

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.

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Class II FOMC – Restricted (FR)

Report to the FOMC on Economic Conditions and Monetary Policy



Book A

Economic and Financial Conditions: Current Situation and Outlook

June 11, 2014

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

Revisions to the Staff Projection since the Previous SEP

The FOMC last published its Summary of Economic Projections (SEP) following the March 2014 FOMC meeting. The table below summarizes revisions to the staff economic projection since the March Tealbook. Reflecting incoming data, GDP growth in the first half of this year is now estimated to have been somewhat weaker than the staff expected in the March Tealbook, while the unemployment rate has declined by more than we had projected. In 2015 and 2016, the staff projection for GDP growth has not changed much from our March projection, but the unemployment rate remains on a lower path.

As discussed in the box “Changes to the Longer-Run Outlook” in this section, we also made some downward adjustments to estimates of GDP growth and interest rates in the longer run. We now see longer-run GDP growth as 2 percent (rather than 2¼ percent) and we have similarly taken down our estimate of the long-run nominal federal funds rate to 3¾ percent. The lower long-run interest rate implies a lower intercept for our policy rule that, when combined with the lower level of slack in this projection, prescribes a path of the federal funds rate that is little changed after liftoff.¹ The liftoff date itself (the second quarter of 2015) has not changed from March.

The staff projection for both overall and core PCE inflation is a bit lower than in the March projection, largely reflecting the small adjustments we made to our inflation projection this round. We continue to project that both core and headline inflation will remain below the Committee’s 2 percent objective through 2016.

Staff Economic Projections Compared with the March Tealbook

Variable	2013	2014		2014	2015	2016	Longer run
		H1	H2				
Real GDP ¹	2.6	1.3	3.5	2.4	3.0	3.2	2.0
March Tealbook	2.5	2.5	3.4	2.9	3.2	3.0	2.3
Unemployment rate ²	7.0	6.3	6.0	6.0	5.4	5.0	5.2
March Tealbook	7.0	6.5	6.2	6.2	5.6	5.1	5.2
PCE inflation ¹	1.0	1.7	1.4	1.5	1.4	1.5	2.0
March Tealbook	1.0	1.4	1.6	1.5	1.5	1.7	2.0
Core PCE inflation ¹	1.2	1.5	1.4	1.5	1.6	1.7	n.a.
March Tealbook	1.2	1.4	1.6	1.5	1.7	1.8	n.a.
Federal funds rate ²	.09	.13	.13	.13	1.04	2.32	3.75
March Tealbook	.09	.13	.13	.13	1.10	2.35	4.00
Memo:							
Federal funds rate, end of period	.13	.13	.13	.13	1.15	2.41	3.75
March Tealbook	.13	.13	.13	.13	1.21	2.42	4.00

1. Percent change from final quarter of preceding period to final quarter of period indicated.

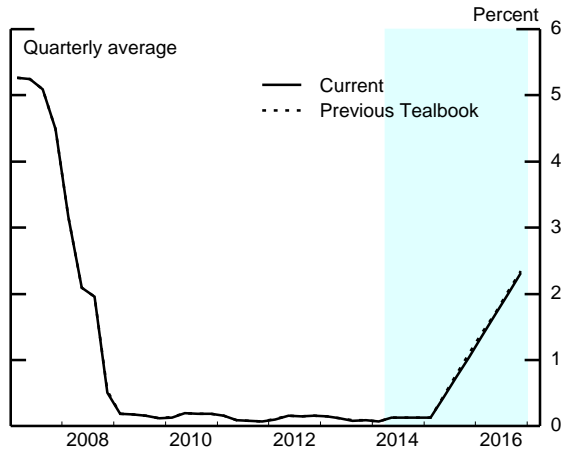
2. Percent, final quarter of period indicated.

n.a. Not available.

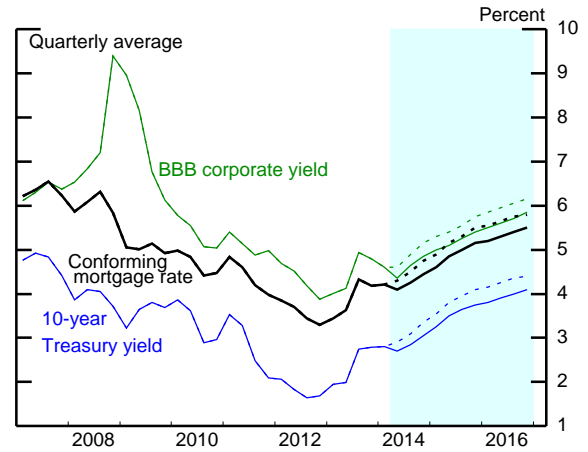
¹ The values in the memo item of the table are meant to show, on an unrounded basis, levels of the federal funds rate in the final month of each period consistent with the staff projection. In previous Tealbooks, we presented these figures rounded to the nearest quarter point.

Key Background Factors underlying the Baseline Staff Projection

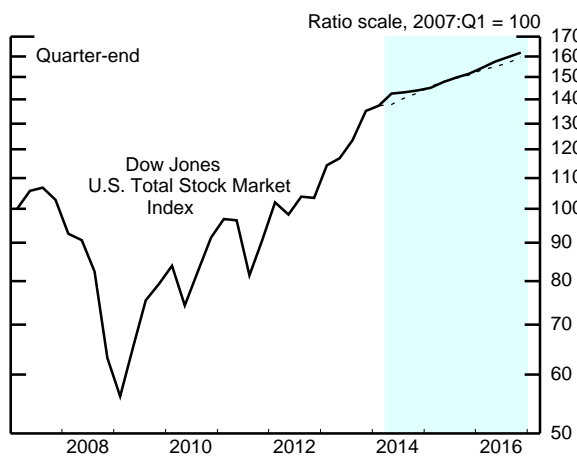
Federal Funds Rate



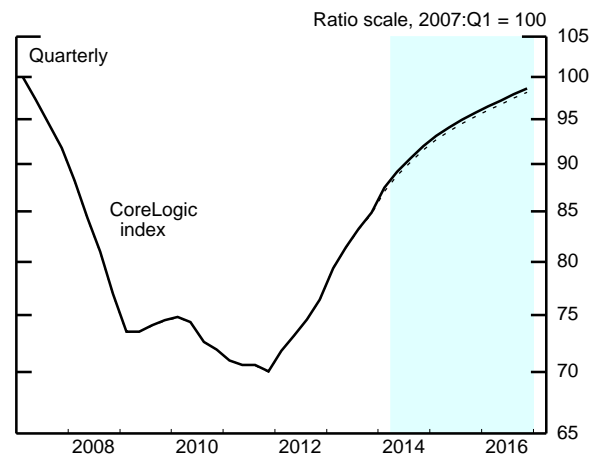
Long-Term Interest Rates



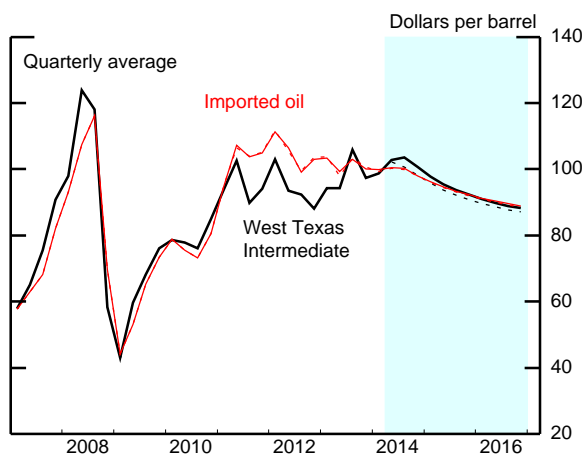
Equity Prices



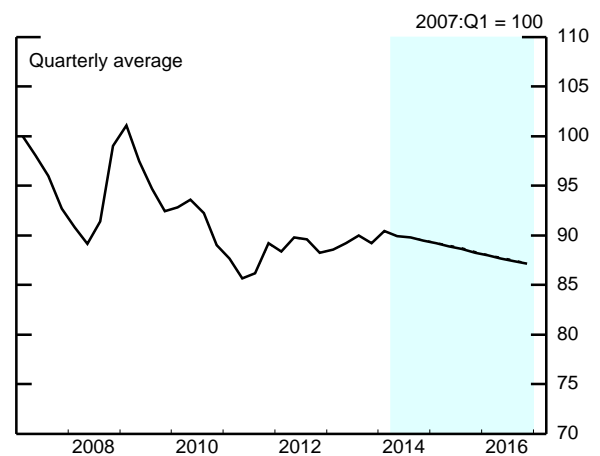
House Prices



Crude Oil Prices



Broad Real Dollar



Summary of the Near-Term Outlook

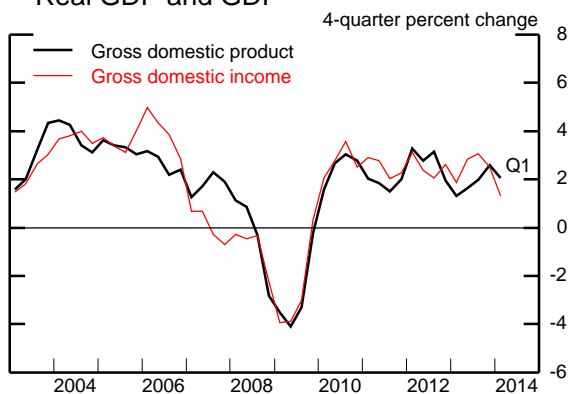
(Percent change at annual rate except as noted)

Measure	2014:Q1		2014:Q2		2014:H2	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
Real GDP	.7	-1.5	3.5	4.2	3.5	3.5
Private domestic final purchases	2.3	2.2	4.0	3.9	4.7	4.1
Personal consumption expenditures	2.5	3.1	3.8	3.0	4.1	3.9
Residential investment	-2.1	-4.8	6.3	4.3	15.8	8.8
Nonres. private fixed investment	2.2	-.8	4.7	8.8	5.2	4.3
Government purchases	.2	-.7	-.3	-.3	-.6	-.4
<i>Contributions to change in real GDP</i>						
Inventory investment ¹	-.3	-1.6	-.2	.9	-.1	.2
Net exports ¹	-1.0	-1.5	.3	.1	-.3	-.1
Unemployment rate	6.7	6.7	6.6	6.3	6.2	6.0
PCE chain price index	1.5	1.4	1.6	2.0	1.6	1.4
Ex. food and energy	1.3	1.2	1.5	1.8	1.6	1.4

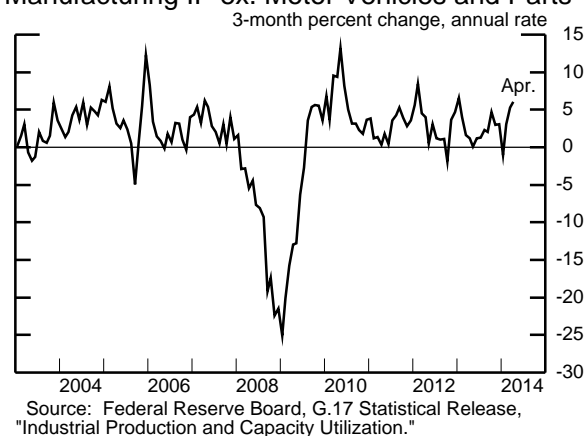
1. Percentage points.

Recent Nonfinancial Developments (1)

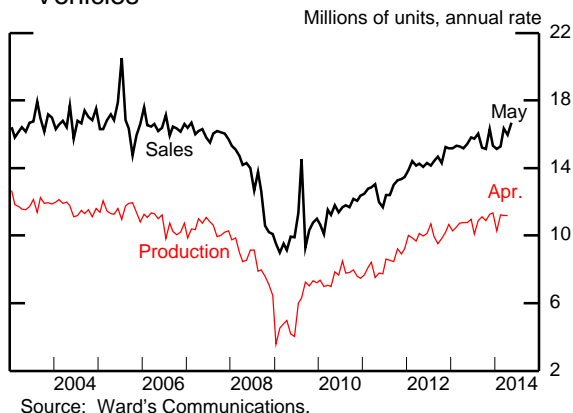
Real GDP and GDI



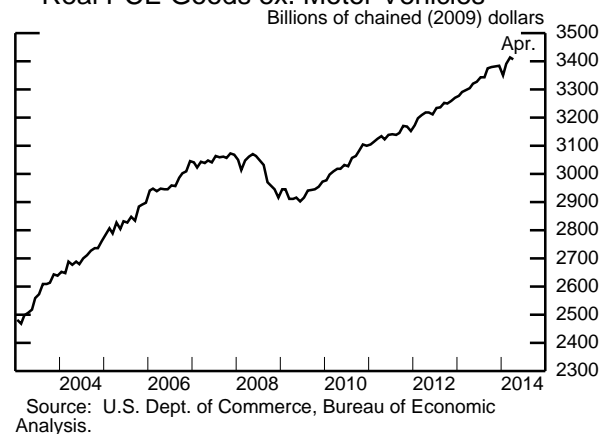
Manufacturing IP ex. Motor Vehicles and Parts



Sales and Production of Light Motor Vehicles



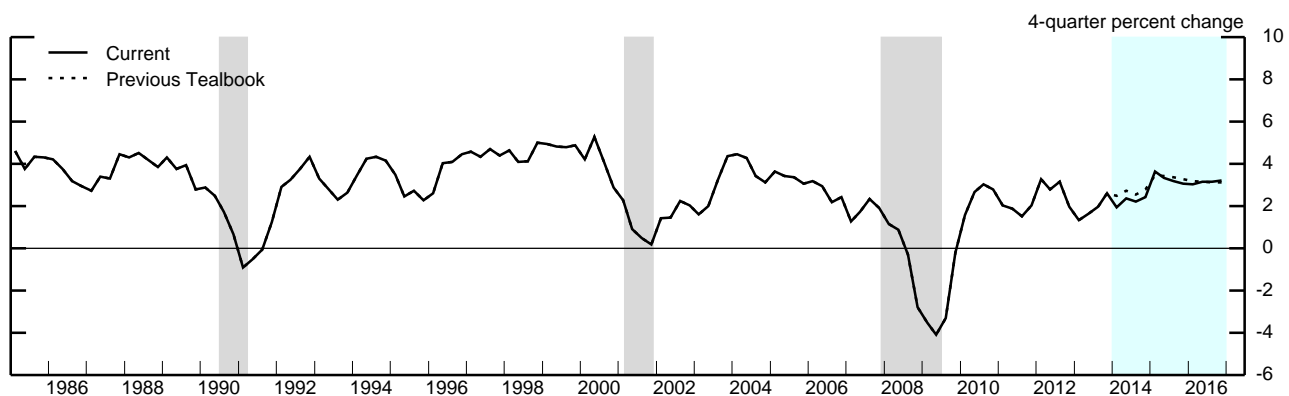
Real PCE Goods ex. Motor Vehicles



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

Measure	2013	2014	2014		2015	2016
			H1	H2		
Real GDP	2.6	2.4	1.3	3.5	3.0	3.2
Previous Tealbook	2.6	2.8	2.0	3.5	3.2	3.1
Final sales	1.8	2.5	1.7	3.4	3.3	3.2
Previous Tealbook	1.8	2.9	2.3	3.6	3.5	3.2
Personal consumption expenditures	2.3	3.5	3.0	3.9	3.5	2.9
Previous Tealbook	2.3	3.6	3.1	4.1	3.7	2.9
Residential investment	6.9	4.1	-.3	8.8	14.6	13.3
Previous Tealbook	6.9	8.7	2.0	15.8	14.5	12.0
Nonresidential structures	-.7	2.8	-1.8	7.5	2.2	2.1
Previous Tealbook	-.7	6.0	6.5	5.4	2.6	2.0
Equipment and intangibles	3.5	4.4	5.6	3.3	5.4	5.4
Previous Tealbook	3.5	3.8	2.5	5.2	5.7	5.6
Federal purchases	-6.2	-2.1	-1.2	-3.0	-3.6	-1.2
Previous Tealbook	-6.2	-1.3	.4	-2.9	-3.5	-1.1
State and local purchases	.2	.5	-.1	1.2	1.3	1.7
Previous Tealbook	.2	.3	-.3	.8	1.1	1.5
Exports	4.9	1.4	-1.6	4.5	5.1	5.6
Previous Tealbook	4.9	1.7	-1.2	4.6	5.0	5.6
Imports	2.8	3.5	3.0	4.1	4.7	4.5
Previous Tealbook	2.8	3.2	1.1	5.4	4.9	4.6
Contributions to change in real GDP (percentage points)						
Inventory change	.7	-.1	-.4	.2	-.2	.0
Previous Tealbook	.7	-.1	-.2	-.1	-.2	-.1
Net exports	.2	-.4	-.7	-.1	-.1	.0
Previous Tealbook	.2	-.3	-.3	-.3	-.1	.0

Real GDP

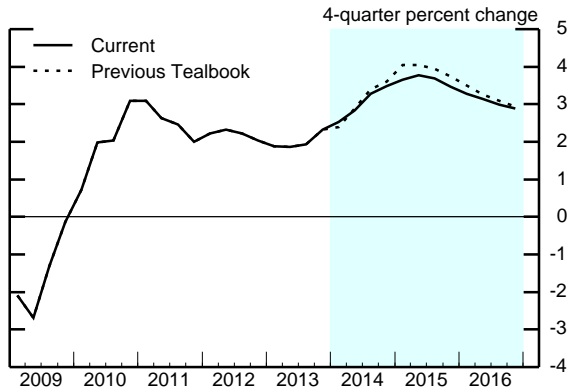


Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

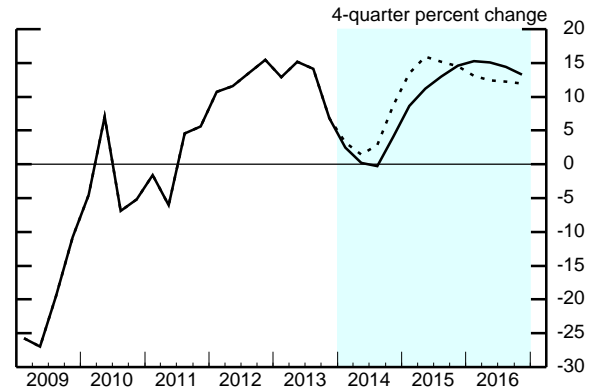
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Components of Final Demand

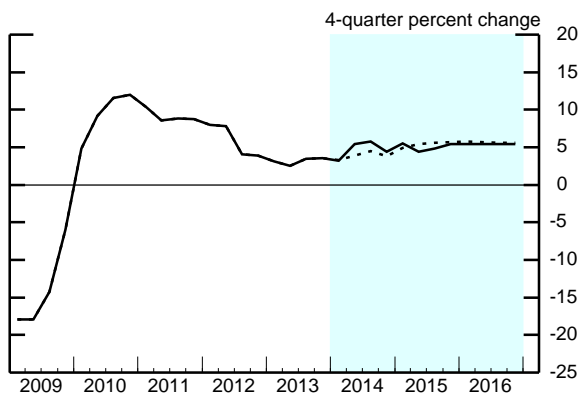
Personal Consumption Expenditures



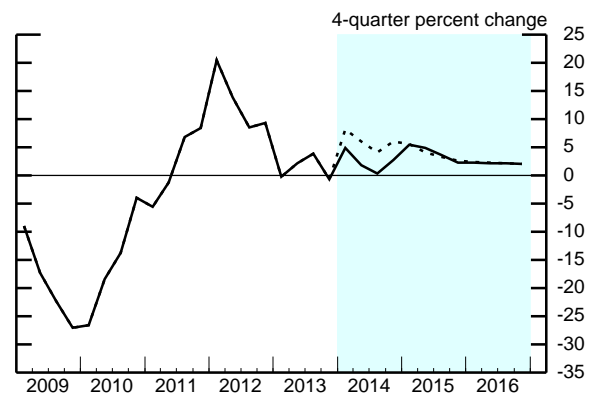
Residential Investment



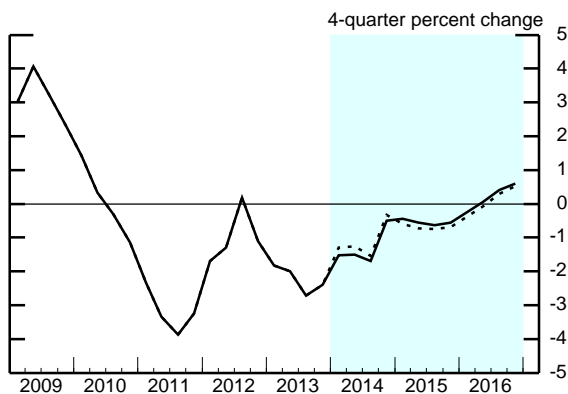
Equipment and Intangibles



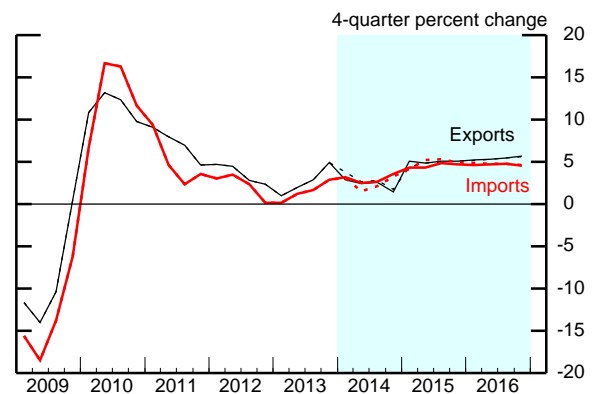
Nonresidential Structures



Government Consumption & Investment



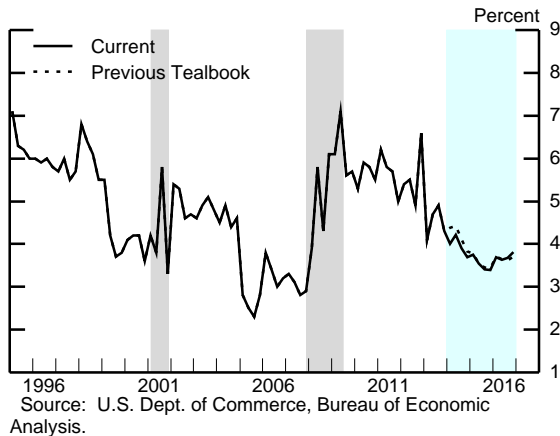
Exports and Imports



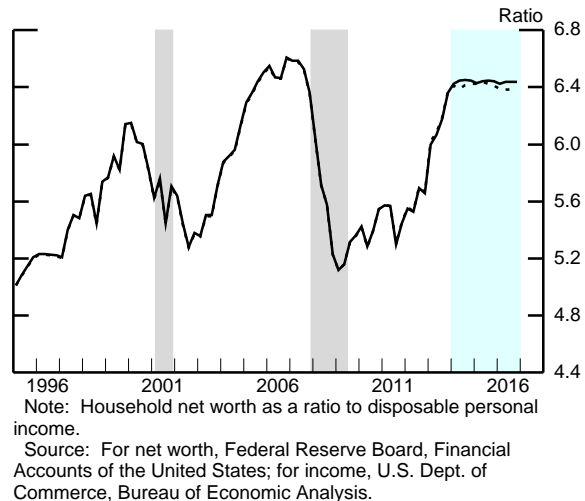
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Aspects of the Medium-Term Projection

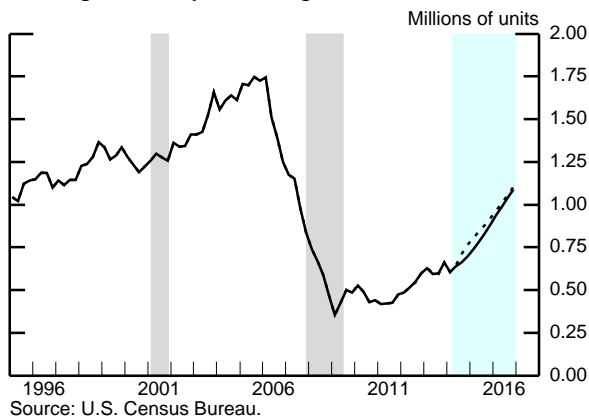
Personal Saving Rate



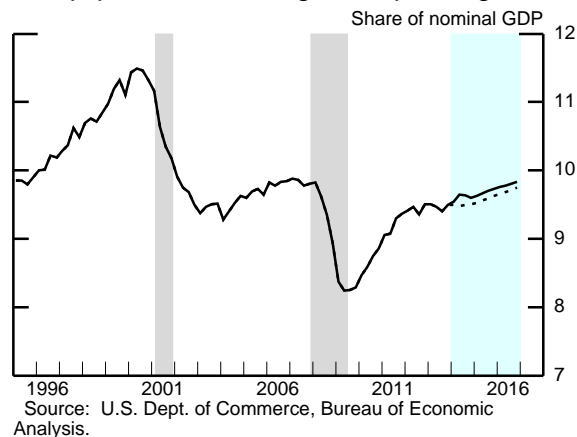
Wealth-to-Income Ratio



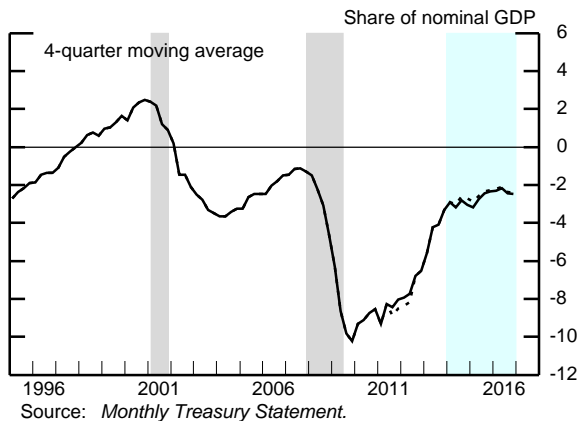
Single-Family Housing Starts



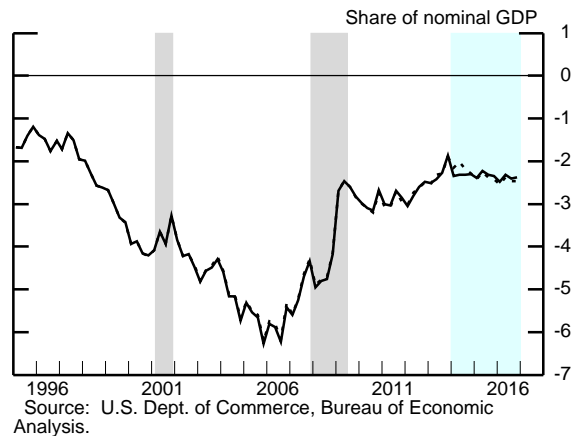
Equipment and Intangibles Spending



Federal Surplus/Deficit

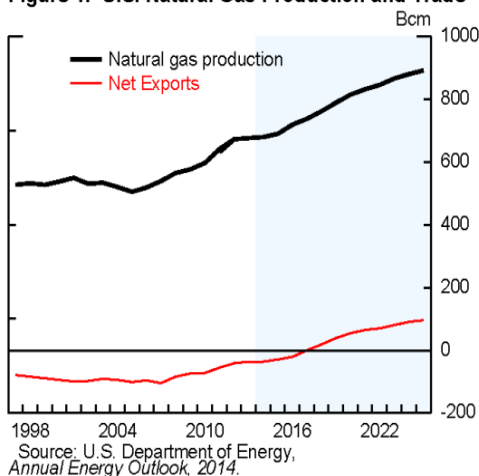
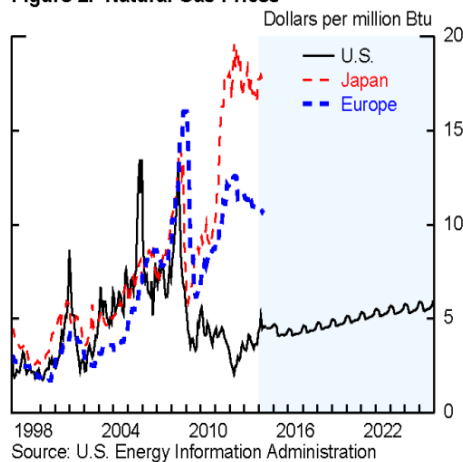


Current Account Surplus/Deficit



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

Second, the effect of increased exports on the relative price of natural gas could be fairly modest. In part this reflects the flatness of the U.S. natural gas supply curve, with a small increase in price likely to elicit a large increase in supply. Recent studies suggest that an increase in exports of the size shown in figure 1, relative to a baseline of no exports, will likely be associated with an increase in natural gas prices of only about 10 percent.⁴ Consistent with this assessment, and as shown in figure 2, the natural gas futures market is pricing in only a moderate increase in domestic prices over the next decade. Additionally, U.S. gas prices are unlikely to fully converge to European or Asian levels as transporting LNG remains costly, adding \$6 to \$7 per million British thermal units to cover the costs of liquefying and cooling the natural gas to minus 260 degrees Fahrenheit during transit. Thus, the most intensive users of natural gas among U.S. manufacturers are likely to continue to enjoy a cost advantage over foreign competitors even as the United States becomes a sizable exporter of LNG.

Figure 1. U.S. Natural Gas Production and Trade**Figure 2. Natural Gas Prices****Table 1. LNG Export Expansion (bcm per year)**

	Under construction	Proposed or planned	Total
United States	18	142	160
Australia	62	36	98
Russia	17	5	22
Canada	0	50	50
Nigeria	0	42	42
All other	11	52	63
Total	107	327	434

Source: *Petroleum Economist*.

Table 2. Natural Gas Intensity

	IP* weight	Energy intensity**
Alkalies and chlorine	.12	43.29
Carbon black	.02	31.67
Flat glass	.05	29.41
Plastic materials and resin	.77	15.32
Auto and truck assembly	1.84	.78
Semiconductors	2.00	.36
Pharmaceutical preparation	3.21	.29
Aircraft	1.63	.24

*Industrial production

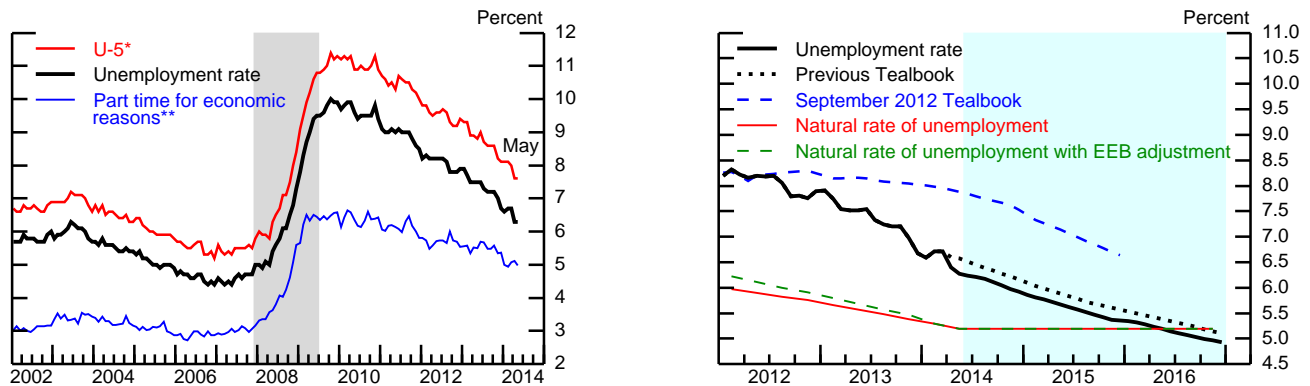
**Thousand btu per \$ of value-added in 2006

Source: Federal Reserve Board; U.S. Department of Energy.

⁴ See Trevor Houser and Mohan Shashank (2014), *Fueling Up: The Economic Implications of America's Oil and Gas Boom* (Washington D.C.: Peterson Institute for Economics), table 8.3, p. 130.

Labor Market Developments and Outlook (1)

Measures of Labor Underutilization



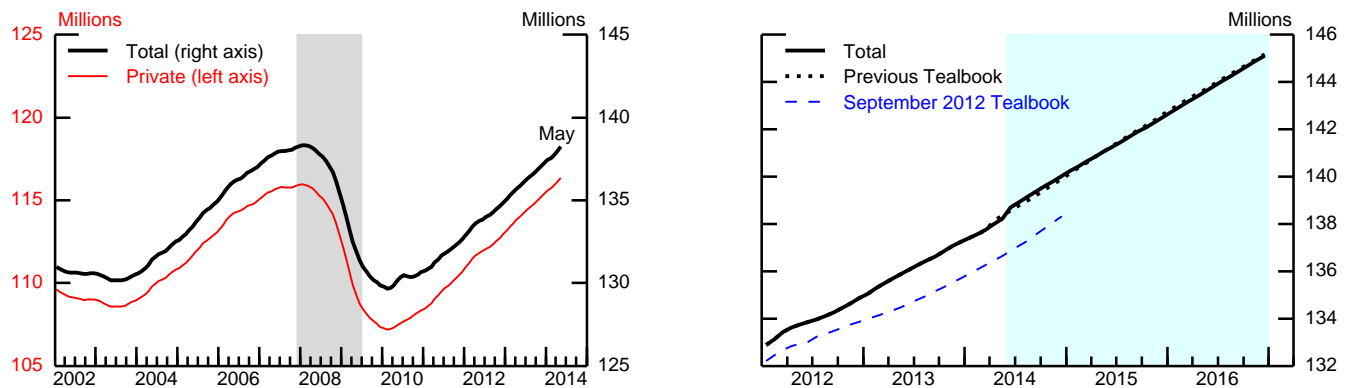
* U-5 measures total unemployed persons plus all marginally attached to the labor force, as a percent of the labor force plus persons marginally attached to the labor force.

** Percent of Current Population Survey employment.

EEB Extended and emergency unemployment benefits.

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

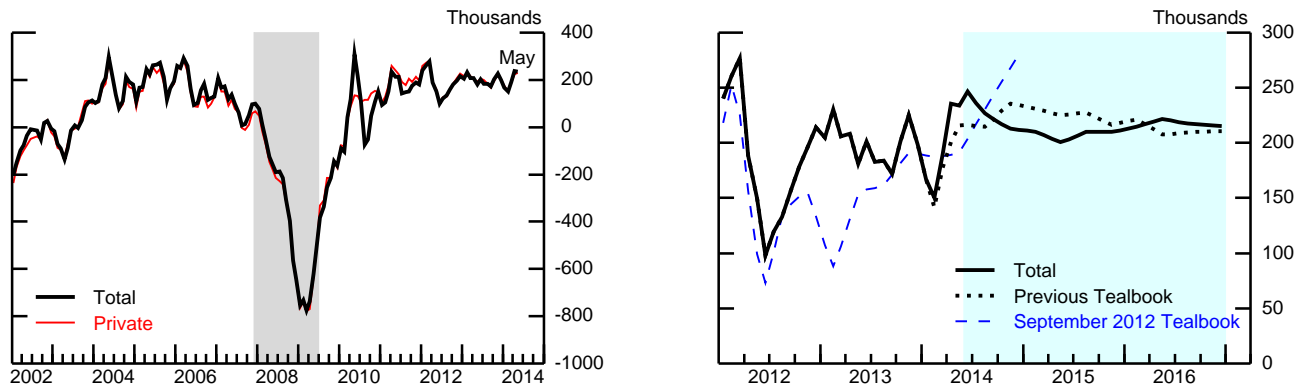
Level of Payroll Employment*



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

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

Change in Payroll Employment*



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

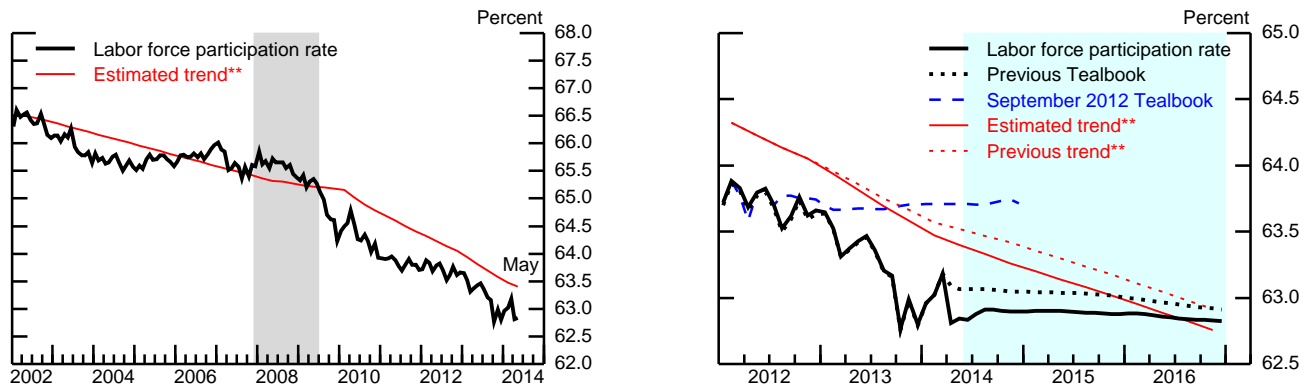
Source: U.S. Department of Labor, Bureau of Labor Statistics.

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

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

Labor Market Developments and Outlook (2)

Labor Force Participation Rate*

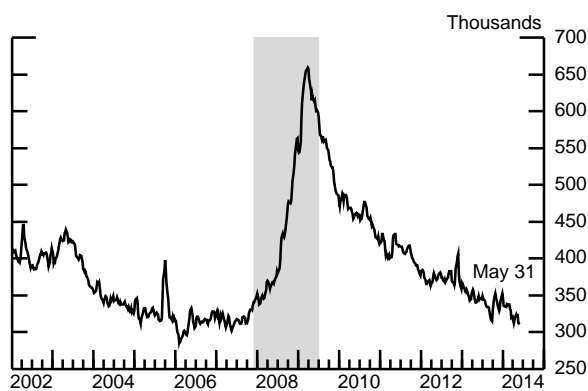


* Published data adjusted by staff to account for changes in population weights.

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

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

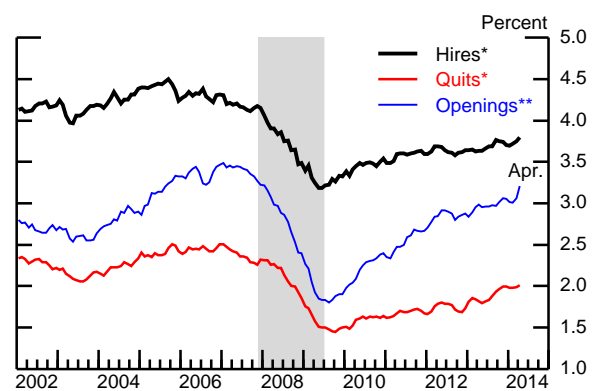
Initial Unemployment Insurance Claims*



* 4-week moving average.

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

Private Hires, Quits, and Job Openings

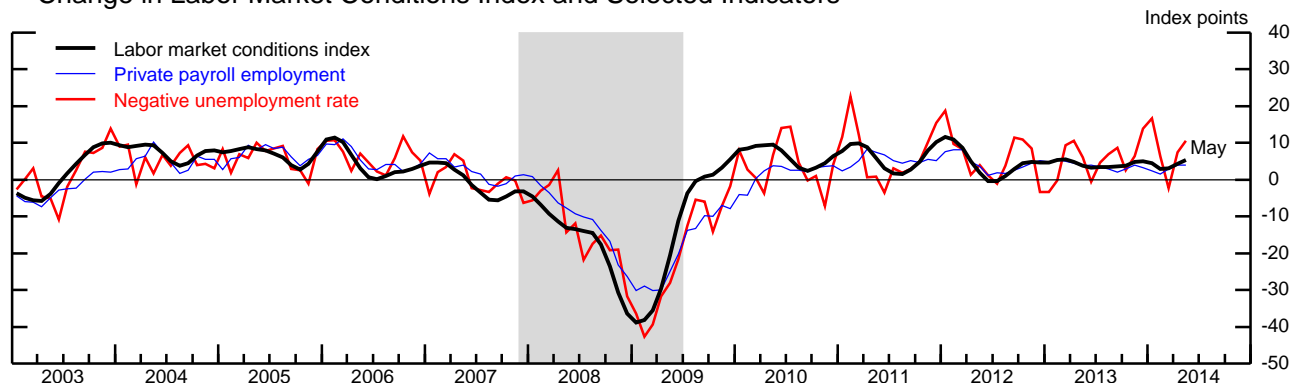


* Percent of private nonfarm payroll employment, 3-month moving average.

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

Source: Job Openings and Labor Turnover Survey.

Change in Labor Market Conditions Index and Selected Indicators*



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

* 3-month moving average.

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

Decomposition of Potential GDP

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

Measure	1974-95	1996-2000	2001-07	2008-10	2011-13	2014	2015	2016
Potential real GDP	3.1	3.4	2.6	1.9	1.5	1.3	1.7	1.9
Previous Tealbook	3.1	3.4	2.6	1.9	1.5	1.8	2.0	1.9
<i>Selected contributions¹</i>								
Structural NFB labor productivity ²	1.6	2.7	2.6	1.8	1.2	1.0	1.7	1.8
Previous Tealbook	1.6	2.7	2.6	1.8	1.2	1.4	1.8	1.8
Structural hours	1.5	1.0	.7	.2	.6	.6	.4	.4
Previous Tealbook	1.5	1.0	.7	.2	.6	.7	.6	.3
Labor force participation	.4	.0	-.3	-.4	-.5	-.4	-.4	-.4
Previous Tealbook	.4	.0	-.3	-.4	-.5	-.3	-.4	-.4
Memo:								
GDP gap ³	-1.8	2.5	1.0	-4.8	-2.8	-1.7	-.4	.8
Previous Tealbook	-1.9	2.5	1.0	-4.8	-2.9	-2.0	-.7	.4

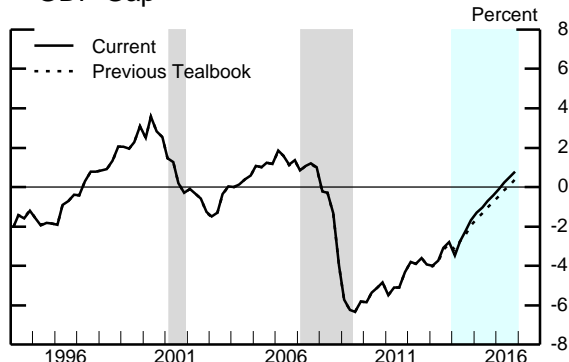
Note: For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.

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.

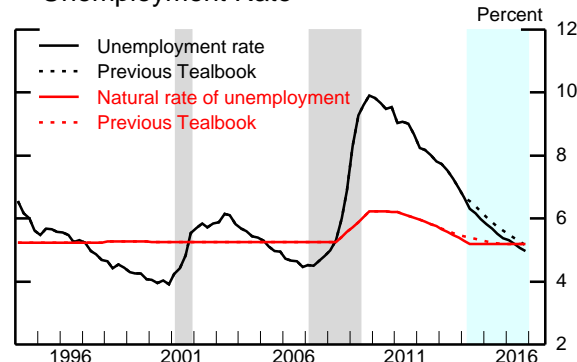
GDP Gap



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

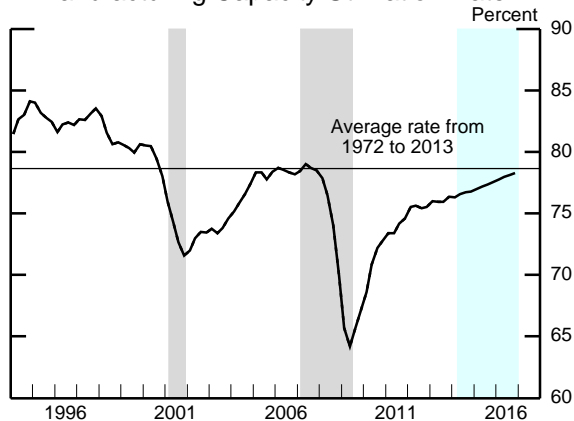
Source: U.S. Dept. of Commerce, BEA; staff assumptions.

Unemployment Rate



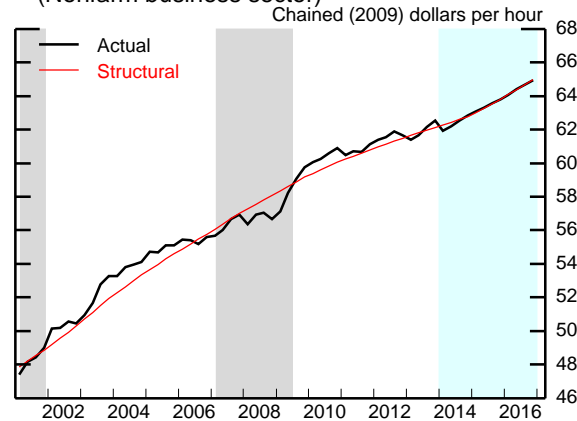
Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

Manufacturing Capacity Utilization Rate



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

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.

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	2014	2014		2015	2016
			H1	H2		
Output per hour, nonfarm business ¹	1.4	.5	-1.0	2.0	1.5	1.8
Previous Tealbook	1.4	.9	.0	1.9	1.6	1.9
Nonfarm private employment ²	197	218	214	223	204	205
Previous Tealbook	197	214	199	229	224	202
Labor force participation rate ³	62.8	62.9	62.9	62.9	62.9	62.8
Previous Tealbook	62.8	63.1	63.1	63.1	63.0	62.9
Civilian unemployment rate ³	7.0	6.0	6.3	6.0	5.4	5.0
Previous Tealbook	7.0	6.2	6.6	6.2	5.6	5.1

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	2014	2014		2015	2016
			H1	H2		
PCE chain-weighted price index	1.0	1.5	1.7	1.4	1.4	1.5
Previous Tealbook	1.0	1.6	1.5	1.6	1.5	1.6
Food and beverages	.8	2.0	2.4	1.5	1.1	1.3
Previous Tealbook	.8	1.7	2.0	1.4	1.3	1.4
Energy	-1.5	1.4	3.1	-.2	-1.6	-.8
Previous Tealbook	-1.5	2.3	2.8	1.7	-1.2	-.9
Excluding food and energy	1.2	1.5	1.5	1.4	1.6	1.7
Previous Tealbook	1.2	1.5	1.4	1.6	1.7	1.8
Prices of core goods imports ¹	-1.1	1.4	1.8	1.1	1.2	1.3
Previous Tealbook	-1.1	1.3	1.1	1.5	1.3	1.3

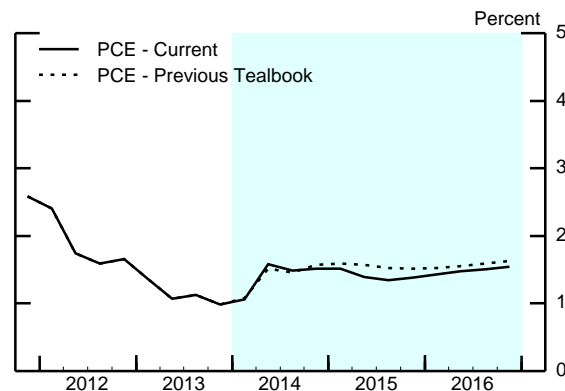
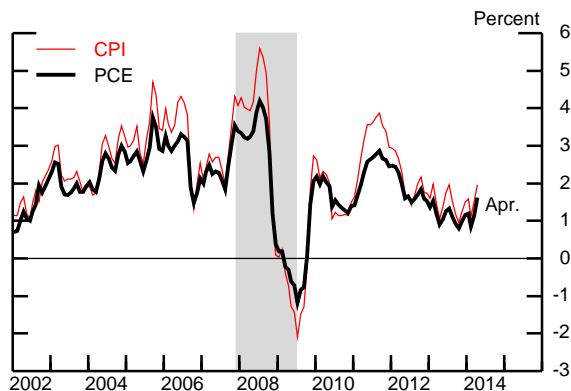
1. Core goods imports exclude computers, semiconductors, oil, and natural gas.

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

Inflation Developments and Outlook (1)

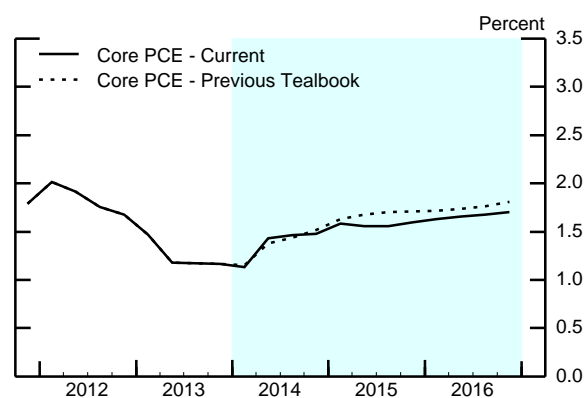
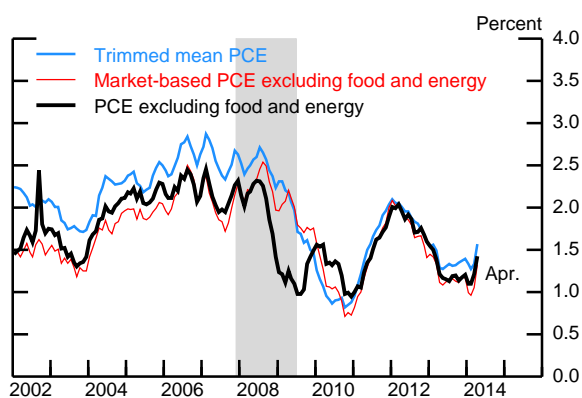
(Percent change from year-earlier period)

Headline Consumer Price Inflation



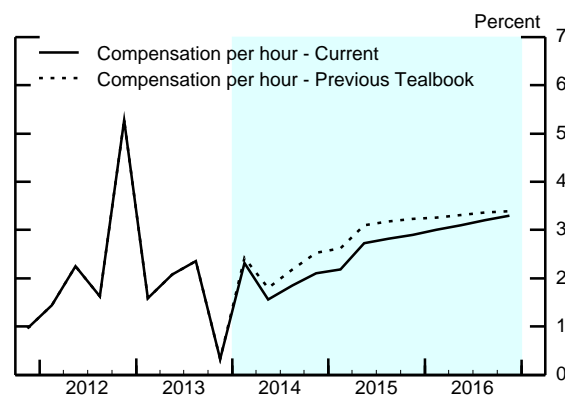
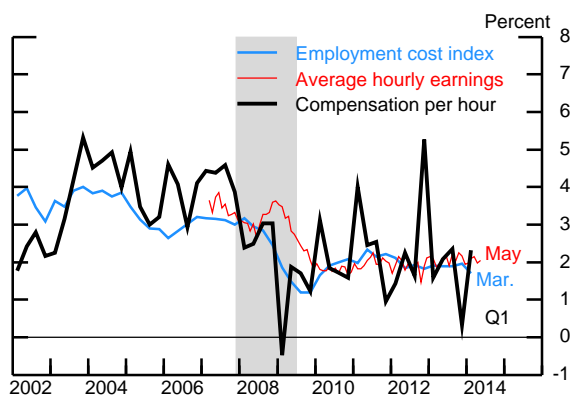
Source: For CPI, U.S. Department of Labor, Bureau of Labor Statistics; for PCE, U.S. Department of Commerce, Bureau of Economic Analysis.

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)



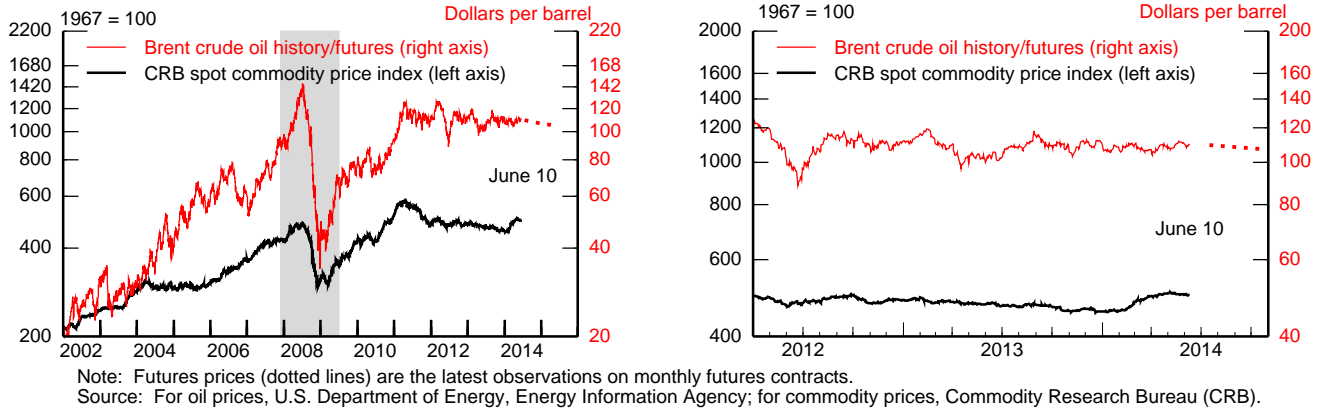
Source: U.S. Department of Labor, Bureau of Labor Statistics.

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

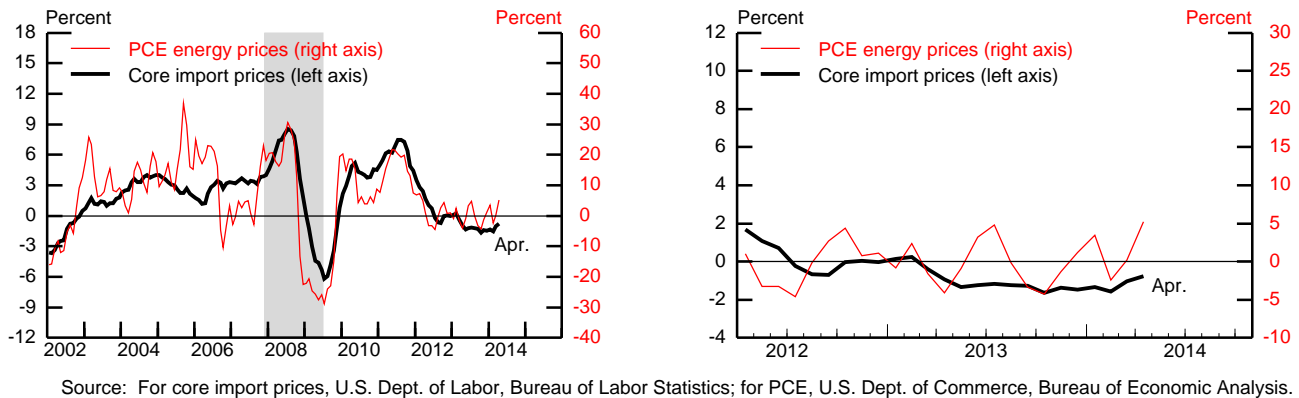
Inflation Developments and Outlook (2)

(Percent change from year-earlier period, except as noted)

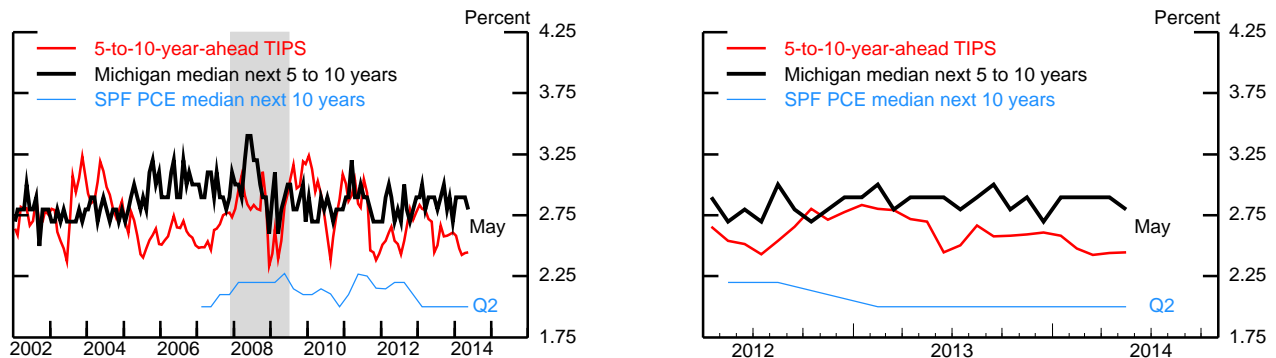
Commodity and Oil Price Levels



Energy and Import Price Inflation



Long-Term Inflation Expectations



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

Changes to the Longer-Run Outlook

In this Tealbook, we have lowered our assumption for the annual rate of real GDP growth in the longer run from $2\frac{1}{4}$ percent to 2 percent.¹ We have also lowered our assumptions for the longer-run values of interest rates, reducing the nominal federal funds rate from 4 percent to $3\frac{3}{4}$ percent and the nominal 10-year Treasury yield from $4\frac{3}{4}$ percent to $4\frac{1}{2}$ percent. Because we continue to assume that inflation will be 2 percent in the longer run, in line with the Committee's stated objective, these changes in nominal interest rates reflect a reduction in equilibrium real rates.

Our downward revision to longer-run potential output growth is largely the result of revisions to expected labor productivity growth. One key factor motivating the revision is a reassessment of the likely role of improvements in labor quality in future years. We now expect labor quality to flatten out in the longer run (rather than continuing to edge higher) because cohorts entering the labor force have essentially the same educational attainment as those retiring, and because the retirement of the baby-boom generation reduces the share of workers in their most-productive years.²

The table below compares our longer-term outlook for real GDP with those of some outside forecasters. Our outlook is somewhat below that of private forecasters but is in line with the CBO's projection.

Our decision to reduce the assumed values for real interest rates in the longer run reflects our assessment of the net effects of a number of factors. Looking over a broad span of time, our assumption for longer-run potential GDP reflects a judgment that potential growth in the years ahead will be lower than it was in the past. For example, according to the staff's estimates, potential GDP rose 3 percent per year from 1997 to 2005—a period chosen because the unemployment rate is near staff estimates of its natural rate at both ends. Over that period, the real federal funds rate

Outside Forecasts of Real GDP and the Real Federal Funds Rate

	Blue Chip	CBO	Staff
Period	2021–25	2020–24	2021–25
Real GDP (percent change, annual rate)	2.4	2.1	2.0
Real federal funds rate (percent)	1.8 ^a	1.9 ^b	1.8

CBO Congressional Budget Office.

a. Assumes PCE inflation will be 0.3 percentage point lower than CPI inflation.

b. Assumes the federal funds rate will be 0.2 percentage point higher than the three-month Treasury-bill yield.

¹ The longer-run outlook refers to the first half of the next decade, around 2021–25, when economic conditions are assumed to have returned to their long-run equilibrium.

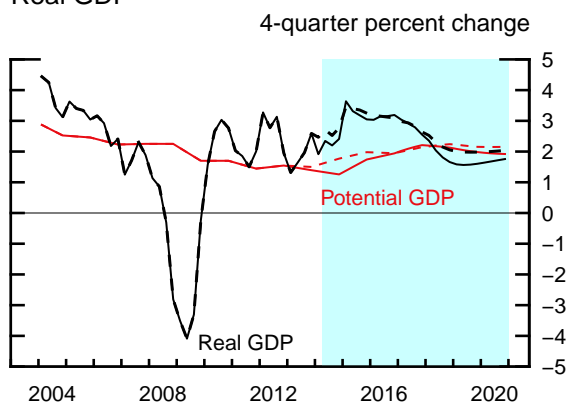
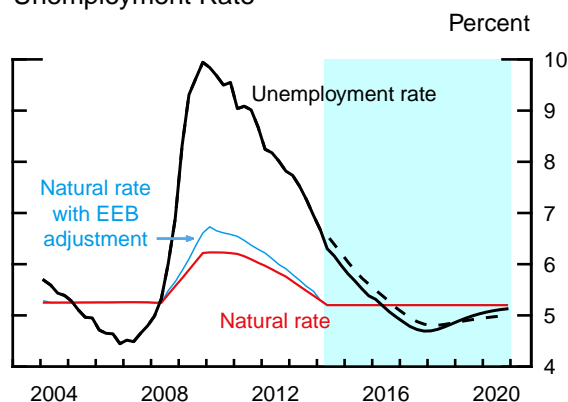
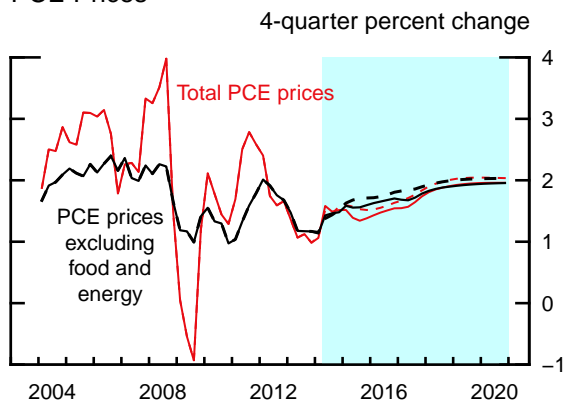
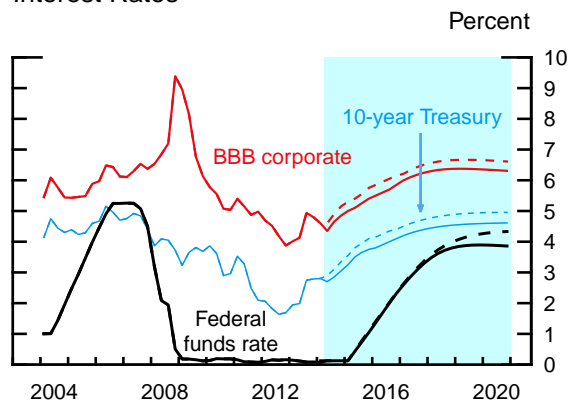
² Dale W. Jorgenson, Mun S. Ho, and Jon D. Samuels (2013), "Economic Growth in the Information Age: A Prototype Industry-Level Production Account for the United States, 1974–2010," unpublished paper, Harvard University, Department of Economics, July. See also John G. Fernald and Charles I. Jones (2014), "The Future of US Economic Growth," *American Economic Review*, vol. 104 (5), pp. 44–49.

The Long-Term Outlook

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

Measure	2014	2015	2016	2017	2018	Longer run
Real GDP	2.4	3.0	3.2	2.6	1.7	2.0
Previous Tealbook	2.8	3.2	3.1	2.6	2.1	2.3
Civilian unemployment rate ¹	6.0	5.4	5.0	4.7	4.8	5.2
Previous Tealbook	6.2	5.6	5.1	4.8	4.8	5.2
PCE prices, total	1.5	1.4	1.5	1.7	1.9	2.0
Previous Tealbook	1.6	1.5	1.6	1.8	2.0	2.0
Core PCE prices	1.5	1.6	1.7	1.8	1.9	2.0
Previous Tealbook	1.5	1.7	1.8	1.9	2.0	2.0
Federal funds rate ¹	.1	1.0	2.3	3.3	3.8	3.8
Previous Tealbook	.1	1.1	2.3	3.4	4.0	4.0
10-year Treasury yield ¹	3.1	3.8	4.1	4.4	4.5	4.6
Previous Tealbook	3.3	4.1	4.4	4.7	4.9	4.8

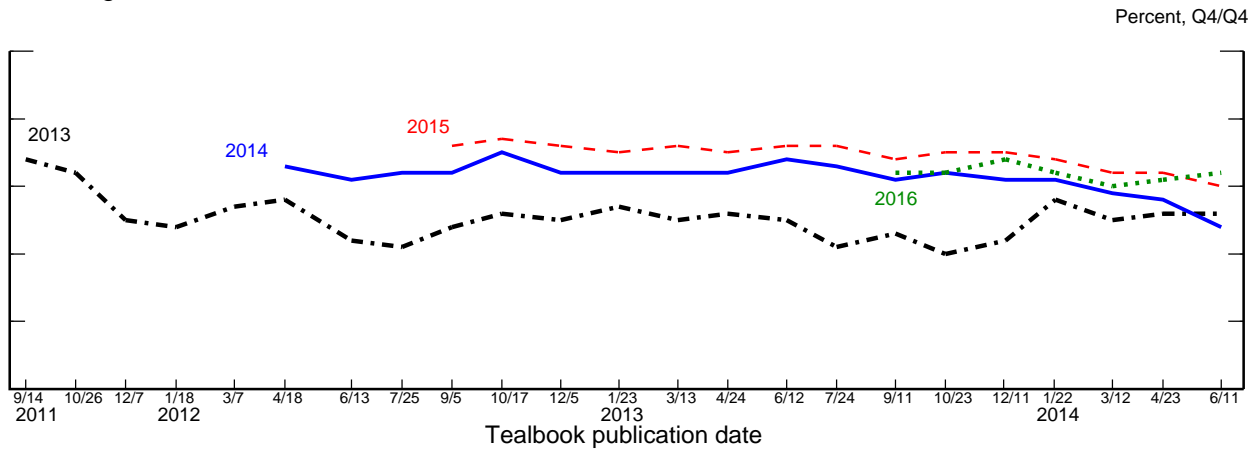
1. Percent, average for the final quarter of the period.

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

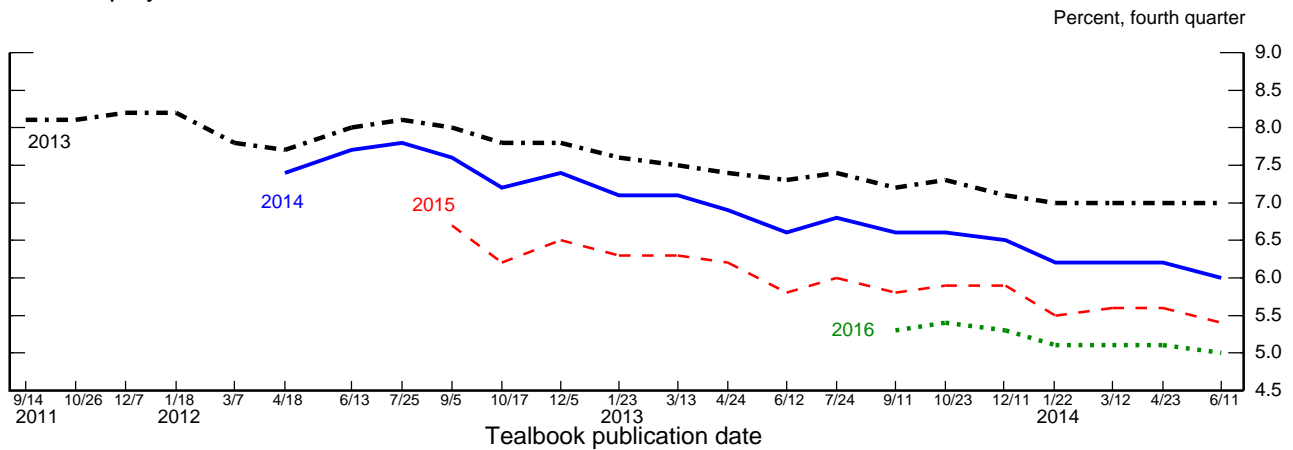
Note: In each panel, shading represents the projection period, and dashed lines are the previous Tealbook.

Evolution of the Staff Forecast

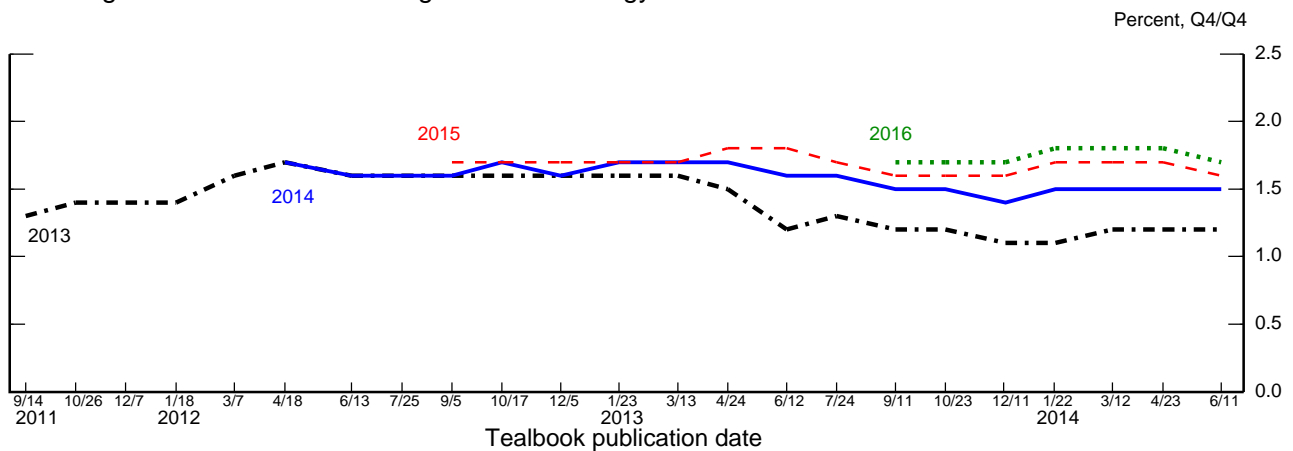
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy



ECB Policy Actions and Options

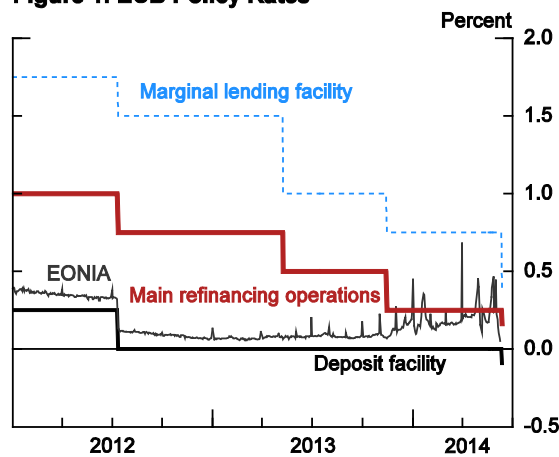
Amid concerns about low inflation and weak bank lending in the euro area, the Governing Council of the European Central Bank (ECB) decided to lower its policy rates at its meeting on June 5 and introduced measures to stimulate lending by banks. Overall, these measures appear to have been a bit more accommodative than markets had been anticipating but are likely to have only a modest impact on the economy.

As shown in figure 1, the ECB cut by 10 basis points the rates on its main refinancing operations (MROs), to 0.15 percent, and on its deposit facility, to negative 0.10 percent, while lowering the rate on its marginal lending facility 35 basis points to 0.40 percent. The rate cuts were modest, but pushing the deposit rate negative penalizes banks for parking liquidity at the ECB and may be viewed by the markets as a signal of the ECB's commitment to encourage banks to lend.

To spur bank lending to nonfinancial corporations and households, the ECB also announced Targeted Longer-Term Refinancing Operations (TLTROs). All TLTROs will mature in September 2018, with banks paying an interest rate that is fixed at the MRO rate at the time of take-up plus 10 basis points. In the first two TLTROs, scheduled for September and December 2014, banks can borrow up to 7 percent of their total eligible loans outstanding on April 30, 2014.¹ In addition, in a series of quarterly TLTROs from March 2015 to June 2016, banks will be able to borrow amounts that can cumulate to three times the increase in their net lending. The TLTRO program is similar to the Bank of England's funding-for-lending scheme, which is thought to have had only a limited effect on U.K. bank lending. However, the TLTROs' fixed rate over a four-year term is seen as reinforcing the ECB's forward guidance that its policy rates will remain low for an extended period of time.

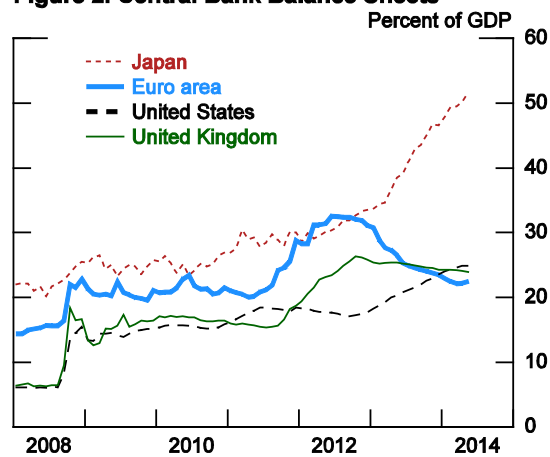
To provide further short-term liquidity, the ECB also announced that its weekly MROs and three-month Longer-Term Refinancing Operations (LTROs) will continue as fixed-rate tender procedures with full allotment until at least December 2016. The ECB also suspended sterilization of outstanding liquidity, currently about €165 billion, injected through purchases of peripheral sovereign bonds under the Securities Markets Programme (SMP). The liquidity measures may reverse part of the decline in the ECB's balance sheet (the blue line in figure 2) that has occurred as banks repaid funds from previous LTROs, but we believe the economic effects will be modest.

Figure 1. ECB Policy Rates



Source: Deutsche Bundesbank; European Central Bank; Haver Analytics.

Figure 2. Central Bank Balance Sheets



Source: Bank of England; Bank of Japan; European Central Bank; Federal Reserve Board; Haver Analytics.

¹ Eligible loans are loans to the euro-area nonfinancial sector, excluding loans to households for house purchase, and amount to about €400 billion.

Although markets had come to anticipate that the ECB would increase accommodation in June, the extent of the policy changes was likely on the higher side of expectations. Euro-area bond yields fell, especially for bonds from peripheral countries; the euro depreciated initially but ended the day a bit higher. Relative to the April Tealbook, we now assume the path of the MRO rate to be 10 basis points lower in the near term and 60 basis points lower at the end of 2016. With the boost from that stimulus partly offset by weaker economic and price data, we revised up our GDP growth forecast about 0.1 percentage point, with a smaller boost to our inflation forecast.

In addition to the announced changes, the ECB decided to intensify preparatory work for outright purchases of asset-backed securities (ABS). The European ABS market currently is very small, with only about €650 billion outstanding, mostly issued in the Netherlands, Spain, and Italy. Of that total, about half have been retained on the balance sheets of euro-area banks and already used to obtain liquidity from the ECB. Thus, we would expect any ABS purchases to be modest in scale. For the ECB to provide significant further stimulus through asset purchases, it would need to also buy sovereign bonds. Some ECB officials have questioned whether such purchases would violate the prohibition against “monetary financing,” and previous ECB programs to buy sovereign bonds (SMP and Outright Monetary Transactions) were controversial. Still, President Draghi has said in the past that sovereign purchases in the secondary market could be consistent with the ECB’s mandate, and we believe the ECB might undertake such purchases in extremis.

To evaluate the effects of asset purchases by the ECB, we ran an alternative simulation that assumes: (1) a balance sheet expansion of about €1 trillion, which, based on our analysis of the effects of the Fed’s large-scale asset purchases in the United States, we assume should reduce the term premium in euro-area long-term interest rates 40 basis points; (2) a 2 percent fall in the real effective exchange value of the euro; and (3) an intention by the ECB, understood by markets, to keep its policy rates near zero through the end of 2016, as assumed in the baseline. As shown in the figures below, the net effect is to boost euro-area GDP growth more than 1 percentage point over the baseline for some time; the effect on inflation is more limited, at just over ¼ percentage point.

These results suggest that the ECB could provide significant further stimulus to the euro-area economy and a modest boost to euro-area inflation by undertaking asset purchases on a significant scale. However, because of political difficulties surrounding purchases of sovereign bonds, it is more likely that the next step for the ECB will be to explore modest ABS purchases along with regulatory changes to help encourage expansion of the ABS market and bank lending.

Figure 3. Euro-Area GDP Growth

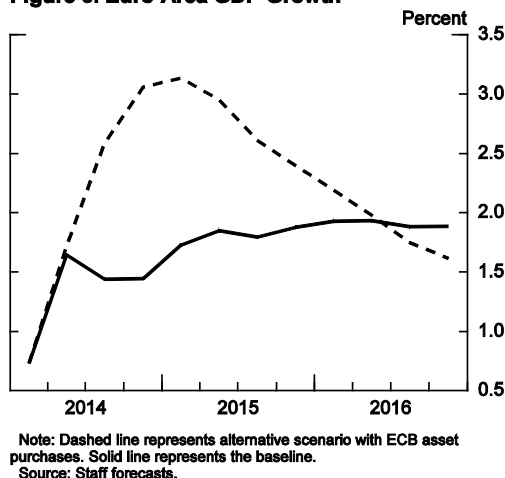
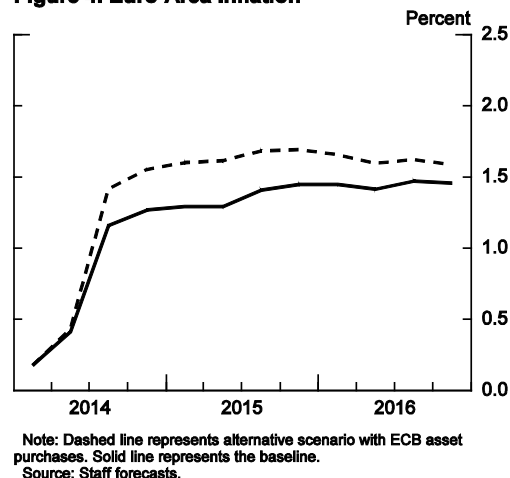


Figure 4. Euro-Area Inflation



The Foreign GDP Outlook

Real GDP*

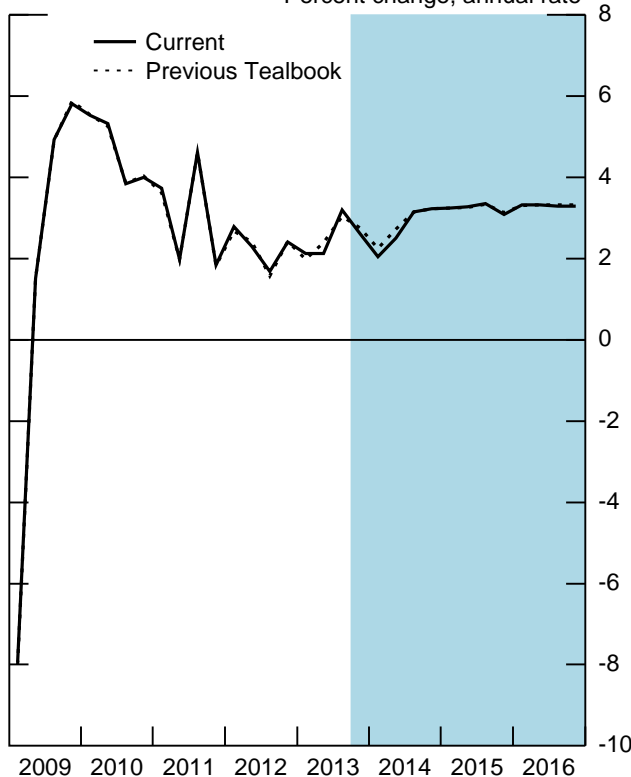
Percent change, annual rate

	2013			2014			2015	2016
	H1	Q3	Q4	Q1	Q2	H2		
1. Total Foreign	2.1	3.2	2.6	2.1	2.5	3.2	3.2	3.3
<i>Previous Tealbook</i>	2.2	3.0	2.8	2.3	2.7	3.2	3.2	3.3
2. Advanced Foreign Economies	1.9	2.1	2.0	2.0	1.7	2.2	2.1	2.2
<i>Previous Tealbook</i>	2.0	1.9	2.1	1.8	1.9	2.2	2.2	2.2
3. Canada	2.4	3.0	2.7	1.2	3.1	2.6	2.6	2.6
4. Euro Area	0.2	0.5	1.0	0.7	1.6	1.4	1.8	1.9
5. Japan	4.1	1.3	0.3	6.7	-4.5	1.9	0.7	1.1
6. United Kingdom	2.3	3.4	2.7	3.3	2.9	2.9	2.6	2.5
7. Emerging Market Economies	2.3	4.3	3.3	2.2	3.3	4.2	4.3	4.4
<i>Previous Tealbook</i>	2.4	4.2	3.4	2.7	3.6	4.2	4.3	4.4
8. China	6.9	8.8	8.0	5.5	6.2	7.5	7.2	7.1
9. Emerging Asia ex. China	2.8	4.3	4.8	2.5	3.6	4.3	4.4	4.4
10. Mexico	-1.0	3.9	0.5	1.1	2.5	3.4	3.6	3.7
11. Brazil	4.1	-1.2	1.8	0.7	1.2	2.1	2.5	2.7

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

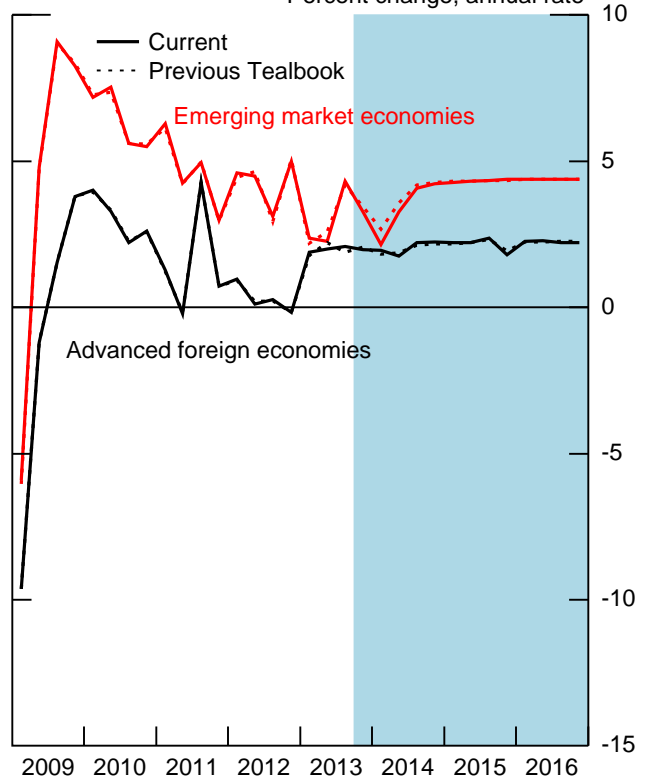
Total Foreign GDP

Percent change, annual rate



Foreign GDP

Percent change, annual rate



The Foreign Inflation Outlook

Consumer Prices*

Percent change, annual rate

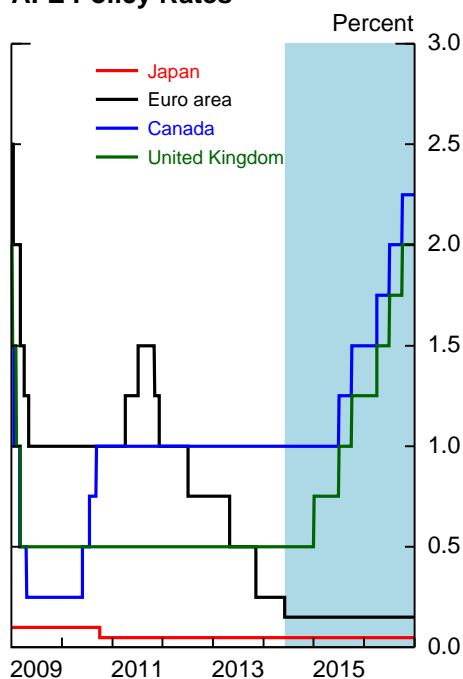
	2013			2014			2015	2016
	H1	Q3	Q4	Q1	Q2	H2		
1. Total Foreign	2.1	2.7	2.4	2.0	2.7	2.5	2.6	2.6
<i>Previous Tealbook</i>	2.1	2.7	2.4	2.0	3.0	2.5	2.6	2.6
2. Advanced Foreign Economies	0.7	2.0	0.7	1.1	2.6	1.3	1.7	1.6
<i>Previous Tealbook</i>	0.7	2.0	0.7	1.1	2.7	1.4	1.7	1.6
3. Canada	0.8	1.9	0.5	2.8	2.3	1.7	1.7	1.9
4. Euro Area	0.7	1.6	0.1	0.2	0.4	1.2	1.4	1.4
5. Japan	0.4	3.0	1.9	0.4	8.5	0.7	2.3	1.3
6. United Kingdom	2.1	2.8	1.4	1.0	1.6	2.0	1.9	1.8
7. Emerging Market Economies	3.2	3.2	3.7	2.7	2.8	3.5	3.4	3.3
<i>Previous Tealbook</i>	3.2	3.3	3.7	2.6	3.2	3.4	3.4	3.3
8. China	2.6	3.4	3.0	0.8	1.7	3.3	3.0	3.0
9. Emerging Asia ex. China	2.8	3.8	4.2	2.9	3.4	3.5	3.5	3.4
10. Mexico	4.2	2.0	4.2	5.2	2.9	3.3	3.3	3.3
11. Brazil	6.4	4.6	6.0	6.9	7.9	5.9	5.4	5.3

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

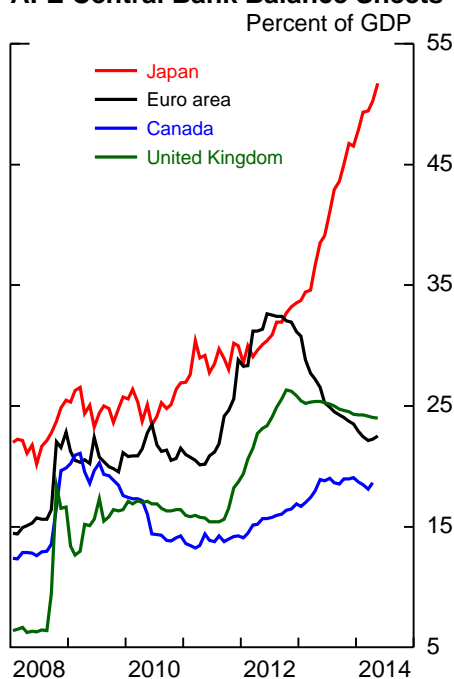
Int'l Econ Devel & Outlook

Foreign Monetary Policy

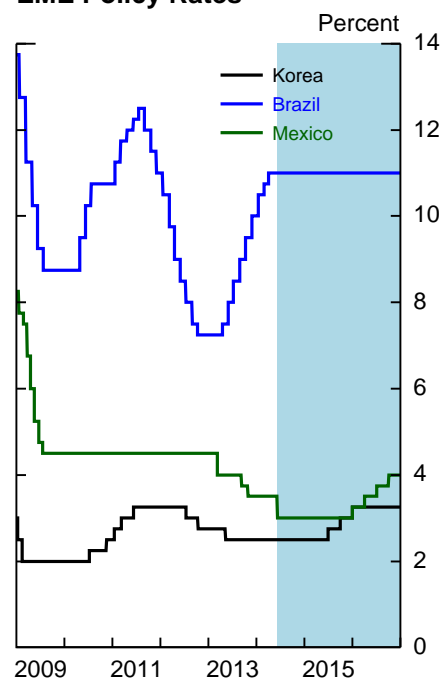
AFE Policy Rates



AFE Central Bank Balance Sheets

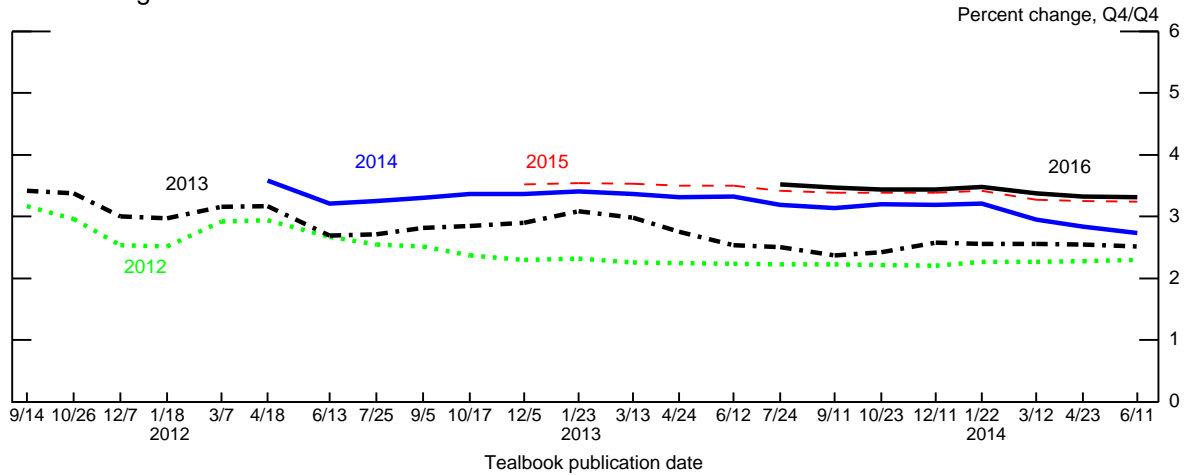


EME Policy Rates

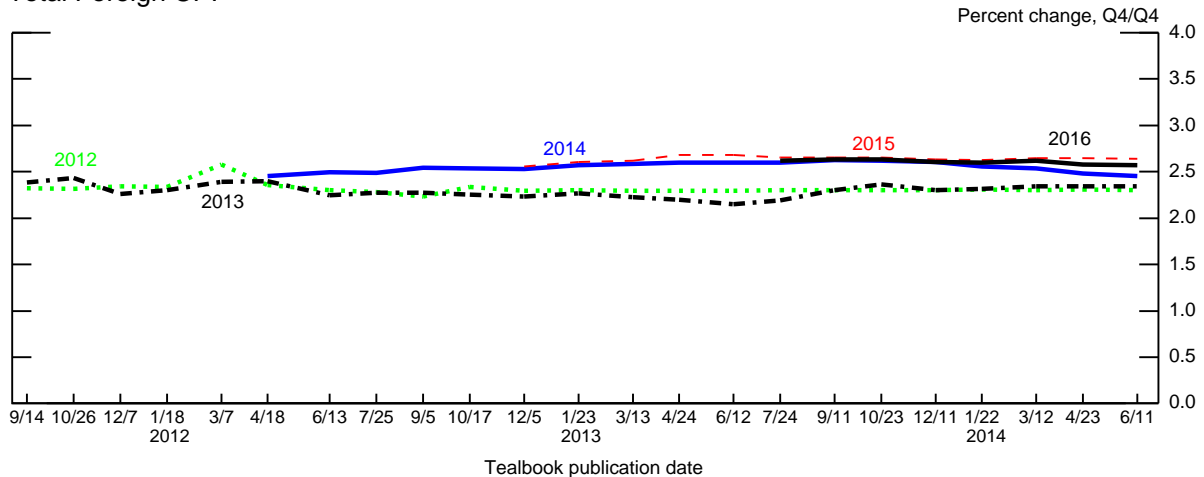


Evolution of Staff's International Forecast

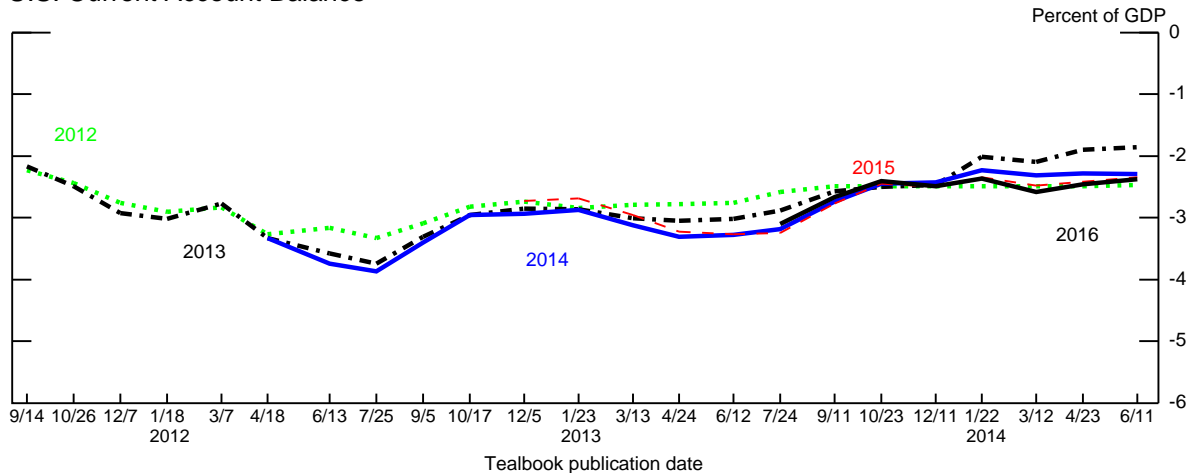
Total Foreign GDP



Total Foreign CPI

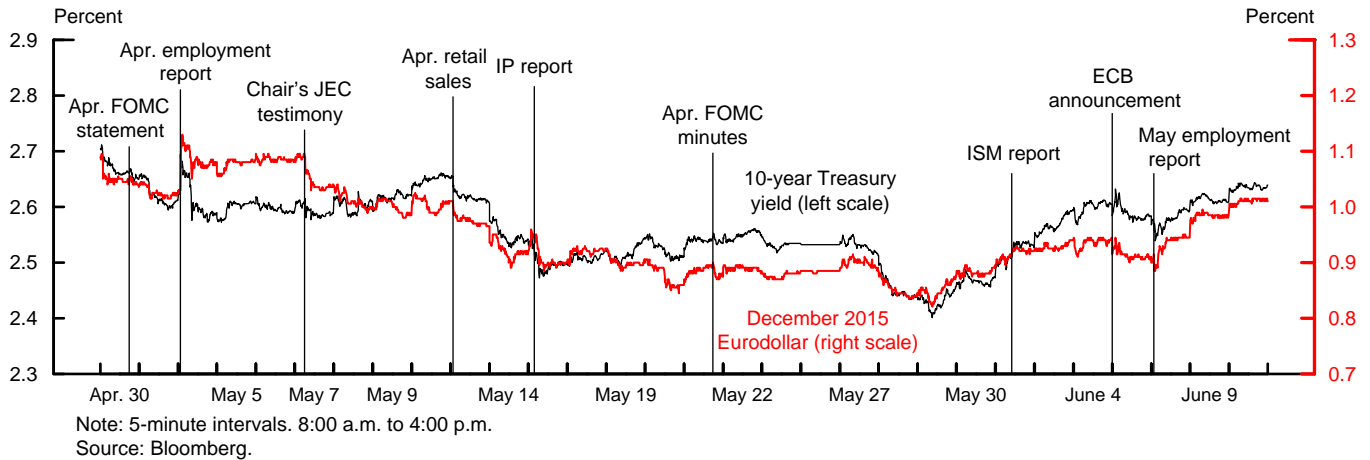


U.S. Current Account Balance

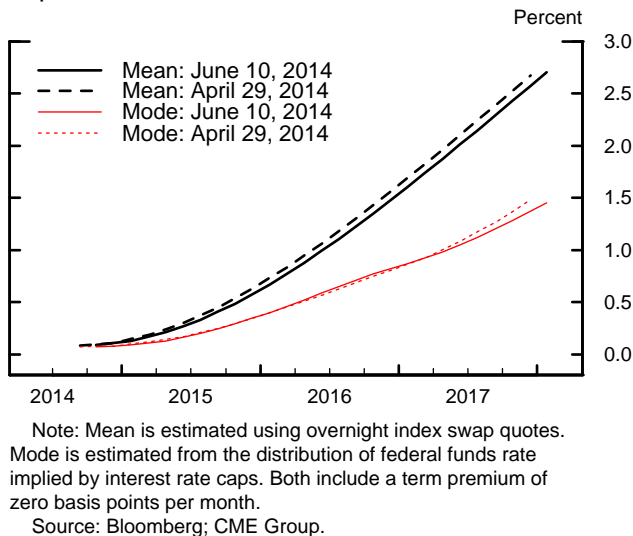


Policy Expectations and Treasury Yields

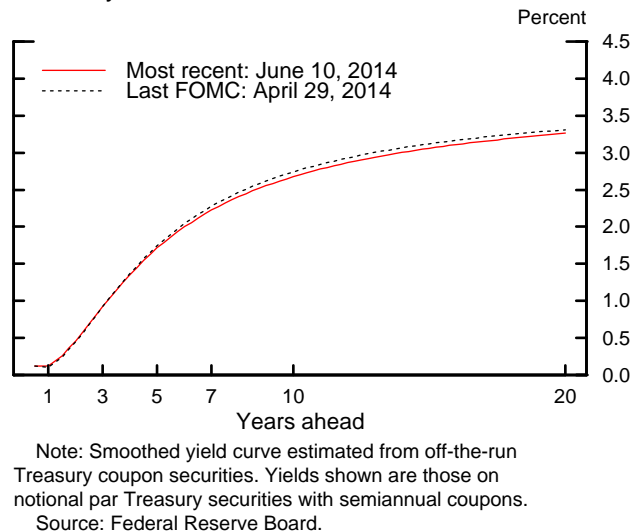
Selected Interest Rates



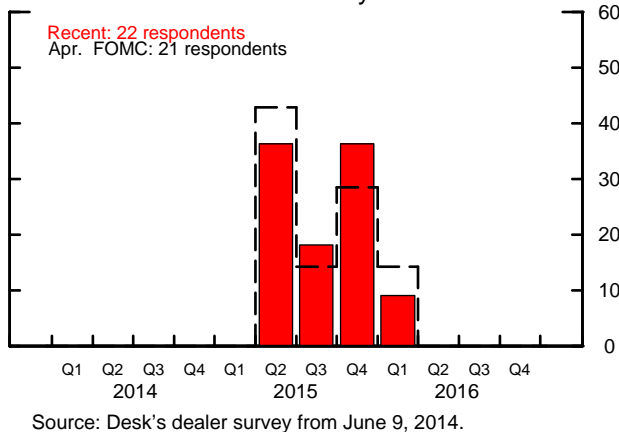
Implied Federal Funds Rate



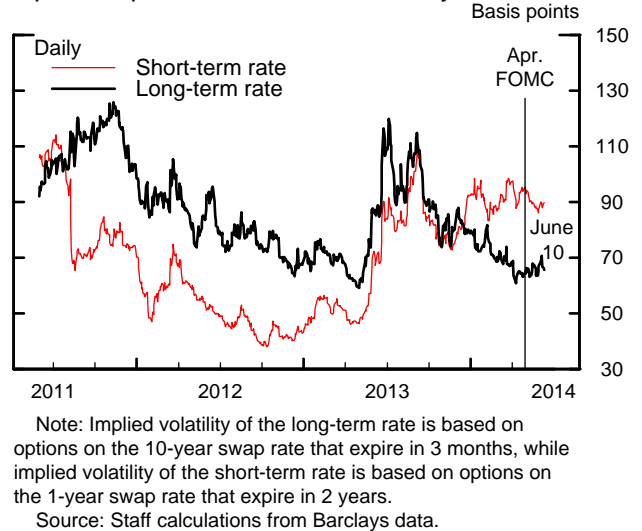
Treasury Yield Curve



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

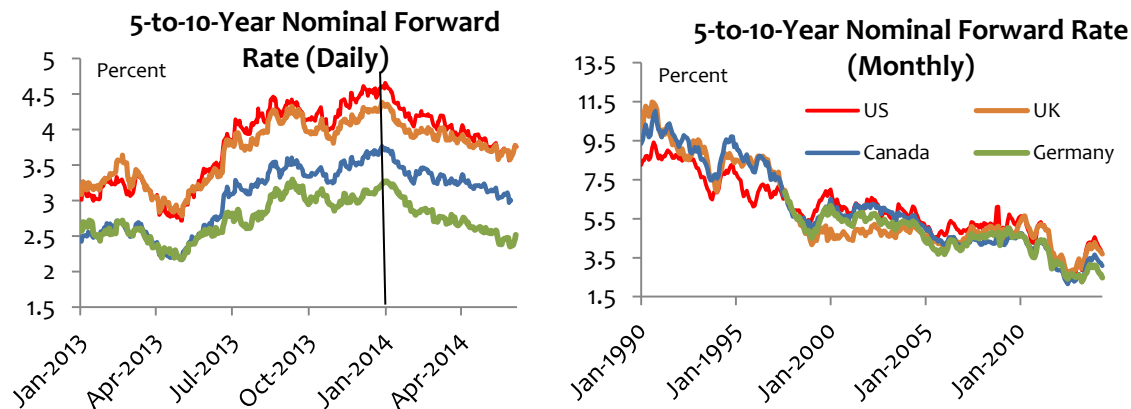


Option-Implied Interest Rate Volatility



What Explains the Recent Decline in Long-Term Forward Rates?

After rising steadily over the second half of last year, long-term nominal forward rates across most of the advanced economies have declined substantially since year-end. As noted in the chart to the right, this behavior is consistent with the pattern of strong co-movement in global long-term rates across advanced economies over the last 25 years despite the substantial differences across countries over time in monetary policy and economic outlook.



Market participants have pointed to a number of factors as contributing to the recent decline in long-term forward rates, including a lower equilibrium real rate associated with reduced expectations of long-run economic growth, as well as factors that might have reduced the term premium, such as reduced uncertainty about future interest rates, increased demand for longer-duration assets by some price-insensitive investors, and the unwinding of short Treasury positions that some investors reportedly had established early in the year in anticipation of rising interest rates.

To examine these factors, we follow a two-step procedure. First, we use Blue Chip long-run forecasts to decompose the 5-to-10-year nominal forward rate into four components: the expected future real short rate (Blue Chip long-run forecast of the 3-month T-bill rate minus that of consumer price index inflation), expected future inflation, the inflation risk premium (Treasury Inflation-Protected Securities (TIPS) 5-to-10-year breakeven rate minus expected future inflation), and the real term premium (TIPS 5-to-10-year forward rate minus the expected future real short rate). The results, shown in the top panel of the table on the next page, suggest that out of a total reduction in the 5-to-10 year forward rate over the first four months of this year of about 65 basis points, about a quarter can be attributed to a reduction in the forward inflation risk premium, while most of the rest can be attributed to a reduction in the real forward term premium.

To better understand the change in the estimated real forward term premium, our second step is to regress the survey-based measure of the real term premium on variables intended to capture uncertainties about future interest rates and growth, as well as market-related demand and supply variations. We then use the model estimates to decompose the change in the real forward term premium between December 2013 and April 2014. On balance, the results, shown in the bottom panel of the table, suggest that out of a total decrease of about 50 basis points in the real term premium over this period,

Alternative Scenarios

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

Measure and scenario	2014		2015	2016	2017-18
	H1	H2			
<i>Real GDP</i>					
Extended Tealbook baseline	1.3	3.5	3.0	3.2	2.1
Low inflation	1.3	3.6	3.0	3.0	2.6
No room to grow	1.2	3.2	2.1	1.7	.6
Faster expansion	1.8	4.6	3.9	3.6	2.1
Weaker household demand	.7	1.9	1.6	2.4	2.5
Stronger growth in EMEs	1.3	3.7	3.4	3.2	1.9
<i>Unemployment rate¹</i>					
Extended Tealbook baseline	6.3	6.0	5.4	5.0	4.8
Low inflation	6.3	6.0	5.4	5.0	4.5
No room to grow	6.4	6.2	5.5	5.2	5.4
Faster expansion	6.2	5.7	4.8	4.2	4.1
Weaker household demand	6.4	6.4	6.4	6.3	5.7
Stronger growth in EMEs	6.3	6.0	5.2	4.7	4.6
<i>Total PCE prices</i>					
Extended Tealbook baseline	1.7	1.4	1.4	1.5	1.8
Low inflation	1.3	1.0	.8	.8	1.1
No room to grow	1.7	1.6	1.7	2.0	2.4
Faster expansion	1.7	1.4	1.4	1.6	1.9
Weaker household demand	1.7	1.4	1.3	1.3	1.6
Stronger growth in EMEs	1.7	1.9	2.4	1.8	1.8
<i>Core PCE prices</i>					
Extended Tealbook baseline	1.5	1.4	1.6	1.7	1.8
Low inflation	1.1	1.0	1.0	1.0	1.1
No room to grow	1.5	1.6	1.9	2.2	2.4
Faster expansion	1.5	1.4	1.6	1.8	1.9
Weaker household demand	1.5	1.4	1.5	1.5	1.6
Stronger growth in EMEs	1.5	1.5	1.9	1.9	1.9
<i>Federal funds rate¹</i>					
Extended Tealbook baseline	.1	.1	1.0	2.3	3.8
Low inflation	.1	.1	.1	.1	.9
No room to grow	.1	.4	2.3	4.3	5.8
Faster expansion	.1	.1	1.8	3.5	5.2
Weaker household demand	.1	.1	.1	.1	.8
Stronger growth in EMEs	.1	.1	1.2	2.9	4.4

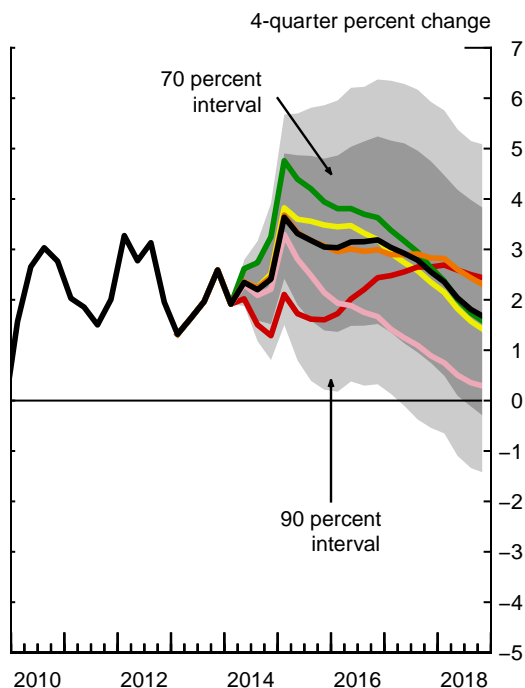
1. Percent, average for the final quarter of the period.

Forecast Confidence Intervals and Alternative Scenarios

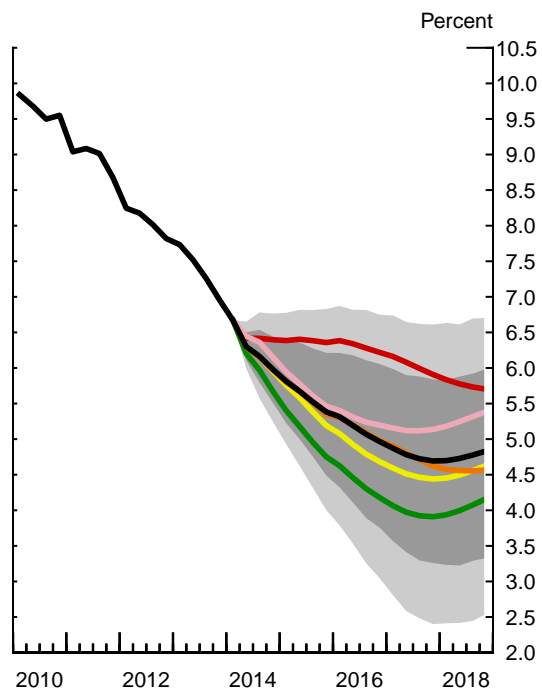
Confidence Intervals Based on FRB/US Stochastic Simulations

- Extended Tealbook baseline
- No room to grow
- Weaker household demand
- Low inflation
- Faster expansion
- Stronger growth in EMEs

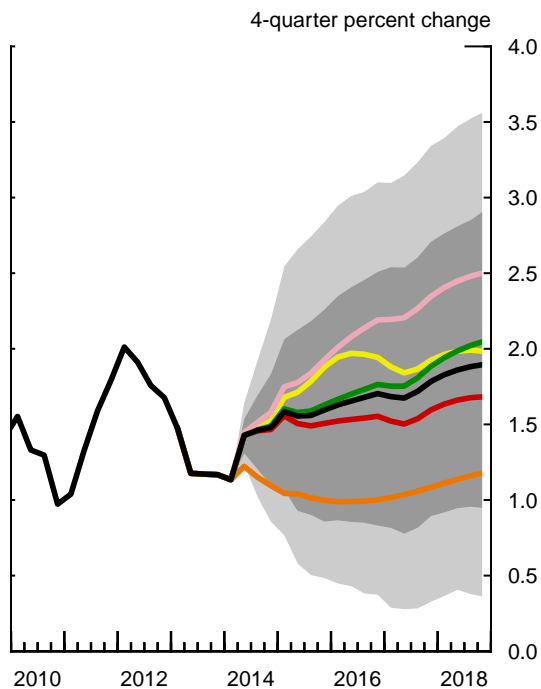
Real GDP



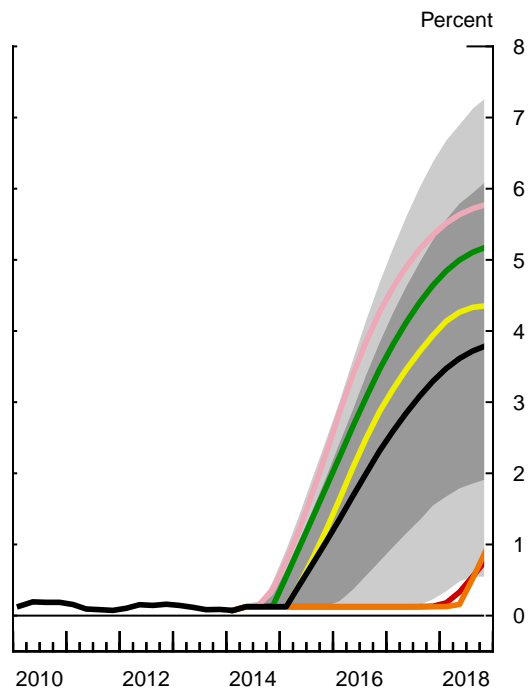
Unemployment Rate



PCE Prices excluding Food and Energy



Federal Funds Rate



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

Measure	2014	2015	2016	2017	2018
<i>Real GDP</i> (percent change, Q4 to Q4)					
Projection	2.4	3.0	3.2	2.6	1.7
Confidence interval					
Tealbook forecast errors	1.2–3.6	1.2–4.9	...	...	...
FRB/US stochastic simulations	1.5–3.3	1.4–4.8	1.5–5.2	.7–4.7	-.3–3.8
<i>Civilian unemployment rate</i> (percent, Q4)					
Projection	6.0	5.4	5.0	4.7	4.8
Confidence interval					
Tealbook forecast errors	5.5–6.5	4.6–6.2	...	...	...
FRB/US stochastic simulations	5.5–6.4	4.5–6.2	3.8–6.1	3.3–5.8	3.3–6.0
<i>PCE prices, total</i> (percent change, Q4 to Q4)					
Projection	1.5	1.4	1.5	1.7	1.9
Confidence interval					
Tealbook forecast errors	.8–2.2	.2–2.6	...	...	...
FRB/US stochastic simulations	.9–2.2	.4–2.3	.5–2.6	.6–2.9	.8–3.1
<i>PCE prices excluding food and energy</i> (percent change, Q4 to Q4)					
Projection	1.5	1.6	1.7	1.8	1.9
Confidence interval					
Tealbook forecast errors	1.1–1.9	.9–2.3	...	...	...
FRB/US stochastic simulations	1.1–1.8	.9–2.3	.8–2.5	.9–2.7	.9–2.9
<i>Federal funds rate</i> (percent, Q4)					
Projection	.1	1.0	2.3	3.3	3.8
Confidence interval					
FRB/US stochastic simulations	.1–.3	.1–2.0	.8–3.8	1.5–5.3	1.9–6.1

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

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

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

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

Measure and projection	2014		2015		2016	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
<i>Real GDP</i>						
Staff	2.8	2.4	3.2	3.0	3.1	3.2
FRB/US	1.9	1.6	2.7	2.3	2.9	2.5
EDO	2.3	2.1	2.8	2.7	2.8	2.7
Blue Chip	2.7	2.2	3.0	3.0	...	...
<i>Unemployment rate¹</i>						
Staff	6.2	6.0	5.6	5.4	5.1	5.0
FRB/US	6.5	6.1	6.1	5.6	5.7	5.3
EDO	6.8	6.5	6.8	6.5	6.7	6.5
Blue Chip	6.2	6.1	5.8	5.7	...	...
<i>Total PCE prices</i>						
Staff	1.6	1.5	1.5	1.4	1.6	1.5
FRB/US	1.4	1.5	1.2	1.2	1.4	1.2
EDO	1.4	1.6	1.5	1.6	1.7	1.7
Blue Chip ²	1.9	2.1	2.0	2.0	...	...
<i>Core PCE prices</i>						
Staff	1.5	1.5	1.7	1.6	1.8	1.7
FRB/US	1.3	1.5	1.4	1.4	1.5	1.4
EDO	1.4	1.5	1.5	1.6	1.7	1.7
Blue Chip	...	...	...	...	...	...
<i>Federal funds rate¹</i>						
Staff	.1	.1	1.1	1.0	2.3	2.3
FRB/US	.1	.1	.1	.5	.7	1.2
EDO	1.1	1.0	1.9	2.0	2.5	2.5
Blue Chip ³	.1	.1	.9	.9	...	...

Note: Blue Chip forecast completed on June 10, 2014.

1. Percent, average for Q4.

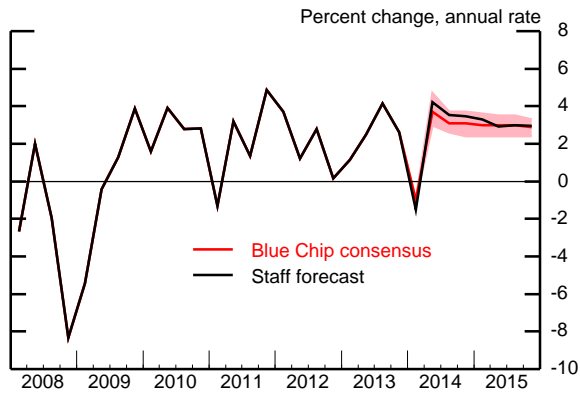
2. Consumer price index.

3. Treasury bill rate.

... Not applicable. The Blue Chip forecast is not available for core inflation.

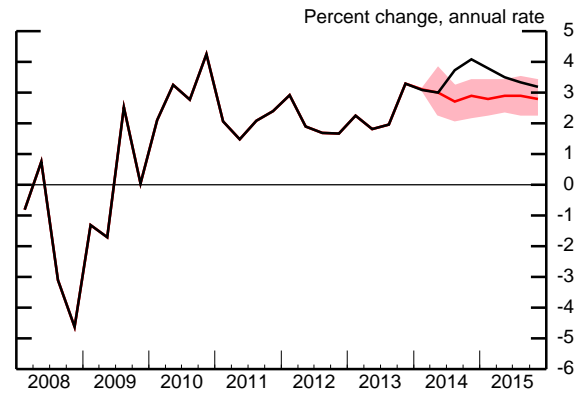
Tealbook Forecast Compared with Blue Chip (Blue Chip survey released June 10, 2014)

Real GDP

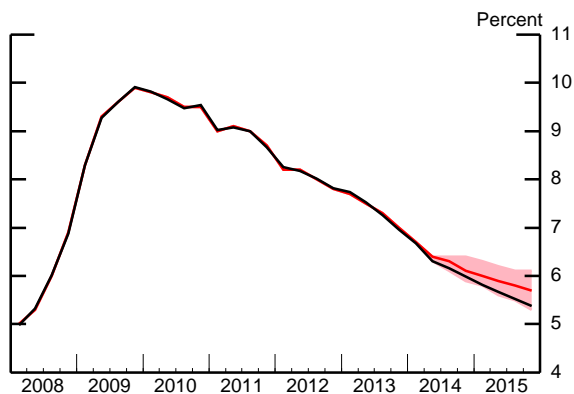


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

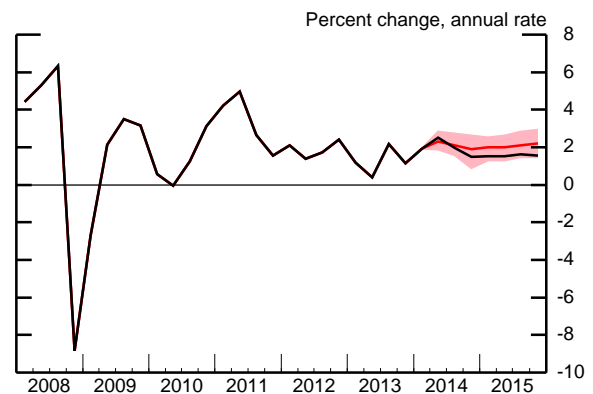
Real PCE



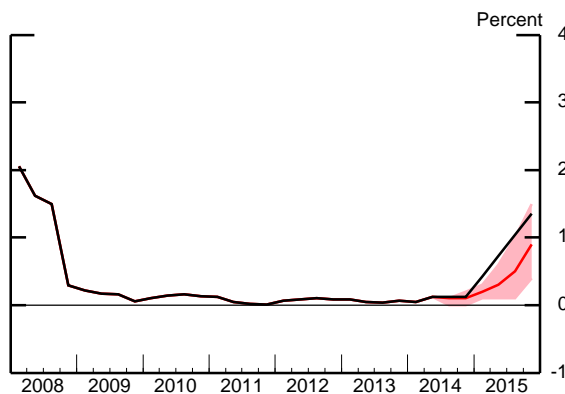
Unemployment Rate



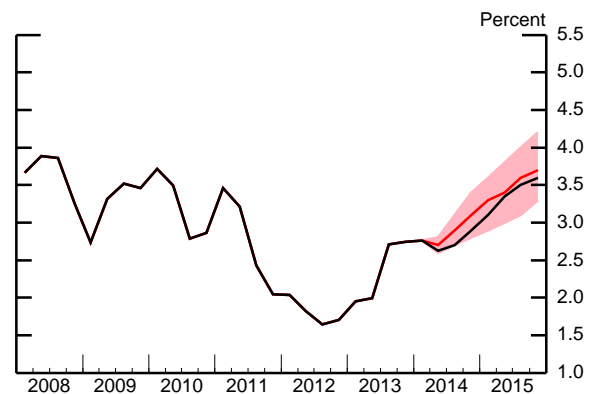
Consumer Price Index



Treasury Bill Rate



10-Year Treasury Yield



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

Assessment of Key Macroeconomic Risks (1)

Probability of Inflation Events (4 quarters ahead—2015:Q2)

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	.04	.03	.10	.16
Previous Tealbook	.05	.03	.09	.07
<i>Less than 1 percent</i>				
Current Tealbook	.30	.37	.33	.08
Previous Tealbook	.22	.34	.34	.15

Probability of Unemployment Events (4 quarters ahead—2015:Q2)

Probability that the unemployment rate will ...	Staff	FRB/US	EDO	BVAR
<i>Increase by 1 percentage point</i>				
Current Tealbook	.01	.01	.20	.00
Previous Tealbook	.02	.04	.21	.01
<i>Decrease by 1 percentage point</i>				
Current Tealbook	.31	.22	.13	.58
Previous Tealbook	.33	.17	.15	.29

Probability of Near-Term Recession

Probability that real GDP declines in each of 2014:Q3 and 2014:Q4	Staff	FRB/US	EDO	BVAR	Factor Model
Current Tealbook	.03	.05	.04	.04	.22
Previous Tealbook	.01	.03	.03	.07	.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 ¹	
	04/23/14	06/11/14	04/23/14	06/11/14	04/23/14	06/11/14	04/23/14	06/11/14	04/23/14	06/11/14
<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	3.1	3.1	2.5	2.5	-1	-1	.6	.6	7.5	7.5
Q3	6.2	6.2	4.1	4.1	1.9	1.9	1.4	1.4	7.3	7.3
Q4	4.2	4.2	2.6	2.6	1.1	1.1	1.3	1.3	7.0	7.0
2014:Q1	2.3	-2	.7	-1.5	1.5	1.4	1.3	1.2	6.7	6.7
Q2	5.1	6.0	3.5	4.2	1.6	2.0	1.5	1.8	6.6	6.3
Q3	5.2	5.2	3.4	3.5	1.7	1.5	1.6	1.5	6.4	6.2
Q4	5.5	5.1	3.6	3.5	1.5	1.2	1.6	1.4	6.2	6.0
2015:Q1	5.4	5.2	3.4	3.3	1.5	1.4	1.7	1.6	6.0	5.8
Q2	5.1	4.7	3.2	2.9	1.5	1.5	1.7	1.7	5.9	5.7
Q3	5.0	4.6	3.2	3.0	1.5	1.4	1.7	1.5	5.7	5.5
Q4	4.9	4.5	3.2	2.9	1.5	1.3	1.6	1.5	5.6	5.4
<i>Two-quarter²</i>										
2013:Q2	3.0	3.0	1.8	1.8	.5	.5	1.0	1.0	-3	-3
Q4	5.2	5.2	3.4	3.4	1.5	1.5	1.3	1.3	-5	-5
2014:Q2	3.7	2.9	2.0	1.3	1.5	1.7	1.4	1.5	-4	-7
Q4	5.3	5.2	3.5	3.5	1.6	1.4	1.6	1.4	-4	-3
2015:Q2	5.2	4.9	3.3	3.1	1.5	1.4	1.7	1.7	-3	-3
Q4	5.0	4.6	3.2	3.0	1.5	1.3	1.7	1.5	-3	-3
<i>Four-quarter³</i>										
2012:Q4	3.8	3.8	2.0	2.0	1.7	1.7	1.7	1.7	-9	-9
2013:Q4	4.1	4.1	2.6	2.6	1.0	1.0	1.2	1.2	-8	-8
2014:Q4	4.5	4.0	2.8	2.4	1.6	1.5	1.5	1.5	-8	-1.0
2015:Q4	5.1	4.8	3.2	3.0	1.5	1.4	1.7	1.6	-6	-6
2016:Q4	5.0	5.0	3.1	3.2	1.6	1.5	1.8	1.7	-5	-4
<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	3.4	3.4	1.9	1.9	1.1	1.1	1.2	1.2	7.4	7.4
2014	4.3	3.8	2.6	2.2	1.4	1.4	1.4	1.4	6.5	6.3
2015	5.2	5.0	3.4	3.3	1.6	1.4	1.7	1.6	5.8	5.6
2016	5.0	4.9	3.1	3.1	1.6	1.5	1.8	1.7	5.3	5.1

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 ¹	2014 ¹	2015 ¹	2016 ¹
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Real GDP <i>Previous Tealbook</i>	2.5 2.5	4.1 4.1	2.6 2.6	-1.5 .7	4.2 3.5	3.5 3.4	3.5 3.6	3.3 3.4	2.9 3.2	3.0 3.2	2.9 3.2	2.6 2.6	2.4 2.8	3.0 3.2	3.2 3.1
Final sales <i>Previous Tealbook</i>	2.1 2.1	2.5 2.5	2.7 2.7	.1 .9	3.4 3.7	3.4 3.7	3.3 3.5	3.4 3.8	3.4 3.5	3.2 3.4	3.2 3.2	1.8 1.8	2.5 2.9	3.3 3.5	3.2 3.2
Priv. dom. final purch. <i>Previous Tealbook</i>	2.6 2.6	2.7 2.7	3.2 3.2	2.2 2.3	3.9 4.0	4.0 4.7	4.3 4.7	4.3 4.8	4.1 4.5	4.0 4.2	3.9 4.0	2.5 2.5	3.6 3.9	4.1 4.4	3.6 3.6
Personal cons. expend. <i>Previous Tealbook</i>	1.8 1.8	2.0 2.0	3.3 3.3	3.1 2.5	3.0 3.8	3.7 4.0	4.1 4.1	3.8 4.2	3.5 3.8	3.3 3.6	3.2 3.4	2.3 2.3	3.5 3.6	3.5 3.7	2.9 2.9
Durables	6.2	7.9	2.8	1.4	12.5	10.3	11.3	9.1	9.0	8.3	8.0	5.6	8.8	8.6	6.3
Nondurables	1.6	2.9	2.9	.4	2.8	3.3	3.1	3.1	2.7	2.6	2.5	2.6	2.4	2.7	2.3
Services	1.2	.7	3.5	4.3	1.6	2.8	3.3	3.2	2.9	2.8	2.6	1.7	3.0	2.9	2.5
Residential investment <i>Previous Tealbook</i>	14.2 14.2	10.3 10.3	-7.9 -7.9	-4.8 -2.1	4.3 6.3	8.3 16.9	9.3 14.7	12.7 16.5	14.7 15.6	15.2 14.1	15.7 12.0	6.9 6.9	4.1 8.7	14.6 14.5	13.3 12.0
Nonres. priv. fixed invest. <i>Previous Tealbook</i>	4.7 4.7	4.8 4.8	5.7 5.7	-.8 2.2	8.8 4.7	4.6 5.2	3.9 5.3	4.8 5.0	4.7 5.0	4.7 5.0	4.5 4.9	2.6 2.6	4.1 4.3	4.7 5.0	4.6 4.7
Equipment & intangibles <i>Previous Tealbook</i>	1.3 1.3	2.4 2.4	8.0 8.0	1.2 1.5	10.1 3.5	3.9 5.1	2.8 5.2	5.5 5.6	5.5 5.8	5.4 5.7	5.2 5.6	3.5 3.5	4.4 3.8	5.4 5.7	5.4 5.6
Nonres. structures <i>Previous Tealbook</i>	17.6 17.6	13.4 13.4	-1.8 -1.8	-7.7 4.5	4.4 8.5	7.1 5.4	8.0 5.4	2.2 2.9	2.2 2.6	2.3 2.5	2.3 2.5	-.7 -.7	2.8 6.0	2.2 2.6	2.1 2.0
Net exports ² <i>Previous Tealbook</i> ²	-424 -424	-420 -420	-383 -383	-441 -421	-436 -408	-433 -414	-440 -427	-445 -433	-445 -437	-449 -441	-452 -445	-412 -412	-437 -418	-448 -439	-452 -446
Exports	8.0	3.9	9.5	-8.8	6.2	4.3	4.8	4.9	5.1	5.3	4.8	4.9	1.4	5.1	5.6
Imports	6.9	2.4	1.5	1.9	4.1	3.1	5.1	4.9	4.2	5.1	4.5	2.8	3.5	4.7	4.5
Gov't. cons. & invest. <i>Previous Tealbook</i>	-.4 -.4	.4 .4	-5.2 -5.2	-.7 .2	-.3 -.3	-.4 -.7	-.5 -.5	-.6 -.9	-.8 -.8	-.7 -.8	-.2 -.2	-.2 -.2	-.5 -.3	-.6 -.7	.6 .5
Federal	-1.6	-1.5	-12.8	.7	-3.0	-2.7	-3.2	-3.4	-4.0	-4.0	-2.8	-6.2	-2.1	-3.6	-1.2
Defense	-.6	-.5	-14.4	-2.4	-4.8	-4.5	-4.0	-3.6	-4.7	-4.3	-3.0	-6.9	-4.0	-3.9	-2.0
Nondefense	-3.1	-3.1	-10.0	5.9	-.1	-.2	-2.0	-3.1	-3.0	-3.5	-2.5	-5.0	1.0	-3.0	.0
State & local	.4	1.7	.0	-1.7	1.4	1.1	1.2	1.3	1.3	1.3	1.4	.2	.5	1.3	1.7
Change in priv. inventories ² <i>Previous Tealbook</i> ²	57 57	116 116	112 112	45 105	80 102	87 92	96 96	96 84	81 72	75 67	66 66	82 82	77 99	80 72	66 57
Nonfarm ²	33	89	89	29	65	77	88	94	78	73	64	58	65	77	64
Farm ²	19	23	20	16	15	11	8	2	2	2	2	20	12	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	2.6 2.6	2.4 2.8	3.0 3.2	3.2 3.1
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	1.8 1.8	2.5 2.9	3.3 3.5	3.2 3.2
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	2.5 2.5	3.6 3.9	4.1 4.4	3.6 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	2.3 2.3	3.5 3.6	3.5 3.7	2.9 2.9
Durables	4.1	-12.9	2.5	9.3	5.7	7.8	5.6	8.8	8.6	6.3
Nondurables	.1	-2.7	.2	3.3	.7	1.6	2.6	2.4	2.7	2.3
Services	1.5	.2	-6	2.1	1.9	1.3	1.7	3.0	2.9	2.5
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	6.9 6.9	4.1 8.7	14.6 14.5	13.3 12.0
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	2.6 2.6	4.1 4.3	4.7 5.0	4.6 4.7
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	3.5 3.5	4.4 3.8	5.4 5.7	5.4 5.6
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	-7 -7	2.8 6.0	2.2 2.6	2.1 2.0
Net exports ¹ <i>Previous Tealbook</i> ¹	-704 -704	-547 -547	-392 -392	-463 -463	-446 -446	-431 -431	-412 -412	-437 -418	-448 -439	-452 -446
Exports	9.8	-2.9	.4	9.8	4.6	2.4	4.9	1.4	5.1	5.6
Imports	.7	-5.9	-6.2	11.7	3.5	.1	2.8	3.5	4.7	4.5
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	-2.4 -2.4	-.5 -.3	-.6 -.7	.6 .5
Federal	2.7	8.4	3.9	3.2	-3.9	-2.3	-6.2	-2.1	-3.6	-1.2
Defense	2.5	9.4	3.6	2.0	-4.2	-5.0	-6.9	-4.0	-3.9	-2.0
Nondefense	2.9	6.5	4.6	5.5	-3.3	2.6	-5.0	1.0	-3.0	.0
State & local	1.2	.2	1.3	-4.0	-2.8	-.3	.2	.5	1.3	1.7
Change in priv. inventories ¹ <i>Previous Tealbook</i> ¹	36 36	-34 -34	-148 -148	58 58	34 34	58 58	82 82	77 99	80 72	66 57
Nonfarm ¹	37	-35	-146	66	40	69	58	65	77	64
Farm ¹	-1	1	-2	-7	-4	-7	20	12	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 ¹	2014 ¹	2015 ¹	2016 ¹
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Real GDP <i>Previous Tealbook</i>	2.5 2.5	4.1 4.1	2.6 2.6	-1.5 .7	4.2 3.5	3.5 3.4	3.5 3.6	3.3 3.4	2.9 3.2	3.0 3.2	2.9 3.2	2.6 2.6	2.4 2.8	3.0 3.2	3.2 3.1
Final sales <i>Previous Tealbook</i>	2.1 2.1	2.5 2.5	2.6 2.6	.1 .9	3.4 3.6	3.4 3.6	3.3 3.5	3.4 3.7	3.3 3.5	3.1 3.3	3.2 3.2	1.8 1.8	2.5 2.9	3.3 3.4	3.2 3.2
Priv. dom. final purch. <i>Previous Tealbook</i>	2.2 2.2	2.3 2.3	2.7 2.7	1.8 1.9	3.3 3.3	3.4 3.9	3.6 3.9	3.6 4.0	3.5 3.8	3.4 3.6	3.3 3.4	2.1 2.1	3.0 3.3	3.4 3.7	3.1 3.1
Personal cons. expend. <i>Previous Tealbook</i>	1.2 1.2	1.4 1.4	2.2 2.2	2.1 1.7	2.1 2.6	2.6 2.8	2.8 2.8	2.6 2.9	2.4 2.6	2.3 2.5	2.2 2.3	1.6 1.6	2.4 2.5	2.4 2.6	2.0 2.0
Durables	.5	.6	.2	.1	.9	.8	.8	.7	.7	.6	.6	.4	.6	.7	.5
Nondurables	.3	.5	.5	.1	.4	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4
Services	.5	.3	1.6	1.9	.8	1.3	1.5	1.5	1.3	1.3	1.2	.8	1.4	1.3	1.2
Residential investment <i>Previous Tealbook</i>	.4 .4	.3 .3	-.3 -.3	-.2 -.1	.1 .2	.3 .5	.3 .5	.4 .5	.5 .5	.5 .5	.5 .4	.2 .2	.1 .3	.5 .5	.5 .5
Nonres. priv. fixed invest. <i>Previous Tealbook</i>	.6 .6	.6 .6	.7 .7	-.1 .3	1.1 .6	.6 .6	.5 .6	.6 .6	.6 .6	.6 .6	.6 .6	.3 .3	.5 .5	.6 .6	.6 .6
Equipment & intangibles <i>Previous Tealbook</i>	.1 .1	.2 .2	.7 .7	.1 .1	.9 .3	.4 .5	.3 .5	.5 .5	.5 .5	.5 .5	.5 .5	.3 .3	.4 .4	.5 .5	.5 .5
Nonres. structures <i>Previous Tealbook</i>	.4 .4	.4 .4	-.1 -.1	-.2 .1	.1 .2	.2 .2	.2 .2	.1 .1	.1 .1	.1 .1	.1 .1	.0 .0	.1 .2	.1 .1	.1 .1
Net exports <i>Previous Tealbook</i>	-.1 -1.1	.1 .5	1.0 1.2	-1.5 -1.2	.1 .8	.1 .6	-.2 -.8	-.1 .7	.0 .7	-.1 -.8	-.1 -.7	.2 .7	-.4 .2	-.1 .7	.0 .8
Exports	-1.1	.5	1.2	-1.2	.8	.6	.6	.7	.7	.7	.6	.7	.2	.7	.8
Imports		-.4	-.2	-.3	-.7	-.5	-.8	-.8	-.7	-.8	-.7	-.5	-.6	-.8	-.7
Gov't. cons. & invest. <i>Previous Tealbook</i>	-.1 -1.1	.1 .1	-1.0 -1.0	-.1 .0	-.1 .0	-.1 -.1	-.1 -.1	-.1 -.2	-.1 -.1	-.1 -.1	.0 .0	-.5 -.5	-.1 -.1	-.1 -.1	.1 .1
Federal	-1.1	.1	-1.0	.0	-.1	-.1	-.1	-.2	-.1	-.1	.0	-.5	-.1	-.1	.1
Defense	-1.1	-.1	-1.0	.1	-.2	-.2	-.2	-.2	-.3	-.3	-.2	-.5	-.1	-.2	-.1
Nondefense	.0	.0	-.7	-.1	-.2	-.2	-.2	-.1	-.2	-.2	-.1	-.3	-.2	-.2	-.1
State & local	-.1 .1	-.1 .2	-.3 .0	-.2 .2	.0 .2	.0 .1	-.1 .1	-.1 .1	-.1 .1	-.1 .1	-.1 .1	-.1 .0	.0 .1	-.1 .1	.0 .2
Change in priv. inventories <i>Previous Tealbook</i>	.4 .4	1.7 1.7	.0 .0	-1.6 -.3	.9 -.2	.2 -.2	.2 .1	-.1 -.3	-.4 -.3	-.1 -.1	-.2 .0	.7 .7	-.1 -.1	-.2 -.2	.0 -.1
Nonfarm	.3	1.6	.0	-1.6	1.0	.3	.3	.2	-.4	-.1	-.2	.5	.0	-.2	.0
Farm	.1	.1	-.1	-.1	-.1	-.1	-.1	-.2	.0	.0	.0	.3	-.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 ¹	2014 ¹	2015 ¹	2016 ¹	
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
GDP chain-wt. price index <i>Previous Tealbook</i>	.6	2.0	1.6	1.3	1.7	1.6	1.5	1.8	1.7	1.6	1.5	1.4	1.6	1.7	1.7	1.8
PCE chain-wt. price index <i>Previous Tealbook</i>	.6	2.0	1.6	1.7	1.6	1.8	1.8	2.0	1.8	1.8	1.7	1.4	1.7	1.8		
Energy <i>Previous Tealbook</i>	-1	1.9	1.1	1.4	2.0	1.5	1.2	1.4	1.5	1.4	1.3	1.0	1.5	1.4	1.5	1.5
Food <i>Previous Tealbook</i>	-1	1.9	1.1	1.5	1.6	1.7	1.5	1.5	1.5	1.5	1.5	1.0	1.6	1.5	1.6	1.6
Ex. food & energy <i>Previous Tealbook</i>	-11.9	11.8	-1.0	4.0	2.3	1.4	-1.8	-1.9	-2.0	-1.4	-1.3	-1.5	1.4	-1.6	-8	-8
Ex. food & energy, market based <i>Previous Tealbook</i>	-11.9	11.8	-1.0	4.1	1.6	2.8	.5	-9	-1.4	-1.3	-1.3	-1.5	2.3	-1.2	-9	-9
CPI <i>Previous Tealbook</i>	.5	1.2	.1	1.4	3.4	1.9	1.2	1.0	1.1	1.1	1.2	.8	2.0	1.1	1.3	1.3
Ex. food & energy <i>Previous Tealbook</i>	.5	1.2	.1	1.4	2.6	1.6	1.2	1.1	1.3	1.3	1.4	.8	1.7	1.3	1.4	1.4
Ex. food & energy <i>Previous Tealbook</i>	.6	1.4	1.3	1.2	1.8	1.5	1.4	1.6	1.7	1.5	1.5	1.2	1.5	1.6	1.7	1.7
Ex. food & energy, market based <i>Previous Tealbook</i>	.6	1.4	1.3	1.3	1.5	1.6	1.6	1.7	1.7	1.7	1.6	1.2	1.5	1.7	1.8	1.8
CPI <i>Previous Tealbook</i>	.5	1.4	1.0	1.0	1.8	1.5	1.4	1.6	1.7	1.5	1.5	1.2	1.4	1.6	1.7	1.7
Ex. food & energy <i>Previous Tealbook</i>	.5	1.4	1.0	1.1	1.5	1.6	1.5	1.8	1.8	1.7	1.6	1.2	1.4	1.7	1.8	1.8
ECI, hourly compensation ² <i>Previous Tealbook</i> ²	.4	2.2	1.1	1.9	2.5	2.0	1.5	1.5	1.5	1.6	1.5	1.2	2.0	1.6	1.7	1.7
Nonfarm business sector Output per hour <i>Previous Tealbook</i>	.4	2.2	1.1	1.9	2.1	2.0	1.8	1.7	1.7	1.7	1.6	1.2	2.0	1.7	1.7	1.7
Compensation per hour <i>Previous Tealbook</i>	1.4	1.8	1.6	1.6	2.4	2.0	1.9	1.9	2.0	2.0	1.9	1.7	2.0	1.9	1.9	1.9
Unit labor costs <i>Previous Tealbook</i>	1.4	1.8	1.6	1.6	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.7	1.9	2.0	2.0	2.0
Core goods imports chain-wt. price index ³ <i>Previous Tealbook</i> ³	2.1	2.0	2.0	1.0	2.3	2.5	2.5	2.6	2.6	2.6	2.7	2.0	2.1	2.6	3.1	3.1
	2.4	1.7	2.0	2.4	2.5	2.5	2.6	2.8	2.9	2.9	2.9	2.0	2.5	2.9	3.2	3.2
Nonfarm business sector Output per hour <i>Previous Tealbook</i>	1.8	3.5	2.3	-3.9	1.9	2.3	1.8	1.5	1.4	1.7	1.5	1.4	.5	1.5	1.8	1.8
Compensation per hour <i>Previous Tealbook</i>	1.8	3.5	2.2	-1.0	1.1	2.0	1.7	1.6	1.7	1.6	1.7	1.4	.9	1.6	1.9	1.9
Unit labor costs <i>Previous Tealbook</i>	3.8	1.3	1.7	2.4	.8	2.5	2.7	2.8	2.9	2.9	3.0	.3	2.1	2.9	3.3	3.3
Core goods imports chain-wt. price index ³ <i>Previous Tealbook</i> ³	3.8	1.3	1.7	2.8	1.3	2.9	3.1	3.2	3.2	3.2	3.3	.3	2.5	3.2	3.4	3.4
Unit labor costs <i>Previous Tealbook</i>	2.0	-2.1	-6	6.6	-1.1	.2	.9	1.3	1.4	1.2	1.5	-1.1	1.6	1.4	1.5	1.5
	2.0	-2.1	-5	3.9	.2	.9	1.4	1.6	1.5	1.5	1.6	-1.0	1.6	1.6	1.5	1.5
Core goods imports chain-wt. price index ³ <i>Previous Tealbook</i> ³	-2.4	-3.2	.6	2.6	1.0	1.1	1.0	1.2	1.2	1.3	1.3	-1.1	1.4	1.2	1.3	1.3
	-2.4	-3.2	.6	1.3	.9	1.7	1.3	1.3	1.3	1.3	1.3	-1.1	1.3	1.3	1.3	1.3

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

2. Private-industry workers.

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

Greensheets

Changes in Prices and Costs

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

Item	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	1.4 1.4	1.6 1.7	1.7 1.8	1.7 1.8
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 1.0	1.5 1.6	1.4 1.5	1.5 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	-1.5 -1.5	1.4 2.3	-1.6 -1.2	-8 -9
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	.8 .8	2.0 1.7	1.1 1.3	1.3 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 1.7	1.7 1.8
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	1.4 1.4	1.6 1.7	1.7 1.8
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	1.2 1.2	2.0 2.0	1.6 1.7	1.7 1.7
Ex. food & energy <i>Previous Tealbook</i>	2.3 2.3	2.0 2.0	1.8 1.8	.6 .6	2.2 2.2	1.9 1.9	1.7 1.7	2.0 1.9	1.9 2.0	1.9 2.0
ECL, hourly compensation ¹ <i>Previous Tealbook</i> ¹	3.0 3.0	2.4 2.4	1.2 1.2	2.1 2.1	2.2 2.2	1.8 1.8	2.0 2.0	2.1 2.5	2.6 2.9	3.1 3.2
Nonfarm business sector Output per hour <i>Previous Tealbook</i>	2.4 2.4	-.5 -.5	5.5 5.5	1.9 1.9	.4 .4	.8 .8	1.4 1.4	.5 .9	1.5 1.6	1.8 1.9
Compensation per hour <i>Previous Tealbook</i>	3.9 3.9	3.0 3.0	1.2 1.2	1.6 1.6	1.0 1.0	5.3 5.3	.3 .3	2.1 2.5	2.9 3.2	3.3 3.4
Unit labor costs <i>Previous Tealbook</i>	1.5 1.5	3.5 3.5	-4.0 -4.0	-.3 -.3	.5 .5	4.4 4.4	-1.1 -1.0	1.6 1.6	1.4 1.6	1.5 1.5
Core goods imports chain-wt. price index ² <i>Previous Tealbook</i> ²	3.0 3.0	3.9 3.9	-1.9 -1.9	2.3 2.3	4.2 4.2	.1 .1	-1.1 -1.1	1.4 1.3	1.2 1.3	1.3 1.3

1. Private-industry workers.

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

Other Macroeconomic Indicators

Item	2013				2014				2015				2013 ¹	2014 ¹	2015 ¹	2016 ¹
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
<i>Employment and production</i>																
Nonfarm payroll employment ²	.6	.5	.6	.5	.7	.7	.7	.6	.6	.6	.6		2.4	2.6	2.5	2.6
Unemployment rate ³	7.5	7.3	7.0	6.7	6.3	6.2	6.0	5.8	5.7	5.5	5.4		7.0	6.0	5.4	5.0
<i>Previous Tealbook³</i>	7.5	7.3	7.0	6.7	6.6	6.4	6.2	6.0	5.9	5.7	5.6		7.0	6.2	5.6	5.1
Natural rate of unemployment ³	5.6	5.5	5.4	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2		5.4	5.2	5.2	5.2
<i>Previous Tealbook³</i>	5.6	5.5	5.5	5.4	5.4	5.4	5.3	5.3	5.2	5.2	5.2		5.5	5.3	5.2	5.2
GDP gap ⁴	-3.7	-3.1	-2.8	-3.5	-2.8	-2.2	-1.7	-1.3	-1.0	-0.7	-0.4		-2.8	-1.7	-0.4	.8
<i>Previous Tealbook⁴</i>	-3.8	-3.2	-2.9	-3.2	-2.8	-2.4	-2.0	-1.6	-1.3	-1.0	-0.7		-2.9	-2.0	-0.7	.4
Industrial production ⁵	1.9	2.5	4.9	4.5	3.6	4.8	3.6	5.0	4.3	3.4	2.5		3.3	4.1	3.8	3.4
<i>Previous Tealbook⁵</i>	1.9	2.5	4.8	4.4	4.4	4.4	3.5	4.9	4.4	3.5	2.6		3.3	4.2	3.8	3.5
Manufacturing industr. prod. ⁵	1.3	1.9	4.2	2.1	4.2	3.6	3.0	3.6	3.4	3.5	3.5		2.9	3.2	3.5	3.4
<i>Previous Tealbook⁵</i>	1.3	1.9	4.2	1.7	5.1	3.3	3.5	3.8	3.7	3.5	3.5		2.9	3.4	3.6	3.6
Capacity utilization rate - mfg. ³	75.9	76.0	76.4	76.3	76.6	76.8	76.8	77.0	77.2	77.4	77.5		76.4	76.8	77.5	78.3
<i>Previous Tealbook³</i>	75.9	76.0	76.4	76.2	76.7	76.8	76.9	77.1	77.3	77.4	77.6		76.4	76.9	77.6	78.1
Housing starts ⁶	.9	.9	1.0	.9	1.0	1.1	1.1	1.2	1.2	1.3	1.4		.9	1.0	1.3	1.5
Light motor vehicle sales ⁶	15.5	15.7	15.6	15.6	16.3	16.3	16.4	16.5	16.7	16.8	16.8		15.5	16.1	16.7	16.9
<i>Income and saving</i>																
Nominal GDP ⁵	3.1	6.2	4.2	-2	6.0	5.2	5.1	5.2	4.7	4.6	4.5		4.1	4.0	4.8	5.0
Real disposable pers. income ⁵	4.1	3.0	.7	1.7	3.9	2.4	3.2	4.1	2.6	2.8	3.2		-2	2.8	3.2	3.3
<i>Previous Tealbook⁵</i>	4.1	3.0	.8	2.7	4.0	2.7	2.9	4.0	2.8	3.2	3.3		-1	3.0	3.3	3.2
Personal saving rate ³	4.7	4.9	4.3	4.0	4.2	3.9	3.7	3.8	3.5	3.4	3.4		4.3	3.7	3.4	3.8
<i>Previous Tealbook³</i>	4.7	4.9	4.3	4.4	4.4	4.1	3.8	3.8	3.5	3.5	3.4		4.3	3.8	3.4	3.7
Corporate profits ⁷	13.9	7.7	9.2	-33.8	29.8	13.8	9.4	1.7	4.9	5.2	2.3		6.2	1.7	3.5	5.0
Profit share of GNP ³	12.3	12.4	12.5	11.3	11.9	12.1	12.3	12.2	12.2	12.2	12.2		12.5	12.3	12.2	12.2
Net federal saving ⁸	-653	-850	-653	-729	-680	-672	-659	-661	-637	-627	-622		-752	-685	-637	-666
Net state & local saving ⁸	-198	-226	-230	-237	-227	-207	-198	-193	-176	-173	-166		-221	-217	-177	-151
Gross national saving rate ³	17.7	17.8	18.1	16.8	17.6	17.7	17.8	17.8	17.9	18.0	18.0		18.1	17.8	18.0	18.5
Net national saving rate ³	2.5	2.7	3.1	1.8	3.0	3.1	3.3	3.3	3.4	3.4	3.5		3.1	3.3	3.5	4.0

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.

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 ¹	1.2	-2.8	-5.6	.8	2.0	2.2	2.4	2.6	2.5	2.6
Unemployment rate ²	4.8	6.9	9.9	9.5	8.7	7.8	7.0	6.0	5.4	5.0
<i>Previous Tealbook²</i>	4.8	6.9	9.9	9.5	8.7	7.8	7.0	6.2	5.6	5.1
Natural rate of unemployment ²	5.3	5.6	6.2	6.2	6.0	5.8	5.4	5.2	5.2	5.2
<i>Previous Tealbook²</i>	5.3	5.6	6.2	6.2	6.0	5.8	5.5	5.3	5.2	5.2
GDP gap ³	1.0	-4.0	-5.8	-4.8	-4.3	-3.9	-2.8	-1.7	-4	.8
<i>Previous Tealbook³</i>	1.0	-4.0	-5.8	-4.8	-4.3	-3.9	-2.9	-2.0	-7	.4
Industrial production ⁴	2.6	-8.9	-5.5	6.2	3.2	3.2	3.3	4.1	3.8	3.4
<i>Previous Tealbook⁴</i>	2.6	-8.9	-5.5	6.2	3.2	3.2	3.3	4.2	3.8	3.5
Manufacturing industr. prod. ⁴	2.8	-11.6	-6.1	6.4	3.1	3.5	2.9	3.2	3.5	3.4
<i>Previous Tealbook⁴</i>	2.8	-11.6	-6.1	6.4	3.1	3.5	2.9	3.4	3.6	3.6
Capacity utilization rate - mfg. ²	78.5	70.0	67.1	72.7	74.6	75.5	76.4	76.8	77.5	78.3
<i>Previous Tealbook²</i>	78.5	70.0	67.1	72.7	74.6	75.5	76.4	76.9	77.6	78.1
Housing starts ⁵	1.4	.9	.6	.6	.6	.8	.9	1.0	1.3	1.5
Light motor vehicle sales ⁵	16.1	13.1	10.4	11.5	12.7	14.4	15.5	16.1	16.7	16.9
<i>Income and saving</i>										
Nominal GDP ⁴	4.4	-1.0	.1	4.6	3.9	3.8	4.1	4.0	4.8	5.0
Real disposable pers. income ⁴	1.2	1.1	-6	2.5	1.4	3.6	-2	2.8	3.2	3.3
<i>Previous Tealbook⁴</i>	1.2	1.1	-6	2.5	1.4	3.6	-1	3.0	3.3	3.2
Personal saving rate ²	2.9	6.1	5.7	5.5	5.0	6.6	4.3	3.7	3.4	3.8
<i>Previous Tealbook²</i>	2.9	6.1	5.7	5.5	5.0	6.6	4.3	3.8	3.4	3.7
Corporate profits ⁶	-9.0	-30.8	54.5	17.0	8.4	2.7	6.2	1.7	3.5	5.0
Profit share of GNP ²	9.9	6.9	10.7	11.9	12.4	12.3	12.5	12.3	12.2	12.2
Net federal saving ⁷	-267	-635	-1,250	-1,330	-1,248	-1,110	-752	-685	-637	-666
Net state & local saving ⁷	-73	-165	-272	-237	-213	-253	-221	-217	-177	-151
Gross national saving rate ²	16.3	15.0	14.7	15.2	15.8	16.9	18.1	17.8	18.0	18.5
Net national saving rate ²	1.0	-1.6	-1.6	-.4	.5	1.7	3.1	3.3	3.5	4.0

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 ^a	2014	2015	2016	Q1 ^a	Q2 ^a	Q3 ^a	Q4 ^a	Q1 ^a	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Unified budget																
Receipts ¹	2,775	3,007	3,243	3,451	581	891	687	665	656	930	756	724	670	1,028	822	763
Outlays ¹	3,455	3,494	3,683	3,916	888	800	857	837	897	891	869	938	941	917	886	967
Surplus/deficit ¹	-680	-487	-439	-464	-307	91	-170	-173	-241	39	-112	-214	-272	111	-65	-203
<i>Previous Tealbook</i>	-680	-451	-422	-451	-307	91	-170	-173	-241	70	-108	-198	-273	113	-65	-192
On-budget	-719	-522	-463	-479	-303	36	-143	-183	-238	-18	-83	-239	-254	61	-32	-224
Off-budget	39	35	24	14	-4	55	-28	10	-3	57	-30	25	-18	50	-33	21
Means of financing:																
Borrowing	702	776	476	584	336	-17	69	371	262	-43	186	160	302	-81	95	233
Cash decrease	-3	-65	84	0	14	-56	46	-74	20	12	-23	84	0	0	0	0
Other ²	-20	-224	-120	-120	-43	-18	55	-124	-42	-8	-50	-30	-30	-30	-30	-30
Cash operating balance, end of period	88	154	70	70	79	135	88	162	142	130	154	70	70	70	70	70
NIPA federal sector																
Receipts	2,938	3,159	3,360	3,547	2,900	3,167	2,976	3,119	3,092	3,191	3,233	3,278	3,344	3,386	3,431	3,472
Expenditures	3,797	3,842	4,006	4,201	3,753	3,820	3,826	3,772	3,821	3,871	3,905	3,937	4,004	4,023	4,058	4,094
Consumption expenditures	981	956	950	948	982	976	972	953	959	957	956	952	955	949	943	940
Defense	620	600	594	593	620	616	615	598	602	601	598	595	597	594	591	589
Nondefense	361	357	356	355	363	360	358	356	357	356	358	357	358	355	353	351
Other spending	2,815	2,886	3,056	3,253	2,771	2,844	2,853	2,819	2,862	2,914	2,949	2,986	3,049	3,074	3,115	3,154
Current account surplus	-859	-683	-646	-654	-853	-653	-850	-653	-729	-680	-672	-659	-661	-637	-627	-622
Gross investment	277	262	251	245	273	277	279	271	262	259	256	254	252	249	247	245
Gross saving less gross investment ³	-870	-674	-619	-616	-860	-663	-861	-654	-720	-667	-654	-639	-636	-608	-595	-586
Fiscal indicators⁴																
High-employment (HEB) surplus/deficit	-655.0	-502.0	-540.0	-621.5	-630.3	-442.6	-662.7	-476.9	-522.7	-496.1	-512.4	-520.6	-546.6	-541.7	-551.2	-564.0
Change in HEB, percent of potential GDP	-1.8	-1.0	.1	.3	-1.5	-1.1	1.2	-1.1	.2	-2	.1	.0	.1	-1	.0	.0
Fiscal impetus (FI), percent of GDP	-1.2	-6	-3	-1	-1.9	-8	-5	-1.6	-7	-7	-4	-5	-6	-2	-2	-2
<i>Previous Tealbook</i>	-1.2	-5	-3	-1	-1.9	-8	-5	-1.6	-5	-7	-4	-4	-7	-2	-2	-2

1. Budget receipts, outlays, and surplus/deficit include corresponding social security (OASDI) surplus and the Postal Service surplus as 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				Projected-----			
	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Real GDP¹												
Total foreign	2.1	2.1	3.2	2.6	2.1	2.5	3.2	3.2	3.2	3.3	3.4	3.1
<i>Previous Tealbook</i>	2.0	2.4	3.0	2.8	2.3	2.7	3.2	3.2	3.2	3.3	3.3	3.1
Advanced foreign economies	1.9	2.0	2.1	2.0	2.0	1.7	2.2	2.2	2.2	2.2	2.4	1.8
Canada	3.0	1.9	3.0	2.7	1.2	3.1	2.7	2.6	2.6	2.6	2.6	2.6
Japan	5.3	2.9	1.3	.3	6.7	-4.5	2.0	1.9	1.5	1.2	2.7	-2.5
United Kingdom	1.4	3.1	3.4	2.7	3.3	2.9	2.9	3.0	2.7	2.7	2.6	2.4
Euro area	-.8	1.3	.5	1.0	.7	1.6	1.4	1.4	1.7	1.8	1.8	1.9
Germany	.0	2.9	1.3	1.5	3.3	1.2	1.9	1.9	2.0	2.0	2.2	2.2
Emerging market economies	2.4	2.3	4.3	3.3	2.2	3.3	4.1	4.2	4.3	4.3	4.3	4.4
Asia	3.6	5.0	5.9	5.9	3.6	4.5	5.5	5.5	5.5	5.5	5.4	5.4
Korea	2.5	4.1	4.4	3.6	3.8	3.0	4.3	4.3	4.2	4.2	4.2	4.2
China	6.5	7.2	8.8	8.0	5.5	6.2	7.5	7.5	7.3	7.3	7.2	7.2
Latin America	1.2	-.4	3.1	.8	.9	2.2	2.9	3.1	3.2	3.3	3.4	3.4
Mexico	1.0	-2.9	3.9	.5	1.1	2.5	3.3	3.5	3.5	3.6	3.6	3.7
Brazil	1.5	6.6	-1.2	1.8	.7	1.2	2.0	2.2	2.5	2.5	2.6	2.6
Consumer prices²												
Total foreign	2.3	1.9	2.7	2.4	2.0	2.7	2.6	2.5	2.5	2.5	2.5	3.0
<i>Previous Tealbook</i>	2.3	1.9	2.7	2.4	2.0	3.0	2.5	2.5	2.5	2.5	2.6	3.0
Advanced foreign economies	1.0	.5	2.0	.7	1.1	2.6	1.3	1.4	1.4	1.4	1.5	2.6
Canada	1.6	-.1	1.9	.5	2.8	2.3	1.7	1.7	1.7	1.7	1.8	1.8
Japan	.0	.8	3.0	1.9	.4	8.5	.7	.8	.9	1.0	1.1	6.5
United Kingdom	2.3	1.8	2.8	1.4	1.0	1.6	1.8	2.2	1.7	1.7	1.8	2.3
Euro area	.8	.7	1.6	.1	.2	.4	1.2	1.3	1.3	1.3	1.4	1.4
Germany	1.4	.8	2.4	.8	.1	.5	1.3	1.5	1.6	1.6	1.6	1.6
Emerging market economies	3.4	3.0	3.2	3.7	2.7	2.8	3.6	3.4	3.4	3.4	3.4	3.3
Asia	3.4	2.0	3.5	3.4	1.5	2.3	3.5	3.2	3.2	3.2	3.2	3.2
Korea	1.0	.4	1.7	1.1	1.3	2.6	2.9	3.1	3.2	3.2	3.2	3.1
China	3.2	2.1	3.4	3.0	.8	1.7	3.5	3.0	3.0	3.0	3.0	3.0
Latin America	3.5	5.4	2.6	4.5	5.7	3.9	3.9	3.8	3.8	3.8	3.8	3.8
Mexico	3.2	5.3	2.0	4.2	5.2	2.9	3.4	3.3	3.3	3.3	3.3	3.3
Brazil	7.0	5.8	4.6	6.0	6.9	7.9	6.1	5.6	5.4	5.4	5.4	5.4

¹ Foreign GDP aggregates calculated using shares of U.S. exports.

² 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	2014	2015	2016
	-----Projected-----								
Real GDP¹									
Total foreign	-7	.9	4.7	3.0	2.3	2.5	2.7	3.2	3.3
<i>Previous Tealbook</i>	-6	.9	4.7	3.0	2.3	2.5	2.8	3.2	3.3
Advanced foreign economies	-1.6	-1.5	3.0	1.5	.3	2.0	2.0	2.1	2.2
Canada	.1	-1.4	3.6	2.4	1.0	2.7	2.4	2.6	2.6
Japan	-4.8	-6	3.5	.3	-.3	2.4	1.4	.7	1.1
United Kingdom	-4.3	-2.5	1.8	1.1	.2	2.7	3.0	2.6	2.5
Euro area	-2.2	-2.3	2.3	.7	-1.0	.5	1.3	1.8	1.9
Germany	-1.8	-2.2	4.2	2.2	.3	1.4	2.1	2.1	2.3
Emerging market economies	.4	3.9	6.5	4.6	4.3	3.1	3.4	4.3	4.4
Asia	1.1	7.8	8.0	5.0	5.6	5.1	4.8	5.4	5.4
Korea	-1.6	4.9	6.1	3.0	2.1	3.6	3.9	4.2	4.1
China	7.7	11.3	9.7	8.7	7.8	7.6	6.7	7.2	7.1
Latin America	-.6	.0	4.7	4.1	3.2	1.2	2.3	3.3	3.5
Mexico	-1.3	-1.2	4.5	4.2	3.3	.6	2.6	3.6	3.7
Brazil	.9	5.3	5.4	1.4	1.8	2.2	1.5	2.5	2.7
Consumer prices²									
Total foreign	3.3	1.2	3.2	3.4	2.3	2.3	2.5	2.6	2.6
<i>Previous Tealbook</i>	3.3	1.2	3.2	3.4	2.3	2.3	2.5	2.6	2.6
Advanced foreign economies	2.0	.2	1.7	2.2	1.3	1.0	1.6	1.7	1.6
Canada	1.8	.8	2.2	2.7	.9	1.0	2.1	1.7	1.9
Japan	1.1	-2.0	-.3	-.3	-.2	1.4	2.6	2.3	1.3
United Kingdom	3.9	2.2	3.4	4.6	2.6	2.1	1.6	1.9	1.8
Euro area	2.3	.4	2.0	2.9	2.3	.8	.8	1.4	1.4
Germany	1.7	.3	1.6	2.6	2.0	1.3	.8	1.6	1.7
Emerging market economies	4.6	2.0	4.3	4.3	3.1	3.3	3.1	3.4	3.3
Asia	3.7	1.2	4.3	4.5	2.6	3.1	2.6	3.2	3.2
Korea	4.5	2.4	3.2	3.9	1.7	1.1	2.5	3.2	3.2
China	2.5	.6	4.7	4.6	2.1	2.9	2.3	3.0	3.0
Latin America	6.6	3.9	4.4	4.0	4.3	4.0	4.3	3.8	3.7
Mexico	6.2	4.0	4.3	3.5	4.1	3.7	3.7	3.3	3.3
Brazil	6.2	4.2	5.6	6.7	5.6	5.8	6.6	5.4	5.3

¹ Foreign GDP aggregates calculated using shares of U.S. exports.² 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>												
U.S. current account balance	-416.2	-404.4	-384.1	-318.6	-400.3	-401.9	-405.7	-407.8	-431.4	-404.4	-425.8	-437.4
<i>Previous Tealbook</i>	-420.2	-387.0	-385.5	-324.5	-368.5	-350.9	-385.7	-408.2	-438.9	-414.7	-440.9	-454.2
Current account as percent of GDP	-2.5	-2.4	-2.3	-1.9	-2.3	-2.3	-2.3	-2.3	-2.4	-2.2	-2.3	-2.3
<i>Previous Tealbook</i>	-2.5	-2.3	-2.3	-1.9	-2.1	-2.0	-2.2	-2.3	-2.4	-2.3	-2.4	-2.4
Net goods & services	-483.8	-487.2	-484.8	-449.8	-507.3	-503.8	-508.4	-514.7	-520.3	-503.4	-512.1	-519.7
Investment income, net	208.3	229.5	245.4	266.5	242.8	244.0	247.4	249.7	243.8	235.2	225.1	218.7
Direct, net	273.4	287.4	301.4	321.0	285.8	301.1	307.3	318.5	323.3	327.2	333.3	342.7
Portfolio, net	-65.1	-57.9	-56.0	-54.5	-42.9	-57.1	-60.0	-68.8	-79.5	-92.0	-108.2	-124.1
Other income and transfers, net	-140.7	-146.7	-144.7	-135.3	-135.9	-142.1	-144.7	-142.8	-154.9	-136.2	-138.8	-136.4

Annual Data

	-----Projected-----										
	2008	2009	2010	2011	2012	2013	2014	2015	2016		
<i>Billions of dollars</i>											
U.S. current account balance	-687.8	-381.8	-444.8	-449.5	-443.4	-380.8	-404.0	-424.7	-459.5		
<i>Previous Tealbook</i>	-681.3	-381.6	-449.5	-457.7	-440.4	-379.3	-378.3	-437.2	-476.0		
Current account as percent of GDP	-4.7	-2.6	-3.0	-2.9	-2.7	-2.3	-2.3	-2.3	-2.4		
<i>Previous Tealbook</i>	-4.6	-2.6	-3.0	-2.9	-2.7	-2.3	-2.2	-2.4	-2.5		
Net goods & services	-708.7	-383.8	-494.7	-548.6	-537.6	-476.4	-508.6	-513.8	-516.7		
Investment income, net	157.8	132.3	185.7	240.7	232.3	237.4	246.0	230.7	198.8		
Direct, net	284.3	257.7	288.0	310.6	293.5	295.8	303.2	331.6	359.8		
Portfolio, net	-126.5	-125.4	-102.3	-69.8	-61.2	-58.4	-57.2	-100.9	-161.0		
Other income and transfers, net	-136.9	-130.2	-135.8	-141.6	-138.0	-141.8	-141.4	-141.6	-141.6		

Class I FOMC – Restricted Controlled (FR)

Report to the FOMC on Economic Conditions and Monetary Policy



Book B Monetary Policy: Strategies and Alternatives

June 12, 2014

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	
	2014Q3	2014Q4	2014Q3	2014Q4
Taylor (1993) rule	1.84	2.12	1.84	2.12
<i>Previous Tealbook outlook</i>	1.72	2.05	1.72	2.05
Taylor (1999) rule	0.73	1.28	0.73	1.28
<i>Previous Tealbook outlook</i>	0.52	1.07	0.52	1.07
Inertial Taylor (1999) rule	0.22	0.37	0.22	0.37
<i>Previous Tealbook outlook</i>	0.18	0.32	0.18	0.32
Outcome-based rule	0.54	1.12	0.54	1.12
<i>Previous Tealbook outlook</i>	0.42	0.89	0.42	0.89
First-difference rule	0.77	1.30	0.77	1.30
<i>Previous Tealbook outlook</i>	0.69	1.23	0.69	1.23
Nominal income targeting rule	0.13	0.13	-0.49	-0.85
<i>Previous Tealbook outlook</i>	0.13	0.13	-0.52	-0.89

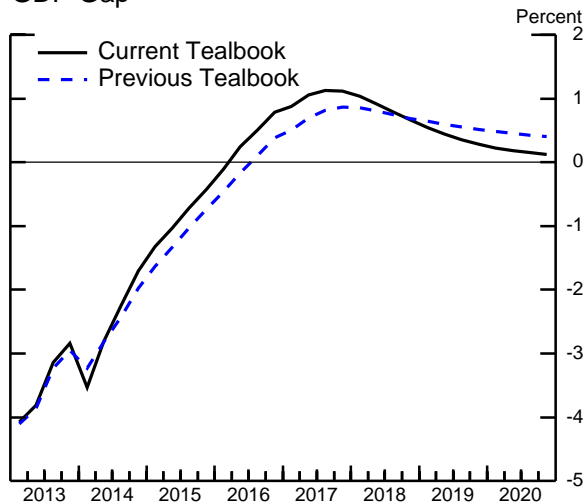
Memo: Equilibrium and Actual Real Federal Funds Rates

	Current Tealbook	<i>Previous Tealbook</i>
Tealbook-consistent FRB/US r^* estimate	-0.64	-0.87
Actual real federal funds rate	-1.01	-1.02

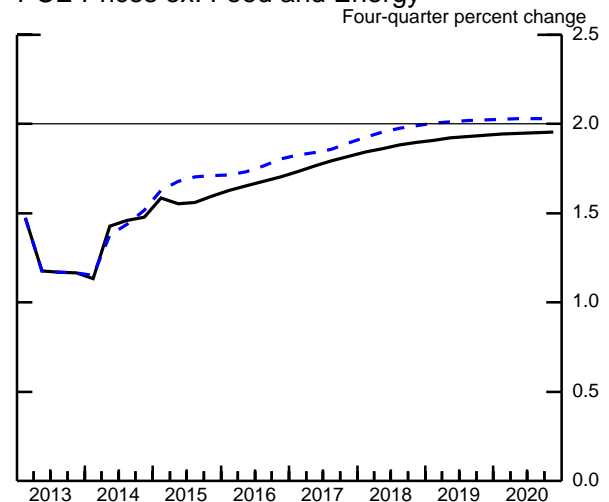
Note: The lines denoted "Previous Tealbook outlook" report rule prescriptions based on the previous Tealbook's staff outlook using the current rule specifications, which have intercept terms that have been adjusted, where applicable, to reflect the staff's downward revision to the long-run real federal funds rate. Rules that have the lagged policy rate as a right-hand-side variable jump off from the average value of the policy rate thus far in the current quarter.

Key Elements of the Staff Projection

GDP Gap



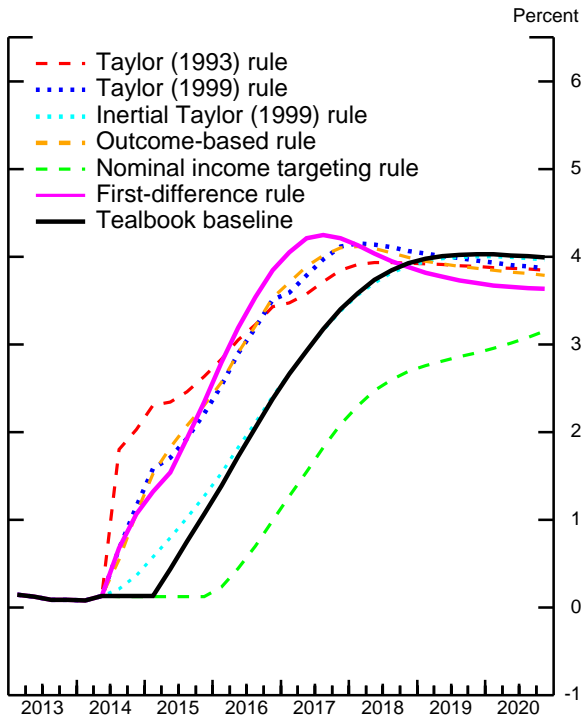
PCE Prices ex. Food and Energy



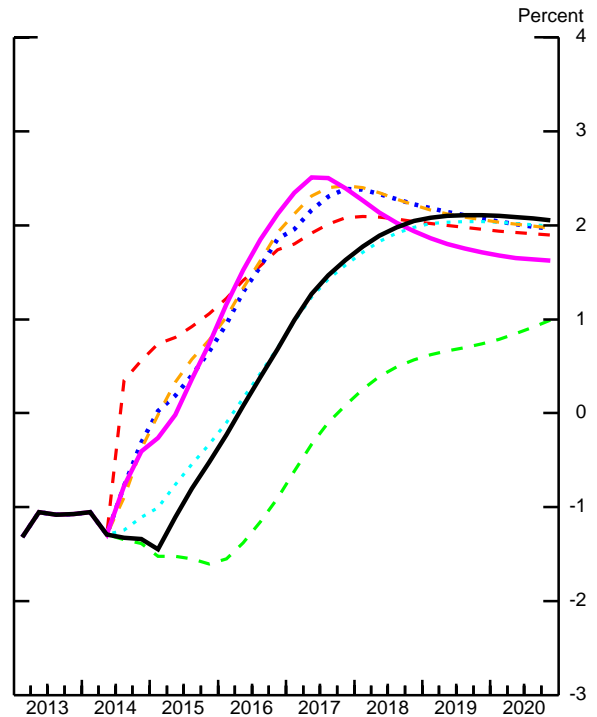
Policy Rule Simulations

Strategies

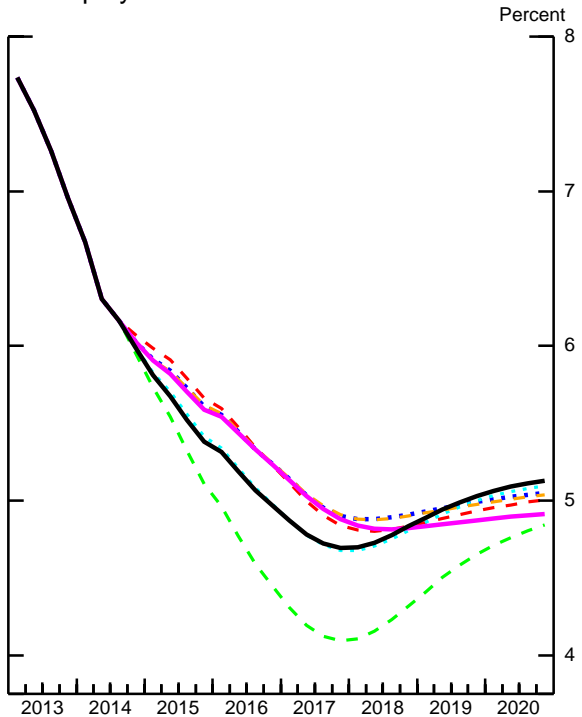
Effective Nominal Federal Funds Rate



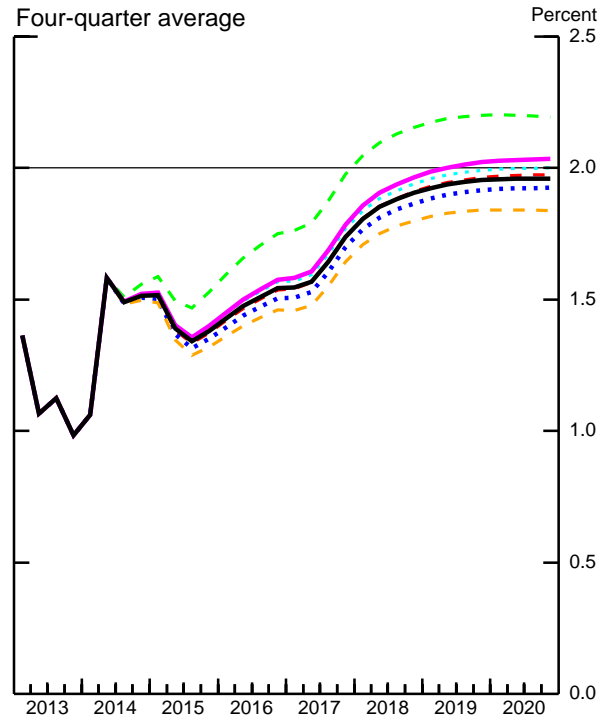
Real Federal Funds Rate



Unemployment Rate



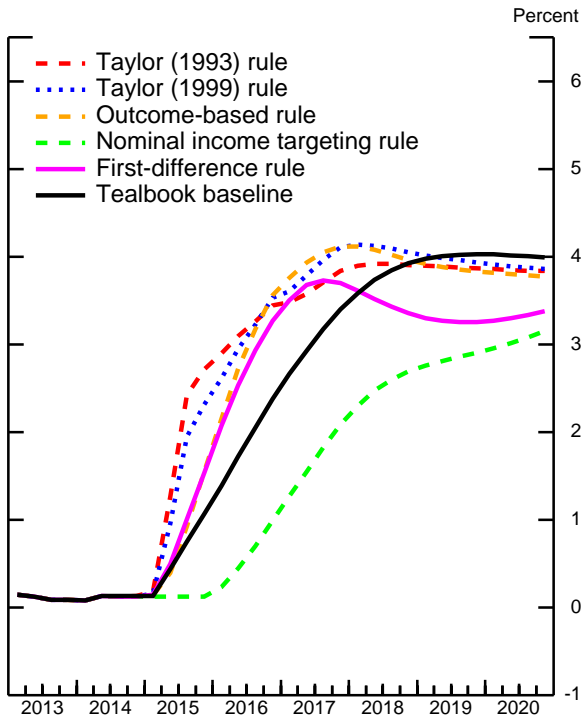
PCE Inflation
Four-quarter average



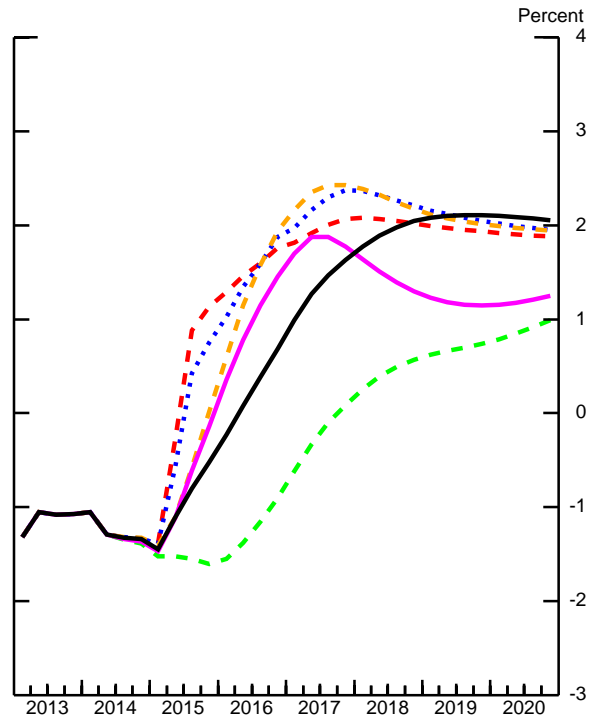
Note: The policy rule simulations in this exhibit are based on rules that respond to core inflation. This choice of rule specification was made in light of the tendency for current and near-term core inflation rates to outperform headline inflation rates as predictors of the medium-term behavior of headline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

Policy Rule Simulations with an Unemployment Rate Threshold

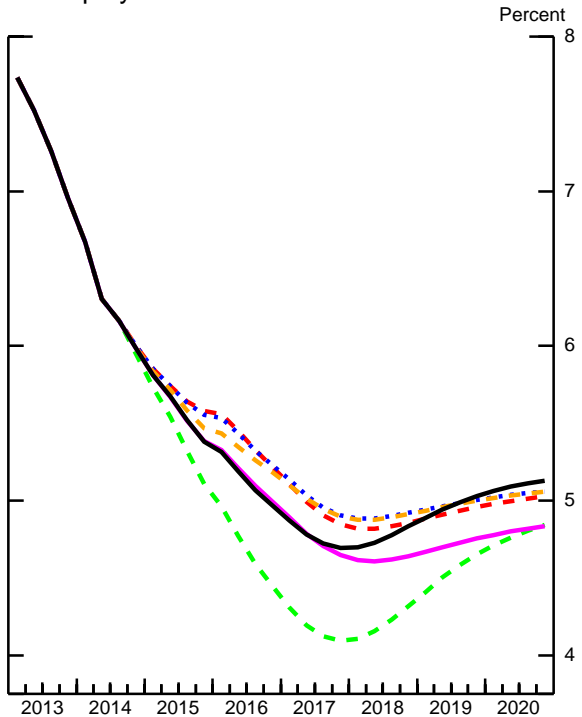
Effective Nominal Federal Funds Rate



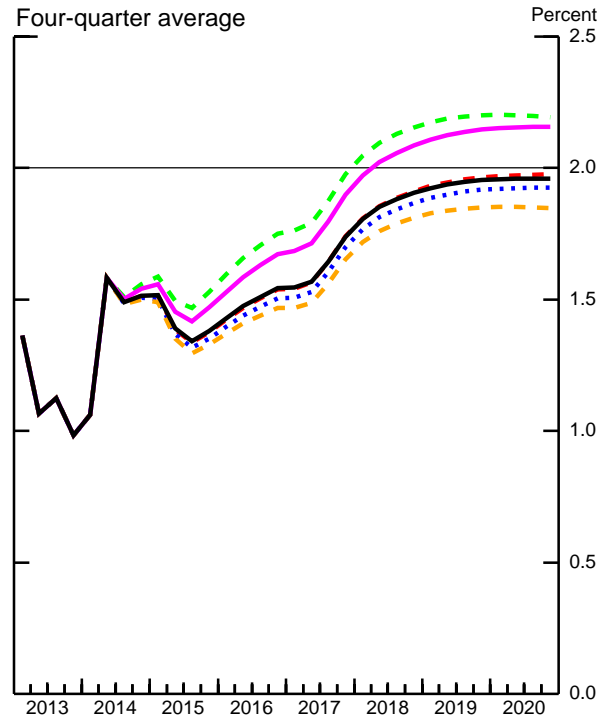
Real Federal Funds Rate



Unemployment Rate



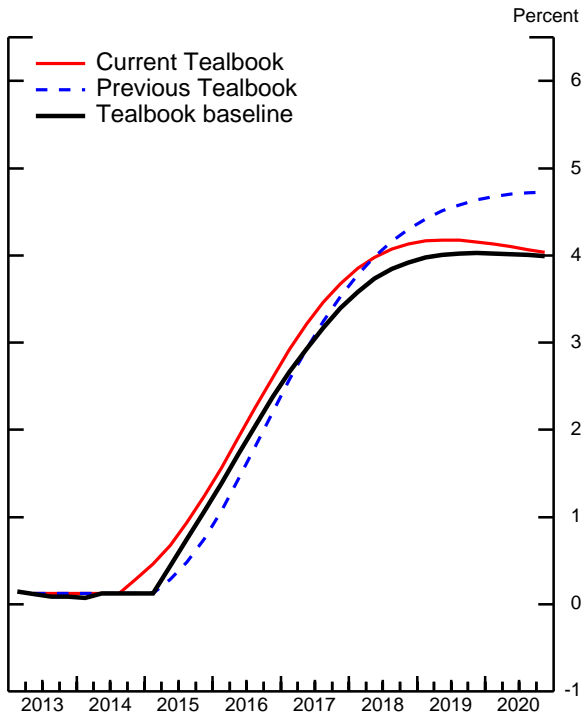
PCE Inflation
Four-quarter average



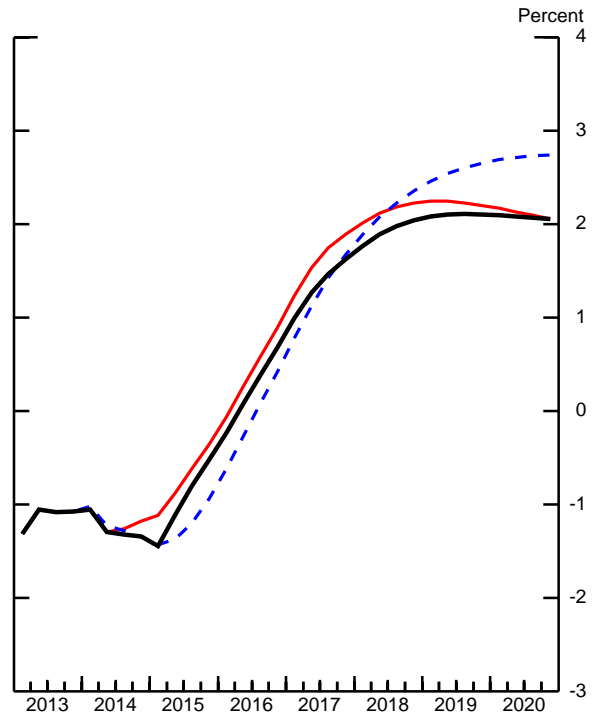
Note: The policy rule simulations in this exhibit keep the federal funds rate at an effective lower bound of 12½ basis points as long as the unemployment rate is 5.8 percent or more. Thereafter, the federal funds rate follows the prescriptions of the specified rule. A value of 5.8 percent was chosen because in the Tealbook baseline the unemployment rate crosses that level just before firming begins. In addition, the simulations are based on rules that respond to core inflation.

Optimal Control Policy

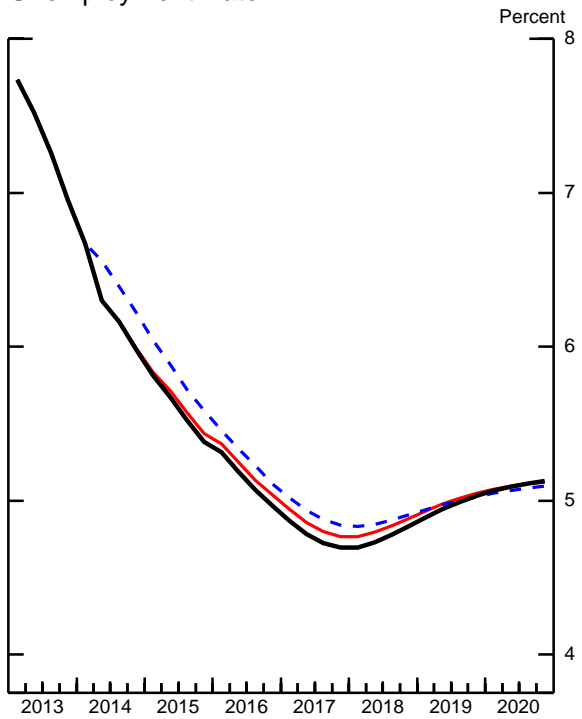
Effective Nominal Federal Funds Rate



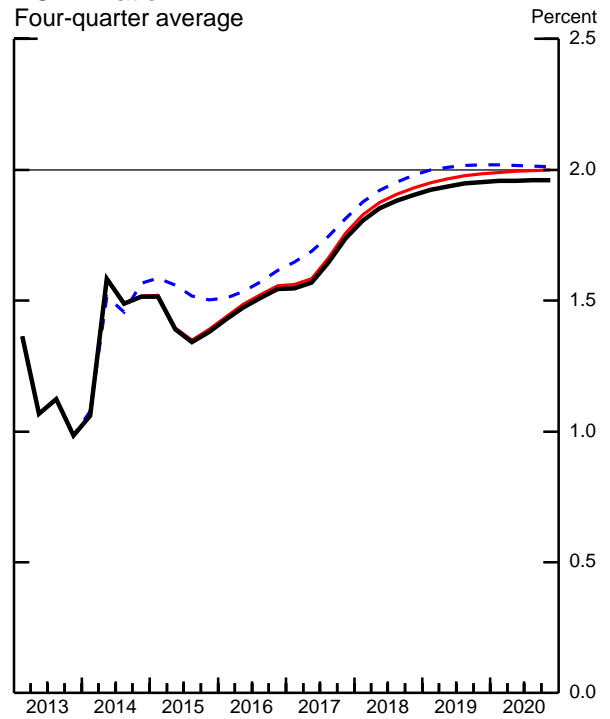
Real Federal Funds Rate



Unemployment Rate

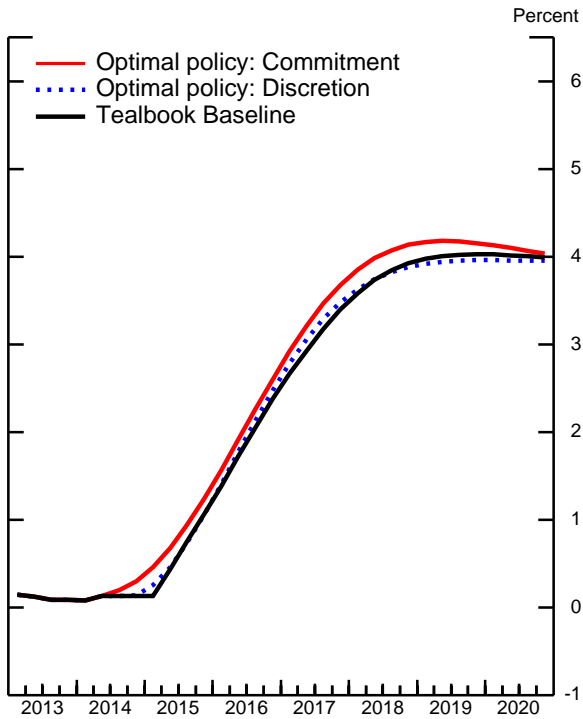


PCE Inflation
Four-quarter average

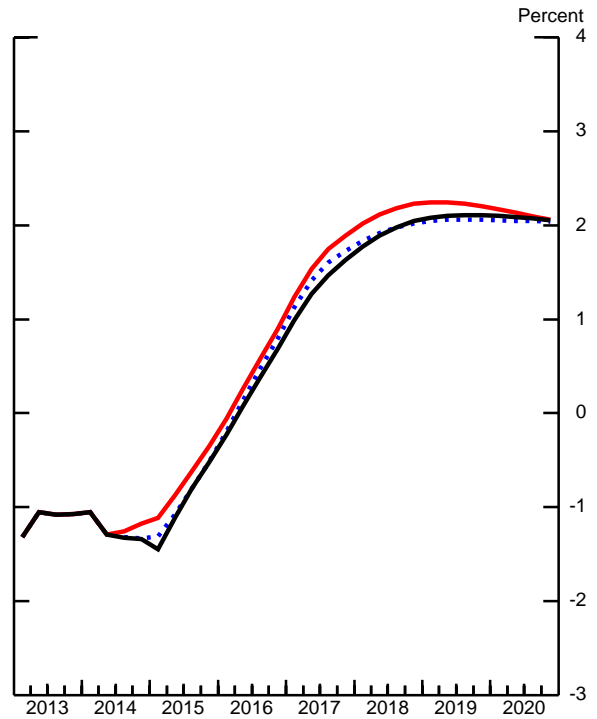


Optimal Control Policy: Commitment vs. Discretion

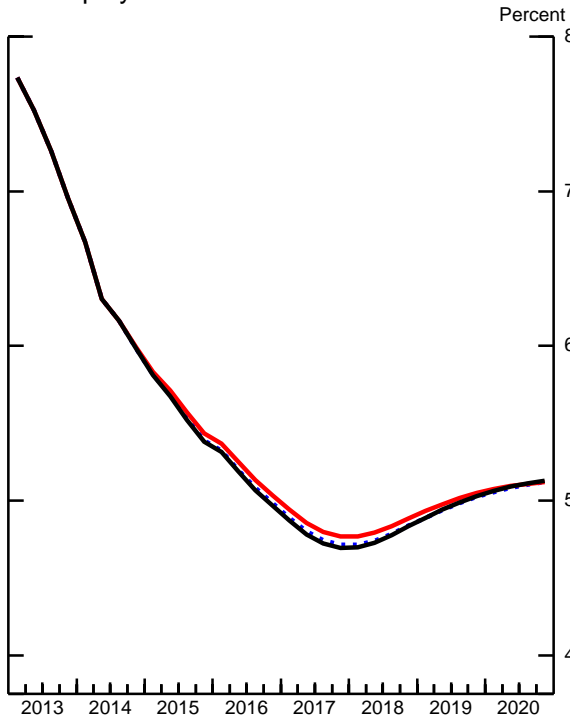
Effective Nominal Federal Funds Rate



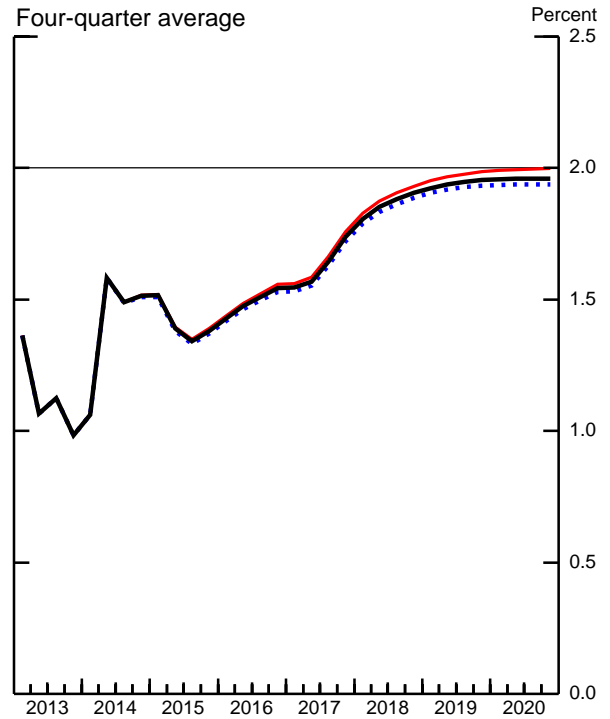
Real Federal Funds Rate



Unemployment Rate



PCE Inflation
Four-quarter average



Outcomes under Alternative Policies

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

Measure and policy	2013					
	H2	2014	2015	2016	2017	2018
<i>Real GDP</i>						
Extended Tealbook baseline ¹	3.4	2.4	3.0	3.2	2.6	1.7
Taylor (1993)	3.4	2.3	2.6	3.2	2.8	1.9
Taylor (1999)	3.4	2.3	2.7	3.1	2.7	1.9
Inertial Taylor (1999)	3.4	2.4	3.0	3.2	2.6	1.7
Outcome-based	3.4	2.3	2.6	3.1	2.7	1.9
First-difference	3.4	2.3	2.7	3.1	2.7	2.0
Nominal income targeting	3.4	2.5	3.6	3.7	2.8	1.6
Optimal control	3.4	2.4	3.0	3.2	2.5	1.7
<i>Unemployment rate²</i>						
Extended Tealbook baseline ¹	7.0	6.0	5.4	5.0	4.7	4.8
Taylor (1993)	7.0	6.1	5.7	5.2	4.8	4.8
Taylor (1999)	7.0	6.0	5.6	5.2	4.9	4.9
Inertial Taylor (1999)	7.0	6.0	5.4	5.0	4.7	4.8
Outcome-based	7.0	6.0	5.6	5.2	4.9	4.9
First-difference	7.0	6.0	5.6	5.2	4.9	4.8
Nominal income targeting	7.0	5.9	5.1	4.4	4.1	4.3
Optimal control	7.0	6.0	5.4	5.0	4.8	4.9
<i>Total PCE prices</i>						
Extended Tealbook baseline ¹	1.5	1.5	1.4	1.5	1.7	1.9
Taylor (1993)	1.5	1.5	1.4	1.5	1.7	1.9
Taylor (1999)	1.5	1.5	1.4	1.5	1.7	1.9
Inertial Taylor (1999)	1.5	1.5	1.4	1.6	1.8	1.9
Outcome-based	1.5	1.5	1.3	1.5	1.6	1.8
First-difference	1.5	1.5	1.4	1.6	1.8	2.0
Nominal income targeting	1.5	1.6	1.5	1.8	2.0	2.2
Optimal control	1.5	1.5	1.4	1.6	1.8	1.9
<i>Core PCE prices</i>						
Extended Tealbook baseline ¹	1.3	1.5	1.6	1.7	1.8	1.9
Taylor (1993)	1.3	1.5	1.6	1.7	1.8	1.9
Taylor (1999)	1.3	1.5	1.6	1.7	1.7	1.9
Inertial Taylor (1999)	1.3	1.5	1.6	1.7	1.8	1.9
Outcome-based	1.3	1.5	1.5	1.6	1.7	1.8
First-difference	1.3	1.5	1.6	1.7	1.8	2.0
Nominal income targeting	1.3	1.5	1.7	1.9	2.0	2.1
Optimal control	1.3	1.5	1.6	1.7	1.8	1.9
<i>Effective nominal federal funds rate²</i>						
Extended Tealbook baseline ¹	0.1	0.1	1.1	2.4	3.4	3.9
Taylor (1993)	0.1	2.0	2.6	3.4	3.8	3.9
Taylor (1999)	0.1	1.1	2.2	3.5	4.1	4.1
Inertial Taylor (1999)	0.1	0.4	1.3	2.4	3.4	3.9
Outcome-based	0.1	1.1	2.3	3.5	4.1	4.0
First-difference	0.1	1.1	2.3	3.8	4.2	3.9
Nominal income targeting	0.1	0.1	0.1	1.0	2.1	2.7
Optimal control	0.1	0.3	1.2	2.5	3.6	4.0

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

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

Outcomes under Alternative Policies with an Unemployment Rate Threshold¹

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

Measure and policy	2013					
	H2	2014	2015	2016	2017	2018
<i>Real GDP</i>						
Extended Tealbook baseline	3.4	2.4	3.0	3.2	2.6	1.7
Taylor (1993)	3.4	2.4	2.7	3.0	2.7	1.9
Taylor (1999)	3.4	2.4	2.7	3.0	2.6	1.9
Outcome-based	3.4	2.4	2.9	3.0	2.5	1.9
First-difference	3.4	2.4	3.1	3.2	2.7	1.9
Nominal income targeting	3.4	2.5	3.6	3.7	2.8	1.6
Optimal control	3.4	2.4	3.0	3.2	2.5	1.7
<i>Unemployment rate²</i>						
Extended Tealbook baseline	7.0	6.0	5.4	5.0	4.7	4.8
Taylor (1993)	7.0	6.0	5.6	5.2	4.8	4.9
Taylor (1999)	7.0	6.0	5.6	5.2	4.9	4.9
Outcome-based	7.0	6.0	5.5	5.2	4.9	4.9
First-difference	7.0	6.0	5.4	5.0	4.6	4.6
Nominal income targeting	7.0	5.9	5.1	4.4	4.1	4.3
Optimal control	7.0	6.0	5.4	5.0	4.8	4.9
<i>Total PCE prices</i>						
Extended Tealbook baseline	1.5	1.5	1.4	1.5	1.7	1.9
Taylor (1993)	1.5	1.5	1.4	1.5	1.7	1.9
Taylor (1999)	1.5	1.5	1.4	1.5	1.7	1.9
Outcome-based	1.5	1.5	1.3	1.5	1.7	1.8
First-difference	1.5	1.5	1.5	1.7	1.9	2.1
Nominal income targeting	1.5	1.6	1.5	1.8	2.0	2.2
Optimal control	1.5	1.5	1.4	1.6	1.8	1.9
<i>Core PCE prices</i>						
Extended Tealbook baseline	1.3	1.5	1.6	1.7	1.8	1.9
Taylor (1993)	1.3	1.5	1.6	1.7	1.8	1.9
Taylor (1999)	1.3	1.5	1.6	1.7	1.7	1.9
Outcome-based	1.3	1.5	1.5	1.6	1.7	1.8
First-difference	1.3	1.5	1.7	1.8	1.9	2.1
Nominal income targeting	1.3	1.5	1.7	1.9	2.0	2.1
Optimal control	1.3	1.5	1.6	1.7	1.8	1.9
<i>Effective nominal federal funds rate²</i>						
Extended Tealbook baseline	0.1	0.1	1.1	2.4	3.4	3.9
Taylor (1993)	0.1	0.1	2.7	3.4	3.8	3.9
Taylor (1999)	0.1	0.1	2.3	3.5	4.1	4.0
Outcome-based	0.1	0.1	1.5	3.6	4.1	4.0
First-difference	0.1	0.1	1.5	3.3	3.7	3.4
Nominal income targeting	0.1	0.1	0.1	1.0	2.1	2.7
Optimal control	0.1	0.3	1.2	2.5	3.6	4.0

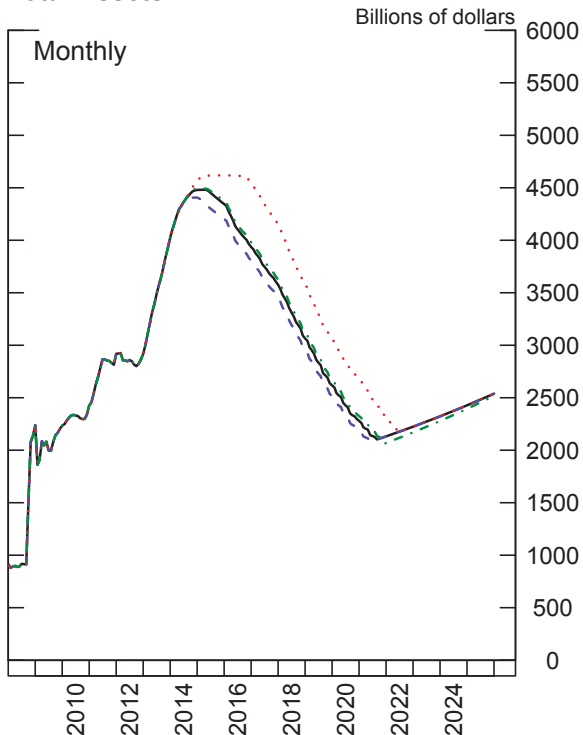
1. With the exception of optimal control, monetary policy is specified to keep the federal funds rate at an effective lower bound of 12½ basis points as long as the unemployment rate is 5.8 percent or more. Once the threshold is crossed, the federal funds rate follows the prescriptions of the specified rule.

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

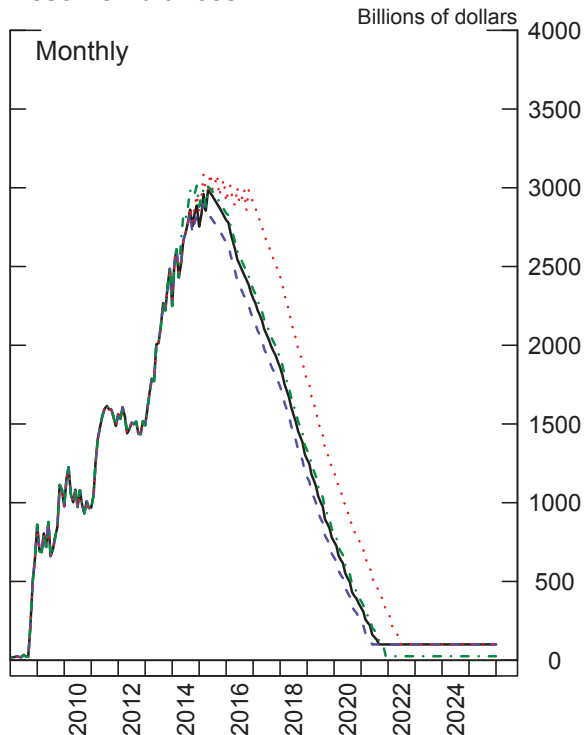
Total Assets and Selected Balance Sheet Items

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

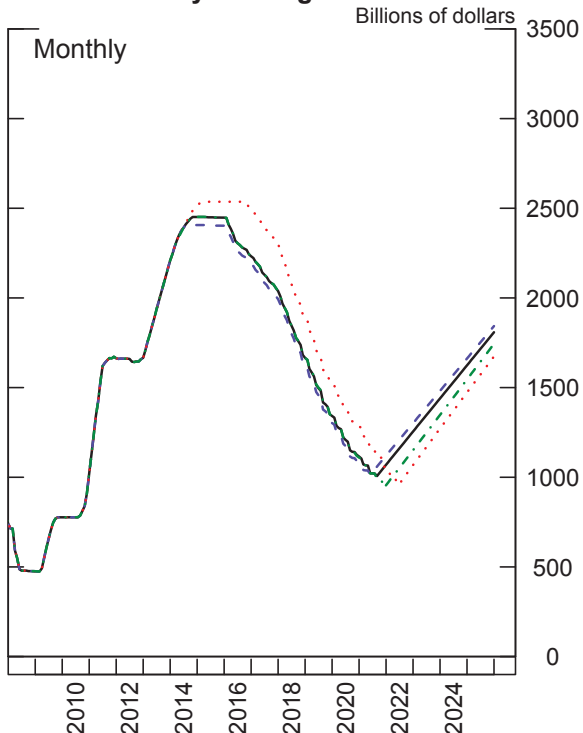
Total Assets



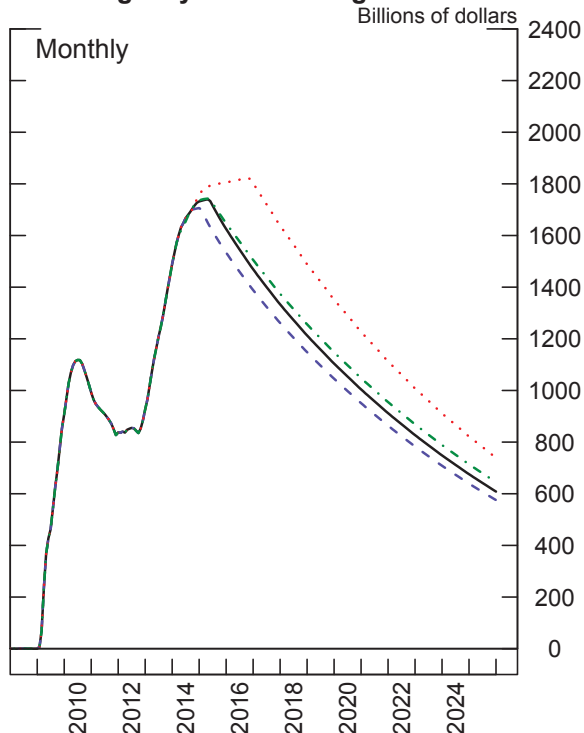
Reserve Balances



SOMA Treasury Holdings



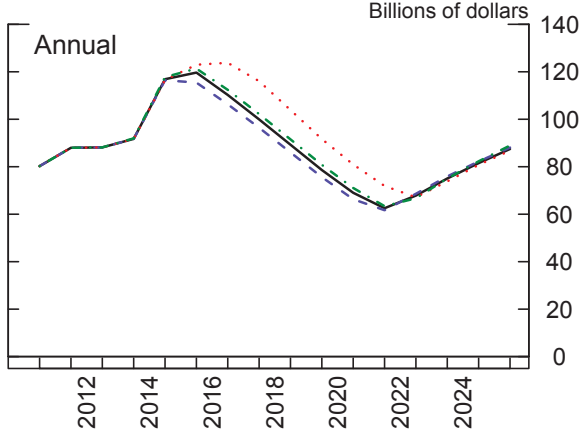
SOMA Agency MBS Holdings



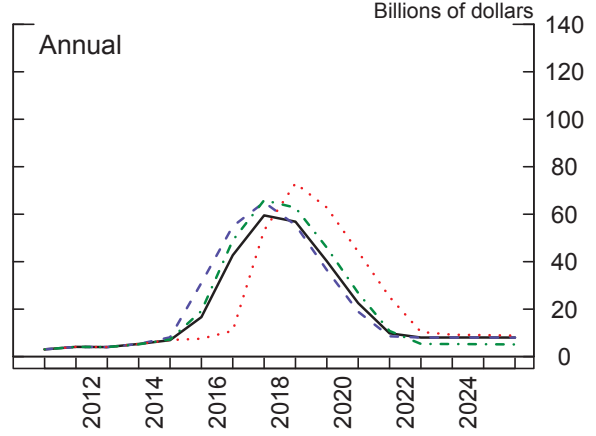
Income Projections

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

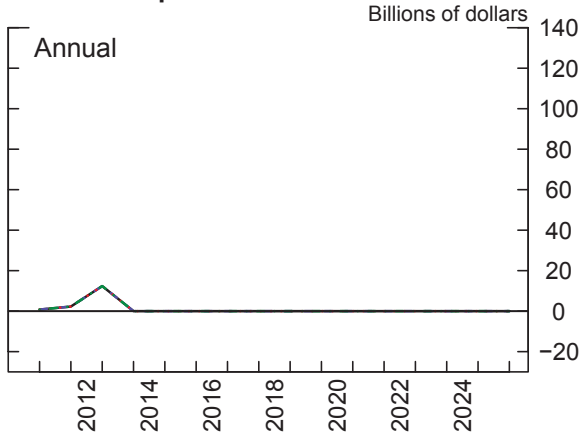
Interest Income



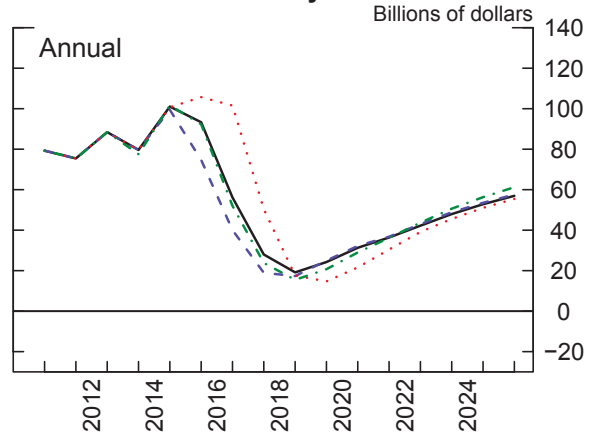
Interest Expense



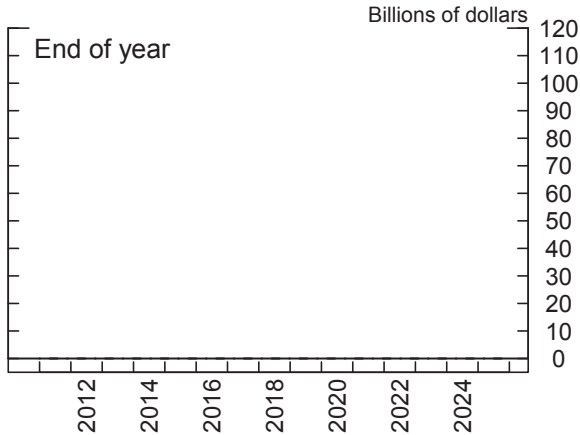
Realized Capital Gains



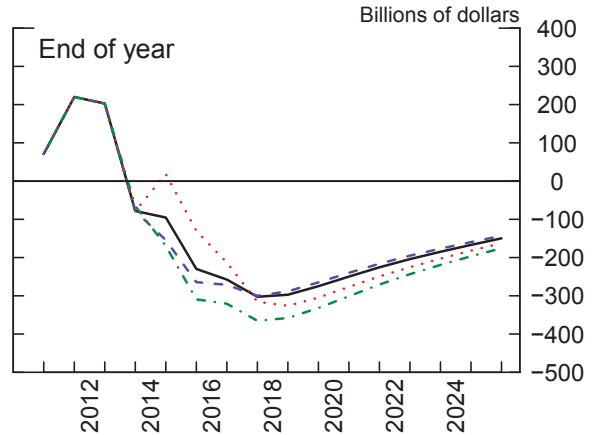
Remittances to Treasury



Deferred Asset



Memo: Unrealized Gains/Losses



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

Billions of dollars

	<u>May 31, 2014</u>	<u>2015</u>	<u>2017</u>	<u>2019</u>	<u>2021</u>	<u>2023</u>	<u>2025</u>
Total assets	4,327	4,345	3,576	2,618	2,132	2,323	2,538
Selected assets							
Loans and other credit extensions*	2	0	0	0	0	0	0
Securities held outright	4,067	4,106	3,376	2,448	1,984	2,190	2,419
U.S. Treasury securities	2,375	2,448	2,038	1,342	1,070	1,440	1,808
Agency debt securities	44	33	4	2	2	2	2
Agency mortgage-backed securities	1,648	1,625	1,333	1,104	912	749	608
Unamortized premiums	209	187	145	111	87	71	56
Unamortized discounts	-18	-17	-14	-11	-9	-7	-6
Total other assets	67	69	69	69	69	69	69
Total liabilities	4,271	4,284	3,500	2,521	2,009	2,168	2,342
Selected liabilities							
Federal Reserve notes in circulation	1,236	1,359	1,514	1,645	1,788	1,948	2,123
Reverse repurchase agreements	277	112	112	112	112	112	112
Deposits with Federal Reserve Banks	2,750	2,808	1,872	765	113	113	113
Reserve balances held by depository institutions	2,665	2,795	1,859	752	100	100	100
U.S. Treasury, General Account	29	5	5	5	5	5	5
Other Deposits	56	8	8	8	8	8	8
Interest on Federal Reserve Notes due to U.S. Treasury	3	0	0	0	0	0	0
Total capital	56	61	77	97	123	155	197

Projections

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

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

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

Alternative Projections for the 10-Year Treasury Term Premium Effect

Date	Alternative B	Alternative C	Alternative A	April Alternative B
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Basis Points

Quarterly Averages

2014: Q2	-121	-117	-138	-122
Q3	-116	-111	-134	-117
Q4	-110	-106	-129	-112
2015: Q1	-105	-101	-124	-106
Q2	-100	-96	-119	-101
Q3	-95	-91	-114	-96
Q4	-90	-86	-109	-91
2016: Q1	-85	-81	-104	-86
Q2	-81	-77	-99	-82
Q3	-76	-73	-95	-77
Q4	-72	-69	-90	-73
2017: Q4	-58	-55	-72	-59
2018: Q4	-47	-44	-58	-47
2019: Q4	-37	-36	-46	-37
2020: Q4	-30	-29	-36	-30
2021: Q4	-25	-24	-29	-24
2022: Q4	-21	-20	-22	-19
2023: Q4	-17	-16	-18	-15
2024: Q4	-13	-12	-13	-12
2025: Q4	-9	-9	-10	-8

Alternative Projections for the Monetary Base

Percent change, annual rate; not seasonally adjusted

Date	Alternative B	Alternative C	Alternative A	April Alternative B
------	---------------	---------------	---------------	------------------------

Quarterly

2014: Q2	14.0	14.0	14.0	39.9
Q3	12.7	11.2	13.6	21.3
Q4	5.5	3.5	10.0	6.5
2015: Q1	5.7	8.8	11.4	-0.3
Q2	10.6	-0.7	5.7	5.4
Q3	-2.5	-5.1	1.9	-1.6
Q4	-5.1	-4.9	-0.6	-4.2
2016: Q1	-7.1	-7.1	-0.5	-6.2
Q2	-13.1	-13.2	-1.2	-11.9
Q3	-10.2	-10.2	1.5	-9.2
Q4	-8.5	-8.5	2.4	-7.7

Annual

2017	-9.7	-9.8	-8.3	-8.9
2018	-14.7	-15.0	-14.2	-13.5
2019	-16.1	-16.3	-15.8	-14.6
2020	-14.9	-15.1	-13.9	-13.6
2021	-9.6	-5.5	-14.3	-11.7
2022	4.1	4.1	-8.0	2.5
2023	4.1	4.1	4.1	4.3
2024	4.2	4.2	4.2	4.3
2025	4.2	4.2	4.2	4.3

Projections

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

MONEY

In recent years, M2 has grown considerably faster than would be anticipated based on its historical relationship with nominal GDP and the opportunity cost of holding money. In part, the elevated level of M2 may reflect strong investor demand for safe and liquid assets in the wake of the financial crisis and during the long economic recovery. Over the forecast period, the staff projects that M2 growth will slow markedly relative to its pace in recent years.¹² In part, the projected deceleration in M2 reflects an assumption that investors will reallocate a portion of their elevated M2 balances to riskier investments as the economic recovery progresses; however, the timing and magnitude of this unwind is highly uncertain. In addition, the increase in the opportunity cost of holding M2 balances that occurs due to the projected tightening of monetary policy acts as an additional restraint on M2 growth in 2015 and 2016.¹³

M2 Monetary Aggregate Projections (Percent change, annual rate; seasonally adjusted)*		
<i>Quarterly</i>		
2014:	Q2	6.3
	Q3	5.7
	Q4	5.4
2015:	Q1	1.0
	Q2	-2.4
	Q3	-3.0
	Q4	-2.8
2016:	Q1	-1.2
	Q2	0.5
	Q3	1.2
	Q4	1.4
<i>Annual</i>		
	2014	6.1
	2015	-1.8
	2016	0.5

Note: Actual data through June 2, 2014; projections thereafter.

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

¹² Since the last Tealbook, the staff's money demand models have been reestimated using data over a more recent time period (1994:Q3 to 2007:Q2); however, the contour of the projected path for M2 growth is broadly similar to that implied by the models prior to the reestimation.

¹³ The three-month Treasury bill rate is assumed to begin rising in 2015:Q1, causing M2 opportunity cost to rise one quarter earlier than the projected increase in the federal funds rate.