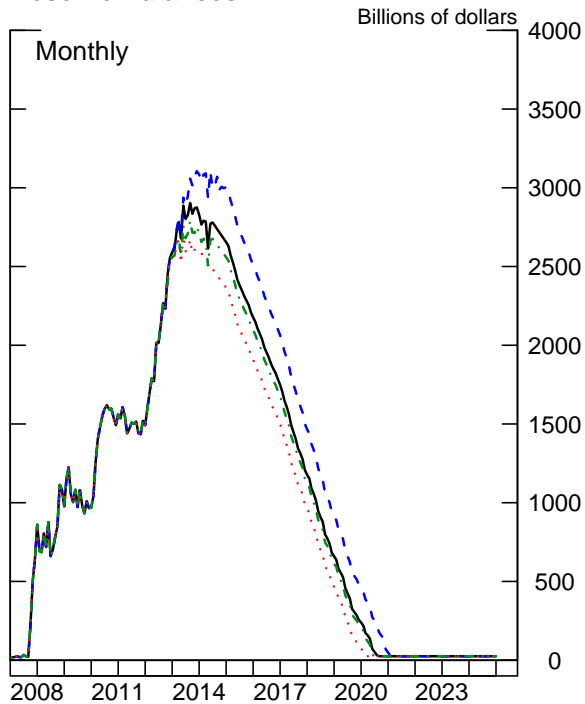
# Total Assets and Selected Balance Sheet Items

— Alternative B  
 - - Alternative A  
 . . . Alternative C  
 . . . September Tealbook Alternative B

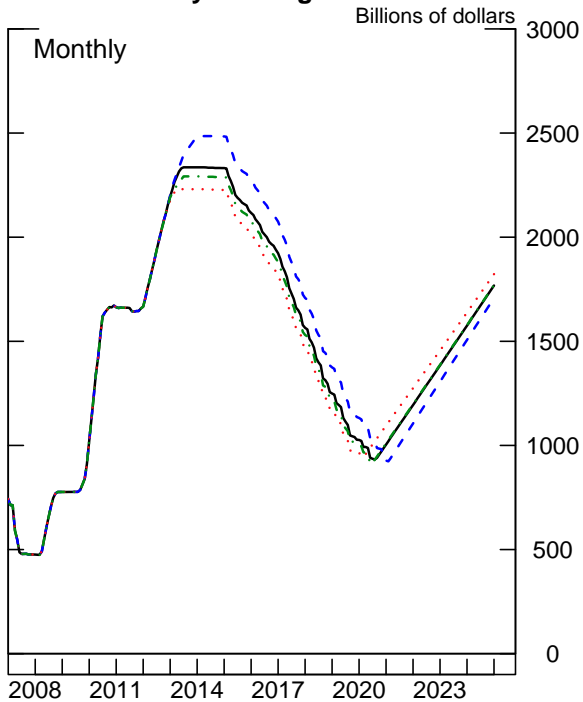
**Total Assets**



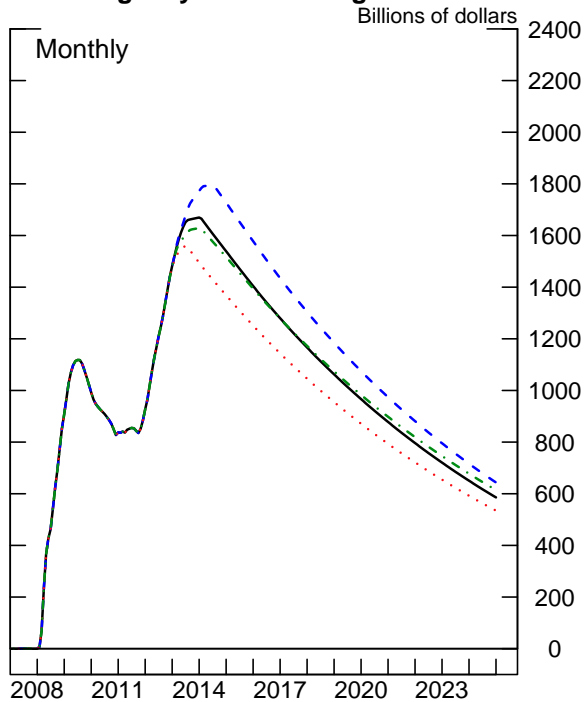
**Reserve Balances**



**SOMA Treasury Holdings**



**SOMA Agency MBS Holdings**

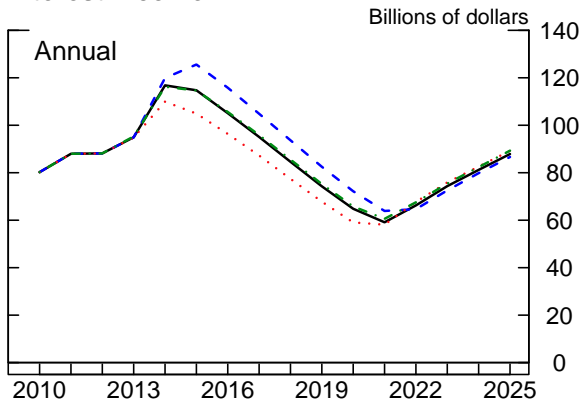


Projections

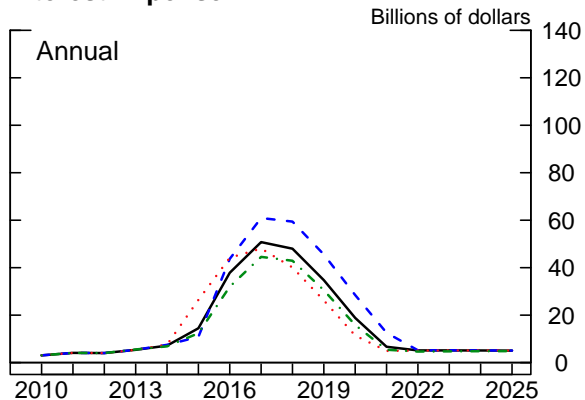
## Income Projections

— Alternative B  
 - - Alternative A  
 . . . Alternative C  
 - - - September Tealbook Alternative B

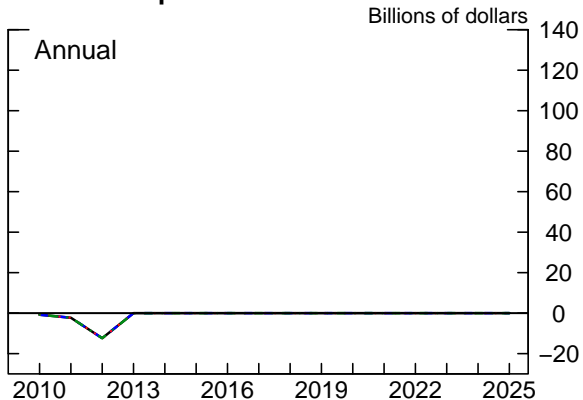
### Interest Income



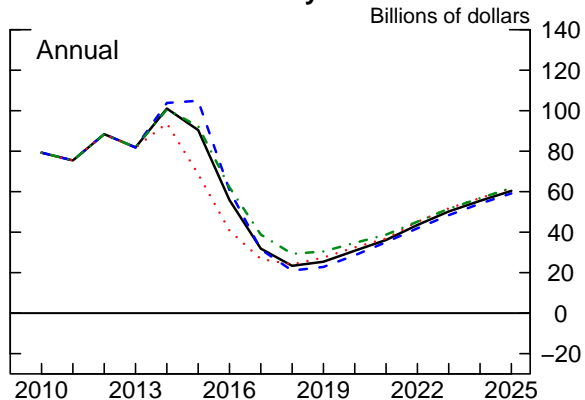
### Interest Expense



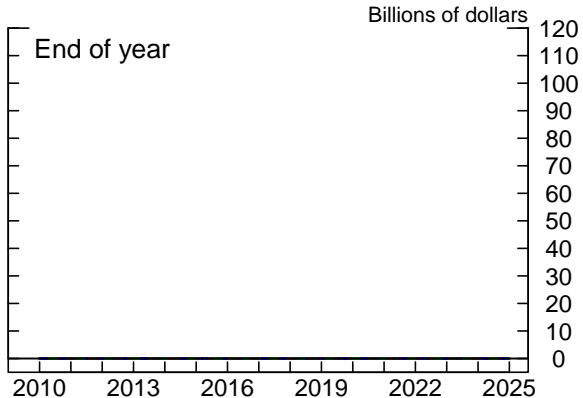
### Realized Capital Losses



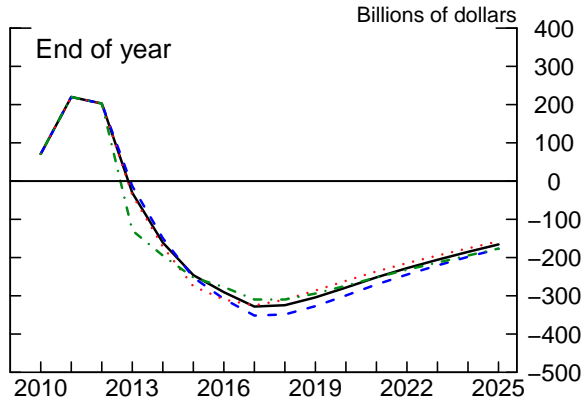
### Remittances to Treasury



### Deferred Asset



### Memo: Unrealized Gains/Losses



Alternative Projections for the Monetary Base				
Percent change, annual rate; not seasonally adjusted				
Date	Alternative B	Alternative C	Alternative A	September Alternative B
<i>Quarterly</i>				
2013: Q4	47.0	46.0	47.1	31.1
2014: Q1	23.2	16.9	24.7	20.1
Q2	13.4	3.5	16.4	7.9
Q3	8.1	2.2	16.8	8.6
Q4	2.7	-0.5	10.2	1.3
2015: Q1	-4.9	-0.6	1.1	-3.6
Q2	-4.5	-4.2	-2.1	-4.0
Q3	4.4	-4.2	1.4	5.5
Q4	-4.2	-4.1	-0.4	-3.9
2016: Q1	-6.6	-6.7	-3.0	-6.6
Q2	-12.7	-13.3	-12.1	-13.1
Q3	-9.9	-10.2	-9.5	-10.1
Q4	-8.2	-8.3	-8.0	-8.3
<i>Annual</i>				
2013	42.0	41.7	42.1	36.6
2014	12.3	5.6	18.1	9.7
2015	-2.3	-3.2	0.0	-1.5
2016	-9.1	-9.3	-7.9	-9.2
2017	-9.6	-9.8	-9.3	-9.8
2018	-14.5	-14.8	-13.9	-14.8
2019	-15.9	-16.2	-15.5	-16.6
2020	-15.1	-15.2	-14.9	-15.6
2021	-8.1	0.1	-13.8	-7.0
2022	4.4	4.5	0.3	4.8
2023	4.5	4.5	4.5	4.9
2024	4.5	4.5	4.5	4.9
2025	4.6	4.5	4.6	4.9

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

## MONEY

After a modest increase in September, the staff estimates that M2 will rise more rapidly in October. As discussed in the Financial Developments section of Book A, liquid deposit balances at banks likely surged temporarily during the debt ceiling standoff in mid-October. Smoothing through the effects of that episode, growth of M2 is expected to slow gradually to a rate more in line with nominal GDP through the first quarter of next year. Thereafter, M2 is projected to rise more slowly than nominal GDP in part because investors are assumed to reallocate a portion of their elevated M2 balances to riskier investments as financial and economic conditions improve.<sup>10</sup> M2 growth is further depressed in 2015 and 2016 as the projected rise in short-term market rates increases the opportunity cost of holding M2 assets.

M2 Monetary Aggregate Projections (Percent change, annual rate; seasonally adjusted) <sup>1</sup>		
<i>Quarterly</i>		
2013:	Q4	8.0
2014:	Q1	4.7
	Q2	3.4
	Q3	2.4
	Q4	2.5
2015:	Q1	-0.4
	Q2	-1.3
	Q3	-1.8
	Q4	-1.9
2016:	Q1	-1.5
	Q2	-1.2
	Q3	-0.9
	Q4	-0.4
<i>Annual</i>		
	2013	6.3
	2014	3.3
	2015	-1.3
	2016	-1.0

Note: This forecast is consistent with nominal GDP and interest rates in the Tealbook forecast. Actual data through October 14, 2013; projections thereafter.

1. Growth rates are computed from period averages with the exception of annual growth rates which are the change from fourth quarter of previous year to fourth quarter of year indicated.

<sup>10</sup> The staff's M2 forecast is constructed using the staff's forecast of nominal income growth and model-based estimates of interest rate effects, as well as judgmental adjustments.

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

Billions of dollars

	<u>Sep 30, 2013</u>	<u>2013</u>	<u>2015</u>	<u>2017</u>	<u>2019</u>	<u>2021</u>	<u>2023</u>	<u>2025</u>
Total assets	3,742	4,020	4,171	3,431	2,503	2,049	2,254	2,488
Selected assets								
Liquidity programs for financial firms	1	0	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0	0	0
Central bank liquidity swaps	1	0	0	0	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	1	0	0	0	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	1	1	0	0	0	0	0	0
Securities held outright	3,475	3,735	3,904	3,207	2,314	1,884	2,107	2,356
U.S. Treasury securities	2,072	2,195	2,332	1,923	1,249	1,004	1,384	1,768
Agency debt securities	61	57	33	4	2	2	2	2
Agency mortgage-backed securities	1,342	1,482	1,539	1,280	1,062	878	721	586
Net portfolio holdings of TALF LLC	0	0	0	0	0	0	0	0
Unamortized premiums	204	223	206	161	125	99	80	65
Unamortized discounts	-7	-8	-8	-6	-5	-4	-3	-3
Total other assets	67	69	69	69	69	69	69	69
Total liabilities	3,687	3,965	4,110	3,355	2,407	1,926	2,099	2,292
Selected liabilities								
Federal Reserve notes in circulation	1,164	1,181	1,332	1,484	1,627	1,782	1,956	2,149
Reverse repurchase agreements	157	100	100	100	100	100	100	100
Deposits with Federal Reserve Banks	2,354	2,674	2,669	1,763	673	39	39	39
Reserve balances held by depository institutions	2,232	2,591	2,655	1,749	659	25	25	25
U.S. Treasury, General Account	88	74	5	5	5	5	5	5
Other Deposits	33	9	9	9	9	9	9	9
Interest on Federal Reserve Notes due to U.S. Treasury	3	0	0	0	0	0	0	0
Total capital	55	55	61	76	97	122	155	196

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

	<u>Sep 30, 2013</u>	<u>2013</u>	<u>2015</u>	<u>2017</u>	<u>2019</u>	<u>2021</u>	<u>2023</u>	<u>2025</u>
Total assets	3,742	3,994	3,881	3,179	2,307	2,048	2,254	2,487
Selected assets								
Liquidity programs for financial firms	1	0	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0	0	0
Central bank liquidity swaps	1	0	0	0	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	1	0	0	0	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	1	1	0	0	0	0	0	0
Securities held outright	3,475	3,710	3,628	2,966	2,127	1,891	2,113	2,359
U.S. Treasury securities	2,072	2,175	2,227	1,818	1,169	1,095	1,456	1,822
Agency debt securities	61	57	33	4	2	2	2	2
Agency mortgage-backed securities	1,342	1,478	1,369	1,144	955	794	655	535
Net portfolio holdings of TALF LLC	0	0	0	0	0	0	0	0
Unamortized premiums	204	221	191	149	115	91	74	60
Unamortized discounts	-7	-8	-7	-5	-4	-3	-2	-2
Total other assets	67	69	69	69	69	69	69	69
Total liabilities	3,687	3,939	3,820	3,102	2,210	1,926	2,099	2,291
Selected liabilities								
Federal Reserve notes in circulation	1,164	1,181	1,332	1,480	1,624	1,782	1,956	2,149
Reverse repurchase agreements	157	100	100	100	100	100	100	100
Deposits with Federal Reserve Banks	2,354	2,648	2,380	1,515	481	39	39	39
Reserve balances held by depository institutions	2,232	2,566	2,366	1,501	467	25	25	25
U.S. Treasury, General Account	88	74	5	5	5	5	5	5
Other Deposits	33	9	9	9	9	9	9	9
Interest on Federal Reserve Notes due to U.S. Treasury	3	0	0	0	0	0	0	0
Total capital	55	55	61	76	97	122	155	196

Projections

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

	<u>Sep 30, 2013</u>	<u>2013</u>	<u>2015</u>	<u>2017</u>	<u>2019</u>	<u>2021</u>	<u>2023</u>	<u>2025</u>
Total assets	3,742	4,024	4,522	3,747	2,758	2,074	2,255	2,489
Selected assets								
Liquidity programs for financial firms	1	0	0	0	0	0	0	0
Primary, secondary, and seasonal credit	0	0	0	0	0	0	0	0
Central bank liquidity swaps	1	0	0	0	0	0	0	0
Term Asset-Backed Securities Loan Facility (TALF)	1	0	0	0	0	0	0	0
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	1	1	0	0	0	0	0	0
Securities held outright	3,475	3,739	4,244	3,514	2,562	1,904	2,104	2,354
U.S. Treasury securities	2,072	2,200	2,484	2,074	1,375	927	1,306	1,708
Agency debt securities	61	57	33	4	2	2	2	2
Agency mortgage-backed securities	1,342	1,481	1,727	1,435	1,185	974	796	644
Net portfolio holdings of TALF LLC	0	0	0	0	0	0	0	0
Unamortized premiums	204	222	219	172	133	105	86	69
Unamortized discounts	-7	-8	-10	-8	-6	-5	-4	-3
Total other assets	67	69	69	69	69	69	69	69
Total liabilities	3,687	3,969	4,462	3,671	2,662	1,952	2,101	2,294
Selected liabilities								
Federal Reserve notes in circulation	1,164	1,181	1,332	1,484	1,627	1,783	1,956	2,150
Reverse repurchase agreements	157	100	100	100	100	100	100	100
Deposits with Federal Reserve Banks	2,354	2,678	3,018	2,078	927	63	39	39
Reserve balances held by depository institutions	2,232	2,595	3,004	2,064	913	49	25	25
U.S. Treasury, General Account	88	74	5	5	5	5	5	5
Other Deposits	33	9	9	9	9	9	9	9
Interest on Federal Reserve Notes due to U.S. Treasury	3	0	0	0	0	0	0	0
Total capital	55	55	61	76	97	122	155	196

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

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



Alternative Projections for the 10-Year Treasury Term Premium Effect

Date	Alternative B	Alternative C	Alternative A	September Alternative B
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Basis Points

Quarterly Averages

2013:Q4	-119	-108	-132	-117
2014:Q1	-115	-103	-128	-112
Q2	-110	-98	-123	-107
Q3	-105	-93	-118	-102
Q4	-99	-88	-113	-97
2015:Q1	-94	-84	-107	-92
Q2	-89	-79	-102	-87
Q3	-84	-75	-97	-83
Q4	-80	-70	-91	-78
2016:Q1	-75	-66	-86	-74
Q2	-71	-63	-82	-70
Q3	-67	-59	-77	-66
Q4	-63	-55	-73	-62
2017:Q4	-49	-43	-57	-49
2018:Q4	-38	-33	-45	-38
2019:Q4	-30	-26	-34	-30
2020:Q4	-23	-20	-27	-23
2021:Q4	-18	-16	-20	-18
2022:Q4	-14	-13	-16	-15
2023:Q4	-11	-10	-12	-11
2024:Q4	-8	-7	-9	-8
2025:Q4	-6	-5	-6	-6

Projections