

Prefatory Note

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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

April 22, 2015

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

Comparing the Staff Projection with Other Forecasts

The staff forecasts of real GDP growth and inflation are, on balance, a little lower than the most recent Blue Chip Consensus outlook and the Survey of Professional Forecasters (SPF) median projection (although the latter dates from mid-February). The staff's forecast of the unemployment rate is a bit higher than those of the outside forecasts.

Comparison of Tealbook and Outside Forecasts

	2015	2016
GDP (Q4/Q4 percent change)	1.8	2.4
<i>March Tealbook</i>	2.2	2.3
Blue Chip (4/10/15)	2.7	2.7
SPF median (2/13/15)	2.8	n.a.
Unemployment rate (Q4 level)	5.3	5.2
<i>March Tealbook</i>	5.2	5.1
Blue Chip (4/10/15)	5.1	4.9
SPF median (2/13/15)	5.2	n.a.
Consumer price inflation (Q4/Q4 percent change)	0.7	2.0
<i>March Tealbook</i>	0.6	2.1
Blue Chip (4/10/15)	0.8	2.2
SPF median (2/13/15)	1.1	2.1
PCE price inflation (Q4/Q4 percent change)	0.6	1.6
<i>March Tealbook</i>	0.6	1.7
SPF median (2/13/15)	1.1	1.9
Core PCE price inflation (Q4/Q4 percent change)	1.3	1.6
<i>March Tealbook</i>	1.3	1.6
SPF median (2/13/15)	1.4	1.7

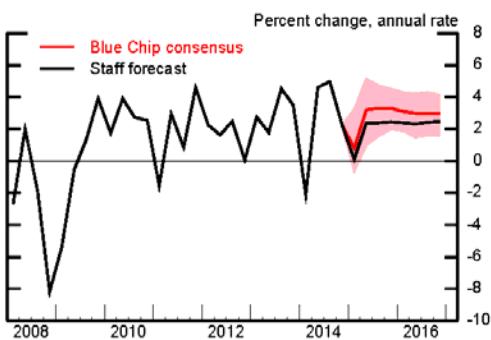
Note: SPF is the Survey of Professional Forecasters. Blue Chip does not provide results for PCE price inflation. The Blue Chip Consensus contains about 50 panelists, and the SPF about 40. Roughly 20 panelists contribute to both surveys.

n.a. Not available.

Source: Blue Chip Economic Indicators; Federal Reserve Bank of Philadelphia.

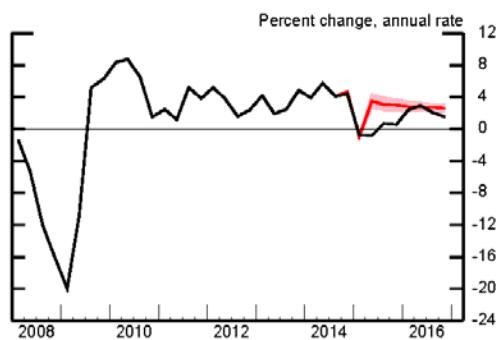
Tealbook Forecast Compared with Blue Chip
 (Blue Chip survey released April 10, 2015)

Real GDP

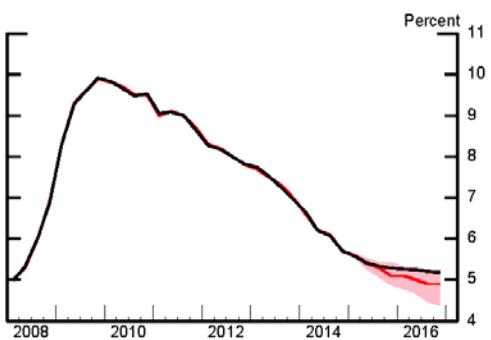


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

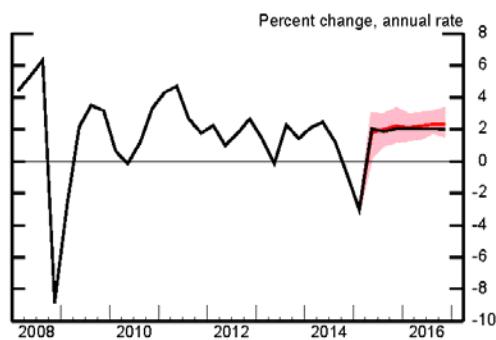
Industrial Production



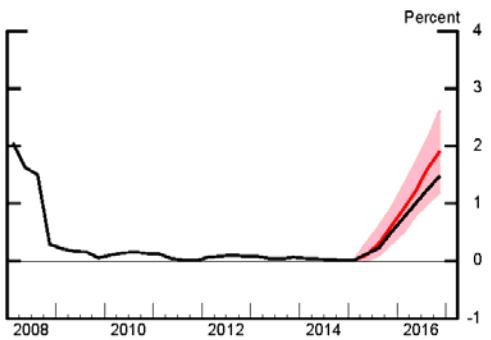
Unemployment Rate



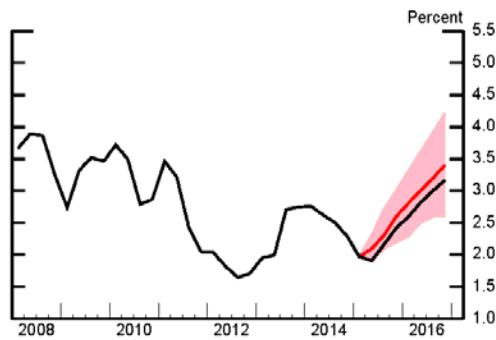
Consumer Price Index



Treasury Bill Rate



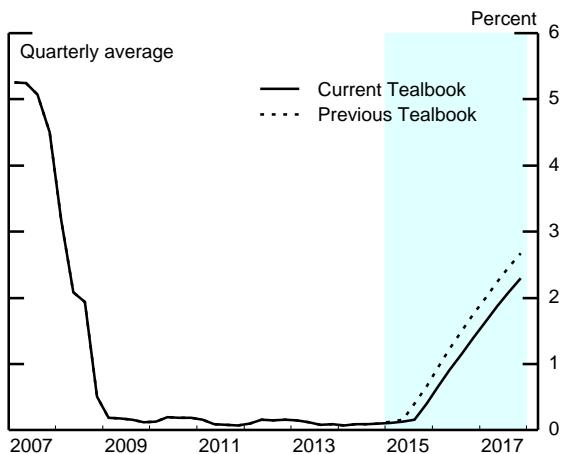
10-Year Treasury Yield



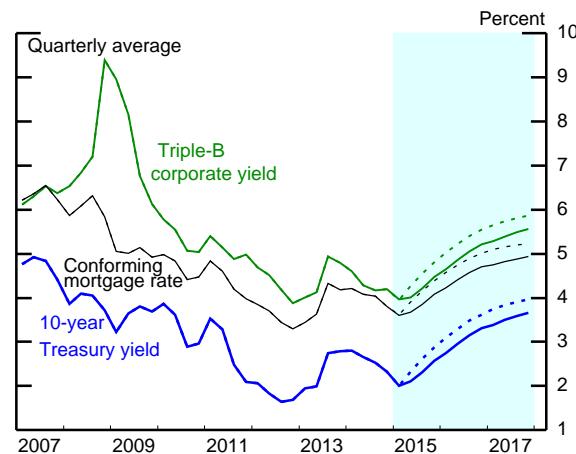
Note: The yield is for on-the-run Treasury securities. Over the forecast period, the staff's projected yield is assumed to be 15 basis points below the off-the-run yield.

Key Background Factors underlying the Baseline Staff Projection

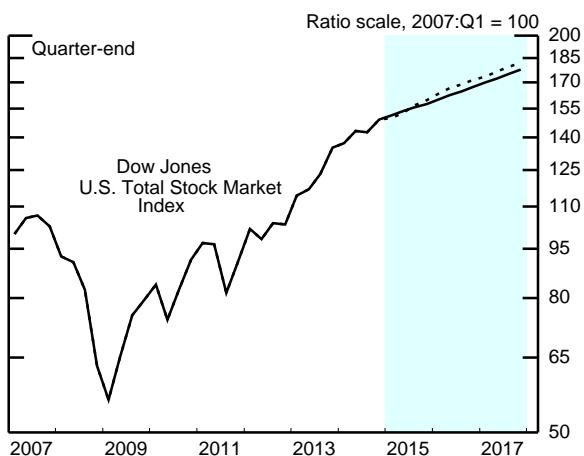
Federal Funds Rate



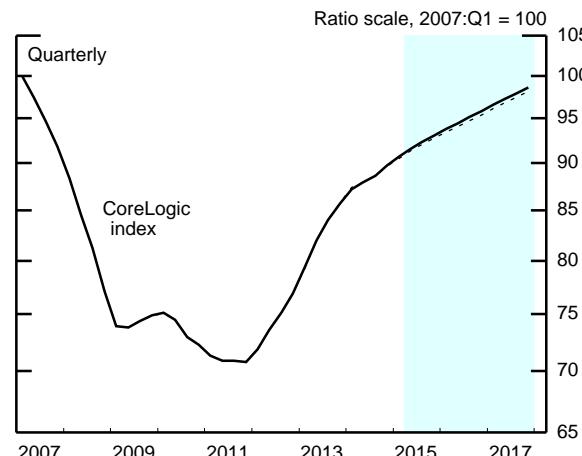
Long-Term Interest Rates



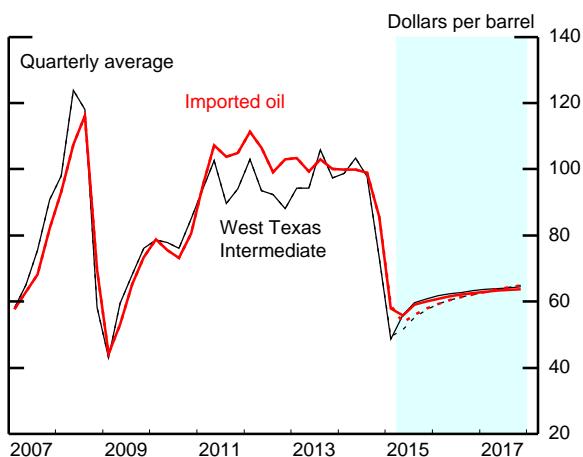
Equity Prices



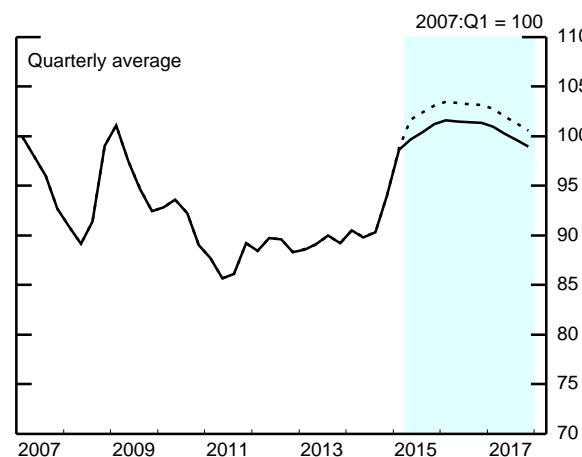
House Prices



Crude Oil Prices



Broad Real Dollar



Summary of the Near-Term Outlook

(Percent change at annual rate except as noted)

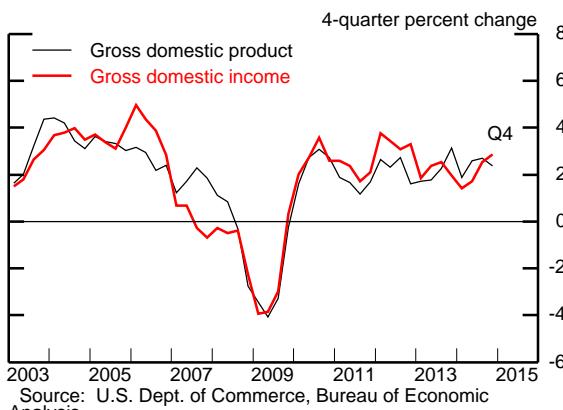
Measure	2014:Q4		2015:Q1		2015:Q2	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
Real GDP	2.1	2.2	1.7	.1	2.6	2.4
Private domestic final purchases	4.3	4.5	3.0	.9	4.1	3.1
Personal consumption expenditures	4.2	4.4	3.5	1.9	4.4	4.2
Residential investment	4.5	3.8	1.4	1.8	8.5	1.1
Nonres. private fixed investment	4.4	4.7	.7	-4.3	1.5	-1.9
Government purchases	-2.0	-1.9	-.8	-2.3	.1	1.3
<i>Contributions to change in real GDP</i>						
Inventory investment ¹	-.1	-.1	.1	.4	.1	.2
Net exports ¹	-1.0	-1.0	-.7	-.6	-1.0	-.6
Unemployment rate²	5.7	5.7	5.5	5.6	5.3	5.4
PCE chain price index	-.4	-.4	-2.0	-2.0	1.3	1.5
Ex. food and energy	1.1	1.1	.8	.8	1.4	1.6

1. Percentage points.

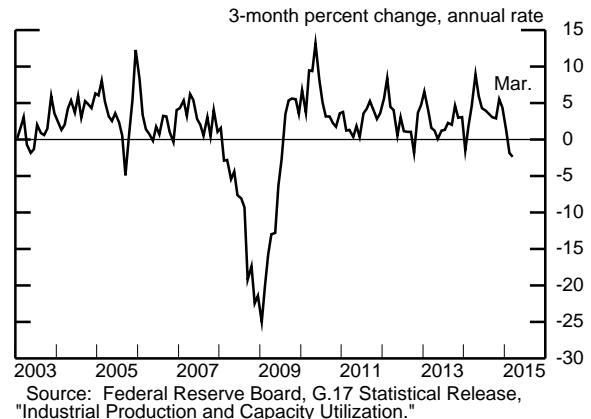
2. Percent.

Recent Nonfinancial Developments (1)

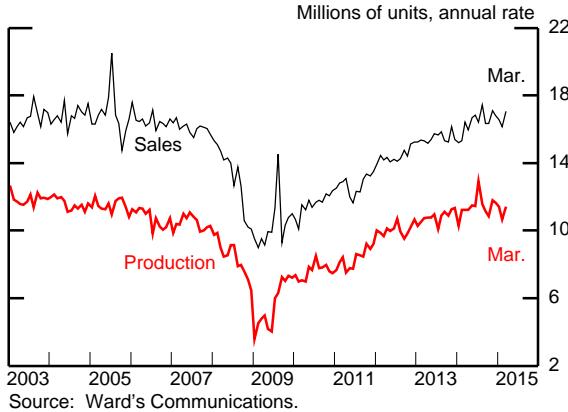
Real GDP and GDI



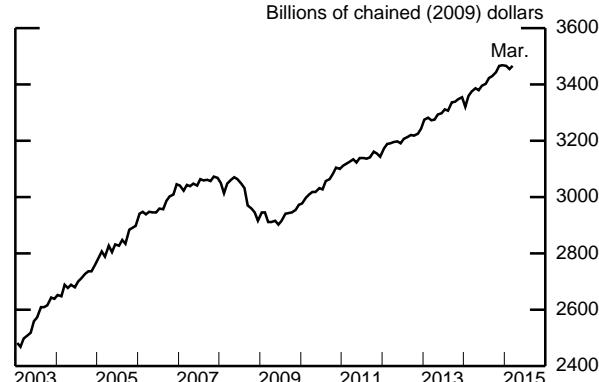
Manufacturing IP ex. Motor Vehicles and Parts



Sales and Production of Light Motor Vehicles



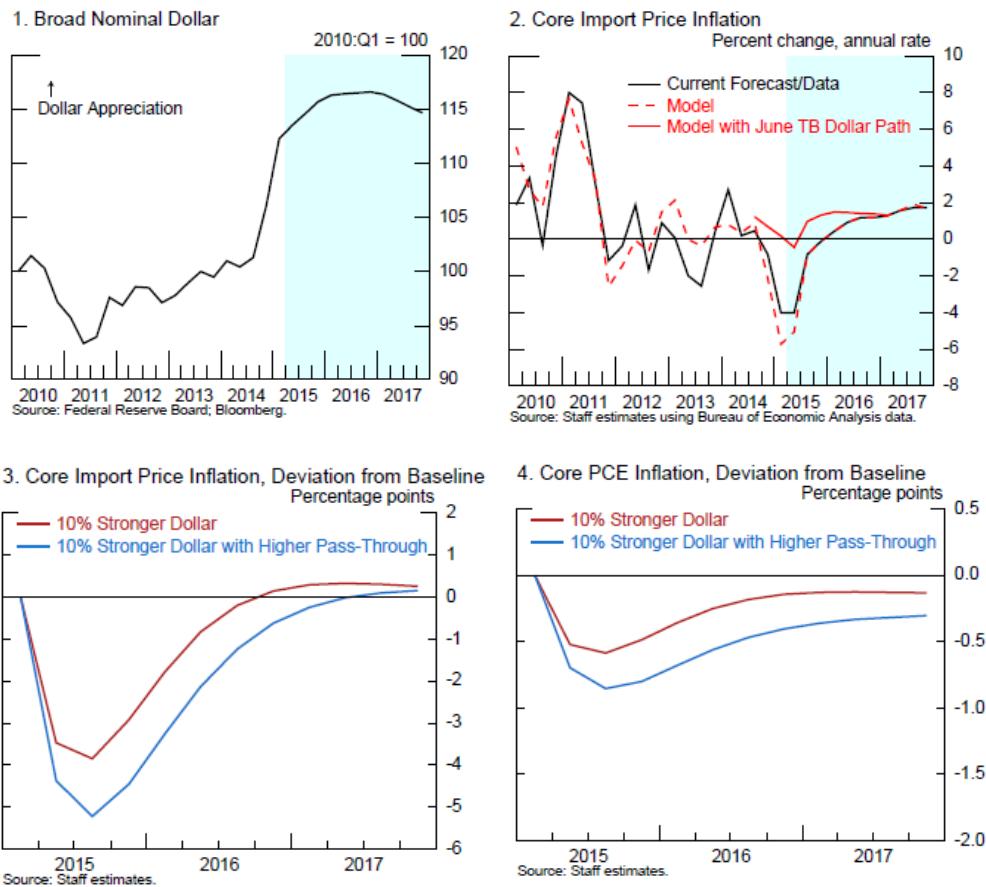
Real PCE Goods ex. Motor Vehicles



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

much of the weakness in import prices to the sharp appreciation of the dollar, as can be seen by comparing the two model paths.

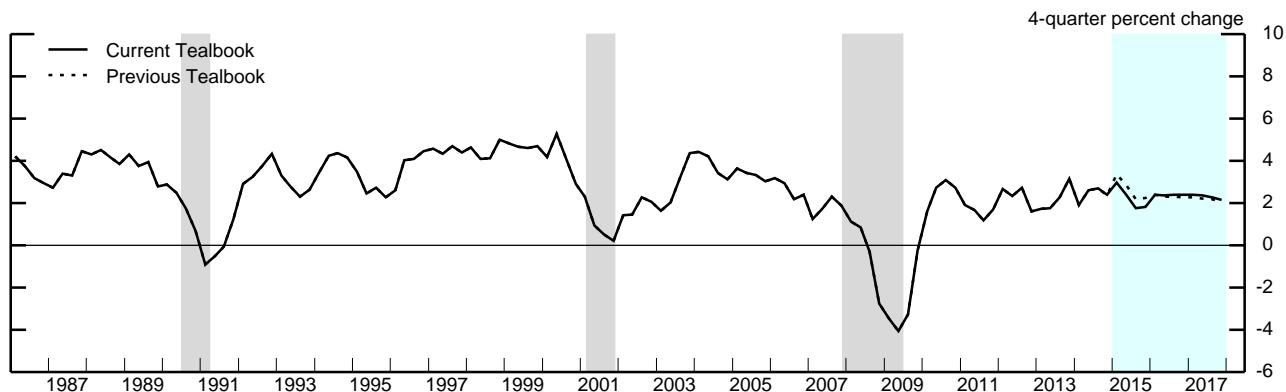
As mentioned above, our model estimates of the pass-through of exchange rate changes to core goods import prices are consistent with those in the literature, but there is a range of these estimates. Although, so far, core goods import prices have declined less than what our model predicts, there is a risk that pass-through going forward will be higher than our current estimate. We examine this possibility using the staff's SIGMA model. In particular, we compare the effect of an additional 10 percent appreciation of the dollar using our standard version of SIGMA (where pass-through is about one-third) with the case where pass-through is assumed to be one-half.⁵ This higher pass-through represents the upper end of the plausible estimates in the literature. As can be seen by comparing the red and blue lines in figure 3, the higher pass-through coefficient amplifies the effect of the dollar on core import price inflation, reducing it by about 1 percentage point in the first year and by somewhat less in the second. The effect of higher pass-through on core PCE inflation, shown in figure 4, is smaller; core PCE inflation falls about $\frac{1}{4}$ percentage point more than in the standard pass-through case in each of the two years following the shock.



⁵ The details of this simulation using the standard pass-through assumption is presented in the “Stronger dollar” scenario in the Risks and Uncertainty section of this Tealbook. Note that the PCE price response in SIGMA is somewhat larger than the response in the judgmental forecast, primarily because inflation is more sensitive to resource slack in SIGMA.

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

Measure	2014	2015	2015		2016	2017
			H1	H2		
Real GDP	2.4	1.8	1.2	2.4	2.4	2.1
Previous Tealbook	2.4	2.2	2.2	2.3	2.3	2.0
Final sales	2.4	1.8	1.0	2.7	2.4	2.3
Previous Tealbook	2.3	2.3	2.1	2.5	2.3	2.2
Personal consumption expenditures	2.9	3.6	3.0	4.1	3.3	2.5
Previous Tealbook	2.8	3.9	3.9	3.9	3.2	2.6
Residential investment	2.5	6.2	1.4	11.2	11.5	7.8
Previous Tealbook	2.7	9.2	4.9	13.7	9.7	5.1
Nonresidential structures	6.5	-11.5	-19.5	-2.8	.3	.5
Previous Tealbook	6.5	-6.2	-8.8	-3.6	1.5	.7
Equipment and intangibles	6.1	2.8	2.1	3.6	4.0	2.6
Previous Tealbook	6.0	4.1	4.1	4.1	4.0	2.5
Federal purchases	.2	-2.3	-2.9	-1.7	-1.3	-.9
Previous Tealbook	.2	-2.3	-2.8	-1.8	-1.3	-.9
State and local purchases	1.2	1.2	1.0	1.5	2.0	2.2
Previous Tealbook	1.2	1.5	1.2	1.7	2.0	2.2
Exports	2.4	-1.2	-2.7	.4	1.1	3.1
Previous Tealbook	2.4	-.1	-.3	.0	.7	2.9
Imports	5.6	3.8	1.8	5.9	5.8	3.9
Previous Tealbook	5.5	6.1	5.3	6.8	6.2	3.8
Contributions to change in real GDP (percentage points)						
Inventory change	.0	.0	.3	-.3	.0	-.1
Previous Tealbook	.0	.0	.1	-.1	.0	-.2
Net exports	-.6	-.8	-.6	-.8	-.8	-.2
Previous Tealbook	-.6	-1.0	-.9	-1.0	-.9	-.3

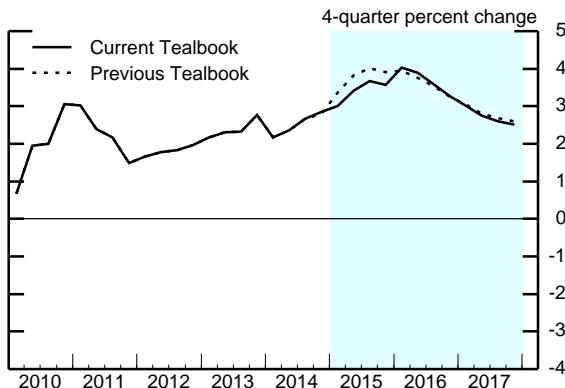
Real GDP

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

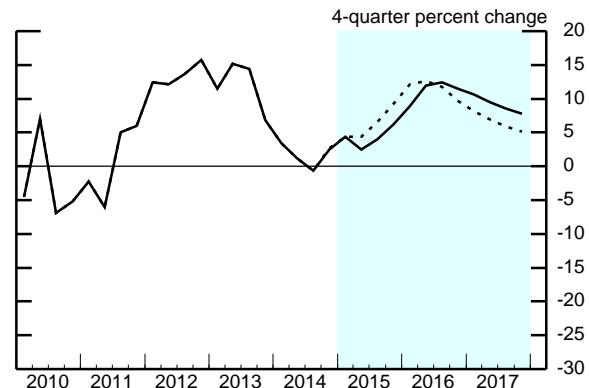
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Components of Final Demand

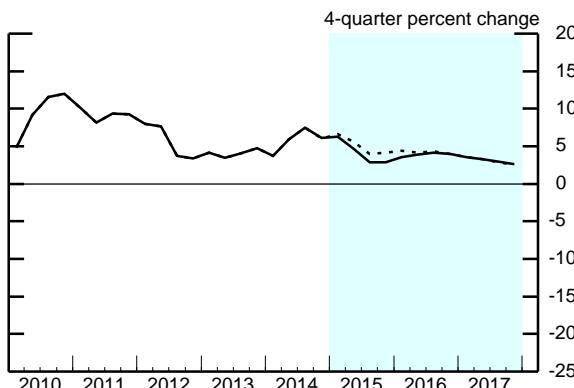
Personal Consumption Expenditures



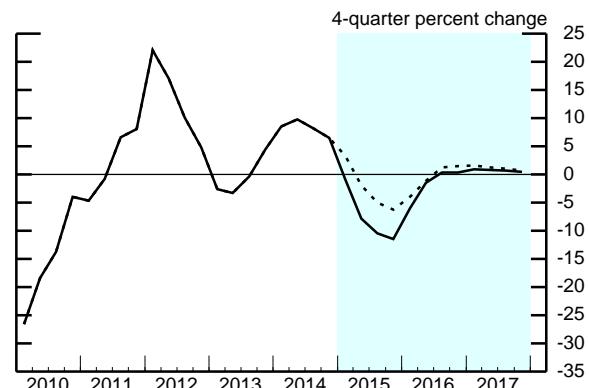
Residential Investment



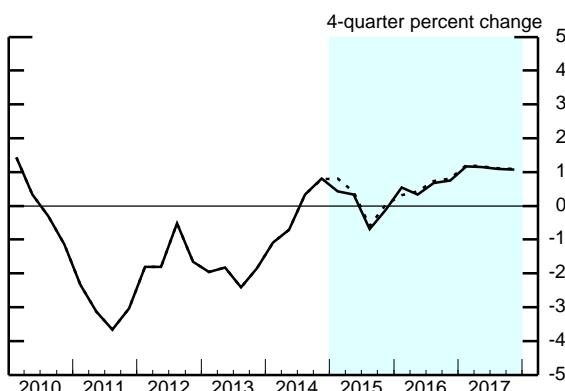
Equipment and Intangibles



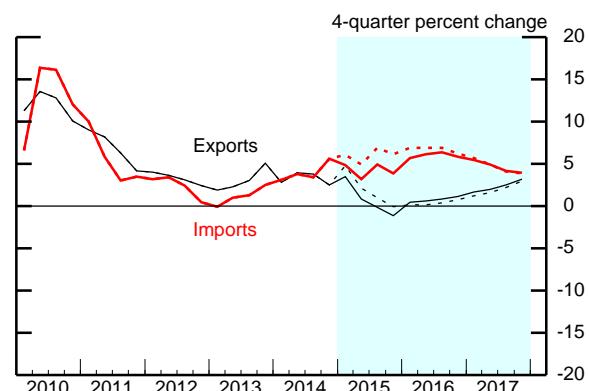
Nonresidential Structures



Government Consumption & Investment

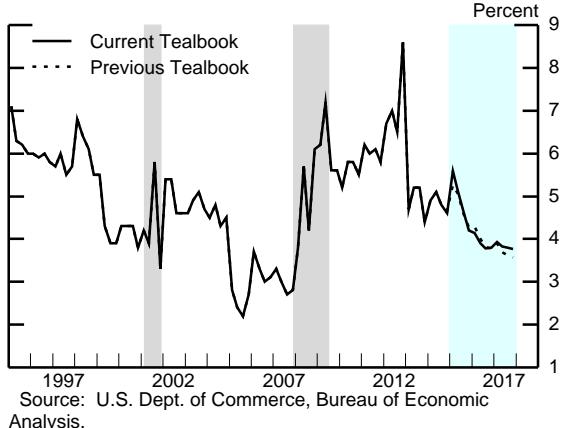


Exports and Imports

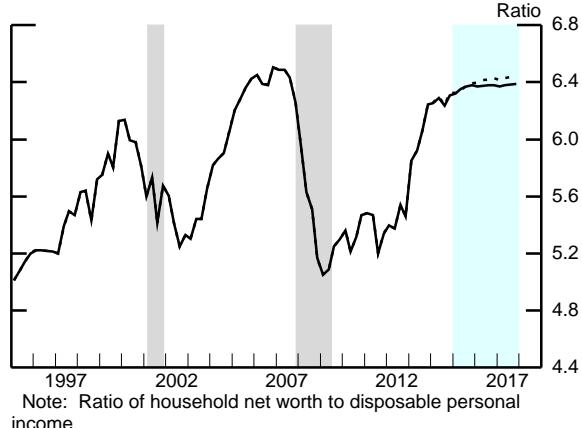


Aspects of the Medium-Term Projection

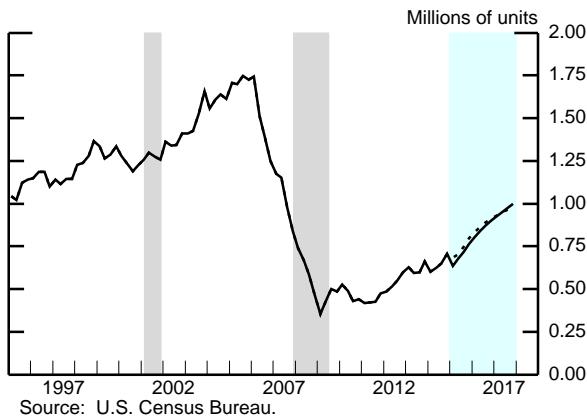
Personal Saving Rate



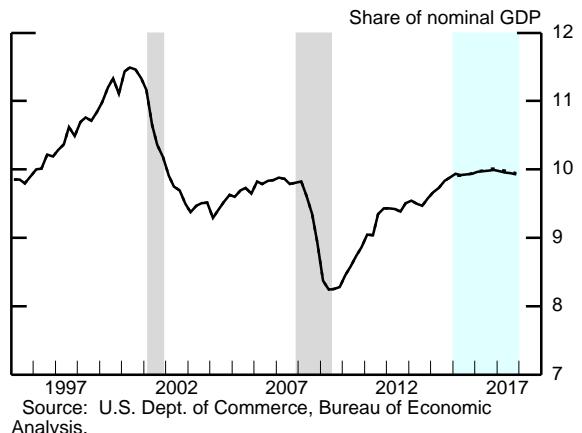
Wealth-to-Income Ratio



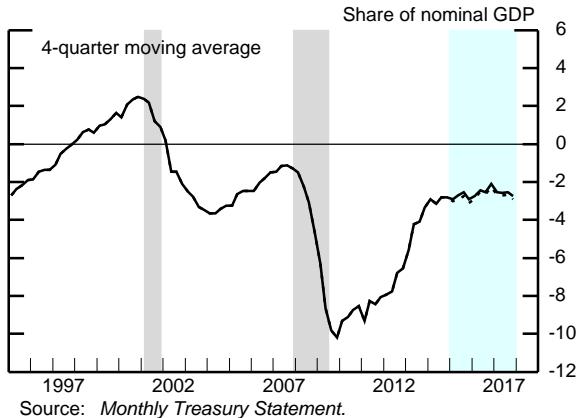
Single-Family Housing Starts



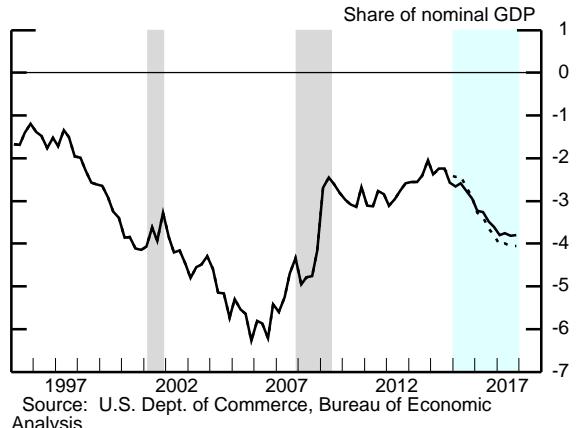
Equipment and Intangibles Spending



Federal Surplus/Deficit



Current Account Surplus/Deficit



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

Decomposition of Potential GDP

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

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

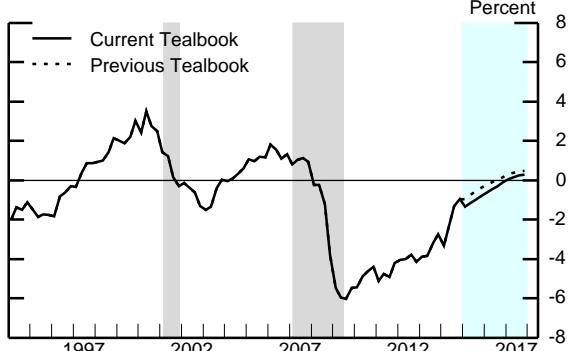
Note: For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.

1. Percentage points.

2. Total business sector.

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

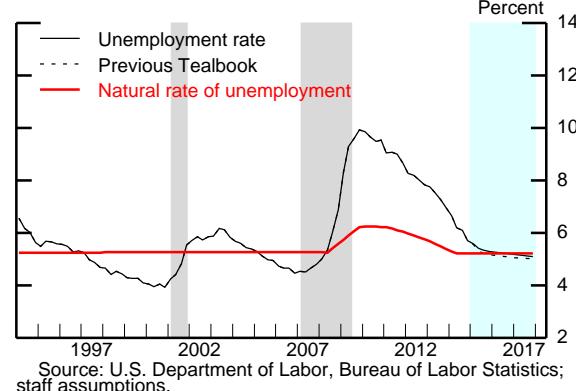
GDP Gap



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

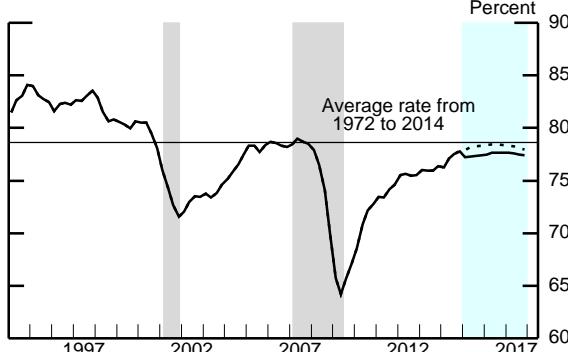
Source: U.S. Department of Commerce, Bureau of Economic Analysis; staff assumptions.

Unemployment Rate



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

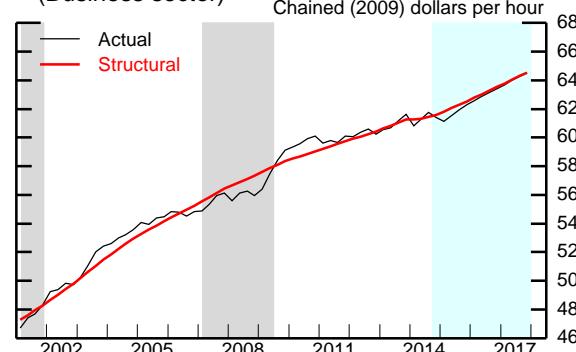
Manufacturing Capacity Utilization Rate



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

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

Structural and Actual Labor Productivity (Business sector)



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

The Outlook for the Labor Market

Measure	2014	2015	2015		2016	2017
			H1	H2		
Output per hour, business ¹ Previous Tealbook	-.4 -.4	1.4 1.6	.4 1.3	2.5 1.8	1.8 1.7	1.8 1.7
Nonfarm private employment ² Previous Tealbook	254 254	202 230	204 253	200 208	165 165	125 123
Labor force participation rate ³ Previous Tealbook	62.8 62.8	62.7 62.7	62.8 62.8	62.7 62.7	62.6 62.6	62.4 62.4
Civilian unemployment rate ³ Previous Tealbook	5.7 5.7	5.3 5.2	5.4 5.3	5.3 5.2	5.2 5.1	5.1 5.0

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

2. Thousands, average monthly changes.

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

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

Inflation Projections

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

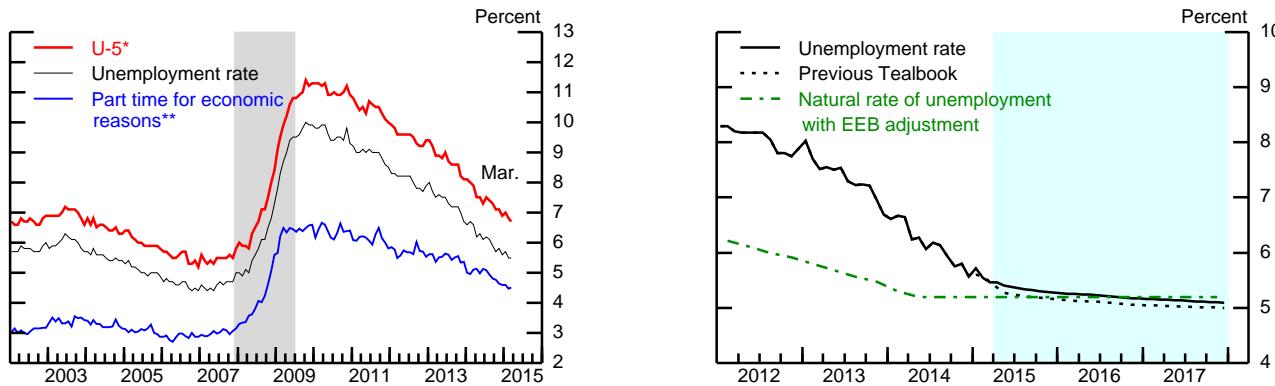
Measure	2014	2015	2015		2016	2017
			H1	H2		
PCE chain-weighted price index Previous Tealbook	1.1 1.1	.6 .6	-.2 -.3	1.5 1.6	1.6 1.7	1.8 1.9
Food and beverages Previous Tealbook	2.8 2.8	.6 .8	-.2 .4	1.4 1.2	1.6 1.6	1.9 1.9
Energy Previous Tealbook	-6.1 -6.1	-11.4 -11.5	-24.4 -24.9	3.8 4.3	2.6 3.3	1.6 2.4
Excluding food and energy Previous Tealbook	1.4 1.4	1.3 1.3	1.2 1.1	1.4 1.5	1.6 1.6	1.8 1.8
Prices of core goods imports ¹ Previous Tealbook	.6 .6	-2.3 -2.4	-4.0 -4.2	-.5 -.7	.9 1.1	1.6 1.7

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

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

Labor Market Developments and Outlook (1)

Measures of Labor Underutilization



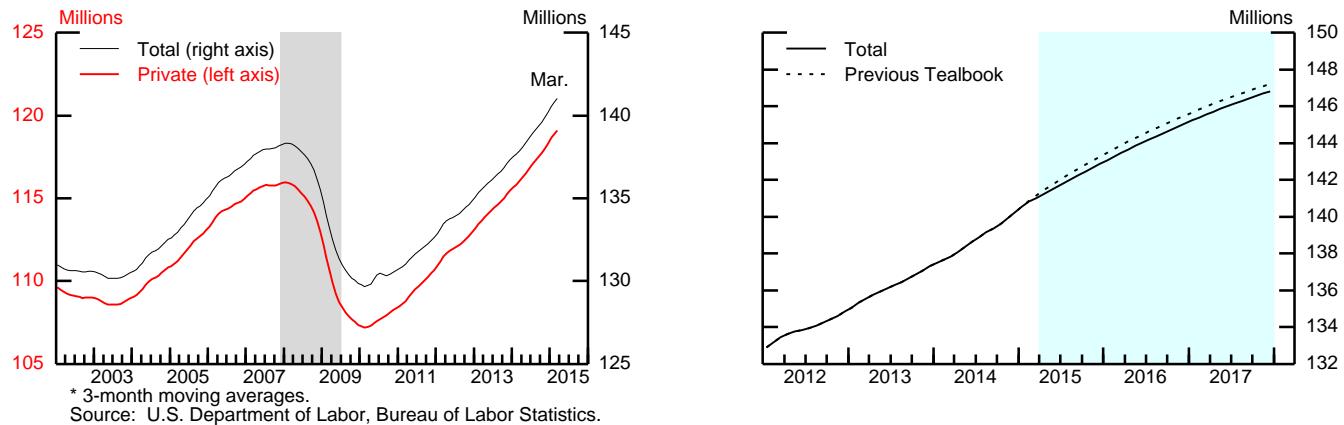
* U-5 measures total unemployed persons plus all marginally attached to the labor force, as a percent of the labor force plus persons marginally attached to the labor force.

** Percent of Current Population Survey employment.

EEB Extended and emergency unemployment benefits.

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

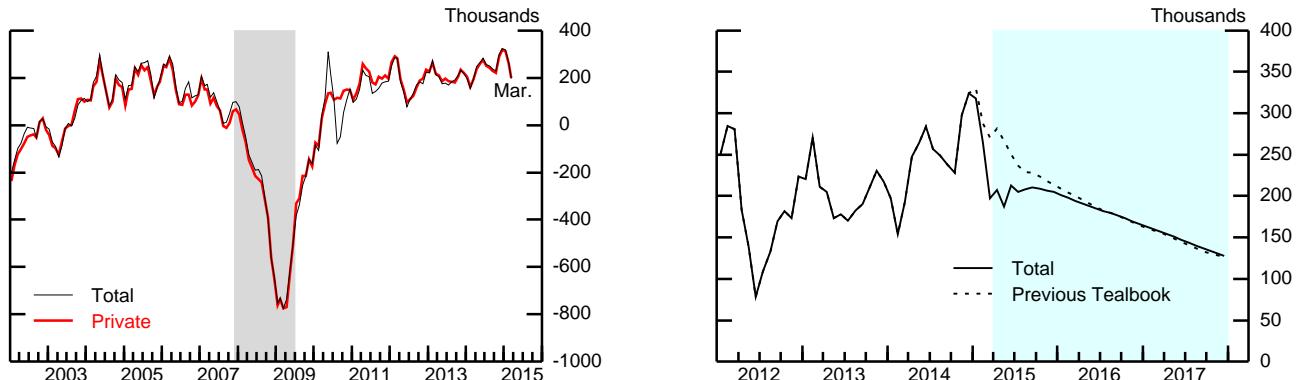
Level of Payroll Employment*



* 3-month moving averages.

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

Change in Payroll Employment*



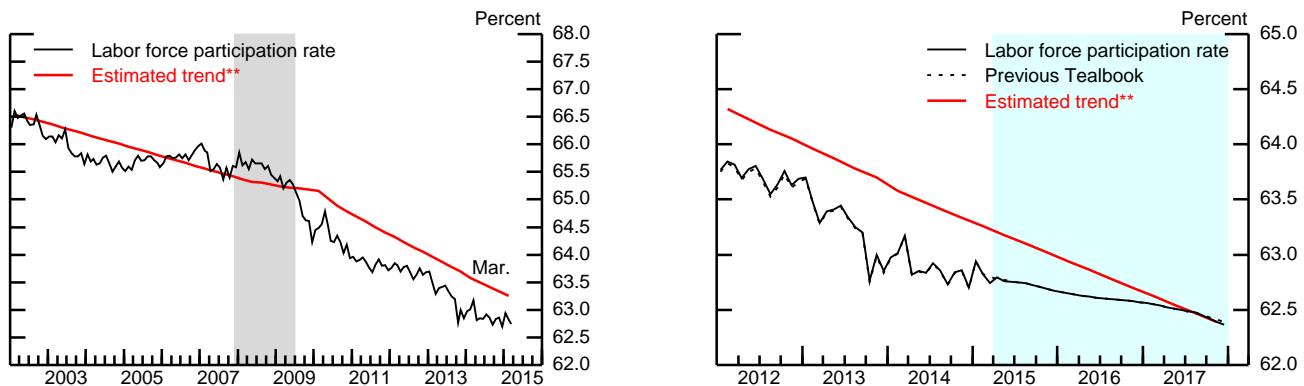
* 3-month moving averages.

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.

Labor Market Developments and Outlook (2)

Labor Force Participation Rate*

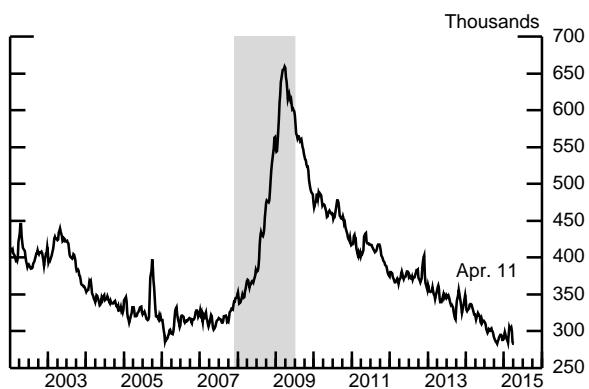


* Published data adjusted by staff to account for changes in population weights.

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

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

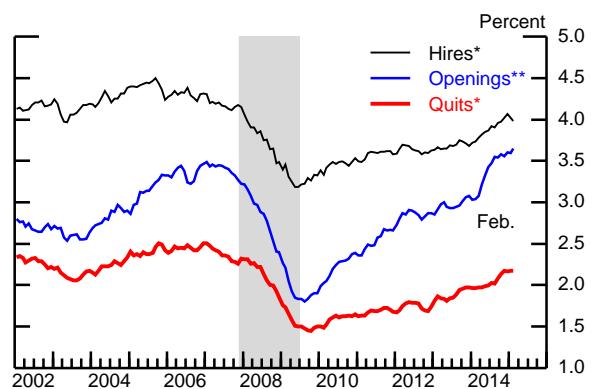
Initial Unemployment Insurance Claims*



* 4-week moving average.

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

Private Hires, Quits, and Job Openings

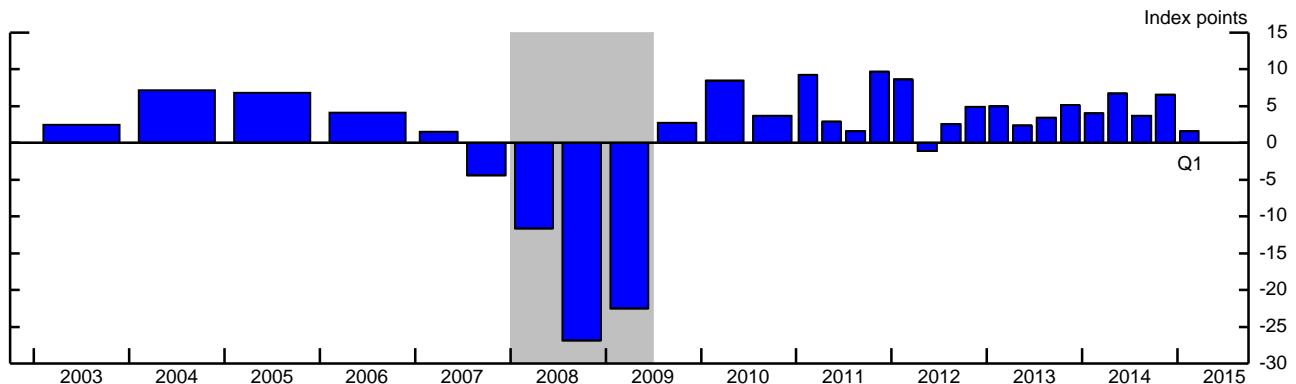


* Percent of private nonfarm payroll employment, 3-month moving average.

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

Source: Job Openings and Labor Turnover Survey.

Average Monthly Change in Labor Market Conditions Index



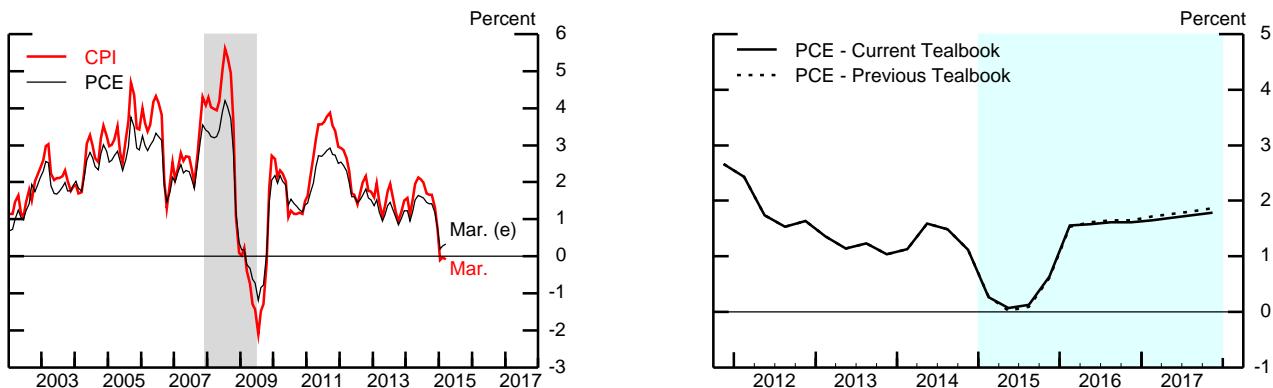
Note: Labor market conditions index estimated by staff.

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

Inflation Developments and Outlook (1)

(Percent change from year-earlier period)

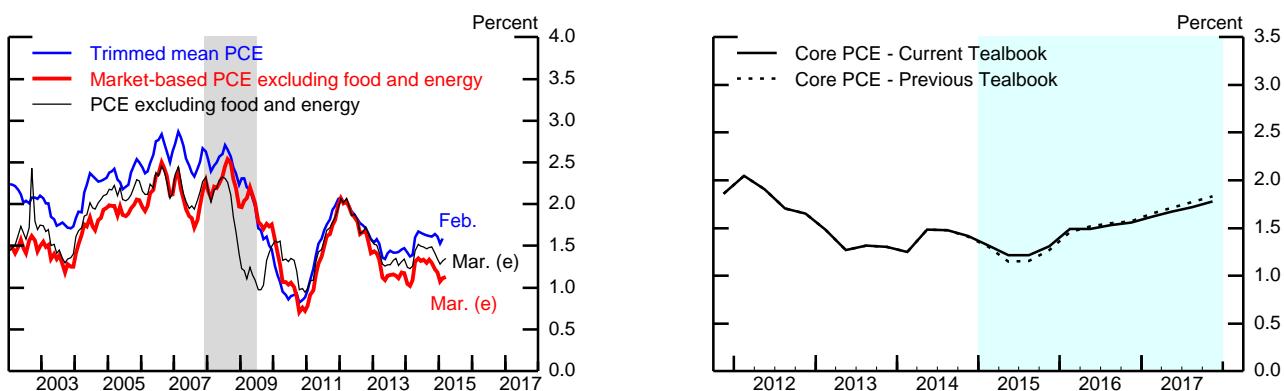
Headline Consumer Price Inflation



Note: PCE prices from January to March 2015 are staff estimates (e).

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

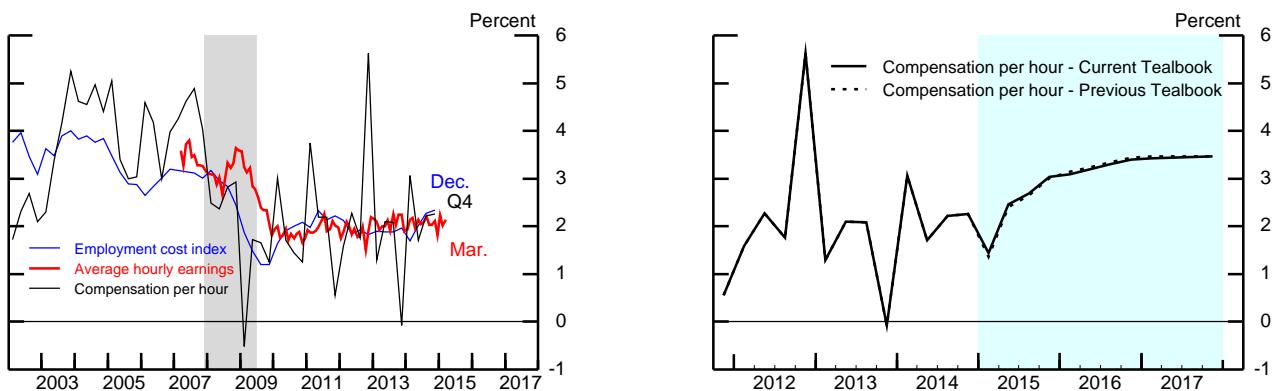
Measures of Underlying PCE Price Inflation



Note: Core PCE prices from January to March 2015 are staff estimates (e).

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

Labor Cost Growth



Note: Compensation per hour is for the business sector. Average hourly earnings are for the private nonfarm sector. The employment cost index is for the private sector.

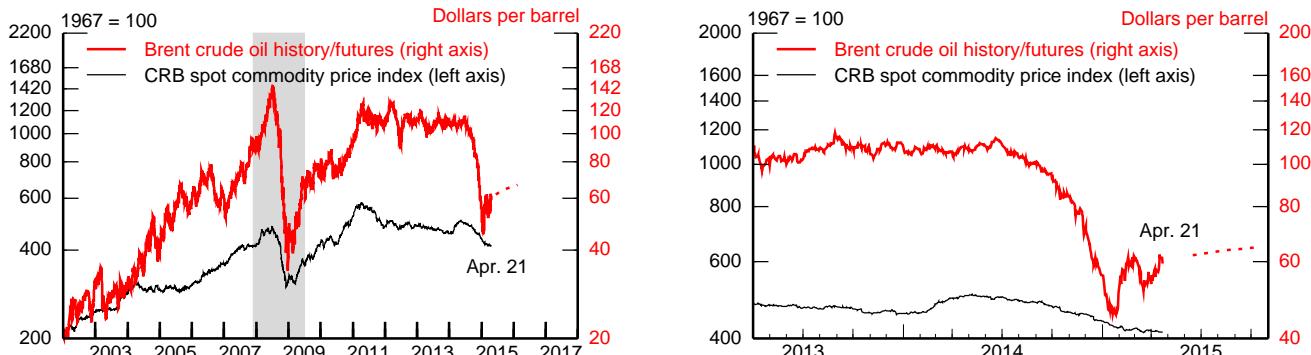
Source: U.S. Department of Labor, Bureau of Labor Statistics.

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)

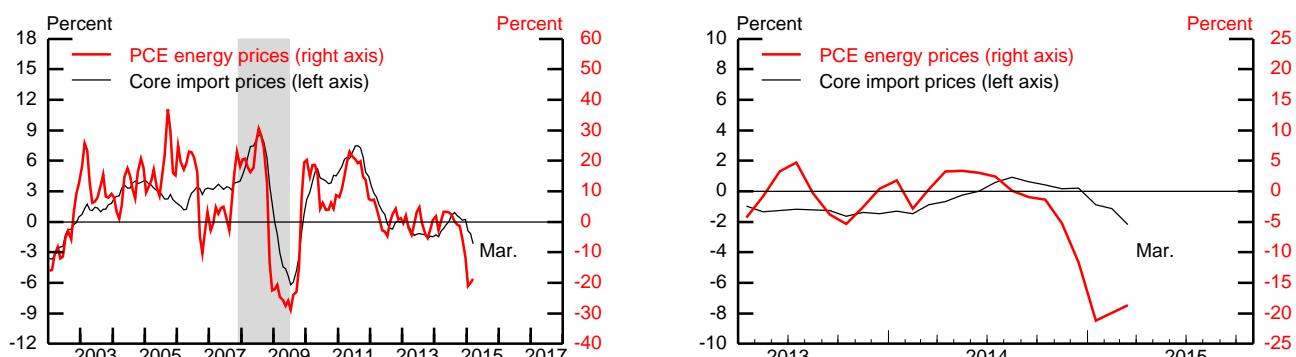
Commodity and Oil Price Levels



Note: Futures prices (dotted lines) are the latest observations on monthly futures contracts.

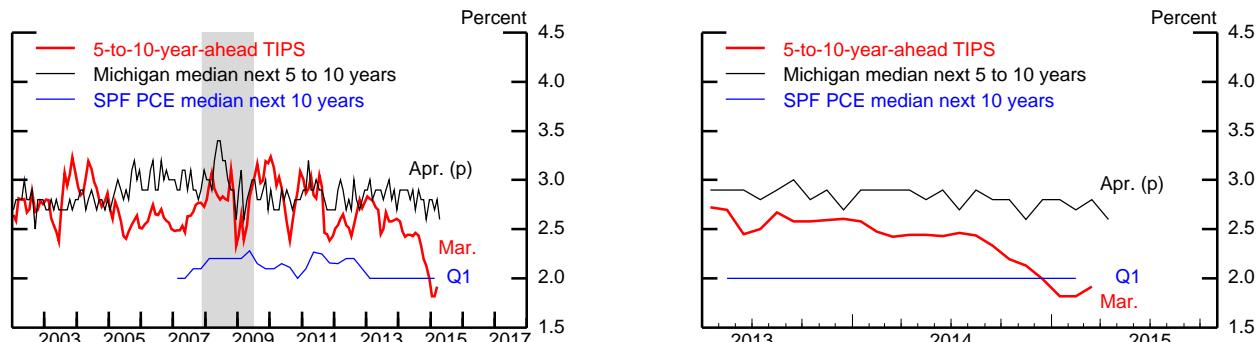
Source: For oil prices, U.S. Department of Energy, Energy Information Agency; for commodity prices, Commodity Research Bureau (CRB).

Energy and Import Price Inflation



Source: For core import prices, U.S. Dept. of Labor, Bureau of Labor Statistics; for PCE, U.S. Dept. of Commerce, Bureau of Economic Analysis.

Long-Term Inflation Expectations



Note: Based on a comparison of an estimated TIPS (Treasury Inflation-Protected Securities) yield curve with an estimated nominal off-the-run Treasury yield curve, with an adjustment for the indexation-lag effect.

p Preliminary.

SPF Survey of Professional Forecasters.

Source: For Michigan, University of Michigan Surveys of Consumers; for SPF, Federal Reserve Bank of Philadelphia; for TIPS, Federal Reserve Board staff calculations.

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

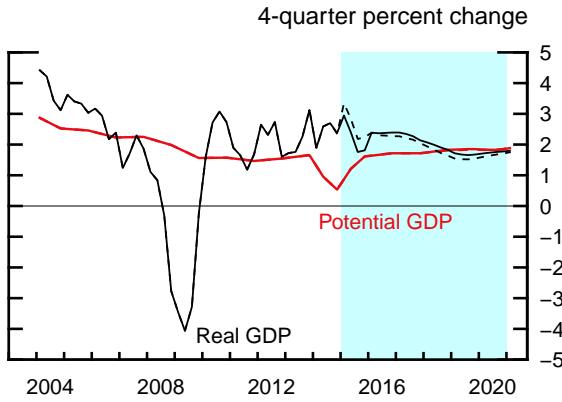
The Long-Term Outlook

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

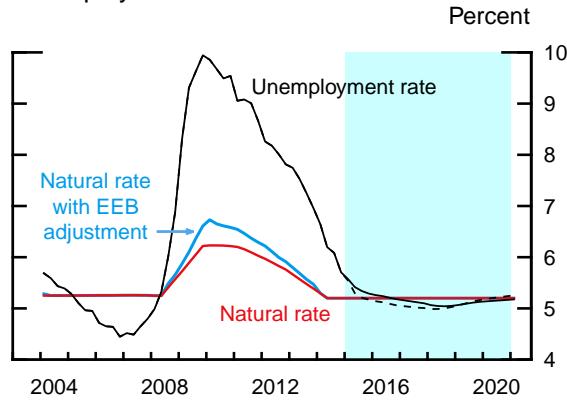
Measure	2015	2016	2017	2018	2019	Longer run
Real GDP Previous Tealbook	1.8 2.2	2.4 2.3	2.1 2.0	1.8 1.6	1.7 1.5	1.9 1.9
Civilian unemployment rate ¹ Previous Tealbook	5.3 5.2	5.2 5.1	5.1 5.0	5.0 5.0	5.1 5.2	5.2 5.2
PCE prices, total Previous Tealbook	.6 .6	1.6 1.7	1.8 1.9	1.9 1.9	2.0 2.0	2.0 2.0
Core PCE prices Previous Tealbook	1.3 1.3	1.6 1.6	1.8 1.8	1.9 1.9	2.0 2.0	2.0 2.0
Federal funds rate ¹ Previous Tealbook	.4 .7	1.4 1.8	2.3 2.7	2.9 3.2	3.2 3.3	3.5 3.5
10-year Treasury yield ¹ Previous Tealbook	2.6 2.9	3.3 3.6	3.7 4.0	4.0 4.1	4.1 4.2	4.3 4.3

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

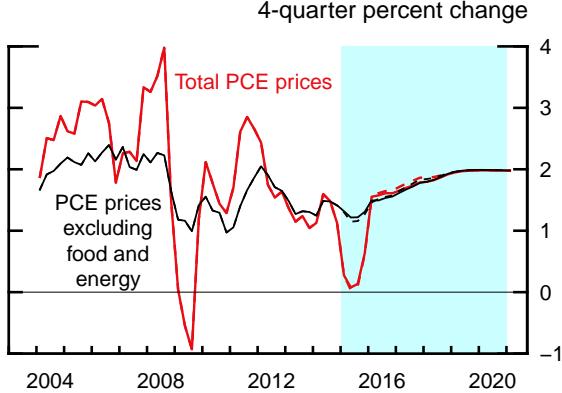
Real GDP



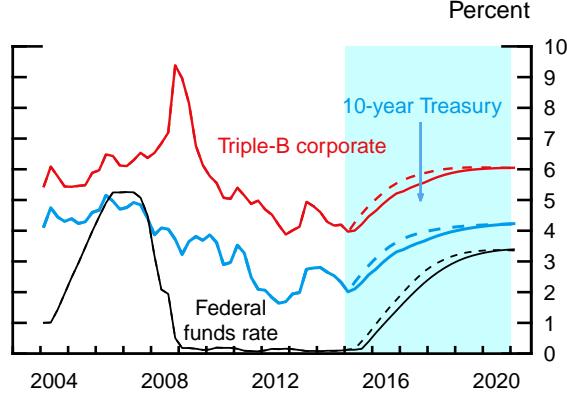
Unemployment Rate



PCE Prices



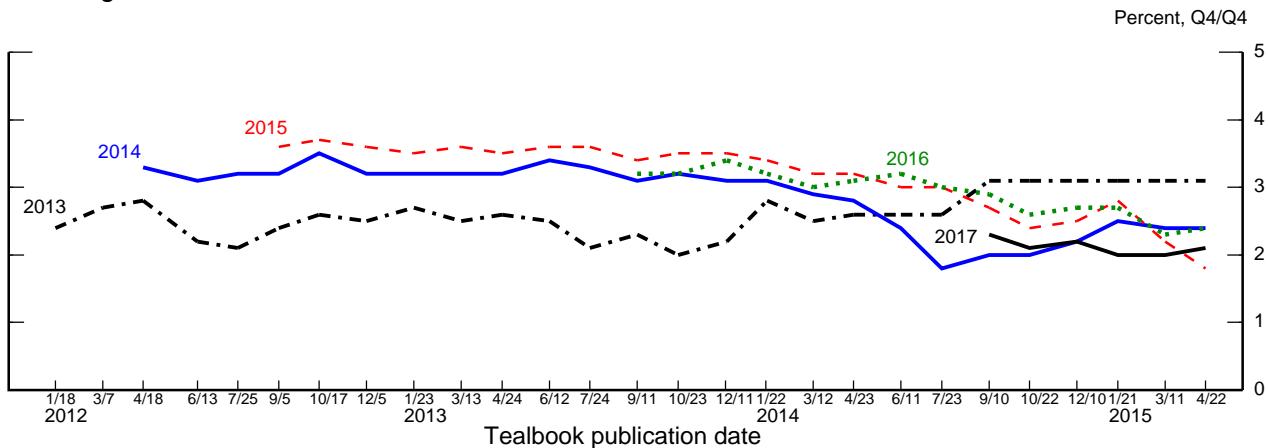
Interest Rates



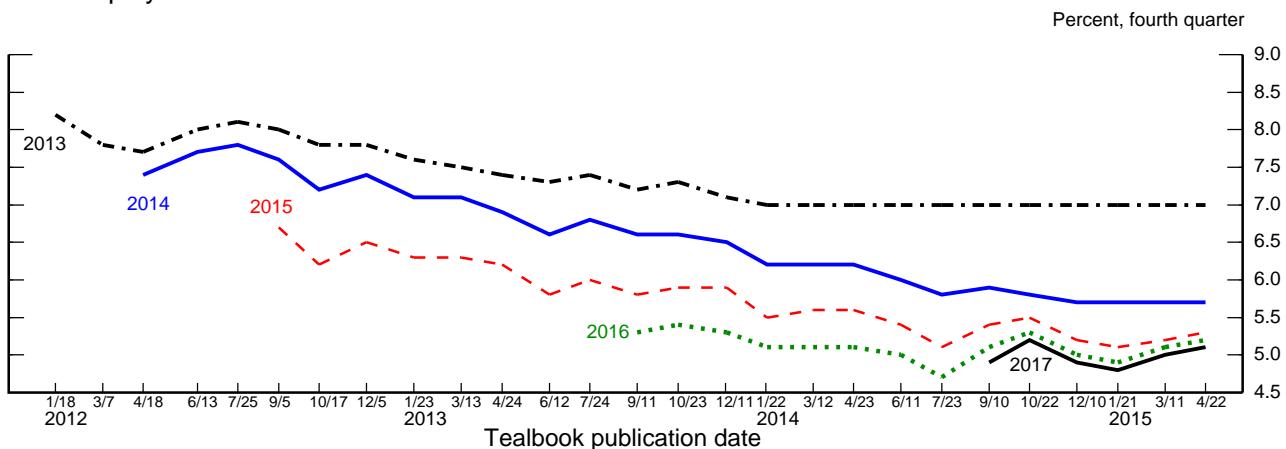
Note: In each panel, shading represents the projection period, and dashed lines are the previous Tealbook.

Evolution of the Staff Forecast

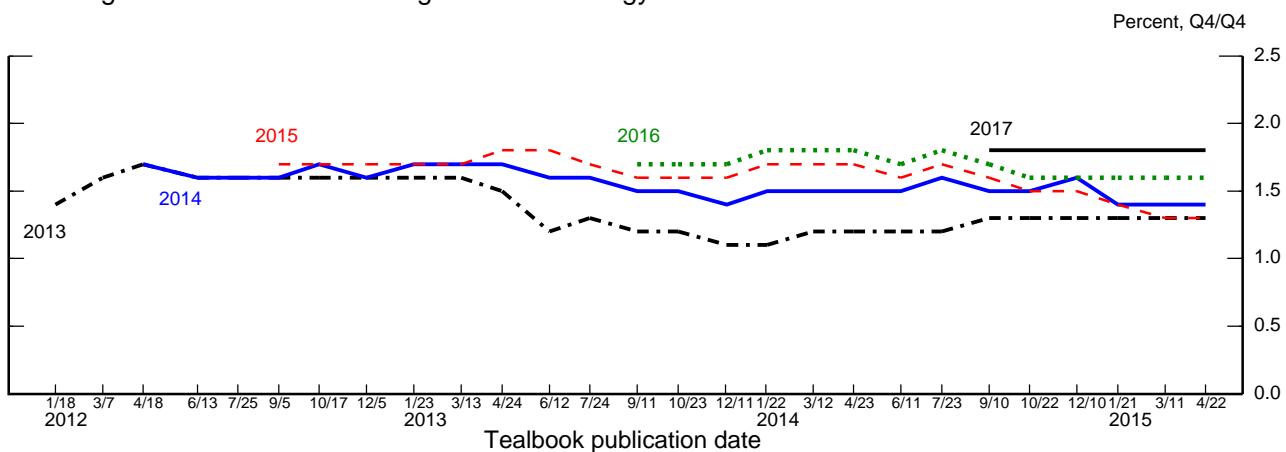
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy



The Foreign GDP Outlook

Real GDP*

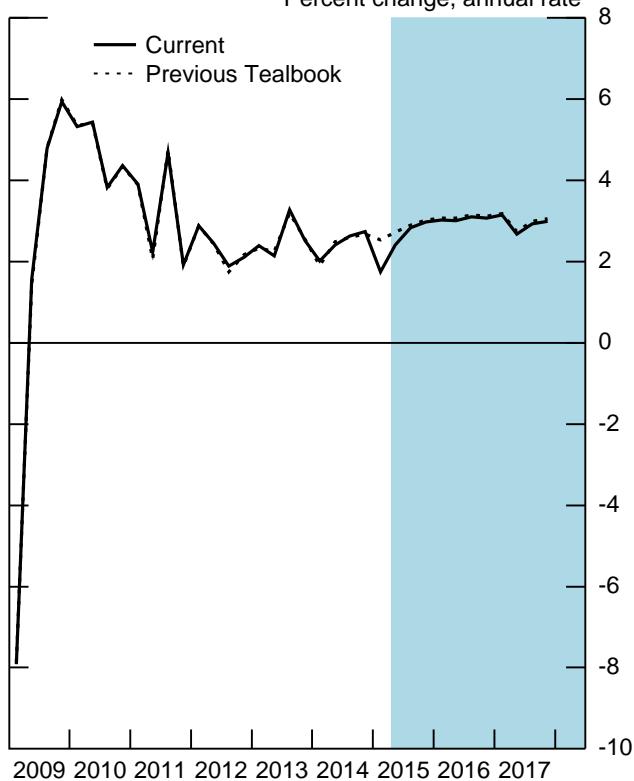
Percent change, annual rate

	2014			2015			2016	2017
	H1	Q3	Q4	Q1	Q2	H2		
1. Total Foreign	2.2	2.6	2.7	1.8	2.4	2.9	3.1	2.9
<i>Previous Tealbook</i>	2.2	2.6	2.7	2.5	2.7	3.0	3.1	3.0
2. Advanced Foreign Economies	1.6	1.7	2.0	1.0	1.8	2.1	2.2	1.9
<i>Previous Tealbook</i>	1.6	1.7	2.0	1.7	1.9	2.2	2.2	2.0
3. Canada	2.4	3.2	2.4	0.2	1.6	2.2	2.4	2.1
4. Euro Area	0.7	0.7	1.3	1.7	1.7	1.9	2.1	2.3
5. Japan	-0.8	-2.6	1.5	1.0	1.5	1.5	1.3	-0.3
6. United Kingdom	3.5	2.5	2.5	2.0	2.7	2.6	2.5	2.3
7. Emerging Market Economies	2.8	3.6	3.4	2.5	3.0	3.7	3.9	3.9
<i>Previous Tealbook</i>	2.8	3.5	3.3	3.3	3.5	3.7	4.0	4.0
8. China	7.0	8.1	7.0	5.3	6.3	7.2	6.6	6.5
9. Emerging Asia ex. China	3.0	4.0	3.9	3.8	4.2	4.4	4.4	4.2
10. Mexico	2.8	2.1	2.7	1.9	2.7	3.3	3.1	3.2
11. Brazil	-1.5	0.6	1.3	-1.7	-2.1	0.3	1.9	2.3

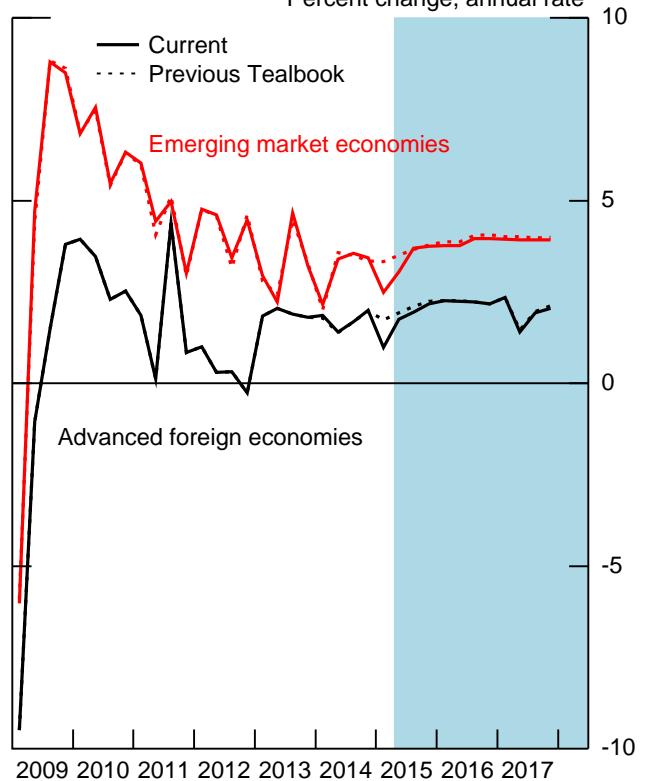
* GDP aggregates weighted by shares of U.S. merchandise exports.

Total Foreign GDP

Percent change, annual rate

**Foreign GDP**

Percent change, annual rate



The Foreign Inflation Outlook

Consumer Prices*

Percent change, annual rate

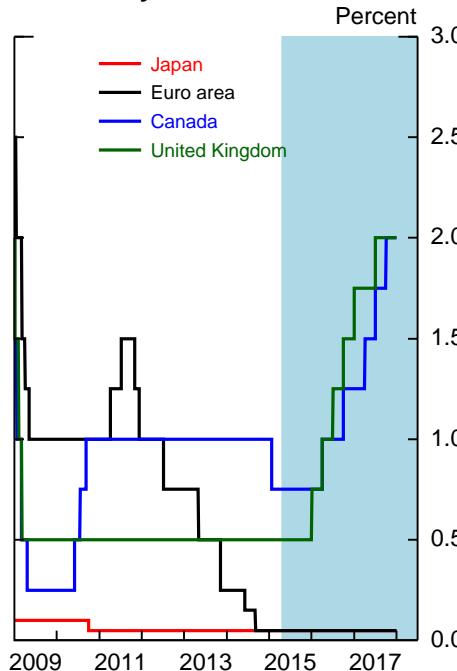
	2014			2015			2016	2017
	H1	Q3	Q4	Q1	Q2	H2		
1. Total Foreign	2.5	2.0	1.1	-0.1	2.0	2.3	2.4	2.6
<i>Previous Tealbook</i>	2.5	2.0	1.1	-0.0	2.1	2.3	2.5	2.6
2. Advanced Foreign Economies	2.2	0.9	-0.4	-0.8	1.1	1.4	1.6	2.0
<i>Previous Tealbook</i>	2.2	0.9	-0.4	-0.7	1.1	1.4	1.6	2.0
3. Canada	3.2	1.2	-0.0	-0.1	1.7	1.8	1.9	2.0
4. Euro Area	0.4	0.5	-0.6	-1.6	1.0	1.4	1.6	1.7
5. Japan	4.9	1.2	-0.6	0.1	0.8	0.8	1.1	2.7
6. United Kingdom	1.6	1.2	-0.7	-1.8	1.2	1.8	1.8	1.9
7. Emerging Market Economies	2.7	2.9	2.3	0.4	2.7	3.0	3.1	3.1
<i>Previous Tealbook</i>	2.8	2.9	2.3	0.5	2.8	3.1	3.1	3.1
8. China	1.4	2.2	1.0	-0.4	2.0	2.4	2.5	2.5
9. Emerging Asia ex. China	2.8	2.1	1.3	-0.5	2.5	3.0	3.2	3.3
10. Mexico	4.1	4.4	4.2	0.3	2.7	3.3	3.3	3.3
11. Brazil	7.0	6.2	6.0	11.1	9.9	5.9	5.6	5.4

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

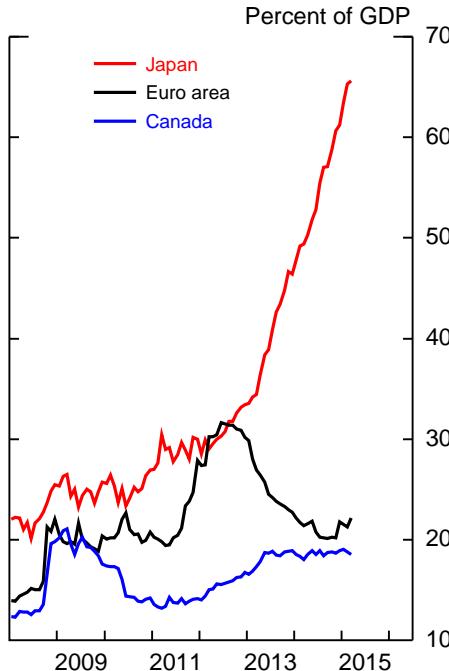
Int'l Econ Devel & Outlook

Foreign Monetary Policy

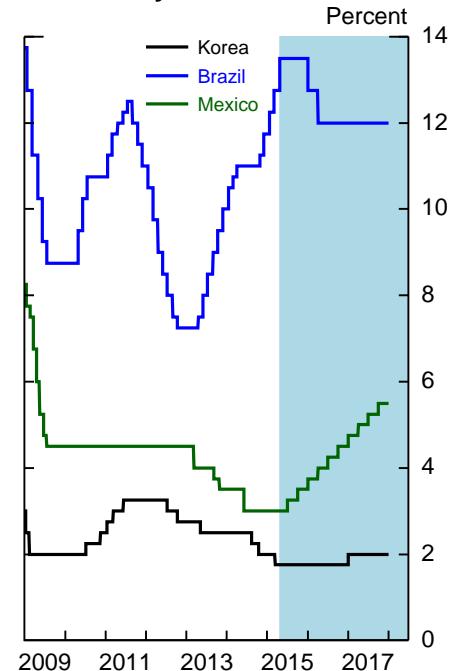
AFE Policy Rates



AFE Central Bank Balance Sheets

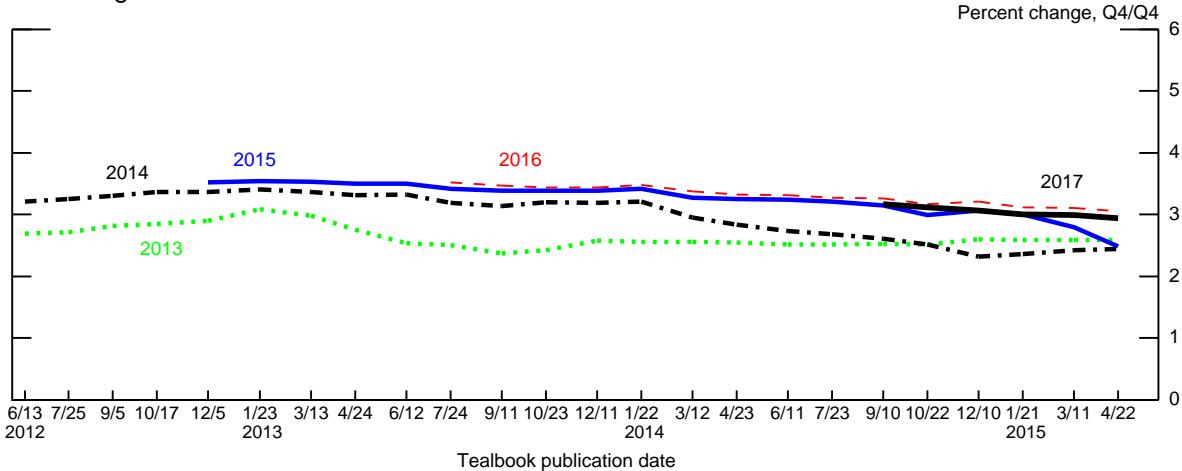


EME Policy Rates

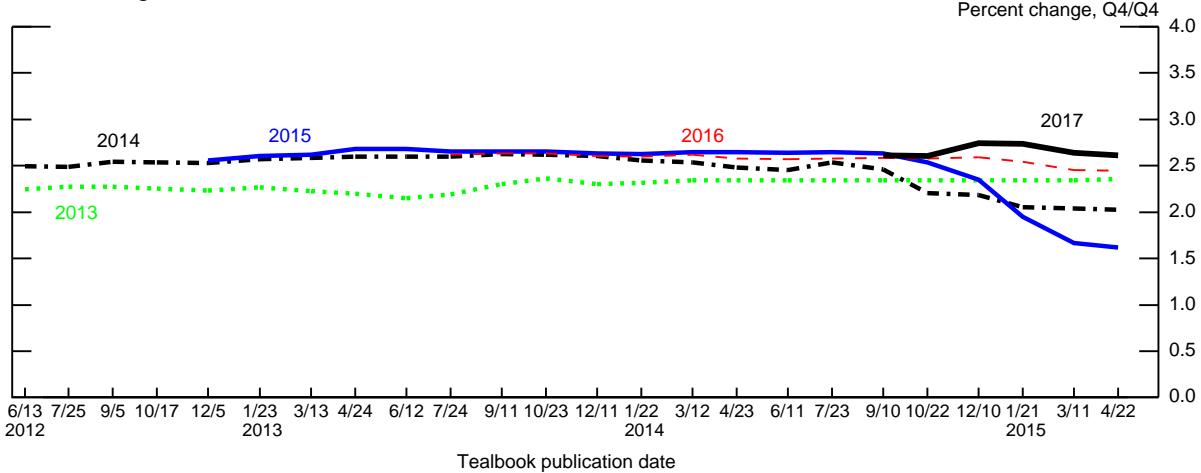


Evolution of Staff's International Forecast

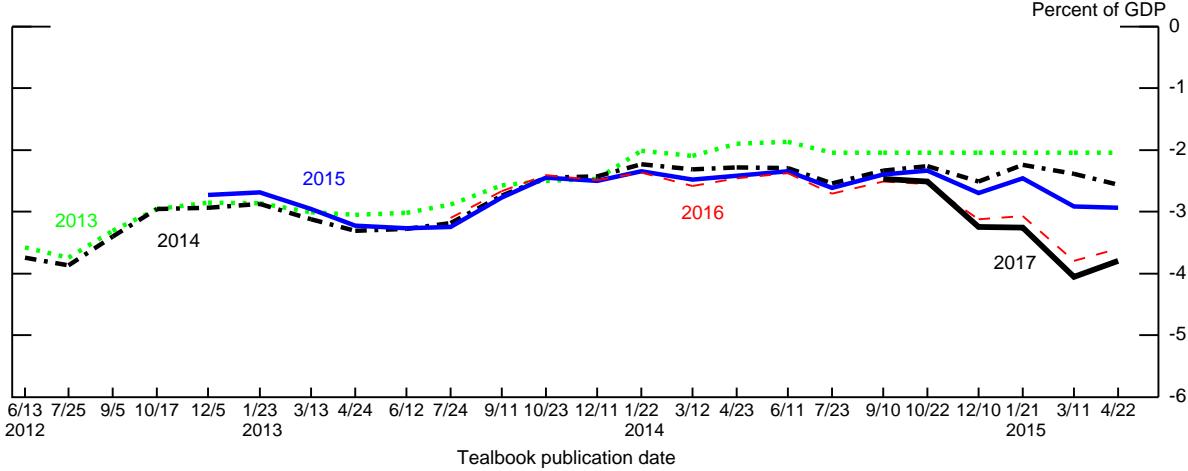
Total Foreign GDP



Total Foreign CPI

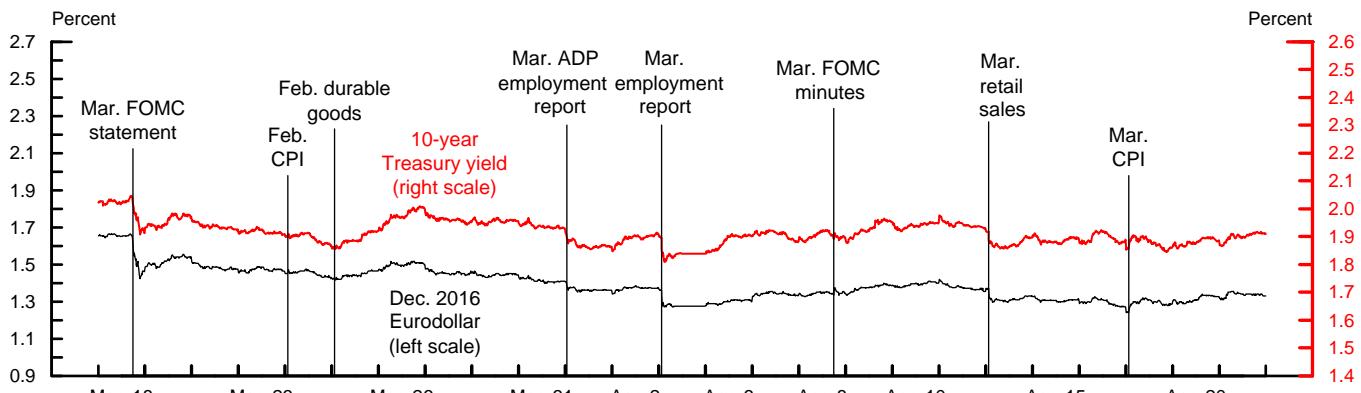


U.S. Current Account Balance



Treasury Yields and Policy Expectations

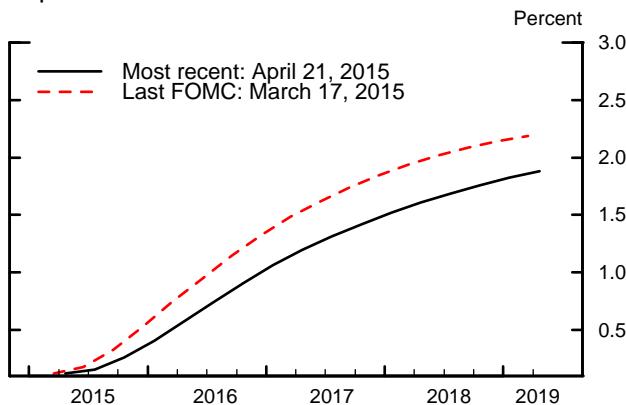
Selected Interest Rates



Note: 5-minute intervals. 8:00 a.m. to 4:00 p.m.

Source: Bloomberg.

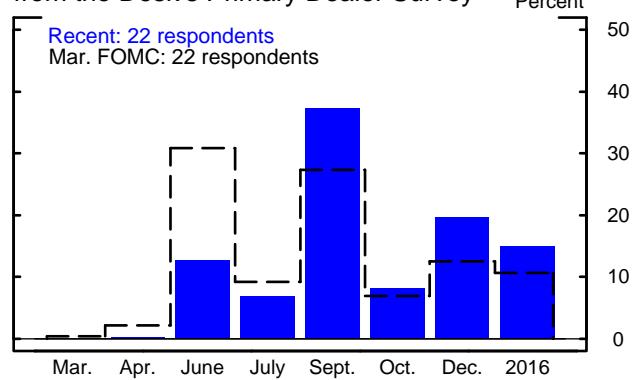
Implied Federal Funds Rate



Note: Path is estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points.

Source: Bloomberg; staff estimation.

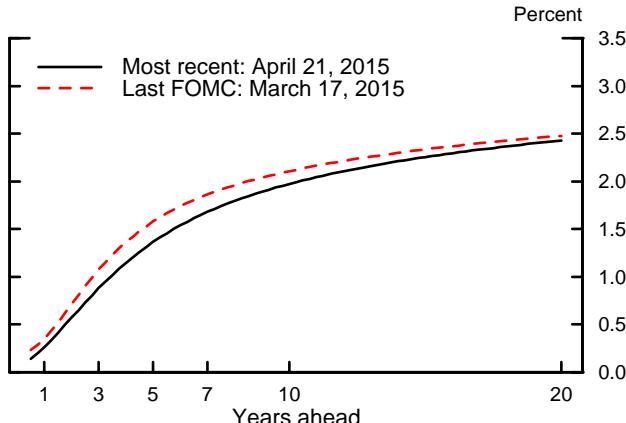
Distribution of Expected Timing of First Rate Increase from the Desk's Primary Dealer Survey



Note: Average across dealers of their individual probabilities attached to the first tightening occurring at a particular meeting. For 2016, expected timing is during or after that year.

Source: Desk's primary dealer survey from April 20, 2015.

Treasury Yield Curve



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

Source: Federal Reserve Board.

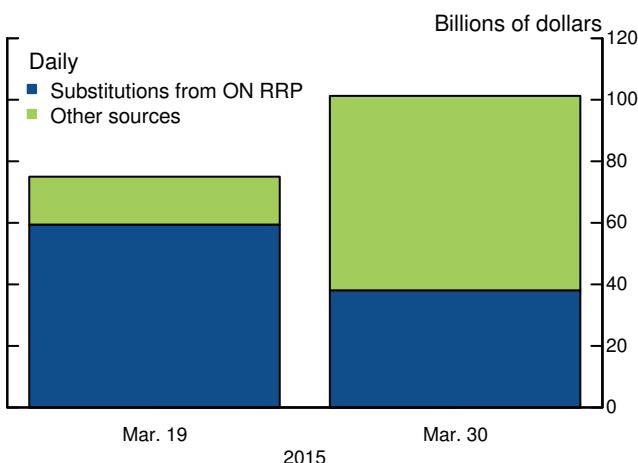
Inflation Compensation



Note: Estimates based on smoothed nominal and inflation-indexed Treasury yield curves.

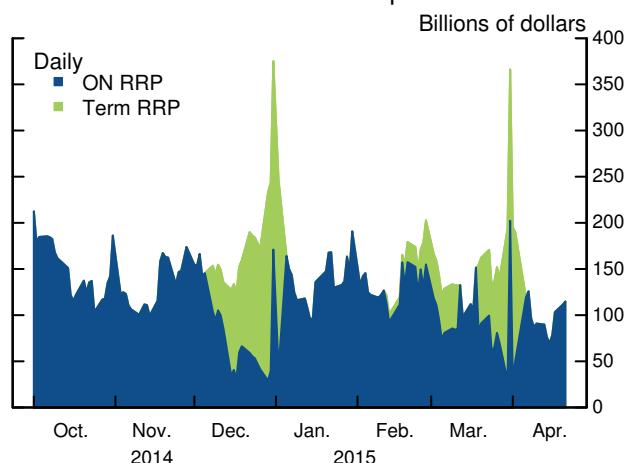
* Adjusted for lagged indexation of Treasury Inflation-Protected Securities (carry effect)

Source: Barclays PLC; Federal Reserve Bank of New York; staff estimates.

Funding Markets and Policy Implementation**Sources of Term RRP Awards**

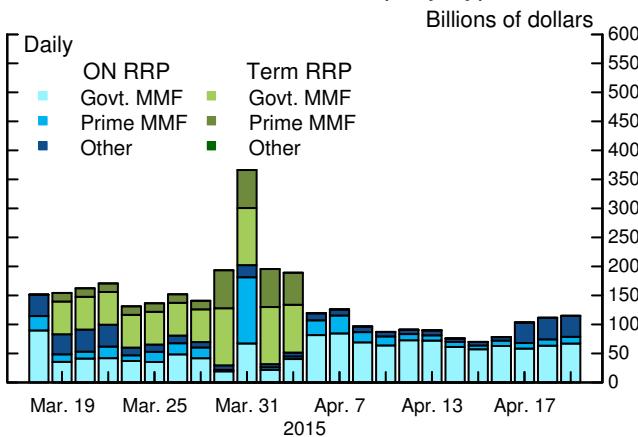
Note: ON RRP is overnight reverse repurchase agreement; term RRP is term reverse repurchase agreement.

Source: Federal Reserve Bank of New York.

ON RRP and Term RRP Take-Up

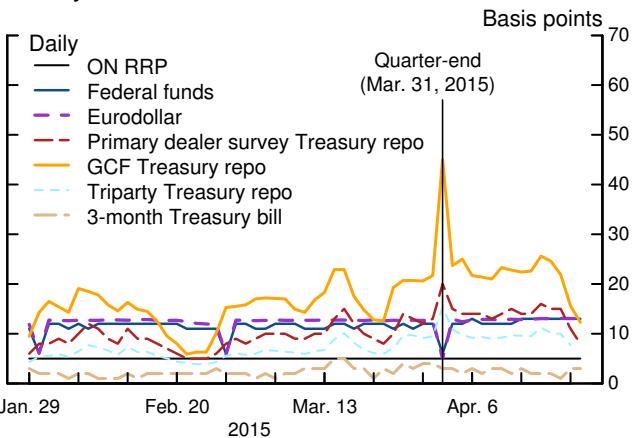
Note: ON RRP is overnight reverse repurchase agreement; term RRP is term reverse repurchase agreement.

Source: Federal Reserve Bank of New York.

ON RRP and Term RRP Take-Up, by Type

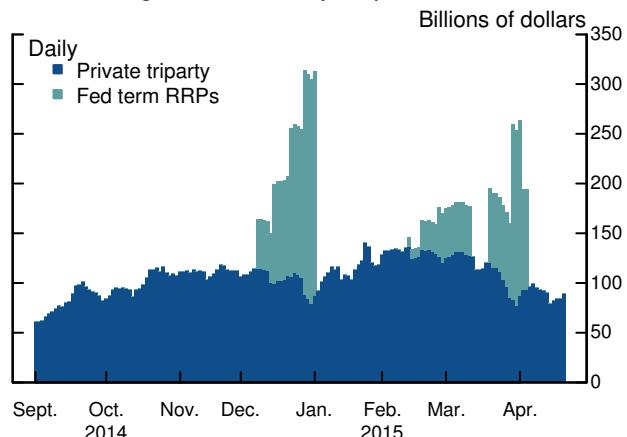
Note: ON RRP is overnight reverse repurchase agreement; term RRP is term reverse repurchase agreement; MMF is money market fund.

Source: Federal Reserve Bank of New York.

Money Market Rates

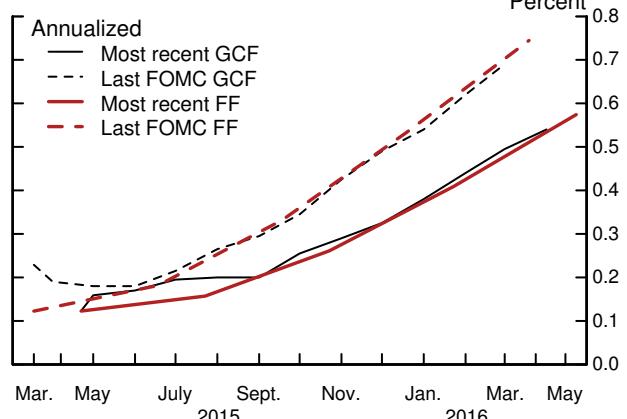
Note: ON RRP is overnight reverse repurchase agreement; GCF is general collateral finance; repo is repurchase agreement.

Source: Depository Trust & Clearing Corporation; Federal Reserve Bank of New York; Federal Reserve Board.

Outstanding Term Treasury Repo

Note: Term refers to all trades having a tenor greater than 1 day; excludes trades between related counterparties. Term RRP is term reverse repurchase agreement; repo is repurchase agreement.

Source: Federal Reserve Bank of New York.

Expected Overnight Treasury GCF Repo and Fed Funds Rates

Note: Last FOMC is March 17, 2015; most recent is April 21, 2015. Federal funds (FF) rates are estimated using overnight index swap quotes with a spline approach; GCF rates are calculated using GCF Treasury repo futures quotes.

Source: Bloomberg; staff estimates.

Alternative Scenarios

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

Measure and scenario	2015		2016	2017	2018-19
	H1	H2			
<i>Real GDP</i>					
Extended Tealbook baseline	1.2	2.4	2.4	2.1	1.8
Persistent slowdown in economic activity	.5	.6	.6	1.7	2.5
Faster growth with higher inflation	2.1	3.9	3.6	2.0	1.4
Lower long-term inflation expectations	1.2	2.4	2.4	2.2	1.8
Room to grow	1.4	2.7	3.0	3.2	3.0
Greek exit with severe spillovers	.8	.5	1.0	2.2	2.3
Stronger dollar	1.2	1.8	2.0	2.2	1.9
<i>Unemployment rate¹</i>					
Extended Tealbook baseline	5.4	5.3	5.2	5.1	5.1
Persistent slowdown in economic activity	5.6	5.8	6.4	6.5	5.8
Faster growth with higher inflation	5.2	4.8	4.3	4.4	4.8
Lower long-term inflation expectations	5.4	5.3	5.2	5.1	5.0
Room to grow	5.4	5.3	5.1	4.8	4.1
Greek exit with severe spillovers	5.5	5.6	6.2	6.2	5.9
Stronger dollar	5.4	5.4	5.5	5.4	5.4
<i>Total PCE prices</i>					
Extended Tealbook baseline	-.2	1.5	1.6	1.8	1.9
Persistent slowdown in economic activity	-.2	1.5	1.6	1.7	1.8
Faster growth with higher inflation	-.2	1.7	2.0	2.3	2.4
Lower long-term inflation expectations	-.3	1.2	1.1	1.2	1.5
Room to grow	-.3	1.3	1.3	1.5	1.7
Greek exit with severe spillovers	-.4	.7	.6	1.2	1.7
Stronger dollar	-.8	1.0	1.4	1.7	1.8
<i>Core PCE prices</i>					
Extended Tealbook baseline	1.2	1.4	1.6	1.8	2.0
Persistent slowdown in economic activity	1.2	1.4	1.5	1.7	1.8
Faster growth with higher inflation	1.3	1.7	2.0	2.3	2.4
Lower long-term inflation expectations	1.1	1.1	1.1	1.2	1.5
Room to grow	1.2	1.2	1.3	1.5	1.7
Greek exit with severe spillovers	1.1	.9	.7	1.2	1.7
Stronger dollar	.9	.9	1.3	1.7	1.8
<i>Federal funds rate¹</i>					
Extended Tealbook baseline	.1	.4	1.4	2.3	3.2
Persistent slowdown in economic activity	.1	.3	.4	.5	1.6
Faster growth with higher inflation	.1	.6	2.7	4.2	5.1
Lower long-term inflation expectations	.1	.4	1.2	1.8	2.7
Room to grow	.1	.1	.3	1.0	2.5
Greek exit with severe spillovers	.1	.3	.3	.5	2.0
Stronger dollar	.1	.3	1.0	1.9	2.9

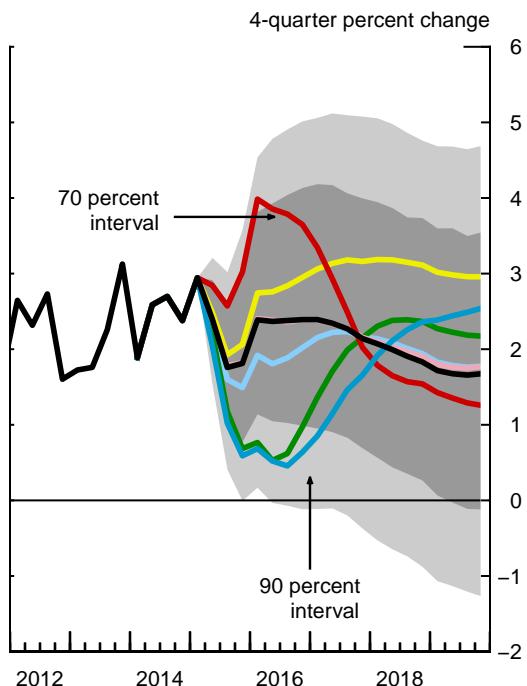
1. Percent, average for the final quarter of the period.

Forecast Confidence Intervals and Alternative Scenarios

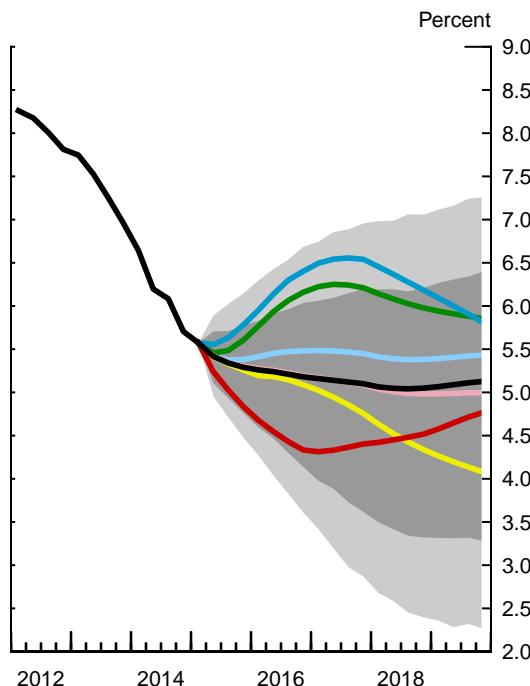
Confidence Intervals Based on FRB/US Stochastic Simulations

- | | | |
|---|--|--|
| ■ Extended Tealbook baseline
■ Persistent slowdown in economic activity
■ Faster growth with higher inflation | ■ Lower long-term inflation expectations
■ Room to grow | ■ Greek exit with severe spillovers
■ Stronger dollar |
|---|--|--|

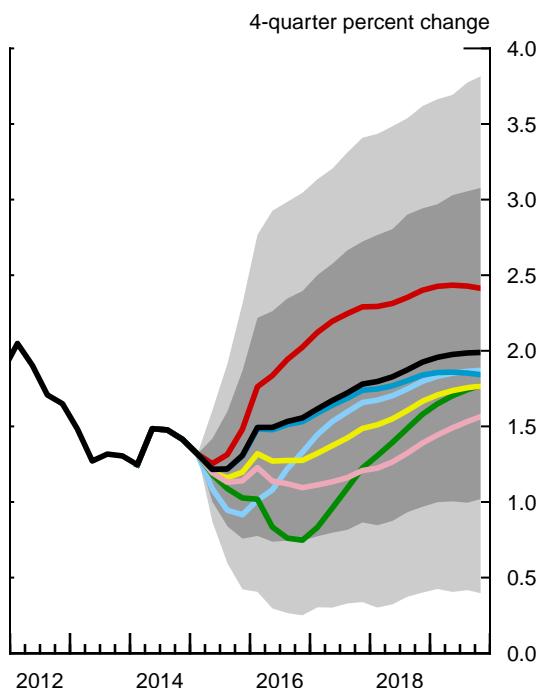
Real GDP



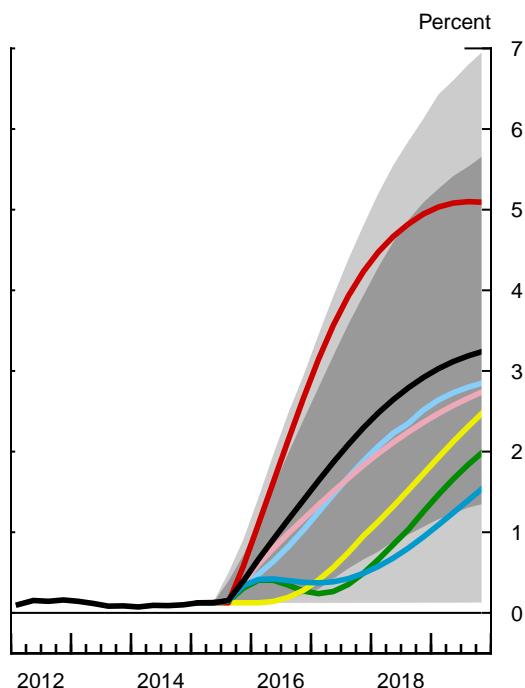
Unemployment Rate



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**

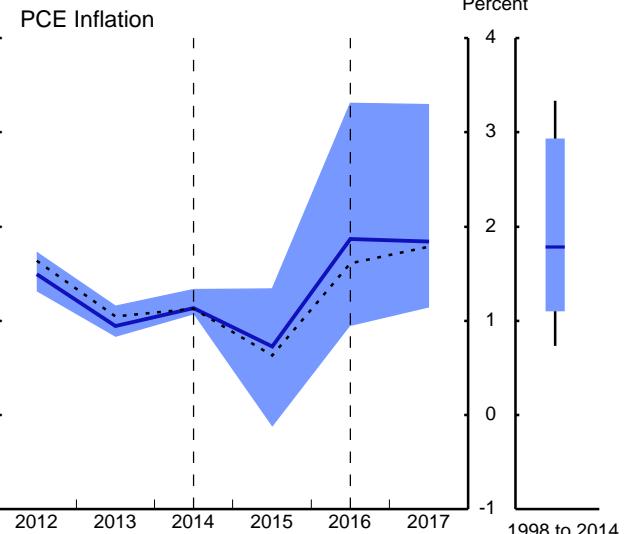
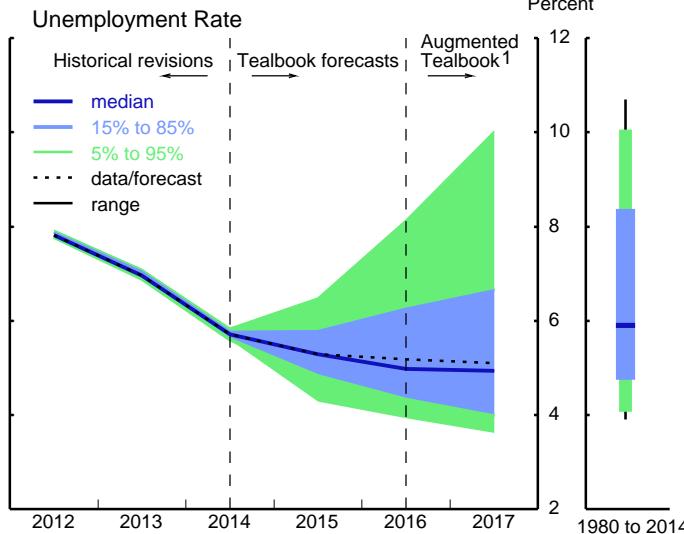
Measure	2015	2016	2017	2018	2019
<i>Real GDP</i> <i>(percent change, Q4 to Q4)</i>					
Projection	1.8	2.4	2.1	1.8	1.7
Confidence interval					
Tealbook forecast errors	.1–3.4	-.2–3.9	-.8–3.5
FRB/US stochastic simulations	.8–2.9	1.0–4.1	.7–4.0	.3–3.7	-.1–3.5
<i>Civilian unemployment rate</i> <i>(percent, Q4)</i>					
Projection	5.3	5.2	5.1	5.0	5.1
Confidence interval					
Tealbook forecast errors	4.8–5.8	4.3–6.3	4.0–6.7
FRB/US stochastic simulations	4.8–5.8	4.1–6.0	3.6–6.2	3.3–6.2	3.3–6.4
<i>PCE prices, total</i> <i>(percent change, Q4 to Q4)</i>					
Projection	.6	1.6	1.8	1.9	2.0
Confidence interval					
Tealbook forecast errors	-.1–1.3	.9–3.3	1.1–3.3
FRB/US stochastic simulations	.0–1.3	.7–2.6	.8–2.8	.9–3.0	.9–3.1
<i>PCE prices excluding</i> <i>food and energy</i> <i>(percent change, Q4 to Q4)</i>					
Projection	1.3	1.6	1.8	1.9	2.0
Confidence interval					
Tealbook forecast errors	.8–1.8	.8–2.5
FRB/US stochastic simulations	.8–1.9	.7–2.4	.9–2.7	1.0–2.9	1.0–3.1
<i>Federal funds rate</i> <i>(percent, Q4)</i>					
Projection	.4	1.4	2.3	2.9	3.2
Confidence interval					
FRB/US stochastic simulations	.1–.7	.2–2.4	.7–3.9	1.1–5.1	1.4–5.7

Note: Shocks underlying FRB/US stochastic simulations are randomly drawn from the 1969–2014 set of model equation residuals. Intervals derived from Tealbook forecast errors are based on projections made from 1980 to 2014 for real GDP and unemployment and from 1998 to 2014 for PCE prices. The intervals for real GDP, unemployment, and total PCE prices are extended into 2017 using information from the Blue Chip survey and forecasts from the CBO and CEA.

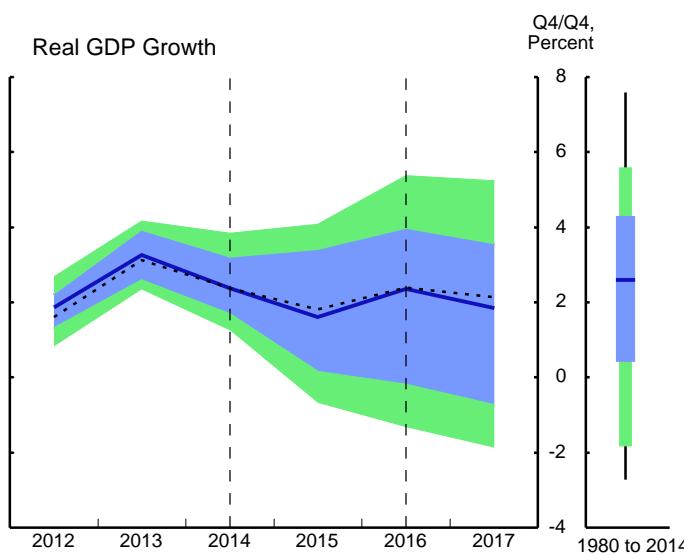
... Not applicable.

Prediction Intervals Derived from Historical Tealbook Forecast Errors

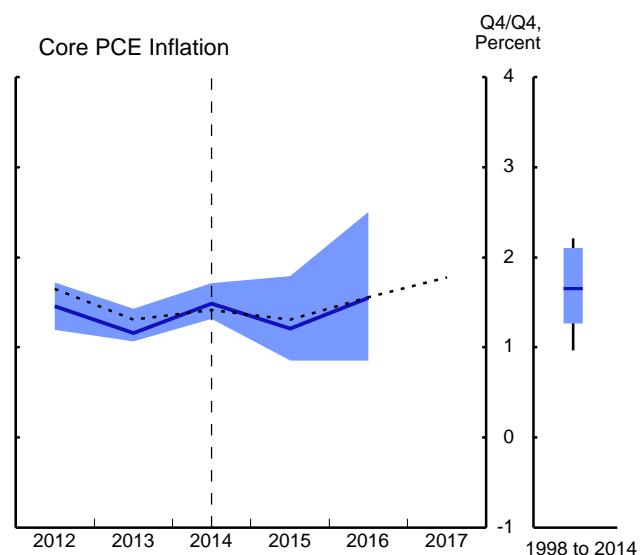
Forecast Error Percentiles



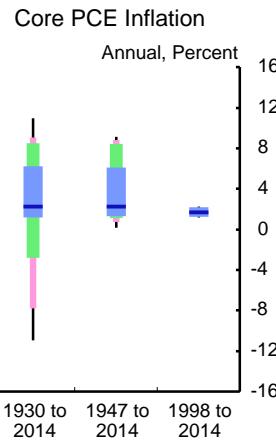
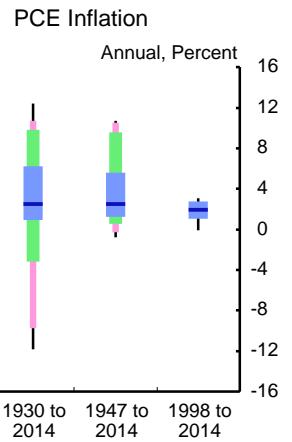
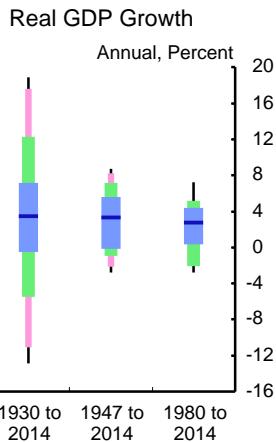
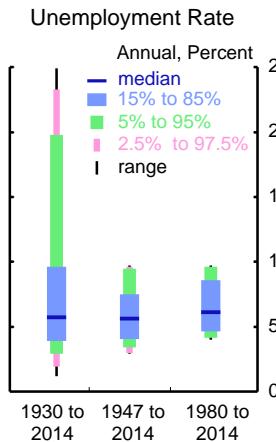
Real GDP Growth



Core PCE Inflation



Historical Distributions



1. Augmented Tealbook prediction intervals use 1- and 2-year-ahead forecast errors from Blue Chip, CBO, and CEA to extend the Tealbook prediction intervals through 2017.

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

	Nominal GDP		Real GDP		PCE price index		Core PCE price index		Unemployment rate ¹	
Interval	03/11/15	04/22/15	03/11/15	04/22/15	03/11/15	04/22/15	03/11/15	04/22/15	03/11/15	04/22/15
<i>Quarterly</i>										
2014:Q1	.8	-.8	-2.1	-2.1	1.4	1.4	1.2	1.2	6.6	6.6
Q2	6.8	6.8	4.6	4.6	2.3	2.3	2.0	2.0	6.2	6.2
Q3	6.4	6.4	5.0	5.0	1.2	1.2	1.4	1.4	6.1	6.1
Q4	2.1	2.4	2.1	2.2	-.4	-.4	1.1	1.1	5.7	5.7
2015:Q1	1.7	.3	1.7	.1	-2.0	-2.0	.8	.8	5.5	5.6
Q2	4.8	4.6	2.6	2.4	1.3	1.5	1.4	1.6	5.3	5.4
Q3	3.9	3.7	2.3	2.4	1.5	1.5	1.4	1.4	5.2	5.3
Q4	4.1	4.2	2.4	2.4	1.6	1.6	1.5	1.4	5.2	5.3
2016:Q1	4.2	4.3	2.3	2.4	1.6	1.6	1.5	1.6	5.1	5.3
Q2	4.0	4.1	2.2	2.3	1.7	1.6	1.6	1.6	5.1	5.2
Q3	4.0	4.2	2.3	2.4	1.7	1.6	1.6	1.6	5.1	5.2
Q4	4.0	4.2	2.3	2.5	1.7	1.6	1.6	1.5	5.1	5.2
<i>Two-quarter²</i>										
2014:Q2	2.9	2.9	1.2	1.2	1.9	1.9	1.6	1.6	-.8	-.8
Q4	4.3	4.4	3.5	3.6	.4	.4	1.2	1.2	-.5	-.5
2015:Q2	3.3	2.4	2.2	1.2	-.3	-.2	1.1	1.2	-.4	-.3
Q4	4.0	3.9	2.3	2.4	1.6	1.5	1.5	1.4	-.1	-.1
2016:Q2	4.1	4.2	2.3	2.3	1.7	1.6	1.6	1.6	-.1	-.1
Q4	4.0	4.2	2.3	2.4	1.7	1.6	1.6	1.6	.0	.0
<i>Four-quarter³</i>										
2013:Q4	4.6	4.6	3.1	3.1	1.0	1.0	1.3	1.3	-.8	-.8
2014:Q4	3.6	3.7	2.4	2.4	1.1	1.1	1.4	1.4	-1.3	-1.3
2015:Q4	3.6	3.2	2.2	1.8	.6	.6	1.3	1.3	-.5	-.4
2016:Q4	4.1	4.2	2.3	2.4	1.7	1.6	1.6	1.6	-.1	-.1
2017:Q4	3.9	4.0	2.0	2.1	1.9	1.8	1.8	1.8	-.1	-.1
<i>Annual</i>										
2013	3.7	3.7	2.2	2.2	1.2	1.2	1.3	1.3	7.4	7.4
2014	3.9	3.9	2.4	2.4	1.3	1.3	1.4	1.4	6.2	6.2
2015	3.7	3.3	2.6	2.2	.3	.3	1.2	1.2	5.3	5.4
2016	4.1	4.2	2.3	2.4	1.6	1.6	1.5	1.5	5.1	5.2
2017	4.0	4.1	2.2	2.3	1.8	1.7	1.7	1.7	5.0	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.

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

Item	2014			2015				2016				2017 ¹				
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2014 ¹	2015 ¹	2016 ¹	2017 ¹	
Real GDP <i>Previous Tealbook</i>	4.6 4.6	5.0 5.0	2.2 2.1	1.1 1.7	2.4 2.3	2.4 2.4	2.4 2.3	2.3 2.2	2.3 2.2	2.4 2.3	2.5 2.3	2.4 2.4	1.8 2.2	2.4 2.3	2.1 2.0	
Final sales <i>Previous Tealbook</i>	3.2 3.8	5.0 4.1	2.3 4.5	-3 -9	2.2 3.1	2.5 4.0	2.8 4.3	2.5 4.0	2.4 3.9	2.4 3.5	2.3 3.0	2.3 2.9	1.8 2.1	2.4 2.3	2.3 2.2	
Priv. dom. final purch. <i>Previous Tealbook</i>	3.8 3.8	4.1 4.1	4.3 4.3	3.0 4.1	4.1 3.8	4.3 4.3	4.3 4.3	4.0 4.0	3.9 3.9	3.5 3.4	3.0 2.9	3.3 3.4	3.1 3.3	3.6 3.8	2.7 2.6	
Personal cons. expend. <i>Previous Tealbook</i>	2.5 2.5	3.2 4.2	4.4 3.5	1.9 4.4	4.2 3.9	4.0 3.8	3.7 3.6	3.6 3.6	3.6 3.1	3.1 2.7	2.7 2.7	2.9 2.8	3.6 3.9	3.3 3.2	2.5 2.6	
Durables	14.1	9.2	6.2	1.5	6.7	7.8	8.1	7.1	6.9	6.2	5.4	8.1	6.0	6.4	4.1	2.3
Nondurables	2.2	2.5	4.1	-3	3.5	3.4	3.4	2.6	3.0	2.5	2.3	2.2	2.5	2.6	2.3	2.3
Services	.9	2.5	4.3	2.6	4.0	3.9	3.6	3.4	3.3	2.7	2.4	2.2	3.5	3.0	3.0	2.3
Residential investment <i>Previous Tealbook</i>	8.8 8.8	3.2 3.2	3.8 4.5	1.8 1.4	1.1 8.5	9.6 12.2	12.9 15.2	12.6 12.6	12.7 10.6	11.4 8.8	9.3 6.9	2.5 2.7	6.2 9.2	11.5 9.7	7.8 5.1	
Nonres. priv. fixed invest. <i>Previous Tealbook</i>	9.7 9.7	8.9 8.9	4.7 4.4	-4.3 .7	-1.9 1.5	1.0 1.1	3.6 3.8	3.3 3.7	3.2 3.5	3.4 3.7	3.2 3.0	6.2 6.1	-4 1.8	3.3 3.5	2.1 2.1	
Equipment & intangibles <i>Previous Tealbook</i>	8.9 8.9	10.1 10.1	4.4 4.0	1.8 3.7	2.3 4.6	3.0 3.6	4.2 4.7	4.5 4.5	3.7 3.8	3.9 4.2	3.9 3.4	6.1 6.0	2.8 4.1	4.0 4.0	2.6 2.5	
Nonres. structures <i>Previous Tealbook</i>	12.6 12.6	4.8 4.8	5.9 5.9	-22.7 -8.8	-16.0 -8.8	-6.5 -7.5	1.0 .4	-1.6 .5	1.1 2.3	1.0 1.8	.8 1.3	6.5 6.5	-11.5 -6.2	.3 1.5	.5 .7	
Net exports ² <i>Previous Tealbook</i> ²	-460 -460	-431 -431	-471 -470	-497 -499	-524 -541	-558 -585	-596 -630	-635 -677	-673 -721	-710 -764	-730 -787	-453 -452	-544 -564	-687 -737	-766 -827	
Exports	11.1	4.5	4.5	-5.6	.2	.5	.4	.6	.8	1.3	1.8	2.4	-1.2	1.1	3.1	3.1
Imports	11.3	-.9	10.4	-.7	4.4	5.7	6.1	6.4	6.2	6.6	4.1	5.6	3.8	5.8	3.9	
Gov't. cons. & invest. <i>Previous Tealbook</i>	1.7 1.7	4.4 4.4	-1.9 -2.0	-2.3 -8	1.3 .1	.2 .3	.3 .5	.3 .4	.5 .5	1.6 1.6	.7 .7	.8 .8	-1 0	.8 .8	1.1 1.1	
Federal	-.9 -.9	9.9 16.0	-7.3 -12.2	-3.8 -3.6	-2.1 -2.2	-1.8 -1.9	-1.6 -1.5	-2.1 -3.4	-1.8 -2.9	.8 1.2	-1.9 1.1	.2 .1	-2.3 -3.1	-1.3 -1.1	-9 -1.5	
Defense	-3.8 -3.4	4.1 1.1	1.5 1.6	-4.1 -1.4	-1.9 3.5	-1.6 1.4	-1.5 1.6	0 1.8	.1 1.9	2.0 2.2	1.2 1.2	1.2 1.2	-2.4 -1.1	.1 1.1	.1 2.0	
Nonddefense																
State & local																
Change in priv. inventories ² <i>Previous Tealbook</i> ²	85 85	82 82	80 78	95 87	103 89	96 78	81 77	77 76	68 71	76 73	79 79	71 70	94 84	72 75	69 69	

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

2. Billions of chained (2009) dollars.

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

Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Real GDP <i>Previous Tealbook</i>	-2.8	.2	2.7	1.7	1.6	3.1	2.4	1.8	2.4	2.1
Final sales <i>Previous Tealbook</i>	-2.1	-.4	2.0	1.5	2.1	2.6	2.4	1.8	2.4	2.3
Priv. dom. final purch. <i>Previous Tealbook</i>	-4.1	-2.4	3.5	2.6	2.6	3.2	3.3	2.3	2.3	2.2
Personal cons. expend. <i>Previous Tealbook</i>	-2.0	-.2	3.1	1.5	2.0	2.8	2.9	3.6	3.6	2.7
Durables	-12.9	2.5	9.3	4.8	7.5	5.9	8.1	6.0	6.4	4.1
Nondurables	-2.7	.2	3.3	.4	1.0	2.5	2.2	2.5	2.6	2.3
Services	.3	-.8	2.0	1.4	1.5	2.4	2.2	3.5	3.0	2.3
Residential investment <i>Previous Tealbook</i>	-24.3	-10.8	-5.2	6.0	15.8	6.9	2.5	6.2	11.5	7.8
Nonres. priv. fixed invest. <i>Previous Tealbook</i>	-8.9	-12.2	8.1	9.0	3.7	4.7	6.2	-.4	3.3	2.1
Equipment & intangibles <i>Previous Tealbook</i>	-11.8	-6.0	12.0	9.2	3.3	4.8	6.1	1.8	3.5	2.1
Nonres. structures <i>Previous Tealbook</i>	-11.8	-6.0	12.0	9.2	3.3	4.8	6.0	2.8	4.0	2.6
Gov't. cons. & invest. <i>Previous Tealbook</i>	3.3	2.3	-1.1	-3.0	-1.7	-1.9	.8	-.1	.8	1.1
Federal	3.3	2.3	-1.1	-3.0	-1.7	-1.9	.8	-.0	.8	1.1
Defense	8.4	3.9	3.2	-4.0	-2.6	-6.3	.2	-2.3	-1.3	-.9
Nondefense	9.4	3.6	2.0	-4.1	-4.9	-6.1	-.3	-2.3	-2.1	-1.5
State & local	6.5	4.6	5.5	-3.9	1.4	-6.6	1.1	-2.4	.1	.1
Change in priv. inventories ¹ <i>Previous Tealbook</i>	-34	-148	58	38	57	64	71	94	72	69
	-34	-148	58	38	57	64	70	84	75	69

1. Billions of chained (2009) dollars.

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

Item	2014			2015			2016			2014 ¹			2015 ¹			2016 ¹			2017 ¹		
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2014 ¹	2015 ¹	2016 ¹	2017 ¹	2014 ¹	2015 ¹	2016 ¹	2017 ¹		
Real GDP <i>Previous Tealbook</i>	4.6	5.0	2.2	1.	2.4	2.4	2.4	2.3	2.3	2.4	2.4	2.4	1.8	2.4	2.1	2.4	2.2	2.3	2.0		
Final sales <i>Previous Tealbook</i>	3.2	5.0	2.3	-.3	2.2	2.5	2.8	2.5	2.6	2.4	2.3	2.4	1.8	2.4	2.3	2.4	2.3	2.2	2.3		
Priv. dom. final purch. <i>Previous Tealbook</i>	3.2	3.5	3.7	.8	2.6	3.3	3.6	3.3	3.3	2.9	2.6	2.8	2.6	3.1	2.3	3.1	3.0	3.0	2.3		
Personal cons. expend. <i>Previous Tealbook</i>	1.8	2.2	3.0	1.3	2.8	2.9	2.8	2.5	2.5	2.1	1.9	1.9	1.9	2.4	2.3	2.4	2.7	2.2	1.8		
Durables	1.0	.7	.5	.1	.5	.6	.5	.5	.5	.4	.4	.6	.4	.5	.5	.4	.4	.5	.3		
Nondurables	.3	.4	.6	1.2	1.8	1.8	1.8	1.7	1.6	1.5	1.3	1.1	1.0	1.6	1.4	1.4	1.4	1.1	.3		
Services	.4	1.2	1.9																		
Residential investment <i>Previous Tealbook</i>	.3	.1	.1	.1	.0	.3	.3	.4	.5	.4	.4	.3	.1	.2	.4	.3	.3	.3	.2		
Nonres. priv. fixed invest. <i>Previous Tealbook</i>	1.2	1.1	.6	-.6	-.2	.1	.4	.4	.4	.4	.4	.4	.8	-.1	.4	.4	.8	.2	.3		
Equipment & intangibles <i>Previous Tealbook</i>	1.2	1.1	.6	.1	.2	.1	.5	.5	.4	.4	.4	.4	.8	.2	.4	.4	.6	.3	.3		
Nonres. structures <i>Previous Tealbook</i>	.8	1.0	.4	.2	.2	.3	.4	.4	.4	.4	.4	.3	.6	.4	.4	.4	.6	.3	.3		
Nonres. inventories <i>Previous Tealbook</i>	.4	.1	.2	-.7	-.5	-.2	.0	.0	.0	.0	.0	.0	.0	.2	.3	.0	.0	.0	.0		
Net exports <i>Previous Tealbook</i>	-.3	.8	-1.0	-.6	-.8	-.9	-.9	-.9	-.9	-.9	-.9	-.4	-.6	-.8	-.8	-.8	-.8	-.8	-.2		
Exports	-.3	.8	-1.0	-.7	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.3		
Imports	1.4	.6	.6	-.8	.0	.1	.1	.1	.1	.1	.2	.2	.3	.2	.2	.2	.2	.1	.4		
Gov't. cons. & invest. <i>Previous Tealbook</i>	.3	.8	-.4	-.4	.2	.0	.1	.1	.1	.1	.1	.3	.1	.1	.0	.1	.1	.0	.2		
Federal Defense	.3	.8	-.4	-.1	.0	.1	-.1	-.1	-.1	-.1	-.1	.1	.1	.1	.0	.0	.0	.0	.2		
Nondefense	-.1	.7	-.5	-.3	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1		
State & local	-.1	.0	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	0.0		
Change in priv. inventories <i>Previous Tealbook</i>	1.4	0	-.1	-.1	.4	.2	-.2	-.4	-.1	-.3	.1	.2	0	0	0	0	0	0	-.2		

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

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

Item	2014				2015				2016				2017 ¹			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2014 ¹	2015 ¹	2016 ¹	2017 ¹	
GDP chain-wt. price index	2.1	1.4	.1	.3	2.2	1.3	1.7	1.9	1.7	1.7	1.7	1.2	1.4	1.8	1.8	
<i>Previous Tealbook</i>	2.1	1.4	.1	-.1	2.2	1.6	1.7	1.9	1.7	1.7	1.7	1.2	1.4	1.7	1.9	
PCE chain-wt. price index	2.3	1.2	-.4	-2.0	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.1	.6	1.6	1.8	
<i>Previous Tealbook</i>	2.3	1.2	-.4	-2.0	1.3	1.5	1.6	1.6	1.7	1.7	1.7	1.1	.6	1.7	1.9	
Energy	5.2	-4.0	-26.0	-45.0	3.9	3.0	4.5	3.5	2.7	2.3	2.0	-6.1	-11.4	2.6	1.6	
<i>Previous Tealbook</i>	5.2	-4.0	-26.0	-44.7	2.0	3.8	4.7	3.9	3.3	3.2	3.0	-6.1	-11.5	3.3	2.4	
Food	4.5	3.1	2.1	-.2	-.3	1.3	1.5	1.5	1.6	1.7	1.8	2.8	.6	1.6	1.9	
<i>Previous Tealbook</i>	4.5	3.1	2.1	.2	.7	1.1	1.3	1.4	1.5	1.7	1.7	2.8	.8	1.6	1.9	
Ex. food & energy	2.0	1.4	1.1	.8	1.6	1.4	1.4	1.6	1.6	1.6	1.5	1.4	1.3	1.6	1.8	
<i>Previous Tealbook</i>	2.0	1.4	1.1	.8	1.4	1.4	1.5	1.5	1.6	1.6	1.6	1.4	1.3	1.6	1.8	
Ex. food & energy, market based	1.8	1.4	.7	.5	1.5	1.4	1.4	1.6	1.6	1.6	1.5	1.2	1.2	1.6	1.8	
<i>Previous Tealbook</i>	1.8	1.4	.6	.5	1.3	1.4	1.5	1.5	1.6	1.6	1.6	1.2	1.2	1.6	1.8	
CPI	2.4	1.2	-.9	-3.1	2.0	1.9	2.0	2.1	2.0	2.0	2.0	1.2	.7	2.0	2.1	
<i>Previous Tealbook</i>	2.4	1.2	-.9	-3.1	1.7	2.0	2.1	2.1	2.1	2.1	2.1	1.2	.6	2.1	2.2	
Ex. food & energy	2.2	1.4	1.5	1.7	2.2	1.8	1.9	2.0	2.0	2.0	2.0	2.0	1.7	1.9	2.1	
<i>Previous Tealbook</i>	2.2	1.4	1.5	1.5	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.1	1.7	1.8	2.0	
ECI, hourly compensation ²	3.4	2.7	2.3	2.6	2.6	2.6	2.6	2.9	2.9	2.9	2.9	2.3	2.6	2.9	3.0	
<i>Previous Tealbook</i>	3.4	2.7	2.3	2.6	2.6	2.6	2.6	2.9	2.9	2.9	2.9	2.3	2.6	2.9	3.0	
Business sector	2.9	3.3	-2.4	-1.8	2.8	2.7	2.3	1.9	1.8	1.8	1.8	-4	1.4	1.8	1.8	
Output per hour	2.9	3.3	-2.4	.2	2.4	1.8	1.9	1.8	1.7	1.7	1.7	-4	1.6	1.7	1.7	
<i>Previous Tealbook</i>	-1.1	2.1	1.6	3.2	3.0	3.0	3.0	3.4	3.4	3.4	3.4	2.3	3.0	3.4	3.5	
Compensation per hour	-1.1	2.1	1.6	2.9	3.1	3.1	3.1	3.4	3.4	3.4	3.4	2.3	3.0	3.4	3.5	
<i>Previous Tealbook</i>	-3.9	-1.2	4.0	5.1	.2	.3	.7	1.5	1.5	1.6	1.6	2.7	1.6	1.5	1.7	
Unit labor costs	-3.9	-1.2	4.1	2.7	.6	1.3	1.1	1.6	1.7	1.7	1.7	2.7	1.4	1.7	1.7	
<i>Previous Tealbook</i>	-3.9	-1.2	4.1	2.7	.6	1.3	1.1	1.6	1.7	1.7	1.7	2.7	1.4	1.7	1.7	
Core goods imports chain-wt. price index ³	.2	.5	-.8	-4.0	-4.0	-.8	-.1	.4	.9	1.2	1.2	.6	-2.3	.9	1.6	
<i>Previous Tealbook</i>	.2	.5	-.8	-4.0	-4.3	-1.5	.1	.7	1.1	1.3	1.3	.6	-2.4	1.1	1.7	

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

2. Private-industry workers.

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

Greensheets**Changes in Prices and Costs**
(Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise noted)

Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
GDP chain-wt. price index <i>Previous Tealbook</i>	1.9	.4	1.8	1.9	1.8	1.4	1.2	1.4	1.8	1.8
PCE chain-wt. price index <i>Previous Tealbook</i>	1.5	1.2	1.3	2.7	1.6	1.0	1.1	.6	1.6	1.8
Energy <i>Previous Tealbook</i>	-8.2	2.3	6.4	12.0	2.1	-2.6	-6.1	-11.4	2.6	1.6
Food <i>Previous Tealbook</i>	6.9	-1.8	1.3	5.1	1.2	.7	2.8	.6	1.6	1.9
Ex. food & energy <i>Previous Tealbook</i>	1.6	1.4	1.0	1.9	1.6	1.3	1.4	1.3	1.6	1.8
Ex. food & energy; market based <i>Previous Tealbook</i>	2.2	1.8	.7	1.9	1.5	1.2	1.2	1.2	1.6	1.8
CPI <i>Previous Tealbook</i>	1.6	1.5	1.2	3.3	1.9	1.2	1.2	.7	2.0	2.1
Ex. food & energy <i>Previous Tealbook</i>	2.0	1.8	.6	2.2	1.9	1.7	1.7	1.9	2.1	2.2
ECI, hourly compensation ¹ <i>Previous Tealbook</i>	2.4	1.2	2.1	2.2	1.8	2.0	2.3	2.6	2.9	3.0
Business sector										
Output per hour <i>Previous Tealbook</i>	-2	5.6	1.7	.0	.2	2.3	-.4	1.4	1.8	1.8
Compensation per hour <i>Previous Tealbook</i>	2.9	1.3	1.2	.6	5.6	-.1	2.3	3.0	3.4	3.5
Unit labor costs <i>Previous Tealbook</i>	3.2	-4.2	-4	.6	5.6	-.1	2.3	3.0	3.4	3.5
Core goods imports chain-wt. price index ² <i>Previous Tealbook</i>	3.9	-1.9	2.3	4.3	.2	-1.0	.6	-2.3	.9	1.6
	3.9	-1.9	2.3	4.3	.2	-1.0	.6	-2.4	1.1	1.7

1. Private-industry workers.

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

Other Macroeconomic Indicators

Item	2014			2015			2016			2014 ^l	2015 ^l	2016 ^l	2017 ^l	
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
<i>Employment and production</i>														
Nonfarm payroll employment ²	.8	.7	.9	.8	.6	.6	.6	.6	.6	.5	.5	2.9	2.2	1.7
Unemployment rate ³	6.2	6.1	5.7	5.6	5.4	5.3	5.3	5.2	5.2	5.2	5.2	5.7	5.3	5.1
<i>Previous Tealbook</i> ³	6.2	6.1	5.7	5.5	5.3	5.2	5.1	5.1	5.1	5.1	5.1	5.7	5.2	5.0
Natural rate of unemployment ³	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
<i>Previous Tealbook</i> ³	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
GDP gap ⁴	-2.3	-1.3	-1.0	-1.3	-1.2	-1.0	-0.8	-0.6	-0.5	-0.3	-0.1	-1.0	-0.8	.3
<i>Previous Tealbook</i> ⁴	-2.3	-1.3	-1.0	-1.0	-0.7	-0.6	-0.4	-0.2	-0.1	0.0	.2	-1.0	-0.4	.5
Industrial production ⁵	5.7	4.1	4.6	-1.0	-.8	.7	.6	2.4	2.9	2.0	1.5	4.6	-.1	2.2
<i>Previous Tealbook</i> ⁵	5.7	4.1	4.3	1.8	1.7	.4	.6	2.4	2.8	1.8	1.1	4.5	1.1	2.0
Manufacturing industr. prod. ⁵	7.0	4.4	3.8	-1.2	1.8	1.9	2.0	2.0	2.3	2.6	2.1	1.8	4.1	1.1
<i>Previous Tealbook</i> ⁵	7.0	4.4	3.8	2.1	3.3	1.9	1.9	2.1	2.1	2.3	1.8	1.6	4.1	2.2
Capacity utilization rate - mfg. ³	77.1	77.5	77.8	77.2	77.3	77.3	77.4	77.4	77.5	77.6	77.7	77.7	77.7	77.4
<i>Previous Tealbook</i> ³	77.1	77.5	77.8	77.9	78.2	78.3	78.3	78.4	78.5	78.5	78.4	77.8	78.3	78.0
Housing starts ⁶	1.0	1.0	1.1	1.0	1.0	1.1	1.2	1.2	1.3	1.4	1.4	1.0	1.1	1.5
Light motor vehicle sales ⁶	16.5	16.7	16.7	16.6	16.8	16.7	16.7	16.7	16.7	16.6	16.6	16.4	16.7	16.5
<i>Income and saving</i>														
Nominal GDP ⁵	6.8	6.4	2.4	.3	4.6	3.7	4.2	4.3	4.1	4.2	4.2	3.7	3.2	4.0
Real disposable pers. income ⁵	3.1	2.4	3.6	6.5	2.0	2.1	2.2	3.4	2.5	2.6	2.8	3.1	3.2	2.5
<i>Previous Tealbook</i> ⁵	3.1	2.4	3.7	6.1	3.4	1.9	2.5	3.6	2.4	2.2	2.6	3.1	3.5	2.4
Personal saving rate ³	5.1	4.8	4.6	5.6	5.1	4.6	4.2	4.1	3.9	3.8	3.8	4.6	4.2	3.8
<i>Previous Tealbook</i> ³	5.1	4.8	4.7	5.3	5.1	4.6	4.3	4.3	4.0	3.8	3.8	4.7	4.3	3.6
Corporate profits ⁷	38.3	12.8	-5.5	-18.3	8.2	4.4	-3.9	1.0	1.5	1.4	.6	-.2	-2.9	1.1
Profit share of GNP ³	12.0	12.2	12.0	11.4	11.5	11.5	11.3	11.2	11.1	11.1	11.0	12.0	11.3	10.6
Net federal saving ⁸	-599	-611	-559	-565	-594	-596	-593	-636	-606	-626	-648	-582	-587	-629
Net state & local saving ⁸	-227	-217	-214	-185	-195	-197	-194	-186	-185	-184	-184	-225	-193	-185
Gross national saving rate ³	17.9	18.1	18.0	18.5	18.0	17.7	17.3	17.1	17.1	17.0	16.9	18.0	17.3	16.9
Net national saving rate ³	2.9	3.1	3.0	3.7	3.0	2.6	2.2	1.9	1.9	1.7	1.6	3.0	2.2	1.6

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

2. Change, millions.

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

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

Annual values are for the fourth quarter of the year indicated.

5. Percent change, annual rate.

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

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

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

Greensheets

Other Macroeconomic Indicators

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

Item	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<i>Employment and production</i>										
Nonfarm payroll employment ¹	-2.8	-5.6	.8	2.0	2.2	2.5	2.9	2.6	2.2	1.7
Unemployment rate ²	6.9	9.9	9.5	8.7	7.8	7.0	5.7	5.3	5.2	5.1
<i>Previous Tealbook</i> ²	6.9	9.9	9.5	8.7	7.8	7.0	5.7	5.2	5.1	5.0
Natural rate of unemployment ²	5.6	6.2	6.2	6.0	5.8	5.4	5.2	5.2	5.2	5.2
<i>Previous Tealbook</i> ²	5.6	6.2	6.2	6.0	5.8	5.4	5.2	5.2	5.2	5.2
GDP gap ³	-3.8	-5.5	-4.4	-4.2	-4.1	-2.8	-1.0	-.8	-.1	.3
<i>Previous Tealbook</i> ³	-3.8	-5.5	-4.4	-4.2	-4.1	-2.8	-1.0	-.4	.2	.5
Industrial production ⁴	-8.9	-5.5	6.2	3.2	3.2	3.3	4.6	-.1	2.2	1.5
<i>Previous Tealbook</i> ⁴	-8.9	-5.5	6.2	3.2	3.2	3.3	4.5	1.1	2.0	1.4
Manufacturing industr. prod. ⁴	-11.6	-6.1	6.4	3.1	3.5	2.9	4.1	1.1	2.2	1.5
<i>Previous Tealbook</i> ⁴	-11.6	-6.1	6.4	3.1	3.5	2.9	4.1	2.3	1.9	1.4
Capacity utilization rate - mfg. ²	70.0	67.1	72.7	74.6	75.5	76.4	77.8	77.4	77.7	77.4
<i>Previous Tealbook</i> ²	70.0	67.1	72.7	74.6	75.5	76.4	77.8	78.3	78.4	78.0
Housing starts ⁵	.9	.6	.6	.6	.8	.9	1.0	1.1	1.3	1.5
Light motor vehicle sales ⁵	13.1	10.4	11.5	12.7	14.4	15.5	16.4	16.7	16.6	16.5
<i>Income and saving</i>										
Nominal GDP ⁴	-.9	.1	4.6	3.6	3.5	4.6	3.7	3.2	4.2	4.0
Real disposable pers. income ⁴	1.1	-.7	2.6	1.7	5.0	-1.9	3.1	3.2	2.8	2.5
<i>Previous Tealbook</i> ⁴	1.1	-.7	2.6	1.7	5.0	-1.9	3.1	3.5	2.7	2.4
Personal saving rate ²	6.1	5.6	5.5	5.8	8.6	4.4	4.6	4.2	3.8	3.8
<i>Previous Tealbook</i> ²	6.1	5.6	5.5	5.8	8.6	4.4	4.7	4.3	3.8	3.6
Corporate profits ⁶	-30.8	53.7	18.0	6.8	3.8	4.7	-.2	-2.9	1.1	.2
Profit share of GNP ²	6.9	10.6	12.0	12.3	12.4	12.4	12.0	11.3	11.0	10.6
Net federal saving ⁷	-634	-1,249	-1,329	-1,244	-1,079	-649	-582	-587	-629	-699
Net state & local saving ⁷	-165	-272	-237	-216	-233	-225	-225	-193	-185	-184
Gross national saving rate ²	14.9	14.6	15.2	16.1	17.8	17.9	18.0	17.3	16.9	16.8
Net national saving rate ²	-1.6	-1.7	-.4	.8	2.8	3.0	3.0	2.2	1.6	1.2

1. Change, millions.

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

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

Values are for the fourth quarter of the year indicated.

4. Percent change.

5. Level, millions; values are annual averages.

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

7. Billions of dollars; values are annual averages.

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

Item	Fiscal year				2014				2015				2016			
	2014	2015	2016	2017	Q1 ^a	Q2 ^a	Q3 ^a	Q4 ^a	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Unified budget																
Receipts	3,021	3,239	3,397	3,541	656	938	760	739	680	1,017	802	745	715	1,076	861	798
Outlays	3,504	3,692	3,869	4,031	897	890	877	916	943	941	892	994	950	952	973	971
Surplus/deficit	-482	-453	-472	-491	-241	47	-117	-177	-263	76	-90	-249	-235	124	-112	-173
<i>Previous Tealbook</i>	-485	-491	-492	-521	-241	47	-117	-177	-282	56	-88	-250	-241	117	-119	-184
Means of financing:																
Borrowing	798	390	440	611	262	-46	211	240	67	-43	125	126	265	-94	142	203
Cash decrease	-70	-64	153	0	20	3	-19	-65	123	48	-74	153	0	0	0	0
Other ¹	-245	128	-120	-120	-42	-4	-74	1	73	15	39	-30	-30	-30	-30	-30
Cash operating balance, end of period	158	223	70	70	142	139	158	223	100	148	223	70	70	70	70	70
NIPA federal sector																
Receipts	3,267	3,384	3,540	3,696	3,243	3,277	3,342	3,341	3,343	3,405	3,448	3,477	3,520	3,561	3,604	3,643
Expenditures	3,844	3,963	4,155	4,379	3,803	3,875	3,953	3,901	3,909	3,999	4,044	4,070	4,155	4,166	4,229	4,290
Consumption expenditures	963	958	960	976	957	956	988	961	960	957	955	954	961	961	965	965
Defense	617	613	620	620	610	610	614	614	613	612	611	612	612	612	614	614
Nondefense	346	347	356	347	345	345	347	347	346	345	344	345	347	349	350	352
Other spending	2,882	3,005	3,195	3,403	2,846	2,920	2,965	2,940	2,949	3,042	3,089	3,116	3,194	3,205	3,264	3,325
Current account surplus	-577	-579	-615	-683	-560	-599	-611	-559	-566	-594	-596	-593	-635	-605	-625	-647
Gross investment	256	253	248	247	251	255	254	256	253	251	250	250	248	246	248	247
Gross saving less gross investment ²	-561	-552	-577	-637	-539	-580	-589	-539	-540	-566	-565	-560	-598	-565	-585	-603
Fiscal indicators																
High-employment (HEB) surplus/deficit ³	-404.2	-490.2	-548.0	-643.7	-342.9	-427.0	-488.7	-464.7	-470.0	-509.0	-517.2	-519.0	-562.9	-539.8	-570.4	-600.2
Change in HEB, percent of potential GDP	-1.0	.4	.2	.4	-.1	.5	.3	-.1	.0	.2	.0	.0	.2	-.1	.1	.1
Fiscal impetus (FI), percent of GDP ⁴	-.1	.2	.3	.3	-.6	.0	.7	-.4	.4	.3	.3	.3	.1	.2	.4	.2
<i>Previous Tealbook</i>	-.1	.2	.3	.3	-.6	.0	.7	-.4	-.2	.2	.3	.3	.1	.2	.4	.2
Federal purchases	.0	-2	-1	-1	.0	-1	.7	-.5	-1	-1	-1	-1	-1	-1	-1	-1
State and local purchases	.1	1	.2	.2	-.1	.4	.1	-.2	.4	.2	.2	.2	.2	.2	.2	.2
Taxes and transfers	-.2	.2	.1	.1	-.5	.1	-.3	-.1	.0	.2	.2	.2	.1	.1	.1	.1

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

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

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

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

a Actual.

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

Measure and country	2014				2015				Projected 2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Real GDP¹												
Total foreign	2.0	2.4	2.6	2.7	1.8	2.4	2.8	3.0	3.0	3.0	3.1	3.1
<i>Previous Tealbook</i>	<i>1.9</i>	<i>2.5</i>	<i>2.6</i>	<i>2.7</i>	<i>2.5</i>	<i>2.7</i>	<i>2.9</i>	<i>3.0</i>	<i>3.1</i>	<i>3.1</i>	<i>3.1</i>	<i>3.1</i>
Advanced foreign economies	1.9	1.4	1.7	2.0	1.0	1.8	2.0	2.2	2.3	2.2	2.2	2.2
Canada	1.0	3.8	3.2	2.4	.2	1.6	2.0	2.4	2.5	2.5	2.5	2.3
Japan	5.1	-6.4	-2.6	1.5	1.0	1.5	1.5	1.5	1.4	1.3	1.2	1.4
United Kingdom	3.6	3.4	2.5	2.5	2.0	2.7	2.7	2.6	2.6	2.6	2.4	2.5
Euro area	1.1	.3	.7	1.3	1.7	1.7	1.8	1.9	2.1	2.1	2.1	2.1
Germany	3.1	-.3	.3	2.8	1.8	1.8	2.0	2.0	2.2	2.2	2.3	2.3
Emerging market economies	2.2	3.4	3.6	3.4	2.5	3.0	3.7	3.8	3.8	3.8	4.0	4.0
Asia	4.1	4.9	5.5	5.0	4.4	4.9	5.5	5.4	5.2	5.2	5.2	5.2
Korea	4.4	2.0	3.2	1.1	3.1	3.6	4.2	4.2	4.1	4.1	4.1	4.1
China	6.4	7.6	8.1	7.0	5.3	6.3	7.5	7.0	6.6	6.6	6.6	6.6
Latin America	.3	2.4	2.1	2.0	1.0	1.6	2.3	2.5	2.6	2.6	2.9	2.9
Mexico	1.4	4.2	2.1	2.7	1.9	2.7	3.3	3.3	3.1	3.1	3.2	3.2
Brazil	2.6	-5.4	.6	1.3	-1.7	-2.1	-3	1.0	1.8	1.8	2.0	2.0
<i>Consumer prices²</i>												
Total foreign	2.0	3.0	2.0	1.1	-.1	2.0	2.2	2.4	2.4	2.4	2.5	2.5
<i>Previous Tealbook</i>	<i>2.1</i>	<i>3.0</i>	<i>2.0</i>	<i>1.1</i>	<i>0</i>	<i>2.1</i>	<i>2.2</i>	<i>2.4</i>	<i>2.4</i>	<i>2.4</i>	<i>2.5</i>	<i>2.5</i>
Advanced foreign economies	1.3	3.0	.9	-.4	-.8	1.1	1.3	1.4	1.5	1.6	1.6	1.7
Canada	3.2	3.3	1.2	0	-.1	1.7	1.7	1.8	1.8	1.8	1.9	1.9
Japan	.7	9.3	1.2	-.6	.1	.8	.8	.9	1.0	1.1	1.2	1.3
United Kingdom	1.4	1.7	1.2	-.7	-1.8	1.2	1.8	1.8	1.8	1.7	1.8	1.8
Euro area	.4	.4	.5	-.6	-1.6	1.0	1.3	1.5	1.6	1.6	1.6	1.6
Germany	.4	.3	1.5	-.5	-2.0	1.4	1.5	1.6	1.7	1.7	1.7	1.8
Emerging market economies	2.5	2.9	2.9	2.3	.4	2.7	3.0	3.1	3.1	3.1	3.1	3.1
Asia	1.4	2.4	2.1	1.1	-.4	2.2	2.5	2.7	2.8	2.8	2.8	2.8
Korea	1.4	2.2	.6	-.2	-.3	1.4	2.4	2.9	3.1	3.2	3.2	3.2
China	.8	2.0	2.2	1.0	-.4	2.0	2.2	2.5	2.5	2.5	2.5	2.5
Latin America	5.3	4.3	4.9	4.8	1.7	3.8	4.0	3.9	3.9	3.9	3.8	3.8
Mexico	4.8	3.3	4.4	4.2	.3	2.7	3.3	3.3	3.3	3.3	3.3	3.3
Brazil	6.5	7.4	6.2	6.0	11.1	9.9	6.2	5.7	5.7	5.7	5.7	5.6

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

²Foreign CPI aggregates calculated using shares of U.S. non-oil imports.

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

Measure and country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Real GDP¹									
Total foreign	.9	4.7	3.2	2.3	2.6	2.4	2.5	3.1	2.9
<i>Previous Tealbook</i>	.9	4.7	3.1	2.3	2.6	2.4	2.8	3.1	3.0
Advanced foreign economies	-1.4	3.1	1.8	.3	1.9	1.7	1.7	2.2	1.9
Canada	-1.4	3.6	3.0	1.0	2.7	2.6	1.6	2.4	2.1
Japan	-.6	3.5	.3	.0	2.3	-.7	1.4	1.3	-.3
United Kingdom	-1.5	2.2	1.5	.4	2.4	3.0	2.5	2.5	2.3
Euro area	-2.3	2.3	.6	-1.0	.4	.9	1.8	2.1	2.3
Germany	-3.0	4.4	2.4	.1	1.1	1.5	1.9	2.2	2.3
Emerging market economies	3.8	6.5	4.6	4.3	3.3	3.1	3.2	3.9	3.9
Asia	7.8	8.0	5.0	5.7	5.1	4.9	5.1	5.2	5.0
Korea	4.9	6.1	2.9	2.1	3.4	2.7	3.8	4.1	3.8
China	11.4	9.7	8.7	7.8	7.5	7.3	6.5	6.6	6.5
Latin America	.0	4.8	4.2	3.4	1.5	1.7	1.8	2.8	3.0
Mexico	-1.2	4.5	4.2	3.4	1.0	2.6	2.8	3.1	3.2
Brazil	5.2	5.8	2.5	2.3	2.1	-.3	-.8	1.9	2.3
Consumer prices ²									
Total foreign	1.2	3.2	3.4	2.3	2.4	2.0	1.6	2.4	2.6
<i>Previous Tealbook</i>	1.2	3.2	3.4	2.3	2.3	2.0	1.7	2.5	2.6
Advanced foreign economies	.2	1.7	2.2	1.3	1.0	1.2	.8	1.6	2.0
Canada	.8	2.2	2.7	1.0	1.0	1.9	1.3	1.9	2.0
Japan	-2.0	-.3	-.3	-.2	1.4	2.5	.6	1.1	2.7
United Kingdom	2.2	3.4	4.6	2.6	2.1	.9	.8	1.8	1.9
Euro area	.4	2.0	2.9	2.3	.8	.2	.5	1.6	1.7
Germany	.3	1.6	2.6	2.0	1.3	.4	.6	1.7	1.8
Emerging market economies	2.0	4.3	4.3	3.1	3.4	2.7	2.3	3.1	3.1
Asia	1.2	4.3	4.5	2.6	3.1	1.8	1.7	2.8	2.8
Korea	2.4	3.2	3.9	1.7	1.1	1.0	1.6	3.2	3.2
China	.6	4.6	4.6	2.1	2.9	1.5	1.6	2.5	2.5
Latin America	3.9	4.4	4.0	4.3	4.0	4.8	3.3	3.9	3.7
Mexico	4.0	4.3	3.5	4.1	3.7	4.2	2.4	3.3	3.3
Brazil	4.3	5.6	6.7	5.6	5.9	6.5	8.2	5.6	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.

**U.S. Current Account
Quarterly Data**

	2014				2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<i>Billions of dollars, s.a.a.r.</i>												
U.S. current account balance	-403.9	-389.1	-395.7	-453.8	-472.1	-462.5	-499.9	-537.0	-596.4	-607.1	-657.3	-685.4
<i>Previous Tealbook</i>	-404.4	-389.7	-399.5	-422.1	-433.6	-434.0	-484.9	-533.7	-606.7	-630.9	-690.3	-723.6
Current account as percent of GDP	-2.4	-2.2	-2.2	-2.6	-2.7	-2.6	-2.8	-2.9	-3.2	-3.3	-3.5	-3.6
<i>Previous Tealbook</i>	-2.4	-2.2	-2.3	-2.4	-2.4	-2.4	-2.7	-2.9	-3.3	-3.4	-3.7	-3.8
Net goods & services	-494.1	-520.9	-495.8	-508.1	-472.1	-466.6	-508.5	-546.0	-587.9	-618.1	-660.8	-686.2
Investment income, net	218.6	228.8	248.5	211.8	166.5	151.9	159.0	157.1	158.0	158.8	153.9	148.8
Direct, net	293.2	293.1	314.9	281.1	249.3	242.7	253.8	262.8	275.4	290.6	302.7	316.0
Portfolio, net	-74.6	-64.3	-66.5	-69.3	-82.7	-90.8	-94.8	-105.7	-117.5	-131.8	-148.8	-167.2
Other income and transfers, net	-128.4	-97.0	-148.4	-157.5	-166.5	-147.8	-150.4	-148.0	-166.5	-147.8	-150.4	-148.0
<i>Annual Data</i>												
U.S. current account balance	-380.8	-443.9	-459.3	-460.8	-400.3	-410.6	-492.9	-492.9	-471.5	-636.6	-739.3	-788.2
<i>Previous Tealbook</i>	-380.8	-443.9	-459.3	-460.8	-400.3	-403.9	-471.5	-662.9	-662.9	-662.9	-662.9	-788.2
Current account as percent of GDP	-2.6	-3.0	-3.0	-2.9	-2.4	-2.4	-2.4	-2.7	-2.7	-3.4	-3.4	-3.8
<i>Previous Tealbook</i>	-2.6	-3.0	-3.0	-2.9	-2.4	-2.4	-2.3	-2.6	-2.6	-3.5	-3.5	-4.0
Net goods & services	-383.8	-494.7	-548.6	-537.6	-476.4	-504.7	-498.3	-638.3	-638.3	-638.3	-638.3	-730.2
Investment income, net	132.3	185.7	229.0	211.4	208.5	226.9	158.6	154.9	154.9	144.1	144.1	144.1
Direct, net	257.7	288.0	298.6	281.6	290.9	295.6	252.1	296.2	296.2	361.8	361.8	361.8
Portfolio, net	-125.4	-102.3	-69.5	-70.2	-82.3	-68.7	-93.5	-141.3	-141.3	-217.7	-217.7	-217.7
Other income and transfers, net	-129.3	-135.0	-139.8	-134.6	-132.4	-132.8	-153.2	-153.2	-153.2	-153.2	-153.2	-153.2

Abbreviations

AFE	advanced foreign economy (IEDO, FD)
BEA	Bureau of Economic Analysis
BOE	Bank of England (IEDO)
CDS	credit default swaps (FD)
C&I	commercial and industrial (FD)
CLO	collateralized loan obligation (FD)
CMBS	commercial mortgage-backed securities (FD)
CP	commercial paper (FD)
CPH	compensation per hour
CPI	consumer price index (DEDO, FD)
CRE	commercial real estate (FD)
Desk	Open Market Desk (FD)
ECB	European Central Bank (IEDO, FD)
EME	emerging market economy (IEDO, FD)
FOMC	Federal Open Market Committee; also, the Committee (DEDO, FD)
FRB	Federal Reserve Board (DEDO)
GCF	general collateral finance (FD)
GDP	gross domestic product (DEDO, IEDO, FD, R&U)
GNP	gross national product
GSE	government-sponsored enterprise (FD)
IMF	International Monetary Fund (FD)
M&A	mergers and acquisitions (FD)
MBS	mortgage-backed securities (FD)
OIS	overnight index swap (FD)
ON RRP	overnight reverse repurchase agreement (FD)
PCE	personal consumption expenditures (DEDO, R&U)
PMI	purchasing managers index (IEDO)

repo	repurchase agreement (FD)
RRP	reverse repurchase agreement (FD)
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
SOMA	System Open Market Account (R&U)
S&P	Standard & Poor's (FD)
SPF	Survey of Professional Forecasters (DEDO)
TIPS	Treasury Inflation-Protected Securities (DEDO, FD)

Prefatory Note

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

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

Class I FOMC – Restricted Controlled (FR)

Report to the FOMC on Economic Conditions and Monetary Policy



Book B Monetary Policy: Strategies and Alternatives

April 23, 2015

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 Rules¹

	<u>2015Q2</u>	<u>2015Q3</u>
Taylor (1993) rule	1.75	1.85
<i>Previous Tealbook</i>	1.85	1.95
Taylor (1999) rule	1.17	1.36
<i>Previous Tealbook</i>	1.49	1.67
Inertial Taylor (1999) rule	0.28	0.44
<i>Previous Tealbook outlook</i>	0.33	0.53
First-difference rule	0.24	0.32
<i>Previous Tealbook outlook</i>	0.22	0.29

Memo: Equilibrium and Actual Real Federal Funds Rates

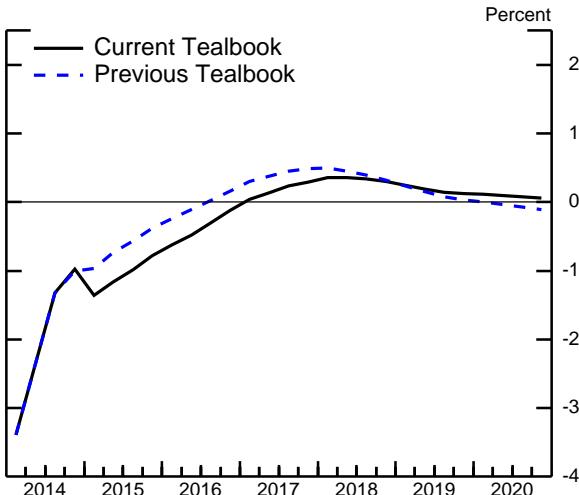
	Current Tealbook	<i>Current Quarter Estimate²</i> as of Previous Tealbook	Previous Tealbook
Tealbook-consistent FRB/US r^* estimate	−0.09	0.30	0.10
Actual real federal funds rate	−1.18		−1.27

1. For rules that have a lagged policy rate as a right-hand-side variable, the lines denoted "Previous Tealbook outlook" report rule prescriptions based on the previous Tealbook's staff outlook, but jumping off from the realized value for the policy rate last quarter.

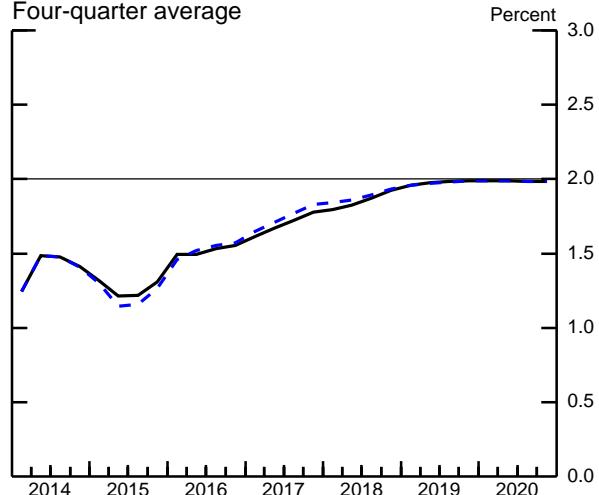
2. Estimates of r^* may change at the beginning of a quarter even when the staff outlook is unchanged because the twelve-quarter horizon covered by the calculation has rolled forward one quarter. Therefore, whenever the Tealbook is published early in the quarter, the memo includes an extra column labeled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

Key Elements of the Staff Projection

GDP Gap

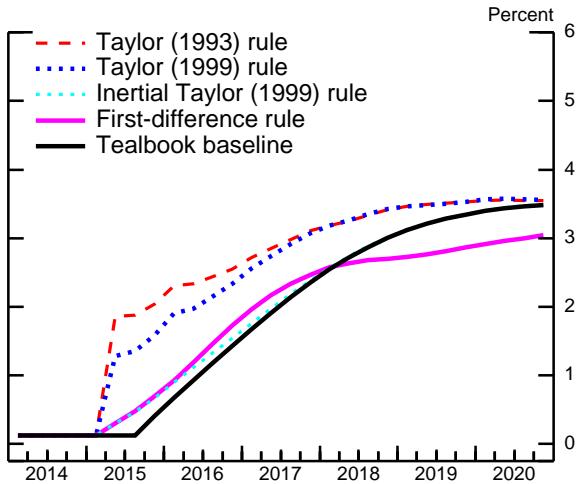


PCE Prices Excluding Food and Energy

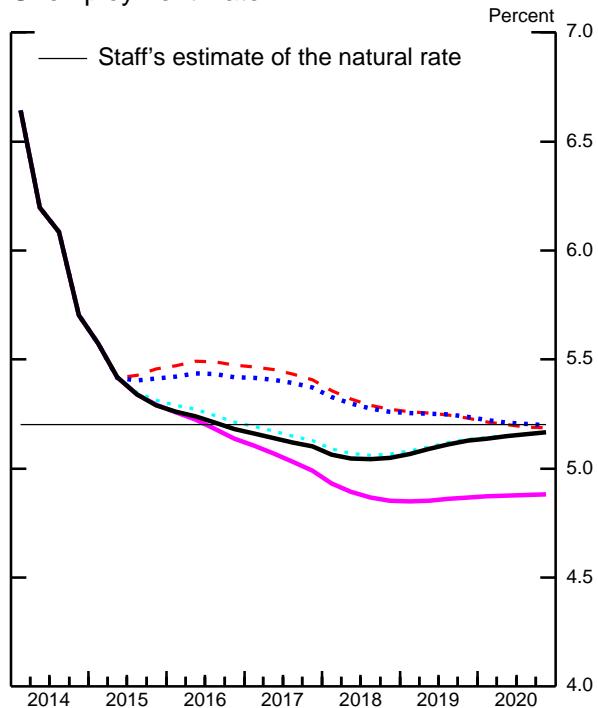


Policy Rule Simulations

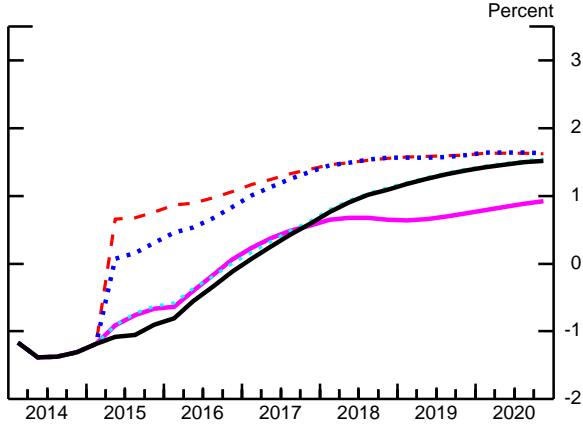
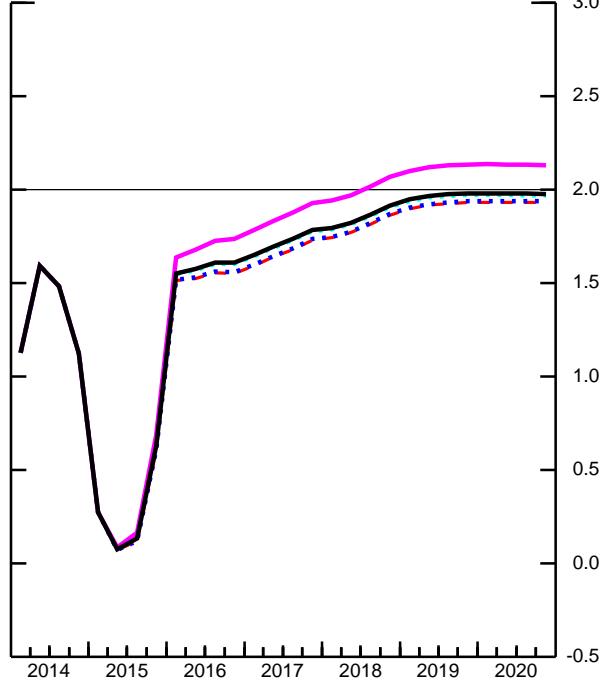
Effective Nominal Federal Funds Rate



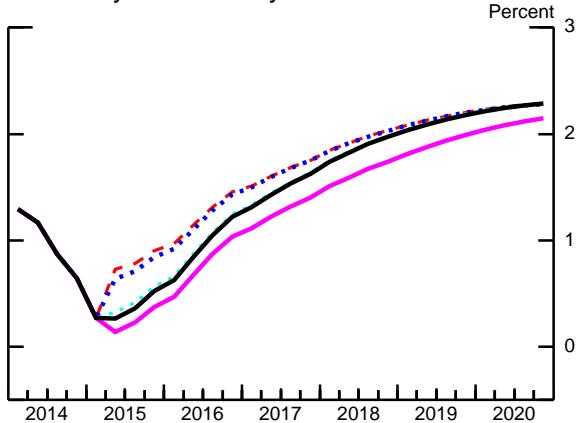
Unemployment Rate



Real Federal Funds Rate

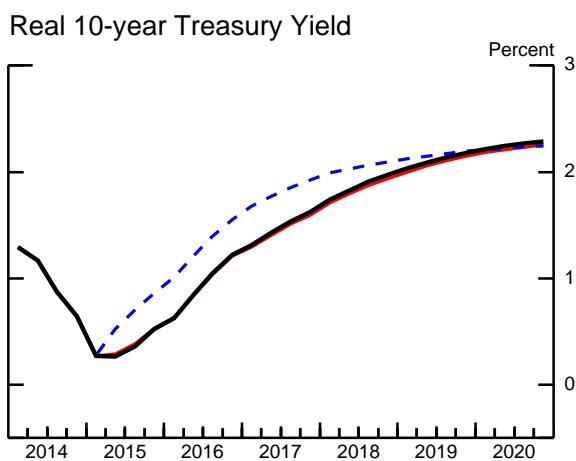
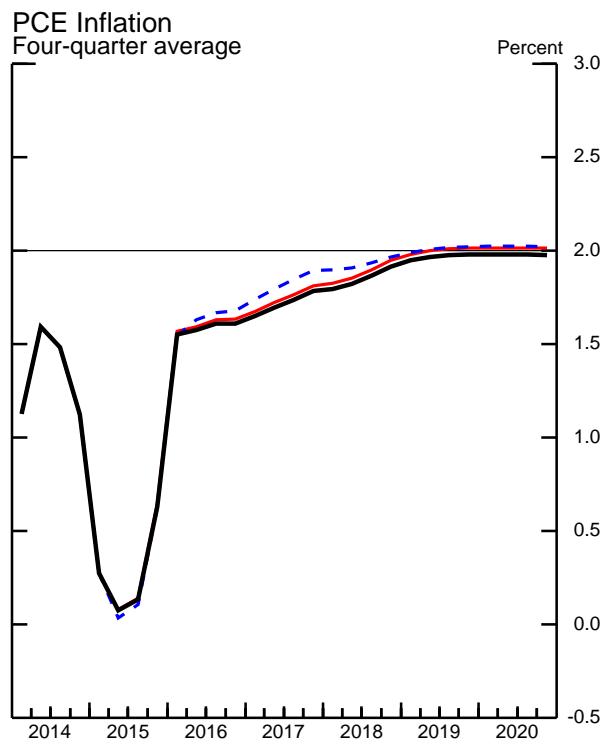
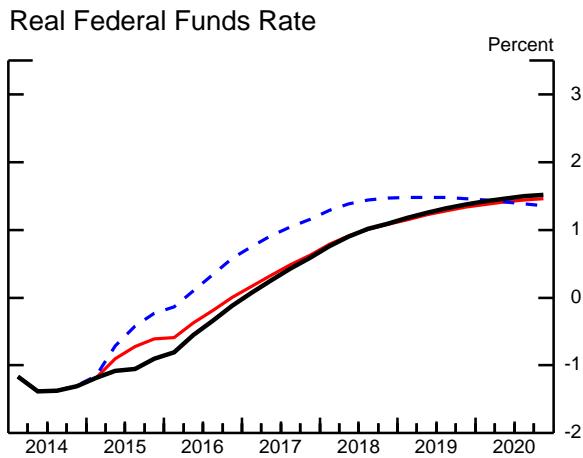
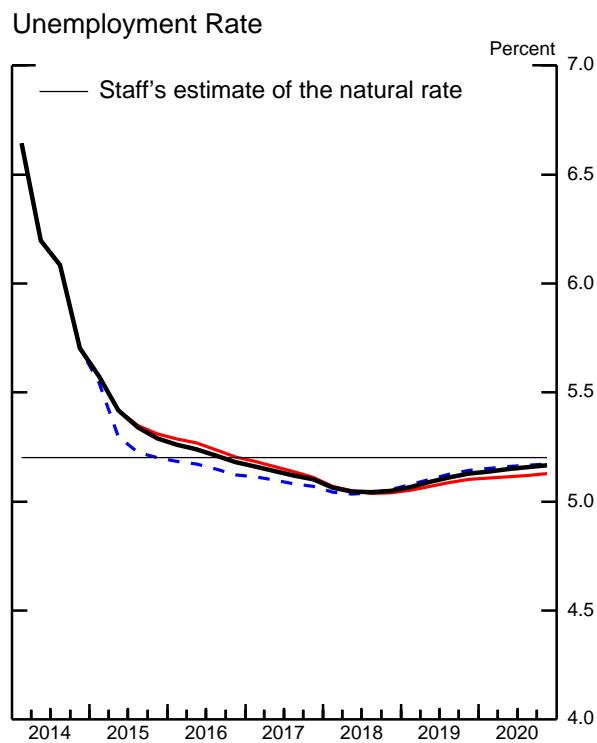
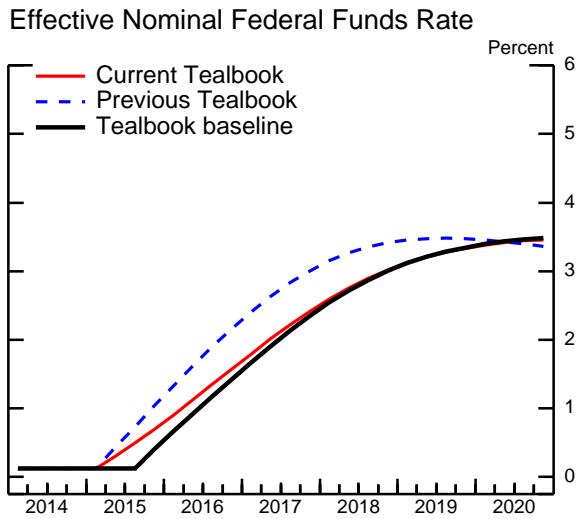
PCE Inflation
Four-quarter average

Real 10-year Treasury Yield

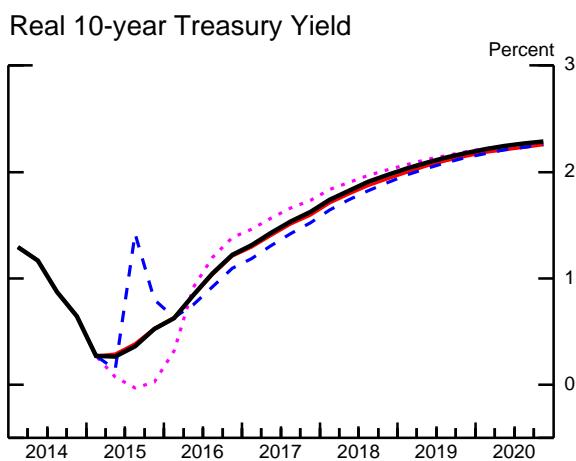
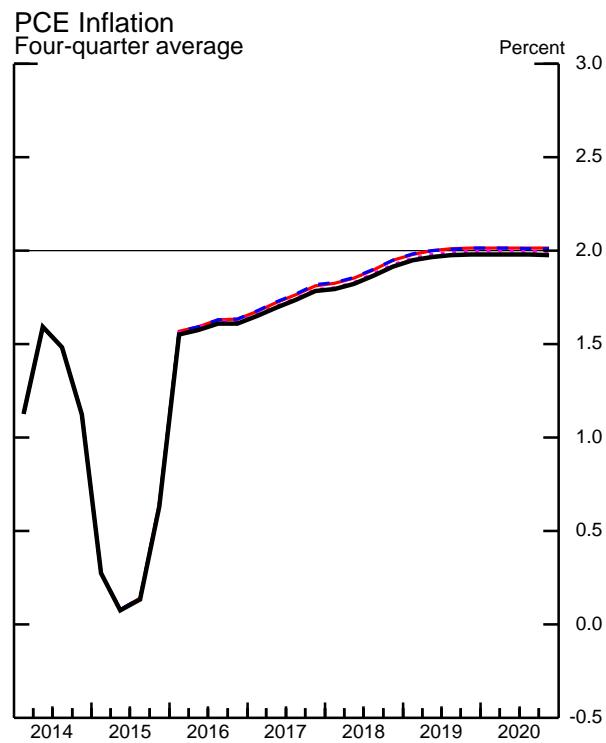
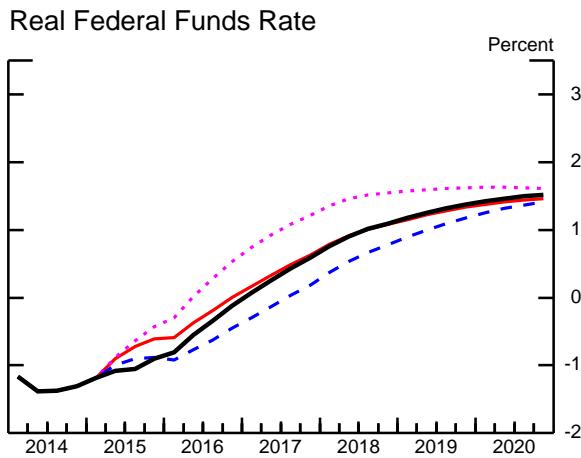
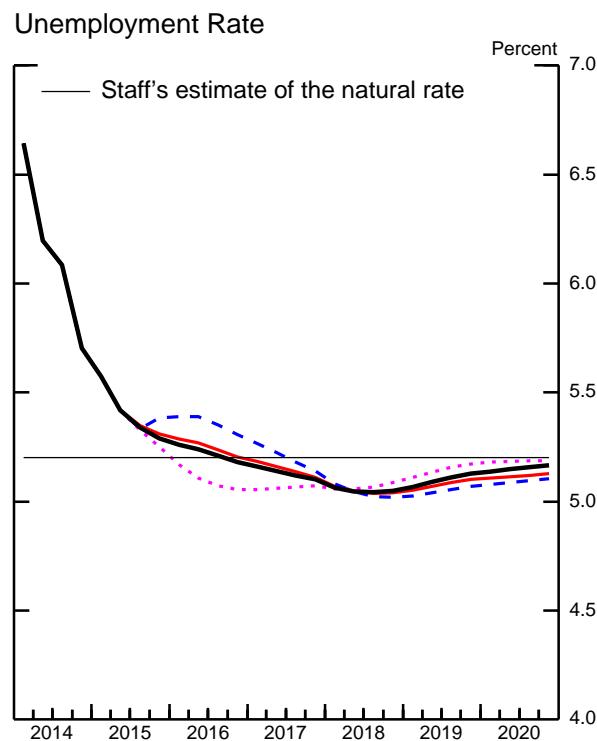
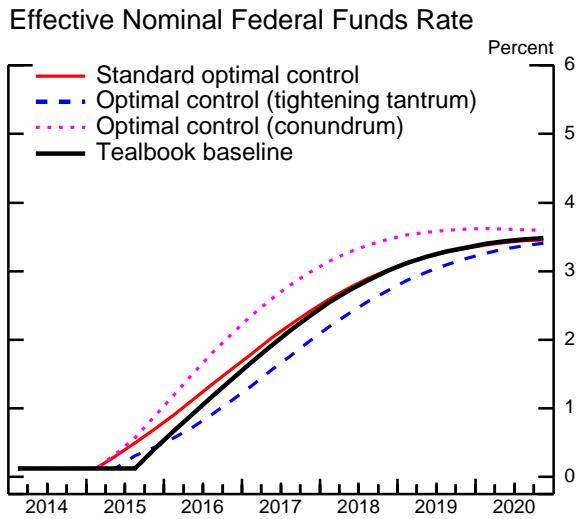


Note: The policy rule simulations in this exhibit are based on rules that respond to core inflation. This choice of rule specification was made in light of the tendency for current and near-term core inflation rates to outperform headline inflation rates as predictors of the medium-term behavior of headline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

Optimal Control Policy under Commitment



Optimal Control in the Presence of Term-Premium Shocks



Outcomes under Alternative Policies

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

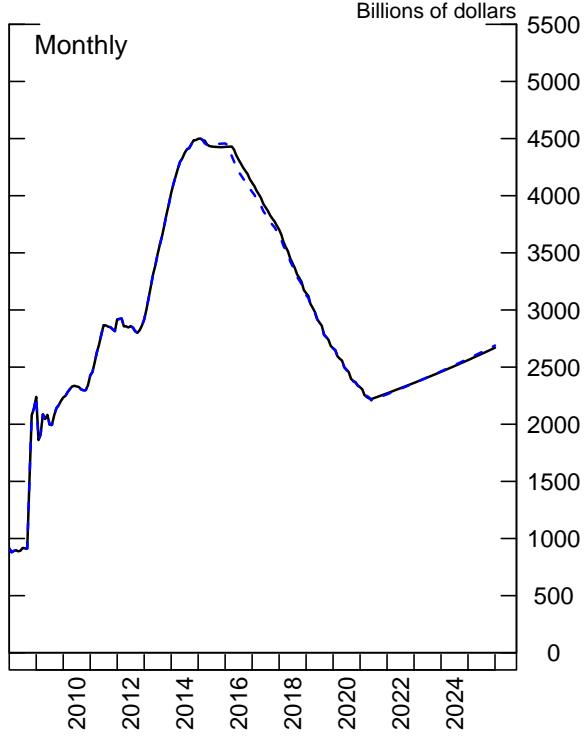
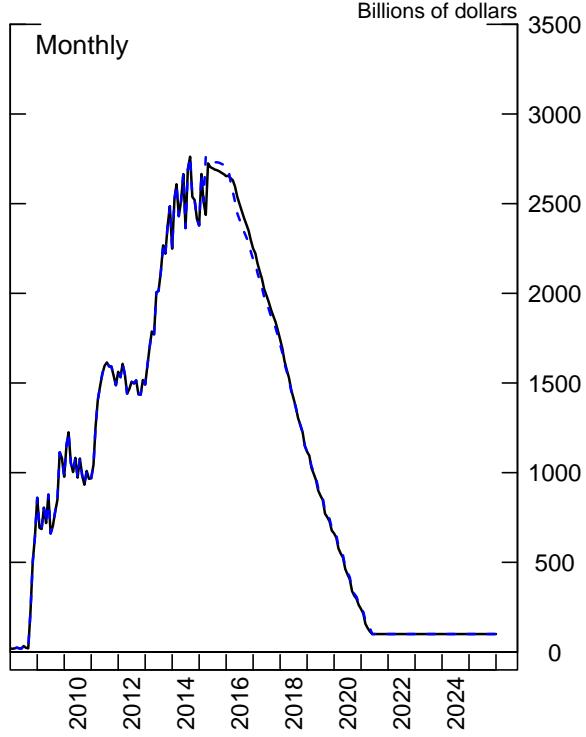
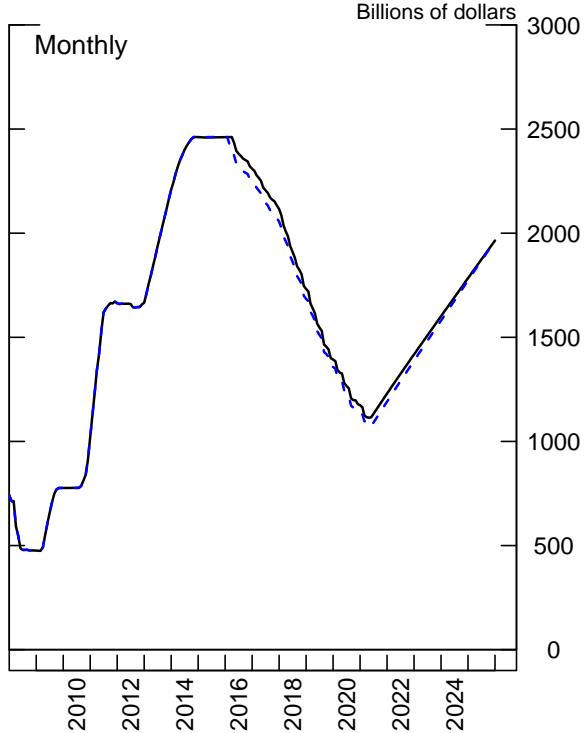
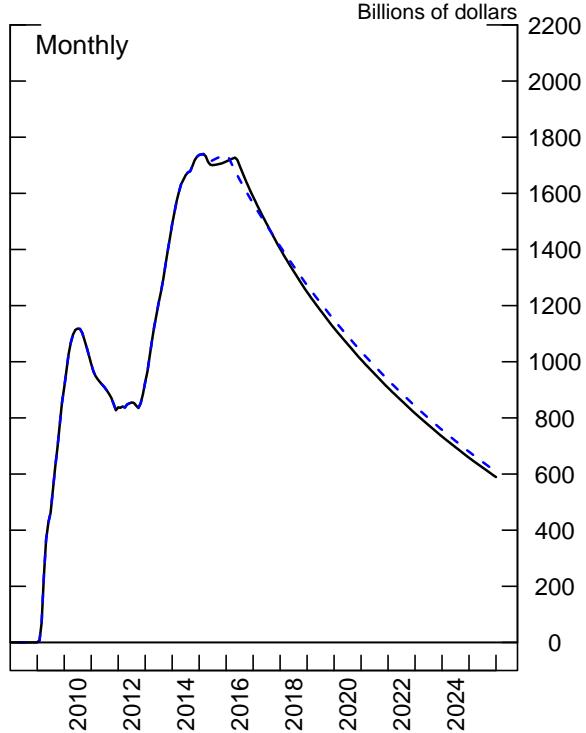
Measure and policy	2015		2016	2017	2018	2019
	H1	H2				
<i>Real GDP</i>						
Extended Tealbook baseline ¹	1.2	2.4	2.4	2.1	1.8	1.7
Taylor (1993)	1.2	1.9	2.1	2.1	2.0	1.9
Taylor (1999)	1.2	2.0	2.1	2.1	1.9	1.8
Inertial Taylor (1999)	1.2	2.3	2.4	2.1	1.8	1.7
First-difference	1.2	2.4	2.5	2.3	2.0	1.8
Optimal control	1.2	2.3	2.4	2.2	1.9	1.7
<i>Unemployment rate²</i>						
Extended Tealbook baseline ¹	5.4	5.3	5.2	5.1	5.1	5.1
Taylor (1993)	5.4	5.5	5.5	5.4	5.3	5.2
Taylor (1999)	5.4	5.4	5.4	5.4	5.3	5.2
Inertial Taylor (1999)	5.4	5.3	5.2	5.1	5.1	5.1
First-difference	5.4	5.3	5.1	5.0	4.9	4.9
Optimal control	5.4	5.3	5.2	5.1	5.0	5.1
<i>Total PCE prices</i>						
Extended Tealbook baseline ¹	-0.2	1.5	1.6	1.8	1.9	2.0
Taylor (1993)	-0.3	1.5	1.6	1.7	1.9	1.9
Taylor (1999)	-0.3	1.5	1.6	1.7	1.9	1.9
Inertial Taylor (1999)	-0.3	1.5	1.6	1.8	1.9	2.0
First-difference	-0.2	1.6	1.7	1.9	2.1	2.1
Optimal control	-0.2	1.5	1.6	1.8	1.9	2.0
<i>Core PCE prices</i>						
Extended Tealbook baseline ¹	1.2	1.4	1.6	1.8	1.9	2.0
Taylor (1993)	1.2	1.4	1.5	1.7	1.9	1.9
Taylor (1999)	1.2	1.4	1.5	1.7	1.9	1.9
Inertial Taylor (1999)	1.2	1.4	1.5	1.8	1.9	2.0
First-difference	1.2	1.5	1.7	1.9	2.1	2.1
Optimal control	1.2	1.4	1.6	1.8	2.0	2.0
<i>Effective nominal federal funds rate²</i>						
Extended Tealbook baseline ¹	0.1	0.4	1.4	2.4	3.0	3.3
Taylor (1993)	1.9	2.0	2.6	3.1	3.4	3.5
Taylor (1999)	1.3	1.6	2.3	3.1	3.4	3.5
Inertial Taylor (1999)	0.3	0.7	1.5	2.4	3.0	3.4
First-difference	0.3	0.7	1.7	2.5	2.7	2.9
Optimal control	0.3	0.7	1.6	2.4	3.0	3.3

1. In the Tealbook baseline, the federal funds rate first departs from an effective lower bound of 12½ basis points in the second quarter of 2015. Thereafter, the federal funds rate follows the prescriptions of the inertial Taylor (1999) rule.

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

Total Assets and Selected Balance Sheet Items

— April Tealbook - - - March Tealbook

Total Assets**Reserve Balances****SOMA Treasury Holdings****SOMA Agency MBS Holdings**

Projections

Federal Reserve Balance Sheet
End-of-Year Projections -- April Tealbook
(Billions of dollars)

	Mar 31, 2015	2015	2017	2019	2021	2023	2025
Total assets	4,481	4,427	3,704	2,666	2,270	2,459	2,670
Selected assets							
Loans and other credit extensions*	3	0	0	0	0	0	0
Securities held outright	4,228	4,207	3,523	2,515	2,139	2,337	2,556
U.S. Treasury securities	2,460	2,461	2,116	1,393	1,230	1,601	1,965
Agency debt securities	37	33	4	2	2	2	2
Agency mortgage-backed securities	1,732	1,713	1,403	1,120	907	734	589
Unamortized premiums	203	184	141	108	86	74	65
Unamortized discounts	-18	-19	-16	-12	-10	-8	-7
Total other assets	46	48	48	48	48	48	48
Total liabilities	4,424	4,368	3,633	2,576	2,156	2,314	2,487
Selected liabilities							
Federal Reserve notes in circulation	1,314	1,371	1,545	1,670	1,812	1,970	2,142
Reverse repurchase agreements	537	258	258	158	158	158	158
Deposits with Federal Reserve Banks	2,564	2,733	1,824	741	180	180	180
Reserve balances held by depository institutions	2,437	2,653	1,744	661	100	100	100
U.S. Treasury, General Account	100	75	75	75	75	75	75
Other deposits	26	5	5	5	5	5	5
Interest on Federal Reserve Notes due to U.S. Treasury	3	0	0	0	0	0	0
Total capital	58	59	71	90	114	145	183

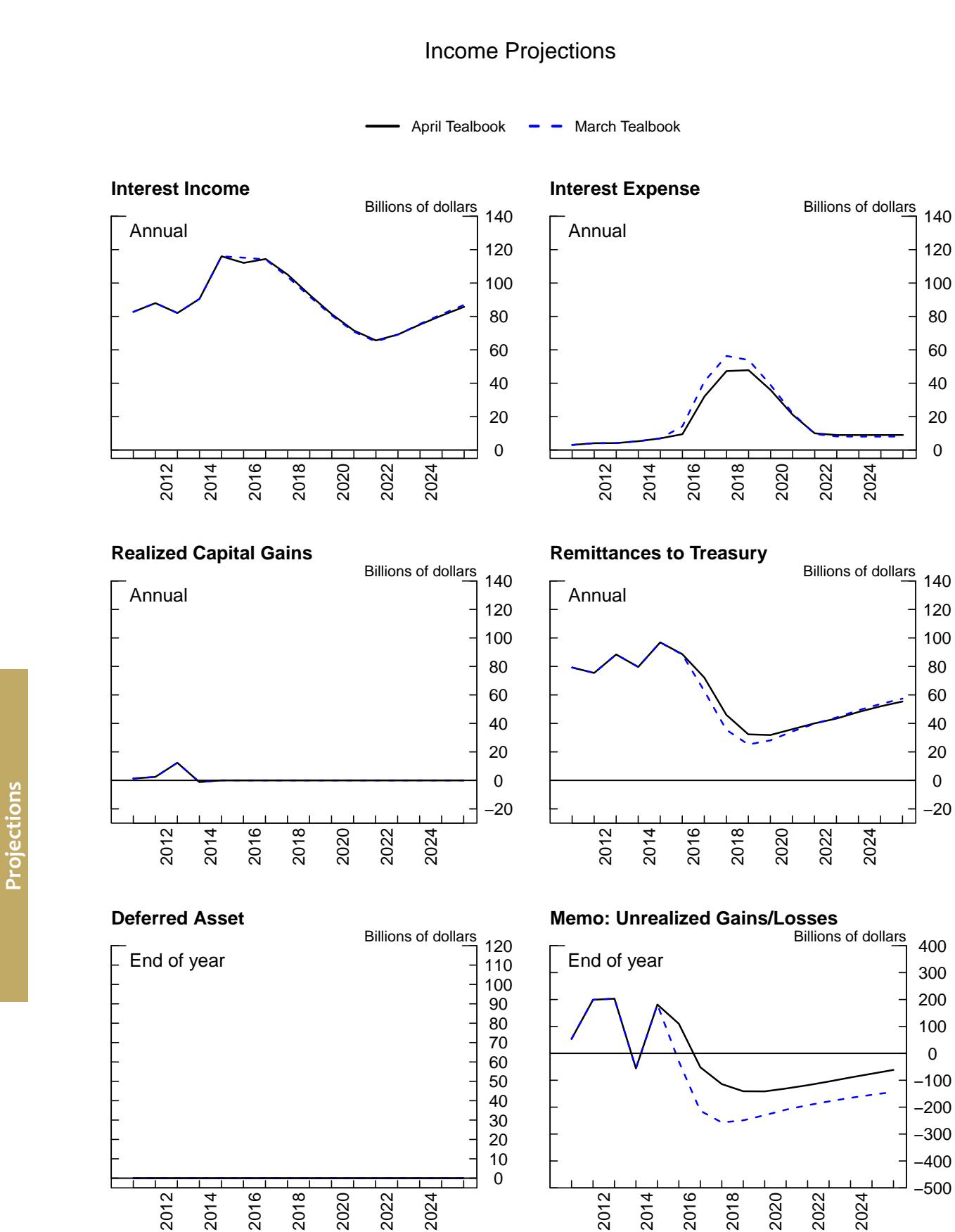
Projections

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; and net portfolio holdings of Maiden Lane LLC.

Income Projections



Projections for the 10-Year Treasury Term Premium Effect
(Basis Points)

Date	April Tealbook	March Tealbook
Quarterly Averages		
2015:Q2	-109	-108
Q3	-104	-103
Q4	-100	-98
2016:Q1	-95	-94
Q2	-90	-89
Q3	-86	-85
Q4	-81	-81
2017:Q4	-66	-66
2018:Q4	-55	-54
2019:Q4	-45	-45
2020:Q4	-38	-38
2021:Q4	-32	-32
2022:Q4	-28	-28
2023:Q4	-23	-23
2024:Q4	-18	-18
2025:Q4	-13	-13

Projections for the Monetary Base
 (Percent change, annual rate; not seasonally adjusted)

Date	April Tealbook	March Tealbook
<i>Quarterly</i>		
2015:Q2	32.6	13.3
Q3	3.3	0.2
Q4	-0.3	0.4
2016:Q1	0.2	-4.3
Q2	-5.0	-13.9
Q3	-10.6	-11.0
Q4	-9.6	-9.1
<i>Annual</i>		
2017	-10.4	-10.3
2018	-15.2	-15.6
2019	-13.8	-14.4
2020	-13.5	-14.9
2021	-4.6	-5.5
2022	3.5	4.2
2023	3.6	4.3
2024	3.6	4.3
2025	3.6	4.3

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

MONEY

M2 growth is expected to moderate a bit in the second quarter of 2015; thereafter, M2 is projected to contract notably through mid-2016 and then to move up slowly over the remainder of the forecast period as the projected increase in the target range for the federal funds rate and the associated rise in the opportunity cost of holding money restrains money demand. The increase in the opportunity cost is expected to hold M2 growth below that of nominal GDP in 2016 and, to a lesser extent, in 2017. There are significant uncertainties surrounding the M2 forecast over the period of policy normalization. For example, it is possible that banks may respond to increases in short-term rates somewhat differently than in the past, both because the target federal funds rate has been close to zero for an extended period and because of important changes in bank regulation. (See the accompanying box, “The Transmission of Monetary Policy to Deposit Rates.”)

Projections

M2 Monetary Aggregate Projections (Percent change, annual rate; seasonally adjusted)*		
<i>Quarterly</i>		
2015:	Q1	7.6
	Q2	4.5
	Q3	-0.1
	Q4	-3.1
2016:	Q1	-2.8
	Q2	-0.7
	Q3	0.6
	Q4	1.3
2017:	Q1	1.5
	Q2	1.7
	Q3	1.8
	Q4	2.0
<i>Annual</i>		
	2015	2.2
	2016	-0.4
	2017	1.8

Note: This forecast is consistent with nominal GDP and interest rates in the Tealbook forecast. Actual data through April 13, 2015; projections thereafter.

* Quarterly growth rates are computed from quarter averages. Annual growth rates are calculated using the change from fourth quarter of previous year to fourth quarter of year indicated.

Abbreviations

ABS	asset-backed securities
BEA	Bureau of Economic Analysis, Department of Commerce
BHC	bank holding company
CDS	credit default swaps
C&I	commercial and industrial
CLO	collateralized loan obligation
CMBS	commercial mortgage-backed securities
CPI	consumer price index
CRE	commercial real estate
Desk	Open Market Desk
ECB	European Central Bank
EME	emerging market economy
FDIC	Federal Deposit Insurance Corporation
FOMC	Federal Open Market Committee; also, the Committee
GCF	general collateral finance
GDI	gross domestic income
GDP	gross domestic product
LIBOR	London interbank offered rate
MBS	mortgage-backed securities
NIPA	national income and product accounts
OIS	overnight index swap
ON RRP	overnight reverse repurchase agreement
PCE	personal consumption expenditures
repo	repurchase agreement
RMBS	residential mortgage-backed securities
RRP	reverse repurchase agreement
SCOOS	Senior Credit Officer Opinion Survey on Dealer Financing Terms

SEP	Summary of Economic Projections
SFA	Supplemental Financing Account
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
SOMA	System Open Market Account
TBA	to be announced (for example, TBA market)
TGA	U.S. Treasury's General Account
TIPS	Treasury inflation-protected securities
TPE	Term premium effects