<u>**Prefatory Note**</u>

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

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

Class II FOMC – Restricted (FR)

Report to the FOMC on Economic Conditions and Monetary Policy

Book A

Economic and Financial Conditions: Current Situation and Outlook

December 10, 2014

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

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Domestic Economic Developments and Outlook

The information about real activity that we have received during the intermeeting period has generally been in line with or a little stronger than our expectations as of the October Tealbook. We now expect real GDP to increase at an average annual rate of 3 percent over the second half of this year; we expect that private domestic final purchases (PDFP)—a measure of aggregate demand that often gives a clearer view of the underlying thrust of the economy—to increase about 3¼ percent over the same period.[1] Both of these figures are slightly stronger than we had written down in our October projection. In the first half of next year, we expect PDFP to continue to rise at about the same solid pace as in the second half of this year, even as real GDP growth slows somewhat. Meanwhile, the two employment reports that were published since the October Tealbook were stronger, on balance, than we had expected—especially with regard to payroll employment—and we have upgraded our near-term outlook for labor market conditions accordingly.

As in previous forecasts, we anticipate that output growth over the next three years will exceed the growth rate of potential. We see accommodative monetary policy, further improvements in the labor market, and continued gains in business sales as bolstering consumer and business confidence, and all of these factors work together to provide additional support to spending growth. Indeed, our medium-term projection for economic activity is a little stronger than in the October Tealbook, as the higher path for stock prices and lower trajectory for crude oil prices in this projection offset the restraint implied by the further appreciation of the dollar.[2] All told, real GDP is expected to increase 2½ percent next year, 2¾ percent in 2016, and 2¼ percent in 2017. By the end of the medium-term projection, therefore, real GDP growth will have slowed most of the way back to its potential rate of growth, restrained by a stance of monetary policy that will have been significantly normalized relative to its position today.

[1] PDFP includes personal consumption expenditures and residential and business fixed investment. Relative to GDP, PDFP excludes net exports, government spending, and inventory investment.

[2] During the intermeeting period, we also adjusted our assumptions about the sensitivity of real GDP to changes in the exchange rate. In particular, we decided to tamp down the effect that changes in the dollar are assumed to have on domestic spending in the judgmental projection; moreover, we applied the smaller sensitivity retroactively to the cumulative rise in the dollar since last summer.

Revisions to the Staff Projection since the Previous SEP

The FOMC most recently published its Summary of Economic Projections, or SEP, following the September 2014 FOMC meeting. The table below compares the staff's current economic projection with the one we presented in the September Tealbook.

We have revised our projection for real GDP growth over the next three years slightly lower, on net, since September; the dollar's stronger exchange value is among the factors accounting for this revision. (Working in the opposite direction, equity prices are higher than we expected in September.) The unemployment rate has continued to fall more than we had projected and is now expected to be lower at the end of this year than in the September Tealbook. But given the lower projected pace of GDP growth, the unemployment rate declines more slowly than in September, and by the end of the medium-term projection it is unrevised at 4.9 percent, ¼ percentage point below our estimate of the natural rate. (Although the unemployment rate is a bit lower than in the September projection through most of the medium term, our projection for the GDP gap is now a touch *weaker* than it was in September. The difference is that we have allowed for a little more cyclical weakness in the labor force participation rate. In this environment, we judge unemployment to be understating somewhat the degree of slack in the labor market, and we view the GDP gap as providing a more accurate assessment of resource slack.)

The staff's projection for headline PCE inflation has been revised lower in the near term, reflecting the substantial further drop in oil prices since September. However, given our assumption that longer-run inflation expectations will remain well anchored,

Staff Economic Projections Compared with the September Tealbook

Variable	2014 H1	2014 H2	2014	2015	2016	2017	Longer run
Real GDP[1]	1.2	3.1	2.2	2.5	2.7	2.2	2.0
September Tealbook	1.1	2.9	2.0	2.7	2.9	2.3	2.0
Unemployment rate[2]	6.2	5.7	5.7	5.2	5.0	4.9	5.2
September Tealbook	6.2	5.9	5.9	5.4	5.1	4.9	5.2
PCE inflation[1]	1.9	.6	1.2	1.0	1.7	1.8	2.0
September Tealbook	1.8	1.1	1.5	1.5	1.6	1.7	2.0
Core PCE inflation[1]	1.6	1.5	1.6	1.5	1.6	1.8	n.a.
September Tealbook	1.6	1.5	1.5	1.6	1.7	1.8	n.a.
Federal funds rate[2]	.09	.13	.13	.98	2.05	3.03	3.75
September Tealbook	.09	.13	.13	1.07	2.25	3.16	3.75
Memo: Federal funds rate, end of period	.13	.13	.13	1.07	2.14	3.09	3.75
September Tealbook	.13	.13	.13	1.17	2.34	3.22	3.75
GDP gap[2,3]	-2.2	-1.3	-1.3	-.6	.4	.8	n.a.
September Tealbook	-2.2	-1.3	-1.3	-.4	.5	.8	n.a.

1. Percent change from final quarter of preceding period to final quarter of period indicated.
2. Percent, final quarter of period indicated.
3. Percent difference between actual and potential. A negative number indicates that the economy is operating below potential.
n.a. Not available.

these energy price declines are assumed to have only a small and transitory effect on core inflation, and our projection for core is little revised (it is just a touch lower in 2015 and 2016 than it was in September). We project that headline inflation will come back into alignment with core inflation after next year, and we continue to project that inflation will remain below the Committee's 2 percent objective through 2017.

With our forecasts for core inflation and the GDP gap both a shade softer than they were in the September Tealbook, the projected path for the federal funds rate is a bit lower than in September; however, the date of liftoff from the effective lower bound remains unchanged at the second quarter of 2015.

Because FOMC participants are now providing additional information about their expectations of the economic conditions that will exist at the time they anticipate it will first become appropriate to increase the target range for the federal funds rate, we include a second table providing quarterly information from the staff projection. In the second quarter of 2015, our projected quarter of liftoff, we now forecast the unemployment rate to average 5.4 percent, and we project the trailing four-quarter change in real GDP to be 2.8 percent.[1] We project the four-quarter change in core PCE inflation to be 1.5 percent in the second quarter of next year, but because of the energy price declines, the four-quarter change in headline PCE inflation is projected to be only 0.5 percent. (Only in early 2016 do we project the recent energy price declines to fall out of the four-quarter change.)

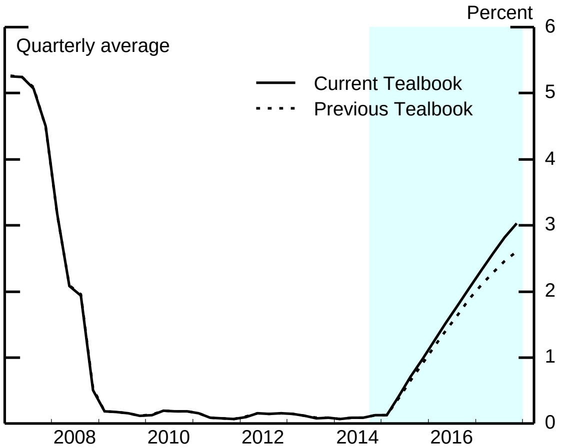
Staff Economic Projections Compared with the September Tealbook, Quarterly

Variable	2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Four-quarter percent change								
Real GDP	3.3	2.8	2.4	2.5	2.6	2.7	2.8	2.7
September Tealbook	3.2	2.7	2.7	2.7	2.7	2.8	2.9	2.9
PCE inflation	.7	.5	.6	1.0	1.6	1.6	1.6	1.7
September Tealbook	1.5	1.3	1.4	1.5	1.6	1.6	1.6	1.6
Core PCE inflation	1.6	1.5	1.5	1.5	1.5	1.6	1.6	1.6
September Tealbook	1.7	1.6	1.6	1.6	1.7	1.7	1.7	1.7
Percent								
Unemployment rate	5.5	5.4	5.3	5.2	5.2	5.1	5.1	5.0
September Tealbook	5.7	5.6	5.5	5.4	5.3	5.3	5.2	5.1
Federal funds rate	.13	.42	.71	.98	1.25	1.52	1.79	2.05
September Tealbook	.13	.45	.76	1.07	1.37	1.67	1.96	2.25
Memo								
Federal funds rate, end of period	.13	.52	.80	1.07	1.34	1.61	1.88	2.14
September Tealbook	.13	.55	.87	1.17	1.47	1.77	2.06	2.34

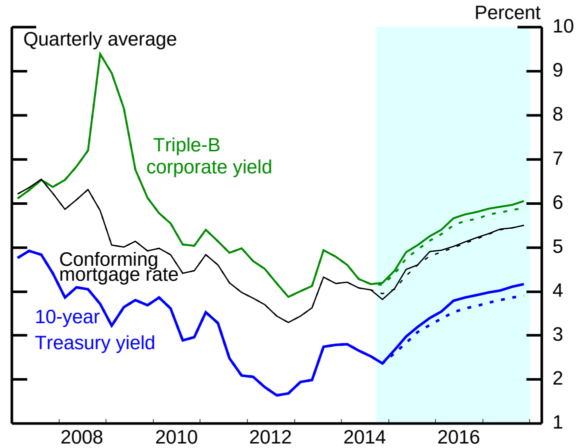
[1] Note that, because the data are published with a lag, some of the data pertaining to the second quarter of 2015 will not be available until after the quarter has ended.

Key Background Factors underlying the Baseline Staff Projection

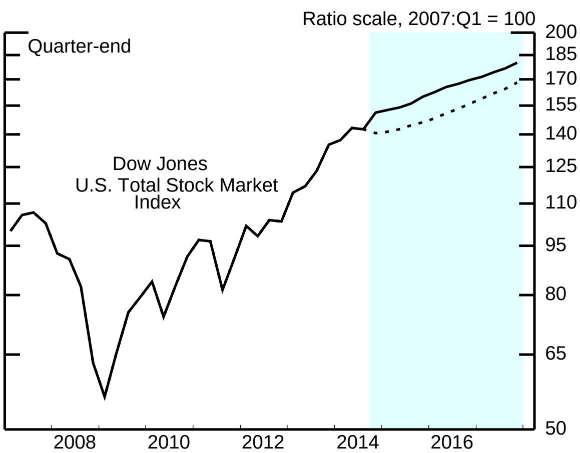
Federal Funds Rate



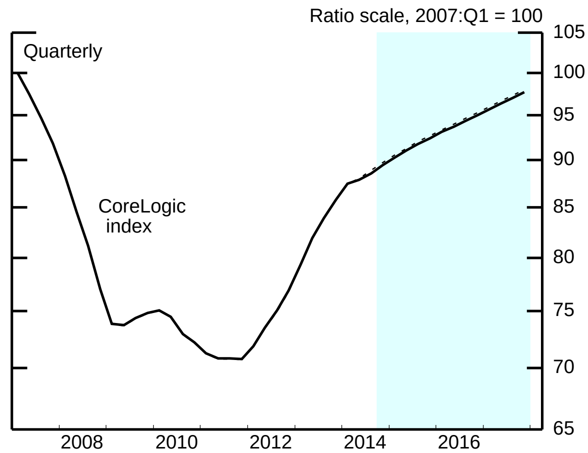
Long-Term Interest Rates



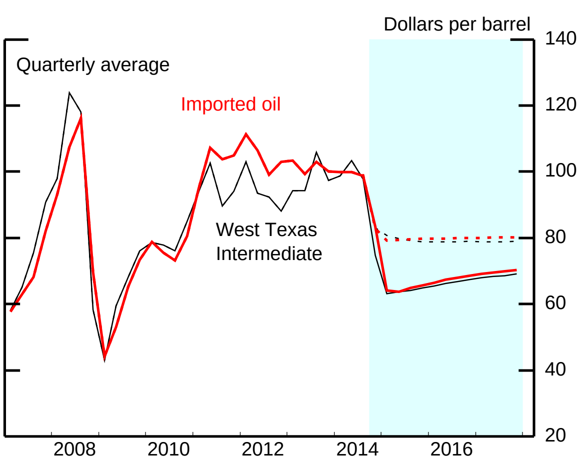
Equity Prices



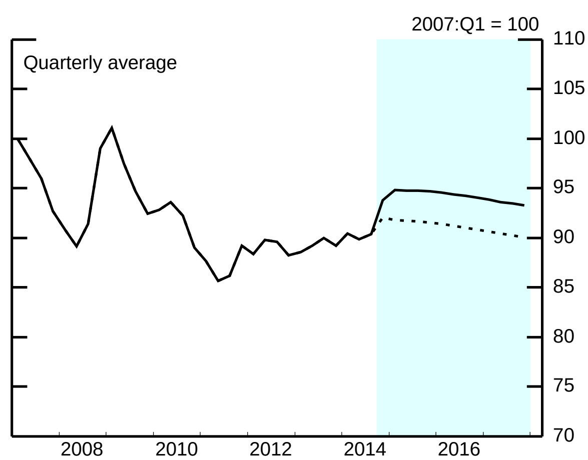
House Prices



Crude Oil Prices



Broad Real Dollar



The unemployment rate is expected to average 5.7 percent in the current quarter, slightly lower than anticipated in the October Tealbook, and it decreases a bit more over the medium term than in the previous projection. The steeper decline reflects both the faster pace of output growth in this forecast and a small downward revision we made to our assumption about potential GDP growth over the forecast period. That revision was intended to correct the string of forecast errors for the unemployment rate we have made over the past few years. We now project the unemployment rate to decline to 5.2 percent at the end of next year—equal to our estimate of its natural rate—and to edge down further to 4.9 percent by the end of 2017, 0.3 percentage point below the October Tealbook forecast. (For a different perspective, see the box "Alternative View: The Unemployment Rate Falls below 5 Percent in 2015.") Thus, as in the September (but not October) Tealbook, we now have a small overshooting of full resource utilization.

The forecast of inflation is little revised from the October other than the near-term consequences of the steeper decline in consumer energy prices. As a result of that decline, we now expect overall PCE prices to be about unchanged this quarter and then to decline at an annual rate of about ½ percent next quarter. However, by the middle of next year when the recent declines in crude oil prices have been fully passed through to the retail level, we expect overall PCE price inflation to move back roughly into line with core PCE price inflation. Over the medium term, we continue to expect that in an environment of stable long-term inflation expectations, both overall and core PCE inflation will rise gradually to 1¾ percent in 2017, aided by tightening resource utilization and waning restraint on import prices from dollar appreciation.

KEY BACKGROUND FACTORS

Monetary Policy

- As in recent Tealbooks, we assume that the federal funds rate will lift off from its effective lower bound in the second quarter of 2015.

- Following liftoff, the federal funds rate is assumed to rise at a pace determined by the prescriptions of an inertial version of the Taylor (1999) policy rule. In this projection, the federal funds rate averages about 3 percent in the fourth quarter of 2017, around 40 basis points higher than was projected in the October Tealbook, reflecting the upward revision to the level of resource utilization in the medium-term projection.

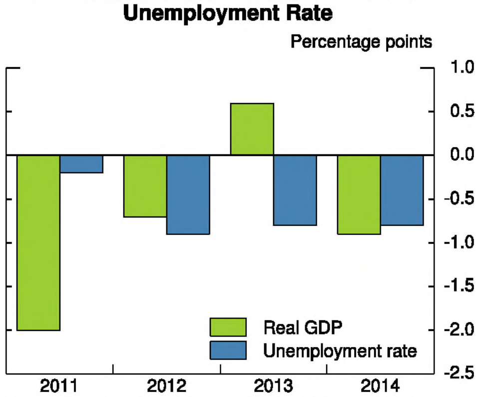
Alternative View: The Unemployment Rate Falls below 5 Percent in 2015

In contrast to the staff's baseline projection that the unemployment rate will decline ½ percentage point in 2015, this discussion presents the view that it will fall considerably faster and end the year below 5 percent.[1] Since mid-2011, the unemployment rate has declined markedly faster than the staff anticipated, even as GDP has largely risen more slowly than we had projected (see figure). This combination of outcomes suggests important changes in the structure of the economy, albeit ones that we do not understand very well. The perspective of this discussion is that, like most other forecasters, the staff has not adjusted its projection methodology or underlying assumptions sufficiently to incorporate potentially new labor market behavior. Consequently, sizable forecast errors have resulted and will likely persist.

At first blush, the staff baseline projection looks quite reasonable. Over the course of 2015, we project GDP growth of 2½ percent, about ¾ percentage point above our estimate of its potential rate, and a decline in the unemployment rate of 0.5 percentage point. This projection is quite close to that of the Blue Chip Consensus forecast. However, their forecasts have suffered the same sort of errors as the staff's: Both forecasts for the one-year-ahead unemployment rate have been too pessimistic by roughly ¾ percentage point in each of the past three years (see table).

The staff's projection of the unemployment rate is informed by Okun's law, the long-run historical relationship between the unemployment rate relative to its natural rate and real GDP relative to potential GDP. However, while it is commonly used, Okun's law suffers from several weaknesses as a forecasting tool. First, two of the key variables, potential GDP and the natural rate of unemployment, are unobserved yet are thought to be changing over time. Second, some researchers find that the Okun's law coefficients have not been stable over time.[2] Third,

Forecast Errors for Real GDP and the Unemployment Rate



Note: Year-ahead forecast errors for Q4/Q4 real GDP growth and the unemployment rate in the fourth quarter and assumes current Tealbook forecast is realized.

Year-Ahead Unemployment Rate Forecasts*

	2011	2012	2013	2014	2015
A	8.7	7.8	7.0	5.7	n.a.
Staff	8.9	8.7	7.8	6.5	5.2
Blue Chip	9.2	8.6	7.6	6.7	5.3
Ten high	9.6	9.2	8.0	7.1	5.6
Ten low	8.8	8.1	7.3	6.4	5.0

n.a. Not available
*Projections for the fourth quarter of the indicated year made in December of the prior year and assumes current Tealbook forecast is realized.

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[1] Prepared by Glenn Follette.

[2] See, for example, Edward S. Knotek, II (2007), "How Useful Is Okun's Law?" Federal Reserve Bank of Kansas City, *Economic Review* (Fourth Quarter), pp. 73–103, www.kc.frb.org/publicat/econrev/pdf/4q07knotek.pdf; Michael T. Owyang and Tatevik Sekhposyan (2012), "Okun's Law over the Business Cycle: Was the Great Recession All That Different?" Federal Reserve Bank of St. Louis, *Federal Reserve Bank of St. Louis Review*, vol. 94 (September/October), pp. 399–418,

the GDP data used in the Okun's law relationship are subject to substantial revision, which reduces their usefulness for real-time forecasting.[3] Indeed, the staff has tried to address the poor quality of the initial GDP data for the first half of 2014 by heavily discounting those data.

Why has Okun's law performed so poorly during the current expansion? One possible reason is that the staff may have been reluctant to mark down its assumptions for potential GDP growth going forward or to adjust other parameters of the relationship. Note that the staff's current estimates of potential GDP growth for recent years are lower than we had assumed when we were making those projections, although not low enough to completely explain the drop in unemployment. In addition, the staff's assumption of the stability of the Okun's law relationship is unlikely to hold. This assumption relies on stable cyclical properties for several labor market variables, chief among them the participation rate, hours worked per person, and productivity. However, these variables instead appear to have become less cyclical. For example, demographic groups with more cyclical labor force participation, such as teenagers, are a smaller share of the labor force now than previously. Hours worked seems to be different this cycle as evidenced by the elevated share of those working part time for economic reasons. Finally, productivity has not been as pro-cyclical in the past three business cycles as it was in earlier business cycles. Changes in the behavior of these variables will affect the estimated Okun's law relationship—in particular, reduced cyclicality on these margins would boost the sensitivity of the unemployment rate to changes in real GDP.

Given the staff's baseline projection of economic activity, how much faster would the unemployment rate fall if recent patterns persist? One gauge would be to adjust the Okun coefficient and our estimate of potential GDP so that there are no persistent errors in the Okun's law relationship over the past four years. Beginning with an Okun coefficient of negative 0.6, such a calibration generates an underlying growth rate of potential output of 1 percent.[4] This relatively low reading on potential growth would incorporate actual damage to the economy's potential as a result of the Great Recession as well as measurement error and other unidentified structural changes that would otherwise cause persistent Okun's law errors. Applying this alternative specification of Okun's law to the staff's projection for real GDP growth leads to an unemployment rate of 5¼ percent in the second quarter of 2015 and 4¾ percent in the fourth quarter.

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http://research.stlouisfed.org/publications/review/article/9413; and Mary C. Daly, John G. Fernald, Òscar Jordà, and Fernanda Nechio (2013), "Okun's Macroscope and the Changing Cyclicality of Underlying Margins of Adjustment," Working Paper Series 2013-32 (San Francisco: Federal Reserve Bank of San Francisco, September), www.frbsf.org/economic-research/files/wp2013-32.pdf.

[3] As documented by Daly and others (2014), during the Great Recession, Okun's law fits better after the data revisions than it does with the initial data. This is true with earlier recessions as well. See Mary C. Daly, John Fernald, Òscar Jordà, and Fernanda Nechio (2014), "Interpreting Deviations from Okun's Law," Federal Reserve Bank of San Francisco, *FRBSF Economic Letter,* 2014-12, www.frbsf.org/economic-research/publications/economic-letter/2014/april/okun-law-deviation-unemployment-recession.

[4] These estimates are also based on the assumption that the natural rate of unemployment has fallen as much as the staff has assumed. The Okun coefficient of negative 0.6 is consistent with the findings of Daly and others (2013) for the 40 quarters ending in 2012. Other combinations of potential and the Okun coefficient are also consistent with these data and yield similar drops in the unemployment rate.

- The SOMA portfolio is assumed to remain at its current size until about two quarters after the federal funds rate is raised above its effective lower bound, at which point the portfolio begins to contract.

Other Interest Rates

- Our projection continues to call for a significant rise in the 10-year Treasury yield, primarily because of the movement of the valuation window through the period of extremely low short-term interest rates as well as a gradual waning of the effects of the FOMC's balance sheet policies on term premiums. This yield averages about 25 basis points higher over the medium term compared with the October Tealbook projection, reflecting the upward revisions to the projected federal funds rate.

- We have marked up our assumptions for corporate bond yields slightly, while mortgage interest rates are little changed.

Equity Prices and Home Prices

- Since the October Tealbook, equity prices have risen about 6 percent. We have revised up our forecast of the path of stock prices in response to the recent strength in market prices and the more positive medium-term macroeconomic outlook, which more than offset the effect of higher interest rates.

- House price data for September and October, on net, were in line with our October Tealbook forecast. We have thus maintained our projection that house price appreciation will continue to slow—from around 4 percent this year to an average rate of about 3 percent per year from 2015 to 2017.

Fiscal Policy

- In this projection, stronger-than-anticipated incoming data on federal purchases as well as a small change in our policy assumptions action provide a slightly larger boost to real GDP growth.[3]

[3] As in previous Tealbooks, we continue to assume that certain tax breaks to businesses that have expired will be extended. We previously assumed that the extension of these provisions would be partially financed by some other tax increases, but we now expect it to add to the deficit.

Foreign Economic Activity and the Dollar

- The broad nominal index for the dollar has appreciated another 4 percent since the October Tealbook. Looking ahead, we expect the dollar to depreciate about ½ percent annually in real terms, as some further appreciation against the currencies of the advanced foreign economies is more than offset by depreciation against the currencies of the emerging market economies. The overall pace of decline in the real value of the dollar is a touch slower than in the previous Tealbook, reflecting the upward revision to projected U.S. interest rates.

- We estimate that foreign real GDP growth picked up only a little from its anemic pace in the first half of the year to an annual rate of about 2½ percent in the second half, somewhat slower than we projected in October. We see growth abroad stepping up to just above a 3 percent pace over the medium term, little changed from our previous projection, as the positive effects of the fall in oil prices and the higher value of the dollar are offset by the weaker tone of recent data.

Oil and Other Commodity Prices

- The spot price of Brent crude oil has fallen $19 per barrel since the time of the October Tealbook, reaching $67 per barrel on December 9. Although subdued global demand growth likely continued to weigh on prices, most of the decline occurred after OPEC decided at its November 27 meeting not to cut production. Despite persistent geopolitical risks in Libya and Iraq, far-dated futures prices also fell sharply to levels not seen since 2009. Going forward, based on prices in the futures market, we project oil prices to move higher. Reflecting some lag in the pass-through of spot oil prices to the price of imported oil, we project the price of imported oil to decline from $84 per barrel in the current quarter to $64 per barrel in the second quarter of next year. Thereafter, the price is projected to rise to $70 per barrel by the end of the forecast period. The downward revision to this forecast is about $15 per barrel in 2015 and tapers to about $10 per barrel by the end of 2017.

- Nonfuel commodity prices have decreased much less than oil prices and are projected to remain about flat over the forecast period.

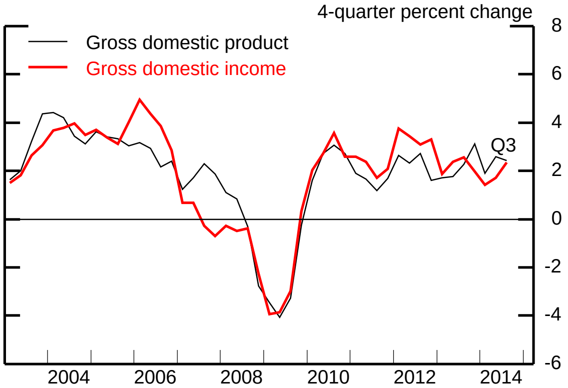
Summary of the Near-Term Outlook
(Percent change at annual rate except as noted)

Measure	2014:Q3 Previous Tealbook	2014:Q3 Current Tealbook	2014:Q4 Previous Tealbook	2014:Q4 Current Tealbook	2015:Q1 Previous Tealbook	2015:Q1 Current Tealbook
Real GDP	**2.7**	**4.1**	**3.0**	**2.2**	**2.3**	**2.4**
Private domestic final purchases	2.8	3.1	3.5	3.4	2.7	3.1
Personal consumption expenditures	1.9	2.2	3.4	3.4	3.0	3.5
Residential investment	8.0	3.0	5.5	6.2	6.1	3.6
Nonres. private fixed investment	6.7	8.0	3.7	3.0	.1	.9
Government purchases	1.5	4.4	-1.6	-2.1	-.2	-.1
Contributions to change in real GDP						
Inventory investment[1]	-.6	-.1	.4	.4	.2	-.1
Net exports[1]	.6	.8	-.1	-.8	-.2	-.1
Unemployment rate[2]	**6.1**	**6.1**	**5.8**	**5.7**	**5.7**	**5.5**
PCE chain price index	**1.2**	**1.3**	**-.2**	**-.1**	**.9**	**-.6**
Ex. food and energy	1.4	1.4	1.2	1.6	1.5	1.5

1. Percentage points.
2. Percent.

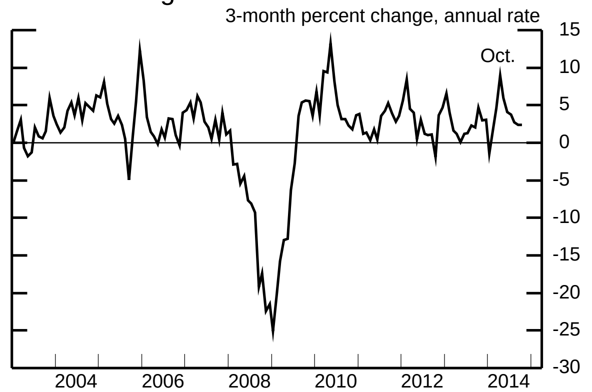
Recent Nonfinancial Developments (1)

Real GDP and GDI



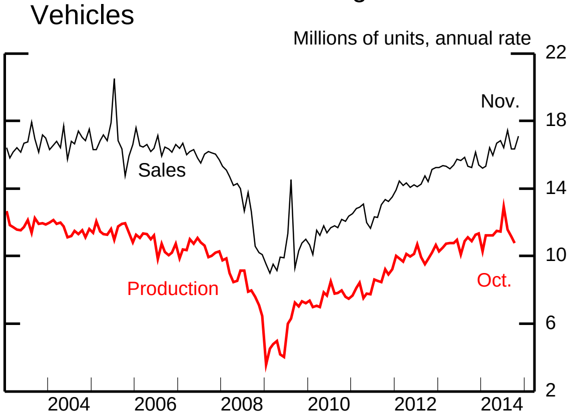
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Manufacturing IP ex. Motor Vehicles and Parts



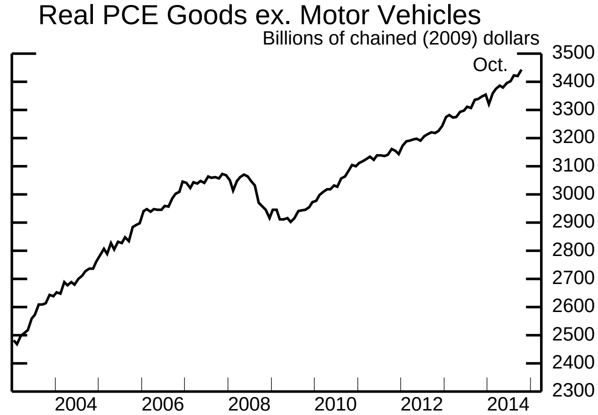
Source: Federal Reserve Board, G.17 Statistical Release, "Industrial Production and Capacity Utilization."

Sales and Production of Light Motor Vehicles



Source: Ward's Communications.

Real PCE Goods ex. Motor Vehicles



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

Domestic Econ Devel & Outlook

RECENT DEVELOPMENTS AND THE NEAR-TERM OUTLOOK FOR REAL GDP

After rising at an annual rate of 4 percent in the third quarter, real GDP is projected to increase at a 2¼ percent average pace in the fourth and first quarters. Although growth in consumer spending is expected to pick up noticeably from its third-quarter pace, both net exports and federal government purchases—volatile spending categories that were important positive contributors to GDP growth last quarter—are projected to drop back in the near term.

- The recent data for consumer spending have generally been in line with our expectations, and thus we continue to project that real PCE growth will step up, to an average rate of 3½ percent in the fourth and first quarters from about 2¼ percent in the third quarter.[4] Much of the projected pickup in the fourth quarter reflects a sizable rebound in energy services spending, which was held down in the third quarter by unusually cool summer weather. The limited available indicators suggest that outlays for goods, including motor vehicles, have risen at a solid pace so far this quarter. More broadly, PCE this quarter and next should be supported by ongoing improvements in the job market, household wealth, and consumer sentiment as well as by the boost to real incomes from the drop in energy prices.

- We have modestly downgraded our forecast for housing construction once again through the near term. Although single-family housing starts rose in October, permits—which provide a better signal about the trajectory for home building—were about unchanged and have been essentially flat since June.

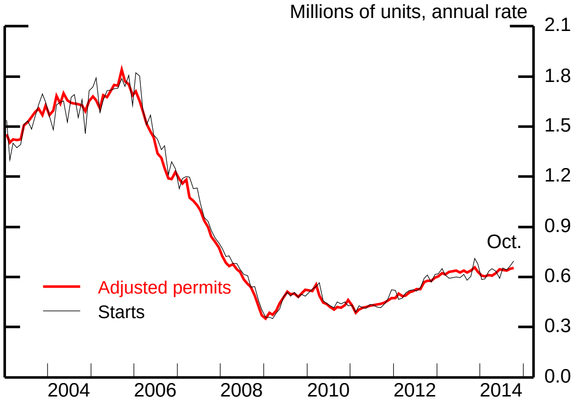
- The growth rate of real equipment and tangibles was boosted significantly in the third quarter by a transitory jump in spending on transportation equipment. Excluding transportation spending, real E&I rose at an annual rate of about 5 percent in that quarter and is projected to increase at about this rate, on average, in the fourth and first quarters.

- We expect net exports to subtract ¾ percentage point from real GDP growth in the fourth quarter of 2014—compared with a roughly neutral projection in

[4]After the December Tealbook projection was closed, the Census Bureau released the Quarterly Services Survey, or QSS, for the third quarter. The retail sales for November will be released on December 11.

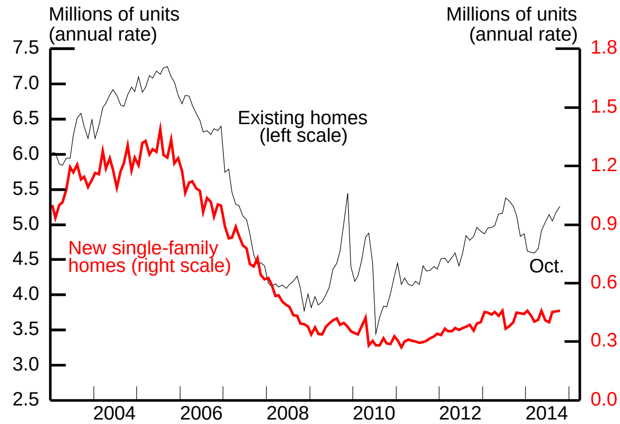
Recent Nonfinancial Developments (2)

Single-Family Housing Starts and Permits



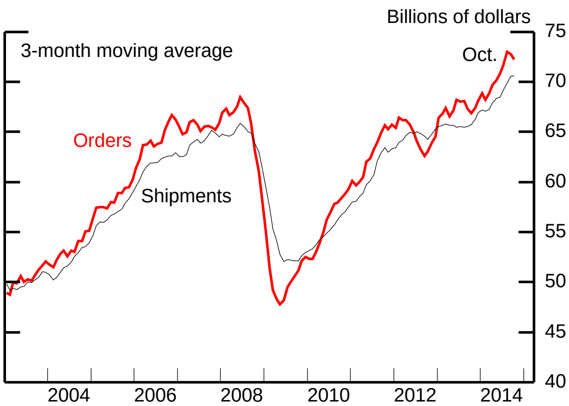
Note: Adjusted permits equal permit issuance plus total starts outside of permit-issuing areas.
Source: U.S. Census Bureau.

Home Sales



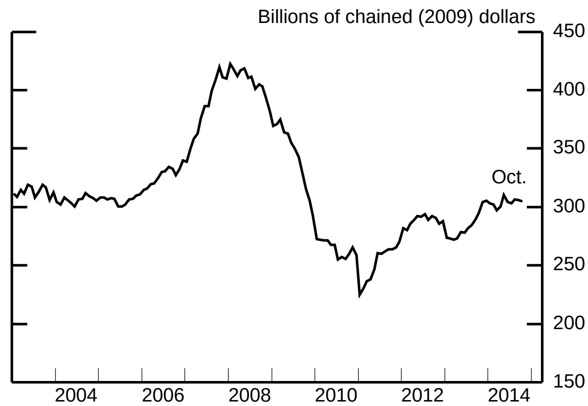
Source: For existing, National Association of Realtors; for new, U.S. Census Bureau.

Nondefense Capital Goods ex. Aircraft



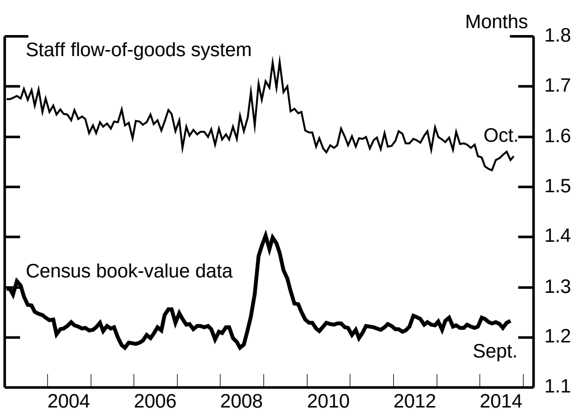
Source: U.S. Census Bureau.

Nonresidential Construction Put in Place



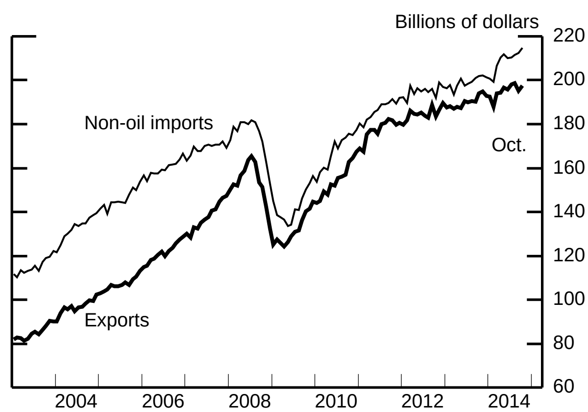
Note: Nominal CPIP deflated by BEA prices through 2014:Q2 and by the staff's estimated deflator thereafter.
Source: U.S. Census Bureau.

Inventory Ratios ex. Motor Vehicles



Note: Flow-of-goods system inventories include manufacturing and mining industries except motor vehicles and parts and are relative to consumption. Census data cover manufacturing and trade ex. motor vehicles and parts, and inventories are relative to sales.
Source: U.S. Census Bureau; staff calculations.

Exports and Non-oil Imports



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

the October Tealbook—after adding about the same amount to growth in the third quarter. The deterioration in net exports in the current quarter largely reflects an upward revision to our forecast for imports: Recent data point to a smaller decline in real oil imports than we had previously projected, while the higher value of the dollar is expected to boost non-oil imports and restrain exports a bit in the near term.

- The physical product and production worker hours data for November suggest manufacturing output rose briskly last month. In addition, the national and regional manufacturing surveys are upbeat, and automakers have boosted their near-term production schedules. All told, we now expect manufacturing IP to increase at an average pace of about 4 percent over the fourth and first quarters, 1½ percentage points more than in the October Tealbook.

THE MEDIUM-TERM OUTLOOK FOR REAL GDP

As in previous Tealbooks, we anticipate that output growth over the next two years will significantly exceed its potential rate, supported by a still-accommodative stance of monetary policy. The gains in aggregate demand drive improvements in labor market conditions, business sales, and consumer and business confidence, all of which, in turn, should provide additional support to spending growth. As the normalization of monetary policy proceeds, we expect real GDP growth will eventually slow to 2¼ percent in 2017. Our forecast for output growth over the next three years is slightly faster than in the October Tealbook, with the projected level of real GDP at the end of 2017 about ½ percent higher than in our previous forecast.

- Relative to the October Tealbook, we expect output growth in this projection to be boosted by the higher equity prices, slightly more expansionary fiscal policy, and lower oil prices. In contrast, the higher path for the dollar in this projection is expected to hold down GDP growth through 2017 relative to the prior Tealbook.

- In addition, we have reassessed the extent to which changes to our forecast for the real exchange value of the dollar show through to our projection for U.S. GDP growth. Broadly speaking, we now think that GDP will be affected a little less by changes in the exchange rate than we had assumed in previous Tealbooks.[5]

- We also made a small adjustment to our supply-side assumptions in this projection. In particular, we revised down our assumptions for structural productivity and potential output growth in 2016 and 2017, reducing the projected acceleration in potential GDP through the medium term.[6] Taking into account the revisions to both actual GDP and its potential, GDP stands ¾ percent above its potential level in the fourth quarter of 2017, compared with no output gap at that time in the October Tealbook.

THE OUTLOOK FOR THE LABOR MARKET

The two employment reports that have been published since the October FOMC meeting, as well as the other indicators that have become available, show more improvement in labor market conditions than we had expected.

- Total nonfarm payrolls rose 321,000 in November. This reading, combined with upward revisions to the estimates in previous months, put the level of total payrolls about 150,000 higher in November than we had anticipated in the previous Tealbook. In response, we raised our forecast for payroll gains to 245,000 in December and to 210,000 per month in the first quarter—about 50,000 more per month than we had previously projected.

- The unemployment rate was 5.8 percent in November, unchanged from October but down about ½ percentage point from six months earlier. We expect the unemployment rate to edge down to 5.7 percent in December and

[5] Our new assumptions about the sensitivity of U.S. real GDP to changes in the exchange rate better reflect the view that a rise in the dollar will tend to boost domestic spending by lowering consumer prices, thus providing some offset to declines in the trade balance. Empirical estimates of the sensitivity of U.S. real GDP to the dollar vary fairly widely; the sensitivity that we have now built into the judgmental projection bring us into closer alignment with simulations from staff models. With our new assumptions, we now estimate that the cumulative roughly 7¼ percent upward revision to the path broad real exchange rate since the July Tealbook has reduced our forecast for the level of real GDP at the end of the medium term by about 1 percent; had we not made this change, the effect would have been roughly 1½ percent.

[6] We also revised up our assumption for the trend labor force participation rate beginning in 2013 to bring it closer to the center of the range of trend estimates presented in the recent paper, "Labor Force Participation: Recent Developments and Future Prospects," by Stephanie Aaronson, Tomaz Cajner, Bruce Fallick, Felix Galbis-Reig, Christopher Smith, and William Wascher that will be published in the Fall 2014 edition of the *Brookings Papers on Economic Activity*.

then to average 5.5 percent in the first quarter; these figures are 0.1 percentage point and 0.2 percentage point, respectively, below our previous forecast.

- The labor force participation rate held steady in November at 62.8 percent, 0.1 percentage point above our projection in the October Tealbook. The participation rate has been unchanged, on net, since the spring, which, relative to its declining trend, is consistent with a modest cyclical improvement.

- The staff's labor market conditions index, which summarizes the movements in 19 labor market indicators, continued to improve in October and November but at a slower pace than earlier this year.

Relative to the October Tealbook, we have marked up the expected pace of improvement in labor market conditions through the medium term. This upgrading reflects the additional momentum indicated by the two most recent labor market reports and the more positive outlook for the GDP gap in this projection, as well as an effort to better balance the risks around our unemployment rate forecast in light of the faster-than-projected declines registered over the past few years.

- We now expect monthly job gains to average about 220,000 in 2015 and 230,000 in 2016 before slowing to around 150,000 in 2017. These gains are considerably faster than we had projected in October: We marked up 2015 and 2016 by an average of approximately 55,000 per month and 2017 by about 20,000 per month.

- We project the unemployment rate to reach 5.2 percent (our estimate of the natural rate) in the fourth quarter of next year and to move down to 4.9 percent at the end of 2017, 0.3 percentage point lower than in the October Tealbook.

- At present, we believe that the unemployment rate gap understates the amount of slack remaining in the economy, reflecting an unusually weak recovery in the labor force participation rate and, we think, an unusually elevated level of involuntary part-time employment. (Also see the box, "Indicators of Labor Shortages.") As the economy improves, we expect that wage gains will pick up and that more of the individuals not in the labor force will be drawn in. This effect will accelerate the cyclical recovery in the participation rate while

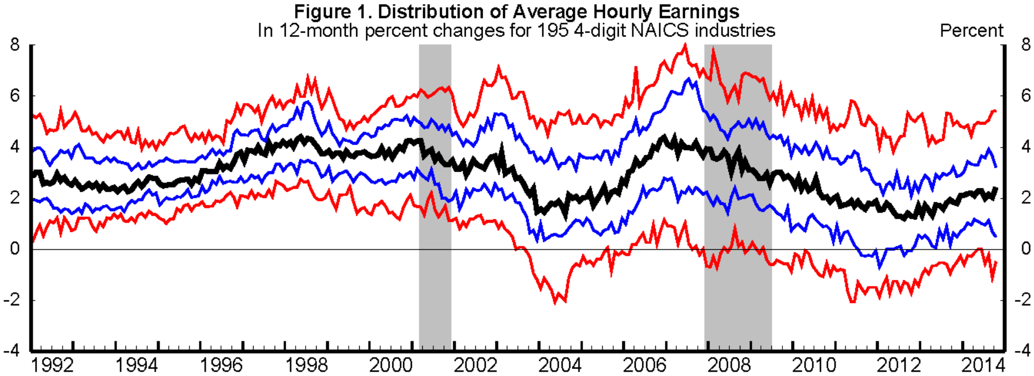
Indicators of Labor Shortages

Anecdotal reports of labor shortages, especially for skilled labor, are widespread. For example, recent Beige Books have frequently noted the difficulties firms face in finding qualified workers for certain positions, particularly in construction, manufacturing, and energy-related industries. In a recent inquiry conducted by the Federal Reserve Banks about staffing plans among their business contacts, 41 percent of respondents reported that an inability to find workers with the required skills restrained their hiring.[1] Similarly, the ISM Semiannual Economic Forecast from December 9 reported that a lack of qualified applicants impinged on hiring plans for 29 percent of manufacturers and 19 percent of nonmanufacturers. A survey from the National Association of Home Builders during the past summer suggested that skilled labor shortages were particularly acute for construction—46 percent of respondents reported a labor shortage, up from 34 percent in 2013 and 21 percent in 2012.[2] Anecdotes also suggest widespread shortages of truck drivers and of workers with skills crucial for the expansion of the nation's oil and gas infrastructure.

In a dynamic economy, some industries will always grow faster than others, creating temporary shortages of specific skills. Such shortages are more likely to arise as the economy improves, and a key question is whether the reported degree of labor shortages suggests more or less slack than is indicated by other labor market and product market indicators. We therefore turn to data sources that allow us to compare the current labor supply situation with previous business cycles.

One way to explore the extent of labor shortages is through the use of wage data. At the aggregate level, some measures of wages have shown modest acceleration, but wage gains remain tepid. At a more detailed level, if certain industries are facing shortages of skilled labor, market pressures should lead to larger wage gains for workers in those industries. However, the distribution of wage increases suggests that shortages are not especially acute at the moment.

Figure 1. Distribution of Average Hourly Earnings
In 12-month percent changes for 195 4-digit NAICS industries



Note: Gray areas indicate recessions as defined by the National Bureau of Economic Research. The black line is the median, the blue lines are the 25th and 75th percentiles, and the red lines are the 10th and 90th percentiles of the distribution of changes in average hourly earnings. The industry data are weighted by employment share, 1992:M1 to 2014:M10.
Source: Bureau of Labor Statistics and staff calculations.

[1] This share of respondents is considerably higher than the 30 percent who reported skills shortages as a restraint on hiring in a January 2014 survey, which, in turn, was double the share in the survey three years earlier.

[2] In addition, the Associated General Contractors of America reported in their 2014 National Workforce Survey (published October 22) that "the construction industry is likely to face significant, and growing, worker shortages, as demand for construction continues to rebound." The Atlanta Federal Reserve Bank reported in their Real Estate Survey for October 2014 that two-thirds of builders were experiencing a labor shortage.

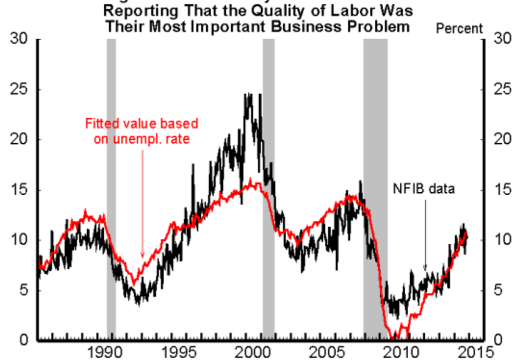
As shown by the top red line in figure 1, at the 90th percentile of the distribution of wage changes, wage growth is still below where it was, on average, during the second half of each of the two previous business cycles.

The monthly survey conducted by the National Federation of Independent Business provides another historical perspective. One of the possible responses to the survey's query about "the most important business problem" affecting small business is "quality of labor" (figure 2). This response is often interpreted by analysts as bearing on the issue of labor shortages. The share of small businesses choosing this response has moved up since the recession, but even so, it remains near where it was around the midpoint of each of the preceding two business cycles and is in line with what the unemployment rate, based on a simple regression, would suggest (the red line in the figure).

For manufacturing, the Census Bureau's Quarterly Survey of Plant Capacity Utilization asks those respondents who report producing at less than full capacity their reasons for doing so. One possible answer is "insufficient supply of local labor force/skills," which was cited by more than 20 percent of survey respondents in the late 1990s (the black line in figure 3). This share plummeted to less than 2 percent during the recession but moved up to 9½ percent in the third quarter of 2014, its highest level since the beginning of the recession but a bit below its historical average. The recent shares are broadly consistent with a regression-based prediction using the unemployment rate and manufacturing capacity utilization (the blue line in the figure).[3] To be sure, some individual industries are reporting elevated shares; for example, in recent quarters roughly 20 percent of respondents in the construction-related wood products industry reported skills shortages, the highest level since 1999.

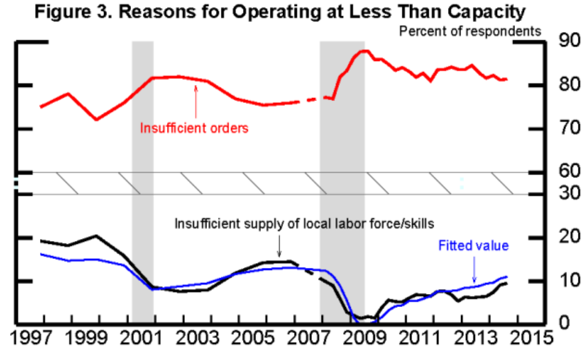
Despite the anecdotes, a variety of evidence suggests that skill shortages are not especially widespread, nor has there been a significant acceleration in wages, either in general or at the top percentiles of industry wage changes. Moreover, where lengthy time-series data are available, the extent to which labor shortages are restraining hiring and production is about what one would expect given the unemployment rate and capacity utilization.

Figure 2. NFIB Survey: Percent of Firms Reporting That the Quality of Labor Was Their Most Important Business Problem



Source: National Federation of Independent Business.

Figure 3. Reasons for Operating at Less Than Capacity



Note: The data are fourth-quarter values from 1997 to 2006 and quarterly values from 2008:Q1 to 2014:Q3.
Source: Census Bureau.

[3] Both historically and currently, the dominant reason cited by plant managers for operating at less than capacity has been "Insufficient orders," the red line in figure 3.

attenuating the decline in the unemployment rate. As a result, we expect that the unemployment rate will only edge down during 2016 and 2017, even as GDP continues to increase faster than its potential.

- Given our view that the participation rate is unusually cyclically weak, our estimate of the output gap is wider than one would infer based on the unemployment rate gap alone. Indeed, we expect the discrepancy to widen a little more over the next few quarters. Beginning later next year, however, we think the process of labor market repair will feed into the behavior of labor force participation more thoroughly, eventually eliminating the unusual cyclical weakness. Until that process is complete, we consider the output gap, rather than the unemployment rate gap, to provide a more accurate assessment of resource slack.

The Outlook for Inflation

Our near-term projection for PCE price inflation continues to be heavily influenced by the recent precipitous drop in energy prices. We now have the overall PCE price index showing little change in the current quarter and then declining at an annual rate of ½ percent in the first quarter. Starting in the second quarter of 2015, we expect overall PCE inflation to be much closer to core inflation and to follow a trajectory that is little changed from the October Tealbook. We continue to expect that headline and core PCE price inflation will move up to 1¾ percent by 2017, reflecting the tightening in resource utilization as well as a resumption of modest increases in core import prices following a period of persistent declines. Of course, as we discuss in the Risks and Uncertainty section, a wide confidence interval surrounds this point forecast.

- Core PCE prices rose 0.2 percent in October, a little faster than we had expected. The surprise was concentrated in volatile categories, in particular the non-market-based component of the index. Thus, although we have marked up our projection for core PCE inflation in the current quarter to 1½ percent from 1¼ percent in the October Tealbook to reflect the incoming data, we left our first-quarter projection for core inflation unrevised at 1½ percent.

- Given the usual lags between changes in oil prices and adjustments at the retail level, we have left our current-quarter projection for consumer energy prices largely unchanged but made a large downward revision to our first-quarter projection; we now expect that consumer energy prices will fall at an average annual rate of around 30 percent in both quarters. With the pass-through from crude to retail prices complete, consumer energy prices are expected to rise gradually thereafter.

- We expect consumer food price inflation to moderate through the near term from its faster pace in the middle of this year and then to eventually move back in line with core inflation over the medium term.

- After only edging up in the third quarter, core import prices are expected to fall at a 1½ percent pace in the fourth quarter and a 2¾ percent pace in the first quarter of next year, largely reflecting the recent appreciation of the dollar. Core import price inflation is then expected to move up to a 1¼ percent pace in 2016 and thereafter, consistent with modest foreign inflation and a roughly flat projected path for the nominal dollar.

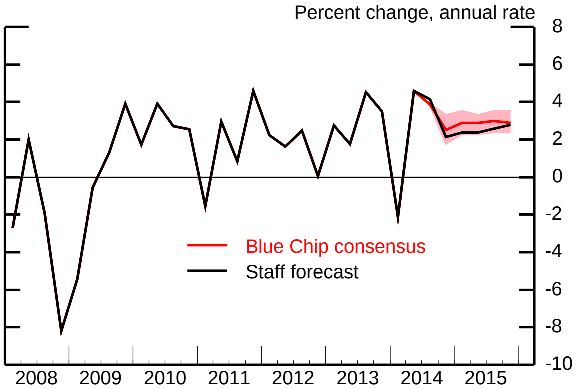
- We expect core PCE price inflation to edge up from 1½ percent in 2015 to 1¾ percent in 2017 as resource slack diminishes further and core import prices turn up in an environment of anchored long-run inflation expectations. The core inflation projection is unchanged from the October Tealbook, as the pass-through of lower core import and energy prices about offsets the effects of tighter labor and product markets. We have noted the recent low readings on inflation compensation from TIPS and the recent downtick in long-run inflation expectations as measured in the Michigan survey, but we have not built any response into our baseline projection.[7] One of the scenarios in the Risks and Uncertainty section explores the possibility that we are wrong in that assessment.

- The several indicators of compensation that have become available since the October Tealbook convey mixed messages. For the second and third quarters, the ECI increased at an average annual rate of about 3 percent—noticeably

[7] Historically, long-term household expectations have been somewhat sensitive to large moves in energy prices, but we expect this effect to be transitory. Staff models attribute recent declines in longer-term measures of inflation compensation from TIPS primarily to declines in term and liquidity premiums rather than declines in expected inflation, while some financial market participants have tended to put more weight on expected inflation.

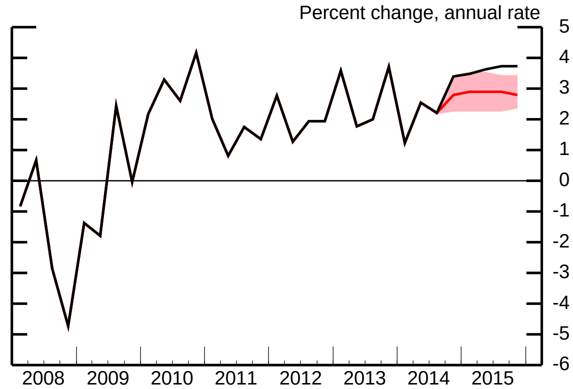
Tealbook Forecast Compared with Blue Chip
(Blue Chip survey released December 10, 2014)

Real GDP

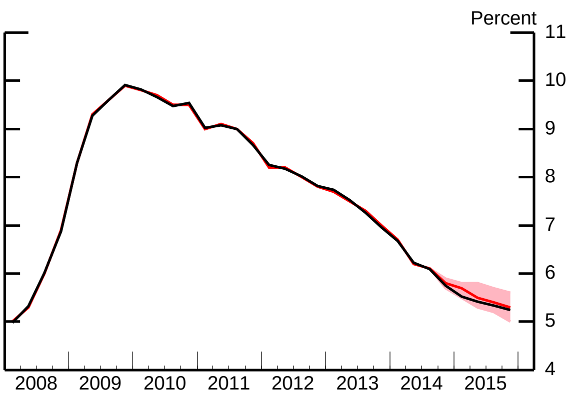


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

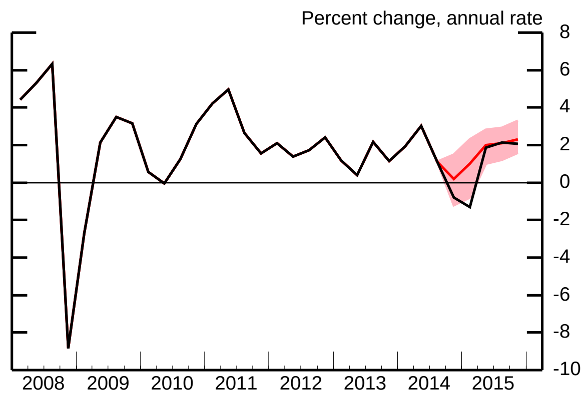
Real PCE



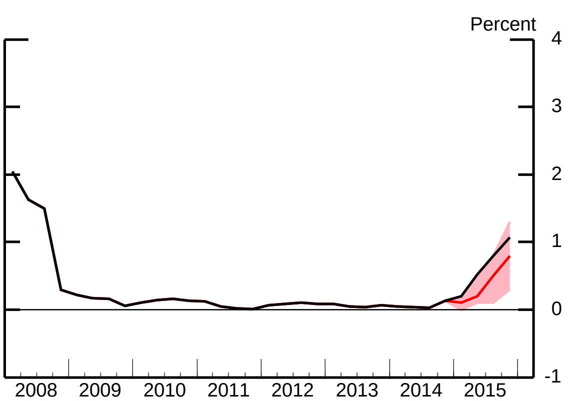
Unemployment Rate



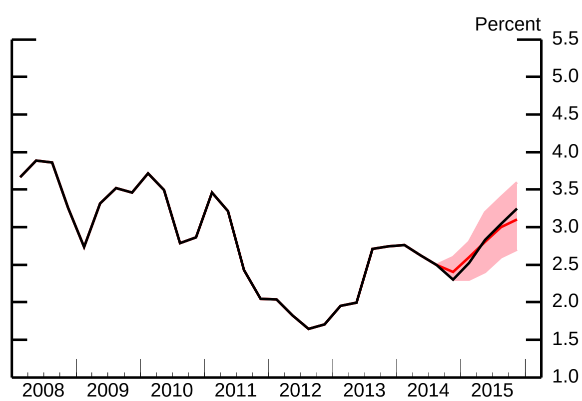
Consumer Price Index



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.

faster than its average pace during the past three years. However, the BLS now reports that hourly compensation in the business sector increased at an annual rate of only ½ percent in the third quarter after having dropped at a 1 percent rate in the second quarter. Looking through the noisy quarterly readings, hourly compensation rose 2 percent during the four quarters ended in the third quarter, unchanged from the rate over the comparable period four quarters earlier. Finally, average hourly earnings rose 0.4 percent in November, but the increase in this measure over the past 12 months was just 2 percent, little different from a year ago.

Comparing the Staff Projection with the Blue Chip

Over 2015, the staff's forecast of real GDP growth (2.6 percent) is somewhat below the Blue Chip consensus outlook (2.9 percent). Nonetheless, the staff's unemployment rate forecast lies just below the Blue Chip Consensus. One interpretation of this juxtaposition is that our assumption about the potential GDP growth rate may be more pessimistic than the one implicitly embedded in the Blue Chip. In addition, the staff's projection for consumer price inflation lies below the consensus of the Blue Chip panelists.

The Long-Term Outlook

- Beyond 2017, the federal funds rate continues to be set according to the prescriptions of an inertial version of the Taylor (1999) rule. This policy rule assumes a long-run equilibrium level of the nominal federal funds rate of 3¾ percent.

- The Federal Reserve's holdings of securities continue to put downward pressure on longer-term interest rates, albeit to a diminishing extent. The process of returning the SOMA portfolio to a normal size is completed by 2021.

- The federal budget deficit continues to widen beyond 2017, primarily reflecting fast-rising transfer payments for retirement and health-care programs. The ratio of federal debt to GDP is around 73 percent in 2018 and rises thereafter.

- The real foreign exchange value of the dollar moves down about ½ percent per year, on average, over the 2018–20 period. The price of crude oil is constant in real terms. Foreign real GDP rises at an annual rate of about 3 percent from 2018 to 2020.

- The natural rate of unemployment is 5¼ percent. Potential GDP rises 2 percent per year on average in the 2018–20 period.

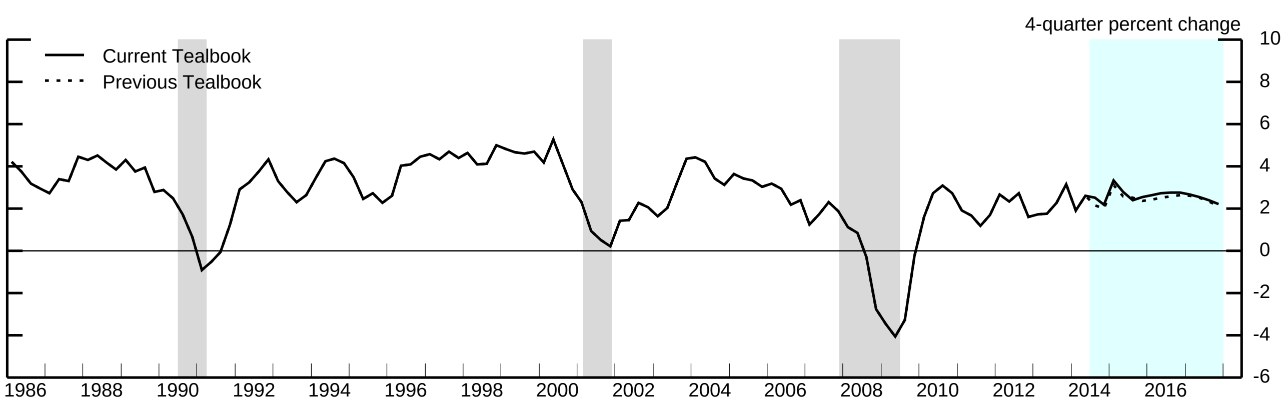
- As monetary accommodation is withdrawn, real GDP growth slows to 1¾ percent in 2018 and then continues to run for a while at a pace just below the assumed growth rate of potential output. The unemployment rate stays flat at just under 5 percent in 2018 before gradually edging up toward its natural rate.

- PCE price inflation remains below the longer-run objective of the Committee at the end of 2017. With the unemployment rate below the natural rate, long-run inflation expectations and PCE price inflation gradually move up to the Committee's 2 percent target.

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

Measure	2014	2014 H1	2014 H2	2015	2016	2017
Real GDP	**2.2**	**1.2**	**3.1**	**2.5**	**2.7**	**2.2**
Previous Tealbook	2.0	1.2	2.8	2.4	2.6	2.1
Final sales	2.0	1.1	3.0	2.5	2.8	2.6
Previous Tealbook	2.0	1.1	2.9	2.3	2.6	2.4
Personal consumption expenditures	2.3	1.9	2.8	3.6	3.3	2.7
Previous Tealbook	2.3	1.9	2.6	3.0	2.7	2.4
Residential investment	3.0	1.5	4.6	9.4	9.9	7.6
Previous Tealbook	4.1	1.5	6.7	9.5	9.7	7.3
Nonresidential structures	4.6	7.6	1.6	-3.4	1.6	1.2
Previous Tealbook	4.2	7.6	.9	-2.4	.6	.4
Equipment and intangibles	5.8	5.0	6.6	2.9	4.2	2.9
Previous Tealbook	5.7	5.0	6.5	2.7	3.6	2.6
Federal purchases	.2	-.5	.9	-2.8	-1.3	-1.1
Previous Tealbook	-1.3	-.5	-2.1	-3.6	-1.4	-1.0
State and local purchases	1.1	1.0	1.2	1.5	1.8	2.0
Previous Tealbook	1.1	1.0	1.3	1.5	1.8	2.0
Exports	1.9	.4	3.5	2.5	3.3	4.2
Previous Tealbook	2.3	.4	4.3	3.7	4.4	5.0
Imports	4.7	6.7	2.8	4.8	5.2	3.9
Previous Tealbook	4.3	6.7	1.9	4.1	4.5	3.8
	Contributions to change in real GDP (percentage points)					
Inventory change	.2	.1	.2	.0	-.1	-.4
Previous Tealbook	.0	.1	-.1	.1	.1	-.3
Net exports	-.5	-1.0	.0	-.4	-.4	-.1
Previous Tealbook	-.4	-1.0	.3	-.2	-.1	.1

Real GDP

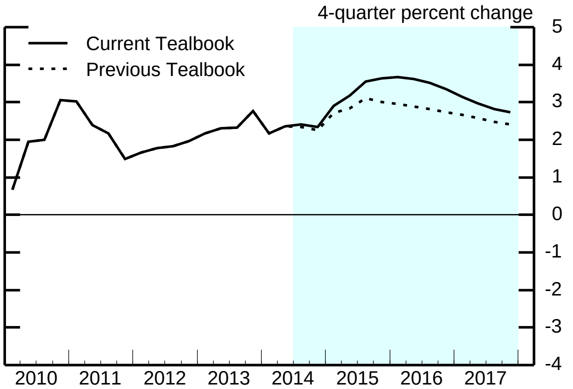


Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

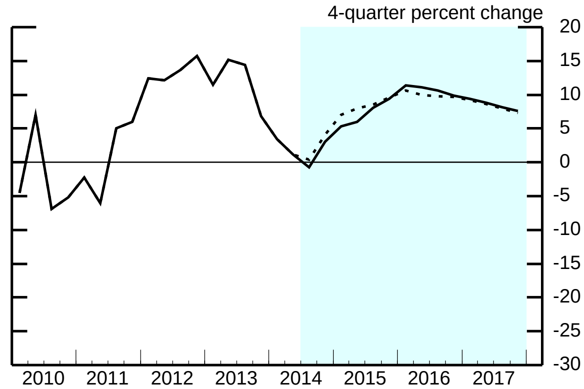
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Components of Final Demand

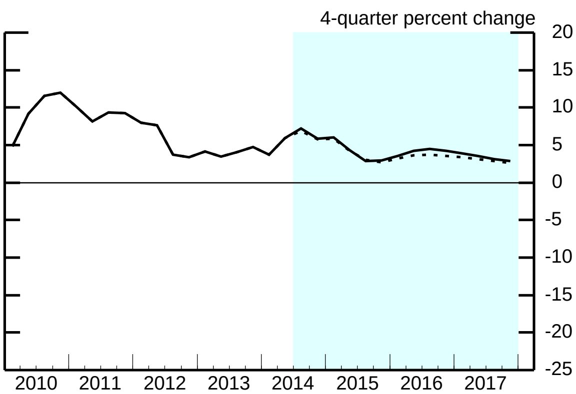
Personal Consumption Expenditures



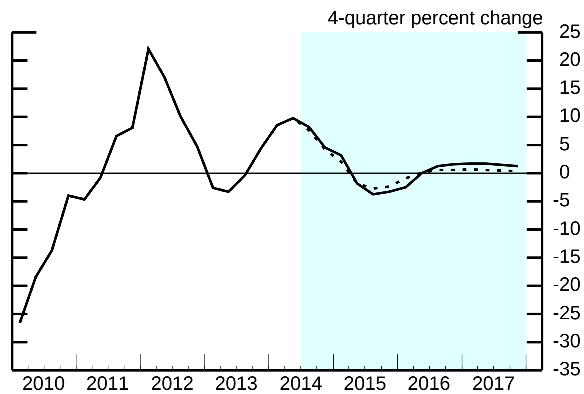
Residential Investment



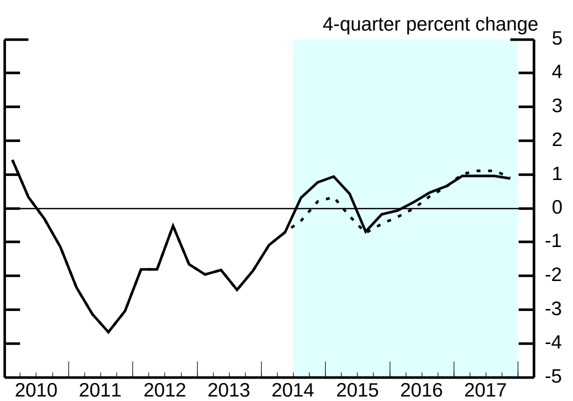
Equipment and Intangibles



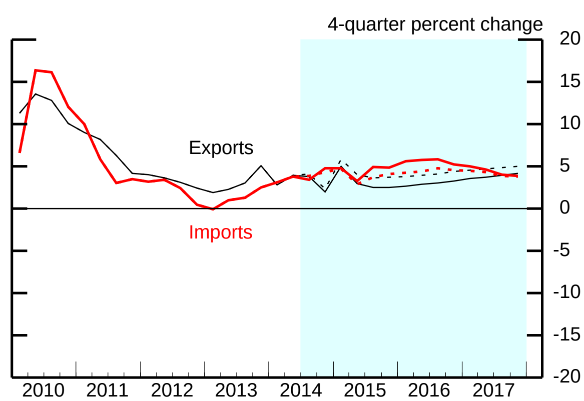
Nonresidential Structures



Government Consumption & Investment



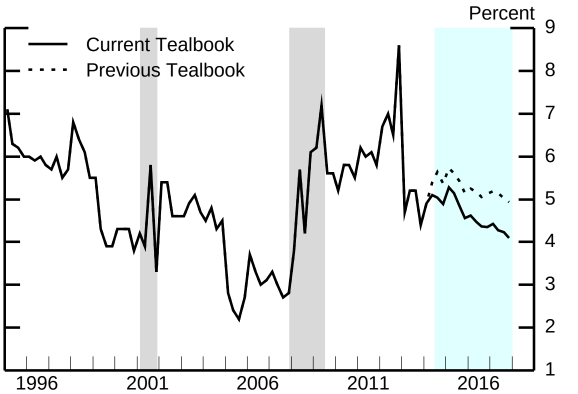
Exports and Imports



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

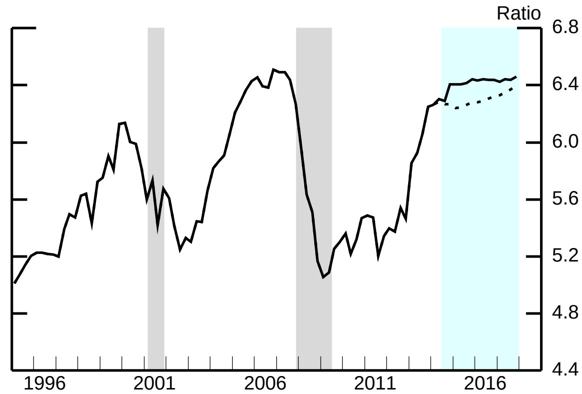
Aspects of the Medium-Term Projection

Personal Saving Rate



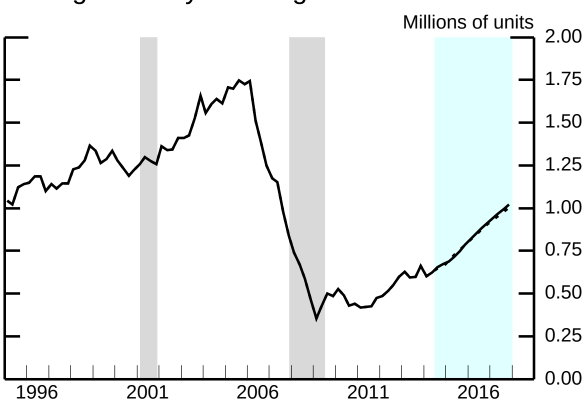
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Wealth-to-Income Ratio



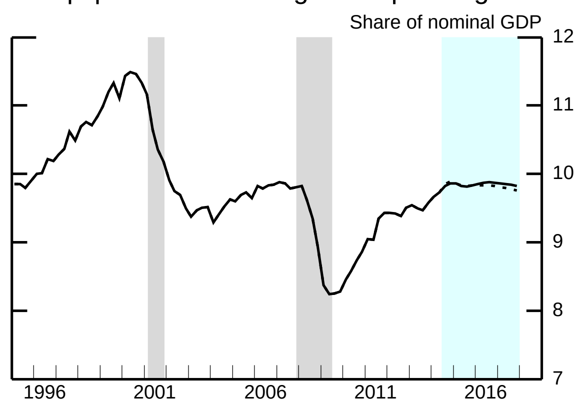
Note: Ratio of household net worth to disposable personal income.
Source: For net worth, Federal Reserve Board, Financial Accounts of the United States; for income, U.S. Dept. of Commerce, Bureau of Economic Analysis.

Single-Family Housing Starts



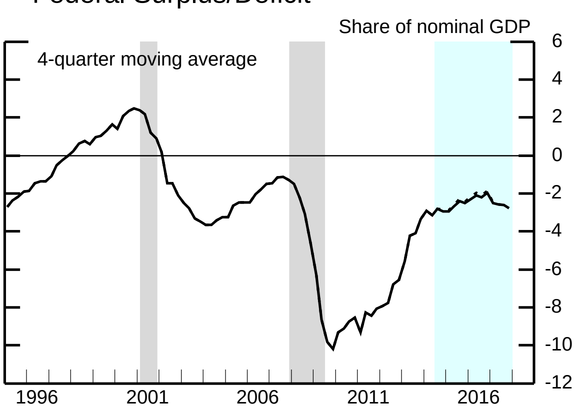
Source: U.S. Census Bureau.

Equipment and Intangibles Spending



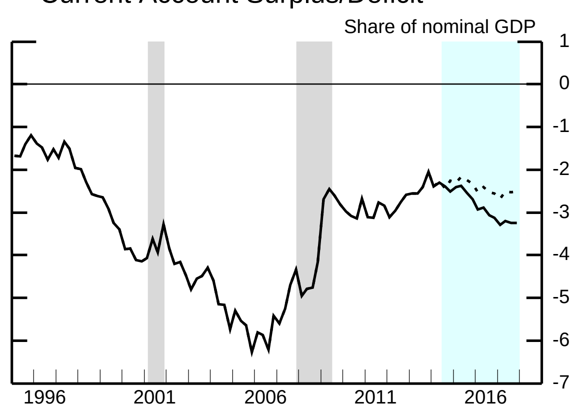
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Federal Surplus/Deficit



Source: *Monthly Treasury Statement.*

Current Account Surplus/Deficit



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

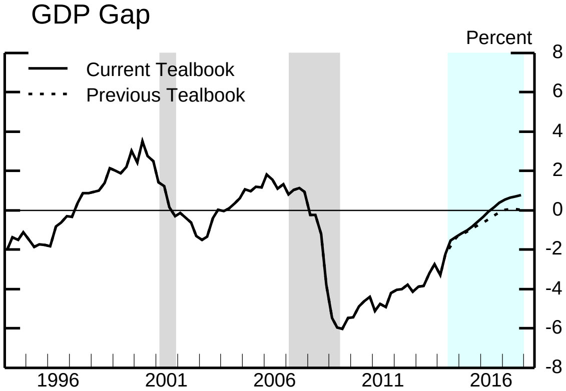
Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

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

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

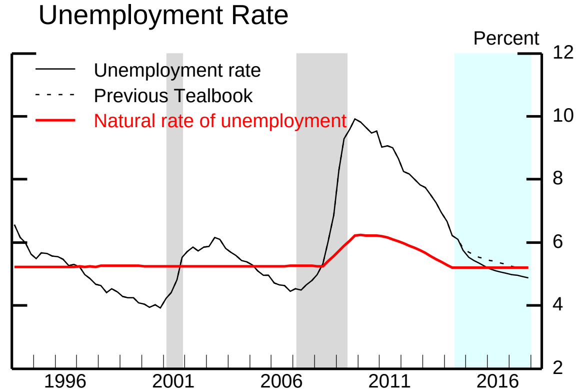
Note: For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.
1. Percentage points.
2. Total business sector.
3. Percent difference between actual and potential GDP in the final quarter of the period indicated. A negative number indicates that the economy is operating below potential.

GDP Gap



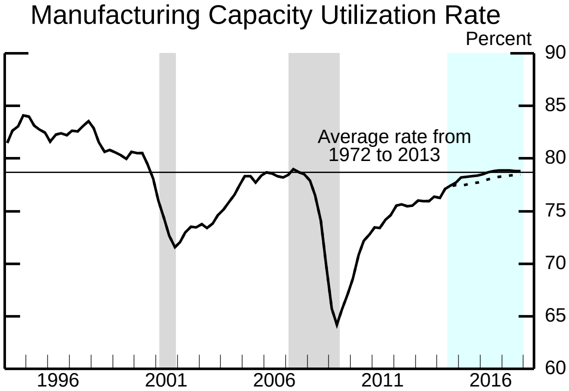
Note: The GDP gap is the percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential.
Source: U.S. Department of Commerce, Bureau of Economic Analysis; staff assumptions.

Unemployment Rate



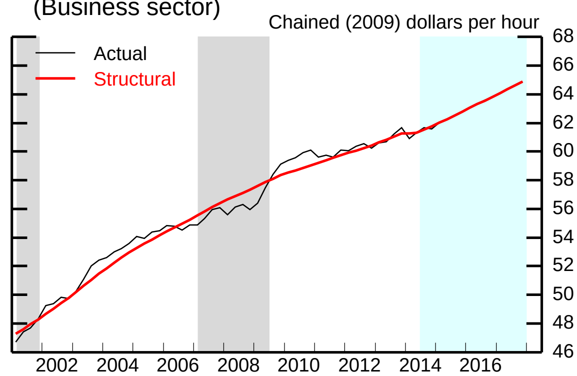
Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

Manufacturing Capacity Utilization Rate



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

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.

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

The Outlook for the Labor Market

Measure	2014	2014 H1	2014 H2	2015	2016	2017
Output per hour, business[1]	-.1	-1.1	.8	1.9	1.7	1.7
Previous Tealbook	.0	-1.1	1.1	1.7	1.8	1.9
Nonfarm private employment[2]	234	222	246	210	218	138
Previous Tealbook	220	222	218	151	161	112
Labor force participation rate[3]	62.8	62.8	62.8	62.6	62.5	62.5
Previous Tealbook	62.7	62.8	62.7	62.6	62.4	62.2
Civilian unemployment rate[3]	5.7	6.2	5.7	5.2	5.0	4.9
Previous Tealbook	5.8	6.2	5.8	5.5	5.3	5.2

1. Percent change from final quarter of preceding period at annual rate.
2. Thousands, average monthly changes.
3. Percent, average for the final quarter in the period.
Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

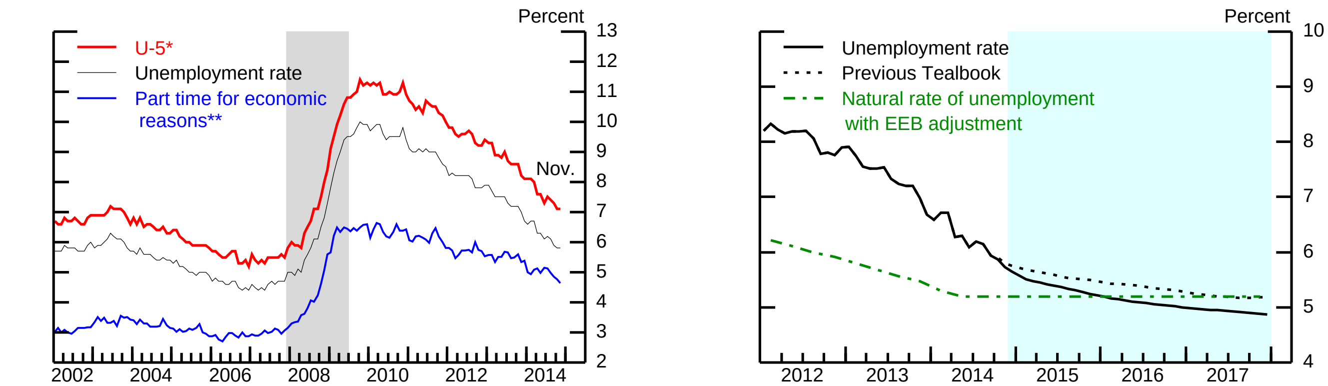
Inflation Projections
(Percent change at annual rate from final quarter of preceding period)

Measure	2014	2014 H1	2014 H2	2015	2016	2017
PCE chain-weighted price index	1.2	1.9	.6	1.0	1.7	1.8
Previous Tealbook	1.2	1.9	.5	1.4	1.6	1.7
Food and beverages	2.6	2.9	2.2	1.3	1.6	1.9
Previous Tealbook	2.7	2.9	2.5	1.0	1.5	1.8
Energy	-6.4	4.6	-16.2	-7.9	2.8	1.9
Previous Tealbook	-5.5	4.6	-14.7	-1.1	1.2	.9
Excluding food and energy	1.6	1.6	1.5	1.5	1.6	1.8
Previous Tealbook	1.5	1.6	1.3	1.5	1.6	1.8
Prices of core goods imports[1]	.4	1.5	-.5	-.3	1.3	1.3
Previous Tealbook	.6	1.5	-.3	.4	1.2	1.2

1. Core goods imports exclude computers, semiconductors, oil, and natural gas.
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

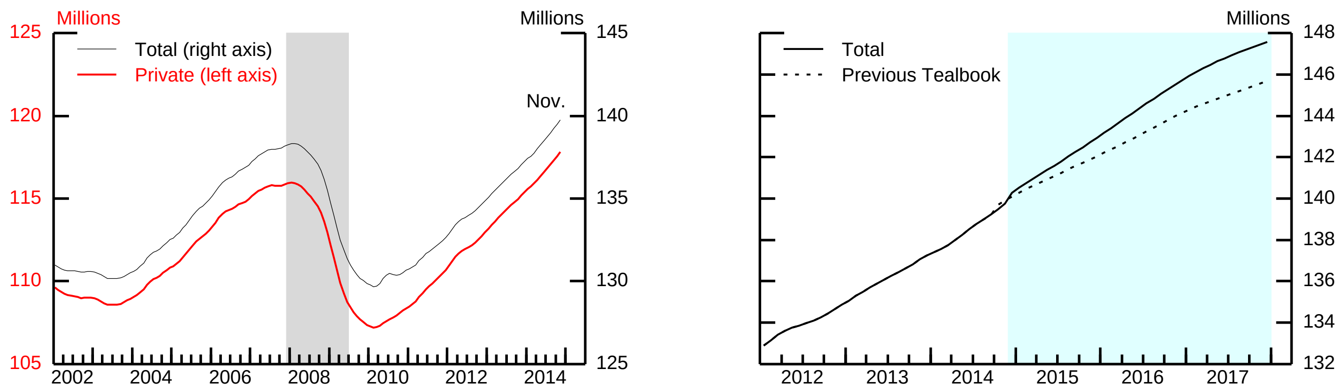
Labor Market Developments and Outlook (1)

Measures of Labor Underutilization



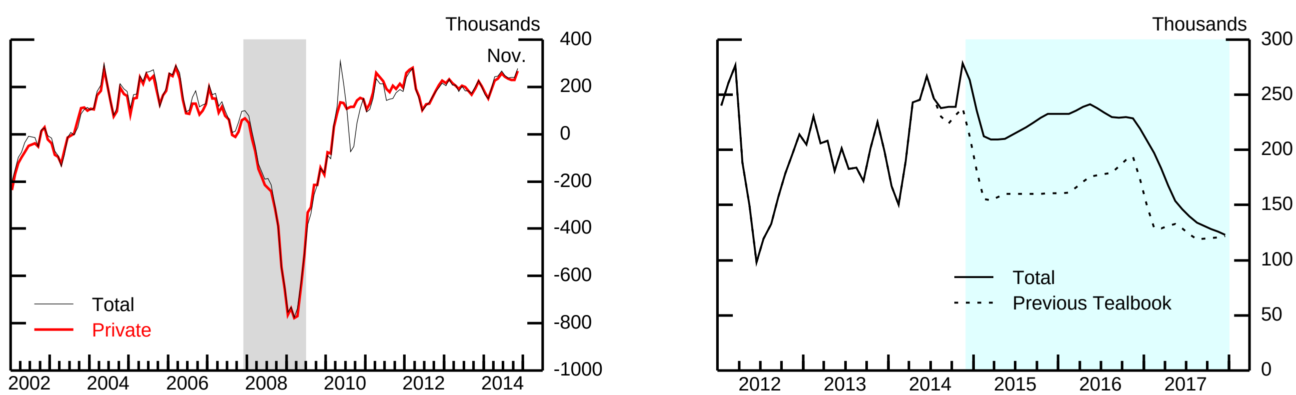
* U-5 measures total unemployed persons plus all marginally attached to the labor force, as a percent of the labor force plus persons marginally attached to the labor force.
** Percent of Current Population Survey employment.
EEB Extended and emergency unemployment benefits.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Level of Payroll Employment*



* 3-month moving averages in history; average levels in each quarter during the forecast period.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Change in Payroll Employment*

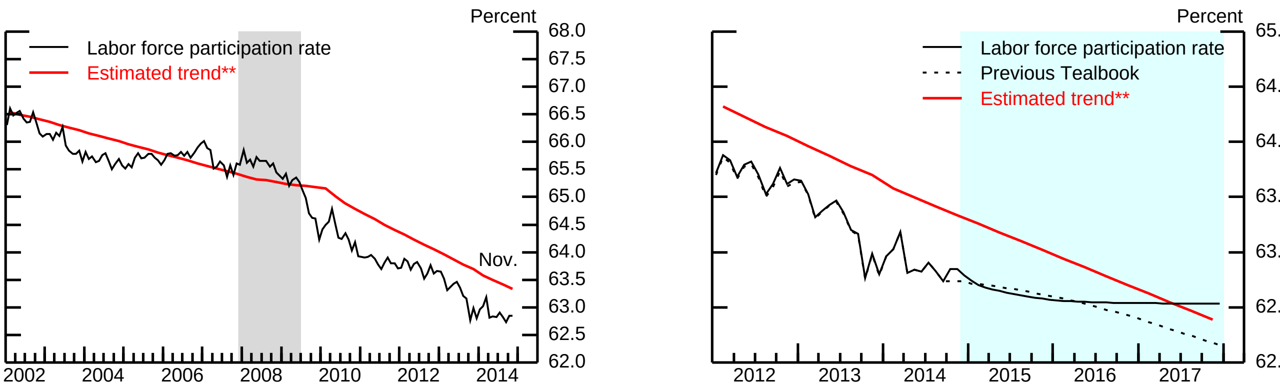


* 3-month moving averages in history; average monthly changes in each quarter during the forecast period.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Note: In September 2012, judgmental projections were prepared through 2015 for the Summary of Economic Projections variables, including the unemployment rate, while projections for other variables, including the labor force participation rate and payroll employment, were prepared only through 2014. This exhibit therefore reports a 2015 projection from the September 2012 Tealbook only for the unemployment rate.
The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

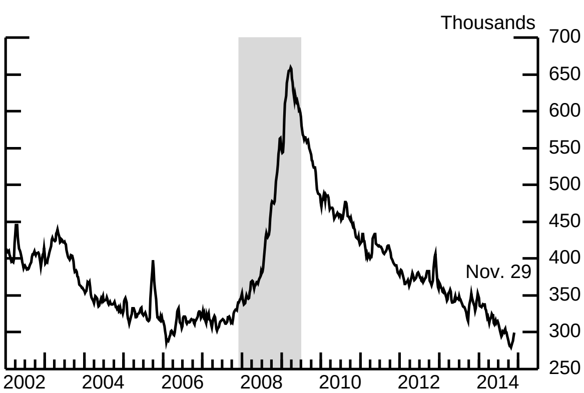
Labor Market Developments and Outlook (2)

Labor Force Participation Rate*



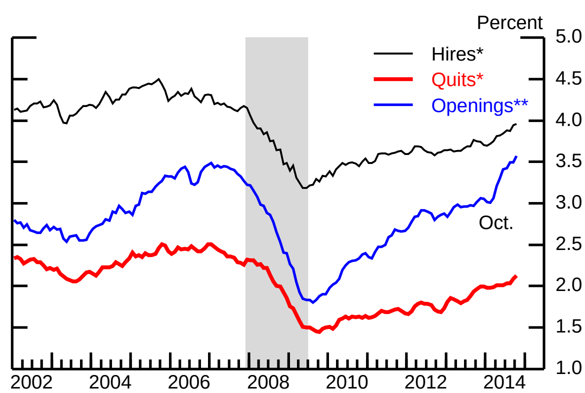
* Published data adjusted by staff to account for changes in population weights.
** Includes staff estimate of the effect of extended and emergency unemployment benefits.
Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

Initial Unemployment Insurance Claims*



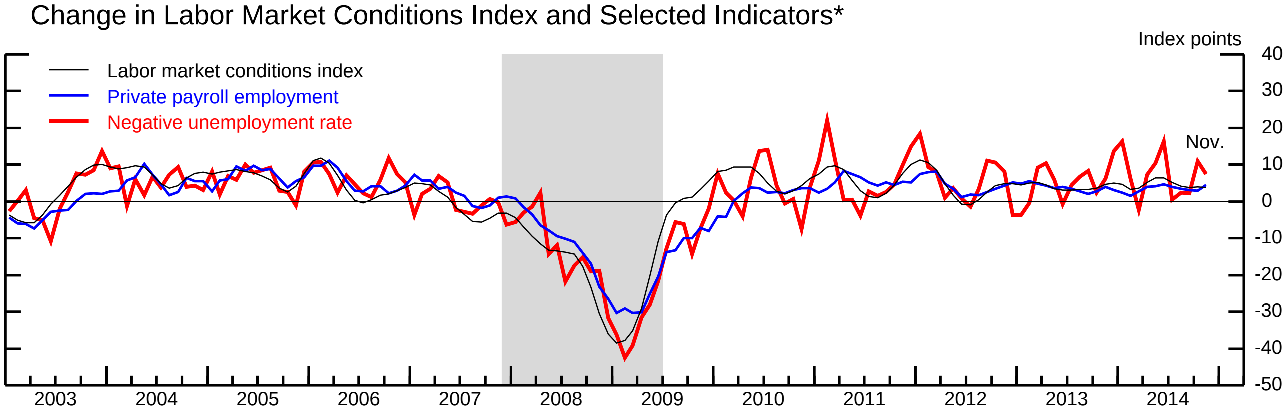
* 4-week moving average.
Source: U.S. Department of Labor, Employment and Training Administration.

Private Hires, Quits, and Job Openings



* Percent of private nonfarm payroll employment, 3-month moving average.
** Percent of private nonfarm payroll employment plus unfilled jobs, 3-month moving average.
Source: Job Openings and Labor Turnover Survey.

Change in Labor Market Conditions Index and Selected Indicators*



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

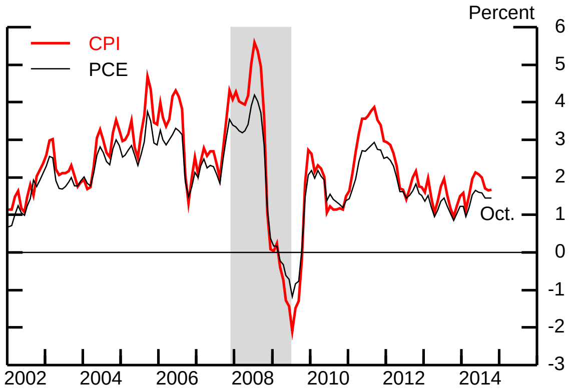
Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

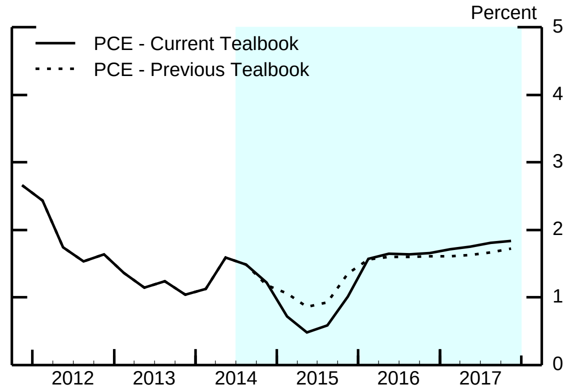
Domestic Econ Devel & Outlook

Inflation Developments and Outlook (1)

(Percent change from year-earlier period)

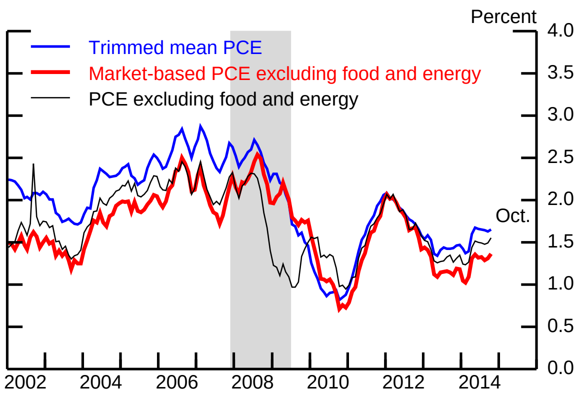
Headline Consumer Price Inflation

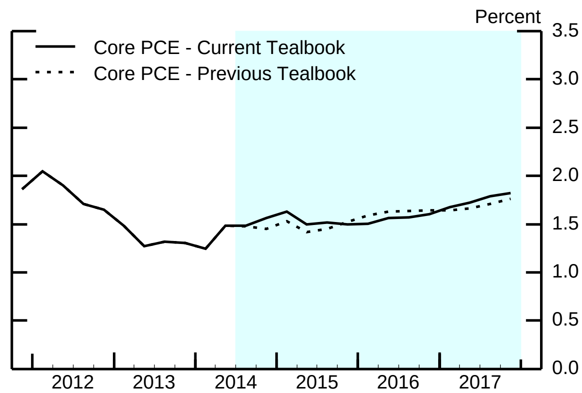




Source: For CPI, U.S. Department of Labor, Bureau of Labor Statistics; for PCE, U.S. Department of Commerce, Bureau of Economic Analysis.

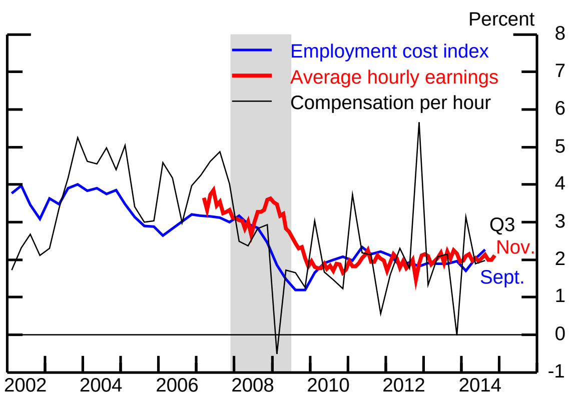
Measures of Underlying PCE Price Inflation

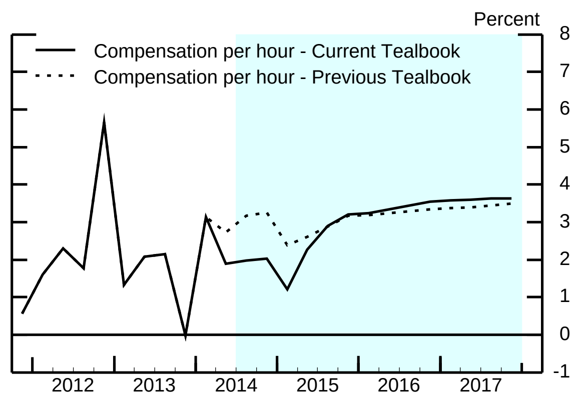




Source: For trimmed mean PCE, Federal Reserve Bank of Dallas; otherwise, U.S. Department of Commerce, Bureau of Economic Analysis.

Labor Cost Growth





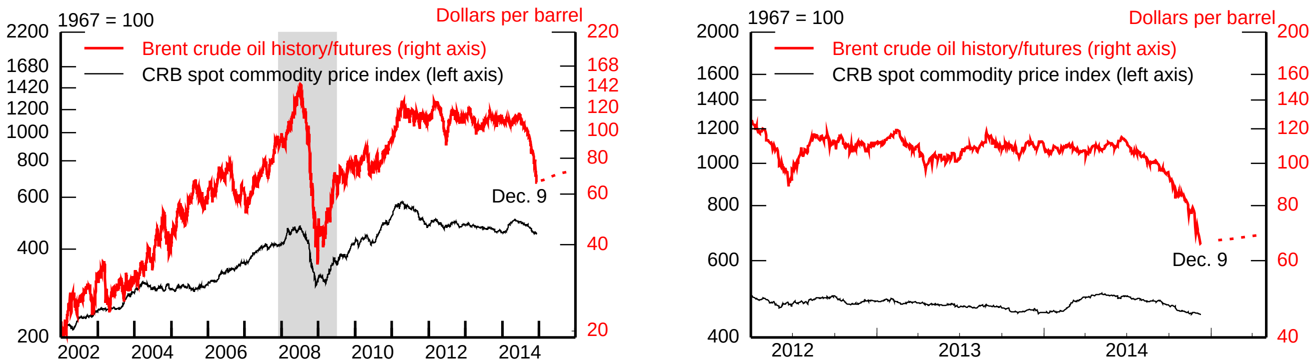
Source: U.S. Department of Labor, Bureau of Labor Statistics.
Note: Compensation per hour is for the business sector. Average hourly earnings are for the private nonfarm sector. The employment cost index is for the private sector.

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)

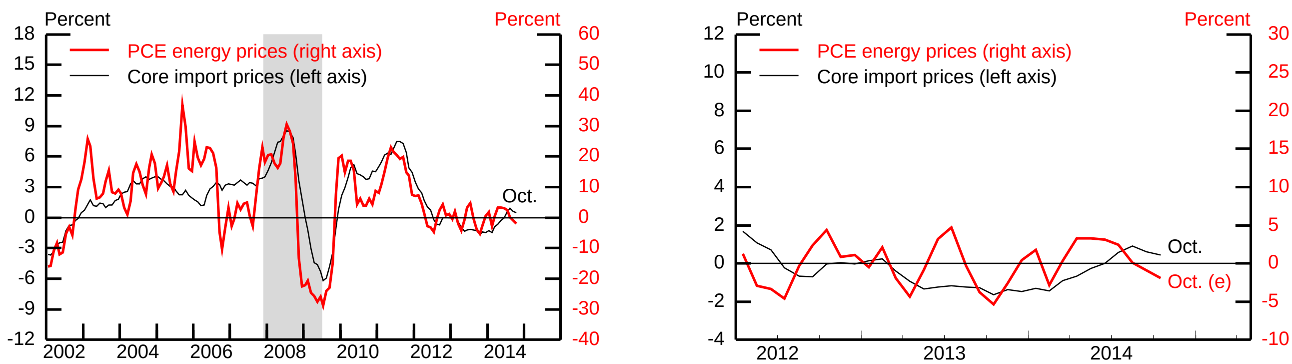
(Percent change from year-earlier period, except as noted)

Commodity and Oil Price Levels



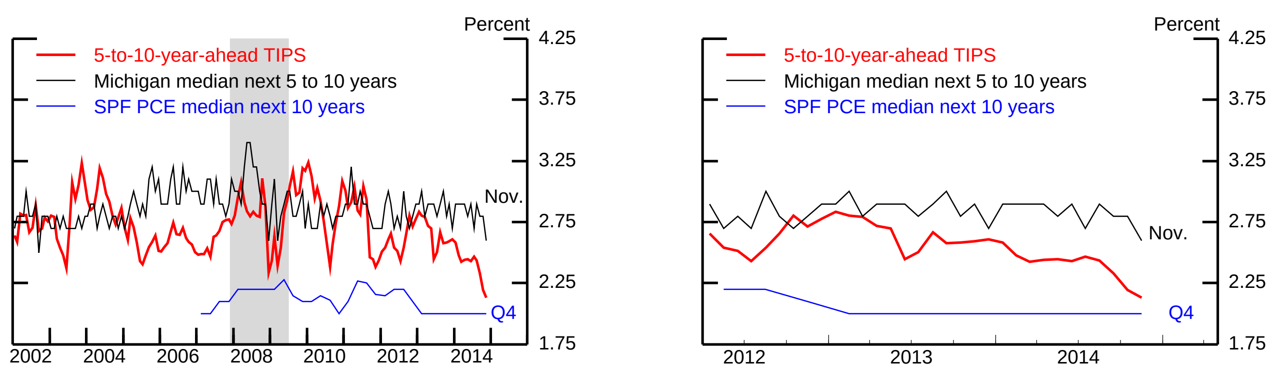
Note: Futures prices (dotted lines) are the latest observations on monthly futures contracts.
Source: For oil prices, U.S. Department of Energy, Energy Information Agency; for commodity prices, Commodity Research Bureau (CRB).

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.
SPF Survey of Professional Forecasters.
Source: For Michigan, Thomson Reuters/University of Michigan Surveys of Consumers; for SPF, the 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.

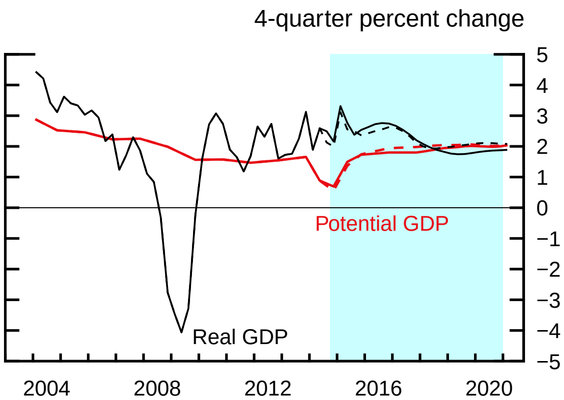
The Long-Term Outlook

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

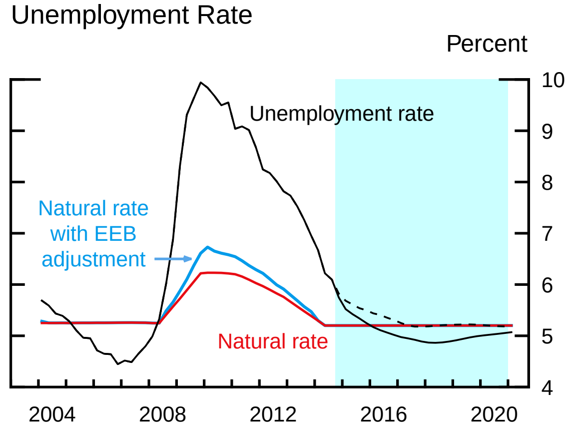
Measure	2014	2015	2016	2017	2018	2019	Longer run
Real GDP	2.2	2.5	2.7	2.2	1.8	1.8	2.0
Previous Tealbook	2.0	2.4	2.6	2.1	2.0	2.1	2.0
Civilian unemployment rate[1]	5.7	5.2	5.0	4.9	4.9	5.0	5.2
Previous Tealbook	5.8	5.5	5.3	5.2	5.2	5.2	5.2
PCE prices, total	1.2	1.0	1.7	1.8	1.9	2.0	2.0
Previous Tealbook	1.2	1.4	1.6	1.7	1.8	1.9	2.0
Core PCE prices	1.6	1.5	1.6	1.8	1.9	2.0	2.0
Previous Tealbook	1.5	1.5	1.6	1.8	1.8	1.9	2.0
Federal funds rate[1]	.1	1.0	2.1	3.0	3.6	3.8	3.8
Previous Tealbook	.1	.9	1.9	2.6	3.0	3.2	3.8
10-year Treasury yield[1]	2.4	3.4	3.9	4.2	4.4	4.5	4.6
Previous Tealbook	2.4	3.2	3.7	3.9	4.2	4.3	4.6

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

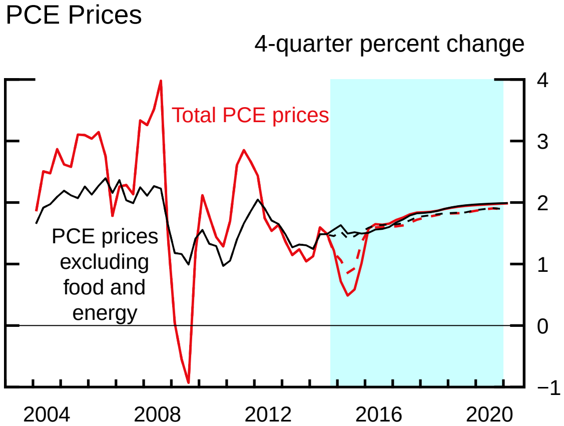
Real GDP



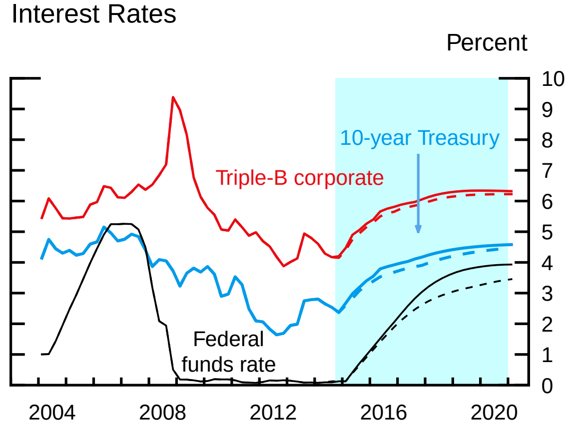
Unemployment Rate



PCE Prices



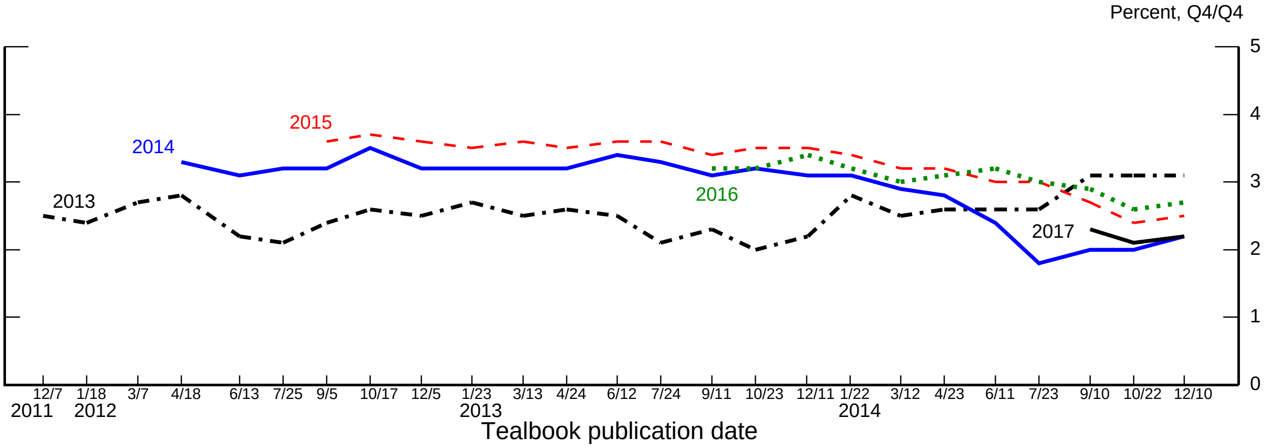
Interest Rates



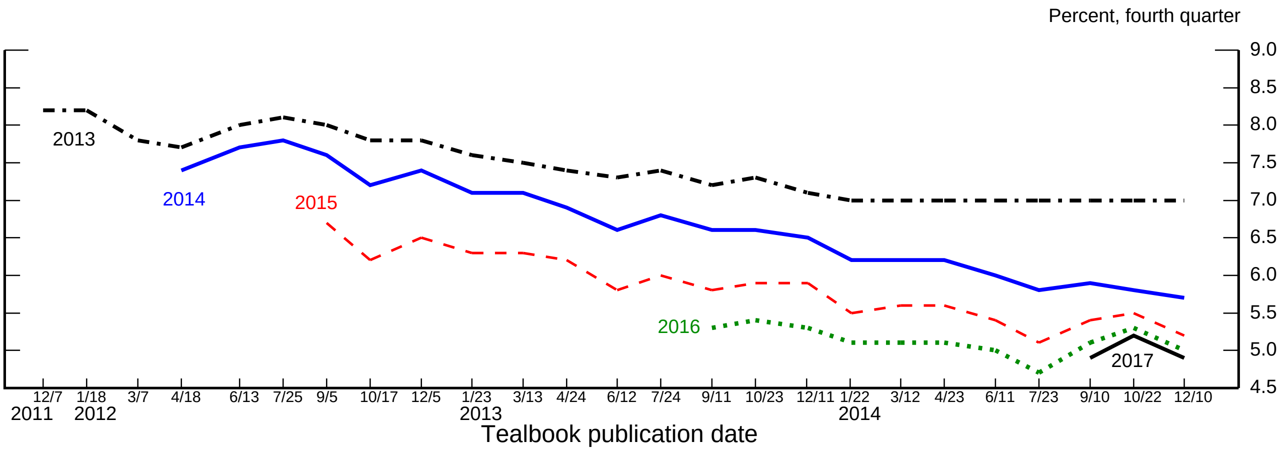
Note: In each panel, shading represents the projection period, and dashed lines are the previous Tealbook.

Evolution of the Staff Forecast

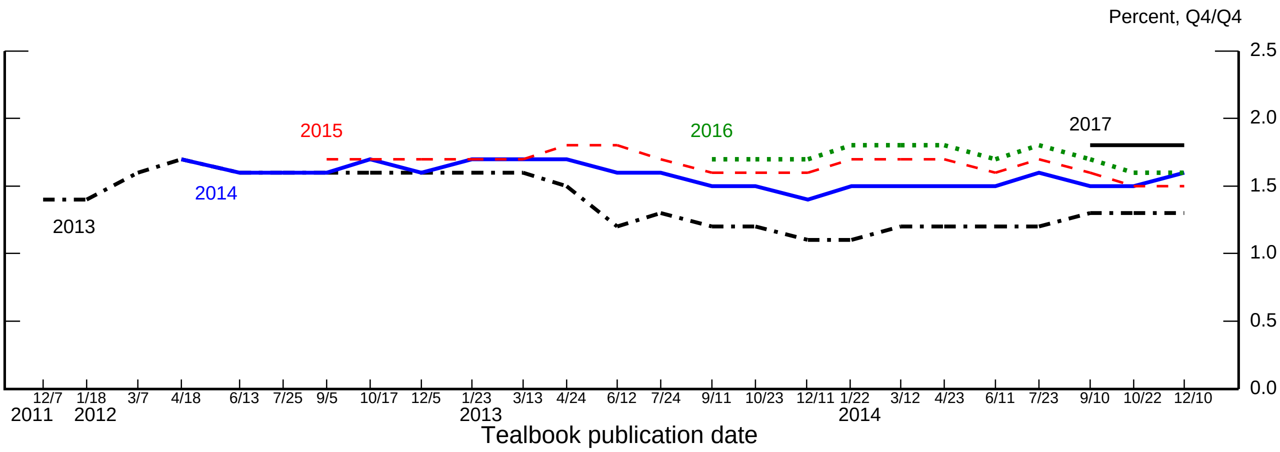
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy



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International Economic Developments and Outlook

Economic activity abroad appears to have improved little from its anemic pace in the first half of the year. Foreign real GDP grew 2¼ percent at an annual rate in the third quarter, ½ percentage point lower than we had estimated in October, owing largely to unexpected weakness in Japan and Mexico. Indicators for the current quarter suggest that foreign growth will remain subdued, around 2½ percent.

We see foreign growth picking up to a pace of 3 percent next year and a little more thereafter. Much of this acceleration reflects a projected recovery of growth in the euro area, Japan, and South America, regions that recently went into recession or are treading near recession. Going forward, foreign economies should benefit from the depreciation of their currencies and the decline in oil prices. (See the box "The Global Macroeconomic Effects of the Recent Decline in Oil Prices.") Growth in the advanced foreign economies (AFEs) will also be supported by accommodative monetary policies and diminishing fiscal drag. The pickup in AFEs, in turn, should boost exports in the emerging market economies (EMEs) and contribute to a return to near-trend growth there as well. On balance, our medium-term outlook is little changed from the October Tealbook: The boost to our outlook from the lower path of oil prices, weaker currencies, and stronger U.S. growth is largely offset by the weaker momentum we are seeing in some key foreign economies.

Nevertheless, our foreign growth forecast is down from earlier this year, and we continue to see downside risks to our outlook. In particular, the global economy remains vulnerable to a derailing of the recovery in the euro area or a sharp deceleration in China. In the Risks and Uncertainty section, we explore the implications for the U.S. economy of a pronounced weakening of foreign activity that puts further upward pressure on the dollar. However, there are some upside risks to global growth as well. Most prominently, supply developments could push oil prices even lower, contrary to our expectation for a moderate recovery in prices (based on futures quotes).

Despite some upward pressure on prices from weaker currencies, inflation in the AFEs continues to be restrained by falling energy prices and still-sizable resource slack. As the effect of the latter factors fades and as accommodative monetary policies continue to provide support, we expect inflation to rise from an estimated 0 percent in the fourth

The Global Macroeconomic Effects of the Recent Decline in Oil Prices

Since late June, the price of crude oil has fallen sharply, with the spot price of Brent (the black line in figure 1) dropping about 40 percent and the price of the December 2017 futures contract (the red line) declining almost 20 percent. Much of the decline is likely due to favorable supply factors, including the rapid growth of U.S. oil production. A substantial portion, however, is a reaction to a downgrade in expectations for global growth since June, which complicates the assessment of the macroeconomic effects of the lower prices. In this discussion, we review the channels through which lower oil prices affect global growth and inflation, and then we present some rules of thumb used to assess the macroeconomic effects of oil price shocks derived from staff models.

One important channel through which a decline in oil prices affects the global economy is the transfer of wealth from oil producers to oil consumers. As shown in figure 2, the largest net oil importers and, thus, the prime beneficiaries of lower oil prices are the emerging Asian economies, the euro area, and, despite recent sharp increases in oil production, the United States.[1] Losses are concentrated in the oil-producing countries in the Middle East, Russia, and Venezuela. (For Russia and Venezuela, lower oil prices have also worsened their fiscal situation and destabilized their financial markets.) Globally, the wealth transfer nets to zero, but the overall effect on global economic activity is likely to be positive in the near term; oil consumers tend to spend a substantial portion of the windfall, while oil producers generally absorb at least some of the initial effect through reduced saving or higher borrowing.[2]

The stimulus from this wealth transfer is likely to be somewhat offset by reduced investment in the oil sector. This channel is particularly relevant for the United States, where investment decisions are more market driven than in many countries. So far, however, current and projected U.S. oil production has yet to decline appreciably, although this could primarily reflect lags in the adjustment process. Moreover, the U.S. oil industry could well respond to lower prices by accelerating the deployment of cost-saving technology, similar to what occurred in U.S. natural gas production after the "fracking" boom triggered the collapse in domestic natural gas prices. Regardless, even if investment by the U.S. oil industry were to shrink, the direct effect on U.S. GDP of a decline would be small because the share of this investment in output—though rising in recent years—is only about 1 percent of GDP.

The decline in oil prices may also affect economic activity by influencing monetary policy, including through its effects on inflation. Both in the United States and abroad, the fall in prices leads to large but transitory declines in headline inflation with only minimal pass-through to core inflation. In principle, if lower oil prices induce only transitory declines in inflation while tending to push up output, they should engender a slight tightening of monetary policy. In the current situation, however, lower inflation may instead lead to further monetary accommodation in a

[1] Although many economies have oil producers as well as oil consumers, and thus some domestic losses as well as gains, net exports of oil by country provides a useful proxy for the global distribution of gains and losses following a price change.

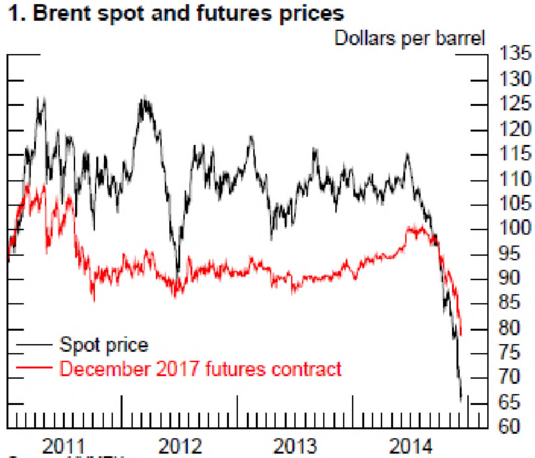
[2] Another channel through which lower oil prices benefit all economies is by lowering the cost of a factor of production, equivalent to a positive productivity shock.

number of economies, including the euro area and Japan, where inflation expectations may be at risk of further declines. Of course, if inflation expectations do decline, such an occurrence could effectively tighten monetary policy at the zero lower bound and hinder the economic recovery.

While there is a general consensus that lower oil prices should boost U.S. and global growth, considerable uncertainty exists over the ultimate size of the effect, in part because it is difficult to distinguish instances where changes in oil prices were due to changes in supply from those where they reflected changes in demand associated with shifts in economic growth. Different approaches have yielded a wide range of empirical estimates. For the United States, the FRB/US model suggests that a persistent 10 percent decrease in the price of oil from current levels will boost GDP by about 0.1 percent, within the range of outside estimates. The staff's SIGMA model suggests a somewhat larger effect, with U.S. and global GDP boosted about 0.2 percent in the year following a persistent 10 percent decline in oil prices. Regardless of the model, the recent rapid increase in domestic oil production has likely reduced the positive net effect of lower oil prices on the U.S. economy somewhat, compared with if production had not increased.

All else being equal, the recent decline in oil prices has bolstered our outlook for global activity, although the effect would likely have been more significant if the fall in prices was not, at least in part, due to a weaker outlook for global demand.[3] All told, we project that the roughly 20 percent decline in long-run oil prices since the June Tealbook will contribute approximately ¼ percent to the level of both U.S. and foreign GDP over the next year, as the positive effect on consumption more than offsets the negative effect on oil investment and demand in oil-exporting economies. Of course, on net, since the June Tealbook, the positive impetus from lower oil prices has not been enough to offset other factors that have led us to revise down our outlook for both U.S. and foreign growth over the period.

1. Brent spot and futures prices



Source: NYMEX.

2. Net oil exports (2013)

	Millions of barrels per day	Share of GDP*
EME Asia ex. China	-8.9	-6.0
Japan	-4.4	-3.7
Euro Area	-9.2	-3.0
China	-5.7	-2.5
United States	-6.6	-1.6
South America ex. Venezuela	-0.8	-0.7
Mexico	0.9	2.8
Canada	1.6	3.7
Russia	7.2	14.2
Middle East	19.2	29.9
Venezuela	1.7	31.0

Source: Department of Energy, International Monetary Fund.
*Approximation based on net export volumes valued at the Brent price on June 17, 2014 ($113.30).

[3] We believe that a majority of the decline in prices since June is due to more abundant supply, including OPEC's decision at its November 27 meeting to not cut production. However, weaker-than-expected global oil demand, particularly in China and the euro area, also contributed to the decline.

quarter to 1¾ percent by end-2016. With inflation and growth both low, the Bank of Japan (BOJ) increased the pace of its asset purchases, and we are expecting the European Central Bank (ECB) to expand its asset purchases next year. While the recent declines in oil prices are generally a positive for economic growth, they also carry the risk of depressing medium-term inflation expectations, particularly in the euro area and Japan. Accordingly, we see lower oil prices as contributing to more accommodative policies abroad.

In the EMEs, inflation is holding steady at 3 percent, only a little below its longer-term trend. Because of the prevalence of administered prices in the energy sector, not all of the declines in oil prices have been passed through to consumers; there have also been upward pressures from idiosyncratic shocks in several of these economies. In some EMEs, high inflation remains a concern. Notably, the central bank of Brazil raised its policy rate further in a move that was bigger than expected.

Advanced Foreign Economies

- ***Euro area.*** Real GDP expanded a meager 0.6 percent in the third quarter; private consumption accelerated, but export growth slowed and investment spending declined. Recent indicators have been lackluster: Consumption data were mixed in October, and November PMIs moved lower while staying in expansionary territory. We see GDP growth remaining near ¾ percent in the current quarter before increasing to 1½ percent in 2015 and 2 percent thereafter, supported by accommodative monetary policy, easing financial and credit conditions, and low oil prices.

  Twelve-month headline inflation inched down to 0.3 percent in November as retail energy prices plunged, while core inflation stayed subdued at 0.7 percent. Recent declines in oil prices are expected to depress quarterly headline inflation to an annual rate of negative ½ percent in the current quarter and 0 percent next quarter. Thereafter, as energy prices increase and the output gap narrows, inflation should move up to a still-subdued 1½ percent rate by mid-2016. No new policy actions were introduced by the ECB, but given the weak outlook for growth and inflation, we expect the ECB early next year to expand its purchases beyond the asset-backed securities and covered bonds it is already buying; potential candidates for future purchases include corporate and even sovereign bonds.

- ***United Kingdom.*** Real GDP growth slowed to a still-solid 2.8 percent in the third quarter from the nearly 3½ percent pace recorded in the first half of the year. The third-quarter expansion was driven by strong domestic demand. Recent data, including softer PMI readings and some decline in business confidence, point to a slight step-down in economic growth to 2½ percent this quarter. As the output gap closes, we have growth moderating further to 2¼ percent by 2017.

  The declines in energy prices have pushed inflation down to an estimated ¼ percent in the current quarter. We expect inflation to increase to 2 percent by 2017, however, as energy prices start rising again and economic slack diminishes. In response to a more dovish tone in its Inflation Report, we now anticipate that the Bank of England will begin raising its policy rate in the third quarter of 2015, one quarter later than previously expected.

- ***Japan.*** Real GDP unexpectedly contracted 1.9 percent in the third quarter, following a tax hike–induced plunge in the second quarter. Although export growth was solid, the pickup in final domestic demand was disappointingly modest and inventory investment fell sharply. With the economy in recession, Prime Minister Abe delayed a second consumption tax hike—originally planned for October 2015—to April 2017 and called for parliamentary elections on December 14. In addition, the BOJ expanded its asset purchase program. These policy actions prompted a large depreciation of the yen and a surge in equity prices, both of which should support economic activity. Indeed, solid export and industrial production data through October point to growth of 1¾ percent in the current quarter. The recovery should continue in 2015 and 2016 before stalling in 2017 as fiscal consolidation resumes.

  We project that inflation will decline from 1.8 percent in the third quarter to negative 1 percent in the current quarter because of falling food and energy prices. Core prices have continued to increase, however, and we expect headline inflation to bounce back to 1 percent next year, reflecting in part some pass-through of the recent sizable depreciation of the yen. The BOJ's aggressive expansion of its asset purchases came sooner than we expected and prompted us to assume that these purchases will persist through 2016, a year longer than we assumed in October. Accordingly, we marked up a bit our medium-term outlook for inflation and now project inflation to rise to 1½ percent by 2017.

- ***Canada.*** Real GDP grew at an annual rate of 2.8 percent in the third quarter, driven by strong exports and firm private domestic demand. Although there was an unexpected decline in employment in November, robust manufacturing PMIs through November point to ongoing momentum. Accordingly, we expect that GDP will expand at a solid 2½ percent pace in the current quarter and over the next two years. This forecast is little changed, on net, as the boost from higher U.S. demand is offset by reduced investment in oil extraction.

  We estimate that inflation remained low in the current quarter at 1¼ percent, restrained by falling energy prices. Core prices, however, have posted rapid gains in recent months. We expect inflation to rise to the Bank of Canada's 2 percent target by 2017 as output edges above its potential level. With the outlook for growth and inflation little changed, we continue to project that the bank's first rate hike will occur in the fourth quarter of 2015.

Emerging Market Economies

- ***China.*** Recent indicators suggest that growth in the current quarter has slowed to 7¼ percent from 7¾ percent in the middle of the year. Industrial production and PMI data point to a deceleration of manufacturing activity, and the downturn in the property market continues to weigh on investment. In addition, export growth has slowed from its rapid pace during the past few quarters. We expect the boost from external demand to wane further but domestic demand to strengthen as authorities add policy stimulus. The People's Bank of China (PBOC) injected substantial liquidity into large- and medium-sized banks in September and October and cut banks' benchmark lending and deposit rates in late November. Although these measures have eased the monetary policy stance somewhat, we believe the PBOC does not intend to generate another sharp surge in credit as in 2009 and in 2013. We continue to see GDP growth edging down to 7 percent by 2017. Continued sharp declines in property prices and weak credit growth in October, however, suggest that risks to the outlook are tilted to the downside.

We expect inflation to dip below 2 percent at an annual rate in the current quarter, restrained by a deceleration in food prices and the recent decline in energy prices. As these factors subside, inflation should pick up to 2½ percent by the middle of next year and to 3 percent by 2016.

- ***Other Emerging Asia.*** In emerging Asia excluding China, real GDP expanded at an annual pace of 3.9 percent in the third quarter. Recent indicators, such as exports and PMIs, suggest that growth will step down a bit to 3½ percent this quarter. In particular, a combination of soft external demand and one-off factors—such as street protests in Hong Kong and reductions of fuel subsidies in Indonesia and Malaysia—are weighing on activity. We see growth in the region recovering to 4½ percent in 2015, supported by lower oil prices and improvements in external demand.

  Inflation, after moderating in the third quarter to an annual rate of 2 percent, is estimated to have picked up to 2½ percent in the fourth quarter. Although in several economies inflation remains low due to falling energy prices, country-specific factors, such as the reductions in fuel subsidies and expiration of housing subsidies in Hong Kong, have driven it substantially up in a few cases. Over the medium term, consistent with central bank targets, we anticipate that inflation will settle at 3½ percent.

- ***Latin America.*** Real GDP growth in **Mexico** dropped to 2 percent in the third quarter, well below our October Tealbook estimate. This result is also somewhat at variance with relatively strong third-quarter monthly indicators. We believe this divergence is unlikely to persist and, with upbeat readings from PMIs, consumer confidence, and motor vehicle production and exports in the current quarter, we expect growth to step up to 3¼ percent. Growth should then move up a bit further, to 3½ percent by mid-2015, supported by U.S. manufacturing activity and the positive effects of recently enacted economic reforms. A spike in food prices pushed up inflation to an annual rate of 4½ percent last quarter. As this effect fades, we expect inflation to moderate to 4 percent in the current quarter and to 3¼ percent next year.

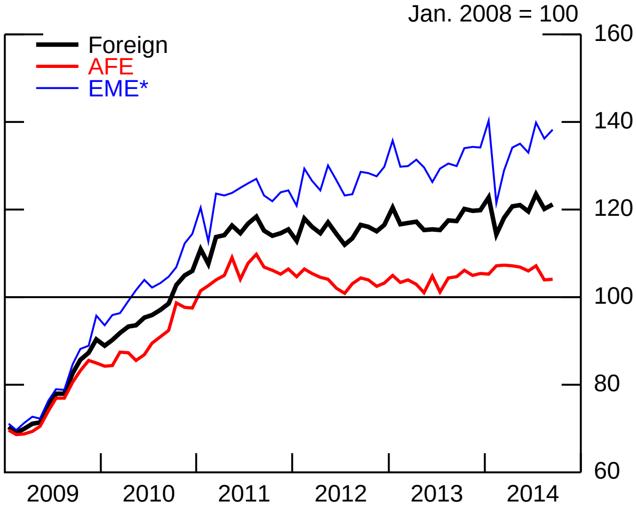
  After a recession in the first half of the year, **Brazil**'s economy grew only 0.3 percent in the third quarter. Recent indicators, including exports and industrial production, have been weak, and consumer and business confidence remain depressed. Accordingly, we see GDP growth picking up only slightly to 1 percent in the current quarter, about ½ percentage point lower than our October projection. We expect that Brazilian activity will remain subdued, increasing to a pace of only 2 percent by 2016, restrained by lower commodity prices and tighter macroeconomic policies. Brazil's new finance minister, Joaquim Levy, pledged to tighten fiscal policy to stabilize the public debt-to-GDP ratio. In addition, the central bank recently raised the policy rate again, by a greater-than-expected 50 basis points. These measures are meant to rebuild policy credibility, but while any favorable effects of improved business confidence pose upside risks to the outlook, such effects will probably show up only slowly over time. Brazil's inflation rate remains near the 6½ percent upper limit of the central bank's target range, and we estimate only a moderate step-down to 5½ percent over the forecast period.

- ***Russia and Venezuela.*** The **Russian** economy is reeling from the twin blows of sanctions imposed in response to its aggression against Ukraine and the sharp decline in oil prices. Private consumption and investment have plunged, and the country's financial markets are in distress. Russian authorities have hiked interest rates 400 basis points this year and have been intervening—to varying degrees over the past few months—in foreign exchange markets to support the currency. However, these actions have not prevented a sharp depreciation of the ruble, which has fallen 65 percent this year. We project the Russian economy to remain mired in recession next year, with only a weak recovery thereafter.

  Similarly, the sharp fall in oil prices has plunged the economy of **Venezuela** into further disarray. Oil accounts for more than 95 percent of the country's exports and a large portion of its fiscal revenues. Venezuela's economy had already been suffering from the effects of years of economic mismanagement, evidenced by very high inflation (over 60 percent), widespread shortages of goods, and substantial capital flight. Amid these economic woes and soaring credit risk spreads on sovereign external debt (to over 4,100 basis points), the government is facing growing pressures to undertake macroeconomic policy adjustments. Prospects for the economy remain dim.

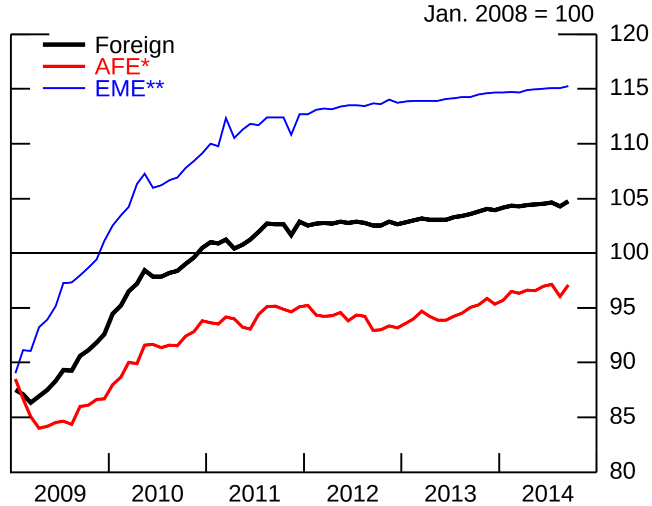
Recent Foreign Indicators

Nominal Exports



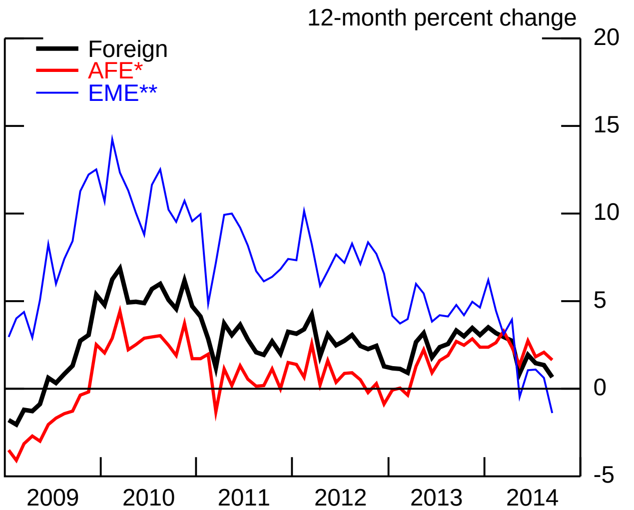
* Excludes Venezuela.

Industrial Production



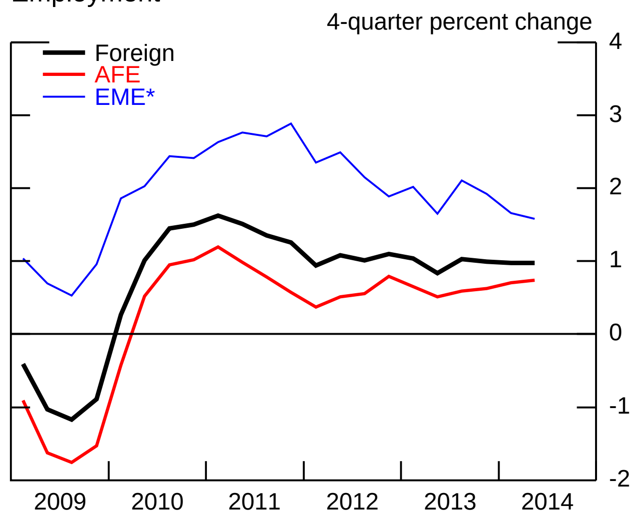
* Excludes Australia and Switzerland.
** Excludes Singapore, Hong Kong, Chile, and Venezuela.

Retail Sales



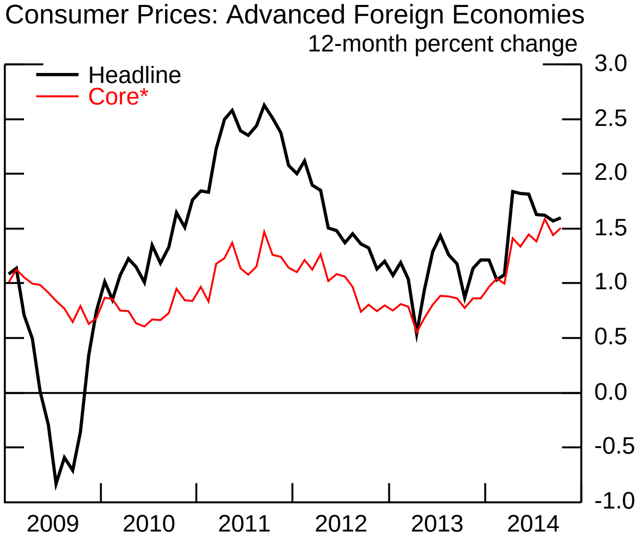
* Excludes Australia and Switzerland.
** Includes Brazil, China, Indonesia, Korea, Singapore.

Employment



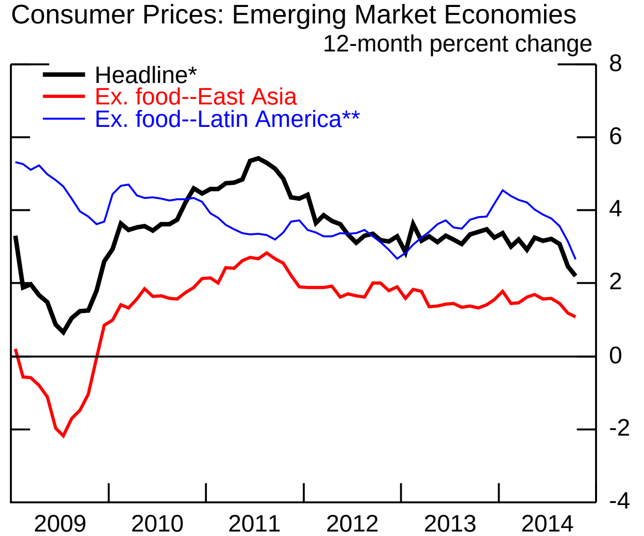
* Excludes Argentina.

Consumer Prices: Advanced Foreign Economies



Note: Excludes Australia, Sweden, and Switzerland.
* Excludes all food and energy; staff calculation.
Source: Haver Analytics and CEIC.

Consumer Prices: Emerging Market Economies



* Excludes Venezuela.
** Excludes Argentina and Venezuela.

The Foreign GDP Outlook

Real GDP*

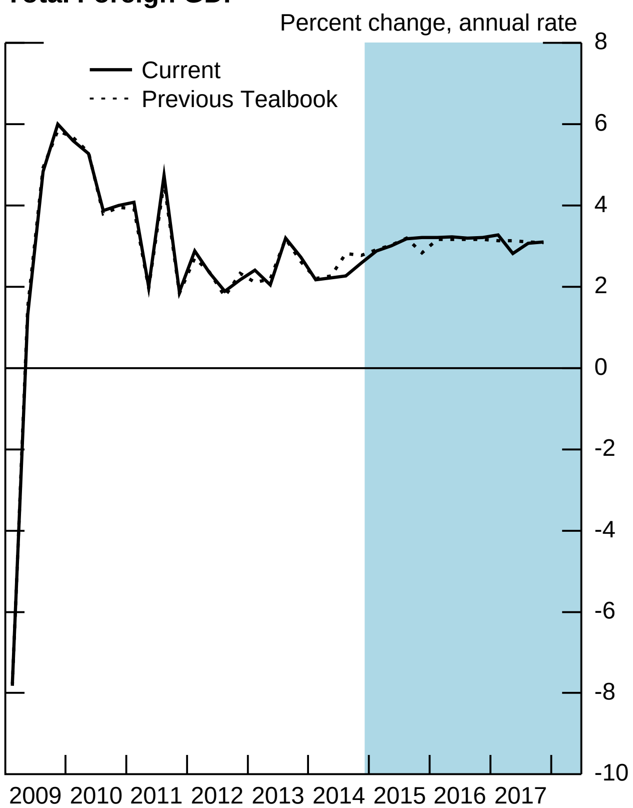
Percent change, annual rate

	2014 H1	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 H2	2016	2017
1. Total Foreign	**2.2**	**2.3**	**2.6**	**2.9**	**3.0**	**3.2**	**3.2**	**3.1**
Previous Tealbook	*2.2*	*2.8*	*2.8*	*2.9*	*3.0*	*3.0*	*3.2*	*3.1*
2. Advanced Foreign Economies	**1.6**	**1.6**	**1.8**	**2.0**	**2.1**	**2.2**	**2.2**	**1.9**
Previous Tealbook	*1.5*	*1.9*	*1.8*	*2.0*	*2.1*	*1.9*	*2.1*	*2.1*
3. Canada	2.3	2.8	2.5	2.4	2.4	2.6	2.5	2.2
4. Euro Area	0.8	0.6	0.7	1.2	1.6	1.7	1.9	2.0
5. Japan	-0.6	-1.9	1.8	1.7	1.5	1.5	1.3	-0.3
6. United Kingdom	3.4	2.8	2.5	2.5	2.5	2.5	2.5	2.3
7. Emerging Market Economies	**2.8**	**3.0**	**3.3**	**3.8**	**3.9**	**4.2**	**4.2**	**4.2**
Previous Tealbook	*3.0*	*3.7*	*3.7*	*3.9*	*4.0*	*4.1*	*4.2*	*4.1*
8. China	7.0	7.7	7.2	7.4	7.4	7.3	7.1	7.0
9. Emerging Asia ex. China	2.8	3.9	3.6	4.4	4.4	4.5	4.5	4.3
10. Mexico	2.5	2.0	3.2	3.3	3.4	3.5	3.4	3.5
11. Brazil	-1.6	0.3	1.0	1.3	1.6	1.8	2.1	2.3

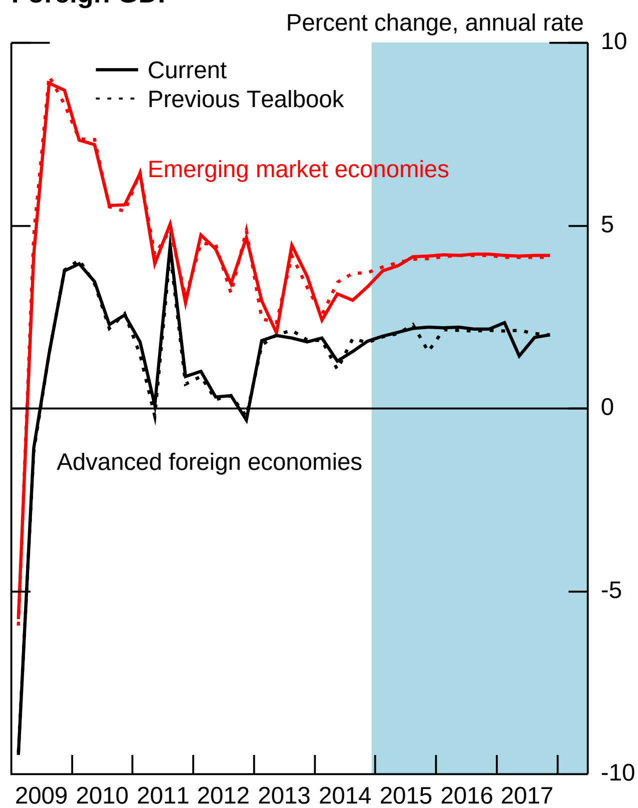
* GDP aggregates weighted by shares of U.S. merchandise exports.

Int'l Econ Devel & Outlook

Total Foreign GDP



Foreign GDP



The Foreign Inflation Outlook

Consumer Prices* Percent change, annual rate

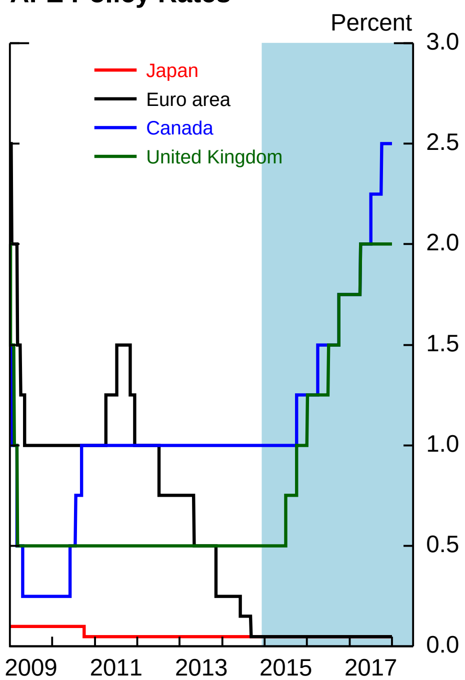
	2014 H1	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 H2	2016	2017
1. Total Foreign	**2.5**	**2.1**	**1.6**	**2.0**	**2.3**	**2.5**	**2.6**	**2.7**
Previous Tealbook	*2.5*	*2.1*	*1.7*	*2.2*	*2.4*	*2.7*	*2.6*	*2.6*
2. Advanced Foreign Economies	**2.2**	**1.1**	**0.0**	**0.6**	**1.1**	**1.4**	**1.6**	**2.0**
Previous Tealbook	*2.2*	*1.1*	*0.3*	*0.8*	*1.2*	*1.9*	*1.6*	*1.7*
3. Canada	3.3	1.3	1.2	1.0	1.4	1.7	1.8	2.0
4. Euro Area	0.4	0.6	-0.5	-0.1	0.9	1.3	1.5	1.6
5. Japan	4.8	1.8	-0.9	1.4	0.9	1.1	1.3	2.8
6. United Kingdom	1.5	1.5	0.2	1.0	1.6	1.9	1.9	2.0
7. Emerging Market Economies	**2.8**	**2.9**	**2.9**	**3.1**	**3.2**	**3.4**	**3.3**	**3.3**
Previous Tealbook	*2.8*	*2.8*	*2.9*	*3.3*	*3.4*	*3.3*	*3.3*	*3.3*
8. China	1.4	2.2	1.9	2.4	2.6	3.0	3.0	3.0
9. Emerging Asia ex. China	3.0	1.9	2.6	3.7	3.6	3.7	3.5	3.5
10. Mexico	4.1	4.4	4.0	3.2	3.3	3.3	3.3	3.3
11. Brazil	7.0	6.2	5.9	5.6	5.6	5.6	5.4	5.4

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

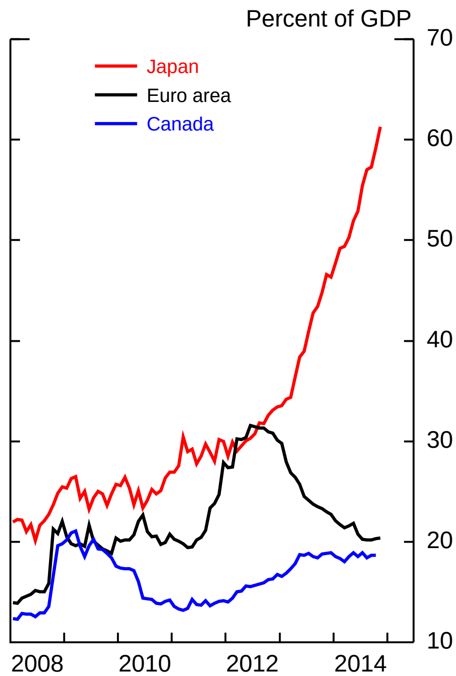
Int'l Econ Devel & Outlook

Foreign Monetary Policy

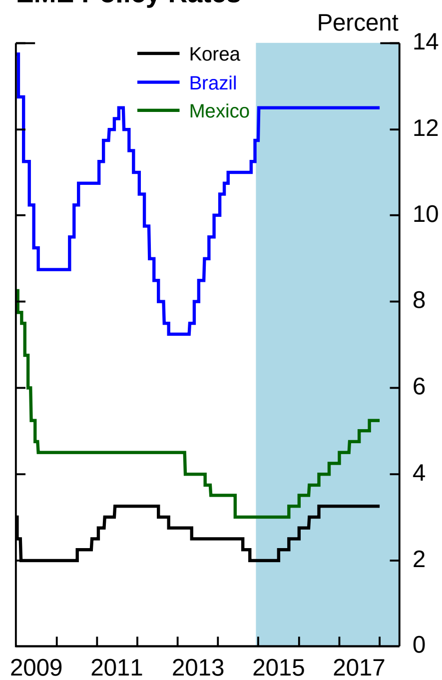
AFE Policy Rates



AFE Central Bank Balance Sheets

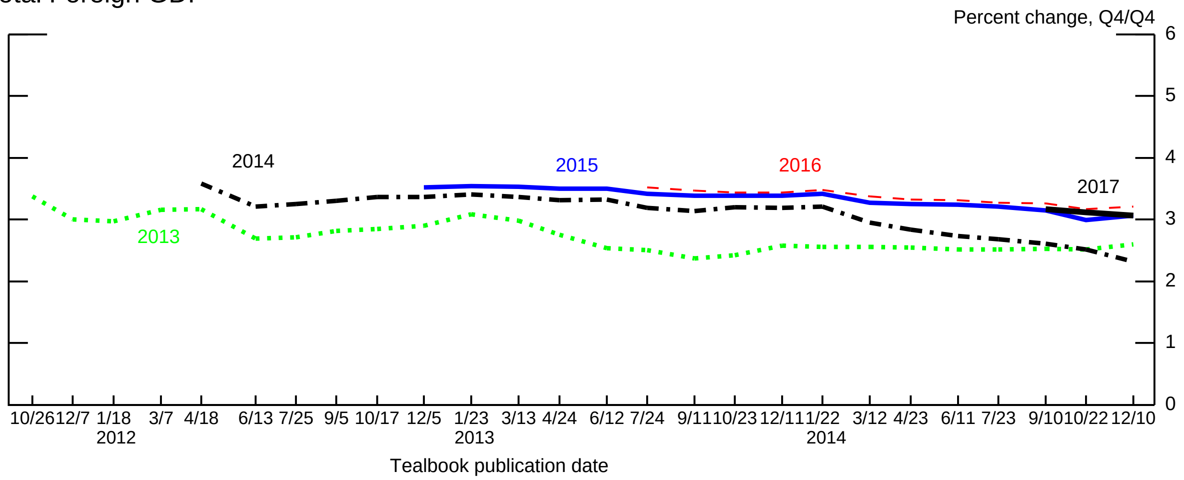


EME Policy Rates

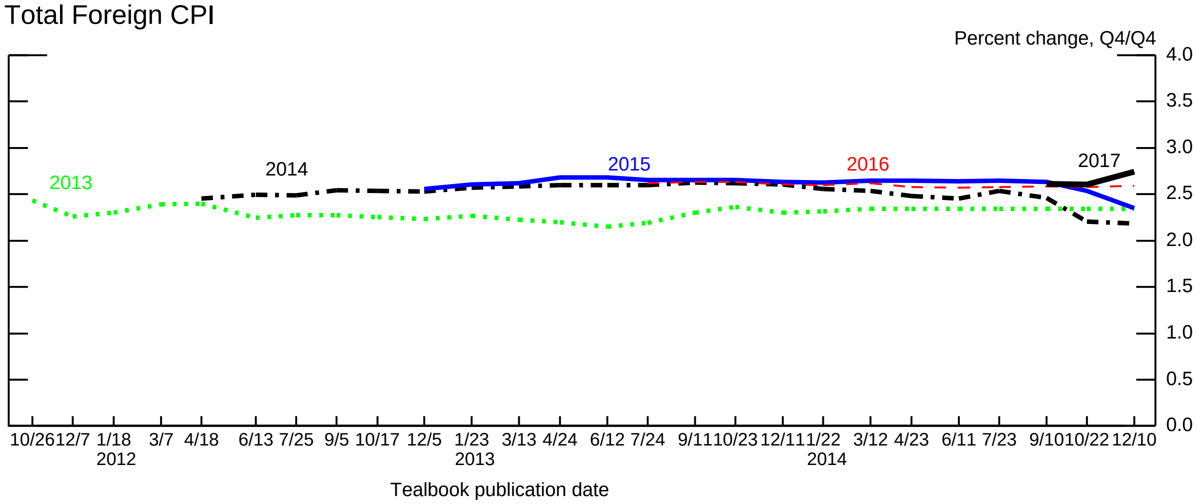


Evolution of Staff's International Forecast

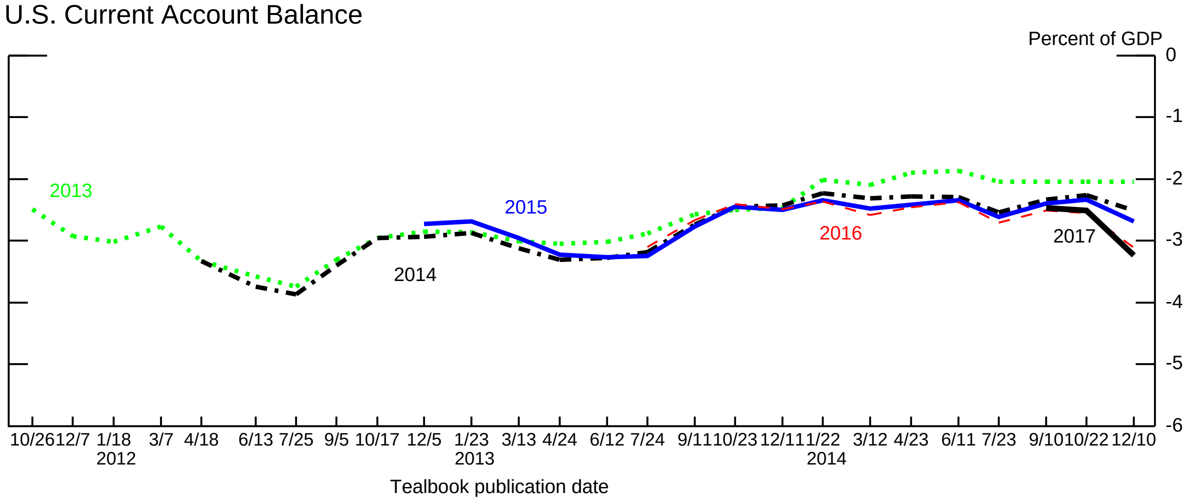
Total Foreign GDP



Total Foreign CPI



U.S. Current Account Balance



Financial Developments

Over the intermeeting period, market participants became a bit more optimistic about U.S. economic prospects, and the expected path for policy implied by asset prices moved higher. Meanwhile, amid ongoing signs of economic weakness abroad, investors were heartened by foreign central bank actions and communications that were more accommodative than expected. A sharp decline in oil prices weighed on inflation compensation and left a mixed imprint on other asset markets.

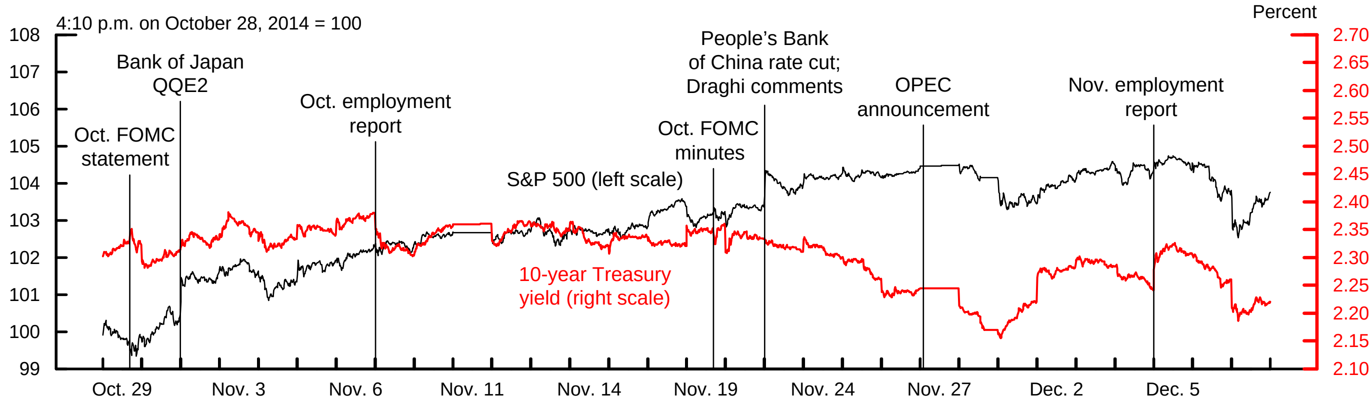
- The path for the federal funds rate implied by OIS quotes rose as much as 25 basis points, and yields on nominal Treasury securities increased at two- and five-year maturities. However, policy expectations of the respondents to the Open Market Desk's surveys of primary dealers and market participants changed little.
- Measures of inflation compensation moved down further over the period and contributed to declines in longer-dated nominal Treasury yields. Most survey-based measures of long-term inflation expectations were little changed.
- The S&P 500 equity price index rose about 4 percent, with notable increases following some key foreign central bank announcements.
- Reflecting the divergent trends in monetary policy here and abroad, the nominal broad index of the dollar appreciated about 4 percent.
- Business financing resumed its robust pace after a brief lull in mid-October. Household financing conditions were little changed, with mortgage credit still tight for many borrowers but consumer credit more broadly available.
- Tests of the Federal Reserve's supplementary tools, including term RRPs, ON RRPs, and the Term Deposit Facility (TDF), shed light on how these tools might affect market dynamics during monetary policy normalization.

Treasury Yields and Policy Expectations

Economic data releases over the intermeeting period, most notably the strong employment report for November, reinforced the view of market participants that the

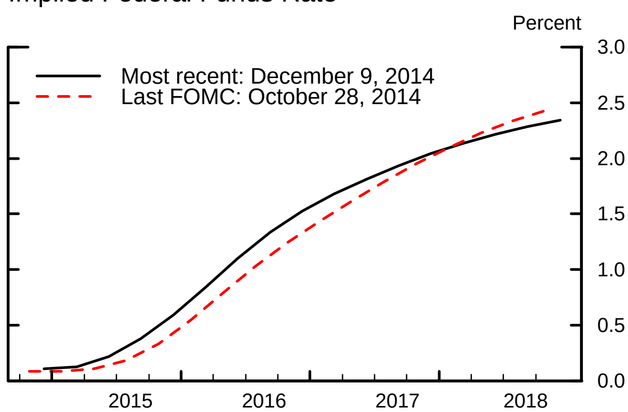
Treasury Yields and Policy Expectations

10-Year Treasury Yield and S&P 500 Index



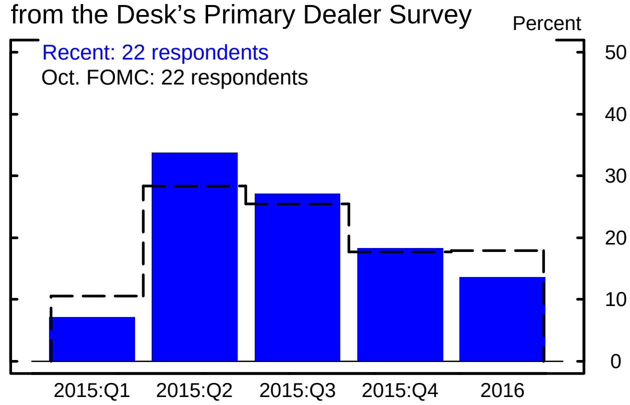
Note: 5-minute intervals. 9:30 a.m. to 4:00 p.m.
Source: Bloomberg.

Implied Federal Funds Rate



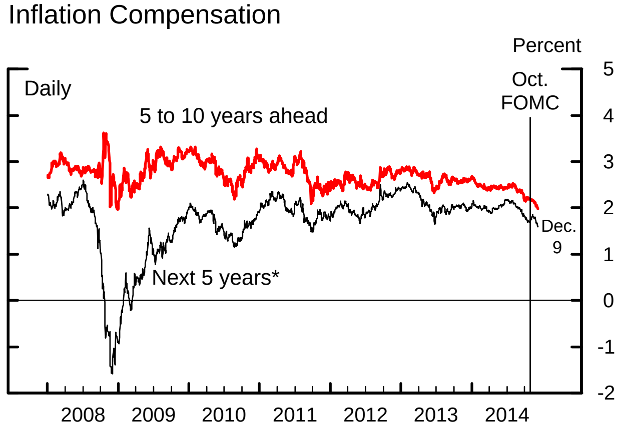
Note: Path is estimated using overnight index swap quotes with a spline approach and a term premium of zero basis points.
Source: Bloomberg; staff estimation.

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



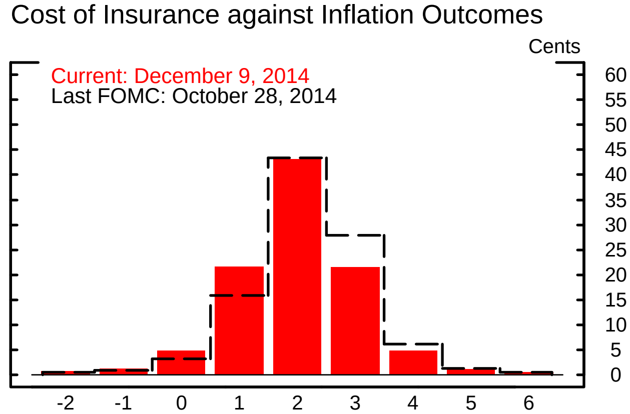
Note: For 2015:Q1, expected timing is before or during that quarter; for 2016, expected timing is during or after that year.
Source: Desk's primary dealer survey from December 8, 2014.

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; staff estimates.

Cost of Insurance against Inflation Outcomes



Note: Prices of binary options that pay $1 if annualized cumulative headline CPI inflation over the next 10 years falls within the given range of outcomes. Derived under the assumption that average inflation takes discrete values (e.g., the bar for 3 percent covers roughly the area between 2.5 percent and 3.5 percent).
Source: Barclays PLC; staff estimates.

Financial Developments

U.S. economic recovery continues to gain momentum, and that monetary policy normalization remains on track. In addition, the October FOMC statement was reportedly seen as suggesting a slightly tighter monetary policy path. Market participants highlighted the Committee's characterization in the statement of an improving labor market and pointed to the passages on the inflation outlook, which were viewed as downplaying somewhat the declines in realized inflation and market-based measures of inflation compensation. Investors also reportedly took note of the new language emphasizing the data dependency of the timing of liftoff. Other FOMC communications appeared to have little effect on policy expectations.

In the Desk surveys of dealers and market participants, a majority of dealer respondents indicated that they expect the "considerable time" language to be removed in the December FOMC statement, and a majority of respondents to both surveys anticipated that the December FOMC communications—including the postmeeting statement, the SEP information, and the press conference—will be interpreted by investors as less accommodative than currently expected. However, a majority of respondents to both surveys also continued to view the June 2015 meeting as the most likely date of liftoff, and expectations for the pace of tightening following liftoff were generally little changed since the October survey.

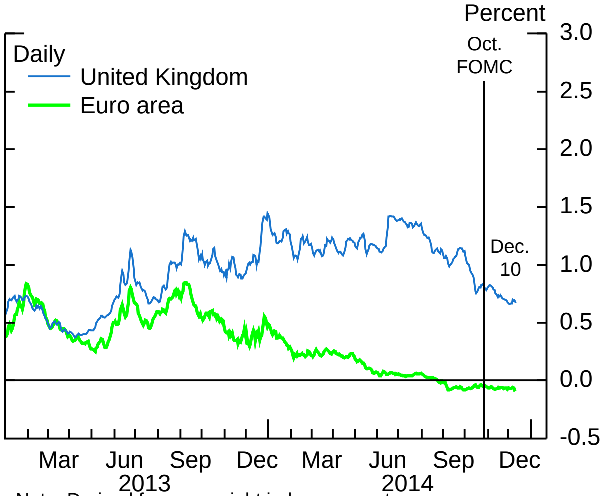
On net, the expected path of the federal funds rate based on a straight read of financial market quotes moved up, and two- and five-year Treasury yields increased 19 basis points and 9 basis points, respectively. Market-based measures of uncertainty about the path of policy increased, particularly at horizons of 12 months or more.

Although yields on 10-year TIPS rose 6 basis points, comparable nominal yields declined 10 basis points. The associated decrease in inflation compensation reportedly reflected increased concerns about global growth and declines in oil prices, with a notable drop in the wake of OPEC's decision not to cut production at its November 27 meeting.[1] Five-year inflation compensation based on TIPS dropped 12 basis points, and the five-year measure five years ahead decreased 22 basis points and now stands a bit below its recent trough in 2011. Measures of inflation compensation taken from inflation swaps declined by similar amounts. In addition, quotes on inflation caps and floors suggest that the decline in inflation compensation has been associated with an increase in concerns

[1] For a longer-term perspective on these declines, see the box "Recent Declines in Inflation Compensation" in the Financial Developments section of the October 2014 Tealbook, Book A.

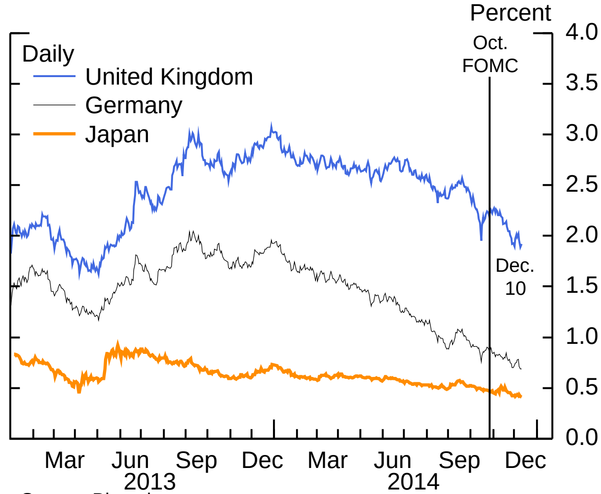
Foreign Developments

Policy Expectations: December 2015



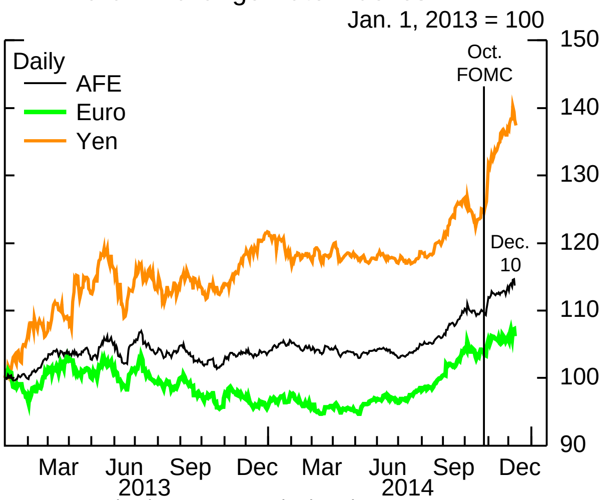
Note: Derived from overnight index swap rates.
Source: Bloomberg.

AFE 10-Year Nominal Benchmark Yields



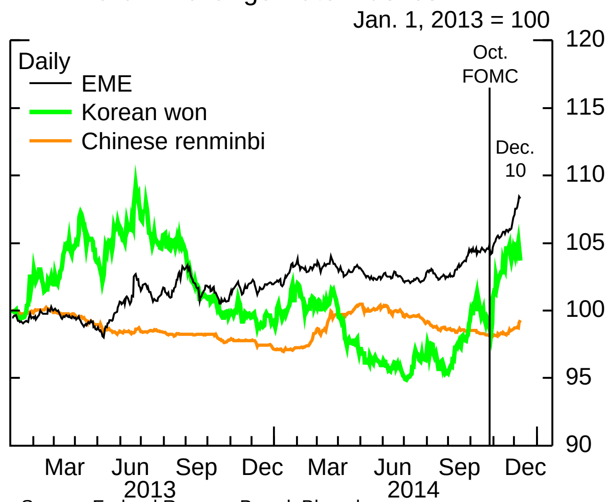
Source: Bloomberg.

AFE Dollar Exchange Rate Indexes



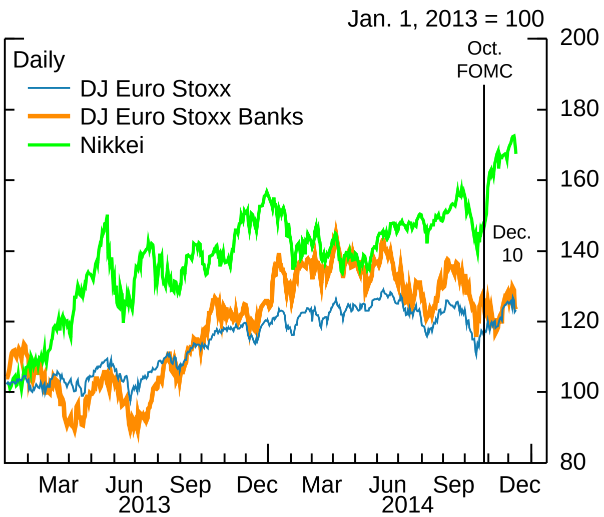
Source: Federal Reserve Board; Bloomberg.

EME Dollar Exchange Rate Indexes



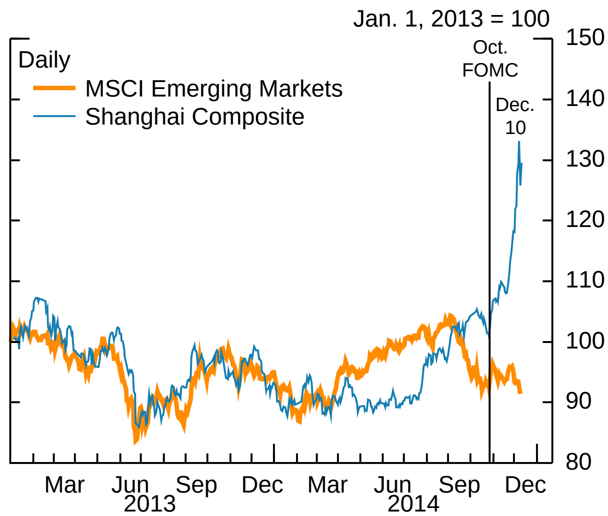
Source: Federal Reserve Board; Bloomberg.

AFE Stock Price Indexes



Source: Bloomberg.

EME Stock Price Indexes



Source: Bloomberg.

Financial Developments

about relatively low inflation outcomes and a comparable decline in concerns about relatively high inflation outomes.

Staff models suggest that much of the decrease in five-year forward inflation compensation reflected changes in risk and liquidity premiums, with longer-term inflation expectations only a little lower. Respondents to the Desk surveys reported little change in their own inflation expectations but nonetheless attributed about half of the decline in inflation compensation to a drop in investors' expected average CPI inflation and the other half to inflation risk and other premiums.

Most survey-based measures of longer-term inflation expectations have changed little of late. In the dealer survey, the average point estimate for annual CPI inflation over 2020 to 2024 declined only a few basis points. By contrast, the Michigan survey measure of long-term inflation expectations has dropped 20 basis points in recent months.[2] However, this measure has historically been somewhat sensitive to large moves in energy prices.

Foreign Developments

Over the intermeeting period, global financial markets were buoyed by substantial policy actions announced in Japan and the prospect of easier monetary policies elsewhere than had previously been expected. These developments contributed to substantial appreciation in the dollar and robust increases in major equity indexes; they also put downward pressure on benchmark sovereign bond yields.

Officials at the Bank of Japan (BOJ) and the Japanese Government Pension Investment Fund (GPIF) surprised markets early in the period with nearly simultaneous announcements of expanded asset purchases and revised investment allocations, respectively. The BOJ raised its target for expanding the monetary base to an annual pace of ¥80 trillion (16 percent of GDP), to be accomplished primarily through larger purchases of domestic government bonds. The GPIF revised its investment targets, raising its allocations of Japanese and global equities each from 12 percent to 25 percent. Later in the period, in the wake of an unexpected contraction in third-quarter GDP, Prime Minister Abe delayed the next planned consumption tax increase by 18 months to

[2] The Michigan long-term measure is the median of household forecasts of average inflation "during the next five to ten years," not just the period five years ahead.

April 2017. Elsewhere in Asia, the People's Bank of China surprised markets by cutting its official lending and deposit rates amid concerns about weakening growth.

European policymakers were also perceived to have become likely to pursue more accommodative policies. The ECB surprised markets by indicating its intention to increase the size of its balance sheet by roughly €1 trillion, toward early 2012 levels. Communications by President Draghi and other ECB officials over the period led market participants to expect further actions by the ECB as early as January, potentially including sovereign bond purchases. In the United Kingdom, market expectations for liftoff of the policy rate were pushed back to late 2015 as statements from the Bank of England were interpreted as being somewhat dovish.

Foreign benchmark 10-year yields fell, with the largest decline (35 basis points) in the United Kingdom. Expectations for more aggressive purchases by the ECB pushed German yields down to a record low of 70 basis points, and most spreads of 10-year peripheral sovereign bonds over those yields narrowed further over the period.

In response to relatively good economic news in the United States, as well as ongoing concerns about tepid growth and expectations for more policy accommodation abroad, the dollar appreciated substantially, continuing the rapid rise seen since July. The AFE and EME currency indexes both rose almost 4 percent. Notably, the dollar appreciated 10 percent versus the Japanese yen. Chinese authorities guided the value of the renminbi lower, allowing it to depreciate about 1¼ percent against the dollar, consistent with a generally more accommodative policy stance. The Mexican peso fell 7 percent against the dollar, and, in response to recent depreciation, Mexican authorities reintroduced a system of dollar auctions intended to limit large intraday declines in the currency.

With new policy measures seeming to outweigh growth concerns, Japanese equity indexes rose 17 percent and European indexes rose between 2 and 9 percent over the period. However, euro-area bank stocks fell amid some weak earnings reports. The ECB published the results of its comprehensive assessment of banks early in the period; although the assessment was broadly viewed as credible and most banks passed, stocks of those banks identified as relatively weaker underperformed. (See the box "The European Central Bank's Comprehensive Assessment of Euro-Area Banks.") Although Chinese stock prices shot up more than 20 percent, an unusually large move even by that market's volatile standards, the MSCI Emerging Markets Index fell slightly, as the decline in commodity prices weighed on equity markets in Latin America.

EQUITY PRICES AND BUSINESS FINANCE

Broad U.S. equity price indexes increased; the S&P 500 rose about 4 percent, with notable gains on the days of the monetary policy communications in Japan, China, and the euro area. The S&P small-cap stock index also rose somewhat, despite a 25 percent slide in the sub-index that tracks the energy sector. Stock prices were supported by the generally positive tone of third-quarter earnings announcements. On net, option-implied volatility on the S&P 500 index—the VIX—was little changed and remained in the lower portion of its historical range.

Corporate credit spreads, particularly those for speculative-grade bonds, widened a bit from fairly low levels, primarily because of the underperformance of energy firms, which account for a relatively large fraction of speculative-grade bonds outstanding. On net, 10-year speculative-grade bond spreads increased 49 basis points over the intermeeting period, while spreads for investment-grade bonds increased 15 basis points.

On balance, however, credit conditions for corporations stayed accommodative over the intermeeting period. Gross issuance of investment-grade corporate bonds increased at its strongest pace in over a year, more than compensating for a slowdown in October, and issuance of speculative-grade bonds remained robust. Nonfinancial commercial paper outstanding expanded notably in November, more than offsetting its drop in October. In addition, leveraged loan issuance in October and November continued to be strong, boosted in part by borrowing to fund mergers and acquisitions, and CLO issuance stayed robust. Finally, commercial and industrial loans on banks' books continued to expand strongly in October and November.

Financing for the commercial real estate (CRE) sector remained broadly available. CRE loans on banks' books grew at a moderate pace in October and November. The volume of CMBS issuance remained solid in October, and, based on the pipeline of forthcoming deals, CMBS issuance overall in 2014 is expected to be somewhat stronger than in 2013. CMBS spreads continued to be tight through the beginning of November. In the December Senior Credit Officer Opinion Survey on Dealer Financing Terms, about one-fifth of broker-dealers with a significant presence in

The European Central Bank's Comprehensive Assessment of Euro-Area Banks

In late October, the European Central Bank (ECB) concluded a comprehensive assessment of significant euro-area lenders in preparation for the ECB to assume principal supervisory authority for the largest euro-area banks on November 4.[1] The assessment was conducted by domestic banking supervisors, third-party consultants, and the European Banking Authority, all under ECB leadership. Covering 130 institutions with €22 trillion in assets, the assessment was unprecedented in size and scope. The assessment consisted of a stress test preceded by an asset quality review (AQR), which evaluated the accuracy of banks' determinations of nonperforming loans and the adequacy of their loan loss reserves. Based on these evaluations, adjustments were made to the capital and risk-weighted assets that were used in the stress test. Market participants largely viewed the exercise as credible, with reasonably stringent methodology and economic assumptions.

The results of the assessment suggest that the larger euro-area banks are in sound condition. On average, banks' benchmark capital ratios under the stress tests' adverse scenario were estimated to be 9 percent, about 4 percentage points lower than their capital ratios at the end of 2013.[2] Moreover, most banks' benchmark capital ratios exceeded the 5.5 percent minimum required under the adverse scenario. Ultimately, only eight banks, mostly from the peripheral economies, will be required to raise a combined €6 billion in additional capital. The modest requirement in part reflects the roughly €40 billion in net capital raised by all banks in the assessment after December 2013, the balance sheet date used for the exercise.

Even so, the quality and quantity of capital held by euro-area banks remain below desirable levels. Although risk-based capital ratios were more than adequate, many institutions in the assessment had weak leverage ratios. Among all euro-area banks that are now subject to direct ECB supervision, those with a leverage ratio below 3 percent—likely to be the euro-area minimum in 2018—hold 15 percent of total assets.[3] Within some of the larger euro-area economies, such as Germany, the figure is higher, reflecting the relatively low ratio of risk-weighted assets to total assets at the largest German banks (figure 1).[4]

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[1] European Central Bank (2014), *Aggregate Report on the Comprehensive Assessment* (Frankfurt am Main, Germany: ECB, October), www.bankingsupervision.europa.eu/ecb/pub/pdf/aggregatereportonthecomprehensiveassessment201410.en.pdf.

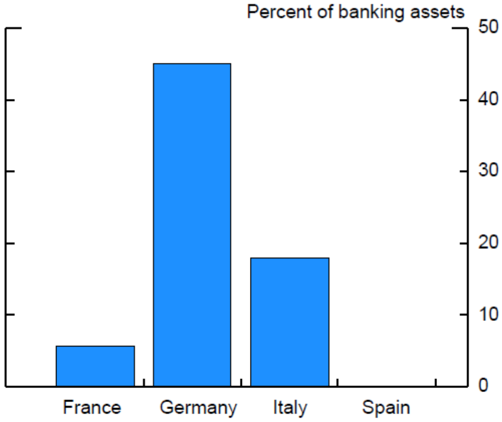
[2] The benchmark capital ratio is the ratio of common equity Tier 1 capital to risk-weighted assets.

[3] Of the 130 banks in the assessment, 110 are now subject to direct ECB supervision.

[4] French, German, Italian, and Spanish banks hold over 70 percent of euro-area banking assets.

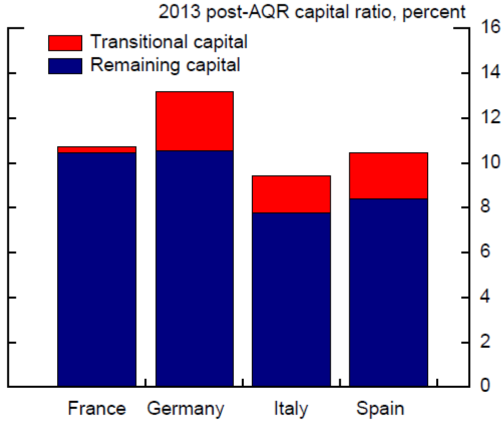
Financial Developments

Figure 1: Banks with Leverage Ratios under 3%



Note: Total assets in banks under direct ECB supervision with leverage ratio below 3 percent, as a percent of total bank assets under direct ECB supervision in each country. The value for Spain is zero.
Source: ECB comprehensive assessment.

Figure 2: Capital Composition



Source: ECB comprehensive assessment.

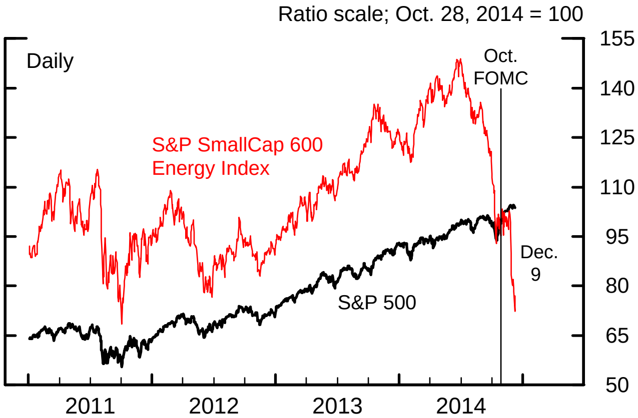
Additionally, a material portion of euro-area banks' existing capital—items such as deferred tax assets, goodwill, and equity holdings in other financial institutions—does not, in all instances, absorb losses. Under Basel III rules, these types of low-quality capital will gradually lose eligibility, but they remain acceptable as so-called transitional capital during the multiyear phase-in period. Banks in Germany, Italy, and Spain rely on such transitional capital for a hefty 15 to 20 percent of their capital stock, or roughly 2 percentage points of their benchmark capital ratios on average (figure 2).

Another concern is that some capital in peripheral banks continues to be provided by their weak sovereigns. Notably, in Greece, Italy, Portugal, and Spain, some deferred tax assets—assets that can be used to reduce taxes on future profits—have been transformed into permanent government credits that, in addition to offsetting taxes due, can also be redeemed when a bank incurs losses or needs to be resolved. This shift is particularly relevant for Spanish banks; an estimated 25 percent of their total benchmark capital consists of tax credits that were converted from deferred tax assets. These actions have improved the reported capital quality of some peripheral banks, but at the same time, these actions have reinforced the link between weak sovereigns and their banking sectors.

As full implementation of Basel III approaches, many euro-area banks will need to improve leverage ratios and replace transitional capital. As a result, many banks will likely remain vulnerable to shocks and are poorly positioned to contribute to the region's economic recovery.

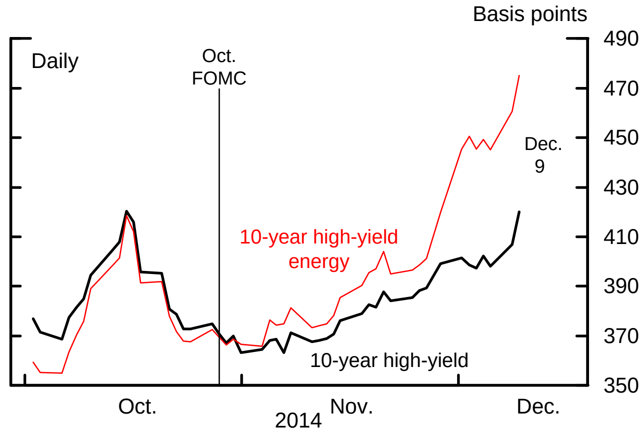
Equity Prices and Business Finance

Equity Price Indexes



Source: Bloomberg.

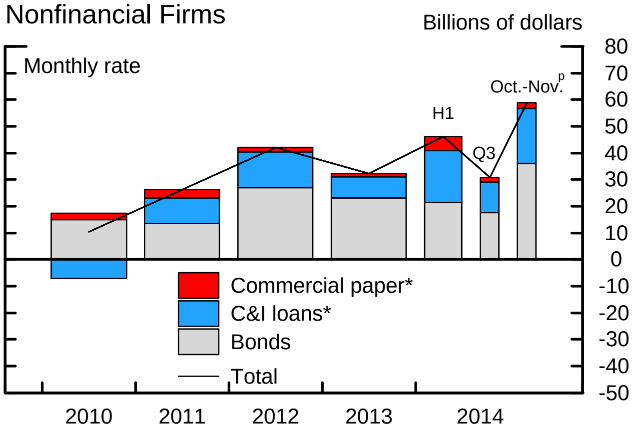
High-Yield Corporate Bond Spreads



Note: Spreads over 10-year Treasury yield. The 10-year high-yield energy spread consists of firms in the energy and utility sectors as defined by Merrill Lynch.

Source: Staff estimates of smoothed corporate yield curves based on Merrill Lynch data and smoothed Treasury yield curve.

Selected Components of Net Debt Financing, Nonfinancial Firms

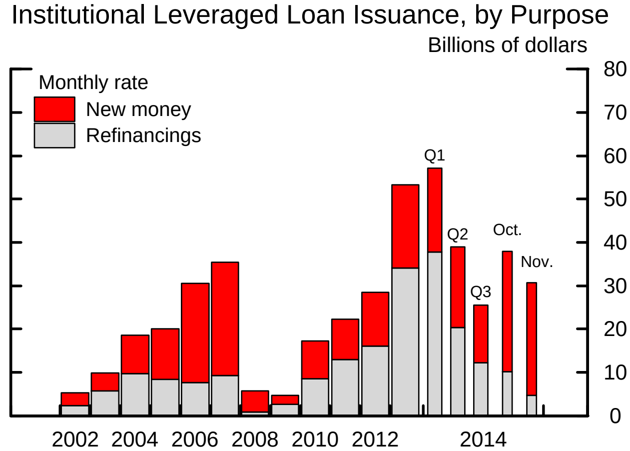


p Preliminary figure for change in commercial and industrial (C&I) loans.

* Period-end basis, seasonally adjusted.

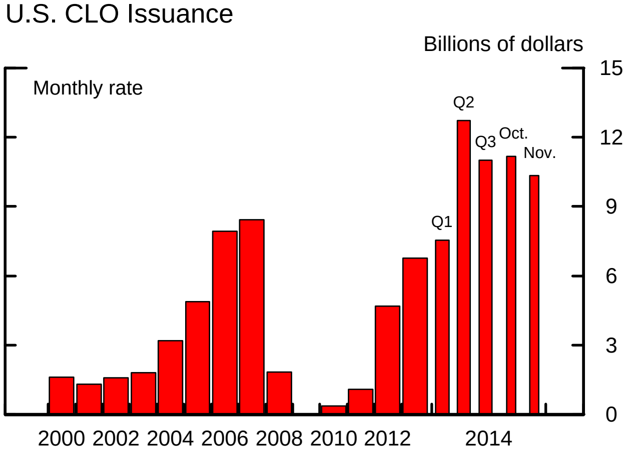
Source: Depository Trust & Clearing Corporation; Mergent Fixed Investment Securities Database; Federal Reserve Board.

Institutional Leveraged Loan Issuance, by Purpose



Source: Thomson Reuters LPC LoanConnector.

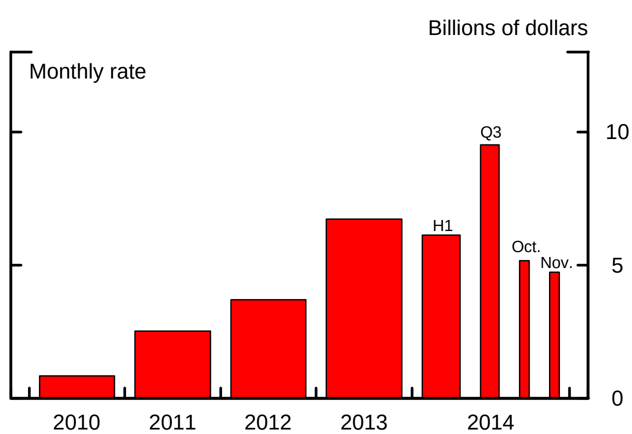
U.S. CLO Issuance



Note: CLO is collateralized loan obligation.

Source: Thomson Reuters LPC LoanConnector.

CMBS Issuance



Note: CMBS is commercial mortgage-backed securities.

Source: Commercial Mortgage Alert.

Financial Developments

capital market activities indicated that they had eased somewhat all of the terms on which they finance CMBS for most-favored clients.

HOUSEHOLD FINANCE

Measures of mortgage lending conditions were little changed over the intermeeting period and continue to indicate that credit conditions for residential mortgages are tight for borrowers with less-than-pristine credit. Mortgage lenders continued to digest the implications of the new GSE guidelines on policies related to putbacks and mortgage originations with higher loan-to-value ratios, but reportedly they are unlikely to ease lending conditions materially in the near term. Interest rates on 30-year fixed-rate mortgages were little changed at about 3.8 percent, approximately 40 basis points above their lows in the spring of 2013. Indicators of refinance activity remained subdued through the end of November.

Financing conditions in consumer credit markets generally stayed accommodative. Auto and student loan balances continued to expand robustly, and revolving credit balances expanded further at a moderate pace. Auto and student loans remained widely available. Credit performance has also stayed strong overall for auto loans, although cumulative loss rates have crept up on the most recent vintages of loans originated by banks.

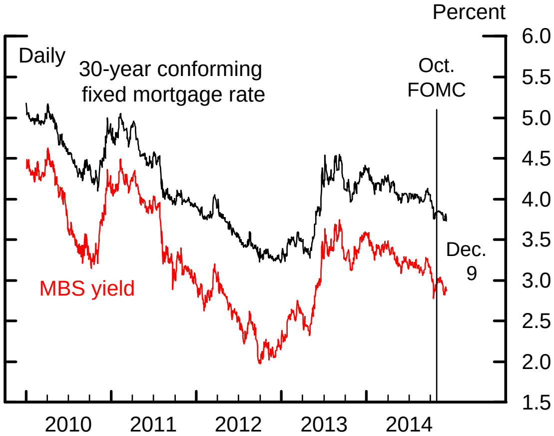
During the third quarter, the distribution of credit scores on newly originated credit card accounts moved lower, suggesting that access to revolving credit continued to improve for consumers with blemished credit records. That said, the terms of credit extended to such borrowers stayed tight, with credit limits remaining low and interest rates still elevated. ABS issuance has continued to be robust in the fourth quarter, with year-to-date issuance slightly outpacing that of last year and ABS yield spreads remaining tight.

BANKING DEVELOPMENTS AND MONEY

The stock prices of large U.S. bank holding companies (BHCs) outperformed broad market indexes, while CDS spreads for large BHCs were slightly lower, on net, over the intermeeting period. In the third quarter, the profitability of BHCs remained within its post-crisis range but was still well below the levels that prevailed in the decade prior to the crisis. Noninterest income improved, supported by investment banking and

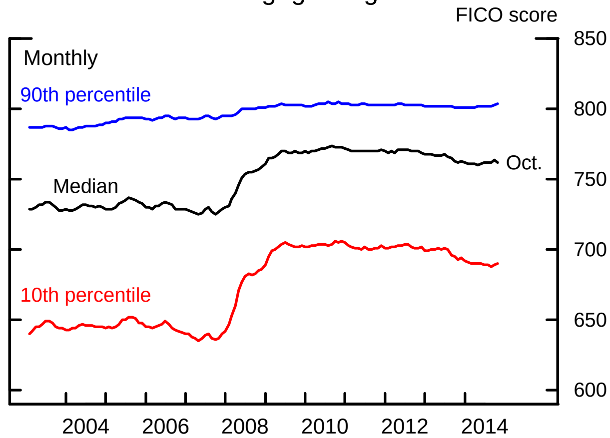
Household Finance

Mortgage Rate and MBS Yield



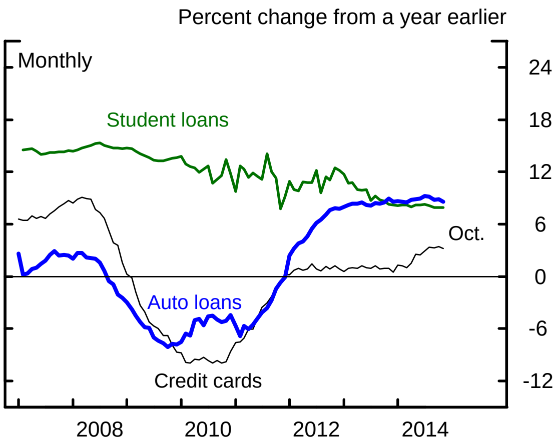
Note: The MBS yield is the Fannie Mae 30-year current-coupon rate.
Source: For MBS yield, Barclays; for mortgage rate, Loansifter.

Credit Scores at Mortgage Origination



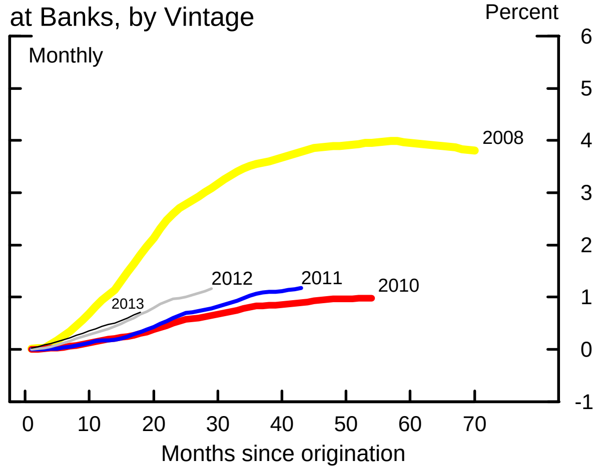
Note: Concerns 30-year GSE-backed purchase mortgages originated in month shown.
Source: LPS Applied Analytics.

Consumer Credit



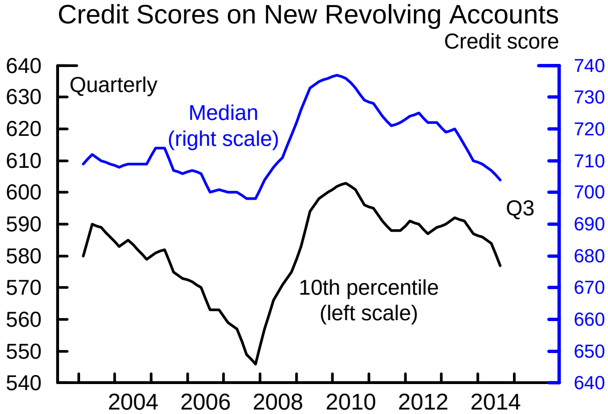
Note: The data are not seasonally adjusted.
Source: Federal Reserve Board.

Cumulative Loss Rates on Auto Loans at Banks, by Vintage



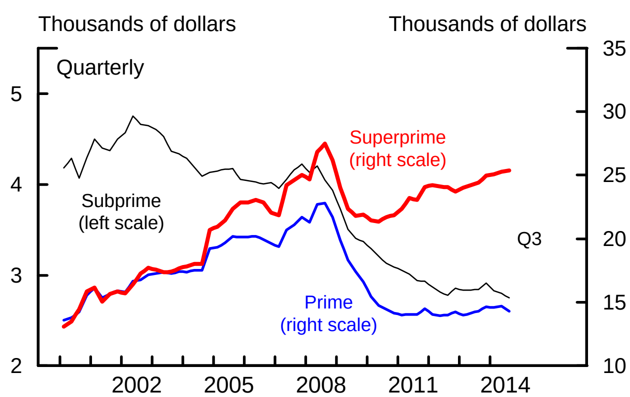
Source: Staff estimates using data from the Federal Reserve Board's FR Y-14Q report (Capital Assessments and Stress Testing).

Credit Scores on New Revolving Accounts



Note: Derived from the number of revolving accounts opened in the past 6 months.
Source: Federal Reserve Bank of New York Consumer Credit Panel/Equifax.

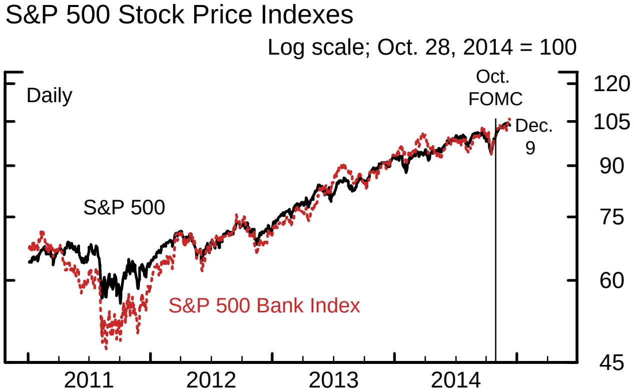
Credit Card Limits per Capita



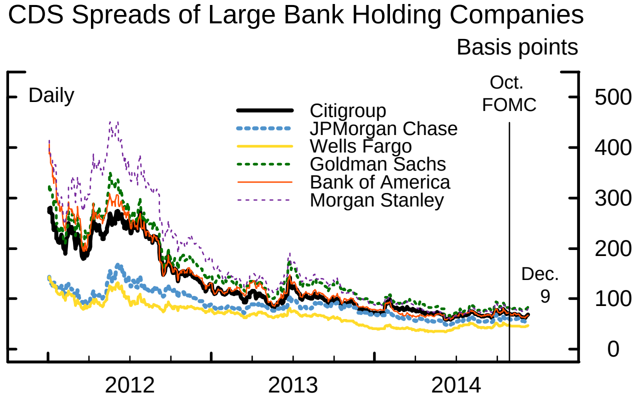
Note: Subprime refers to borrowers with Equifax Risk Scores lower than 660; prime, between 660 and 779; and superprime, greater than 779.
Source: Federal Reserve Bank of New York Consumer Credit Panel/Equifax.

Financial Developments

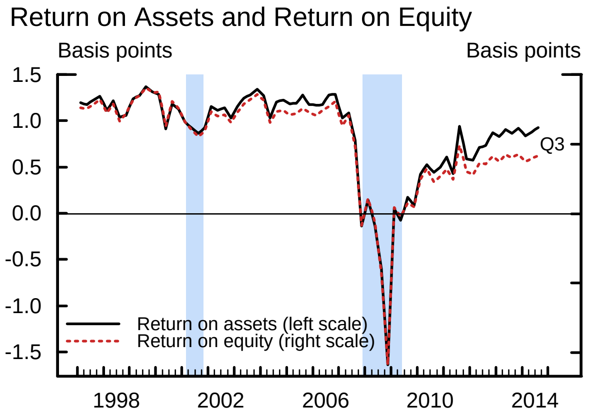
Banking Developments and Money



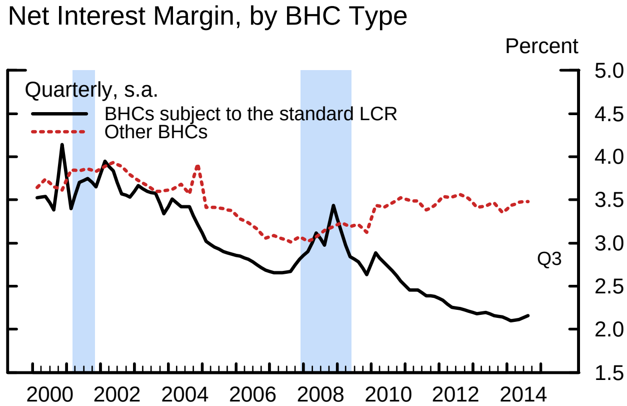
Source: Bloomberg.



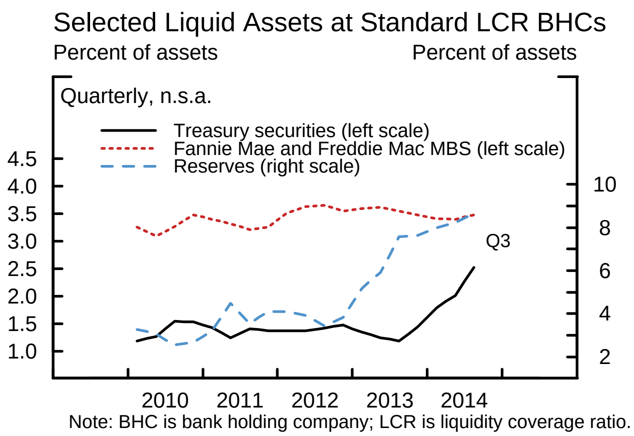
Source: Markit.



Note: The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.
Source: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Holding Companies.



Note: BHC is bank holding company; LCR is liquidity coverage ratio. The shaded bars indicate periods of business recession as defined by the National Bureau of Economic Research.
Source: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Holding Companies.



Note: BHC is bank holding company; LCR is liquidity coverage ratio.
Source: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Holding Companies.

Growth of M2 and Its Components

Percent, s.a.a.r.

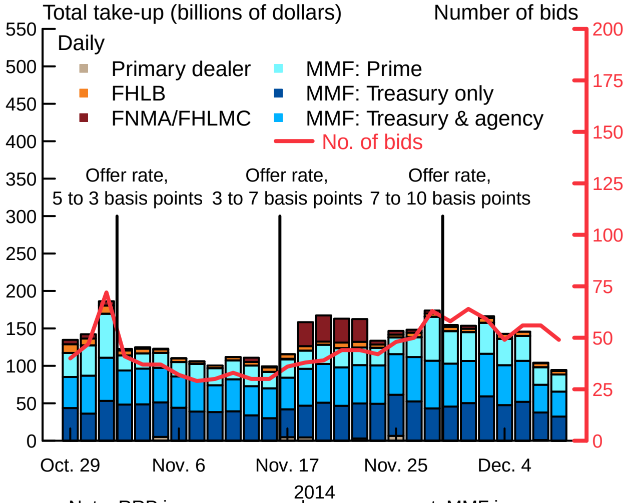
	M2	Liquid deposits	Small time deposits	Retail MMFs	Curr.
2013	6.0	7.9	-13.6	1.6	6.6
2014:Q1	6.7	8.5	-8.8	-4.8	7.4
2014:Q2	6.3	7.2	-8.2	-.9	10.4
2014:Q3	5.4	6.8	-4.3	-5.2	5.5
Oct. & Nov. (avg.)	4.6	5.2	-5.4	1.2	6.3

Note: Retail MMFs are retail money market funds.
Source: Federal Reserve Board.

Financial Developments

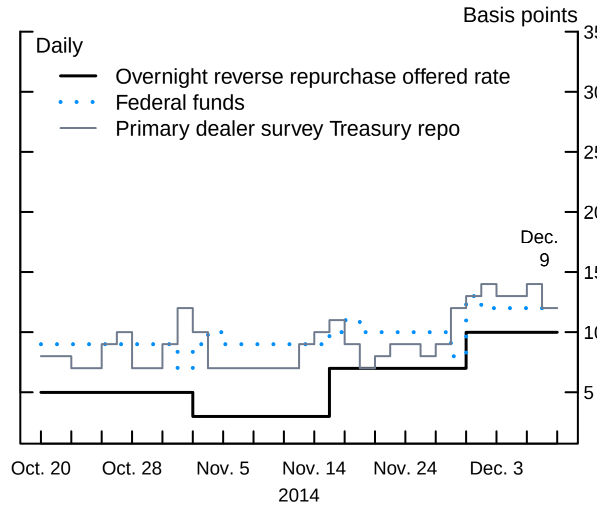
Short-Term Funding Markets and Federal Reserve Operations

Intermeeting Overnight RRP Propositions



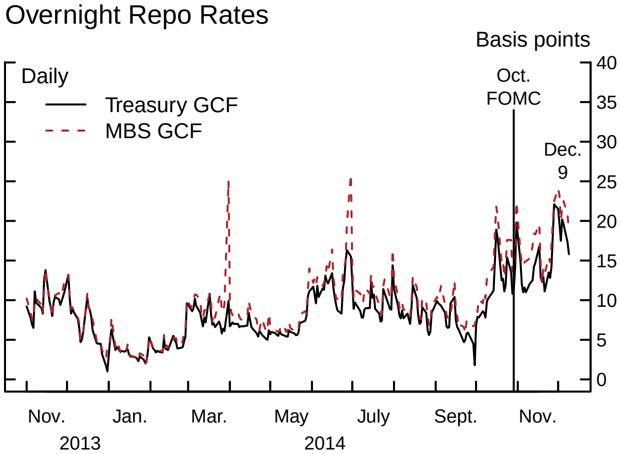
Note: RRP is reverse repurchase agreement; MMF is money market fund.
Source: Federal Reserve Bank of New York.

Money Market Rates



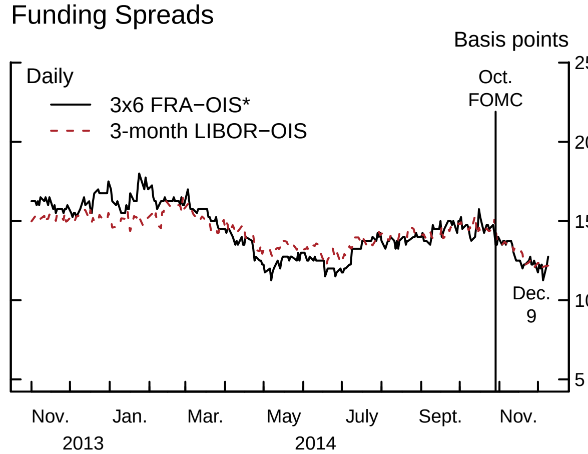
Source: Depository Trust & Clearing Corporation; Federal Reserve Bank of New York.

Overnight Repo Rates



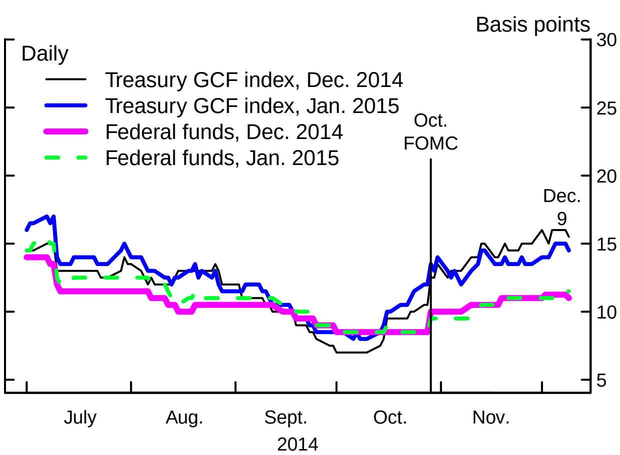
Note: GCF is general collateral finance.
Source: Bloomberg.

Funding Spreads



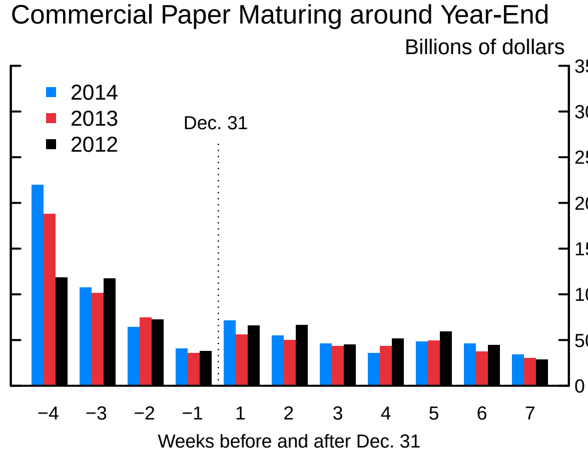
* Spread is calculated from a LIBOR forward rate agreement (FRA) 3 to 6 months in the future and the forward overnight index swap (OIS) rate for the same period.
Source: Bloomberg.

Rates on Futures Contracts around 2014 Year-End



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

Commercial Paper Maturing around Year-End



Note: Bars represent volumes of commercial paper maturing during the weeks around year-end.
Source: Depository Trust & Clearing Corporation.

Financial Developments

trading revenues. In contrast, net interest margins at large banks remained low, reflecting continued low interest rates and, to a lesser extent, increased holdings of high-quality liquid assets, which banks are reportedly purchasing to meet Basel III liquidity requirements.

M2 expanded at roughly a 4½ percent pace over October and November. Over the same period, the monetary base contracted at an annual rate of about 30 percent, largely reflecting a decline in reserve balances associated with the recent TDF operational testing.

Short-Term Funding Markets and Federal Reserve Operations

Testing of the Federal Reserve's ON RRP operations continued over the intermeeting period. ON RRP rates ranged from 3 basis points to 10 basis points in November and December.[3] Early in the period, the effective federal funds rate averaged 8 basis points when the ON RRP rate was 5 basis points. Later on, the federal funds rate averaged 10 basis points and then 12 basis points when the ON RRP rate rose to 7 basis points and then 10 basis points, respectively, suggesting that the ON RRP operations put some upward pressure on unsecured rates.[4] In addition, GCF repo rates for Treasury and MBS collateral, as well as repo rate futures contracts for December, rose, on net, as the the ON RRP offered rate continued to provide a soft floor for secured money market rates.

In addition, the Desk announced four term RRP operations in December that will cross year-end with a cumulative cap of $300 billion. The first term operation was conducted on December 8. It was oversubscribed, with more than 70 counterparties placing bids for a total of $102 billion, about double the $50 billion on offer, resulting in a stopout rate of 8 basis points. Later that day, usage at the overnight operation dropped by more than $40 billion from the day before—even though lower secured money market rates on that day, all else being equal, might have increased demand for the operation—

[3] For a summary of how money market rates were influenced by the ON RRP testing, see Elizabeth Klee and Bernd Schlusche (Board of Governors) and Steven Burnett, James Egelhof, Jacqueline Yen, and Patricia Zobel (Federal Reserve Bank of New York) (2014), "Assessment of Changes to Reverse Repo Testing," memorandum to the FOMC, December 8.

[4] The effective federal funds rate averaged 10 basis points over the intermeeting period, with the intraday standard deviation averaging about 5 basis points. The volume of federal funds trading remained stable over the intermeeting period.

suggesting that some counterparties substituted term RRP investments for overnight investments.

Market participants reported that the term RRPs would help alleviate the expected downward pressure on most short-term rates over year-end. Indeed, the rise in repo rate futures contracts for December may have reflected in part the announcement of these operations. Another sign that market participants may be anticipating a fairly normal year-end is that the amount of commercial paper maturing by year-end and the associated maturity structure appear to be in line with those of previous years.

The most recent testing of the TDF concluded with an auction of $402 billion in deposits maturing on December 11, 2014. The number of participants and the total amount deposited continued to be sensitive to the offering rate and maximum individual award amount (known as the cap). The cap was binding for the largest banks even at its highest level of $20 billion. The introduction of an early withdrawal option led to significant increases in the number of depository institutions participating and in the take-up relative to earlier operations without this feature.[5]

Liquidity conditions in the Treasury and MBS markets remained relatively stable after the Federal Reserve concluded its purchases under the flow-based asset purchase program.[6] The Desk purchased $29 billion of agency MBS securities under the reinvestment program over the period.

[5] For details, see Marnie Gillis DeBoer, Jeff Huther, Ezra Kidane, and Heather Wiggins (2014), "Recent Testing of the Term Deposit Facility," memorandum to the FOMC, December 5.

[6] Over the intermeeting period, the Desk conducted $625 million of dollar rolls. No Treasury securities were purchased in the secondary market, while the amount of SOMA Treasury holdings rolled over at auctions was small. Over the same period, the Treasury Department has auctioned $222 billion of nominal fixed-rate coupon securities, $13 billion of TIPS, and $28 billion of the two-year Floating Rate Notes. The auctions were generally characterized as well received, although for some auctions the bid-to-cover ratios were a bit below recent averages.

Risks and Uncertainty

ASSESSMENT OF RISKS

We continue to view the uncertainty around our projections for real GDP growth and the unemployment rate as roughly in line with the average over the past 20 years (the benchmark used by the FOMC). As always, a number of upside and downside risks attend our forecast; importantly, however, we see neither monetary nor fiscal policy as well positioned to help the economy withstand adverse shocks. Consequently, we continue to view the risks to our forecast for real GDP growth as tilted somewhat to the downside. By contrast, we continue to view the risks around our unemployment projection as roughly balanced, with the risk of a higher unemployment rate from adverse demand-side developments offset by the possibility that we continue to overestimate potential output.

With regard to inflation, we see significant uncertainty around our projection but do not view the current level of uncertainty as unusually high. Most measures of long-term inflation expectations have remained stable in recent years despite fluctuations in the prices of crude oil, other commodities, and imports more generally as well as the deep recession and subsequent slack in labor and product markets. Recently, however, some measures of long-term inflation expectations have softened at the same time that other major economies have seen worrisome downturns in inflation. As a consequence, we view the risks around our inflation projection as tilted somewhat to the downside.

Our view of the risks to the economic outlook is informed by the staff's ongoing quantitative surveillance assessment, which views the vulnerability of the financial system to adverse shocks as moderate overall. This assessment reflects the modest use of leverage in most parts of the financial sector, low-to-moderate levels of securitization and maturity transformation in the financial sector, and the lack of acceleration in borrowing by the nonfinancial sector. Nevertheless, certain vulnerabilities in the financial system remain: There are continued pressures in speculative-grade corporate debt markets and emerging pressures in commercial real estate lending. In addition, there are increasing concerns that some asset prices do not accurately reflect their liquidity risks—in part because of increased holdings of less-liquid securities by pooled investment vehicles—which suggests the potential for the amplification of any adjustment in investors' views about the economic outlook.

Alternative Scenarios

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

Measure and scenario	2014 H2	2015	2016	2017	2018-19
Real GDP					
Extended Tealbook baseline	3.1	2.5	2.7	2.2	1.8
Weaker foreign growth and stronger dollar	3.1	2.0	2.0	2.2	2.3
Weaker demand (FRB/US)	3.1	1.9	3.1	2.5	1.9
Weaker demand (EDO)	3.1	1.9	3.0	2.5	1.9
Lower long-term inflation expectations	3.1	2.6	3.2	3.0	1.9
Faster recovery	3.1	3.2	3.4	2.6	1.8
Unemployment rate[1]					
Extended Tealbook baseline	5.7	5.2	5.0	4.9	5.0
Weaker foreign growth and stronger dollar	5.7	5.4	5.5	5.5	5.3
Weaker demand (FRB/US)	5.7	5.5	5.2	4.9	4.9
Weaker demand (EDO)	5.7	5.5	5.1	4.9	5.0
Lower long-term inflation expectations	5.7	5.2	4.7	4.2	4.3
Faster recovery	5.7	5.0	4.5	4.3	4.6
Total PCE prices					
Extended Tealbook baseline	.6	1.0	1.7	1.8	1.9
Weaker foreign growth and stronger dollar	.5	.0	.8	1.4	2.1
Weaker demand (FRB/US)	.6	1.0	1.7	1.8	1.9
Weaker demand (EDO)	.6	1.0	1.6	1.8	1.9
Lower long-term inflation expectations	.6	.9	1.4	1.6	1.9
Faster recovery	.6	1.1	2.0	2.3	2.4
Core PCE prices					
Extended Tealbook baseline	1.5	1.5	1.6	1.8	1.9
Weaker foreign growth and stronger dollar	1.5	.9	1.0	1.4	1.8
Weaker demand (FRB/US)	1.5	1.5	1.6	1.8	1.9
Weaker demand (EDO)	1.5	1.5	1.6	1.8	1.9
Lower long-term inflation expectations	1.5	1.3	1.3	1.6	1.9
Faster recovery	1.5	1.6	1.9	2.3	2.4
Federal funds rate[1]					
Extended Tealbook baseline	.1	1.0	2.1	3.0	3.8
Weaker foreign growth and stronger dollar	.1	.4	1.1	1.8	3.2
Weaker demand (FRB/US)	.1	.5	1.6	2.8	3.9
Weaker demand (EDO)	.1	.7	1.7	2.7	3.7
Lower long-term inflation expectations	.1	.1	.1	1.5	4.3
Faster recovery	.1	1.2	2.7	4.1	5.2

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

Risks & Uncertainty

ALTERNATIVE SCENARIOS

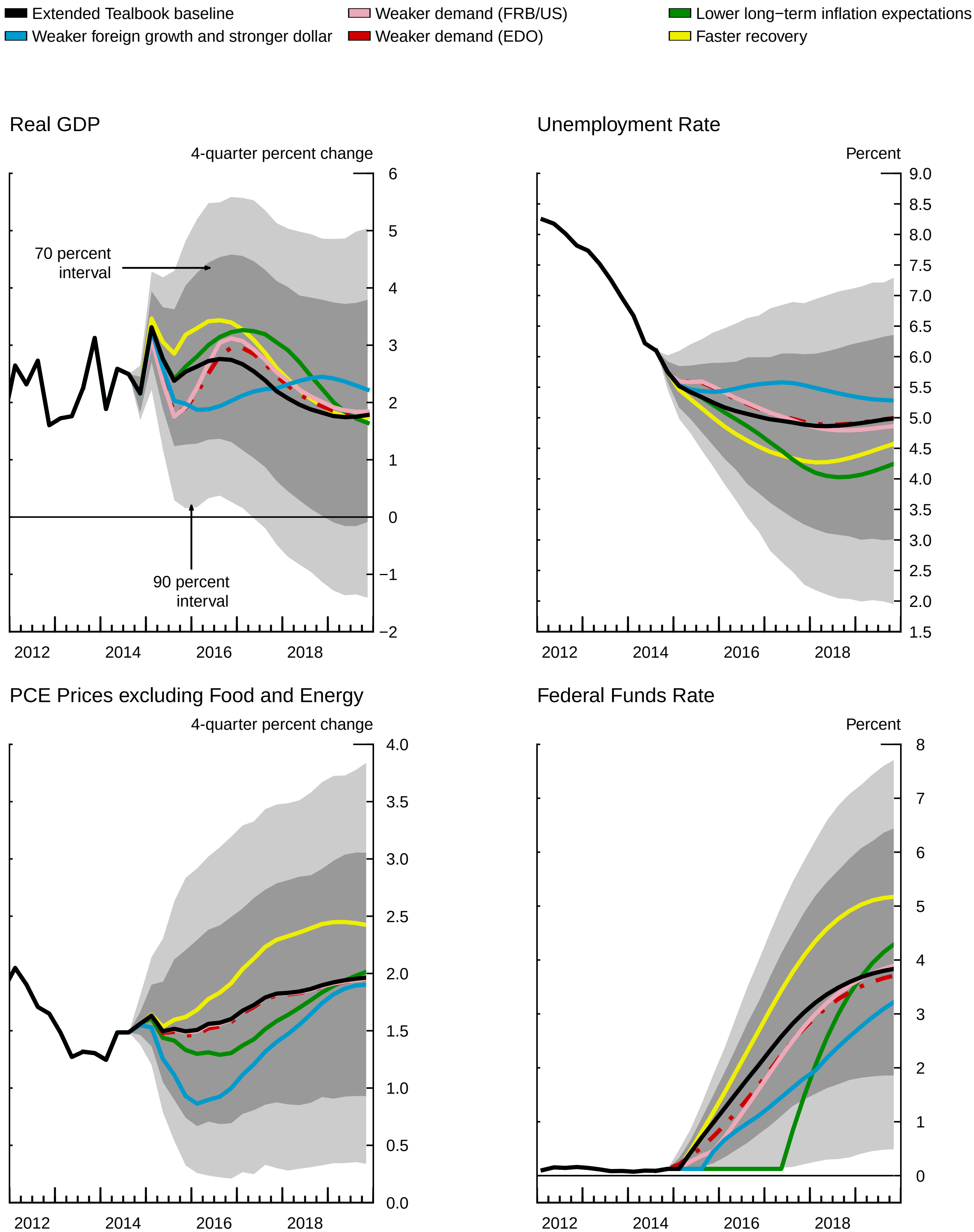
To illustrate some of the risks to the outlook, we construct a number of alternatives to the baseline projection using simulations of staff models. In the first scenario, foreign economic growth is significantly weaker than in our baseline outlook, while the dollar appreciates sharply. The next scenario examines the effects of a return to weak consumption growth early in 2015. In the third scenario, the trajectory of longer-term inflation expectations is lower than in the baseline, leading to a lower path of actual inflation in coming years. The final scenario considers the possibility that the better-than-expected improvements in the labor market so far this year are consistent with a stronger pace for the overall economic recovery.

We generate the first scenario using the multicountry SIGMA model. Recognizing our uncertainty about the true structure of the economy, we run the second scenario in both the EDO and FRB/US models. (SIGMA and EDO are both DSGE models, but, unlike SIGMA, EDO focuses exclusively on the domestic economy.) The remaining scenarios use the FRB/US model. Once the federal funds rate has lifted off from its effective lower bound, its movements are governed—as in the baseline forecast—by an inertial version of the Taylor (1999) rule. The date of liftoff in each scenario is set using a mechanical procedure intended to be broadly consistent with the guidance provided in the Committee's recent statements.[1] In all cases, we assume that the size and composition of the SOMA portfolio follow their baseline paths.

[1] Specifically, with the exception of the "Weaker Foreign Growth and Stronger Dollar" and "Lower Long-Term Inflation Expectations" scenarios, the inertial Taylor (1999) rule takes over in the quarter following the observation of an unemployment rate of 5.6 percent, the level of unemployment prevailing in the baseline one quarter prior to liftoff. In the "Lower Long-Term Inflation Expectations" scenario, where the path of inflation is significantly different from the baseline, the choice of liftoff date is meant to capture the Committee's intention to maintain the current target range for the federal funds rate, "especially if projected inflation continues to run below the Committee's 2 percent longer-run goal," as stated in the October FOMC statement. In the "Weaker Foreign Growth and Stronger Dollar" scenario, in which the unemployment rate rises gradually and persistently relative to the baseline throughout the forecast period, the federal funds rate does not lift off from its effective lower bound as long as the projected unemployment rate over the forecast horizon is above 5.6 percent. For the scenarios run in EDO and SIGMA, we assume a broadly similar policy rule to the FRB/US simulations. One key difference relative to the FRB/US simulations is that the policy rule in SIGMA uses a measure of slack equal to the difference between actual output and the model's estimate of the level of output that would occur in the absence of slow adjustment of wages and prices.

Forecast Confidence Intervals and Alternative Scenarios

Confidence Intervals Based on FRB/US Stochastic Simulations



Weaker Foreign Growth and Stronger Dollar

Our baseline forecast projects some pickup in foreign GDP growth relative to its tepid pace through most of this year. However, there are a number of downside risks to the global outlook, including a renewed recession in the euro area, a hard landing in China, or an escalation of geopolitical stresses. The realization of any of these risks could trigger financial market turbulence and widespread declines in foreign economic growth. In this scenario, foreign GDP growth is assumed to average 1 percentage point below the baseline over the next three years. Weaker foreign economic activity and flight-to-safety flows to dollar-denominated assets induce the broad real dollar to appreciate by about 10 percent relative to the baseline by the end of 2015.

The slower foreign economic growth and stronger dollar cause U.S. real net exports to decline relative to baseline. All told, U.S. real GDP expands by about 2 percent in 2015 and 2016, about ½ percentage point less than in the baseline in each year. Weaker U.S. economic activity and lower import price inflation hold core inflation to about 1 percent through 2016. The federal funds rate remains at its effective lower bound two quarters longer than in the baseline and U.S. monetary policy accommodation is removed more gradually going forward.

Weaker Domestic Demand

While the previous scenario highlights external risks to the outlook, this scenario considers a possible homegrown risk. The Tealbook forecast features a pickup in output growth next year driven in large part by stronger gains in consumer spending. However, consumption growth in recent quarters has been lackluster, in line with some staff models that now project more of the same in the near future. This scenario uses both the FRB/US and EDO models to trace out the consequences of a more restrained path for consumption growth.[2]

In the FRB/US simulation, output rises by 2 percent in 2015, while the unemployment rate remains above 5½ percent through the end of the year. Activity rebounds firmly in 2016, and the unemployment rate falls slightly below baseline in 2018. While the federal funds rate exits the zero lower bound in the second quarter of 2015, as in the baseline, a wider output gap and a largely unchanged path for inflation

[2] Specifically, in FRB/US, shocks are applied such that total consumption in 2015 grows at roughly the same pace as in the past few years, while in EDO, comparable shocks are implemented such that the yearly change in output over 2015 is in line with the FRB/US simulations.

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

Measure	2014	2015	2016	2017	2018	2019
Real GDP						
(percent change, Q4 to Q4)						
Projection	2.2	2.5	2.7	2.2	1.8	1.8
Confidence interval						
Tealbook forecast errors	1.6–2.7	.8–4.2	.9–4.6	. . .	. . .	. . .
FRB/US stochastic simulations	1.8–2.4	1.3–4.0	1.3–4.6	.6–4.1	.0–3.8	-.1–3.8
Civilian unemployment rate						
(percent, Q4)						
Projection	5.7	5.2	5.0	4.9	4.9	5.0
Confidence interval						
Tealbook forecast errors	5.6–5.9	4.5–5.9	3.8–6.2	. . .	. . .	. . .
FRB/US stochastic simulations	5.6–5.9	4.5–5.9	3.8–6.0	3.3–6.0	3.1–6.2	3.0–6.4
PCE prices, total						
(percent change, Q4 to Q4)						
Projection	1.2	1.0	1.7	1.8	1.9	2.0
Confidence interval						
Tealbook forecast errors	1.0–1.4	-.2–2.2	.6–2.7	. . .	. . .	. . .
FRB/US stochastic simulations	1.1–1.4	.2–1.9	.6–2.7	.8–3.0	.8–3.0	.8–3.2
PCE prices excluding						
food and energy						
(percent change, Q4 to Q4)						
Projection	1.6	1.5	1.6	1.8	1.9	2.0
Confidence interval						
Tealbook forecast errors	1.3–1.8	.9–2.1	.9–2.4	. . .	. . .	. . .
FRB/US stochastic simulations	1.5–1.7	.7–2.2	.7–2.5	.9–2.8	.9–2.9	.9–3.1
Federal funds rate						
(percent, Q4)						
Projection	.1	1.0	2.1	3.0	3.6	3.8
Confidence interval						
FRB/US stochastic simulations	.1–.1	.2–1.5	.8–3.2	1.4–4.9	1.8–5.9	1.9–6.5

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.

imply a lower path for the federal funds rate thereafter. Given shocks in EDO that also produce a 2 percent rise in output over 2015, outcomes for unemployment, inflation, and the federal funds rate are quite similar to the FRB/US results over the simulation period.

Thus, although EDO and FRB/US differ substantially in their economic structure, they display very similar paths when hit with this adverse demand shock. It is likely that the models have similar responses because both are estimated using the same data and because the shocks underlying the scenario in each model are the typical drivers of the business cycle.[3]

Lower Long-Term Inflation Expectations

A key assumption behind the baseline inflation projection is that the level of long-term inflation expectations relevant for wage and price setting is currently 1.8 percent and eventually rises to 2 percent. However, some models suggest that long-term inflation expectations are currently lower than 1.8 percent, and there is an associated risk that these expectations could take even longer than in the baseline to converge to the Committee’s 2 percent objective.[4] In this scenario, we assume that long-term inflation expectations currently stand at 1.5 percent and that, going forward, households and businesses form their long-term expectations adaptively based on past inflation. Low actual inflation in the coming years and subdued inflation expectations are mutually reinforcing. As a result, inflation in this scenario runs persistently below baseline, reaching only 1.6 percent in 2017, and the federal funds rate does not lift off until the third quarter of 2017. The added stimulus generated by holding the federal funds rate at its lower bound for an additional two years is sufficient to drive the unemployment rate well below its natural rate, eventually generating a pickup in inflation, and—with some delay—moving long-term inflation expectations back toward the Committee’s target.

Faster Recovery with Higher Inflation

Over the past year, the unemployment rate has continued to move down appreciably. At the same time, lending standards have continued to ease, manufacturing

[3] We emphasize, however, that substantial differences in theoretical structure between EDO and FRB/US mean that the shocks used to generate this scenario have different structural interpretations in the two models.

[4] See Deb Lindner (2014), “Why Is Inflation Persistently Low in the Judgmental Forecast?” memorandum to the FOMC, June 4; and Thomas Laubach, John Roberts, Jae Sim, and Brad Strum (2014), “Long-Term Inflation Expectations and Risks to the Inflation Outlook,” memorandum to the FOMC, September 5.

Risks & Uncertainty

output growth has been solid, and fiscal policy restraint has faded. In this scenario, these favorable developments solidify business confidence about the durability of demand going forward; the resulting strong investment growth supports a much more robust economic recovery than in the baseline. We also assume that inflation will be more sensitive to reductions in resource slack than is implicit in the FRB/US model, in line with the larger cyclical effects on inflation in some DSGE models.

Real GDP growth averages 3¼ percent in 2015 and 2016, about ¾ percentage point higher than in the baseline; the unemployment rate falls to about 4¼ percent by the end of 2017. With resource utilization running tighter, inflation rises faster than in the baseline, reaching almost 2½ percent at the beginning of 2019.[5] The federal funds rate lifts off in the second quarter of 2015, as in the baseline, but rises more steeply thereafter, passing 4 percent in late 2017 and reaching 5 percent in 2019. Given enough time, this path for the federal funds rate would eventually drive the unemployment rate to its assumed natural rate and bring inflation back down to 2 percent.

[5] The larger rise in inflation depends importantly on the substantially steeper wage and price Phillips curves used in this scenario. Had we used our standard coefficients in these equations, inflation would have peaked at 2 percent.

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

Measure and projection	2014		2015		2016	
	September Tealbook	Current Tealbook	September Tealbook	Current Tealbook	September Tealbook	Current Tealbook
Real GDP						
Staff	2.0	2.2	2.7	2.5	2.9	2.7
FRB/US	1.9	2.2	3.1	3.1	2.7	2.5
EDO	2.0	2.2	2.9	3.2	2.9	2.7
Blue Chip	2.0	2.2	2.9	2.9	. . .	. . .
Unemployment rate[1]						
Staff	5.9	5.7	5.4	5.2	5.1	5.0
FRB/US	6.1	5.7	5.5	5.3	5.2	5.2
EDO	6.3	5.7	6.2	5.9	6.2	5.9
Blue Chip	6.0	5.8	5.5	5.3	. . .	. . .
Total PCE prices						
Staff	1.5	1.2	1.5	1.0	1.6	1.7
FRB/US	1.5	1.2	1.5	1.2	1.5	1.6
EDO	1.7	1.2	1.7	1.6	1.8	1.8
Blue Chip[2]	2.2	1.6	2.1	1.8	. . .	. . .
Core PCE prices						
Staff	1.5	1.6	1.6	1.5	1.7	1.6
FRB/US	1.6	1.6	1.6	1.7	1.6	1.6
EDO	1.6	1.6	1.7	1.6	1.8	1.8
Blue Chip	. . .	. . .	. . .	. . .	. . .	. . .
Federal funds rate[1]						
Staff	.1	.1	1.1	1.0	2.3	2.1
FRB/US	.1	.1	.8	1.0	1.4	2.1
EDO	.5	.1	1.6	1.5	2.4	2.4
Blue Chip[3]	.1	.0	.9	.8	. . .	. . .

Note: Blue Chip forecast completed on December 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.

Risks & Uncertainty

Assessment of Key Macroeconomic Risks (1)

Probability of Inflation Events

(4 quarters ahead—2015:Q4)

Probability that the 4-quarter change in total PCE prices will be ...	Staff	FRB/US	EDO	BVAR
Greater than 3 percent				
Current Tealbook	.02	.03	.12	.04
Previous Tealbook	.02	.02	.10	.06
Less than 1 percent				
Current Tealbook	.51	.41	.27	.19
Previous Tealbook	.54	.46	.30	.17

Probability of Unemployment Events

(4 quarters ahead—2015:Q4)

Probability that the unemployment rate will ...	Staff	FRB/US	EDO	BVAR
Increase by 1 percentage point				
Current Tealbook	.02	.02	.24	.01
Previous Tealbook	.02	.01	.21	.01
Decrease by 1 percentage point				
Current Tealbook	.23	.17	.05	.37
Previous Tealbook	.27	.27	.07	.30

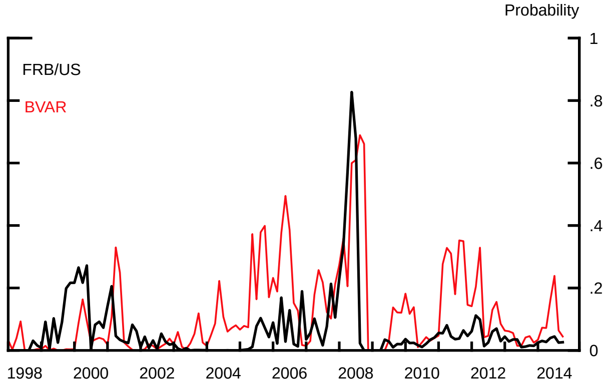
Probability of Near-Term Recession

Probability that real GDP declines in each of 2015:Q1 and 2015:Q2	Staff	FRB/US	EDO	BVAR	Factor Model
Current Tealbook	.03	.03	.02	.02	.03
Previous Tealbook	.04	.02	.02	.02	.07

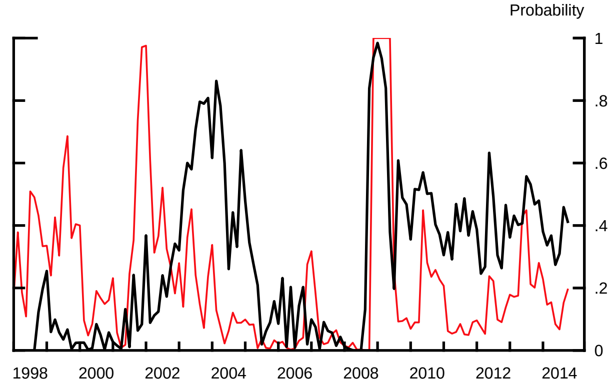
Note: "Staff" represents Tealbook forecast errors applied to the Tealbook baseline; baselines for FRB/US, BVAR, EDO, and the factor model are generated by those models themselves, up to the current-quarter estimate. Data for the current quarter are taken from the staff estimate for the second Tealbook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

Assessment of Key Macroeconomic Risks (2)

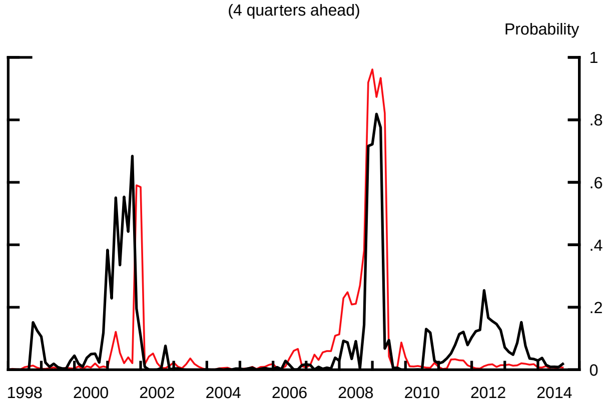
Probability that Total PCE Inflation Is above 3 Percent
(4 quarters ahead)



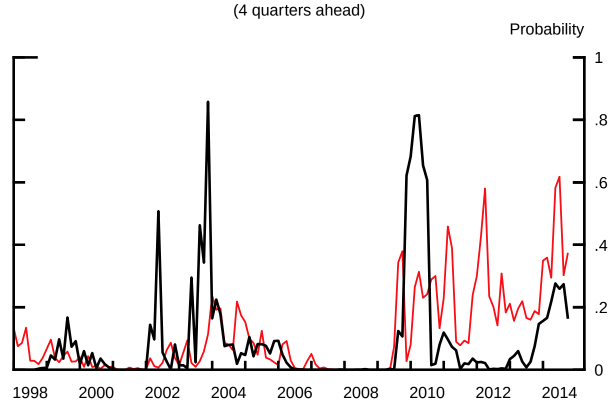
Probability that Total PCE Inflation Is below 1 Percent
(4 quarters ahead)



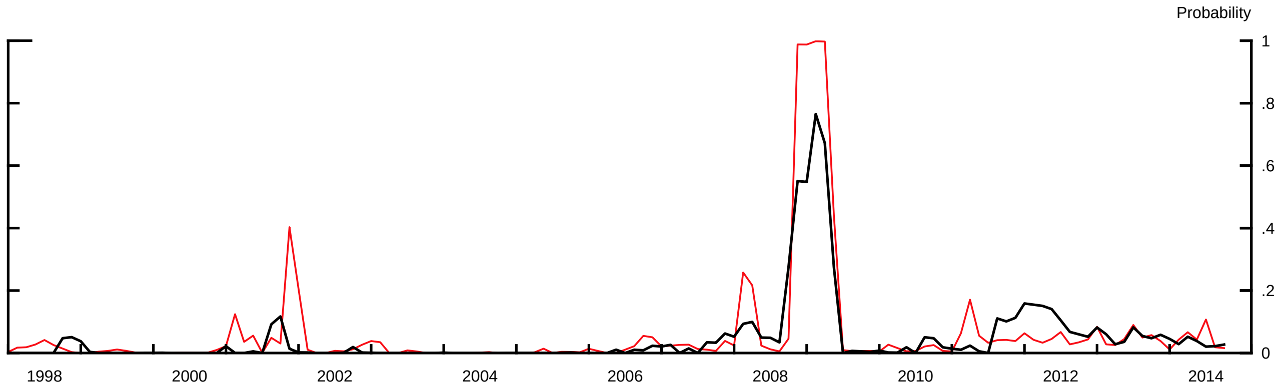
Probability that the Unemployment Rate Increases 1 ppt
(4 quarters ahead)



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



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



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

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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]	
	10/22/14	12/10/14	10/22/14	12/10/14	10/22/14	12/10/14	10/22/14	12/10/14	10/22/14	12/10/14
Quarterly										
2014:Q1	-.8	-.8	-2.1	-2.1	1.4	1.4	1.2	1.2	6.7	6.7
Q2	6.8	6.8	4.6	4.6	2.3	2.3	2.0	2.0	6.2	6.2
Q3	4.1	5.6	2.7	4.1	1.2	1.3	1.4	1.4	6.1	6.1
Q4	4.2	3.6	3.0	2.2	-.2	-.1	1.2	1.6	5.8	5.7
2015:Q1	3.9	3.6	2.3	2.4	.9	-.6	1.5	1.5	5.7	5.5
Q2	4.1	4.0	2.3	2.4	1.5	1.4	1.5	1.4	5.6	5.4
Q3	4.2	4.4	2.4	2.6	1.5	1.7	1.6	1.5	5.5	5.3
Q4	4.1	4.5	2.4	2.8	1.5	1.6	1.5	1.5	5.5	5.2
2016:Q1	4.5	4.6	2.5	2.8	1.7	1.6	1.7	1.5	5.4	5.2
Q2	4.4	4.6	2.6	2.8	1.7	1.7	1.7	1.6	5.4	5.1
Q3	4.4	4.5	2.7	2.7	1.6	1.6	1.6	1.6	5.4	5.1
Q4	4.4	4.5	2.7	2.7	1.5	1.7	1.6	1.7	5.3	5.0
Two-quarter[2]										
2014:Q2	2.9	2.9	1.2	1.2	1.9	1.9	1.6	1.6	-.8	-.8
Q4	4.2	4.6	2.8	3.1	.5	.6	1.3	1.5	-.4	-.5
2015:Q2	4.0	3.8	2.3	2.4	1.2	.4	1.5	1.5	-.2	-.3
Q4	4.1	4.4	2.4	2.7	1.5	1.6	1.5	1.5	-.1	-.2
2016:Q2	4.5	4.6	2.6	2.8	1.7	1.7	1.7	1.6	-.1	-.1
Q4	4.4	4.5	2.7	2.7	1.5	1.7	1.6	1.6	-.1	-.1
Four-quarter[3]										
2013:Q4	4.6	4.6	3.1	3.1	1.0	1.0	1.3	1.3	-.8	-.8
2014:Q4	3.5	3.8	2.0	2.2	1.2	1.2	1.5	1.6	-1.2	-1.3
2015:Q4	4.0	4.1	2.4	2.5	1.4	1.0	1.5	1.5	-.3	-.5
2016:Q4	4.4	4.5	2.6	2.7	1.6	1.7	1.6	1.6	-.2	-.2
2017:Q4	4.0	4.1	2.1	2.2	1.7	1.8	1.8	1.8	-.1	-.1
Annual										
2013	3.7	3.7	2.2	2.2	1.2	1.2	1.3	1.3	7.4	7.4
2014	3.7	3.9	2.1	2.3	1.3	1.4	1.4	1.4	6.2	6.2
2015	4.2	4.3	2.6	2.7	1.1	.7	1.5	1.5	5.6	5.4
2016	4.3	4.5	2.5	2.7	1.6	1.6	1.6	1.6	5.4	5.1
2017	4.2	4.3	2.4	2.4	1.7	1.8	1.7	1.8	5.2	4.9

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 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2014[1]	2015[1]	2016[1]	2017[1]
Real GDP	4.6	4.1	2.2	2.4	2.4	2.6	2.8	2.8	2.8	2.7	2.7	2.2	2.5	2.7	2.2
Previous Tealbook	4.6	2.7	3.0	2.3	2.3	2.4	2.4	2.5	2.6	2.7	2.7	2.0	2.4	2.6	2.1
Final sales	3.2	4.2	1.7	2.5	2.3	2.6	2.7	2.9	2.9	2.8	2.8	2.0	2.5	2.8	2.6
Previous Tealbook	3.2	3.3	2.6	2.1	2.4	2.5	2.3	2.6	2.6	2.5	2.6	2.0	2.3	2.6	2.4
Priv. dom. final purch.	3.8	3.1	3.4	3.1	3.3	3.7	4.0	3.9	3.8	3.6	3.3	2.8	3.5	3.7	2.9
Previous Tealbook	3.8	2.8	3.5	2.7	3.1	3.2	3.2	3.2	3.1	3.0	2.9	2.8	3.0	3.1	2.6
Personal cons. expend.	2.5	2.2	3.4	3.5	3.6	3.7	3.7	3.6	3.4	3.3	3.0	2.3	3.6	3.3	2.7
Previous Tealbook	2.5	1.9	3.4	3.0	3.0	3.0	2.9	2.8	2.8	2.7	2.6	2.3	3.0	2.7	2.4
Durables	14.1	8.7	4.9	8.3	8.2	7.7	8.3	6.6	6.7	6.4	5.6	7.6	8.1	6.3	4.1
Nondurables	2.2	2.2	4.3	4.1	2.9	3.1	3.0	2.6	2.8	2.7	2.7	2.2	3.3	2.7	2.5
Services	.9	1.2	2.8	2.5	3.1	3.3	3.2	3.4	3.1	3.0	2.7	1.6	3.0	3.1	2.6
Residential investment	8.8	3.0	6.2	3.6	11.4	11.4	11.5	11.2	10.4	9.6	8.4	3.0	9.4	9.9	7.6
Previous Tealbook	8.8	8.0	5.5	6.1	12.4	10.5	9.3	10.4	9.8	9.6	9.1	4.1	9.5	9.7	7.3
Nonres. priv. fixed invest.	9.7	8.0	3.0	.9	-.3	1.8	3.6	3.8	3.9	3.7	3.1	5.5	1.5	3.6	2.5
Previous Tealbook	9.7	6.7	3.7	.1	.9	2.2	2.9	2.9	3.1	2.9	2.6	5.4	1.5	2.9	2.1
Equipment & intangibles	8.9	9.0	4.2	2.0	1.9	3.3	4.5	4.6	4.5	4.2	3.5	5.8	2.9	4.2	2.9
Previous Tealbook	8.9	7.9	5.0	1.8	2.1	3.2	3.6	3.7	3.8	3.6	3.2	5.7	2.7	3.6	2.6
Nonres. structures	12.6	4.6	-1.3	-2.7	-7.7	-3.4	.5	.9	1.8	1.9	1.7	4.6	-3.4	1.6	1.2
Previous Tealbook	12.6	2.6	-.7	-5.5	-3.3	-1.3	.5	.4	.6	.5	.6	4.2	-2.4	.6	.4
Net exports[2]	-460	-431	-461	-464	-482	-503	-531	-552	-572	-593	-601	-450	-495	-579	-616
Previous Tealbook[2]	-460	-436	-440	-446	-450	-455	-467	-475	-480	-491	-492	-446	-454	-484	-489
Exports	11.1	4.5	2.4	2.3	2.5	2.6	2.7	2.9	3.1	3.4	3.7	1.9	2.5	3.3	4.2
Imports	11.3	-1.0	6.8	2.4	4.9	5.5	6.4	5.5	5.4	5.9	4.0	4.7	4.8	5.2	3.9
Gov't. cons. & invest.	1.7	4.4	-2.1	-.1	-.3	-.2	.0	.3	.7	.9	.7	.8	-.2	.7	.9
Previous Tealbook	1.7	1.5	-1.6	-.2	-.6	-.5	-.5	.6	.4	.9	.6	.2	-.5	.6	.9
Federal	-.9	9.9	-7.4	-2.6	-3.2	-3.0	-2.5	-1.9	-1.0	-.7	-1.4	.2	-2.8	-1.3	-1.1
Defense	.9	16.0	-10.8	-2.7	-3.9	-3.7	-2.9	-3.1	-1.6	-1.2	-2.3	.0	-3.3	-2.0	-1.8
Nondefense	-3.8	.4	-1.2	-2.5	-1.9	-1.7	-2.0	.0	.0	.0	.0	.5	-2.0	.0	.0
State & local	3.4	1.1	1.4	1.4	1.5	1.5	1.5	1.6	1.7	1.8	2.0	1.1	1.5	1.8	2.0
Change in priv. inventories[2]	85	82	99	95	99	99	102	98	93	92	92	75	99	94	60
Previous Tealbook[2]	85	61	76	83	82	80	84	82	83	89	95	64	82	87	68

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	-2.8	-.2	2.7	1.7	1.6	3.1	2.2	2.5	2.7	2.2
Previous Tealbook	-2.8	-.2	2.7	1.7	1.6	3.1	2.0	2.4	2.6	2.1
Final sales	-2.1	-.4	2.0	1.5	2.1	2.6	2.0	2.5	2.8	2.6
Previous Tealbook	-2.1	-.4	2.0	1.5	2.1	2.6	2.0	2.3	2.6	2.4
Priv. dom. final purch.	-4.1	-2.4	3.5	2.6	2.6	3.2	2.8	3.5	3.7	2.9
Previous Tealbook	-4.1	-2.4	3.5	2.6	2.6	3.2	2.8	3.0	3.1	2.6
Personal cons. expend.	-2.0	-.2	3.1	1.5	2.0	2.8	2.3	3.6	3.3	2.7
Previous Tealbook	-2.0	-.2	3.1	1.5	2.0	2.8	2.3	3.0	2.7	2.4
Durables	-12.9	2.5	9.3	4.8	7.5	5.9	7.6	8.1	6.3	4.1
Nondurables	-2.7	.2	3.3	.4	1.0	2.5	2.2	3.3	2.7	2.5
Services	.3	-.8	2.0	1.4	1.5	2.4	1.6	3.0	3.1	2.6
Residential investment	-24.3	-10.8	-5.2	6.0	15.8	6.9	3.0	9.4	9.9	7.6
Previous Tealbook	-24.3	-10.8	-5.2	6.0	15.8	6.9	4.1	9.5	9.7	7.3
Nonres. priv. fixed invest.	-8.9	-12.2	8.1	9.0	3.7	4.7	5.5	1.5	3.6	2.5
Previous Tealbook	-8.9	-12.2	8.1	9.0	3.7	4.7	5.4	1.5	2.9	2.1
Equipment & intangibles	-11.8	-6.0	12.0	9.2	3.3	4.8	5.8	2.9	4.2	2.9
Previous Tealbook	-11.8	-6.0	12.0	9.2	3.3	4.8	5.7	2.7	3.6	2.6
Nonres. structures	-1.2	-27.1	-4.0	8.0	4.8	4.4	4.6	-3.4	1.6	1.2
Previous Tealbook	-1.2	-27.1	-4.0	8.0	4.8	4.4	4.2	-2.4	.6	.4
Net exports[1]	-558	-395	-459	-459	-452	-420	-450	-495	-579	-616
Previous Tealbook[1]	-558	-395	-459	-459	-452	-420	-446	-454	-484	-489
Exports	-2.8	.8	10.1	4.2	2.4	5.1	1.9	2.5	3.3	4.2
Imports	-6.0	-6.2	12.0	3.5	.4	2.5	4.7	4.8	5.2	3.9
Gov't. cons. & invest.	3.3	2.3	-1.1	-3.0	-1.7	-1.9	.8	-.2	.7	.9
Previous Tealbook	3.3	2.3	-1.1	-3.0	-1.7	-1.9	.2	-.5	.6	.9
Federal	8.4	3.9	3.2	-4.0	-2.6	-6.3	.2	-2.8	-1.3	-1.1
Defense	9.4	3.6	2.0	-4.1	-4.9	-6.1	.0	-3.3	-2.0	-1.8
Nondefense	6.5	4.6	5.5	-3.9	1.4	-6.6	.5	-2.0	.0	.0
State & local	.2	1.3	-4.0	-2.3	-1.0	1.2	1.1	1.5	1.8	2.0
Change in priv. inventories[1]	-34	-148	58	38	57	64	75	99	94	60
Previous Tealbook[1]	-34	-148	58	38	57	64	64	82	87	68

1. Billions of chained (2009) dollars.

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

Item	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2014[1]	2015[1]	2016[1]	2017[1]
Real GDP	4.6	4.1	2.2	2.4	2.4	2.6	2.8	2.8	2.8	2.7	2.7	2.2	2.5	2.7	2.2
Previous Tealbook	4.6	2.7	3.0	2.3	2.3	2.4	2.4	2.5	2.6	2.7	2.7	2.0	2.4	2.6	2.1
Final sales	3.2	4.2	1.7	2.5	2.3	2.6	2.7	2.9	2.9	2.7	2.7	2.0	2.5	2.8	2.6
Previous Tealbook	3.2	3.3	2.6	2.1	2.4	2.5	2.3	2.6	2.6	2.5	2.6	2.0	2.3	2.6	2.4
Priv. dom. final purch.	3.2	2.6	2.9	2.6	2.8	3.1	3.4	3.3	3.2	3.1	2.8	2.4	3.0	3.1	2.5
Previous Tealbook	3.2	2.4	2.9	2.3	2.6	2.7	2.7	2.7	2.6	2.6	2.5	2.3	2.6	2.6	2.2
Personal cons. expend.	1.8	1.5	2.3	2.4	2.4	2.5	2.5	2.4	2.3	2.3	2.1	1.6	2.5	2.3	1.9
Previous Tealbook	1.8	1.3	2.3	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.5	2.0	1.9	1.6
Durables	1.0	.6	.4	.6	.6	.6	.6	.5	.5	.5	.4	.6	.6	.5	.3
Nondurables	.3	.3	.6	.6	.4	.5	.4	.4	.4	.4	.4	.3	.5	.4	.4
Services	.4	.6	1.3	1.1	1.4	1.5	1.5	1.6	1.4	1.4	1.3	.7	1.4	1.4	1.2
Residential investment	.3	.1	.2	.1	.4	.4	.4	.4	.4	.3	.3	.1	.3	.4	.3
Previous Tealbook	.3	.2	.2	.2	.4	.3	.3	.4	.3	.3	.3	.1	.3	.3	.3
Nonres. priv. fixed invest.	1.2	1.0	.4	.1	.0	.2	.5	.5	.5	.5	.4	.7	.2	.5	.3
Previous Tealbook	1.2	.8	.5	.0	.1	.3	.4	.4	.4	.4	.3	.7	.2	.4	.3
Equipment & intangibles	.8	.9	.4	.2	.2	.3	.4	.4	.4	.4	.3	.6	.3	.4	.3
Previous Tealbook	.8	.8	.5	.2	.2	.3	.4	.4	.4	.4	.3	.5	.3	.3	.3
Nonres. structures	.4	.1	.0	-.1	-.2	-.1	.0	.0	.1	.1	.0	.1	-.1	.0	.0
Previous Tealbook	.4	.1	.0	-.2	-.1	.0	.0	.0	.0	.0	.0	.1	-.1	.0	.0
Net exports	-.3	.8	-.8	-.1	-.4	-.5	-.6	-.5	-.4	-.5	-.2	-.5	-.4	-.4	-.1
Previous Tealbook	-.3	.6	-.1	-.2	-.1	-.1	-.3	-.2	-.1	-.2	.0	-.4	-.2	-.1	.1
Exports	1.4	.6	.3	.3	.3	.3	.3	.4	.4	.4	.5	.3	.3	.4	.5
Imports	-1.8	.2	-1.1	-.4	-.8	-.8	-1.0	-.9	-.8	-.9	-.6	-.8	-.8	-.8	-.6
Gov't. cons. & invest.	.3	.8	-.4	.0	-.1	.0	.0	.1	.1	.2	.1	.1	.0	.1	.2
Previous Tealbook	.3	.3	-.3	.0	-.1	-.1	-.1	.1	.1	.2	.1	.0	-.1	.1	.2
Federal	-.1	.7	-.5	-.2	-.2	-.2	-.2	-.1	-.1	.0	-.1	.0	-.2	-.1	-.1
Defense	.0	.7	-.5	-.1	-.2	-.2	-.1	-.1	-.1	.0	-.1	.0	-.1	-.1	-.1
Nondefense	-.1	.0	.0	-.1	.0	.0	.0	.0	.0	.0	.0	.0	-.1	.0	.0
State & local	.4	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.2	.2	.2
Change in priv. inventories	1.4	-.1	.4	-.1	.1	.0	.1	-.1	-.1	.0	.0	.2	.0	-.1	-.4
Previous Tealbook	1.4	-.6	.4	.2	.0	-.1	.1	-.1	.0	.2	.2	.0	.1	.1	-.3

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 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2014[1]	2015[1]	2016[1]	2017[1]
GDP chain-wt. price index	2.1	1.4	1.3	1.2	1.6	1.7	1.7	1.8	1.8	1.7	1.7	1.5	1.5	1.8	1.9
Previous Tealbook	2.1	1.4	1.2	1.6	1.7	1.7	1.6	1.9	1.8	1.7	1.6	1.5	1.6	1.7	1.8
PCE chain-wt. price index	2.3	1.3	-.1	-.6	1.4	1.7	1.6	1.6	1.7	1.6	1.7	1.2	1.0	1.7	1.8
Previous Tealbook	2.3	1.2	-.2	.9	1.5	1.5	1.5	1.7	1.7	1.6	1.5	1.2	1.4	1.6	1.7
Energy	5.2	-4.0	-26.9	-34.9	.9	5.2	3.9	3.2	3.0	2.8	2.3	-6.4	-7.9	2.8	1.9
Previous Tealbook	5.2	-4.1	-24.0	-9.8	2.1	2.1	1.6	1.2	1.2	1.2	1.0	-5.5	-1.1	1.2	.9
Food	4.5	3.1	1.3	1.3	1.3	1.3	1.3	1.4	1.6	1.7	1.7	2.6	1.3	1.6	1.9
Previous Tealbook	4.5	3.1	2.0	1.0	.9	1.0	1.2	1.4	1.5	1.5	1.5	2.7	1.0	1.5	1.8
Ex. food & energy	2.0	1.4	1.6	1.5	1.4	1.5	1.5	1.5	1.6	1.6	1.7	1.6	1.5	1.6	1.8
Previous Tealbook	2.0	1.4	1.2	1.5	1.5	1.6	1.5	1.7	1.7	1.6	1.6	1.5	1.5	1.6	1.8
Ex. food & energy, market based	1.8	1.3	1.4	1.5	1.4	1.5	1.5	1.5	1.7	1.6	1.7	1.4	1.5	1.6	1.8
Previous Tealbook	1.8	1.4	1.2	1.5	1.5	1.6	1.5	1.8	1.7	1.6	1.6	1.3	1.5	1.6	1.8
CPI	3.0	1.1	-.8	-1.3	1.8	2.1	2.1	2.1	2.1	2.1	2.1	1.3	1.2	2.1	2.2
Previous Tealbook	3.0	1.1	-.6	.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.3	1.7	1.9	2.0
Ex. food & energy	2.5	1.3	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.1	2.1	1.8	2.0	2.0	2.2
Previous Tealbook	2.5	1.3	1.6	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	1.8	2.0	2.0	2.1
ECI, hourly compensation[2]	3.4	2.7	2.7	2.8	2.8	2.8	2.8	3.4	3.3	3.3	3.3	2.4	2.8	3.3	3.4
Previous Tealbook[2]	3.4	2.3	2.5	2.8	2.7	2.7	2.7	3.3	3.1	3.1	3.1	2.3	2.7	3.1	3.3
Business sector															
Output per hour	2.9	2.2	-.5	3.0	1.5	1.7	1.6	1.7	1.7	1.7	1.7	-.1	1.9	1.7	1.7
Previous Tealbook	2.9	-.3	2.6	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.9	.0	1.7	1.8	1.9
Compensation per hour	-1.1	.6	1.9	3.5	3.1	3.1	3.1	3.7	3.5	3.5	3.5	2.0	3.2	3.5	3.6
Previous Tealbook	2.2	2.0	2.0	3.4	3.1	3.1	3.1	3.5	3.3	3.3	3.3	3.2	3.2	3.3	3.5
Unit labor costs	-3.9	-1.6	2.4	.5	1.6	1.4	1.4	1.9	1.8	1.8	1.8	2.2	1.2	1.8	1.9
Previous Tealbook	-.7	2.3	-.6	1.7	1.5	1.4	1.3	1.7	1.4	1.4	1.4	3.2	1.5	1.5	1.6
Core goods imports chain-wt. price index[3]	.2	.5	-1.5	-2.8	-.5	.9	1.1	1.2	1.3	1.3	1.3	.4	-.3	1.3	1.3
Previous Tealbook[3]	.2	.5	-1.1	-.9	.6	.9	1.1	1.3	1.2	1.2	1.2	.6	.4	1.2	1.2

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	1.9	.4	1.8	1.9	1.8	1.4	1.5	1.5	1.8	1.9
Previous Tealbook	1.9	.4	1.8	1.9	1.8	1.4	1.5	1.6	1.7	1.8
PCE chain-wt. price index	1.5	1.2	1.3	2.7	1.6	1.0	1.2	1.0	1.7	1.8
Previous Tealbook	1.5	1.2	1.3	2.7	1.6	1.0	1.2	1.4	1.6	1.7
Energy	-8.2	2.3	6.4	12.0	2.1	-2.6	-6.4	-7.9	2.8	1.9
Previous Tealbook	-8.2	2.3	6.4	12.0	2.1	-2.6	-5.5	-1.1	1.2	.9
Food	6.9	-1.8	1.3	5.1	1.2	.7	2.6	1.3	1.6	1.9
Previous Tealbook	6.9	-1.8	1.3	5.1	1.2	.7	2.7	1.0	1.5	1.8
Ex. food & energy	1.6	1.4	1.0	1.9	1.6	1.3	1.6	1.5	1.6	1.8
Previous Tealbook	1.6	1.4	1.0	1.9	1.6	1.3	1.5	1.5	1.6	1.8
Ex. food & energy, market based	2.2	1.8	.7	1.9	1.5	1.2	1.4	1.5	1.6	1.8
Previous Tealbook	2.2	1.8	.7	1.9	1.5	1.2	1.3	1.5	1.6	1.8
CPI	1.6	1.5	1.2	3.3	1.9	1.2	1.3	1.2	2.1	2.2
Previous Tealbook	1.6	1.5	1.2	3.3	1.9	1.2	1.3	1.7	1.9	2.0
Ex. food & energy	2.0	1.8	.6	2.2	1.9	1.7	1.8	2.0	2.0	2.2
Previous Tealbook	2.0	1.8	.6	2.2	1.9	1.7	1.8	2.0	2.0	2.1
ECI, hourly compensation[1]	2.4	1.2	2.1	2.2	1.8	2.0	2.4	2.8	3.3	3.4
Previous Tealbook[1]	2.4	1.2	2.1	2.2	1.8	2.0	2.3	2.7	3.1	3.3
Business sector										
Output per hour	-.2	5.6	1.7	.0	.3	2.4	-.1	1.9	1.7	1.7
Previous Tealbook	-.2	5.6	1.7	.0	.3	2.4	.0	1.7	1.8	1.9
Compensation per hour	2.9	1.3	1.2	.6	5.7	.0	2.0	3.2	3.5	3.6
Previous Tealbook	2.9	1.3	1.2	.6	5.7	.0	3.2	3.2	3.3	3.5
Unit labor costs	3.2	-4.2	-.4	.6	5.4	-2.3	2.2	1.2	1.8	1.9
Previous Tealbook	3.2	-4.2	-.4	.6	5.4	-2.3	3.2	1.5	1.5	1.6
Core goods imports chain-wt. price index[2]	3.9	-1.9	2.3	4.3	.2	-1.0	.4	-.3	1.3	1.3
Previous Tealbook[2]	3.9	-1.9	2.3	4.3	.2	-1.0	.6	.4	1.2	1.2

1. Private-industry workers.
2. Core goods imports exclude computers, semiconductors, oil, and natural gas.

Other Macroeconomic Indicators

Item	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2014[1]	2015[1]	2016[1]	2017[1]
Employment and production															
Nonfarm payroll employment[2]	.8	.7	.8	.7	.6	.7	.7	.7	.7	.7	.7	2.8	2.7	2.8	1.9
Unemployment rate[3]	6.2	6.1	5.7	5.5	5.4	5.3	5.2	5.2	5.1	5.1	5.0	5.7	5.2	5.0	4.9
Previous Tealbook[3]	6.2	6.1	5.8	5.7	5.6	5.5	5.5	5.4	5.4	5.4	5.3	5.8	5.5	5.3	5.2
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	5.2
Previous Tealbook[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	5.2
GDP gap[4]	-2.2	-1.6	-1.3	-1.2	-1.0	-.8	-.6	-.3	-.1	.1	.4	-1.3	-.6	.4	.8
Previous Tealbook[4]	-2.2	-1.8	-1.4	-1.2	-1.1	-.9	-.8	-.6	-.5	-.3	-.1	-1.4	-.8	-.1	.0
Industrial production[5]	5.7	3.3	5.1	4.0	2.0	1.5	1.4	2.8	2.9	2.7	2.5	4.5	2.2	2.7	2.0
Previous Tealbook[5]	5.5	3.2	4.0	2.1	3.0	2.1	1.7	3.0	2.8	2.7	2.6	4.1	2.2	2.7	2.0
Manufacturing industr. prod.[5]	7.0	3.9	3.7	4.6	2.5	2.4	2.6	2.8	3.0	2.7	2.5	4.0	3.0	2.7	2.1
Previous Tealbook[5]	6.8	3.5	3.1	1.8	2.6	2.6	2.6	2.8	2.9	2.8	2.7	3.7	2.4	2.8	2.2
Capacity utilization rate - mfg.[3]	77.1	77.4	77.7	78.2	78.3	78.3	78.4	78.5	78.7	78.8	78.9	77.7	78.4	78.9	78.8
Previous Tealbook[3]	77.1	77.3	77.5	77.4	77.5	77.6	77.7	77.8	78.0	78.2	78.3	77.5	77.7	78.3	78.4
Housing starts[6]	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.0	1.2	1.3	1.5
Light motor vehicle sales[6]	16.5	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.4	16.7	16.7	16.6
Income and saving															
Nominal GDP[5]	6.8	5.6	3.6	3.6	4.0	4.4	4.5	4.6	4.6	4.5	4.5	3.8	4.1	4.5	4.1
Real disposable pers. income[5]	3.1	2.3	2.7	5.3	3.0	2.3	2.6	3.8	2.8	2.8	3.0	2.9	3.3	3.1	2.4
Previous Tealbook[5]	4.4	3.2	2.3	4.7	2.5	2.2	1.8	3.3	2.5	2.2	2.9	3.3	2.8	2.7	2.2
Personal saving rate[3]	5.1	5.0	4.9	5.3	5.1	4.8	4.6	4.6	4.5	4.4	4.4	4.9	4.6	4.4	4.1
Previous Tealbook[3]	5.4	5.6	5.4	5.7	5.6	5.4	5.1	5.2	5.2	5.1	5.1	5.4	5.1	5.1	4.9
Corporate profits[7]	38.3	8.8	-3.5	-4.3	.7	5.4	-4.8	3.9	-1.3	1.9	.8	-.6	-.8	1.3	1.2
Profit share of GNP[3]	12.0	12.1	11.9	11.7	11.6	11.6	11.4	11.4	11.2	11.1	11.0	11.9	11.4	11.0	10.7
Net federal saving[8]	-599	-621	-582	-571	-569	-582	-570	-619	-594	-610	-630	-590	-573	-613	-680
Net state & local saving[8]	-227	-232	-246	-226	-224	-215	-209	-200	-199	-196	-195	-236	-218	-198	-184
Gross national saving rate[3]	17.9	18.0	17.8	18.1	18.0	17.9	17.7	17.5	17.6	17.5	17.4	17.8	17.7	17.4	17.2
Net national saving rate[3]	2.9	3.2	3.0	3.3	3.2	3.0	2.7	2.6	2.6	2.5	2.4	3.0	2.7	2.4	2.1

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
Employment and production										
Nonfarm payroll employment[1]	-2.8	-5.6	.8	2.0	2.2	2.4	2.8	2.7	2.8	1.9
Unemployment rate[2]	6.9	9.9	9.5	8.7	7.8	7.0	5.7	5.2	5.0	4.9
Previous Tealbook[2]	6.9	9.9	9.5	8.7	7.8	7.0	5.8	5.5	5.3	5.2
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
Previous Tealbook[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	-1.3	-.6	.4	.8
Previous Tealbook[3]	-3.8	-5.5	-4.4	-4.2	-4.1	-2.8	-1.4	-.8	-.1	.0
Industrial production[4]	-8.9	-5.5	6.2	3.2	3.2	3.3	4.5	2.2	2.7	2.0
Previous Tealbook[4]	-8.9	-5.5	6.2	3.2	3.2	3.3	4.1	2.2	2.7	2.0
Manufacturing industr. prod.[4]	-11.6	-6.1	6.4	3.1	3.5	2.9	4.0	3.0	2.7	2.1
Previous Tealbook[4]	-11.6	-6.1	6.4	3.1	3.5	2.9	3.7	2.4	2.8	2.2
Capacity utilization rate - mfg.[2]	70.0	67.1	72.7	74.6	75.5	76.4	77.7	78.4	78.9	78.8
Previous Tealbook[2]	70.0	67.1	72.7	74.6	75.5	76.4	77.5	77.7	78.3	78.4
Housing starts[5]	.9	.6	.6	.6	.8	.9	1.0	1.2	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	16.7	16.6
Income and saving										
Nominal GDP[4]	-.9	.1	4.6	3.6	3.5	4.6	3.8	4.1	4.5	4.1
Real disposable pers. income[4]	1.1	-.7	2.6	1.7	5.0	-1.9	2.9	3.3	3.1	2.4
Previous Tealbook[4]	1.1	-.7	2.6	1.7	5.0	-1.9	3.3	2.8	2.7	2.2
Personal saving rate[2]	6.1	5.6	5.5	5.8	8.6	4.4	4.9	4.6	4.4	4.1
Previous Tealbook[2]	6.1	5.6	5.5	5.8	8.6	4.4	5.4	5.1	5.1	4.9
Corporate profits[6]	-30.8	53.7	18.0	6.8	3.8	4.7	-.6	-.8	1.3	1.2
Profit share of GNP[2]	6.9	10.6	12.0	12.3	12.4	12.4	11.9	11.4	11.0	10.7
Net federal saving[7]	-634	-1,249	-1,329	-1,244	-1,079	-649	-590	-573	-613	-680
Net state & local saving[7]	-165	-272	-237	-216	-233	-225	-236	-218	-198	-184
Gross national saving rate[2]	14.9	14.6	15.2	16.1	17.8	17.9	17.8	17.7	17.4	17.2
Net national saving rate[2]	-1.6	-1.7	-.4	.8	2.8	3.0	3.0	2.7	2.4	2.1

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	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Unified budget					Not seasonally adjusted											
Receipts	3,021	3,236	3,417	3,566	656	938	760	720	680	1,020	816	761	718	1,080	858	794
Outlays	3,505	3,667	3,830	4,076	897	890	878	923	924	933	887	989	926	962	952	984
Surplus/deficit	-484	-432	-412	-510	-241	47	-117	-204	-244	87	-71	-228	-208	118	-94	-190
Previous Tealbook	*-483*	*-406*	*-392*	*-509*	*-241*	*47*	*-117*	*-185*	*-249*	*92*	*-63*	*-222*	*-203*	*125*	*-92*	*-185*
Means of financing:																
Borrowing	798	477	532	630	262	-46	211	249	217	-38	48	258	238	-88	124	220
Cash decrease	-70	88	0	0	20	3	-19	-52	132	-45	53	0	0	0	0	0
Other[1]	-243	-133	-120	-120	-42	-4	-75	7	-106	-4	-30	-30	-30	-30	-30	-30
Cash operating balance, end of period	158	70	70	70	142	139	158	210	78	123	70	70	70	70	70	70
NIPA federal sector					Seasonally adjusted annual rates											
Receipts	3,265	3,423	3,601	3,774	3,243	3,277	3,333	3,340	3,405	3,450	3,497	3,530	3,581	3,623	3,671	3,714
Expenditures	3,845	3,999	4,199	4,439	3,803	3,875	3,954	3,922	3,976	4,019	4,079	4,100	4,200	4,217	4,281	4,344
Consumption expenditures	963	975	976	992	957	956	988	975	979	975	972	969	977	979	981	981
Defense	617	628	626	633	610	610	641	628	631	628	625	624	627	627	628	627
Nondefense	346	347	350	359	347	345	347	347	348	347	347	346	350	352	353	354
Other spending	2,882	3,024	3,223	3,447	2,846	2,920	2,966	2,946	2,997	3,044	3,107	3,130	3,223	3,238	3,300	3,362
Current account surplus	-580	-576	-598	-665	-560	-599	-621	-582	-571	-569	-582	-570	-619	-594	-610	-630
Gross investment	256	243	237	237	251	255	253	246	244	242	240	239	237	237	237	236
Gross saving less gross investment[2]	-563	-539	-548	-607	-539	-580	-599	-551	-536	-530	-539	-524	-570	-543	-557	-574
Fiscal indicators																
High-employment (HEB) surplus/deficit[3]	-405.3	-475.8	-541.6	-650.4	-343.7	-429.5	-489.9	-460.5	-467.7	-477.4	-497.7	-498.5	-552.8	-542.4	-573.0	-605.4
Change in HEB, percent of potential GDP	-1.0	.3	.3	.5	-.1	.5	.3	-.2	.0	.0	.1	.0	.3	-.1	.1	.1
Fiscal impetus (FI), percent of GDP[4]	-.1	.1	.2	.2	-.6	.0	.7	-.4	-.1	.1	.2	.2	.1	.2	.3	.2
Previous Tealbook	*-.1*	*.0*	*.2*	*.2*	*-.5*	*.1*	*.3*	*-.3*	*-.3*	*.0*	*.1*	*.1*	*.1*	*.1*	*.2*	*.2*
Federal purchases	.0	-.2	-.1	-.1	.0	-.1	.7	-.5	-.2	-.2	-.2	-.2	-.1	-.1	.0	-.1
State and local purchases	.1	.2	.2	.2	-.1	.4	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2
Taxes and transfers	-.2	.1	.1	.0	-.5	-.3	-.1	.0	-.1	.2	.2	.2	.0	.1	.1	.1

1. Other means of financing include checks issued less checks paid, accrued items, and changes in other financial assets and liabilities.
2. Gross saving is the current account surplus plus consumption of fixed capital of the general government as well as government enterprises.
3. HEB is gross saving less gross investment (NIPA) of the federal government in current dollars, with cyclically sensitive receipts and outlays adjusted to the staff's measure of potential output and the natural rate of unemployment. The sign on Change in HEB, as a percent of nominal potential GDP, is reversed. Quarterly figures for change in HEB are not at annual rates.
4. Fiscal impetus measures the contribution to growth of real GDP from fiscal policy actions at the general government level (excluding multiplier effects). It equals the sum of the direct contributions to real GDP growth from changes in federal purchases and state and local purchases, plus the estimated contribution from real consumption and investment that is induced by discretionary policy changes in transfers and taxes.
a Actual.

Greensheets

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

			------Projected	------	------	------	------	------	------	------	------	------
	2014				2015				2016			
Measure and country	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Real GDP[1]												
Total foreign	2.2	2.2	2.3	2.6	2.9	3.0	3.2	3.2	3.2	3.2	3.2	3.2
Previous Tealbook	*2.2*	*2.3*	*2.8*	*2.8*	*2.9*	*3.0*	*3.2*	*2.8*	*3.2*	*3.2*	*3.2*	*3.2*
Advanced foreign economies	1.9	1.3	1.6	1.8	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.2
Canada	1.0	3.6	2.8	2.5	2.4	2.4	2.6	2.6	2.6	2.6	2.5	2.5
Japan	5.8	-6.7	-1.9	1.8	1.7	1.5	1.5	1.4	1.3	1.3	1.2	1.4
United Kingdom	3.0	3.7	2.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4
Euro area	1.3	.3	.6	.7	1.2	1.6	1.7	1.8	1.8	1.9	1.9	1.9
Germany	3.1	-.3	.3	.9	1.5	1.8	2.0	2.0	2.0	2.0	2.0	2.0
Emerging market economies	2.4	3.1	3.0	3.3	3.8	3.9	4.2	4.2	4.2	4.2	4.2	4.2
Asia	3.8	4.8	5.3	4.9	5.5	5.5	5.5	5.6	5.5	5.5	5.5	5.5
Korea	3.8	2.0	3.7	3.9	4.3	4.3	4.3	4.3	4.2	4.2	4.2	4.2
China	6.2	7.7	7.7	7.2	7.4	7.4	7.3	7.3	7.2	7.2	7.1	7.1
Latin America	1.2	1.9	1.3	2.3	2.5	2.7	3.1	3.1	3.1	3.1	3.2	3.2
Mexico	1.4	3.6	2.0	3.2	3.3	3.4	3.5	3.5	3.4	3.4	3.5	3.5
Brazil	-.7	-2.4	.3	1.0	1.3	1.6	1.8	1.9	2.1	2.1	2.1	2.1
Consumer prices[2]												
Total foreign	2.0	3.1	2.1	1.6	2.0	2.3	2.5	2.6	2.6	2.6	2.6	2.6
Previous Tealbook	*2.0*	*3.1*	*2.1*	*1.7*	*2.2*	*2.4*	*2.5*	*3.0*	*2.6*	*2.6*	*2.6*	*2.6*
Advanced foreign economies	1.1	3.3	1.1	.0	.6	1.1	1.3	1.5	1.5	1.6	1.6	1.7
Canada	2.8	3.7	1.3	1.2	1.0	1.4	1.6	1.8	1.8	1.8	1.9	1.9
Japan	.4	9.4	1.8	-.9	1.4	.9	1.0	1.2	1.2	1.3	1.3	1.4
United Kingdom	1.3	1.8	1.5	.2	1.0	1.6	1.8	1.9	1.8	1.9	1.9	1.9
Euro area	.3	.5	.6	-.5	-.1	.9	1.3	1.3	1.4	1.5	1.6	1.6
Germany	.2	.4	1.7	-.3	.2	1.2	1.5	1.6	1.7	1.7	1.7	1.7
Emerging market economies	2.6	2.9	2.9	2.9	3.1	3.2	3.4	3.4	3.4	3.3	3.3	3.3
Asia	1.5	2.4	2.1	2.1	2.9	3.0	3.2	3.3	3.2	3.2	3.2	3.2
Korea	1.4	2.2	.6	.6	3.0	3.0	3.0	3.2	3.3	3.3	3.3	3.3
China	.8	2.0	2.2	1.9	2.4	2.6	2.9	3.0	3.0	3.0	3.0	3.0
Latin America	5.3	4.3	4.9	4.5	3.7	3.8	3.8	3.8	3.7	3.7	3.7	3.7
Mexico	4.8	3.3	4.4	4.0	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Brazil	6.5	7.4	6.2	5.9	5.6	5.6	5.6	5.5	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	2009	2010	2011	2012	2013	2014 (Projected)	2015 (Projected)	2016 (Projected)	2017 (Projected)
Real GDP[1]									
Total foreign	.9	4.7	3.2	2.3	2.6	2.3	3.1	3.2	3.1
Previous Tealbook	*1.0*	*4.7*	*3.1*	*2.3*	*2.5*	*2.5*	*3.0*	*3.2*	*3.1*
Advanced foreign economies	-1.4	3.1	1.8	.3	1.9	1.7	2.1	2.2	1.9
Canada	-1.4	3.6	3.0	1.0	2.7	2.5	2.5	2.5	2.2
Japan	-.6	3.5	.3	.0	2.2	-.4	1.5	1.3	-.3
United Kingdom	-1.5	2.2	1.5	.4	2.7	3.0	2.5	2.5	2.3
Euro area	-2.3	2.3	.6	-.9	.4	.7	1.6	1.9	2.0
Germany	-3.0	4.4	2.4	.1	1.1	1.0	1.8	2.0	1.9
Emerging market economies	3.8	6.4	4.6	4.3	3.3	3.0	4.0	4.2	4.2
Asia	7.8	8.0	4.9	5.6	5.2	4.7	5.5	5.5	5.3
Korea	4.9	6.1	3.0	2.1	3.6	3.3	4.3	4.2	4.0
China	11.3	9.7	8.7	7.7	7.6	7.2	7.3	7.1	7.0
Latin America	.0	4.7	4.0	3.3	1.5	1.7	2.8	3.1	3.2
Mexico	-1.2	4.4	4.1	3.4	1.1	2.6	3.4	3.4	3.5
Brazil	5.3	5.3	1.3	1.8	2.2	-.5	1.6	2.1	2.3
Consumer prices[2]									
Total foreign	1.2	3.2	3.4	2.3	2.3	2.2	2.3	2.6	2.7
Previous Tealbook	*1.2*	*3.2*	*3.4*	*2.3*	*2.3*	*2.2*	*2.5*	*2.6*	*2.6*
Advanced foreign economies	.2	1.7	2.2	1.3	1.0	1.4	1.1	1.6	2.0
Canada	.8	2.2	2.7	.9	1.0	2.3	1.4	1.8	2.0
Japan	-2.0	-.3	-.3	-.2	1.4	2.6	1.1	1.3	2.8
United Kingdom	2.2	3.4	4.6	2.6	2.1	1.2	1.6	1.9	2.0
Euro area	.4	2.0	2.9	2.3	.8	.2	.8	1.5	1.6
Germany	.3	1.6	2.6	2.0	1.3	.5	1.1	1.7	1.7
Emerging market economies	2.0	4.3	4.3	3.1	3.4	2.8	3.3	3.3	3.3
Asia	1.2	4.3	4.5	2.6	3.1	2.0	3.1	3.2	3.2
Korea	2.4	3.2	3.9	1.7	1.1	1.2	3.1	3.3	3.3
China	.6	4.6	4.6	2.1	2.9	1.7	2.7	3.0	3.0
Latin America	3.9	4.4	4.0	4.3	4.0	4.8	3.7	3.7	3.6
Mexico	4.0	4.3	3.5	4.1	3.7	4.1	3.3	3.3	3.3
Brazil	4.3	5.6	6.7	5.6	5.9	6.5	5.6	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.

U.S. Current Account

Quarterly Data

	2014				2015 (Projected)				2016 (Projected)			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Billions of dollars, s.a.a.r.												
U.S. current account balance	**-408.5**	**-397.9**	**-420.2**	**-445.6**	**-431.3**	**-428.3**	**-463.5**	**-497.3**	**-545.4**	**-545.6**	**-584.8**	**-601.8**
Previous Tealbook	*-408.5*	*-394.0*	*-426.1*	*-400.1*	*-409.9*	*-391.0*	*-407.3*	*-430.2*	*-468.8*	*-453.8*	*-481.3*	*-489.9*
Current account as percent of GDP	-2.4	-2.3	-2.4	-2.5	-2.4	-2.4	-2.5	-2.7	-2.9	-2.9	-3.1	-3.1
Previous Tealbook	*-2.4*	*-2.3*	*-2.4*	*-2.3*	*-2.3*	*-2.2*	*-2.2*	*-2.3*	*-2.5*	*-2.4*	*-2.5*	*-2.6*
Net goods & services	-498.1	-524.9	-497.3	-484.0	-441.7	-447.3	-473.0	-507.1	-534.3	-547.9	-576.8	-590.1
Investment income, net	218.2	221.7	222.5	178.4	162.5	152.3	145.5	143.4	140.9	135.7	128.0	121.9
Direct, net	292.8	286.0	286.1	241.2	228.4	229.7	233.7	244.8	256.3	266.8	275.3	285.3
Portfolio, net	-74.6	-64.3	-63.6	-62.8	-65.9	-77.4	-88.2	-101.4	-115.3	-131.1	-147.3	-163.4
Other income and transfers, net	-128.5	-94.7	-145.4	-140.0	-152.1	-133.4	-136.0	-133.6	-152.1	-133.4	-136.0	-133.6

Annual Data

	2009	2010	2011	2012	2013	2014 (Projected)	2015 (Projected)	2016 (Projected)	2017 (Projected)
Billions of dollars									
U.S. current account balance	**-380.8**	**-443.9**	**-459.3**	**-460.8**	**-400.3**	**-418.0**	**-455.1**	**-569.4**	**-642.0**
Previous Tealbook	*-380.8*	*-443.9*	*-459.3*	*-460.8*	*-400.3*	*-407.2*	*-409.6*	*-473.5*	*-504.1*
Current account as percent of GDP	-2.6	-3.0	-3.0	-2.9	-2.4	-2.4	-2.5	-3.0	-3.2
Previous Tealbook	*-2.6*	*-3.0*	*-3.0*	*-2.9*	*-2.4*	*-2.3*	*-2.3*	*-2.5*	*-2.6*
Net goods & services	-383.8	-494.7	-548.6	-537.6	-476.4	-501.1	-467.3	-562.3	-608.8
Investment income, net	132.3	185.7	229.0	211.4	208.5	210.2	150.9	131.6	105.6
Direct, net	257.7	288.0	298.6	281.6	290.9	276.5	234.2	270.9	312.0
Portfolio, net	-125.4	-102.3	-69.5	-70.2	-82.3	-66.4	-83.2	-139.3	-206.4
Other income and transfers, net	-129.3	-135.0	-139.8	-134.6	-132.4	-127.1	-138.8	-138.8	-138.8

Abbreviations

ABS	asset-backed securities
AFE	advanced foreign economy
BHC	bank holding company
BLS	Bureau of Labor Statistics
BOJ	Bank of Japan
CDS	credit default swaps
CLO	collateralized loan obligation
CMBS	commercial mortgage-backed securities
CPI	consumer price index
CRE	commercial real estate
Desk	Open Market Desk
DSGE	dynamic stochastic general equilibrium
ECB	European Central Bank
ECI	employment cost index
E&I	equipment and intangibles
EME	emerging market economy
FOMC	Federal Open Market Committee; also, the Committee
GCF	general collateral finance
GDP	gross domestic product
GPIF	Government Pension Investment Fund (Japan)
GSE	government-sponsored enterprise
IP	industrial production
MBS	mortgage-backed securities
OIS	overnight index swap
ON RRP	overnight reverse repurchase agreement
OPEC	Organization of the Petroleum Exporting Countries
PBOC	People’s Bank of China
PCE	personal consumption expenditures

PDFP	private domestic final purchases
PMI	purchasing managers index
repo	repurchase agreement
RRP	reverse repurchase agreement
SEP	Summary of Economic Projections
SOMA	System Open Market Account
S&P	Standard & Poor's
TDF	Term Deposit Facility
TIPS	Treasury Inflation-Protected Securities