Prefatory Note

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

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

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Authorized for Public Release

Class II FOMC – Restricted (FR)

Report to the FOMC on Economic Conditions and Monetary Policy

Book A

Economic and Financial Conditions: Current Situation and Outlook

June 11, 2014

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

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Domestic Economic Developments and Outlook

The information we have received since the April Tealbook suggests that aggregate spending was even weaker early in the year than we had anticipated. However, given the ongoing improvement in other indicators, we judge that the fundamental recovery dynamic remains in place, and that the first-quarter declines in GDP and GDI partly reflect a combination of statistical noise and transitory downdraft that will be halted or reversed. Accordingly, we have marked up modestly our expectation for the growth of real GDP over the remainder of this year. Still, for the year as a whole, our forecast now stands at an annual rate of just under 2½ percent, nearly ½ percentage point lower than in the previous Tealbook.

One set of indicators that have generally continued to improve are those pertaining to the labor market. In particular, the employment reports for April and May showed a slightly faster average pace of payroll employment gains and a notably larger decline in the unemployment rate in those months than we had projected. Even after making allowance for the lower-than-anticipated labor force participation rate, labor market conditions appear to be somewhat better than we had expected in the April Tealbook.

To help reconcile the divergent signals in the recent data about the labor and product markets, we have once again adjusted our supply-side assumptions, marking down our outlook for potential output growth and nudging down our estimate of the natural rate of unemployment in late 2013 and in 2014. These adjustments are explained in greater detail in our discussion of the labor market outlook.

We have also marked down our expectations for both real GDP growth and the federal funds rate in the longer term. (These adjustments can be seen in the box "Revisions to the Staff Projection since the Previous SEP" and are discussed in more detail later in this document.) The lower equilibrium level of the federal funds rate led us to revise down our forecast trajectory of borrowing rates. However, our projection proceeds from the assumption that these lower borrowing rates will not provide additional support for aggregate demand after households and businesses take into account the less optimistic outlook for economic growth in the longer run.

Revisions to the Staff Projection since the Previous SEP

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

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

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

Staff Economic Projections Compared with the March Tealbook

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

1. Percent change from final quarter of preceding period to final quarter of period indicated.
2. Percent, final quarter of period indicated.
n.a. Not available.

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

All told, our forecast for the level of real GDP at the end of 2016 is somewhat below that in the April Tealbook, with this revision reflecting both the weaker incoming data on spending and, after this year, our modestly more pessimistic assumptions about potential output growth over the medium term. Even with these changes, we still expect economic activity to expand more rapidly over the medium term than in recent years, and fast enough to complete the job of eliminating economic slack during the first half of 2016, somewhat earlier than in the previous projection. Our current forecast anticipates that real GDP growth will average 2½ percent this year and then rise around 3 percent per year in 2015 and 2016. Meanwhile, we anticipate that the unemployment rate will fall from 6¼ percent in the current quarter to 6 percent by the end of 2014 and then gradually move down to 5 percent by the end of 2016 (nearly ¼ percentage point below the assumed level of the natural rate at that time).

With regard to inflation, the incoming data indicate somewhat faster increases in both overall and core PCE prices in the current quarter than we had anticipated in the April Tealbook, but this upside surprise was concentrated in a handful of volatile categories and otherwise had little effect on our inflation forecast. Indeed, our medium-term projection for inflation is slightly lower than in the April Tealbook, reflecting a reassessment of where the inflation rate would settle in the absence of economic slack if the current level of long-run inflation expectations were maintained. We now put this level of inflation about ¼ percentage point below the FOMC's longer-run objective of 2 percent. In light of this adjustment, we have trimmed our forecasts for both core and topline PCE price inflation over the medium term by about one-tenth of a percentage point. With these revisions, core PCE inflation creeps up to 1¾ percent by 2016 and overall PCE price inflation runs at about 1½ percent.

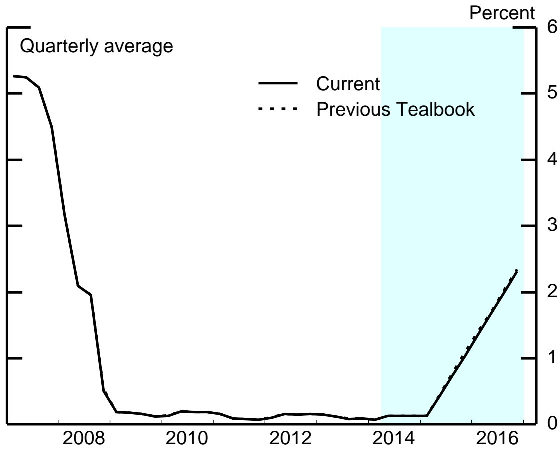
In the Risks and Uncertainty section, we provide our views on the degree of uncertainty attending our projections for real GDP growth, the unemployment rate, and inflation.

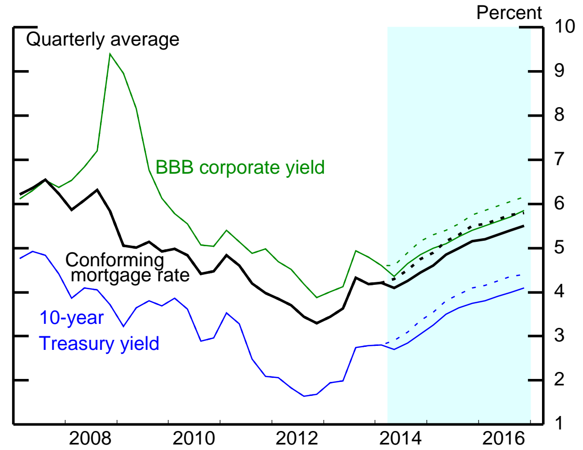
KEY BACKGROUND FACTORS

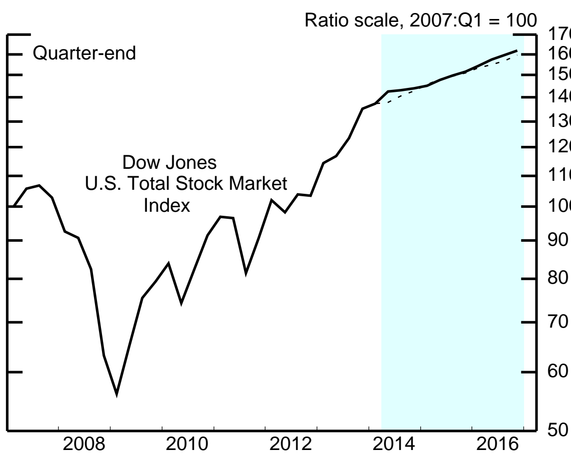
Monetary Policy

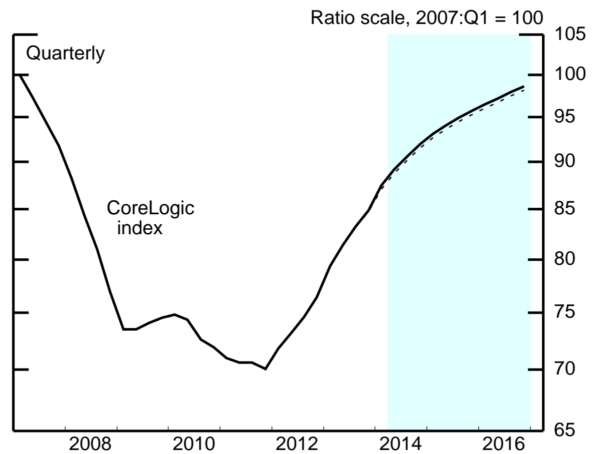
Our assumptions about the current LSAP program are unchanged. We assume that asset purchases will continue to slow at a measured pace and will conclude before the end of this year, leaving the cumulative amount of purchases under the current program at close to $1.5 trillion.

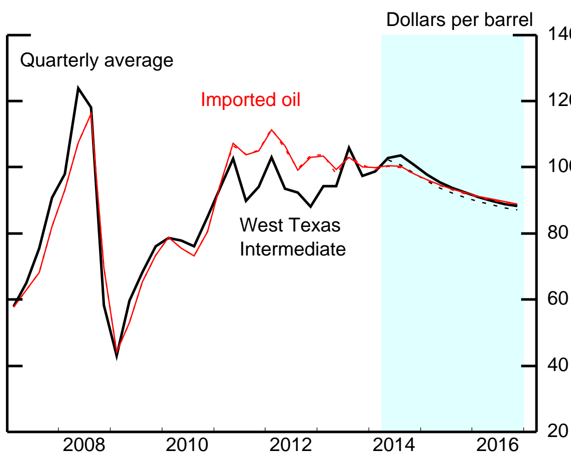
Key Background Factors underlying the Baseline Staff Projection

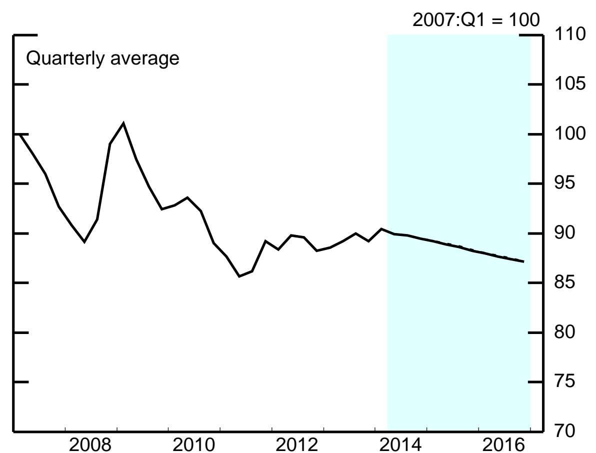












As in the April Tealbook, we assume that the federal funds rate will lift off from its effective lower bound two quarters after the end of asset purchases. We construe the two-quarter lag to be consistent with the Committee's view, expressed in its March and April statements, that "it likely will be appropriate to maintain the current target range for the federal funds rate for a considerable time after the asset purchase program ends." Following liftoff, the federal funds rate is assumed to follow the prescriptions of an inertial version of the Taylor (1999) policy rule. The downward revision to the equilibrium federal funds rate amounts to a ¼ percentage point reduction in the intercept of the rule. Given this adjustment and the narrower anticipated output gap, the rule puts the average federal funds rate at about 2.3 percent in the fourth quarter of 2016, roughly unchanged from its projected level in the April Tealbook.

Other Interest Rates

The projected path for the 10-year Treasury yield has been marked down notably, reflecting our downward revisions to the trajectory of the federal funds rate in the longer run. Even so, we continue to anticipate a significant increase in Treasury yields over the projection period, primarily because of the movement of the 10-year valuation window through the period of extremely low short-term interest rates as well as the gradual waning of the effects of the FOMC's balance sheet policies. All told, the Treasury yield is projected to rise to slightly above 4 percent by the end of 2016.

Investment-grade corporate bond and mortgage spreads are little changed since the April Tealbook. Consequently, our forecasts for corporate bond yields and mortgage rates over the medium term have been revised essentially in line with our revisions to the path of the Treasury yield.

Equity Prices and Home Prices

Equity prices have increased at a somewhat faster pace than we had projected in April. As a result, the trajectory of stock prices is a bit higher in 2014. Over the medium term, our view about projected stock prices is roughly unchanged and implies an average annual rate of increase in these prices of around 6 percent.

Our forecast for house prices is little changed since April. In recent months, house prices have continued to post robust increases, but at a slower pace than a year earlier. Overall, we continue to expect house price appreciation to slow from 11 percent in 2013 to an average of roughly 5 percent per year from 2014 to 2016.

Fiscal Policy

Our assumptions for fiscal policy are the same as in the April Tealbook. Even with the extended unemployment compensation (EUC) program having expired at the beginning of this year, the drag on economic growth from fiscal policy changes should diminish this year relative to last, as the rate of decline in real federal purchases slows and the effects of various tax increases put in place last year wane. We expect the restraint on real GDP growth from fiscal policy actions (excluding multiplier effects) by all levels of government to diminish from about 1 percentage point in 2013 to ½ percentage point this year, ¼ percentage point in 2015, and roughly zero in 2016.

As in the previous projection, we expect the federal budget deficit to narrow from 4 percent of GDP in fiscal year 2013 to around 2½ percent of GDP by fiscal 2016, reflecting continued spending restraint and a strengthening of tax receipts in line with anticipated increases in overall economic activity. As a result, federal debt held by the public is expected to remain roughly stable at a little more than 70 percent of GDP over the medium term.

Foreign Activity and the Dollar

Foreign real GDP growth slowed in the first quarter to an annual rate of just 2 percent, ¼ percentage point lower than anticipated in the April Tealbook, as a marked reduction in growth in emerging Asia and in Canada more than offset faster growth in Japan. In part, the deceleration of foreign activity reflected a widespread weakening of trade flows, but country-specific factors also played a role, including severe winter weather in Canada and the lagged effect of measures taken late last year by Chinese authorities to curb excessive credit and investment growth. As Canada's economy bounces back, policy in China becomes more supportive, and U.S. economic activity rebounds, foreign growth is expected to step up to an annual rate of 2½ percent in the current quarter and then rise further to about 3¼ percent over the remainder of the medium term, close to our assumption for the growth of foreign potential output. Apart from our downward revisions to the current quarter, this projection is little changed relative to the previous Tealbook.

The broad nominal index for the dollar is little changed on net since the previous Tealbook, as an appreciation of the dollar against the currencies of the advanced foreign economies (AFEs), particularly the euro, was balanced by depreciation against the currencies of the emerging market economies (EMEs). Going forward, the broad real

dollar depreciates about 1¼ percent per year, roughly in line with our projection in the previous Tealbook, as China and other emerging Asian economies allow their currencies to strengthen.

Oil and Other Commodity Prices

The spot price of Brent crude oil is little changed from the time of the previous Tealbook, closing near $110 per barrel on June 10. Developments in Russia and Ukraine have continued to have only modest effects on oil prices, and upward pressure on prices from the continued disruption of Libyan exports has been counterbalanced by increased production elsewhere, including in the United States. We project that the price of imported oil will average a bit more than $100 per barrel in the current quarter and then decline gradually over the remainder of the forecast period, reaching $89 per barrel at the end of 2016. This trajectory is little changed from the April Tealbook.

On balance, nonfuel commodity prices have moved lower in recent weeks. After large increases earlier this year, prices of several crops (particularly corn and coffee) have retreated in the face of improved supply conditions. Iron ore prices fell sharply, likely on account of idiosyncratic supply developments, while copper prices edged down a bit on net. Over the forecast period, as in the previous Tealbook, we expect our overall commodity price index to remain about flat.

Recent Developments and the Near-Term Outlook for Real GDP

The BEA's latest estimate put the decline in real GDP in the first quarter at an annual rate of 1 percent, and source data that have become available since that release point to an even larger decline in the neighborhood of 1½ percent.[1] We are suspicious that aggregate demand weakened as much as this GDP estimate suggests, and the reported decline in real GDI is also puzzling to us in some respects. This view, which is corroborated by a range of indicators, including most measures of labor market conditions, leads us to expect that some of the large downside surprise in real GDP in the first quarter will be reversed. Accordingly, and consistent with available monthly spending estimates, we are penciling in that real GDP will increase at an outsized annual rate of 4¼ percent in the current quarter, ¾ percentage point faster than the increase we

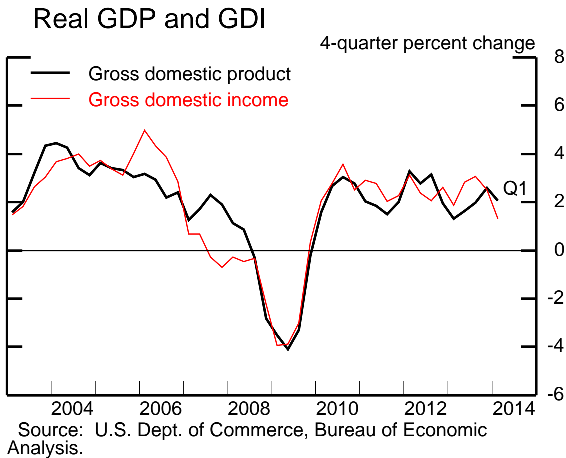
[1] We received the first-quarter estimates from the Quarterly Service Survey too late to process their implications for the GDP projection.

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

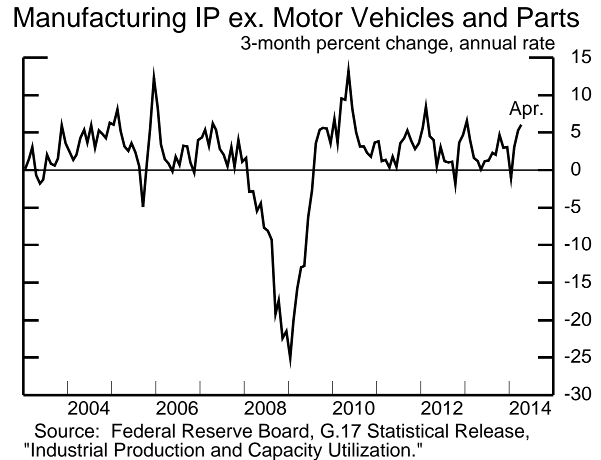
Measure	2014:Q1		2014:Q2		2014:H2	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
Real GDP	**.7**	**-1.5**	**3.5**	**4.2**	**3.5**	**3.5**
Private domestic final purchases	2.3	2.2	4.0	3.9	4.7	4.1
Personal consumption expenditures	2.5	3.1	3.8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

1. Percentage points.

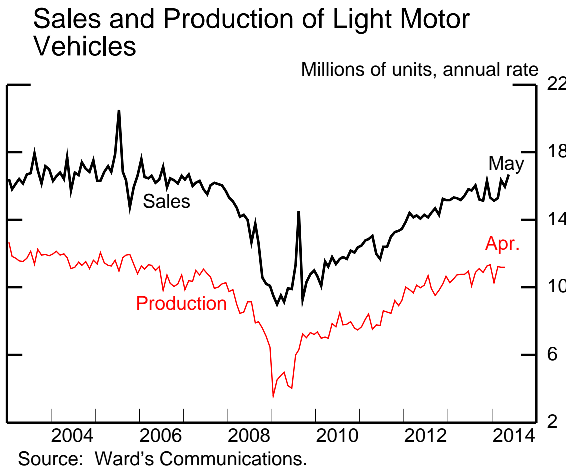
Recent Nonfinancial Developments (1)



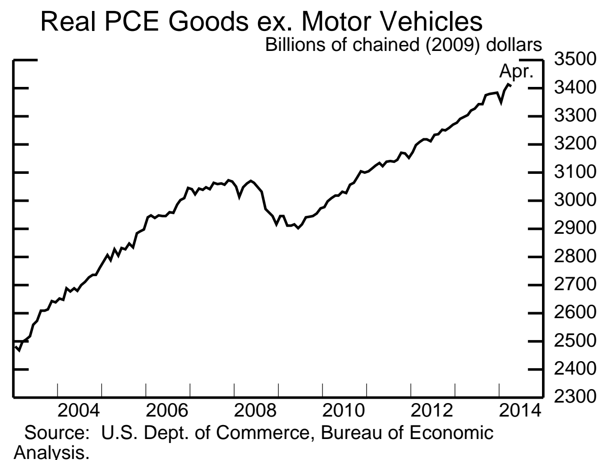
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.



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



Source: Ward's Communications.



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

anticipated in the April Tealbook. We still expect real GDP to increase at an annual rate of 3½ percent in the second half of the year.

Household Spending

Available data and indicators suggest that real personal consumption expenditures (PCE) are on track to increase at an annual rate of 3 percent over the first half of the year, roughly in line with our expectations in the April Tealbook. In our assessment, PCE has been influenced on the upside by this year's reported step-up in consumption of health-care services associated with the Affordable Care Act, but on the downside by the loss of income from the expiration of the EUC program at the beginning of this year; taken together, these programmatic changes roughly counterbalance in this forecast. Meanwhile, light vehicle sales climbed to a post-recession high in May after having slipped earlier in the year. More broadly, after having moved up at an average annual rate of just 2 percent over much of the recovery, real PCE seems to have accelerated in recent quarters, consistent with increases in household wealth and the step-up in disposable personal income over the past year or so. In the second half of this year, real PCE growth is projected to move up to an annual rate of nearly 4 percent, much the same as in the April Tealbook.

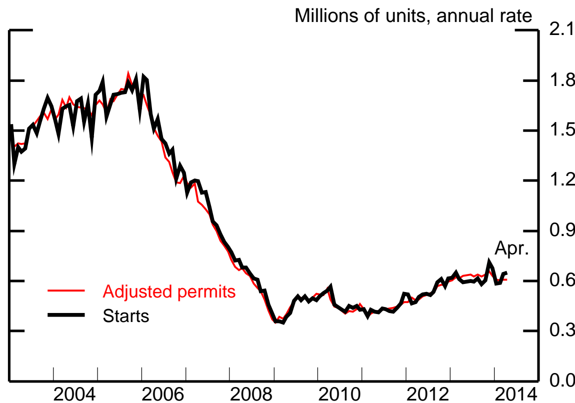
Meanwhile, incoming data on housing construction have again proved disappointing. In April, single-family housing starts were little changed, and permit issuance—which is measured more accurately than starts and tends to be less sensitive to weather fluctuations—continued to track sideways, suggesting that the weakness earlier in the year was due less to adverse weather, and more to a lackluster underlying trend of activity, than we had thought. At the same time, activity in the multifamily sector has continued to be relatively strong, on balance, in recent months, while the latest readings on pending and existing home sales suggest that activity in the resale market is leveling out after having moved down steadily since last summer. All told, we responded to the news about single-family construction by marking down our forecast for housing activity in the near term, and we now anticipate a noticeably less pronounced acceleration in real residential investment in the second half of this year.

Business Investment

Incoming data on nonresidential construction also have been weaker than we had anticipated. After folding in the latest monthly estimates of construction spending, we now estimate that real expenditures on nonresidential structures excluding drilling and

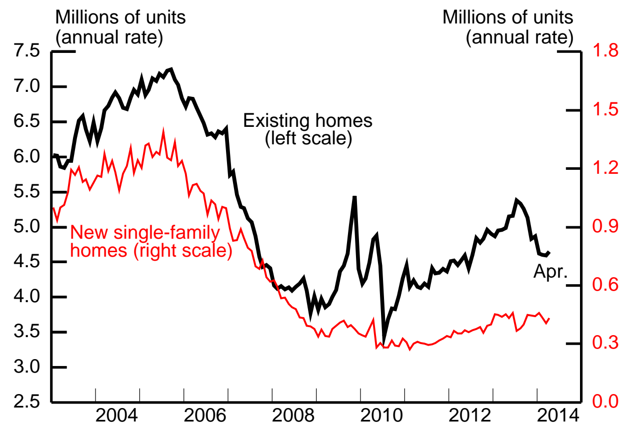
Recent Nonfinancial Developments (2)

Single-Family Housing Starts and Permits



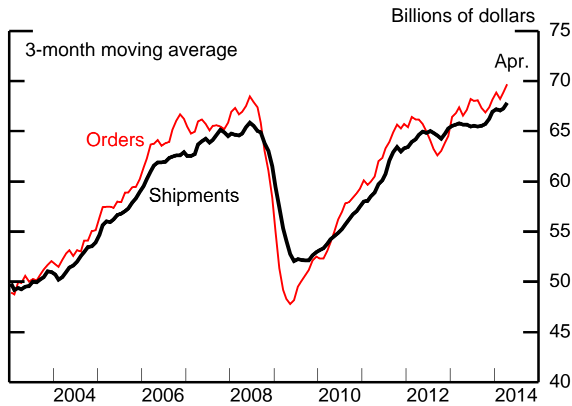
Note: Adjusted permits equal permit issuance plus total starts outside of permit-issuing areas.
Source: U.S. Census Bureau.

Home Sales



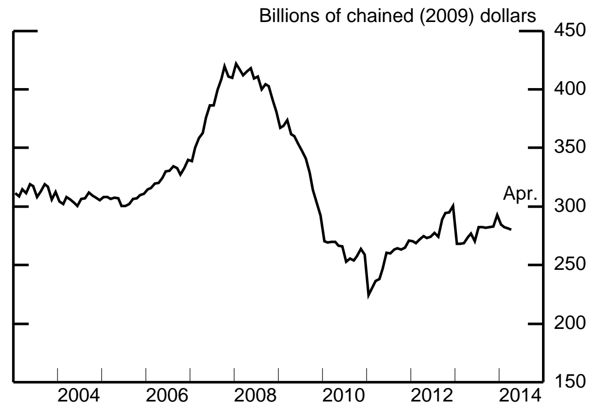
Source: For existing, National Association of Realtors; for new, U.S. Census Bureau.

Nondefense Capital Goods ex. Aircraft



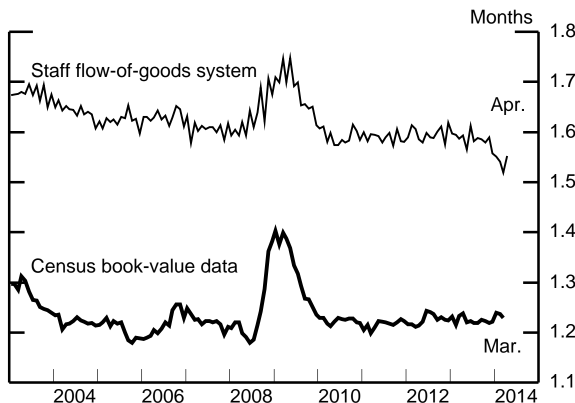
Source: U.S. Census Bureau.

Nonresidential Construction Put in Place



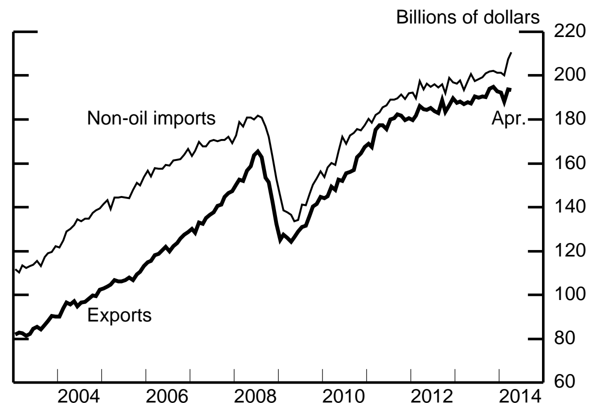
Note: Nominal CPIP deflated by BEA prices through 2013:Q4 and by staff's estimated deflator thereafter.
Source: U.S. Census Bureau.

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.

mining fell at a double-digit annual rate in the first quarter, with part of the decline attributable to an expiring tax incentive for renewable energy that pulled forward some outlays on windpower structures into 2013. However, we also took some signal from the incoming data and marked down the projected rate of increase in nonresidential building outlays, on net, over the next few quarters. Meanwhile, we still expect real investment in drilling and mining structures to post a moderate net gain in the first half of this year, supported by high oil prices and the ongoing boost from new drilling technologies.

Real spending on equipment and intangibles (E&I) seems poised for a rebound in the second quarter following a first-quarter lull. In recent months, both orders and shipments of nondefense capital goods have accelerated a fair bit, and, with orders continuing to run well above shipments, we anticipate further moderate increases in shipments in the next few months. In addition, indicators of business spending on motor vehicles have strengthened of late. More broadly, we still view the trajectory of business output growth and forward-looking indicators as being consistent with moderate spending increases in this sector. Accordingly, E&I spending growth is expected to rebound to 10 percent in the second quarter and then rise to an annual rate of 3¼ percent in the second half of the year. This near-term growth outlook is up a touch, on balance, from April.

Incoming data now show inventory investment as having subtracted about 1½ percentage points (annual rate) from the percentage change in real GDP in the first quarter after having boosted GDP growth by around ¾ percentage point in the second half of 2013. This drop-off, which pushed inventory investment well below its average level over the past few years, appears to have been amplified by a sizable drawdown of heating fuels (such as natural gas, coal, and fuel oil) during the cold winter. Estimates from the staff's flow-of-goods system suggest that inventory investment in these categories rebounded somewhat in April. Outside of the energy sector, available indicators do not point to significant inventory imbalances in most industries. Consequently, we expect the pace of stockbuilding to gradually recover over the course of the year to levels in line with our April Tealbook projection.

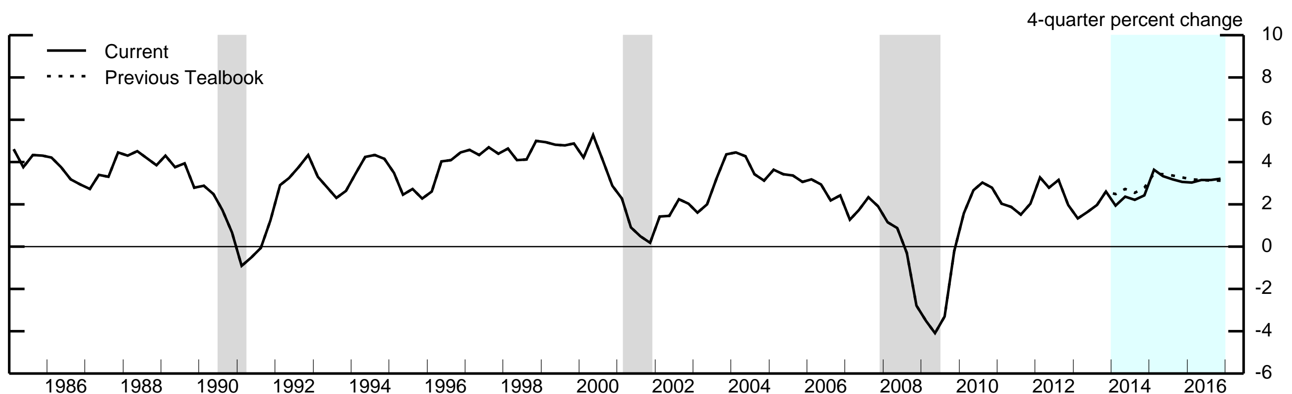
Government

Real federal purchases rose at an annual rate of ¾ percent in the first quarter, partly reflecting a reversal of the effects of last October's government shutdown. We expect federal purchases to fall at an annual rate of roughly 3 percent over the rest of the

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

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

Real GDP



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

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

year, in line with its downward trend, reflecting ongoing fiscal consolidation and reductions in spending on overseas military operations.

We estimate that real state and local purchases registered a moderate decrease in the first quarter because of a sharp decline in construction outlays apparently associated with the inclement winter weather. We expect real purchases by state and local governments to increase at a modest annual rate of just above 1 percent over the current and next quarter as the weather-related drag on construction unwinds and as employment by these governments continues its slow expansion.

Foreign Trade

Exports have been volatile in recent quarters, plunging at an annual rate of 8¾ percent in the first quarter following a 9½ percent surge in the fourth quarter of 2013. This swing in part reflects sharp movements in a few idiosyncratic categories such as petroleum and agricultural goods. In the current quarter, we expect exports to rise at a 6¼ percent pace and then decelerate only a bit to a 4¼ percent pace in the third quarter, supported by the anticipated rebound of foreign demand. Real imports are projected to rise 3½ percent on average in the second and third quarters, boosted by the solid increase in U.S. GDP during these quarters but held down a bit by the continued decline in real oil imports. Altogether, the external sector is expected to be a slight positive for real GDP growth in the second and third quarters.

The Industrial Sector

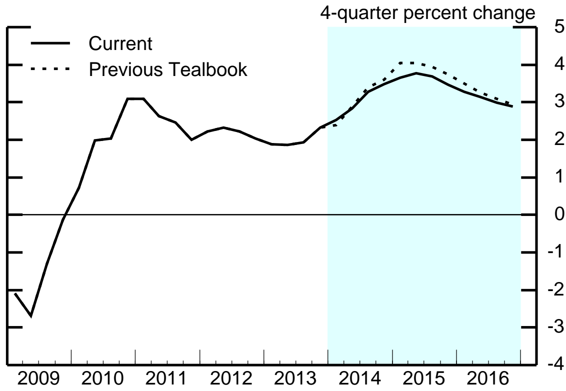
Manufacturing output rose at a modest annual rate of 2 percent in the first quarter, with the monthly pattern reflecting weather-related disruptions early in the quarter. Available data suggest a solid gain in factory activity in May, and we expect output to expand at a moderate pace over the near term, consistent with positive readings on new orders from the national and regional surveys and with automakers' assembly plans.

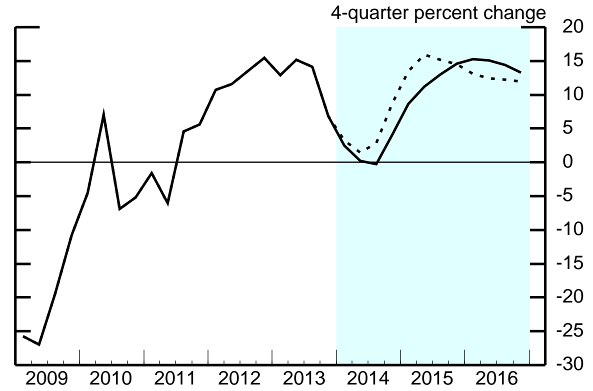
The Medium-Term Outlook for Real GDP

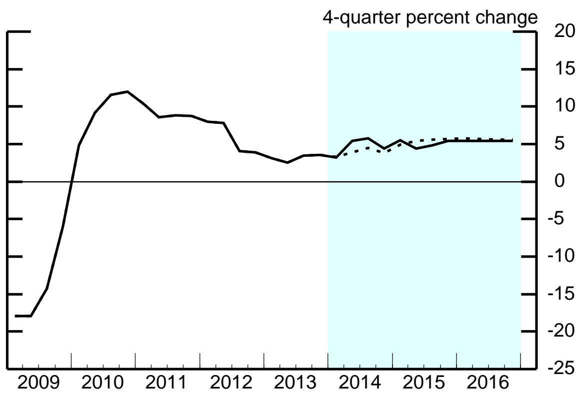
Beyond the near term, our real GDP growth outlook is about unchanged from the April Tealbook. Longer-term borrowing rates follow a lower trajectory in this Tealbook than in the April iteration, reflecting our assumption of a lower equilibrium real federal funds rate. However, these lower borrowing rates do not boost spending in our forecast because households and businesses are assumed to also take into account the less optimistic outlook for real GDP growth in the longer term. All told, we now forecast that

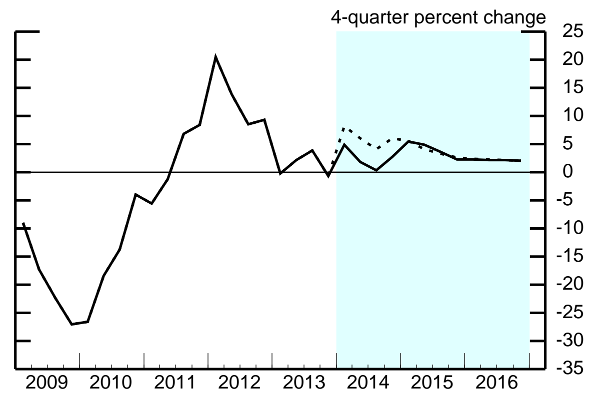
Domestic Econ Devel & Outlook

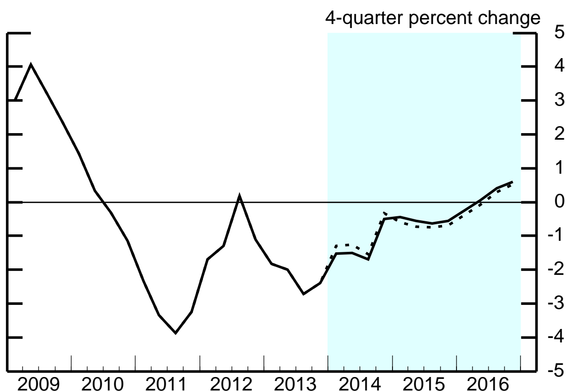
Components of Final Demand

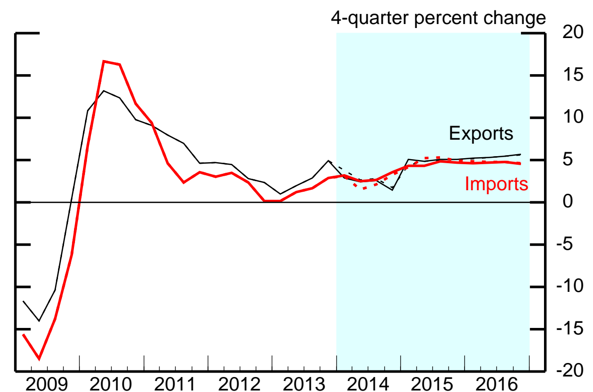












Source: U.S. Department of Commerce, Bureau of Economic Analysis.

real GDP growth will rise from 2½ percent in 2014 to an average of around 3 percent in 2015 and 2016.

Our projection that real GDP growth will step up over the medium term—even as interest rates rise—reflects our expectation that some of the forces that have been holding back growth in recent years will recede further. In particular, the restraint from changes in fiscal policy has waned this year and should continue to fade as federal purchases decline less sharply, state and local purchases rise modestly, and the drag from earlier tax increases diminishes. In addition, we look for mortgage credit to gradually become more broadly available, thereby providing some boost to demand. These developments, along with improving labor market conditions, are expected to foster a growing sense among households and firms that the downside risks to the recovery have lessened; in turn, this growing confidence should provide additional support to household spending, business investment, and hiring.

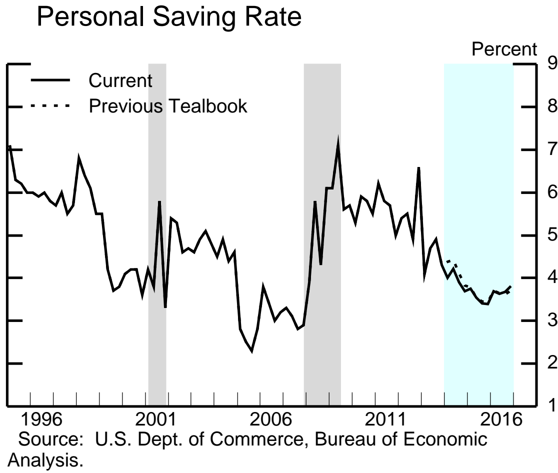
These influences are most apparent in our projection for consumer spending. In particular, we anticipate that the fading effects of last year's tax increases, gains in household wealth resulting from rising house and equity prices, and anticipated improvements in consumer confidence will boost real PCE growth from 2¼ percent in 2013 to 3½ percent in 2014 and in 2015. We look for spending growth to then slow to 3 percent in 2016 as the boost to growth from these influences wanes. These projected rates of increase are a little slower than in the April Tealbook, largely due to our downward revisions to potential output (and, hence, permanent income) in the medium term.

As in the April Tealbook, rising income and confidence are expected to eventually fuel a pickup in household formation that will feed through to increases in residential construction. The step-up in homebuilding would be more pronounced if not for rising mortgage rates and the limited availability of buildable lots and specialized inputs. All told, we expect gains in residential investment to increase from 4 percent in 2014 to an average of 14 percent in 2015 and 2016. The pace of recovery this year is noticeably more restrained than in the April Tealbook but is essentially unchanged thereafter.

Real outlays on E&I are expected to increase 4½ percent in 2014 and 5½ percent in 2015 and in 2016. This lackluster outlook reflects our projection that business output will rise at only a moderate pace over the medium term. For the same reason, we

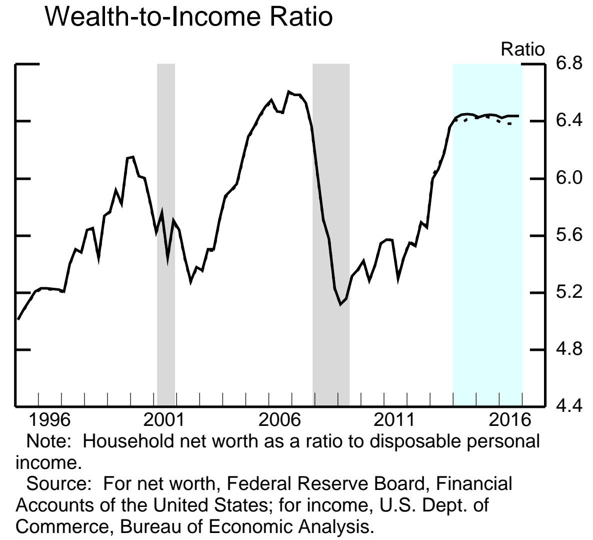
Aspects of the Medium-Term Projection

Personal Saving Rate



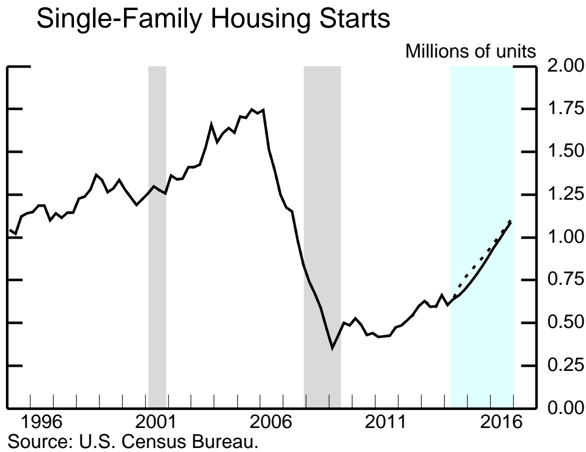
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Wealth-to-Income Ratio



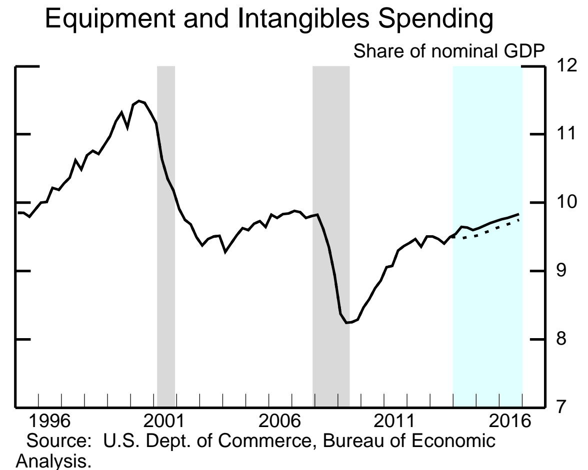
Note: Household net worth as a ratio to disposable personal income.
Source: For net worth, Federal Reserve Board, Financial Accounts of the United States; for income, U.S. Dept. of Commerce, Bureau of Economic Analysis.

Single-Family Housing Starts



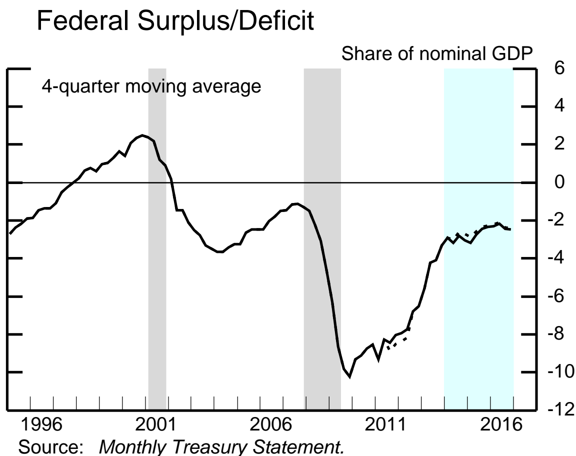
Source: U.S. Census Bureau.

Equipment and Intangibles Spending



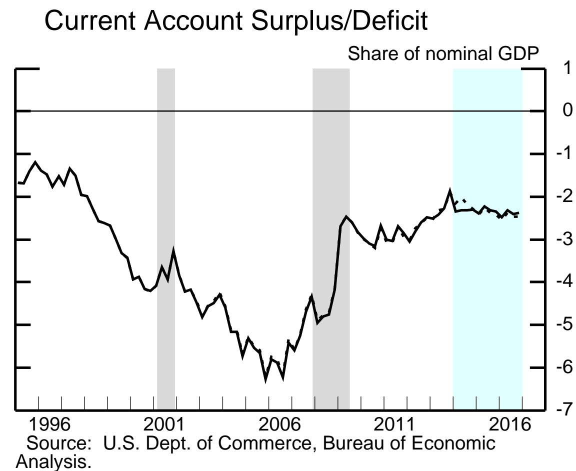
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

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.

continue to expect expenditures on nonresidential structures to rise at only a subdued pace over the forecast period.

The external sector is expected to have a neutral influence on the growth rate of real GDP going forward. The projected strengthening of foreign growth and the anticipated depreciation of the dollar should support solid increases in real exports, which rise 4½ percent in the second half of 2014 before picking up to an average pace of 5¼ percent in 2015 and 2016. (Also see the box "Natural Gas Exports and Manufacturing Competitiveness.") Real imports are expected to rise at an average rate of 4½ percent per year in 2015 and 2016, buoyed by strengthening U.S. activity but held back by the depreciation of the dollar and by falling real oil imports.

THE OUTLOOK FOR THE LABOR MARKET AND INFLATION

Recent Developments and Near-Term Outlook for the Labor Market

The latest data on the labor market suggest that conditions have been improving at a slightly faster pace than we anticipated in the April Tealbook. Total nonfarm payrolls rose at an average pace of 250,000 in April and May, about 40,000 more per month than we had expected. In the household survey, the unemployment rate fell 0.4 percentage point in April to 6.3 percent and then held at that level in May, about ¼ percentage point below our projections in the previous Tealbook. However, the labor force participation rate also fell 0.4 percentage point in April, whereas we had expected relatively little change. This weakness of participation likely implies that the recent fall in unemployment overstates somewhat the improvement in labor market conditions; nevertheless, other indicators of labor underutilization, such as U-5 (which includes marginally attached workers) and the percentage of the labor force working part time for economic reasons, also declined in the past two months.

During the next few months, nonfarm payrolls are forecast to increase 230,000 per month, a slightly faster pace of increase than we had anticipated. We project the unemployment rate to remain at 6.3 percent in June and then to drift down to 6.1 percent by September, while the labor force participation rate is expected to edge up from 62.8 percent in May to 62.9 percent in June and then to remain flat at that level.

Potential GDP and the Natural Rate of Unemployment

As described earlier, data received since the April Tealbook point to a noticeably lower level of real GDP and a significantly lower unemployment rate in the current

Natural Gas Exports and Manufacturing Competitiveness

Over the past decade, U.S. natural gas production (the black line in figure 1 on the following page) has increased sharply as new methods, including hydraulic fracturing and horizontal drilling, have been applied to previously undeveloped shale gas formations. Without infrastructure to export this gas, the gains in U.S. production have pushed down natural gas prices in the United States relative to those in Europe and Asia (see figure 2). Commentators have suggested that the low price of natural gas in the United States compared with prices prevailing abroad could provide an important boost to the competitiveness of U.S. manufacturing. However, the low domestic price of gas has also led to a flurry of projects and proposals to build the necessary infrastructure to support gas exports, thereby allowing gas producers to benefit from higher global prices but potentially eroding the cost advantage of domestic industry. This tradeoff has stoked controversy over whether policymakers should encourage or discourage the development of export facilities.[1]

Notwithstanding this controversy, the United States is already set to become a net exporter of liquefied natural gas (LNG), although the full extent of the increase in exports remains uncertain. Table 1 reviews prospective additions to LNG export capacity around the world over the coming years. In the United States, almost 20 billion cubic meters (bcm) of export capacity is presently *under construction*, representing 3 percent of current U.S. production. *Planned or proposed* export terminals in the United States account for almost half of the slated expansion of global capacity. Constructing export terminals is expensive and it is unlikely that all proposed U.S. export terminals will be completed. Nonetheless, U.S. completions will likely be sizable, and the Department of Energy projects U.S. net exports of natural gas (the red line in figure 1) to rise over the next decade.[2]

Overall, we do not see increased natural gas exports having much negative effect on the competitiveness of domestic manufacturing as a whole. First, empirical evidence suggests that low prices relative to those prevailing abroad are providing a significant competitive boost to only the most intensive users of natural gas, which are listed at the top of table 2. Staff estimates, based on the historical relationship between relative natural gas prices and industrial production across industries, suggest that, all else being equal, lower natural gas prices could eventually boost output and employment in industries that use natural gas most intensively, by as much as 40 percent. However, as table 1 makes clear, these users account for only a small share of industrial production, suggesting that the effects on the U.S. manufacturing sector as a whole of an export-led increase in natural gas prices are likely to be small.[3]

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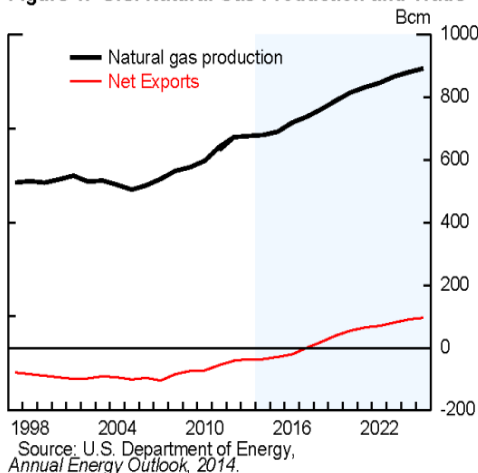
[1] Unlike crude oil, there is no legal ban on exporting natural gas. However, exporting natural gas requires authorization from both the Department of Energy and the Federal Energy Regulatory Commission.

[2] Recent tensions between Ukraine and Russia has raised interest in the possibility of U.S. exports lessening European dependence on Russian natural gas. However, the near-term prospects for U.S. gas exports amount to only 15 percent of Russia's exports to Europe, making it unlikely that the United States will provide much of a substitute anytime soon.

[3] Our discussion is limited to the effect of natural gas prices on downstream industries that use natural gas as an input. The recent energy boom has raised production in industries closely related to the extraction of oil and natural gas, a development which has provided a substantial boost to overall industrial production as discussed in the April Tealbook box "The Effects of the Energy Boom on Industrial Production."

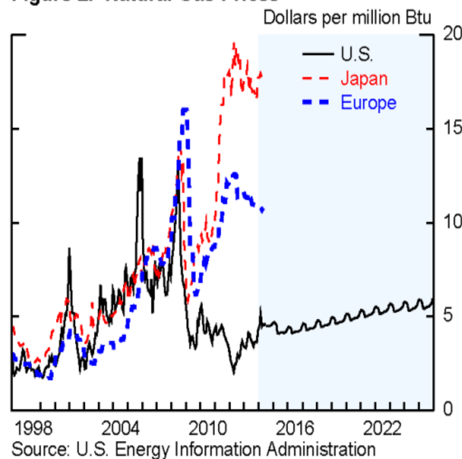
Second, the effect of increased exports on the relative price of natural gas could be fairly modest. In part this reflects the flatness of the U.S. natural gas supply curve, with a small increase in price likely to elicit a large increase in supply. Recent studies suggest that an increase in exports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

Figure 1. U.S. Natural Gas Production and Trade



Source: U.S. Department of Energy, *Annual Energy Outlook, 2014.*

Figure 2. Natural Gas Prices



Source: U.S. Energy Information Administration

Table 1. LNG Export Expansion (bcm per year)

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

Source: *Petroleum Economist.*

Table 2. Natural Gas Intensity

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

*Industrial production
**Thousand btu per $ of value-added in 2006
Source: Federal Reserve Board; U.S. Department of Energy.

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

quarter than we had projected in the April Tealbook. Absent adjustments to our supply-side assumptions, these data would have implied a 0.3 percentage point *wider* GDP gap and a 0.3 percentage point *narrower* unemployment rate gap in the current quarter than in the previous Tealbook. To help resolve some of the tension between these apparently divergent signals for resource utilization, we adjusted our assumptions about both potential output growth and the natural rate of unemployment. We now assume that the natural rate declined slightly faster last year and reached its assumed long-run level of 5¼ percent this quarter, whereas we previously assumed that it would not attain that level until mid-2015. Taken together, the lower unemployment rate and the lower natural rate leave us with an unemployment rate gap in the current quarter that is only 0.1 percentage point narrower than we had anticipated in April. Moreover, we marked down our estimate of potential output growth by ½ percentage point in 2014 and by ¼ percentage point in 2015; our revision in 2014 leaves the output gap in the current quarter unrevised from the April Tealbook. With these revised assumptions, potential output growth steps up from 1¼ percent in 2014 to 1¾ percent in 2015 and to nearly 2 percent in 2016.

The Medium-Term Outlook for the Labor Market

With GDP projected to rise at an above-trend pace throughout the medium term, total payroll employment is projected to increase at an average of 210,000 per month throughout this period, nearly unrevised from the April Tealbook.

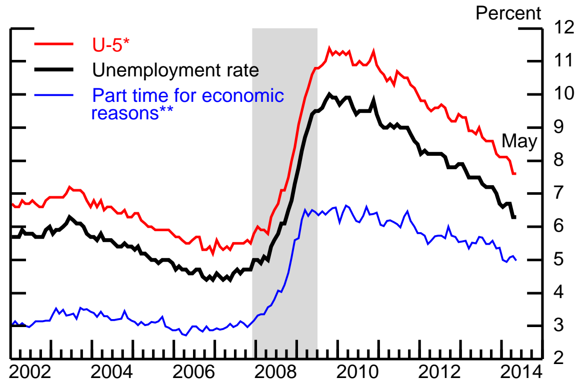
Starting from its somewhat lower value of 6¼ percent in the current quarter, the unemployment rate is projected to fall to 6 percent by the fourth quarter of this year and then to decline about ½ percentage point per year, ending 2016 at 5 percent—nearly ¼ percentage point below the staff's assumption for the natural rate of unemployment at that time and a little below our expectation in the April Tealbook.

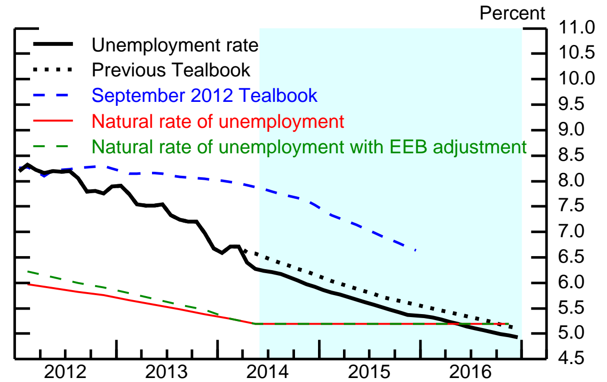
Resource Utilization

We anticipate that the unemployment rate will be about 1 percentage point above our revised estimate of the natural rate in the second quarter; on our revised assumptions for potential GDP, we put the corresponding GDP gap at 2¾ percent. Going forward, resource slack is expected to diminish gradually, and by the middle of 2016, the unemployment rate gap and the output gap are essentially closed. In the manufacturing sector, the current level of capacity utilization is nearly 2¼ percentage points below its long-run average and is projected to rise to its long-run average by the end of 2016.

Labor Market Developments and Outlook (1)

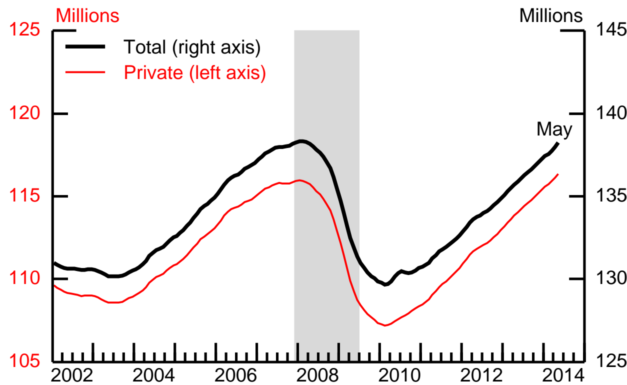
Measures of Labor Underutilization

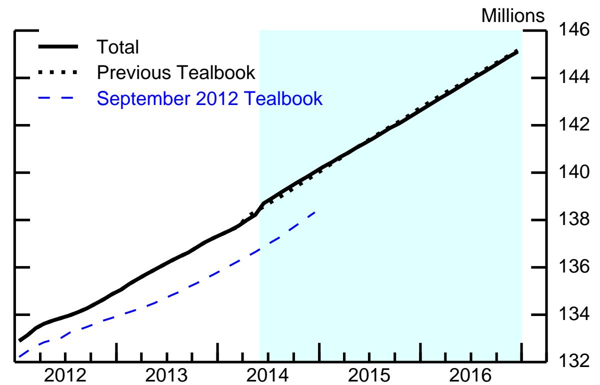




* U-5 measures total unemployed persons plus all marginally attached to the labor force, as a percent of the labor force plus persons marginally attached to the labor force.
** Percent of Current Population Survey employment.
EEB Extended and emergency unemployment benefits.
Source: U.S. Department of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

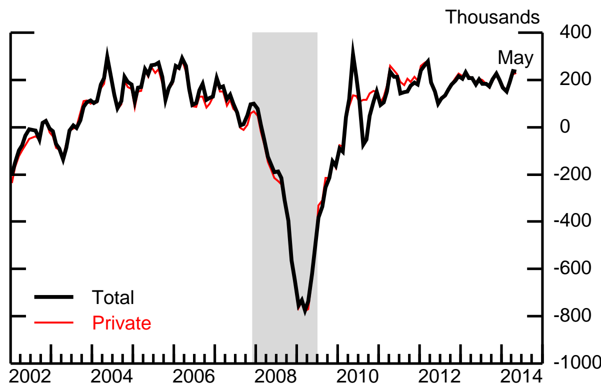
Level of Payroll Employment*

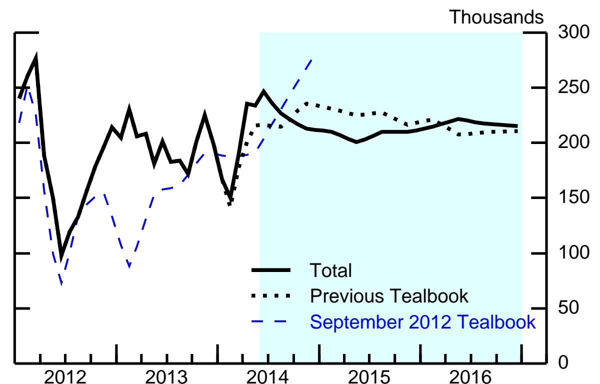




* 3-month moving averages in history; average levels in each quarter during the forecast period.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Change in Payroll Employment*



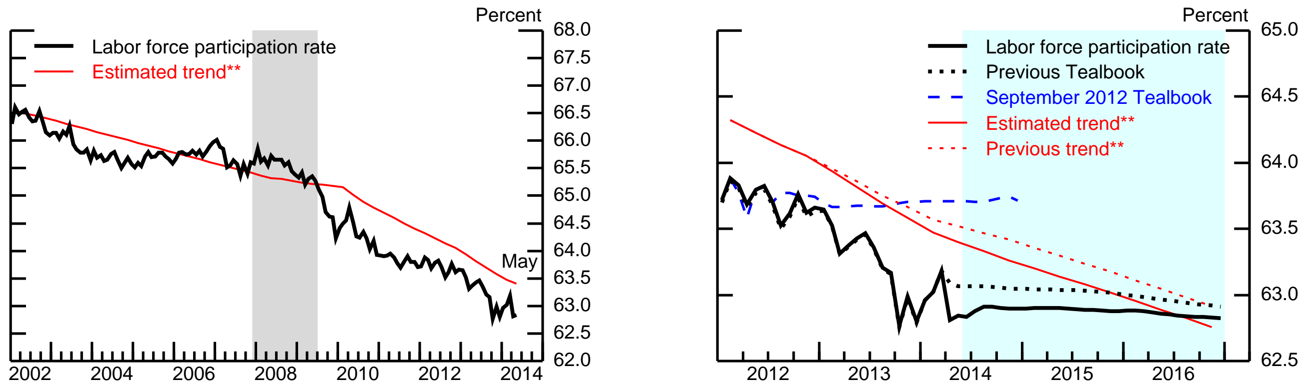


* 3-month moving averages in history; average monthly changes in each quarter during the forecast period.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

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

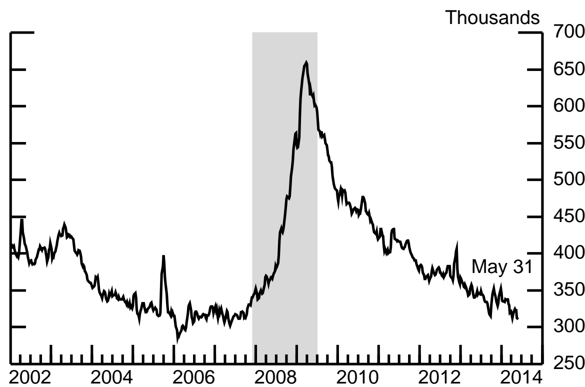
Labor Market Developments and Outlook (2)

Labor Force Participation Rate*



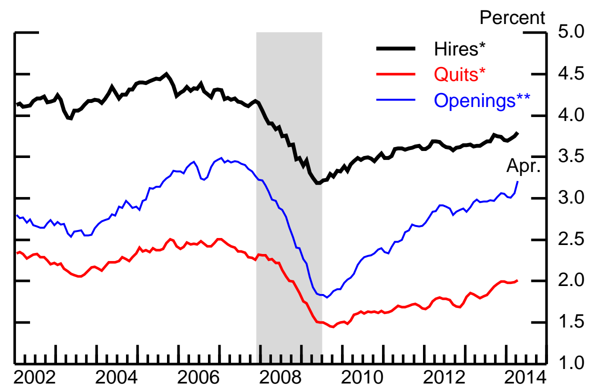
* Published data adjusted by staff to account for changes in population weights.
** Includes staff estimate of the effect of extended and emergency unemployment benefits.
Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

Initial Unemployment Insurance Claims*



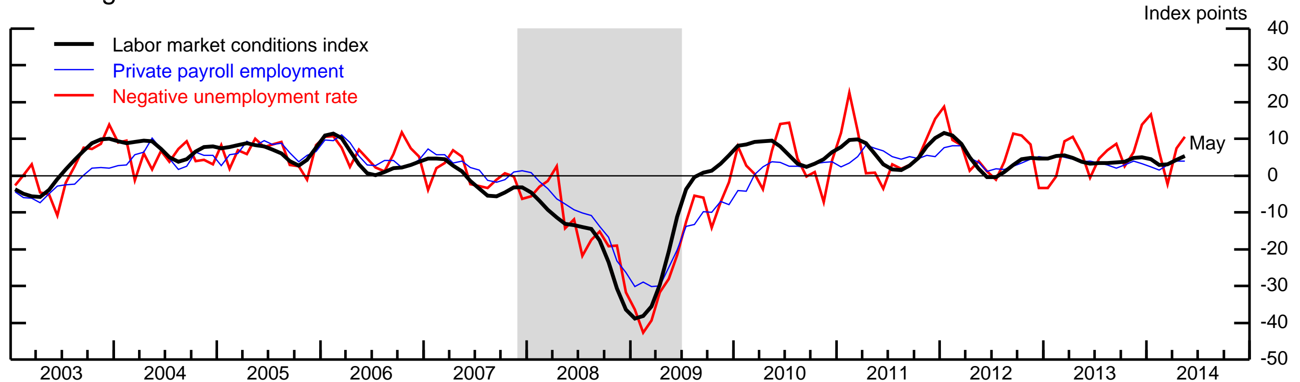
* 4-week moving average.
Source: U.S. Department of Labor, Employment and Training Administration.

Private Hires, Quits, and Job Openings



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

Change in Labor Market Conditions Index and Selected Indicators*



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

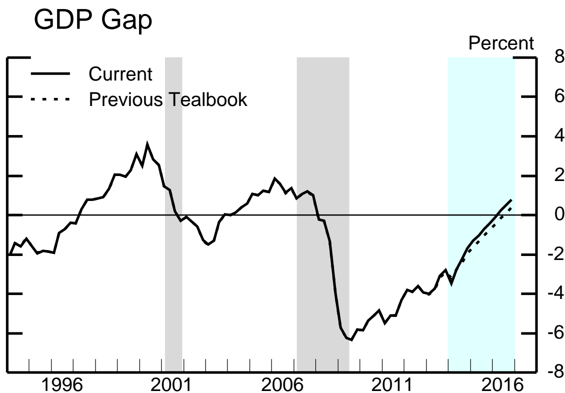
Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

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

Measure	1974-95	1996-2000	2001-07	2008-10	2011-13	2014	2015	2016
Potential real GDP	3.1	3.4	2.6	1.9	1.5	1.3	1.7	1.9
Previous Tealbook	3.1	3.4	2.6	1.9	1.5	1.8	2.0	1.9
Selected contributions[1]								
Structural NFB labor productivity[2]	1.6	2.7	2.6	1.8	1.2	1.0	1.7	1.8
Previous Tealbook	1.6	2.7	2.6	1.8	1.2	1.4	1.8	1.8
Structural hours	1.5	1.0	.7	.2	.6	.6	.4	.4
Previous Tealbook	1.5	1.0	.7	.2	.6	.7	.6	.3
Labor force participation	.4	.0	-.3	-.4	-.5	-.4	-.4	-.4
Previous Tealbook	.4	.0	-.3	-.4	-.5	-.3	-.4	-.4
Memo:								
GDP gap[3]	-1.8	2.5	1.0	-4.8	-2.8	-1.7	-.4	.8
Previous Tealbook	-1.9	2.5	1.0	-4.8	-2.9	-2.0	-.7	.4

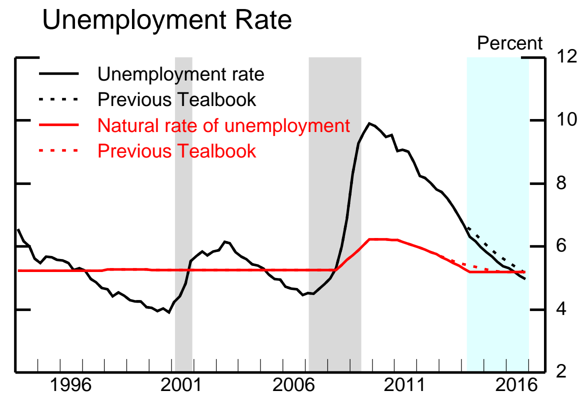
Note: For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.
1. Percentage points.
2. Because of substantial revisions from the Bureau of Economic Analysis to productive investment as part of the latest comprehensive revision, staff estimates of the components of structural productivity are not available for this Tealbook.
3. Percent difference between actual and potential GDP in the final quarter of the period indicated. A negative number indicates that the economy is operating below potential.

GDP Gap



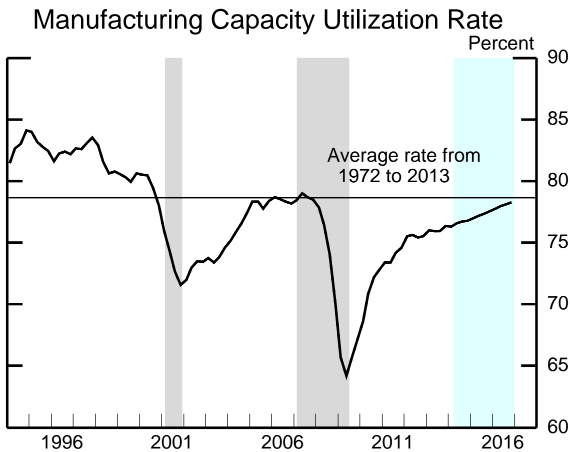
Note: The GDP gap is the percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential.
Source: U.S. Dept. of Commerce, BEA; staff assumptions.

Unemployment Rate



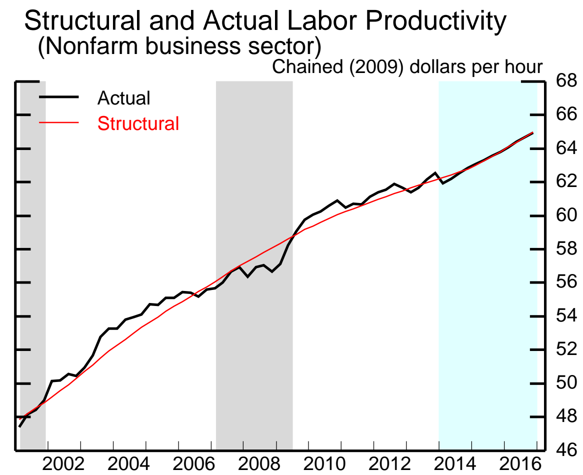
Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

Manufacturing Capacity Utilization Rate



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

Structural and Actual Labor Productivity
(Nonfarm business sector)



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

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

The Outlook for the Labor Market

Measure	2013	2014	2014		2015	2016
			H1	H2		
Output per hour, nonfarm business[1]	1.4	.5	-1.0	2.0	1.5	1.8
Previous Tealbook	1.4	.9	.0	1.9	1.6	1.9
Nonfarm private employment[2]	197	218	214	223	204	205
Previous Tealbook	197	214	199	229	224	202
Labor force participation rate[3]	62.8	62.9	62.9	62.9	62.9	62.8
Previous Tealbook	62.8	63.1	63.1	63.1	63.0	62.9
Civilian unemployment rate[3]	7.0	6.0	6.3	6.0	5.4	5.0
Previous Tealbook	7.0	6.2	6.6	6.2	5.6	5.1

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

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

Measure	2013	2014	2014		2015	2016
			H1	H2		
PCE chain-weighted price index	1.0	1.5	1.7	1.4	1.4	1.5
Previous Tealbook	1.0	1.6	1.5	1.6	1.5	1.6
Food and beverages	.8	2.0	2.4	1.5	1.1	1.3
Previous Tealbook	.8	1.7	2.0	1.4	1.3	1.4
Energy	-1.5	1.4	3.1	-.2	-1.6	-.8
Previous Tealbook	-1.5	2.3	2.8	1.7	-1.2	-.9
Excluding food and energy	1.2	1.5	1.5	1.4	1.6	1.7
Previous Tealbook	1.2	1.5	1.4	1.6	1.7	1.8
Prices of core goods imports[1]	-1.1	1.4	1.8	1.1	1.2	1.3
Previous Tealbook	-1.1	1.3	1.1	1.5	1.3	1.3

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

The Outlook for Prices and Compensation

After rising at an annual rate of 1½ percent in the first quarter, total PCE prices are expected to increase 2 percent in the current quarter. Similarly, core PCE price inflation is expected to rise from 1¼ percent last quarter to 1¾ percent in the second quarter. These second-quarter forecasts are about ¼ percentage point higher than in the April Tealbook, with the small revision reflecting data surprises in categories from which we tend to take little signal, including an outsized March increase in nonmarket prices and an April jump in airfares and motor vehicle prices. In the second half of this year, both total and core PCE price inflation are anticipated to step down to an annual rate of 1½ percent, with part of the slowing attributable to residual seasonality in the latter half of the year.[2]

Movements in retail energy prices have been subdued of late. Electricity prices retreated in April after having been boosted, on net, by strong demand stemming from unseasonably cold weather in preceding months; other energy prices have been fairly quiescent. Much as in the April Tealbook, we project that consumer energy prices will increase at an average annual rate of nearly 2 percent in the second and third quarters, down from an increase of 4 percent in the first quarter. We continue to expect modest declines in PCE energy prices in 2015 and 2016, reflecting the downward trajectory of futures prices for crude oil and natural gas.

By contrast, retail food prices moved up at a brisk pace over the three-month period ending in April, partly reflecting lower pork supplies that have been constrained by a virus that has afflicted many herds. However, recent readings on spot prices suggest that upward pressure on farm prices has begun to wane. Accordingly, we look for PCE food price inflation to step down from an annual rate of 2½ percent in the first half of this year to 1½ percent in the second half. In 2015 and 2016, we project that PCE food prices will rise at a pace slightly below core inflation.

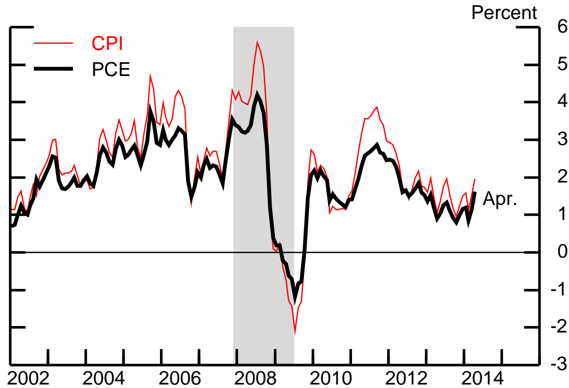
Core import prices have turned upward in recent quarters after having fallen through much of 2013. In the first half of this year, core import price inflation is now projected to come in at an annual rate of 1¾ percent; it is then expected to step down to

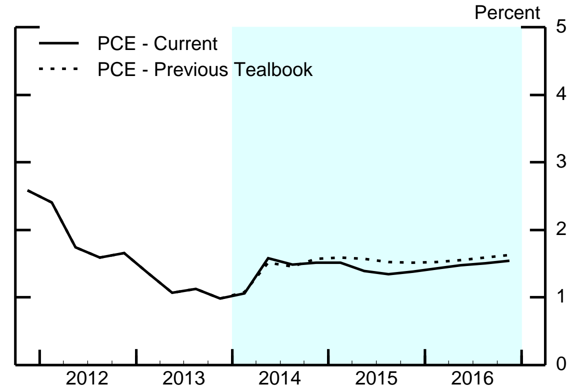
[2] As Ekaterina Peneva showed in her nonfinancial briefing on June 2, over the past decade PCE price inflation has tended to slow somewhat over the second half of the year—a pattern that we think arises, in part, because the BEA computes the PCE price aggregate using highly disaggregated price series that are often not seasonally adjusted.

Inflation Developments and Outlook (1)

(Percent change from year-earlier period)

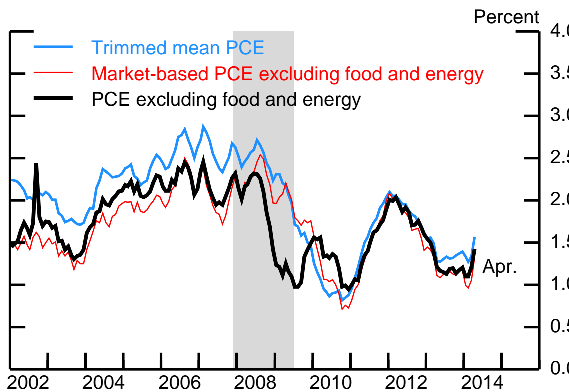
Headline Consumer Price Inflation

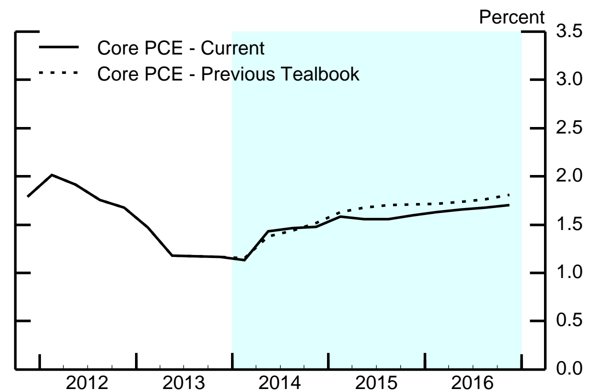




Source: For CPI, U.S. Department of Labor, Bureau of Labor Statistics; for PCE, U.S. Department of Commerce, Bureau of Economic Analysis.

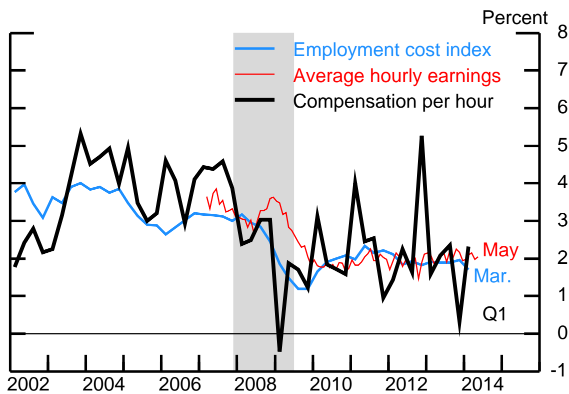
Measures of Underlying PCE Price Inflation

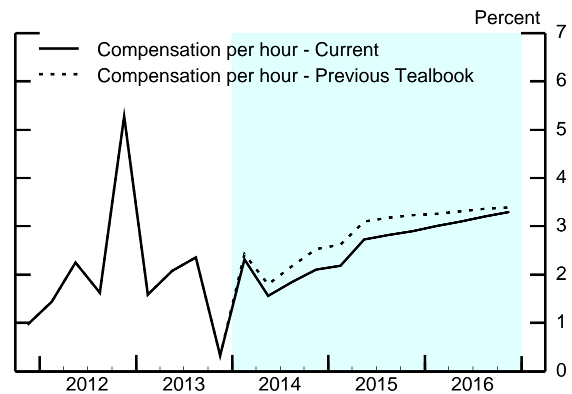




Source: For trimmed mean PCE, Federal Reserve Bank of Dallas; otherwise, U.S. Department of Commerce, Bureau of Economic Analysis.

Labor Cost Growth (Private Industry)





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

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

1 percent in the second half, held back by lagged effects from previous declines in commodity prices. In 2015 and 2016, we project that core import prices will rise only about 1¼ percent per year, a pace that is in line with flat commodity prices and our assumed pace of dollar depreciation. This projection implies that import prices will have little effect on PCE price inflation throughout the medium term.

Readings on longer-term inflation expectations have remained stable. The final May reading on median 5-to-10-year-ahead inflation expectations from the Michigan survey stood at 2.8 percent, within the relatively narrow range seen in recent years. Expectations for PCE price inflation over the next 10 years, as measured by the Survey of Professional Forecasters, were unchanged at 2 percent in the second quarter. Similarly, TIPS-based measures of longer-term inflation compensation were little changed, on balance, since the April Tealbook.

Based on a reassessment of several of our empirical models, we have nudged down our estimate of where PCE price inflation would settle in the absence of economic slack and if the current level of longer-run inflation expectations were maintained. On current evidence, we put that level at around 1¾ percent rather than the 1.9 percent that was implicit in our previous projection.[3]

Amid stable long-run inflation expectations and with gradually diminishing margins of slack, core PCE inflation is expected to edge upward at a slightly slower pace than we anticipated in the April Tealbook, from 1½ percent in 2014 to 1¾ percent in 2016. Given the slight downward trajectory for energy prices, total PCE inflation is projected to run at 1½ percent, a bit below core inflation, over most of the medium term. Therefore, even though we expect the output gap to be closed one quarter earlier in 2016 than we had previously thought, total PCE inflation at the end of the medium term is expected to remain ½ percentage point below the Committee's longer-run objective of 2 percent.

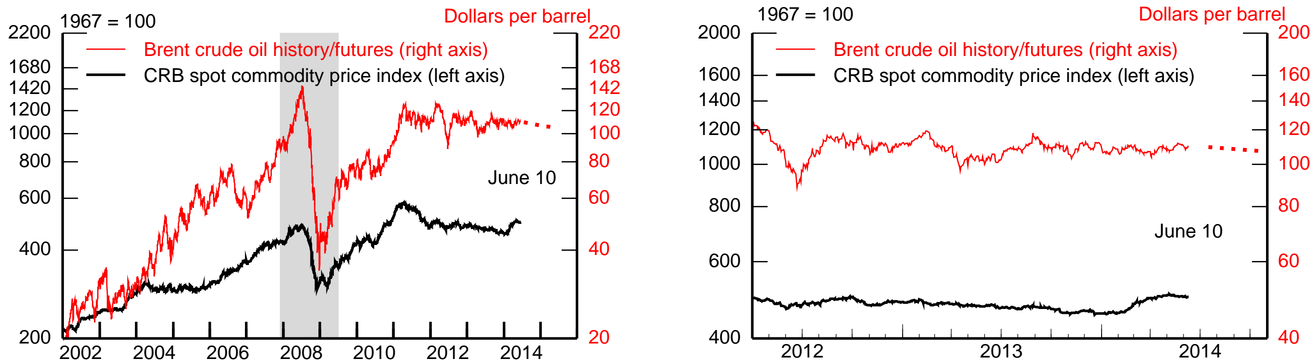
The incoming data suggest that labor compensation has continued to rise at a modest pace. Compensation per hour in the nonfarm business sector is estimated to have risen at an annual rate of 2½ percent in the first quarter of the year—a bit softer than we had anticipated in April. Other measures of compensation have shown somewhat slower

[3] This reassessment was discussed by Deb Lindner in a memo sent to the FOMC on June 4 titled "Why Is Inflation Persistently Low in the Judgmental Forecast?"

Inflation Developments and Outlook (2)

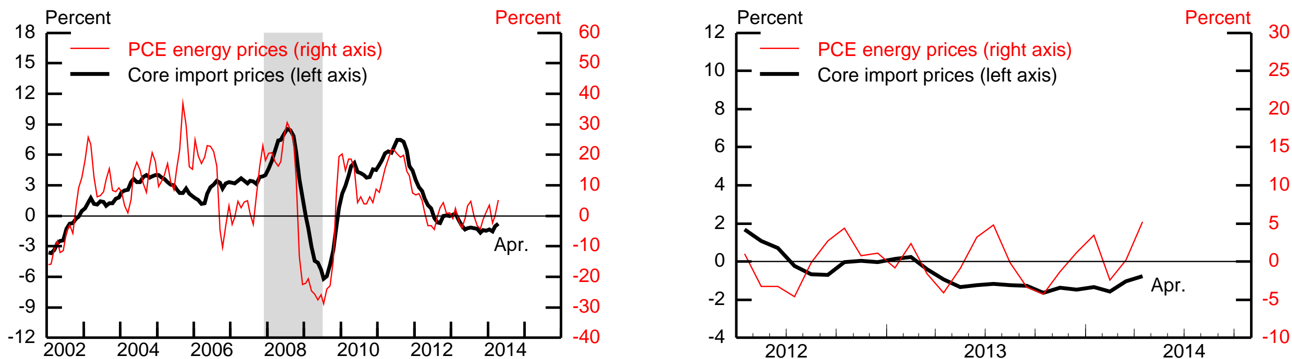
(Percent change from year-earlier period, except as noted)

Commodity and Oil Price Levels



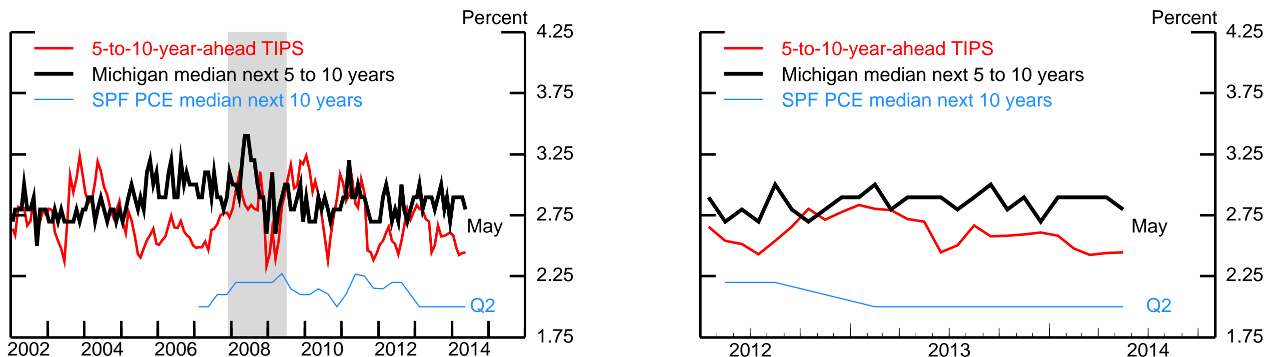
Note: Futures prices (dotted lines) are the latest observations on monthly futures contracts.
Source: For oil prices, U.S. Department of Energy, Energy Information Agency; for commodity prices, Commodity Research Bureau (CRB).

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.

increases of late: The employment cost index (ECI) for private-industry workers rose at an annual rate of only 1 percent in the first quarter of the year, and average hourly earnings has continued to post moderate increases through May after increasing at an annual rate of 2¼ percent in the first quarter. We expect the tightening of the labor market over the medium term to gradually push up the rate of increase in compensation per hour to 3¼ percent in 2016. These projected increases are a little slower than we had anticipated in April, reflecting the lower trend in price inflation.

The Long-Term Outlook

We have extended the staff's forecast beyond the medium term using the FRB/US model and our assumptions about long-run supply-side conditions, fiscal policy, and other factors. The contour of the long-term outlook depends on the following key assumptions:

- The federal funds rate continues to be set according to the prescriptions of an inertial version of the Taylor (1999) rule. This policy rule now assumes a long-run equilibrium level of the nominal federal funds rate of 3¾ percent, revised down from 4 percent as of the previous Tealbook. (See the box "Changes to the Longer-Run Outlook" for the rationale for this change.)

- 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 expected to be completed by 2021.

- Risk premiums on corporate equities continue to decrease, on balance, toward their longer-run levels, while those on corporate bonds are slightly below their longer-run levels at the start of the extended outlook.

- The federal budget deficit begins to widen after 2017, primarily reflecting fast-rising transfer payments for retirement and health-care programs. The ratio of federal debt to GDP is above 70 percent in 2017 and edges up thereafter.

- The real foreign exchange value of the dollar moves down about 1¼ percent in 2017—the same pace as in 2016—and stays constant thereafter. The price of crude oil holds steady in real terms. Foreign real GDP rises at an annual rate of about 3 percent from 2017 to 2020.

- The natural rate of unemployment is 5¼ percent, and potential GDP rises around 2 percent per year on average from 2017 to 2020.

Changes to the Longer-Run Outlook

In this Tealbook, we have lowered our assumption for the annual rate of real GDP growth in the longer run from 2¼ percent to 2 percent.[1] We have also lowered our assumptions for the longer-run values of interest rates, reducing the nominal federal funds rate from 4 percent to 3¾ percent and the nominal 10-year Treasury yield from 4¾ percent to 4½ percent. Because we continue to assume that inflation will be 2 percent in the longer run, in line with the Committee's stated objective, these changes in nominal interest rates reflect a reduction in equilibrium real rates.

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

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

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

Outside Forecasts of Real GDP and the Real Federal Funds Rate

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

CBO Congressional Budget Office.
a. Assumes PCE inflation will be 0.3 percentage point lower than CPI inflation.
b. Assumes the federal funds rate will be 0.2 percentage point higher than the three-month Treasury-bill yield.

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

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

averaged 2 percent. On our analysis, most of the slowdown in potential GDP growth relative to that earlier period reflects demographic factors, including lower population growth and declines in labor force participation associated with baby-boomer retirements. Standard models predict that lower potential output growth will lead to lower real interest rates, mostly because, other factors held constant, less investment is required when the workforce is growing less rapidly.

We also give some weight to the possibility that households' desired rate of saving may be higher than in the past. It is possible, for example, that the financial crisis has left a lasting impression on households, raising risk aversion and thus leading to an increased desire to save and less of a desire to spend, which would put downward pressure on interest rates. Rising income inequality may also work to boost the aggregate saving rate of the economy if high-income households have greater saving rates than lower-income households.

International considerations may mitigate the effects of these domestic developments. In a recent study, the IMF presents evidence that over the past 15 years long-term interest rates in advanced economies have moved together to a much greater degree than in earlier periods, suggesting that the integration of global financial markets may be more important than in the past and that U.S. interest rates may depend more on global GDP growth than domestic GDP growth.[3] Our forecast is that longer-run world output growth will be about the same as in the pre-crisis period, reflecting the balancing of some offsetting factors: While the growth rates of the United States, other advanced economies, and China are expected to slow, that slowing is about offset by the increasing importance of China and other fast-growing economies. Perhaps even more important, if high-export countries such as China succeed in rebalancing their economies toward more domestic consumption, there could be some upward pressure on world interest rates.

On balance, we conclude that real interest rates are likely to be somewhat lower in the longer run than we had previously judged, with the slower expected pace of U.S. potential GDP growth playing the most significant role in our reassessment.

Finally, we should emphasize the high degree of uncertainty around these estimates. One study reports a standard error around a real-time estimate of the long-run real federal funds rate of around 2½ percentage points, so that a 70 percent confidence interval around our estimate of 1¾ percent would run from negative ¾ percent to 4¼ percent.[4] That study suggests trend output growth can be estimated somewhat more precisely, with a standard error of just over ½ percentage point. Uncertainty about trend output growth and equilibrium interest rates 10 years ahead would be greater than suggested by these point-in-time estimates.

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[3] International Monetary Fund (2014), "Perspectives on Global Real Interest Rates," chap. 3 in *World Economic Outlook* (Washington: IMF, April), www.imf.org/external/Pubs/ft/weo/2014/01.

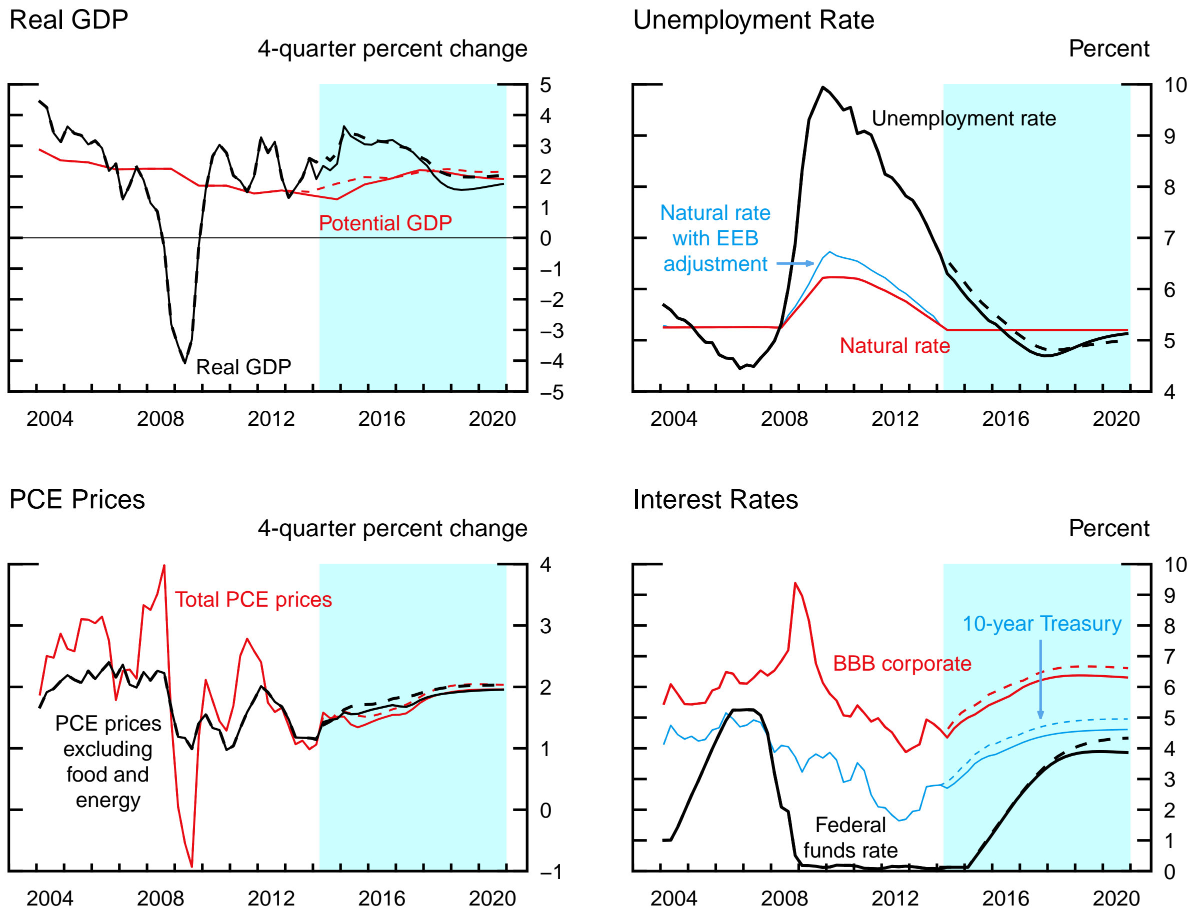
[4] Thomas Laubach and John C. Williams (2003), "Measuring the Natural Rate of Interest," *Review of Economics and Statistics,* vol. 85 (November), pp. 1063–70.

The Long-Term Outlook

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

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

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

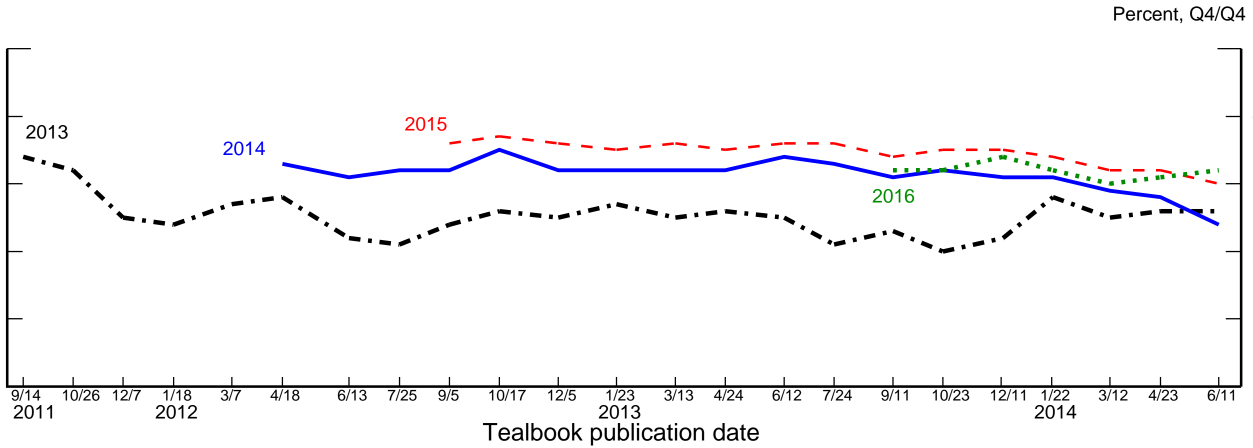


Note: In each panel, shading represents the projection period, and dashed lines are the previous Tealbook.

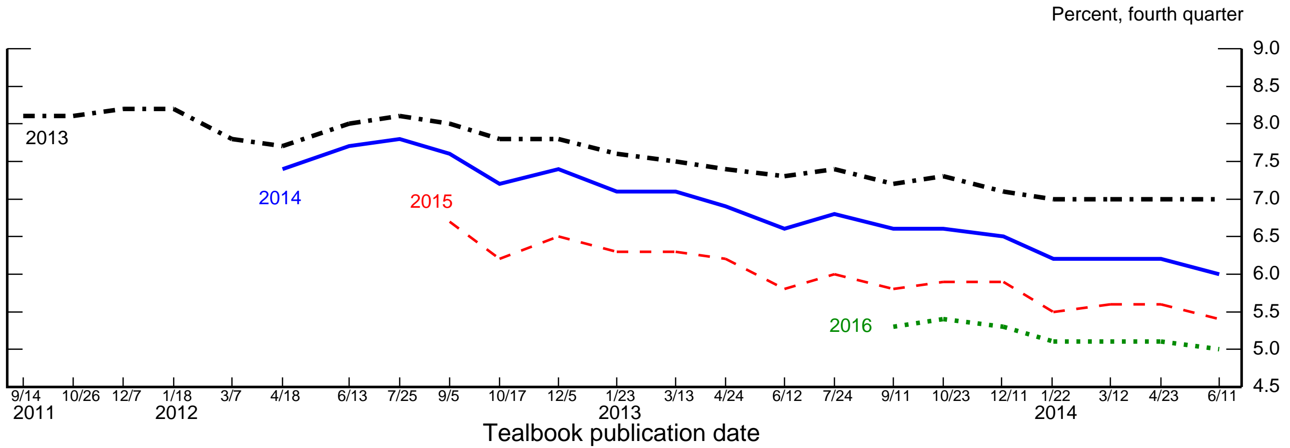
With the federal funds rate gradually rising, real GDP growth slows to 2½ percent in 2017. The unemployment rate moves down further and is ½ percentage point below its natural rate at the end of 2017. As monetary policy accommodation continues to be gradually withdrawn, gains in real GDP slow to below their potential pace, causing the unemployment rate to move back toward its natural rate. As discussed earlier in the Outlook for Prices and Compensation section, inflation is projected to still run below the Committee's 2 percent objective in 2016. With resource utilization projected to remain high for several years, longer-run inflation expectations edge higher and PCE price inflation reaches the FOMC's longer-run inflation objective of 2 percent late in the decade.

Evolution of the Staff Forecast

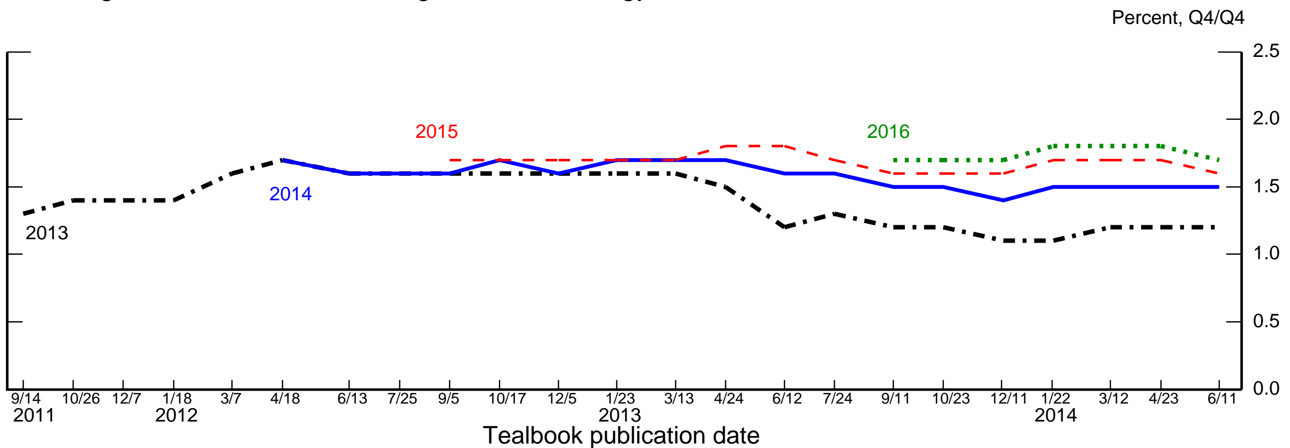
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy



International Economic Developments and Outlook

Foreign real GDP growth slowed from an annual rate of 2½ percent in the fourth quarter of last year to just 2 percent in the first quarter. This deceleration of activity reflected several factors: surprisingly weak exports by many economies; slow domestic demand growth in China, which spilled over to other economies, particularly in emerging Asia; severe winter weather in Canada; and continued poor economic performance in Latin America.

We see foreign growth coming out of its first-quarter pothole, rising to 2½ percent in the current quarter and further to nearly 3¼ percent in the second half of this year, as Canada's economy bounces back, policy in China becomes more supportive, and U.S. economic activity rebounds. The overall tone of recent indicators is broadly consistent with this outlook. In particular, exports appear to be rebounding in many countries, suggesting a pickup in global activity. In 2015 and 2016, foreign GDP growth is projected to remain at 3¼ percent, a bit above its trend pace, underpinned by strengthening U.S. growth, continued accommodative monetary policies, and diminished drag from fiscal consolidation in Europe. We marked down foreign growth ¼ percentage point in the current quarter, but the forecast is little changed thereafter.

We are attentive to several risks to our outlook. On the downside, growth in China could slow further and perhaps quite abruptly, possibly in response to either a bust in the country's property sector, where signs of strains are emerging, or a run on the shadow banking sector. Such a slowdown could have damaging spillovers to other economies. Additionally, notwithstanding recent encouraging indicators, the surprisingly widespread slump in exports and activity in the first quarter may prove more persistent than we currently anticipate. On the upside, it is also possible that the factors that depressed activity earlier this year, including weak global trade, might reverse more vigorously than we anticipate, paving the way for a stronger rebound of economic activity, particularly in the emerging market economies (EMEs). We explore the implications of a stronger EME growth path in the Risks and Uncertainty section.

Encouragingly, inflation appears to have edged up in the current quarter in most advanced foreign economies (AFEs) from earlier low readings, partly reflecting the fading effect of falling energy prices in some countries. In the euro area, however,

inflation has remained surprisingly weak, prompting the European Central Bank (ECB) to announce additional stimulus. In the EMEs, we estimate that inflation has remained subdued on average. EME monetary policies were generally on hold; a major exception is Mexico, where the central bank cut its policy rate to support growth.

ADVANCED FOREIGN ECONOMIES

Real GDP in the AFEs rose 2 percent in the first quarter, the same as in the previous quarter, with a pickup in growth in Japan and the United Kingdom largely offsetting a marked slowdown in Canada. We see AFE GDP growth at 1¾ percent in the current quarter, restrained by a large contraction in Japan following the recent consumption tax hike. As Japan's economy bounces back, we project AFE growth to rise to about 2¼ percent in the second half of this year and to remain near this rate through 2016. This projection is little changed relative to the April Tealbook.

Recent data suggest that underlying AFE inflation (excluding the effects of Japan's consumption tax increase) remained just above 1 percent in the current quarter. We expect AFE inflation to rise to nearly 1¾ percent by the end of the forecast period, as output gaps narrow. With growth projected to be moderate and inflation subdued, monetary policy in the AFEs is expected to remain highly accommodative throughout the forecast period. Disappointing euro-area inflation readings and recent policy actions by the ECB, including a decrease in its policy rate, prompted us to postpone liftoff of the ECB's main policy rate beyond the forecast horizon. In contrast, given relatively hawkish signals from Bank of Japan (BOJ) officials, we now expect the BOJ to wait until early 2015 before further easing policy. Our monetary policy assumptions for the other AFEs are unchanged.

Euro Area

Euro-area real GDP expanded 0.7 percent in the first quarter, half the rate estimated in the April Tealbook, as exports were surprisingly weak. We expect exports to improve and domestic demand to strengthen as well, supporting a step-up in growth to 1½ percent this quarter. In April, industrial production rose in a number of countries, and retail sales for the region picked up. Additionally, both the euro-area composite PMI and economic sentiment through May were above their first-quarter averages. Looking ahead, we project that GDP growth will remain at 1½ percent over the second half of this year and then rise to 2 percent by the end of 2016, as the pace of fiscal consolidation

diminishes, financial and credit conditions normalize further, and monetary policy remains accommodative.

Euro-area inflation remained weak as core inflation was subdued and consumer energy prices continued to fall, and we marked down our estimate this quarter to just ½ percent. As energy prices bottom out and as the output gap narrows, inflation should rise, but to a still-subdued 1½ percent rate by late 2015 and in 2016.

At its June meeting, the ECB lowered its main refinancing rate 10 basis points to 0.15 percent, cut the rate on its deposit facility to negative 0.10 percent, and announced additional credit-easing measures that are detailed in the box "ECB Policy Actions and Options." With the ECB acting somewhat more decisively than anticipated to ease policy, we now expect the first policy rate hike in 2017 instead of mid-2016. Relative to the April Tealbook, the policy rate at the end of the forecast period is 60 basis points lower. Our projections incorporate a slight boost to inflation and growth in 2015 as a result of the ECB's looser policy stance.

United Kingdom

Real GDP in the United Kingdom expanded at a robust 3.3 percent rate in the first quarter, as strength in domestic demand more than offset a contraction in exports. Indicators for the second quarter, including industrial production in April and PMI readings through May, point to continued solid growth. Accordingly, we project that GDP will rise 3 percent this year before normalizing to a still-solid 2½ percent pace in 2015 and 2016. We estimate that inflation stepped up to 1½ percent this quarter and should rise a bit more as the output gap closes, with inflation settling at nearly 2 percent in 2015 and 2016.

The unemployment rate fell to 6.6 percent in the three months through April, taking it further below the 7 percent threshold announced in the initial forward guidance issued by the Bank of England (BOE) last year. Nonetheless, the BOE has been signaling that slack remains sufficient to keep its policy rate low for some time, consistent with the updated guidance issued in February that it will base its policy decisions on broader measures of economic slack. Accordingly, we still expect its first rate hike to occur in early 2015. With the ongoing surge in house prices, the BOE is considering additional macroprudential measures to contain financial stability risks.

ECB Policy Actions and Options

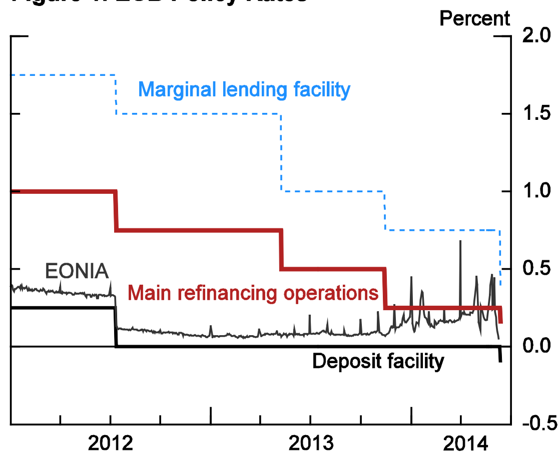
Amid concerns about low inflation and weak bank lending in the euro area, the Governing Council of the European Central Bank (ECB) decided to lower its policy rates at its meeting on June 5 and introduced measures to stimulate lending by banks. Overall, these measures appear to have been a bit more accommodative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

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

To spur bank lending to nonfinancial corporations and households, the ECB also announced Targeted Longer-Term Refinancing Operations (TLTROs). All TLTROs will mature in September 2018, with banks paying an interest rate that is fixed at the MRO rate at the time of take-up plus 10 basis points. In the first two TLTROs, scheduled for September and December 2014, banks can borrow up to 7 percent of their total eligible loans outstanding on April 30, 2014.[1] In addition, in a series of quarterly TLTROs from March 2015 to June 2016, banks will be able to borrow amounts that can cumulate to three times the increase in their net lending. The TLTRO program is similar to the Bank of England's funding-for-lending scheme, which is thought to have had only a limited effect on U.K. bank lending. However, the TLTROs' fixed rate over a four-year term is seen as reinforcing the ECB's forward guidance that its policy rates will remain low for an extended period of time.

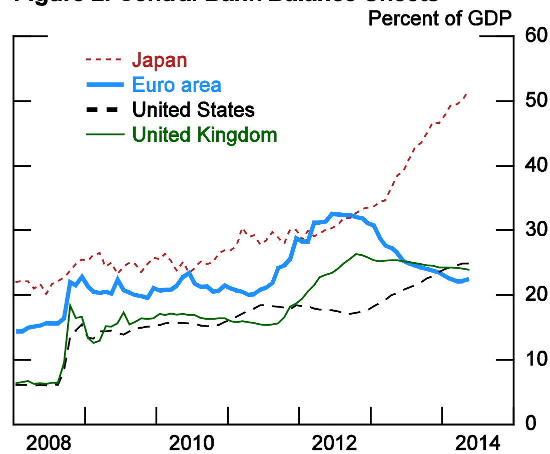
To provide further short-term liquidity, the ECB also announced that its weekly MROs and three-month Longer-Term Refinancing Operations (LTROs) will continue as fixed-rate tender procedures with full allotment until at least December 2016. The ECB also suspended sterilization of outstanding liquidity,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

Figure 1. ECB Policy Rates



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

Figure 2. Central Bank Balance Sheets



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

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

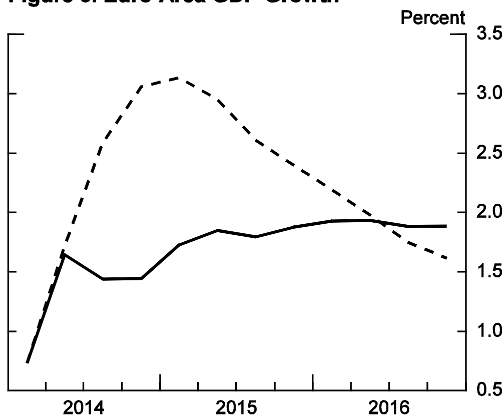
Although markets had come to anticipate that the ECB would increase accommodation in June, the extent of the policy changes was likely on the higher side of expectations. Euro-area bond yields fell, especially for bonds from peripheral countries; the euro depreciated initially but ended the day a bit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

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

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

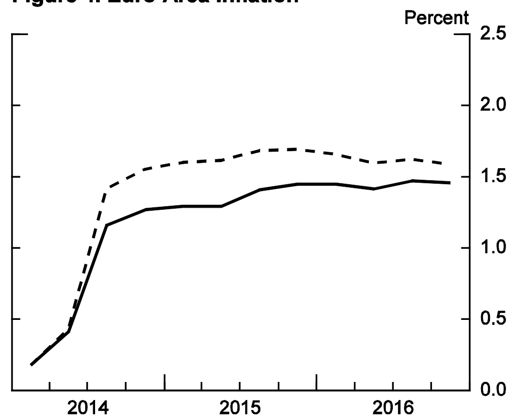
These results suggest that the ECB could provide significant further stimulus to the euro-area economy and a modest boost to euro-area inflation by undertaking asset purchases on a significant scale. However, because of political difficulties surrounding purchases of sovereign bonds, it is more likely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

Figure 3. Euro-Area GDP Growth



Note: Dashed line represents alternative scenario with ECB asset purchases. Solid line represents the baseline.
Source: Staff forecasts.

Figure 4. Euro-Area Inflation



Note: Dashed line represents alternative scenario with ECB asset purchases. Solid line represents the baseline.
Source: Staff forecasts.

Japan

In Japan, real GDP growth increased sharply to 6.7 percent in the first quarter, more than double the pace estimated in the April Tealbook, as exports soared and as private consumption and residential investment surged ahead of April's consumption tax hike. We project that the reversal of spending associated with the tax hike will result in a 4½ percent GDP contraction this quarter. In April, retail sales plunged and the composite PMI fell into contractionary territory for the first time since late 2012. As the effect of the tax hike dissipates and previously announced fiscal stimulus measures are implemented, real GDP should begin expanding again, rising nearly 2 percent in the second half of the year. Subsequently, we expect growth to slow to 1 percent over the remainder of the forecast period, partly reflecting drag from another tax increase scheduled for October 2015.

Inflation is estimated to have jumped to an 8½ percent annual rate in the current quarter, although, excluding the direct effect of the consumption tax hike, the rate likely remained near the ½ percent pace recorded in the first quarter. Going forward, as the output gap narrows and inflation expectations increase further, we see inflation rising to 1½ percent by the end of 2016. Many analysts, including ourselves, had expected the BOJ to step up its pace of asset purchases this year to push inflation toward its 2 percent target. However, with the BOJ reiterating that it sees inflation on track to reach its target next year, we now think that it will increase its purchases only in early 2015. Consistent with this less accommodative monetary policy stance, we marked down slightly our forecast for growth and inflation in 2015.

Canada

Canadian real GDP growth dropped from 2.7 percent in the fourth quarter of 2013 to 1.2 percent in the first quarter of 2014, a bit below our previous estimate. Exports fell and fixed investment, notably residential construction, continued to contract, reflecting severe winter weather as well as weak U.S. growth. As these restraints fade, we expect growth to step up to 3 percent in the current quarter, consistent with recent indicators: Exports were above the first-quarter level in April, and the manufacturing PMI remained solid through May. Looking ahead, we expect growth to average almost 2¾ percent over the remainder of the forecast period.

Surprisingly strong April data on Canadian consumer prices, especially for energy, led us to mark up our forecast of second-quarter inflation by ½ percentage point

to 2¼ percent. As the boost from energy prices subsides, inflation should moderate to 1¾ percent in the second half of 2014 before edging up toward 2 percent over the forecast period as the output gap closes. Against the backdrop of still-moderate growth and inflation, we continue to expect the Bank of Canada to keep its policy rate at 1 percent until the third quarter of 2015.

EMERGING MARKET ECONOMIES

Real GDP growth in the EMEs slowed from an annual rate of 3¼ percent in the fourth quarter of 2013 to 2¼ percent in the first quarter, ½ percentage point below our April Tealbook estimate. We judge the factors that held down EME growth to be largely transitory and expect growth to rise to a still-subdued 3¼ percent rate this quarter and more robustly to a near-trend 4¼ percent by the end of this year, as current and prospective policies in China provide more support and activity in the United States rebounds. EME growth edges up to 4½ percent over the remainder of the forecast period. Relative to the previous Tealbook, this forecast is ¼ percentage point lower in the current quarter, reflecting our response to downside surprises in the first quarter, and unchanged further out.

Inflation in the EMEs likely remained at 2¾ percent in the second quarter but is expected to rise to 3½ percent later this year and settle at just below this rate thereafter. The Bank of Mexico cut its policy rate to support growth. Despite continued high inflation, the Central Bank of Turkey also cut its policy rate, citing improved global risk sentiment; the cut partly unwinds the large rate increase it implemented in January to contain financial pressures. In contrast, policy was tightened in Colombia and the Philippines to contain inflation.

China

After slowing to a 5½ percent pace last quarter, economic activity in China is estimated to have accelerated modestly in the second quarter. A first-quarter drop in exports, which was a major factor behind the step-down in GDP growth, was largely reversed in April and May. Other activity indicators were more subdued—industrial production accelerated only a little from its first-quarter pace, while growth of retail sales and investment fell slightly. A notable rise in the official PMI in May, however, suggests that the pace of manufacturing activity picked up more recently. On balance, we project growth to rise to a still-subdued 6¼ percent rate in the current quarter.

Chinese authorities have thus far refrained from announcing a large-scale economic stimulus program. Instead, they have introduced a steady stream of modest, targeted measures, including lower reserve requirement ratios for some banks, accelerated fiscal spending, increased investment in certain infrastructure projects, tax rebates to exporters, and easier borrowing terms for first-time homebuyers. The cumulative effect of these measures should help push growth up to 7½ percent in the second half of the year. Rising exports, supported in part by the depreciation of the renminbi since the beginning of the year, should also boost growth. For the year as a whole, however, we expect growth to be 7 percent—short of the authorities' 7½ percent target—and to remain near that level throughout the forecast period.

Given the pronounced slowing of the Chinese economy in recent years, coupled with worrisome indications of strains in lending and property markets, the uncertainties around this outlook are wide. In particular, property price increases have been moderating in recent months, while real estate transactions have fallen sharply and inventories of vacancies and unfinished construction projects have risen, creating the potential for a sharp near-term correction. That said, we continue to believe that a collapse in the property market, though a significant risk, is not the most likely outcome. In our view, the property market is supported by healthy household balance sheets, the continuing importance of real estate as an investment vehicle, and underlying demand from ongoing urbanization. Moreover, we believe that the authorities have both the means and the incentive to mitigate the effect of a downturn of the property market on the financial sector and the economy more broadly.

Inflation has been subdued in recent months, pushed down by falling food and fuel prices. However, May data showed some increase in both of these categories and, as these prices continue to normalize, we forecast inflation to rise from a ¾ percent pace in the first quarter to 3½ percent in the third quarter and to remain near that pace.

Other Emerging Asia

Real GDP growth in emerging Asia excluding China tumbled to 2½ percent in the first quarter from an above-trend rate of 4¾ percent the quarter before, as exports slumped. The decline in growth was particularly severe in Thailand, where several months of political unrest, culminating in a military coup late last month, led output to contract more than 8 percent. In contrast, in India, election-related spending boosted growth to 6 percent.

The region's growth is projected to recover to 3½ percent this quarter and to 4½ percent thereafter, supported by rising export demand as the U.S. and Chinese economies strengthen. Indeed, there are already some signs of recovery: Exports in several countries moved above first-quarter averages in April, and forward-looking indicators for the high-tech sector, which is important for manufacturing and export activity in the region, have gained of late. Additionally, we marked up India's medium-term growth path slightly on greater confidence that the newly elected government will address much-needed structural economic reforms.

We estimate that the region's inflation rose to 3½ percent in the current quarter, partly because of the reversal of previous food price declines in India, and we expect it to remain at that rate.

Latin America

Mexico's economy remained in the doldrums in the first quarter, with real GDP expanding only 1 percent, half the pace estimated in the April Tealbook. Available data suggest that the weakness was broad based. Exports were about flat, held back by weak U.S. demand. Hikes in tax rates and administered fuels prices in January caused a plunge in consumer sentiment and retail sales. A slide in construction since mid-2012 has weighed on Mexican growth, and the sector remained weak in the first quarter. Amid subdued activity, the Bank of Mexico, in a surprise move, cut its policy rate by 50 basis points to 3 percent.

Recent activity indicators suggest that Mexican growth is strengthening. Industrial production and exports, particularly of manufactured goods, rose in April; the manufacturing PMI and other indicators of business sentiment climbed in May; and consumer sentiment has retraced some of its first-quarter decline. Additionally, U.S. manufacturing output is projected to rebound. Accordingly, we estimate that growth has risen to 2½ percent in the current quarter, although it is ¾ percentage point lower than in the April Tealbook. We continue to expect growth to rise further to 3¾ percent by 2016, supported by the more accommodative monetary policy stance, solid U.S. manufacturing growth, recovery in the construction sector, and less fiscal drag. Moreover, we anticipate that, by 2015, the reform process now under way will begin to boost growth.

We estimate that Mexican consumer price inflation will step down to 3 percent in the current quarter from 5¼ percent in the first, as the effects of earlier tax and fuel price

hikes wane and as food prices decline from earlier weather-related surges. Thereafter, we see inflation edging up to 3¼ percent and settling at about this rate through 2016.

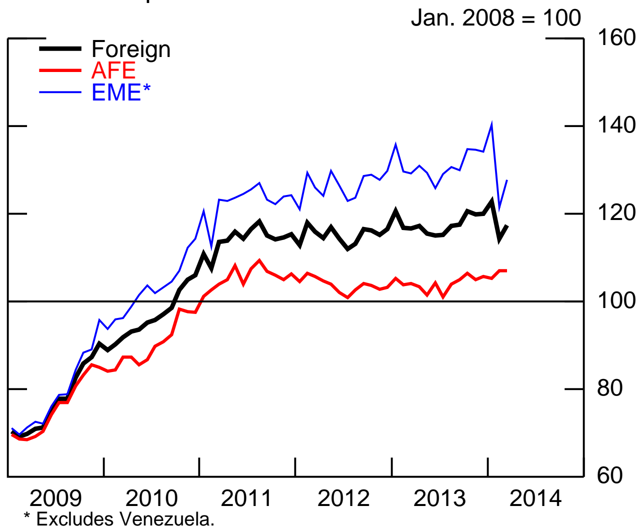
Brazil's economic performance continues to be dismal. Real GDP rose only ¾ percent in the first quarter, with the weakness spread across most sectors. Moreover, recent indicators of activity have generally been lackluster, prompting us to mark down Brazil's growth path through 2015. We now expect growth of just 1½ percent this year as the economy struggles to overcome its structural problems. Next year and in 2016, we see growth averaging a trend-like rate of 2½ percent, supported in part by stronger external demand. Despite weak economic growth, Brazilian inflation has been rising and is set to reach almost 8 percent at an annual rate in the second quarter, reflecting tight labor market conditions and persistently high inflation expectations. On a 12-month basis, inflation rose to 6½ percent in May, hitting the upper limit of the inflation target range. Even so, the central bank ceased its policy tightening in May, keeping the Selic rate at 11 percent.

Other Emerging Market Economies

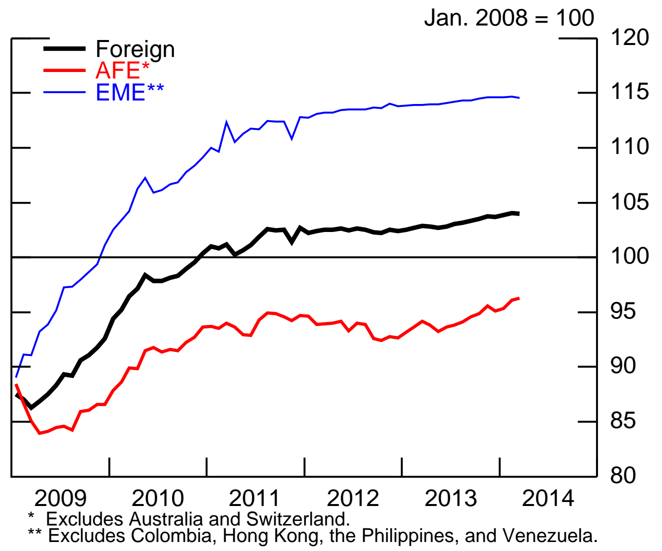
In late April, the International Monetary Fund approved a $17 billion financial support package for Ukraine, which, along with other official assistance, should help meet the country's financing needs. Last month, Petro Poroshenko won Ukraine's presidential election and, in a surprising shift in posture, Russia accepted the results of the elections, helping to de-escalate tensions. Partly in response to these developments, sentiment and financial markets improved markedly in the region. Nonetheless, armed conflict continues in the eastern part of the country.

In part reflecting the onset of the crisis, real GDP in Ukraine and Russia contracted substantially in the first quarter. However, fluctuations in the tensions between the two countries have had little noticeable effect on global markets.

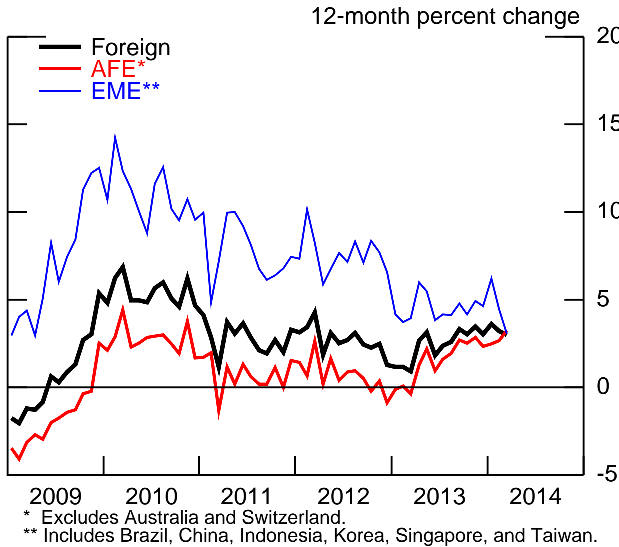
Recent Foreign Indicators



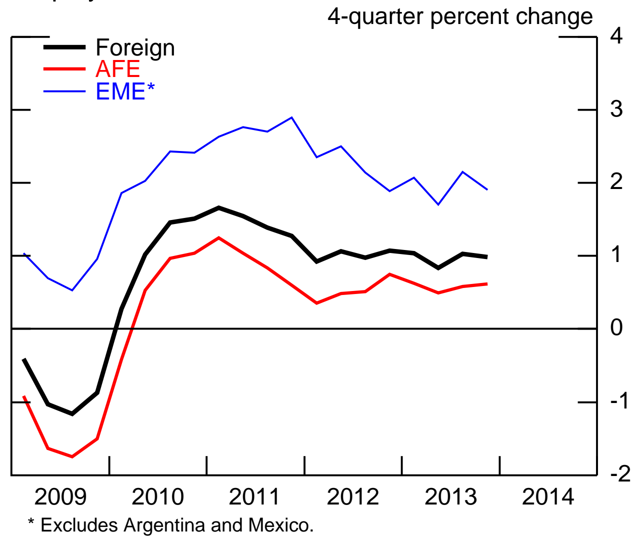
* Excludes Venezuela.



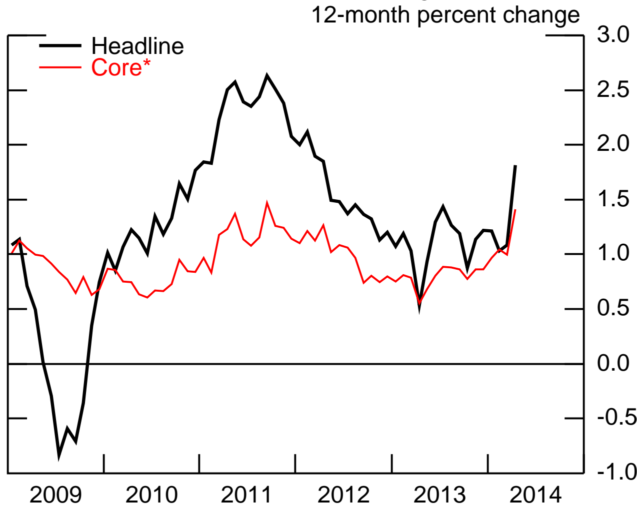
* Excludes Australia and Switzerland.
** Excludes Colombia, Hong Kong, the Philippines, and Venezuela.

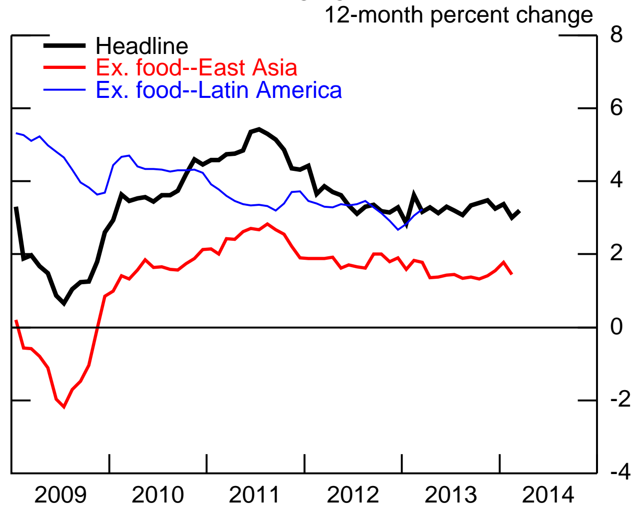


* Excludes Australia and Switzerland.
** Includes Brazil, China, Indonesia, Korea, Singapore, and Taiwan.



* Excludes Argentina and Mexico.





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

Int'l Econ Devel & Outlook

The Foreign GDP Outlook

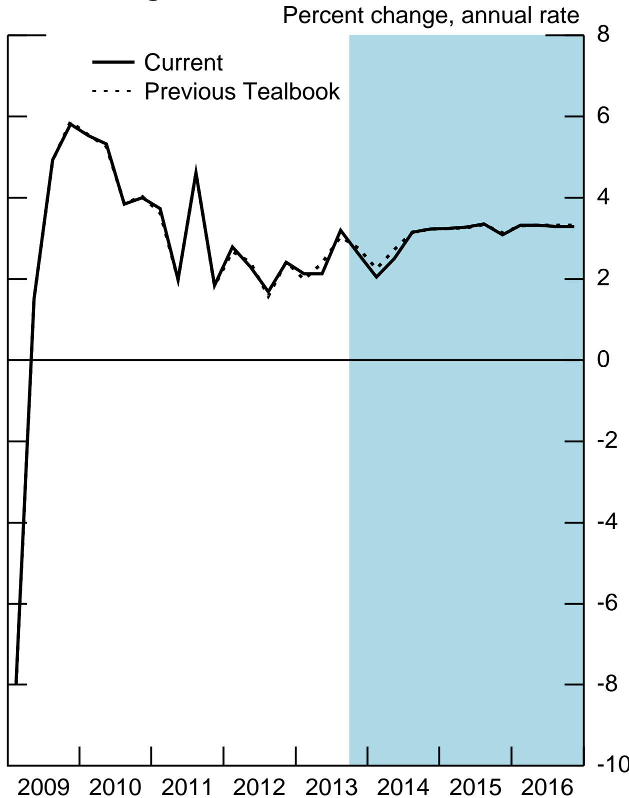
Real GDP*

Percent change, annual rate

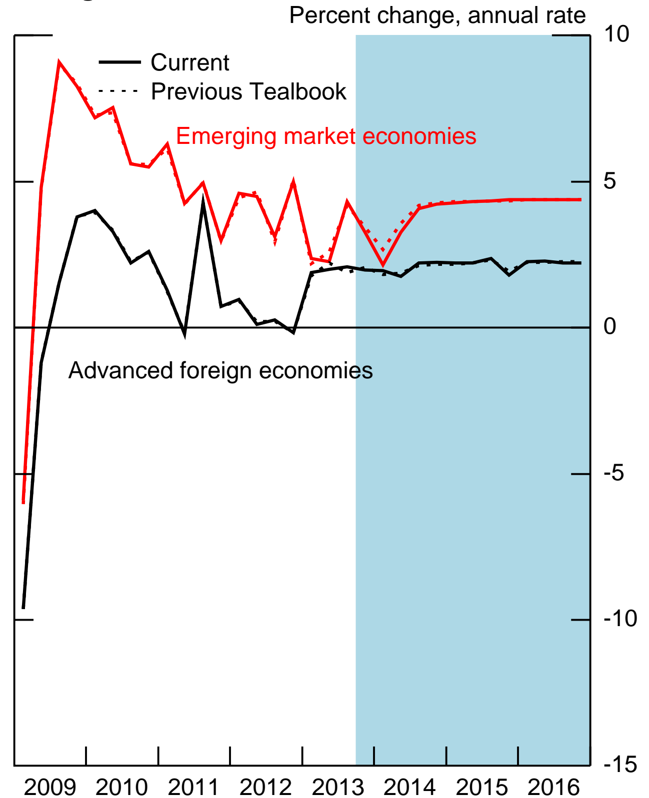
	2013 H1	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 H2	2015	2016
1. Total Foreign	**2.1**	**3.2**	**2.6**	**2.1**	**2.5**	**3.2**	**3.2**	**3.3**
Previous Tealbook	*2.2*	*3.0*	*2.8*	*2.3*	*2.7*	*3.2*	*3.2*	*3.3*
2. Advanced Foreign Economies	**1.9**	**2.1**	**2.0**	**2.0**	**1.7**	**2.2**	**2.1**	**2.2**
Previous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

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

Total Foreign GDP



Foreign GDP



The Foreign Inflation Outlook

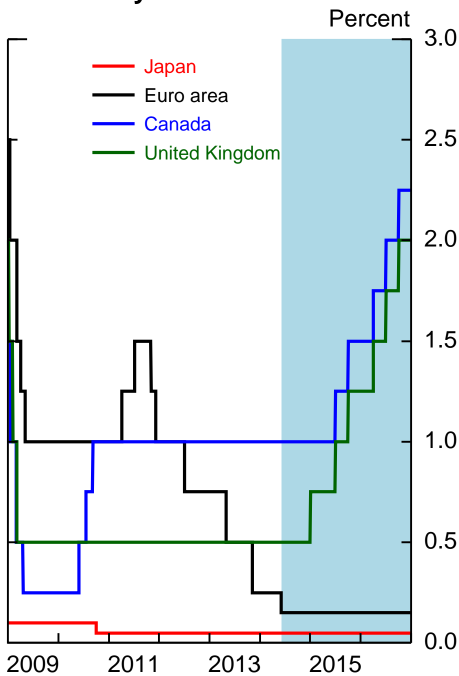
Consumer Prices* Percent change, annual rate

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

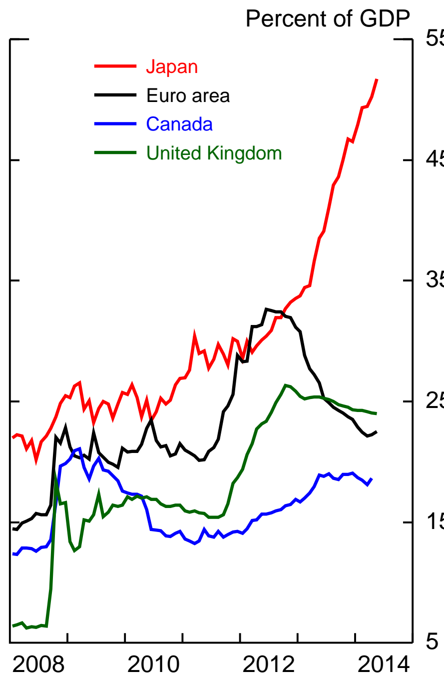
* CPI aggregates weighted by shares of U.S. non-oil imports.

Foreign Monetary Policy

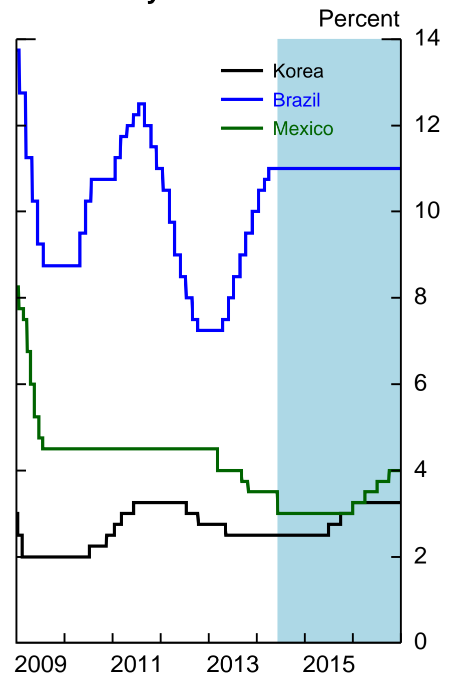
AFE Policy Rates



AFE Central Bank Balance Sheets

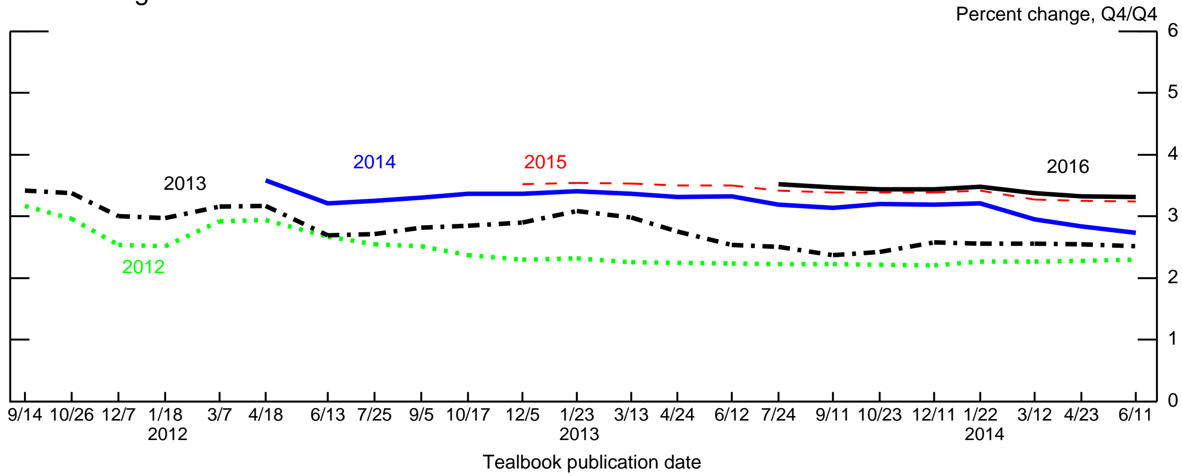


EME Policy Rates

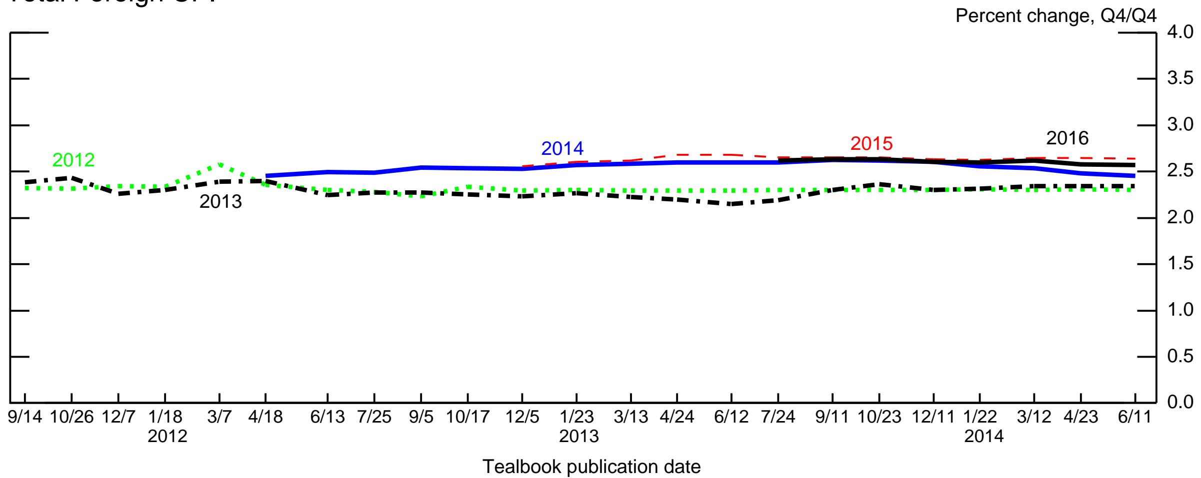


Evolution of Staff's International Forecast

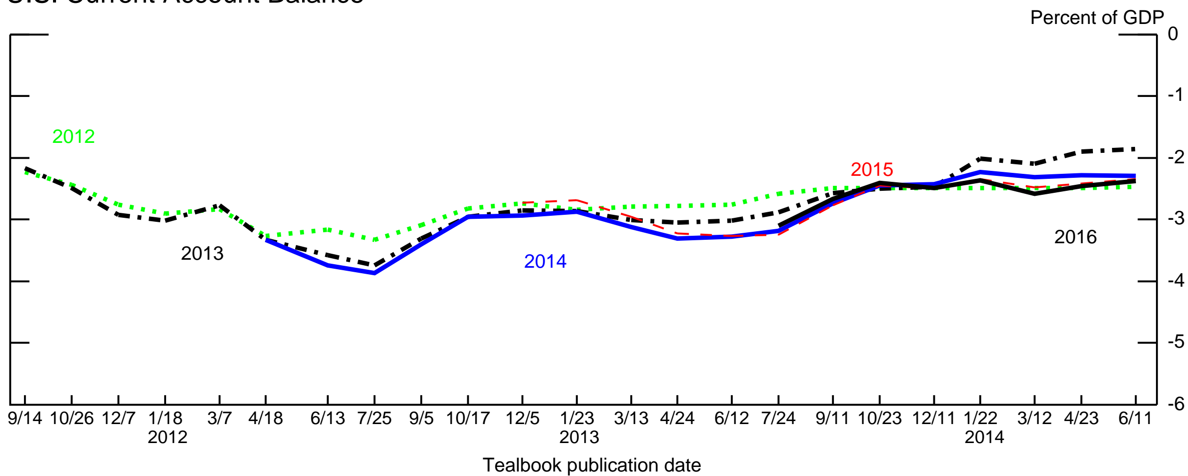
Total Foreign GDP



Total Foreign CPI



U.S. Current Account Balance



Financial Developments

Investors read central bank communications in the United States and the euro area over the intermeeting period as suggesting that monetary policies would be more accommodative than had been expected, contributing to a broad-based rise in bond and stock prices in global financial markets. While U.S. economic news, on balance, was seen as somewhat more favorable than expected, economic news in foreign economies was mixed.

- The expected path of the federal funds rate implied by derivatives prices was little changed on net. Primary dealers continue to see the third quarter of 2015 as the most likely time of liftoff, but their median forecast for the longer-run level of the federal funds rate dropped to 3.5 percent.

- Intermediate- and long-term Treasury yields declined notably in May but subsequently retraced to end the period only modestly lower.

- The ECB announced a number of measures to provide additional monetary accommodation. In particular, the ECB lowered its main lending rate and moved its deposit rate into negative territory.

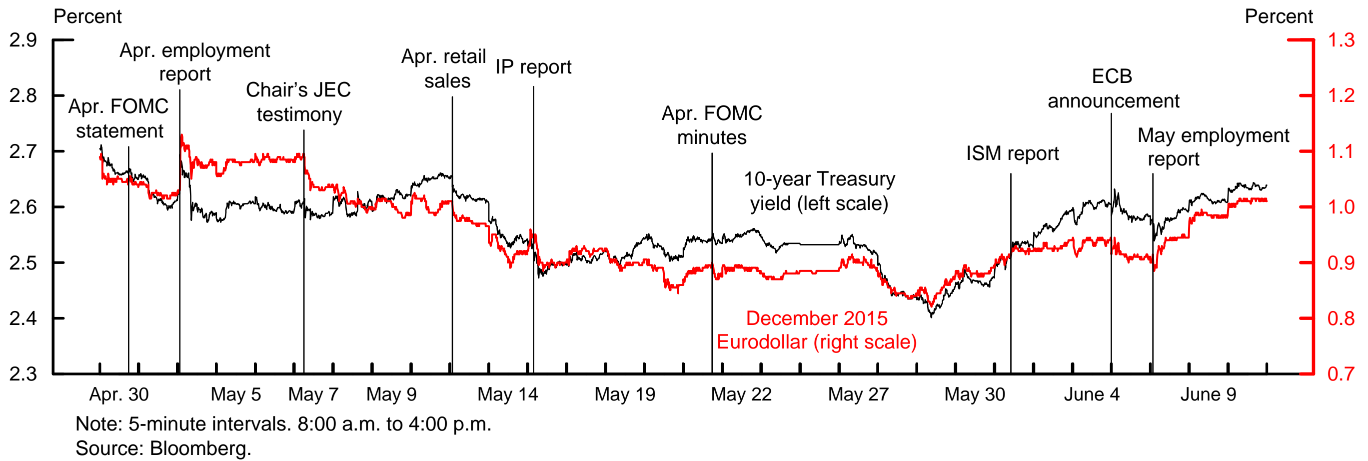
- Investors appeared to become more willing to hold risky positions, as equity prices continued to advance and bond risk spreads narrowed both in the United States and abroad; measures of actual and implied volatility continued to ebb, nearing historical lows for U.S. equities.

- Credit flows to domestic nonfinancial corporations continued to be strong. Consumer credit expanded at a robust pace, including a pickup in credit card borrowing from a very subdued pace. Home mortgage lending remained tepid.

- Repo rates firmed over recent weeks, likely reflecting a rise in Treasury issuance. Against that backdrop, take-up in ON RRP operations declined.

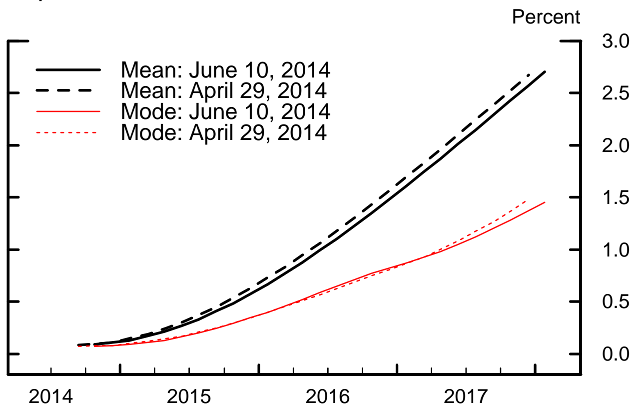
Policy Expectations and Treasury Yields

Selected Interest Rates



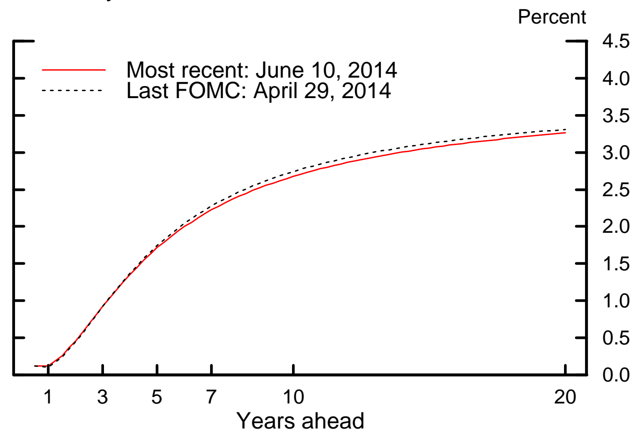
Note: 5-minute intervals. 8:00 a.m. to 4:00 p.m.
Source: Bloomberg.

Implied Federal Funds Rate



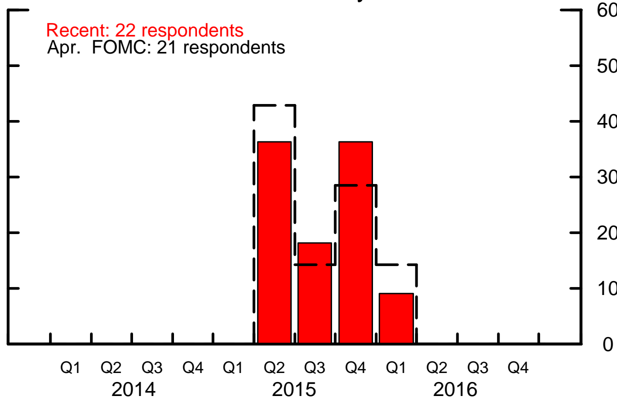
Note: Mean is estimated using overnight index swap quotes. Mode is estimated from the distribution of federal funds rate implied by interest rate caps. Both include a term premium of zero basis points per month.
Source: Bloomberg; CME Group.

Treasury Yield Curve



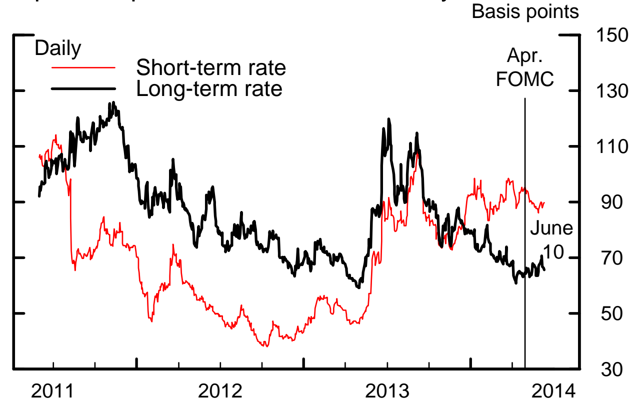
Note: Smoothed yield curve estimated from off-the-run Treasury coupon securities. Yields shown are those on notional par Treasury securities with semiannual coupons.
Source: Federal Reserve Board.

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



Source: Desk's dealer survey from June 9, 2014.

Option-Implied Interest Rate Volatility



Note: Implied volatility of the long-term rate is based on options on the 10-year swap rate that expire in 3 months, while implied volatility of the short-term rate is based on options on the 1-year swap rate that expire in 2 years.
Source: Staff calculations from Barclays data.

POLICY EXPECTATIONS AND TREASURY YIELDS

On net over the intermeeting period, yields on Treasury coupon securities were little changed at shorter maturities and edged lower at longer maturities after reversing notable early-period declines. In May, market participants puzzled over the significant declines in long forward rates since the beginning of the year and pointed to a variety of domestic and global factors possibly driving this trend, including lower expectations for long-run potential growth, lower inflation risk premiums, purchases of longer-term securities by price-insensitive investors, unwinding of short Treasury positions, and declining interest rate uncertainty (see the box "What Explains the Recent Decline in Long-Term Forward Rates?"). Communications by the ECB, particularly those leading up to the announcement of new policy-easing measures, were also seen as contributing to the decline in yields. The TIPS-based measure of five-year inflation compensation ticked up amid stronger-than-expected data for April core CPI, while the five-year measure five years ahead was unchanged.

Although the April FOMC statement and minutes were generally in line with expectations and elicited little reaction in financial markets, the Chair's congressional testimony before the Joint Economic Committee and the subsequent Q&A session were viewed as suggesting marginally more accommodative policy than expected.

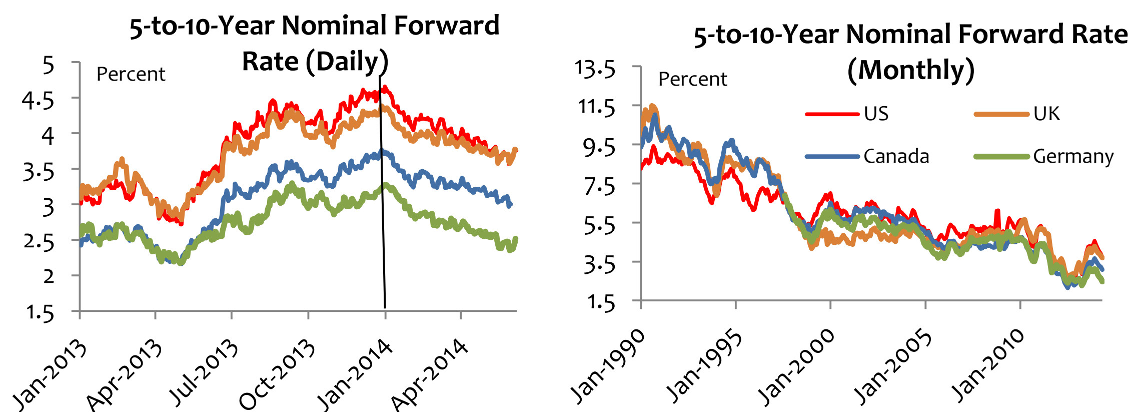
U.S. economic data releases during the intermeeting period were seen by market participants as modestly favorable on balance. Weaker-than-expected reports on April retail sales and industrial production were counterbalanced by stronger-than-expected business surveys indicating a possible pickup in the pace of activity, while job growth over April and May came in a touch above expectations. Increasingly over the period, market participants appeared to interpret data, on the whole, as supporting the anticipation of a sizable bounceback in activity from the first-quarter weakness.

All told, the expected path of the federal funds rate changed little over the intermeeting period. The end-of-2016 federal funds rate implied by OIS quotes is about 1.7 percent, down about 10 basis points since the April FOMC meeting.[1] The median dealer's response from the Open Market Desk's June survey put the end-of-2016 federal funds rate at 2.1 percent, slightly higher than in the April survey. The survey indicated

[1] The effective federal funds rate averaged 9 basis points over the intermeeting period, with the intraday standard deviation averaging about 5 basis points.

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

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



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

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

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

about 20 basis points can be attributed to reduced interest rate uncertainty. Other variables in the regression are found to contribute little to the move in the term premium, and a large portion of the decline remains unexplained. [1]

These results depend, of course, on the data used in the decomposition. In particular, the Blue Chip surveys have not indicated any significant decline in long-run expectations of the real short rate or real economic growth since December; as a result, our analysis shows no contribution from a lower equilibrium real rate. [2] In contrast, results from the Open Market Desk's June survey show that the median (average) estimate of dealers' longer-run federal funds rate forecasts has declined about 50 (15) basis points since December, and both dealers and buy-side investors cited a reduction in the expected long-run real policy rate as one of the most important factors driving the recent decline in long-term forward rates.[3] While all surveys are imperfect measures of market expectations, the Open Market Desk survey results suggest that the Blue Chip surveys may understate the decline in the expected real interest rate this year and, by implication, overstate the decline in the real term premium.

Decomposition of the Change in the 5-to-10-Year Nominal Forward Rate in the United States, December 2013 to April 2014 (basis points)

Total change in the nominal forward rate	-64
Of which:	
Blue Chip expected long-run 3-month real T-bill rate	3
Blue Chip expected long-run CPI inflation rate	0
Blue Chip-based forward inflation risk premium	-17
Blue Chip-based real forward term premium	-50
Change in Blue Chip-based real forward term premium explained by	
Disagreement in long-run real GDP forecasts	0
Capacity utilization	0
Net long speculative positions in 10-year Treasury futures	-1
Foreign official demand	1
Private supply of Treasury securities	0
Equity-implied volatility	0
First principal component of swaption implied volatilities	-19
Total change explained by the model	-19

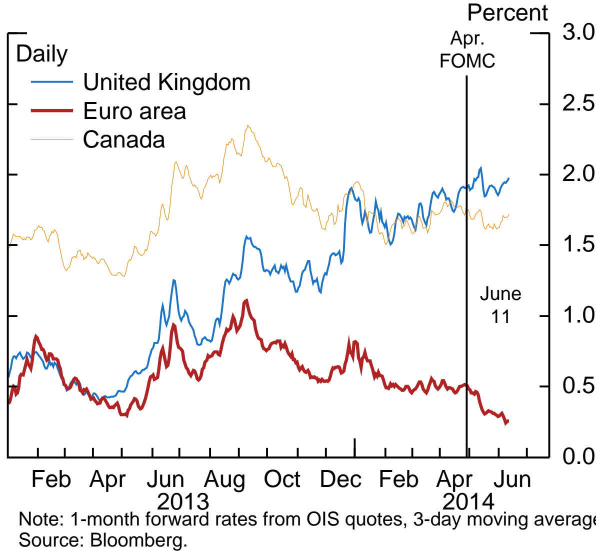
[1] The list of independent variables includes long-run economic uncertainty (as measured by the difference between the averages of the top 10 and of the bottom 10 long-run real GDP forecasts from the Blue Chip survey), interest rate uncertainty (as measured by the first principal component of swaption implied volatilities), and capacity utilization (to capture the cyclicality of the term premium). To capture the effects of demand and supply of Treasury securities, we include net long speculative positions in 10-year Treasury futures, holdings of longer-term Treasury security by foreign official institutions (normalized by GDP), and the amount of nominal Treasury notes and bonds outstanding that are not held by the System Open Market Account (normalized by GDP). Finally, the VIX is included to capture the safe-haven demand for Treasury securities resulting from domestic equity market volatility. We estimate the model using monthly data from January 1999 to April 2014, the latest month for which data is available.

[2] The Consensus Economics surveys also show no significant declines in long-run real GDP growth forecasts for the United States, Germany, the United Kingdom, or Canada in recent months.

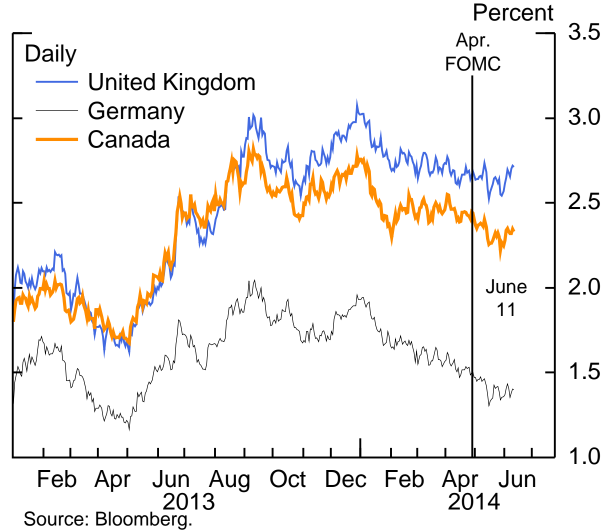
[3] Two other factors listed as the most important in driving the recent decline in long-term forward rates were changes in economic and/or policy outlook in other advanced foreign economies and market-related factors.

Financial Developments

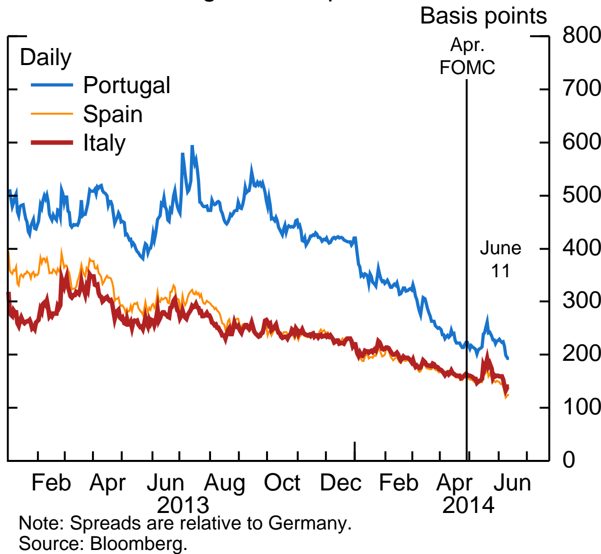
Foreign Developments



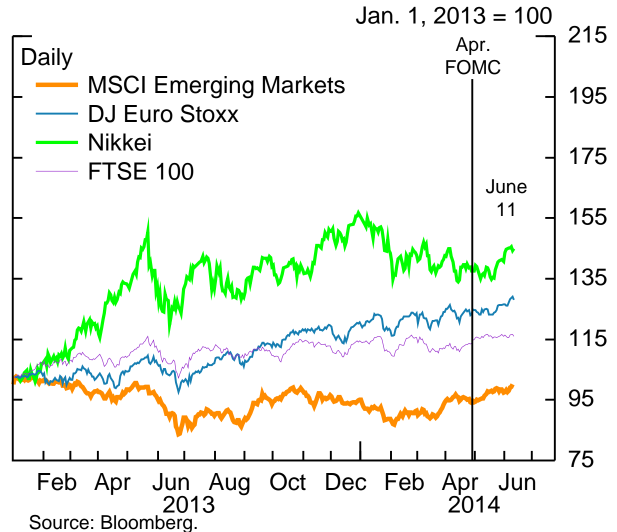
Note: 1-month forward rates from OIS quotes, 3-day moving average.
Source: Bloomberg.



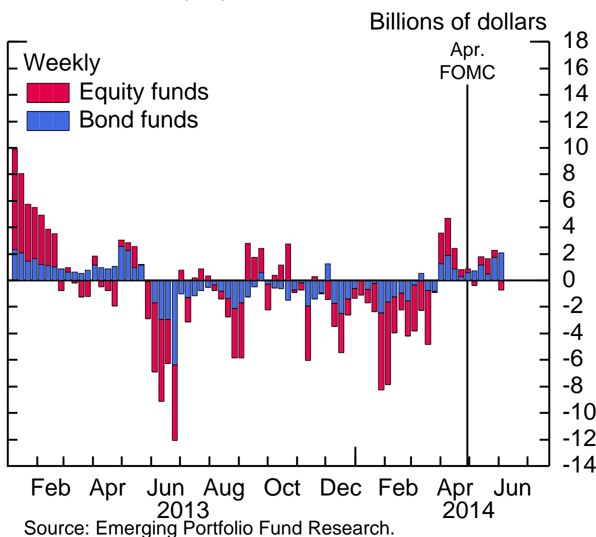
Source: Bloomberg.



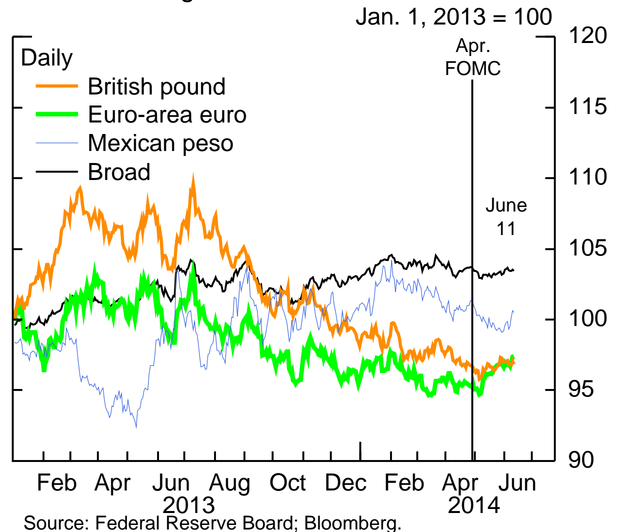
Note: Spreads are relative to Germany.
Source: Bloomberg.



Source: Bloomberg.



Source: Emerging Portfolio Fund Research.



Source: Federal Reserve Board; Bloomberg.

Financial Developments

no change in the dealers' consensus for the most likely timing of liftoff, pegged in the third quarter of 2015. The median dealer forecast for the longer-run level of the federal funds rate dropped to 3.5 percent, a decline of 25 basis points from the April survey and a decline of 50 basis points from the January survey.

Over the intermeeting period, MBS current-coupon yields decreased 6 basis points, in line with the movement in the 10-year Treasury yield, while option-adjusted spreads on production-coupon MBS tightened about 7 basis points. Much of the narrowing in MBS spreads followed a speech by President Dudley of the Federal Reserve Bank of New York in which he expressed a preference for continuing the reinvestment of principal payments on the Federal Reserve's securities holdings past the liftoff of the federal funds rate from its effective lower bound. Responses to the Desk's June survey indicate that the median dealer has pushed back the expected timing of the end of reinvestments for both Treasury securities and MBS by about three quarters and revised up the expected size of the SOMA portfolio at the end of 2017 by about $170 billion.

Foreign Developments

Expectations for the path of policy rates in the euro area fell steadily over the period, as market participants placed increasing odds on the ECB easing policy at its June 5 meeting. In the event, the ECB cut its policy rates largely as expected, lowering its main lending rate to 15 basis points and its deposit rate to negative 10 basis points. The ECB also announced other measures, including new targeted longer-term refinancing operations. (See the box "ECB Policy Actions and Options" in the International Economic Developments and Outlook section.) All told, market participants judged the package to be a bit more accommodative than they had been anticipating and now expect policy rates to remain unchanged until at least the second half of 2016. Conversely, analysts lowered their expectations of asset purchases by the Bank of Japan, which reiterated that it believes Japanese inflation is on track to reach its 2 percent target next year.

Yields on 10-year sovereign bonds in Germany and Canada fell about 10 basis points over the intermeeting period. Since January 1, 10-year benchmark bond yields are down throughout the advanced foreign economies, especially in Germany, where the decline exceeds 50 basis points. The German yield decline is due, in part, to mounting concerns about the strength of the economic recovery and prospects for inflation in the

euro area. (See the box "Divergence in Sovereign Bond Yields in Advanced Economies.")

Yields on sovereign debt issued by peripheral European countries continued to decline relative to yields on German bunds, with spreads falling ¼ to ½ percentage point and reaching their lowest levels since the start of the European debt crisis in 2010. In addition, emerging market sovereign and foreign corporate bond spreads narrowed, reflecting in part the generally upbeat tone of financial markets over the period.

Most foreign equity indexes have increased since the April FOMC meeting. Euro-area equities generally rose following the ECB's announcement. In Japan, stock prices jumped following the release of first-quarter GDP, which showed a larger-than-expected surge in consumer spending ahead of an April tax increase. Emerging market equity indexes added to their gains so far this year. Both bond and equity emerging market mutual funds saw net inflows over the period.

The foreign exchange value of the dollar was little changed, on net, over the period. The dollar appreciated about 2 percent against the euro in response to weak incoming data for the euro area and actual and expected easing in the ECB's policy stance. By contrast, the dollar declined against most emerging market currencies as investor sentiment toward EMEs continued to improve. The People's Bank of China guided the dollar value of the renminbi up about ½ percent, on net, over the period, reversing a small part of its decline since earlier this year. Despite ongoing conflict in eastern Ukraine, the ruble appreciated further against the dollar, as Ukrainian elections seemed to help ease tensions with Russia. A military coup in Thailand pushed up sovereign bond yields and led to a modest depreciation of the baht, but it had little effect outside of these markets.

Equity Valuations and Bond Spreads

Broad U.S. equity price indexes rose about 4 percent over the intermeeting period to new record highs on a more optimistic assessment of near-term economic prospects and were likely supported by continued low interest rates. While many backward-looking measures of economic activity were disappointing, forward-looking indicators such as business surveys were viewed as upbeat. Moreover, despite disappointing news on first-quarter earnings, corporate guidance for profits in coming quarters was

apparently favorable enough to prompt the first notable upward revision in several months to analysts' forecasts of year-ahead earnings per share for S&P 500 firms.

Yields on investment-grade bonds moved down about 10 basis points, a bit more than comparable Treasury yields, while yields on high-yield bonds posted a larger decline, pushing down their spreads to comparable Treasury yields to the lowest levels since 2007. Reflecting the improved market sentiment, the VIX, an index of option-implied volatility for one-month returns on the S&P 500 index, continued to decline and ended the period near its historical lows.

BUSINESS FINANCE

Financing conditions for domestic nonfinancial corporations remained favorable. Amid low yields and reduced market volatility, gross issuance of investment- and speculative-grade bonds rebounded to a very robust pace in May. An increased portion—about one-half—of speculative-grade issuances were tagged for purposes other than the refinancing of existing debt, including investment and mergers and acquisitions. Funds raised through new equity issues remained robust; the pace of gross equity issuance was slightly higher than in the same period last year.

Commercial and industrial (C&I) loans continued to expand at a strong pace over the intermeeting period. In addition, spreads of loan rates over market interest rates for newly originated C&I loans declined in the May Survey of Terms of Business Lending. Issuance of leveraged loans, particularly institutional loans, remained strong in April and May, driven primarily by sturdy demand from institutional investors, including collateralized loan obligations (CLOs). Responses to the June Senior Credit Officer Opinion Survey on Dealer Financing Terms indicate that demand on the part of levered investors to obtain financing to fund purchases of senior and mezzanine CLO tranches has increased somewhat since the beginning of the year.[2]

Commercial real estate (CRE) lending has continued to expand amid some further easing of underwriting standards for commercial mortgages. While CMBS issuance has slowed a bit since the beginning of the year, bank and insurance company originations of commercial mortgages increased robustly in the first quarter. Moreover, weekly bank

[2] For details, see the memo "June 2014 Senior Credit Officer Opinion Survey on Dealer Financing Terms."

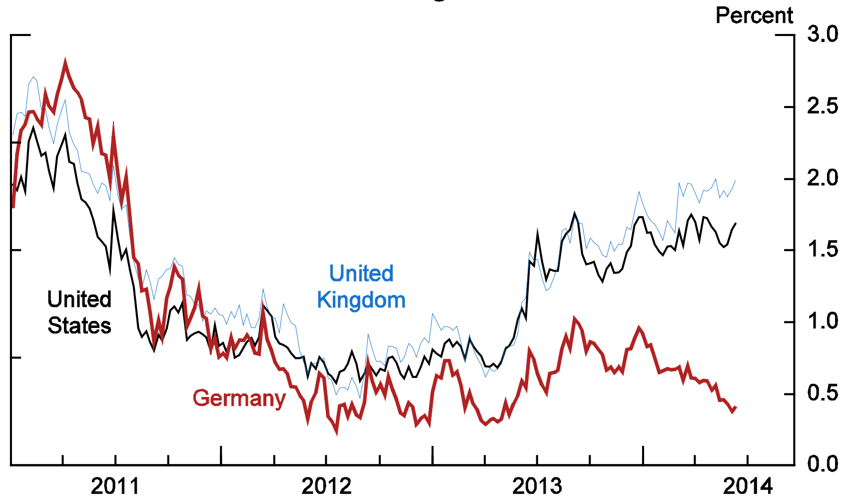
Divergence in Sovereign Bond Yields in Advanced Economies

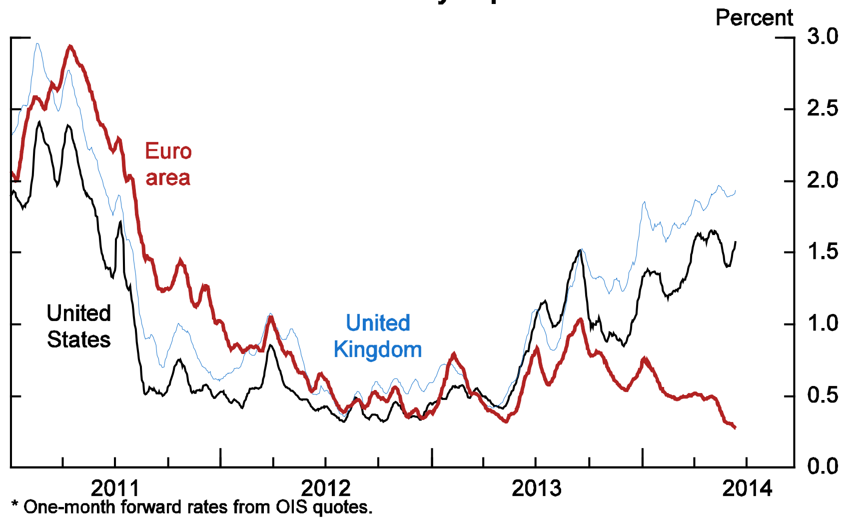
Although medium- to long-term rates in the advanced economies generally move closely together, since the middle of 2012 a gap has developed between rates in Germany and those in other advanced economies. As shown in the upper panel on the next page, the gap between German rates and U.S., U.K., and Canadian rates is currently about 1¼ percentage points at the five-year maturity. Although not unprecedented, this gap is significant given the low level of rates in advanced economies.

In our view, the current wedge in rates reflects, at least in part, two closely related factors: a divergence in policy expectations and a divergence in inflation expectations. The middle panel shows policy expectations, derived from overnight index swap rates (OIS), at the three-year horizon. Starting in mid-2013, even as U.S. and U.K. policy expectations have trended up in anticipation of policy normalization, euro-area policy expectations have declined amid prospects of a weak recovery and subdued inflation. Indeed, since then, the European Central Bank (ECB) has lowered its main refinancing rate a cumulative 60 basis points, announcing a negative deposit rate this month. Markets expect the ECB to keep its policy rate near zero until 2017.

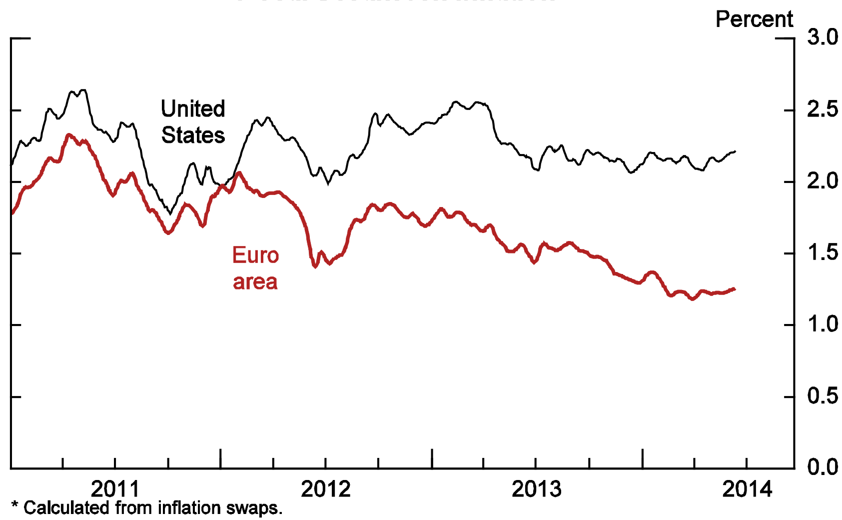
Market expectations of near- to medium-term inflation in the euro area have declined substantially in recent years. The bottom panel depicts five-year breakeven inflation rates derived from inflation swaps. By this measure, inflation expectations for the United States have been stable. In contrast, euro-area inflation expectations have declined as actual inflation has continued to disappoint. Of note, long-term inflation expectations (beyond five years) in both economies have remained relatively steady (not shown).

Declining inflation expectations also contribute to the fall in policy expectations, and both inflation and policy expectations are putting downward pressure on German rates. Of course, the gap between German and U.S. yields could close rapidly if euro-area inflation and inflation expectations pick up in response to a sustained recovery. However, the divergence bears monitoring. In Japan, for example, a sustained divergence between domestic and foreign interest rates in the early 1990s presaged many years of subpar growth and deflation.



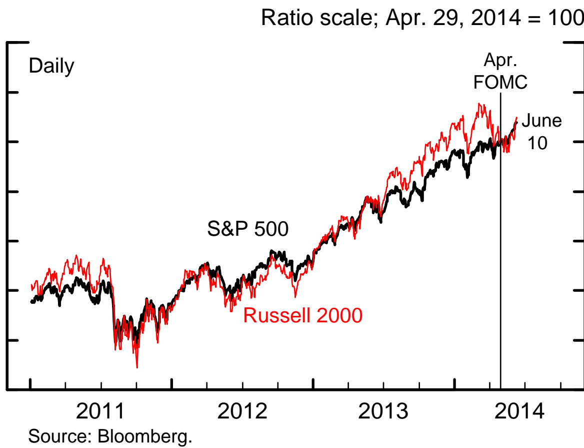


* One-month forward rates from OIS quotes.

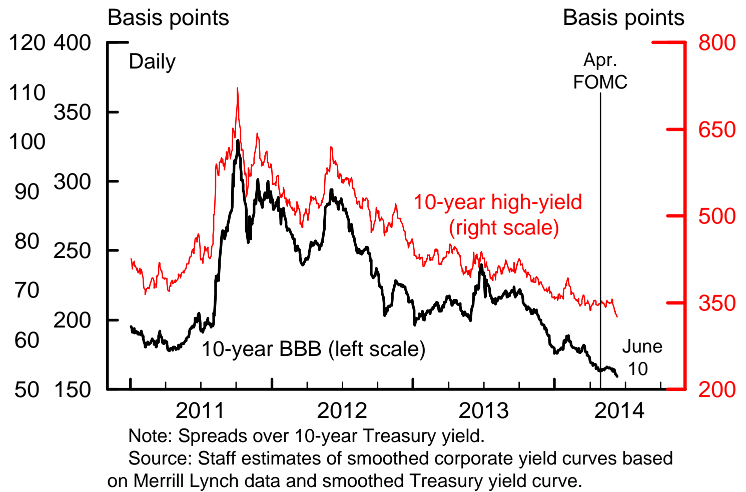


* Calculated from inflation swaps.

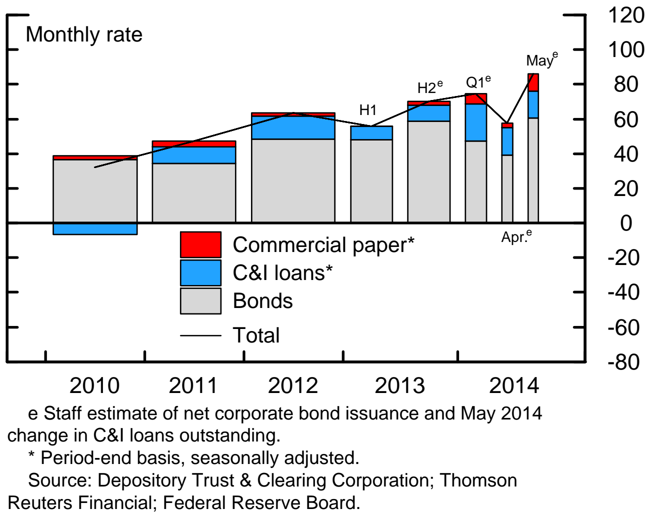
Other Asset Prices and Business Finance



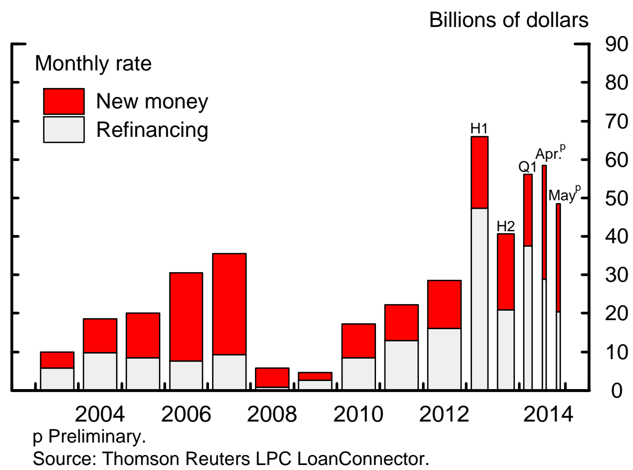
Source: Bloomberg.



Note: Spreads over 10-year Treasury yield.
Source: Staff estimates of smoothed corporate yield curves based on Merrill Lynch data and smoothed Treasury yield curve.



e Staff estimate of net corporate bond issuance and May 2014 change in C&I loans outstanding.
* Period-end basis, seasonally adjusted.
Source: Depository Trust & Clearing Corporation; Thomson Reuters Financial; Federal Reserve Board.



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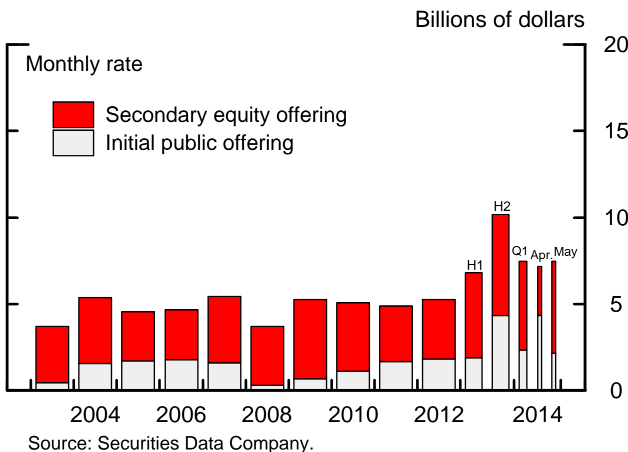
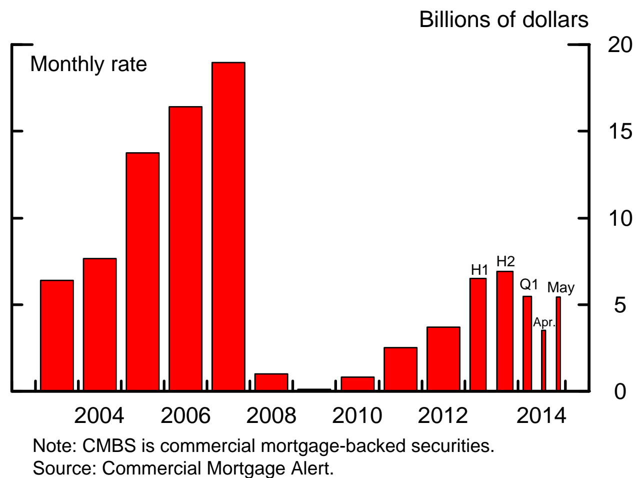
Source: Thomson Reuters LPC LoanConnector.



Source: Securities Data Company.



Note: CMBS is commercial mortgage-backed securities.
Source: Commercial Mortgage Alert.

Financial Developments

credit data available for April and May indicate that growth in CRE loans on banks' books remained strong.

HOUSEHOLD FINANCE

Mortgage rates have declined about 15 basis points since the April FOMC meeting, somewhat more than long-term Treasury yields, and (seasonally adjusted) applications for purchase mortgages and refinances ticked up but remain quite low. Mortgage lending standards remain tight, but there are signs of improving accessibility. The distribution of credit scores for GSE-backed purchase mortgages during the first few months of 2014 edged lower relative to the fourth quarter, and a major lender cut its minimum credit score for GSE-backed loans.

Despite tight mortgage financing conditions, house prices continued to rise fairly robustly in March and April but at a slower pace than during the same period last year. House price growth remains strong in many areas of the country, owing in part to the sharp decline in distressed sales as a share of total sales in recent months and to tight inventories of homes available for sale.

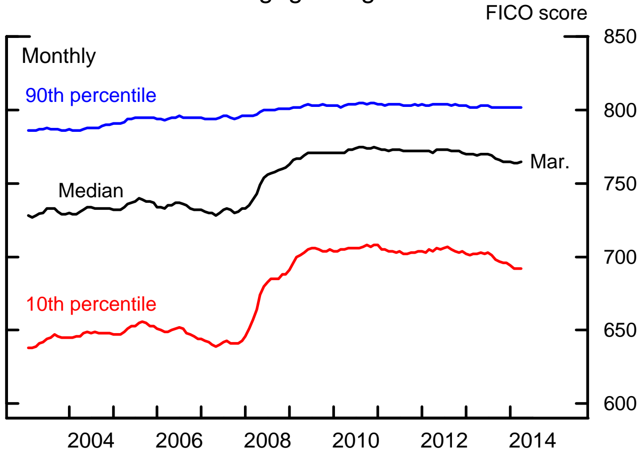
Consumer credit continued to expand through April at a robust pace. While still quite strong, growth in student loans moderated further and outstanding auto loans continued to grow. Credit card loan balances surged in April, and weekly bank balance sheet data suggest a further gain in May; still, on a year-on-year basis, the growth rate remained moderate at about 2½ percent. The largest increases have come at banks that reported having eased standards and increased borrowing limits on such loans in the April Senior Loan Officer Opinion Survey on Bank Lending Practices.

BANKING DEVELOPMENTS AND MONEY

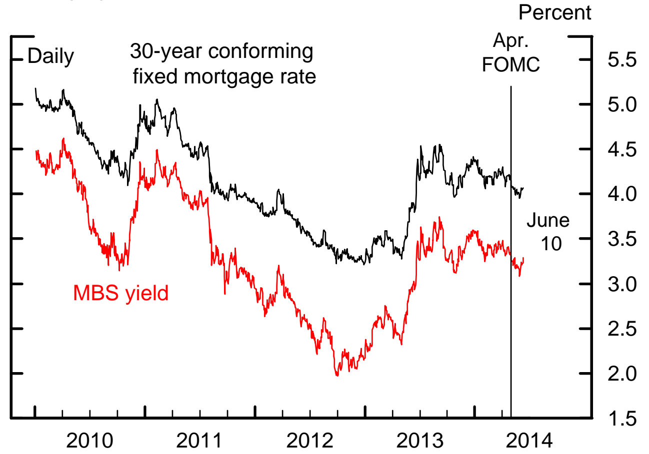
The stock prices of large U.S. bank holding companies (BHCs) generally kept pace with the broad equity market over the intermeeting period, and CDS spreads for large BHCs have narrowed a bit further. The profitability of BHCs decreased in the first quarter, mainly because of declines in mortgage revenues and trading income as well as a significant increase in litigation expenses at one large BHC.[3] In addition, large banks

[3] Bank of America reported a $6 billion litigation expense in the first quarter of 2014; about $3.6 billion reflected a settlement with the Federal Housing Finance Agency, with the remainder earmarked as additional reserves for legacy-mortgage-related matters.

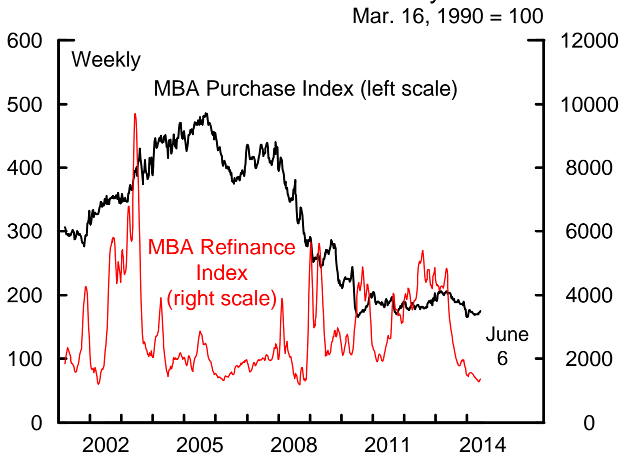
Household Finance



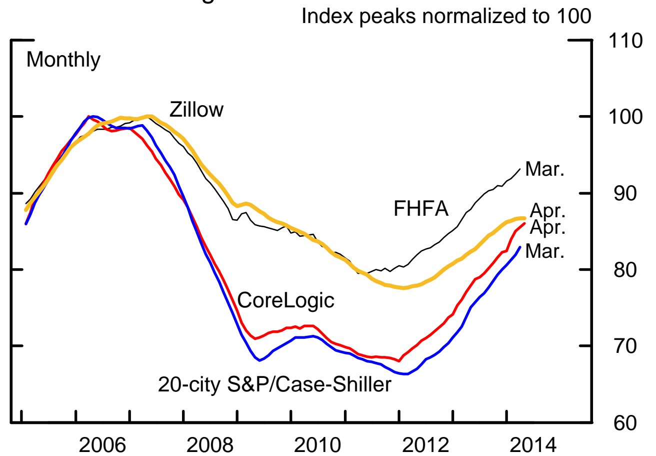
Note: Concerns 30-year GSE-backed purchase mortgages originated in month shown.
Source: LPS Applied Analytics.



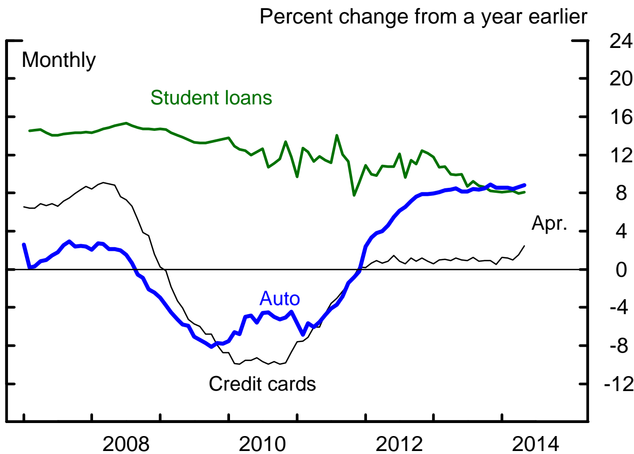
Note: The MBS yield is the Fannie Mae 30-year current-coupon rate.
Source: For MBS yield, Barclays; for mortgage rate, Loansifter.



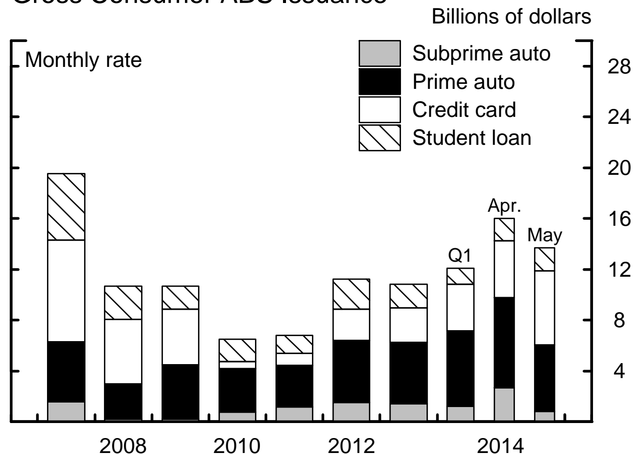
Note: The data are weekly and seasonally adjusted by FRB staff.
Source: Mortgage Bankers Association.



Source: For FHFA, Federal Housing Finance Agency; for CoreLogic, CoreLogic; for S&P/Case-Shiller, Standard & Poor's; for Zillow, Zillow.



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



Note: Gross issuance in the month of June (as of June 6, 2014) was zero.
Source: Inside MBS & ABS; Merrill Lynch; Federal Reserve Board.

continued to report compressed net interest margins in the first quarter. Banks' holdings of U.S. Treasury securities rose substantially over the past three months, reportedly in part reflecting banks' efforts to meet proposed liquidity regulations.

M2 expanded at a 7 percent average annual rate over April and May, likely boosted a bit by the accumulation of tax refunds and a buildup in deposit balances in advance of tax payments beyond what is captured in seasonal factors. Currency growth slowed over the two-month period as international demand for U.S. notes appeared to diminish, following rapid growth in March.

SHORT-TERM FUNDING MARKETS

Rates in short-term funding markets generally remained stable over the intermeeting period, although there was some modest upward pressure on Treasury repo rates associated with a pickup in Treasury debt issuance. The uptick in Treasury repo rates reportedly contributed to the decline in take-up in the Federal Reserve's ON RRP operations in recent weeks; money market funds continue to account for the largest share of ON RRP participation.[4]

In May, the Federal Reserve began an eight-week series of expanded seven-day TDF test operations. The first four of these operations offered term deposits at 26 basis points while gradually raising the maximum award for individual bidders from $1.25 billion to $10 billion.[5] Participation in the first four of these operations increased from an average of 27 depository institutions in the TDF operations conducted in March to about 36 in the current series, with a total amount awarded rising from an average of $14.6 billion in the March operations to $77.8 billion for the most recent operation.[6]

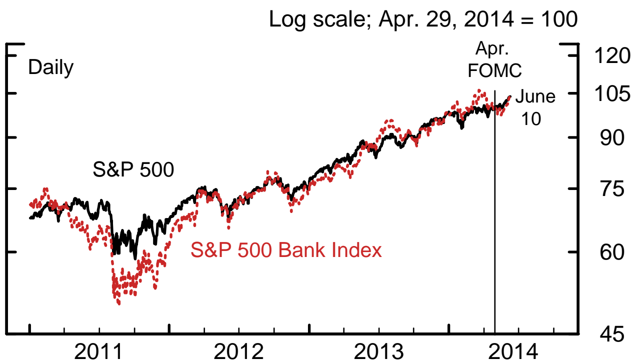
[4] In response to special questions in the June policy survey, the median dealer expects that, immediately following the liftoff in the federal funds rate, both the target federal funds rate and the IOER rate will be about 10 basis points higher than the ON RRP rate. Usage of ON RRP at that time was estimated to be roughly $400 billion. More than half of the dealers also indicated that they expected the Term Deposit Facility and term Treasury RRP to be used during policy normalization.

[5] Over the second set of four operations, the interest rate offered on the term deposits will be increased gradually to a level that does not exceed 30 basis points.

[6] A wide range of institutions reported that their demand for TDF deposits is limited as a result of Basel III Liquidity Coverage Ratio requirements, as discussed in the June 11, 2014, memo "Results of Recent Term Deposit Facility Test Operations and Summary of Staff Outreach Findings," by Marnie Gillis DeBoer, Courtney Demartini, and Laura Lipscomb.

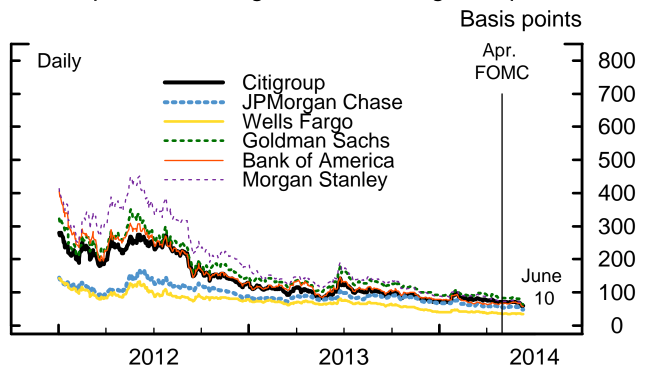
Banking Developments and Money

S&P 500 Stock Price Indexes



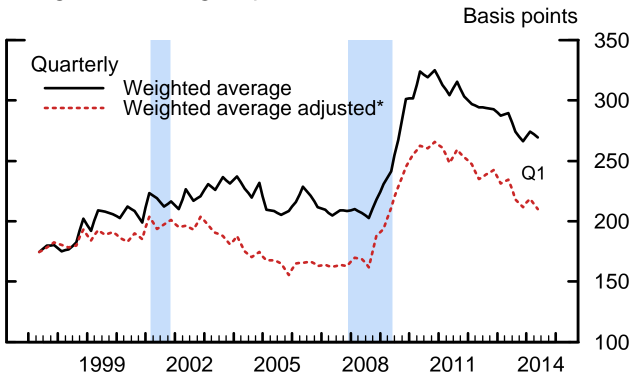
Source: Bloomberg.

CDS Spreads of Large Bank Holding Companies



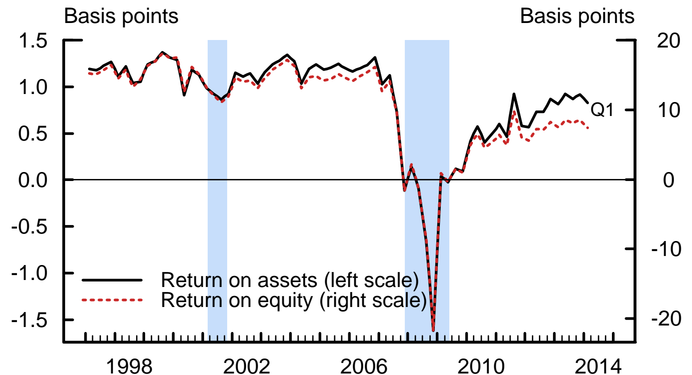
Source: Markit.

Weighted-Average Spread on C&I Loans



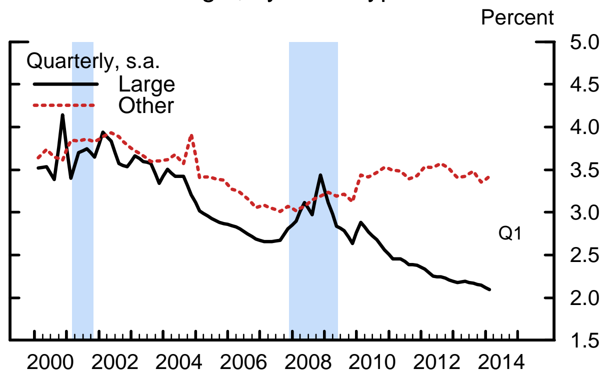
Note: The observation for Q1 is as of February 7, 2014. C&I loans of amounts less than $25 million. Spreads are computed over market interest rates on instruments with maturities comparable to each loan's repricing interval.
* Adjusted for changes in nonprice loan characteristics.
Source: Survey of Terms of Business Lending.

Return on Assets and Return on Equity



Source: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Holding Companies.

Net Interest Margin, by BHC Type



Note: Large bank holding companies (BHCs) consist of Bank of America, Bank of New York Mellon, Citigroup, Goldman Sachs, JPMorgan Chase, Morgan Stanley, Northern Trust, State Street, and Wells Fargo.
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	6.1	8.0	-13.8	2.0	6.6
2013:Q4	6.5	8.3	-8.0	-3.3	5.8
2014:Q1	6.3	8.1	-11.1	-4.5	7.3
Apr.	6.0	7.0	-13.5	2.6	9.5
May	7.8	9.5	-7.1	-.9	6.2

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

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

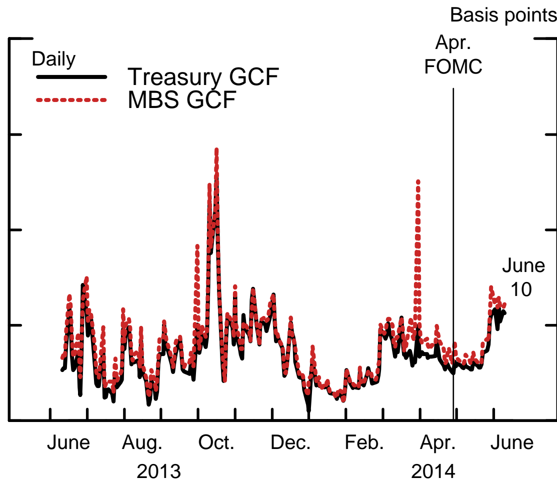
TREASURY AND AGENCY FINANCE AND MARKET FUNCTIONING

Liquidity conditions in Treasury and MBS markets remained stable amid ongoing reductions in the pace of asset purchases.[7] Still, there seemed to be some signs of specialness, especially in the 30-year Fannie Mae 3.5 percent coupon TBA market, as evidenced by low levels of dollar-roll-implied financing rates. In response, the Desk rolled about 11 percent of its total agency MBS purchases for May settlement to June and about 3 percent of its total agency MBS purchases for June settlement to July. Compared with the beginning of the year, the Desk's MBS settlements in the intermeeting period represented a somewhat smaller fraction of gross MBS issuance, as gross issuance edged up while SOMA settlements declined modestly.

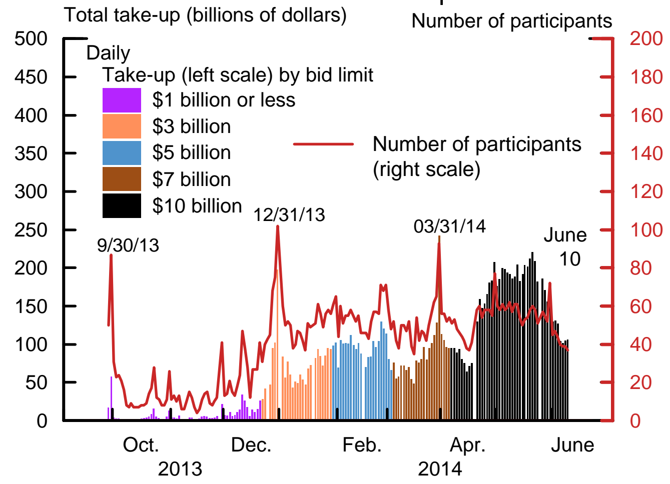
Financial Developments

[7] The Desk conducted outright purchases of $34 billion in Treasury securities and $36 billion in agency MBS securities. Over the intermeeting period, MBS purchases were fully transitioned to FedTrade, the Desk's proprietary trading system. The Desk typically now conducts two operations per day in a multiple-price format. No significant pricing changes were associated with the transition. Dollar roll transactions continue to be conducted on TradeWeb, the existing commercial trading system.

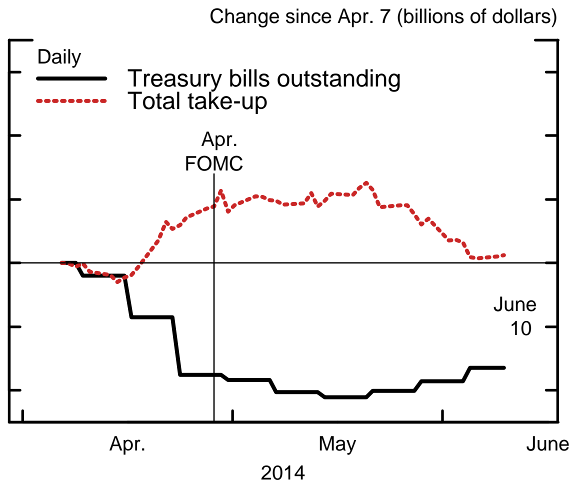
Short-Term Funding Markets and Treasury and Agency Finance



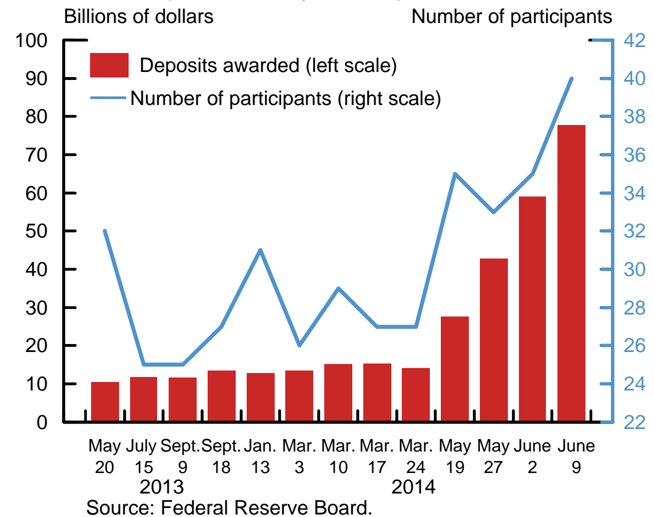
Source: Bloomberg.



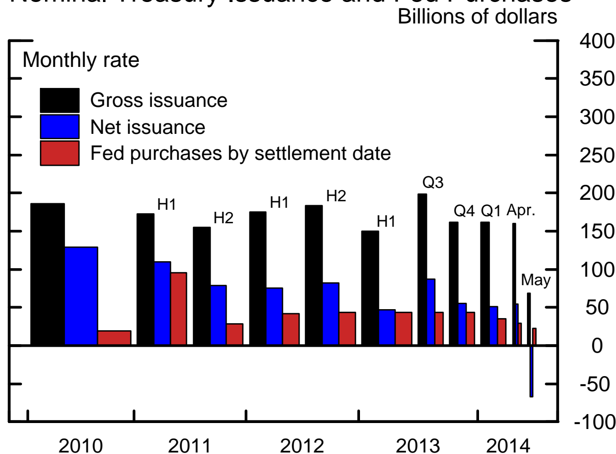
Source: Federal Reserve Bank of New York.



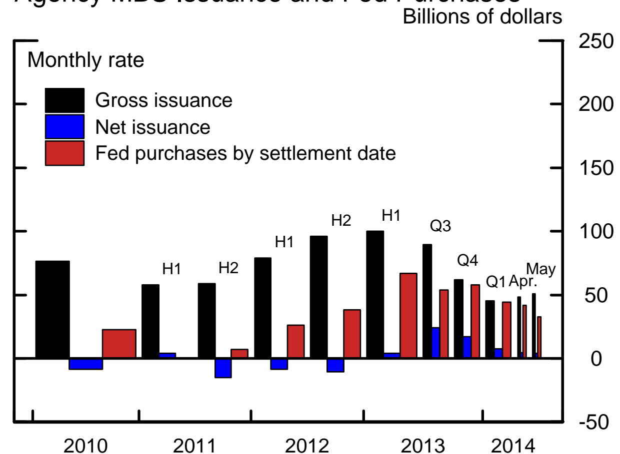
Source: Federal Reserve Bank of New York.



Source: Federal Reserve Board.



Note: Excludes bills.
Source: U.S. Department of the Treasury; Federal Reserve Bank of New York.



Note: Issuance and purchases of 30-year fixed-rate agency MBS.
Source: Federal Reserve Bank of New York.

Risks and Uncertainty

ASSESSMENT OF RISKS

We continue to view the extent of uncertainty around our projections for real GDP growth and the unemployment rate as roughly in line with the average of the past 20 years (the benchmark used by the FOMC), a period that includes considerable volatility.[1] As always, a number of upside and downside risks attend our forecast for economic activity; importantly, however, we see neither monetary policy nor fiscal policy as being well positioned to help the economy withstand adverse shocks. Consequently, we continue to believe that the risks to our forecast for real GDP growth are tilted a little to the downside. By contrast, we view the uncertainty around our projection for the unemployment rate as roughly balanced, with the risk of a higher unemployment rate from adverse demand-side developments largely countered by the possibility that the unemployment rate could continue to surprise us to the downside, despite the further reduction of our estimate of potential GDP growth in the current Tealbook.

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 relatively strong capital positions of large domestic banking firms, the generally low levels and moderate growth of aggregate credit in the nonfinancial sectors, and the reduced reliance on fragile short-term wholesale funding across the financial sector in recent years. That said, pockets of vulnerabilities are evident: Valuation pressures have continued in corporate debt markets and in certain segments of the equity market, low levels of implied volatility may indicate that investors have become complacent, and term

[1] The benchmark estimates of uncertainty about real activity increased sharply after the end of the Great Moderation. As the fixed 20-year window used to assess the size of typical forecast errors has moved forward to include the experience of the past six years, the estimated standard errors for out-year projections of the unemployment rate and real GDP growth increased between 2008 and 2011—almost doubling for the unemployment rate and increasing by about 50 percent for GDP growth—and have remained at those higher levels with the current 20-year sample. As a result, the benchmark estimates of uncertainty about economic activity are no longer dominated by the experience of the Great Moderation. In contrast, benchmark estimates of uncertainty about inflation are essentially unchanged relative to earlier sample periods.

Alternative Scenarios

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

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

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

Risks & Uncertainty

premiums on long-term Treasury securities are compressed by historical standards, suggesting the risk of a sharp increase. In addition, the largest financial institutions remain complex and interconnected, and money market mutual funds continue to be susceptible to investor runs.

With regard to inflation, we see significant uncertainty around our projection but do not view the current level of uncertainty as unusually high. Longer-run inflation expectations appear to have remained stable in recent years despite fluctuations in the prices of crude oil, other commodities, and imports more generally, and also despite the deep recession and subsequent slack in labor and product markets. Furthermore, we view the risks to our inflation forecast as balanced. On the downside, there is the possibility that the soft readings on inflation that have been seen, on net, since the beginning of last year could prove more persistent than we expect, especially if longer-term inflation expectations move down or if low levels of resource utilization persist longer or have larger effects than we currently project. On the upside, an increase in inflation expectations, potentially related to concerns about the size of the Federal Reserve's balance sheet and the ability to execute a timely exit from the current stance of policy, could cause inflation to rise, as could significant unanticipated increases in the prices of oil and other commodities caused by overseas developments, a stronger-than-expected economic recovery, or a larger amount of damage to the supply side of the economy than is assumed in the baseline.

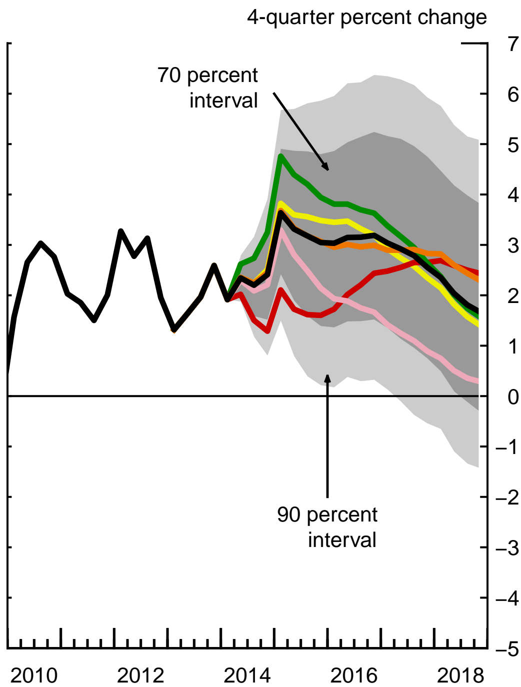
Alternative Scenarios

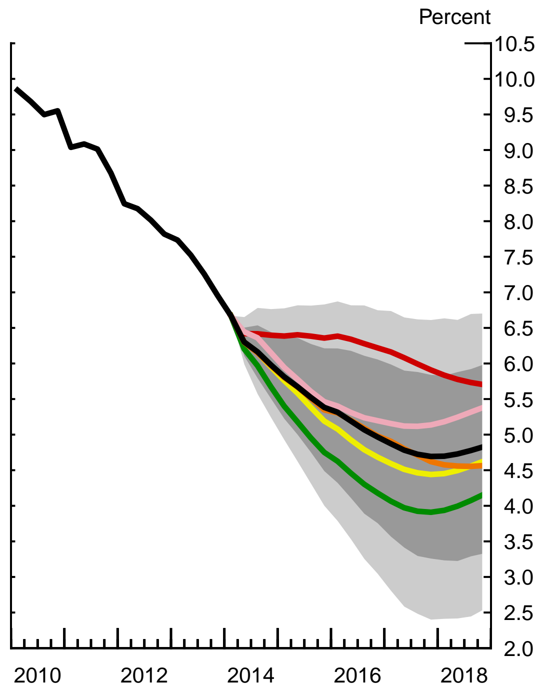
To illustrate some of the risks to the outlook, we construct a number of alternatives to the baseline projection using simulations of staff models. The first scenario contemplates the risk that the generally low readings for consumer price inflation seen over the past year could prove to be more persistent than anticipated. The second scenario features a deeper and more protracted reduction in potential output growth than assumed in the baseline. In the third scenario, the recent increases in employment and auto sales herald a more robust expansion than the staff expects. By contrast, the fourth scenario considers the possibility that the projected step-up in housing demand and consumer spending fails to materialize, implying persistently weaker aggregate demand. In the final scenario, growth in emerging market economies is considerably more robust than in the baseline.

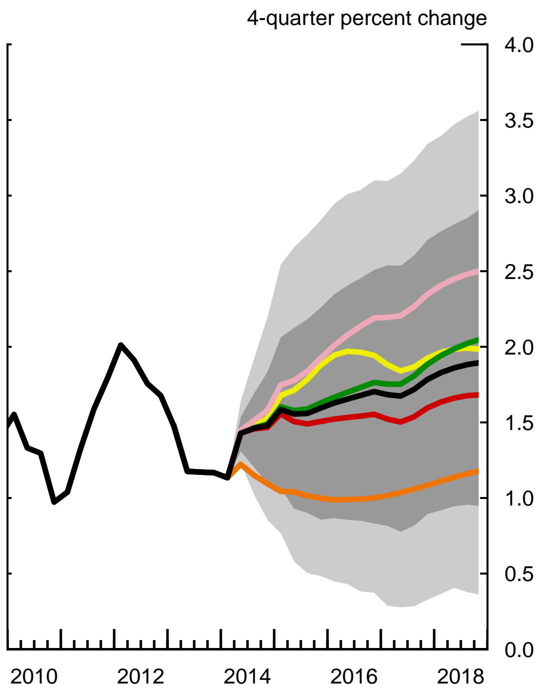
Forecast Confidence Intervals and Alternative Scenarios

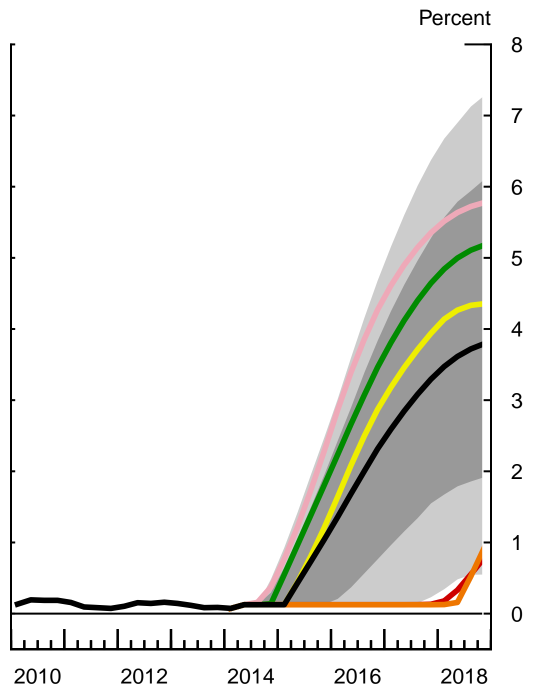
Confidence Intervals Based on FRB/US Stochastic Simulations

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









Risks & Uncertainty

We generate the first four scenarios using the FRB/US model and the final one using the multicountry SIGMA 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.[2] In all cases, we assume that the size and composition of the SOMA portfolio follow their baseline paths.

Low Inflation

A premise of the baseline projection is that, given the level of longer-term inflation expectations, if slack in resource utilization were to be closed promptly but without overshooting, the inflation rate would settle at 1¾ percent—down from just under 2 percent in the April Tealbook. As discussed in the recent memorandum to the FOMC on persistently low inflation in the judgmental forecast, some models point to even lower estimates.[3] In this scenario, we assume that the extended experience of below-target inflation has resulted in a reduction of current longer-run inflation expectations to about 1½ percent, and that continued low inflation in the coming years leads to further erosion in these expectations. As a consequence, inflation in this scenario is close to 1 percent through 2018. In turn, persistently low inflation causes liftoff to occur in the second half of 2018, more than three years later than in the baseline. At that time, the unemployment rate has declined to 4½ percent, ¾ percentage point below its natural rate.[4] However, given the decline in long-horizon inflation expectations, inflation

[2] Specifically, in the second, third, and fourth scenarios, the inertial Taylor (1999) rule takes over in the quarter following the observation of an unemployment rate of 5.8 percent, the level of unemployment prevailing in the baseline one quarter prior to liftoff. In the "Low Inflation" 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, per its March and April statements, "to maintain the current target range for the federal funds rate for a considerable time after the asset purchase program ends, especially if projected inflation continues to run below the Committee's 2 percent longer-run goal." For the final scenario, "Stronger Growth in Emerging Market Economies," we assume a broadly similar policy rule to the one used in the first four scenarios. 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.

[3] See Deb Lindner (2014), "Why Is Inflation Persistently Low in the Judgmental Forecast?" memorandum to the FOMC, Board of Governors of the Federal Reserve System, Division of Research and Statistics, June 4.

[4] Lower inflation expectations, all else equal, imply a higher path for real interest rates, which would contract aggregate demand. However, in this scenario the federal funds rate lifts off later than in the baseline, which more than offsets these contractionary forces, and the unemployment rate is lower than in the baseline in 2018.

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

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

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

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

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

projected one to two years ahead is still below the Committee's 2 percent objective despite this degree of labor market tightness.

No Room to Grow

In the June Tealbook, the level of potential has been revised down further, but some of the models we consult suggest that potential output may be even lower than is assumed in the baseline projection and may grow more slowly in the future. In this scenario, we assume that structural productivity gains in recent years have been slower than the staff currently estimates and continue to be weaker over the projection period, and that the natural rate of unemployment has remained constant at 6¼ percent since early 2011, as labor market efficiency is assumed to have been substantially impaired. With these assumptions, potential output has expanded at an annual rate of only ¾ percent since 2011; looking ahead, it rises at only a 1 percent pace through 2018. As a consequence of the historical revision to potential output, the output gap is estimated to be closed by the current quarter.

Compared with the baseline, real GDP growth is substantially lower as households and firms base their spending on lower levels of permanent income and potential output. Initially, policymakers incorrectly perceive supply-side conditions as consistent with the staff's baseline view. However, as evidence of the weaker supply-side conditions mounts, their perceptions gradually come into line with reality and are assumed to be fully adjusted by 2016. As a consequence, monetary policy eventually tightens considerably and real GDP growth slows well below even the sluggish pace of potential output growth assumed in this scenario.[5] Inflation is higher than in the baseline, reflecting the effects of both tighter resource utilization and smaller productivity gains, which contribute to greater cost pressures. By 2018, the federal funds rate is nearly 6 percent, and real GDP rises slightly more than ¼ percent over the year. The unemployment rate begins to move up by the end of 2017 but has still not risen to the assumed natural rate of 6¼ percent by the end of 2018. Inflation is about 2½ percent in that year. Given enough time, the Taylor rule governing the setting of the federal funds rate would eventually drive the unemployment rate above its assumed natural rate, bringing inflation back down to 2 percent.

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[5] If policymakers were to recognize immediately the change in supply-side conditions, the funds rate path would be ½ percentage point higher in 2015 and ¼ percentage point higher in 2016 than in this scenario. This tighter policy would aggravate the slowing of the economy and slightly damp the increase in inflation.

Risks & Uncertainty

Faster Expansion

Some recent indicators—including motor vehicle sales, payroll employment, and business surveys—have been encouraging and raise the possibility that underlying aggregate demand conditions may be stronger than assumed in the baseline. In this scenario, we assume that recent labor market improvements boost the confidence of households and businesses in the durability of the expansion and spark a virtuous circle. Real GDP growth reaches an annual rate of 4½ percent in the second half of this year and averages 4 percent over 2015; the unemployment rate falls below 4¼ percent by the end of 2016. Inflation is only slightly higher than in the baseline as the effects of tighter resource utilization are partially offset by higher investment, which boosts productivity and thus helps hold down increases in costs. The federal funds rate lifts off one quarter earlier than in the baseline and rises more steeply thereafter, moving above 5 percent by the end of 2018.

Weaker Household Demand

In this scenario, the first-quarter declines in GDP and GDI prove to be more indicative of the underlying momentum in aggregate demand than the staff currently assumes. The strengthening in housing activity projected in the baseline does not materialize; instead, residential investment rises, on average, only 2 percent per year. Reduced consumer confidence spawns a vicious circle of restrained household spending and a slower pace of business investment and hiring, contributing further to a slower recovery. All told, real GDP rises at an average annual rate of 2 percent over the next two years, and the unemployment rate hovers above 6 percent through mid-2017. With a wider margin of resource slack than in the baseline, inflation rises somewhat more slowly. The federal funds rate does not lift off until the second quarter of 2018.

Stronger Growth in Emerging Market Economies

Most emerging market economies have experienced subpar growth since early last year, and their growth took an especially large dip in the first quarter of this year. Our baseline forecast envisions that GDP growth in those economies will move up to its potential pace over the next couple of quarters and remain there subsequently. In light of the pickup in advanced economies and the relatively modest level of EME financial stresses at present, this scenario considers the possibility of a much faster snapback in EME growth than the staff currently assumes. It also assumes a more pronounced rebalancing toward domestic demand than we are currently anticipating, especially in emerging Asia.

Specifically, real GDP in the EMEs expands at an annual pace about 2 percentage points above the baseline over the next two years, as sharply improving household and business confidence within the EMEs fuels a robust expansion in spending. Monetary policy tightens in response to faster growth, and the authorities allow EME currencies to appreciate relative to the baseline, resulting in a 3 percent depreciation of the broad real dollar relative to its baseline path. The EMEs' current accounts surpluses shrink in response to stronger domestic demand and appreciated currencies, and they are assumed to reduce their purchases of U.S. Treasury securities, which causes term premiums on longer-term Treasury securities to rise by roughly 15 basis points. Finally, oil prices rise around $20 per barrel above their baseline path in response to higher global demand.

The stronger foreign activity and weaker dollar boost U.S. real net exports. U.S. real GDP expands nearly 3½ percent in 2015 as the positive impetus from net exports more than offsets the contractionary effects of increased oil prices and higher term premiums. Higher import prices and stronger activity boost core PCE inflation to about 2 percent in 2015. The federal funds rate lifts off from its effective lower bound in the second quarter of 2015, as in the baseline, but rises somewhat more quickly thereafter and averages about ½ percentage point above its baseline level through the end of the decade.

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

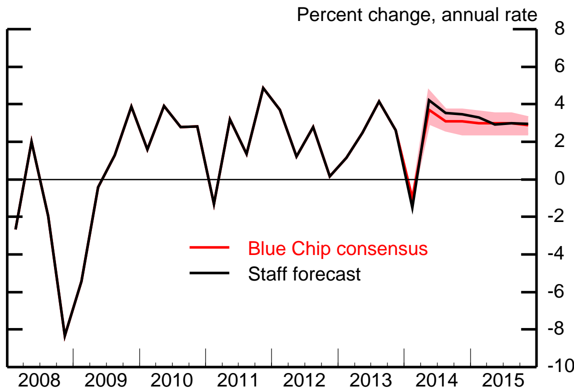
Measure and projection	2014		2015		2016	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
Real GDP						
Staff	2.8	2.4	3.2	3.0	3.1	3.2
FRB/US	1.9	1.6	2.7	2.3	2.9	2.5
EDO	2.3	2.1	2.8	2.7	2.8	2.7
Blue Chip	2.7	2.2	3.0	3.0	...	...
Unemployment rate[1]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

Note: Blue Chip forecast completed on June 10, 2014.
1. Percent, average for Q4.
2. Consumer price index.
3. Treasury bill rate.
... Not applicable. The Blue Chip forecast is not available for core inflation.

Risks & Uncertainty

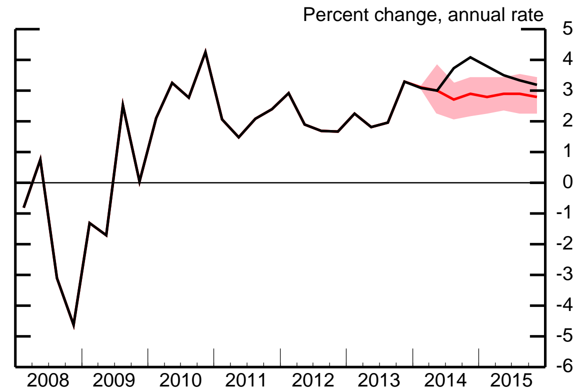
Tealbook Forecast Compared with Blue Chip
(Blue Chip survey released June 10, 2014)

Real GDP

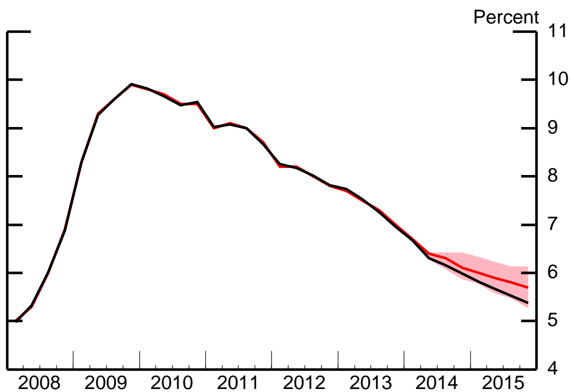


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

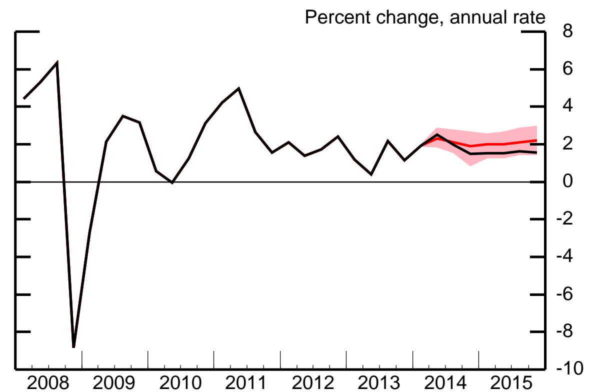
Real PCE



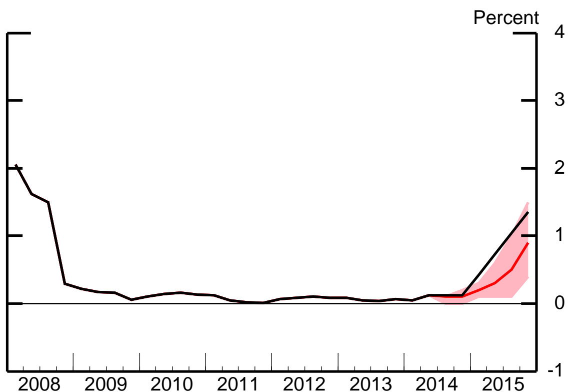
Unemployment Rate



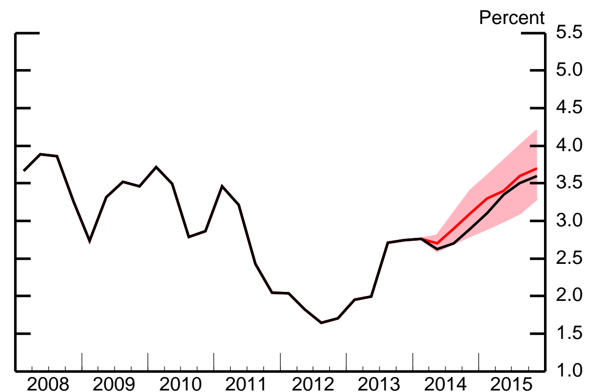
Consumer Price Index



Treasury Bill Rate



10-Year Treasury Yield



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

Risks & Uncertainty

Assessment of Key Macroeconomic Risks (1)

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

Probability that the 4-quarter change in total PCE prices will be ...	Staff	FRB/US	EDO	BVAR
Greater than 3 percent				
Current Tealbook	.04	.03	.10	.16
Previous Tealbook	.05	.03	.09	.07
Less than 1 percent				
Current Tealbook	.30	.37	.33	.08
Previous Tealbook	.22	.34	.34	.15

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

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

Probability of Near-Term Recession

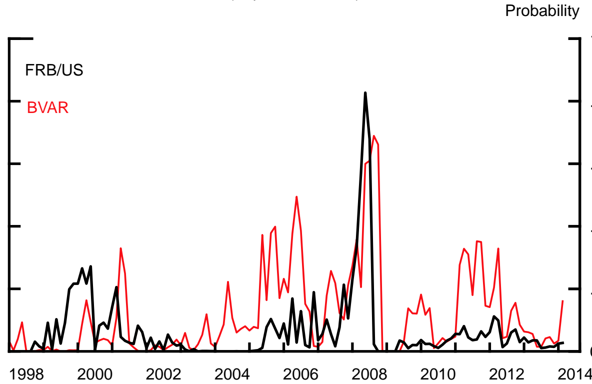
Probability that real GDP declines in each of 2014:Q3 and 2014:Q4	Staff	FRB/US	EDO	BVAR	Factor Model
Current Tealbook	.03	.05	.04	.04	.22
Previous Tealbook	.01	.03	.03	.07	.09

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

Assessment of Key Macroeconomic Risks (2)

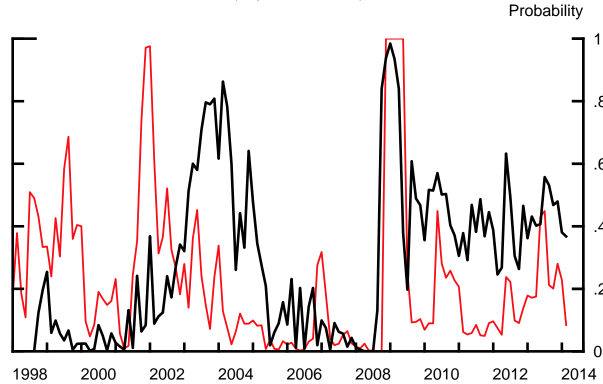
Probability that Total PCE Inflation Is above 3 Percent

(4 quarters ahead)



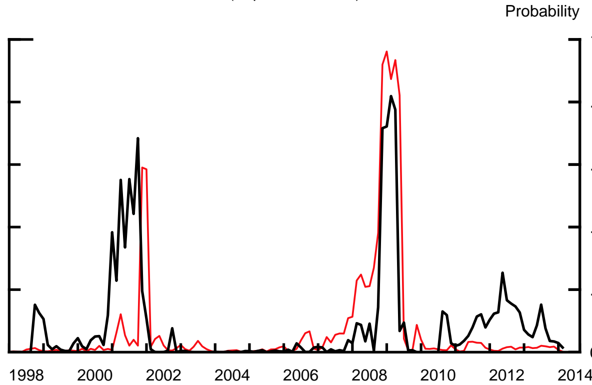
Probability that Total PCE Inflation Is below 1 Percent

(4 quarters ahead)



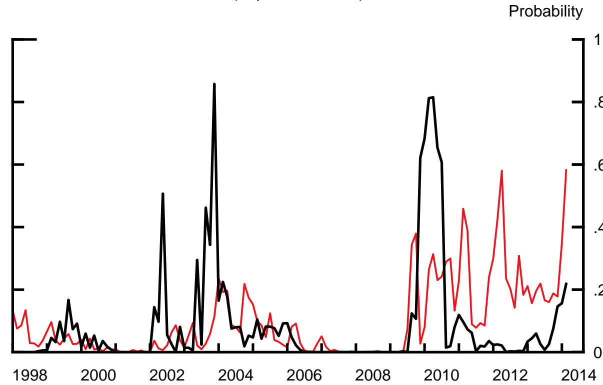
Probability that the Unemployment Rate Increases 1 ppt

(4 quarters ahead)

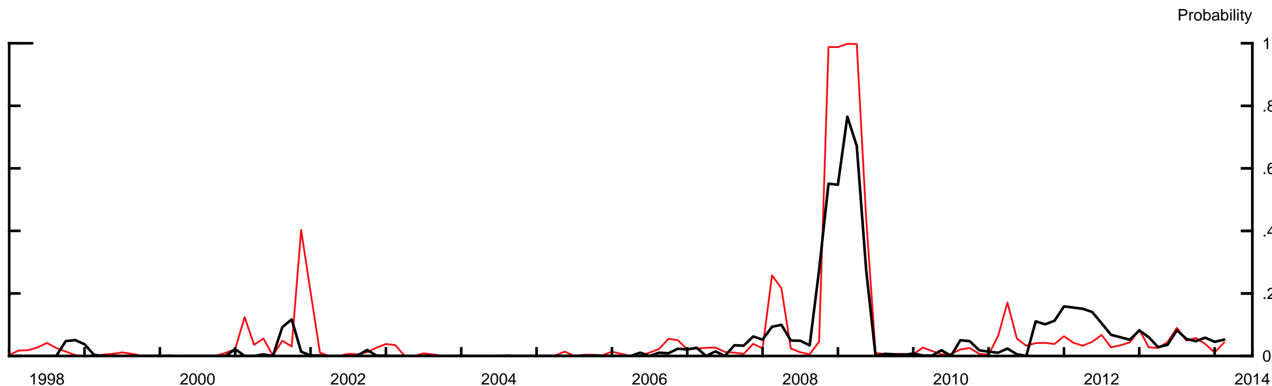


Probability that the Unemployment Rate Decreases 1 ppt

(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.

Risks & Uncertainty

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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]	
	04/23/14	06/11/14	04/23/14	06/11/14	04/23/14	06/11/14	04/23/14	06/11/14	04/23/14	06/11/14
Quarterly										
2013:Q1	2.8	2.8	1.1	1.1	1.1	1.1	1.4	1.4	7.7	7.7
Q2	3.1	3.1	2.5	2.5	-.1	-.1	.6	.6	7.5	7.5
Q3	6.2	6.2	4.1	4.1	1.9	1.9	1.4	1.4	7.3	7.3
Q4	4.2	4.2	2.6	2.6	1.1	1.1	1.3	1.3	7.0	7.0
2014:Q1	2.3	-.2	.7	-1.5	1.5	1.4	1.3	1.2	6.7	6.7
Q2	5.1	6.0	3.5	4.2	1.6	2.0	1.5	1.8	6.6	6.3
Q3	5.2	5.2	3.4	3.5	1.7	1.5	1.6	1.5	6.4	6.2
Q4	5.5	5.1	3.6	3.5	1.5	1.2	1.6	1.4	6.2	6.0
2015:Q1	5.4	5.2	3.4	3.3	1.5	1.4	1.7	1.6	6.0	5.8
Q2	5.1	4.7	3.2	2.9	1.5	1.5	1.7	1.7	5.9	5.7
Q3	5.0	4.6	3.2	3.0	1.5	1.4	1.7	1.5	5.7	5.5
Q4	4.9	4.5	3.2	2.9	1.5	1.3	1.6	1.5	5.6	5.4
Two-quarter[2]										
2013:Q2	3.0	3.0	1.8	1.8	.5	.5	1.0	1.0	-.3	-.3
Q4	5.2	5.2	3.4	3.4	1.5	1.5	1.3	1.3	-.5	-.5
2014:Q2	3.7	2.9	2.0	1.3	1.5	1.7	1.4	1.5	-.4	-.7
Q4	5.3	5.2	3.5	3.5	1.6	1.4	1.6	1.4	-.4	-.3
2015:Q2	5.2	4.9	3.3	3.1	1.5	1.4	1.7	1.7	-.3	-.3
Q4	5.0	4.6	3.2	3.0	1.5	1.3	1.7	1.5	-.3	-.3
Four-quarter[3]										
2012:Q4	3.8	3.8	2.0	2.0	1.7	1.7	1.7	1.7	-.9	-.9
2013:Q4	4.1	4.1	2.6	2.6	1.0	1.0	1.2	1.2	-.8	-.8
2014:Q4	4.5	4.0	2.8	2.4	1.6	1.5	1.5	1.5	-.8	-1.0
2015:Q4	5.1	4.8	3.2	3.0	1.5	1.4	1.7	1.6	-.6	-.6
2016:Q4	5.0	5.0	3.1	3.2	1.6	1.5	1.8	1.7	-.5	-.4
Annual										
2012	4.6	4.6	2.8	2.8	1.8	1.8	1.8	1.8	8.1	8.1
2013	3.4	3.4	1.9	1.9	1.1	1.1	1.2	1.2	7.4	7.4
2014	4.3	3.8	2.6	2.2	1.4	1.4	1.4	1.4	6.5	6.3
2015	5.2	5.0	3.4	3.3	1.6	1.4	1.7	1.6	5.8	5.6
2016	5.0	4.9	3.1	3.1	1.6	1.5	1.8	1.7	5.3	5.1

1. Level, except for two-quarter and four-quarter intervals.
2. Percent change from two quarters earlier; for unemployment rate, change is in percentage points.
3. Percent change from four quarters earlier; for unemployment rate, change is in percentage points.

Changes in Real Gross Domestic Product and Related Items

(Percent, annual rate except as noted)

Item	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2013[1]	2014[1]	2015[1]	2016[1]
Real GDP	2.5	4.1	2.6	-1.5	4.2	3.5	3.5	3.3	2.9	3.0	2.9	2.6	2.4	3.0	3.2
Previous Tealbook	2.5	4.1	2.6	.7	3.5	3.4	3.6	3.4	3.2	3.2	3.2	2.6	2.8	3.2	3.1
Final sales	2.1	2.5	2.7	.1	3.4	3.4	3.3	3.4	3.4	3.2	3.2	1.8	2.5	3.3	3.2
Previous Tealbook	2.1	2.5	2.7	.9	3.7	3.7	3.5	3.8	3.5	3.4	3.2	1.8	2.9	3.5	3.2
Priv. dom. final purch.	2.6	2.7	3.2	2.2	3.9	4.0	4.3	4.3	4.1	4.0	3.9	2.5	3.6	4.1	3.6
Previous Tealbook	2.6	2.7	3.2	2.3	4.0	4.7	4.7	4.8	4.5	4.2	4.0	2.5	3.9	4.4	3.6
Personal cons. expend.	1.8	2.0	3.3	3.1	3.0	3.7	4.1	3.8	3.5	3.3	3.2	2.3	3.5	3.5	2.9
Previous Tealbook	1.8	2.0	3.3	2.5	3.8	4.0	4.1	4.2	3.8	3.6	3.4	2.3	3.6	3.7	2.9
Durables	6.2	7.9	2.8	1.4	12.5	10.3	11.3	9.1	9.0	8.3	8.0	5.6	8.8	8.6	6.3
Nondurables	1.6	2.9	2.9	.4	2.8	3.3	3.1	3.1	2.7	2.6	2.5	2.6	2.4	2.7	2.3
Services	1.2	.7	3.5	4.3	1.6	2.8	3.3	3.2	2.9	2.8	2.6	1.7	3.0	2.9	2.5
Residential investment	14.2	10.3	-7.9	-4.8	4.3	8.3	9.3	12.7	14.7	15.2	15.7	6.9	4.1	14.6	13.3
Previous Tealbook	14.2	10.3	-7.9	-2.1	6.3	16.9	14.7	16.5	15.6	14.1	12.0	6.9	8.7	14.5	12.0
Nonres. priv. fixed invest.	4.7	4.8	5.7	-.8	8.8	4.6	3.9	4.8	4.7	4.7	4.5	2.6	4.1	4.7	4.6
Previous Tealbook	4.7	4.8	5.7	2.2	4.7	5.2	5.3	5.0	5.0	5.0	4.9	2.6	4.3	5.0	4.7
Equipment & intangibles	1.3	2.4	8.0	1.2	10.1	3.9	2.8	5.5	5.5	5.4	5.2	3.5	4.4	5.4	5.4
Previous Tealbook	1.3	2.4	8.0	1.5	3.5	5.1	5.2	5.6	5.8	5.7	5.6	3.5	3.8	5.7	5.6
Nonres. structures	17.6	13.4	-1.8	-7.7	4.4	7.1	8.0	2.2	2.2	2.3	2.3	-.7	2.8	2.2	2.1
Previous Tealbook	17.6	13.4	-1.8	4.5	8.5	5.4	5.4	2.9	2.6	2.5	2.5	-.7	6.0	2.6	2.0
Net exports[2]	-424	-420	-383	-441	-436	-433	-440	-445	-445	-449	-452	-412	-437	-448	-452
Previous Tealbook[2]	-424	-420	-383	-421	-408	-414	-427	-433	-437	-441	-445	-412	-418	-439	-446
Exports	8.0	3.9	9.5	-8.8	6.2	4.3	4.8	4.9	5.1	5.3	4.8	4.9	1.4	5.1	5.6
Imports	6.9	2.4	1.5	1.9	4.1	3.1	5.1	4.9	4.2	5.1	4.5	2.8	3.5	4.7	4.5
Gov't. cons. & invest.	-.4	.4	-5.2	-.7	-.3	-.4	-.5	-.6	-.8	-.7	-.2	-2.4	-.5	-.6	.6
Previous Tealbook	-.4	.4	-5.2	.2	-.3	-.7	-.5	-.9	-.8	-.8	-.2	-2.4	-.3	-.7	.5
Federal	-1.6	-1.5	-12.8	.7	-3.0	-2.7	-3.2	-3.4	-4.0	-4.0	-2.8	-6.2	-2.1	-3.6	-1.2
Defense	-.6	-.5	-14.4	-2.4	-4.8	-4.5	-4.0	-3.6	-4.7	-4.3	-3.0	-6.9	-4.0	-3.9	-2.0
Nondefense	-3.1	-3.1	-10.0	5.9	-.1	.2	-2.0	-3.1	-3.0	-3.5	-2.5	-5.0	1.0	-3.0	.0
State & local	.4	1.7	.0	-1.7	1.4	1.1	1.2	1.3	1.3	1.3	1.4	.2	.5	1.3	1.7
Change in priv. inventories[2]	57	116	112	45	80	87	96	96	81	75	66	82	77	80	66
Previous Tealbook[2]	57	116	112	105	102	92	96	84	72	67	66	82	99	72	57
Nonfarm[2]	33	89	89	29	65	77	88	94	78	73	64	58	65	77	64
Farm[2]	19	23	20	16	15	11	8	2	2	2	2	20	12	2	2

1. Change from fourth quarter of previous year to fourth quarter of year indicated.
2. Billions of chained (2009) dollars.

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

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP	1.9	-2.8	-.2	2.8	2.0	2.0	2.6	2.4	3.0	3.2
Previous Tealbook	1.9	-2.8	-.2	2.8	2.0	2.0	2.6	2.8	3.2	3.1
Final sales	2.0	-2.2	-.4	2.0	1.8	2.5	1.8	2.5	3.3	3.2
Previous Tealbook	2.0	-2.2	-.4	2.0	1.8	2.5	1.8	2.9	3.5	3.2
Priv. dom. final purch.	.8	-4.1	-2.3	3.5	3.0	2.9	2.5	3.6	4.1	3.6
Previous Tealbook	.8	-4.1	-2.3	3.5	3.0	2.9	2.5	3.9	4.4	3.6
Personal cons. expend.	1.5	-2.0	-.1	3.1	2.0	2.0	2.3	3.5	3.5	2.9
Previous Tealbook	1.5	-2.0	-.1	3.1	2.0	2.0	2.3	3.6	3.7	2.9
Durables	4.1	-12.9	2.5	9.3	5.7	7.8	5.6	8.8	8.6	6.3
Nondurables	.1	-2.7	.2	3.3	.7	1.6	2.6	2.4	2.7	2.3
Services	1.5	.2	-.6	2.1	1.9	1.3	1.7	3.0	2.9	2.5
Residential investment	-21.3	-24.3	-10.8	-5.2	5.6	15.5	6.9	4.1	14.6	13.3
Previous Tealbook	-21.3	-24.3	-10.8	-5.2	5.6	15.5	6.9	8.7	14.5	12.0
Nonres. priv. fixed invest.	7.1	-8.9	-12.2	8.1	8.6	5.0	2.6	4.1	4.7	4.6
Previous Tealbook	7.1	-8.9	-12.2	8.1	8.6	5.0	2.6	4.3	5.0	4.7
Equipment & intangibles	3.9	-11.8	-6.0	12.0	8.7	3.9	3.5	4.4	5.4	5.4
Previous Tealbook	3.9	-11.8	-6.0	12.0	8.7	3.9	3.5	3.8	5.7	5.6
Nonres. structures	17.1	-1.2	-27.1	-4.0	8.3	9.3	-.7	2.8	2.2	2.1
Previous Tealbook	17.1	-1.2	-27.1	-4.0	8.3	9.3	-.7	6.0	2.6	2.0
Net exports[1]	-704	-547	-392	-463	-446	-431	-412	-437	-448	-452
Previous Tealbook[1]	-704	-547	-392	-463	-446	-431	-412	-418	-439	-446
Exports	9.8	-2.9	.4	9.8	4.6	2.4	4.9	1.4	5.1	5.6
Imports	.7	-5.9	-6.2	11.7	3.5	.1	2.8	3.5	4.7	4.5
Gov't. cons. & invest.	1.8	3.3	2.3	-1.1	-3.3	-1.1	-2.4	-.5	-.6	.6
Previous Tealbook	1.8	3.3	2.3	-1.1	-3.3	-1.1	-2.4	-.3	-.7	.5
Federal	2.7	8.4	3.9	3.2	-3.9	-2.3	-6.2	-2.1	-3.6	-1.2
Defense	2.5	9.4	3.6	2.0	-4.2	-5.0	-6.9	-4.0	-3.9	-2.0
Nondefense	2.9	6.5	4.6	5.5	-3.3	2.6	-5.0	1.0	-3.0	.0
State & local	1.2	.2	1.3	-4.0	-2.8	-.3	.2	.5	1.3	1.7
Change in priv. inventories[1]	36	-34	-148	58	34	58	82	77	80	66
Previous Tealbook[1]	36	-34	-148	58	34	58	82	99	72	57
Nonfarm[1]	37	-35	-146	66	40	69	58	65	77	64
Farm[1]	-1	1	-2	-7	-4	-7	20	12	2	2

1. Billions of chained (2009) dollars.

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

Item	2013			2014				2015							
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2013[1]	2014[1]	2015[1]	2016[1]
Real GDP	2.5	4.1	2.6	-1.5	4.2	3.5	3.5	3.3	2.9	3.0	2.9	2.6	2.4	3.0	3.2
Previous Tealbook	2.5	4.1	2.6	.7	3.5	3.4	3.6	3.4	3.2	3.2	3.2	2.6	2.8	3.2	3.1
Final sales	2.1	2.5	2.6	.1	3.4	3.4	3.3	3.4	3.3	3.1	3.2	1.8	2.5	3.3	3.2
Previous Tealbook	2.1	2.5	2.6	.9	3.6	3.6	3.5	3.7	3.5	3.3	3.2	1.8	2.9	3.4	3.2
Priv. dom. final purch.	2.2	2.3	2.7	1.8	3.3	3.4	3.6	3.6	3.5	3.4	3.3	2.1	3.0	3.4	3.1
Previous Tealbook	2.2	2.3	2.7	1.9	3.3	3.9	3.9	4.0	3.8	3.6	3.4	2.1	3.3	3.7	3.1
Personal cons. expend.	1.2	1.4	2.2	2.1	2.1	2.6	2.8	2.6	2.4	2.3	2.2	1.6	2.4	2.4	2.0
Previous Tealbook	1.2	1.4	2.2	1.7	2.6	2.8	2.8	2.9	2.6	2.5	2.3	1.6	2.5	2.6	2.0
Durables	.5	.6	.2	.1	.9	.8	.8	.7	.7	.6	.6	.4	.6	.7	.5
Nondurables	.3	.5	.5	.1	.4	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4
Services	.5	.3	1.6	1.9	.8	1.3	1.5	1.5	1.3	1.3	1.2	.8	1.4	1.3	1.2
Residential investment	.4	.3	-.3	-.2	.1	.3	.3	.4	.5	.5	.5	.2	.1	.5	.5
Previous Tealbook	.4	.3	-.3	-.1	.2	.5	.5	.5	.5	.5	.4	.2	.3	.5	.5
Nonres. priv. fixed invest.	.6	.6	.7	-.1	1.1	.6	.5	.6	.6	.6	.6	.3	.5	.6	.6
Previous Tealbook	.6	.6	.7	.3	.6	.6	.6	.6	.6	.6	.6	.3	.5	.6	.6
Equipment & intangibles	.1	.2	.7	.1	.9	.4	.3	.5	.5	.5	.5	.3	.4	.5	.5
Previous Tealbook	.1	.2	.7	.1	.3	.5	.5	.5	.5	.5	.5	.3	.4	.5	.5
Nonres. structures	.4	.4	-.1	-.2	.1	.2	.2	.1	.1	.1	.1	.0	.1	.1	.1
Previous Tealbook	.4	.4	-.1	.1	.2	.2	.2	.1	.1	.1	.1	.0	.2	.1	.1
Net exports	-.1	.1	1.0	-1.5	.1	.1	-.2	-.1	.0	-.1	-.1	.2	-.4	-.1	.0
Previous Tealbook	-.1	.1	1.0	-1.0	.3	-.1	-.3	-.1	-.1	-.1	-.1	.2	-.3	-.1	.0
Exports	1.0	.5	1.2	-1.2	.8	.6	.6	.7	.7	.7	.6	.7	.2	.7	.8
Imports	-1.1	-.4	-.2	-.3	-.7	-.5	-.8	-.8	-.7	-.8	-.7	-.5	-.6	-.8	-.7
Gov't. cons. & invest.	-.1	.1	-1.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	-.5	-.1	-.1	.1
Previous Tealbook	-.1	.1	-1.0	.0	.0	-.1	-.1	-.2	-.1	-.1	.0	-.5	-.1	-.1	.1
Federal	-.1	-.1	-1.0	.1	-.2	-.2	-.2	-.2	-.3	-.3	-.2	-.5	-.1	-.2	-.1
Defense	.0	.0	-.7	-.1	-.2	-.2	-.2	-.1	-.2	-.2	-.1	-.3	-.2	-.2	-.1
Nondefense	-.1	-.1	-.3	.2	.0	.0	-.1	-.1	-.1	-.1	-.1	-.1	.0	-.1	.0
State & local	.1	.2	.0	-.2	.2	.1	.1	.1	.1	.1	.1	.0	.1	.1	.2
Change in priv. inventories	.4	1.7	.0	-1.6	.9	.2	.2	-.1	-.4	-.1	-.2	.7	-.1	-.2	.0
Previous Tealbook	.4	1.7	.0	-.3	-.2	-.2	.1	-.3	-.3	-.1	.0	.7	-.1	-.2	-.1
Nonfarm	.3	1.6	.0	-1.6	1.0	.3	.3	.2	-.4	-.1	-.2	.5	.0	-.2	.0
Farm	.1	.1	-.1	-.1	-.1	-.1	-.1	-.2	.0	.0	.0	.3	-.1	-.1	.0

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

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

Item	2013			2014				2015							
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2013[1]	2014[1]	2015[1]	2016[1]
GDP chain-wt. price index	.6	2.0	1.6	1.3	1.7	1.6	1.5	1.8	1.7	1.6	1.5	1.4	1.6	1.7	1.7
Previous Tealbook	.6	2.0	1.6	1.7	1.6	1.8	1.8	2.0	1.8	1.8	1.7	1.4	1.7	1.8	1.8
PCE chain-wt. price index	-.1	1.9	1.1	1.4	2.0	1.5	1.2	1.4	1.5	1.4	1.3	1.0	1.5	1.4	1.5
Previous Tealbook	-.1	1.9	1.1	1.5	1.6	1.7	1.5	1.5	1.5	1.5	1.5	1.0	1.6	1.5	1.6
Energy	-11.9	11.8	-1.0	4.0	2.3	1.4	-1.8	-1.9	-2.0	-1.4	-1.3	-1.5	1.4	-1.6	-.8
Previous Tealbook	-11.9	11.8	-1.0	4.1	1.6	2.8	.5	-.9	-1.4	-1.3	-1.3	-1.5	2.3	-1.2	-.9
Food	.5	1.2	.1	1.4	3.4	1.9	1.2	1.0	1.1	1.1	1.2	.8	2.0	1.1	1.3
Previous Tealbook	.5	1.2	.1	1.4	2.6	1.6	1.2	1.1	1.3	1.3	1.4	.8	1.7	1.3	1.4
Ex. food & energy	.6	1.4	1.3	1.2	1.8	1.5	1.4	1.6	1.7	1.5	1.5	1.2	1.5	1.6	1.7
Previous Tealbook	.6	1.4	1.3	1.3	1.5	1.6	1.6	1.7	1.7	1.7	1.6	1.2	1.5	1.7	1.8
Ex. food & energy, market based	.5	1.4	1.0	1.0	1.8	1.5	1.4	1.6	1.7	1.5	1.5	1.2	1.4	1.6	1.7
Previous Tealbook	.5	1.4	1.0	1.1	1.5	1.6	1.5	1.8	1.8	1.7	1.6	1.2	1.4	1.7	1.8
CPI	.4	2.2	1.1	1.9	2.5	2.0	1.5	1.5	1.5	1.6	1.5	1.2	2.0	1.6	1.7
Previous Tealbook	.4	2.2	1.1	1.9	2.1	2.0	1.8	1.7	1.7	1.7	1.6	1.2	2.0	1.7	1.7
Ex. food & energy	1.4	1.8	1.6	1.6	2.4	2.0	1.9	1.9	2.0	2.0	1.9	1.7	2.0	1.9	1.9
Previous Tealbook	1.4	1.8	1.6	1.6	2.0	2.0	2.0	2.1	2.1	2.0	1.9	1.7	1.9	2.0	2.0
ECI, hourly compensation[2]	2.1	2.0	2.0	1.0	2.3	2.5	2.5	2.6	2.6	2.6	2.7	2.0	2.1	2.6	3.1
Previous Tealbook[2]	2.4	1.7	2.0	2.4	2.5	2.5	2.6	2.8	2.9	2.9	2.9	2.0	2.5	2.9	3.2
Nonfarm business sector															
Output per hour	1.8	3.5	2.3	-3.9	1.9	2.3	1.8	1.5	1.4	1.7	1.5	1.4	.5	1.5	1.8
Previous Tealbook	1.8	3.5	2.2	-1.0	1.1	2.0	1.7	1.6	1.7	1.6	1.7	1.4	.9	1.6	1.9
Compensation per hour	3.8	1.3	1.7	2.4	.8	2.5	2.7	2.8	2.9	2.9	3.0	.3	2.1	2.9	3.3
Previous Tealbook	3.8	1.3	1.7	2.8	1.3	2.9	3.1	3.2	3.2	3.2	3.3	.3	2.5	3.2	3.4
Unit labor costs	2.0	-2.1	-.6	6.6	-1.1	.2	.9	1.3	1.4	1.2	1.5	-1.1	1.6	1.4	1.5
Previous Tealbook	2.0	-2.1	-.5	3.9	.2	.9	1.4	1.6	1.5	1.5	1.6	-1.0	1.6	1.6	1.5
Core goods imports chain-wt. price index[3]	-2.4	-3.2	.6	2.6	1.0	1.1	1.0	1.2	1.2	1.3	1.3	-1.1	1.4	1.2	1.3
Previous Tealbook[3]	-2.4	-3.2	.6	1.3	.9	1.7	1.3	1.3	1.3	1.3	1.3	-1.1	1.3	1.3	1.3

1. Change from fourth quarter of previous year to fourth quarter of year indicated.
2. Private-industry workers.
3. Core goods imports exclude computers, semiconductors, oil, and natural gas.

Greensheets

Changes in Prices and Costs

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

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
GDP chain-wt. price index	2.5	1.9	.4	1.8	1.8	1.8	1.4	1.6	1.7	1.7
Previous Tealbook	2.5	1.9	.4	1.8	1.8	1.8	1.4	1.7	1.8	1.8
PCE chain-wt. price index	3.3	1.5	1.2	1.3	2.6	1.7	1.0	1.5	1.4	1.5
Previous Tealbook	3.3	1.5	1.2	1.3	2.6	1.7	1.0	1.6	1.5	1.6
Energy	19.1	-8.2	2.3	6.4	11.7	2.1	-1.5	1.4	-1.6	-.8
Previous Tealbook	19.1	-8.2	2.3	6.4	11.7	2.1	-1.5	2.3	-1.2	-.9
Food	4.9	6.9	-1.8	1.3	5.1	1.2	.8	2.0	1.1	1.3
Previous Tealbook	4.9	6.9	-1.8	1.3	5.1	1.2	.8	1.7	1.3	1.4
Ex. food & energy	2.2	1.6	1.4	1.0	1.8	1.7	1.2	1.5	1.6	1.7
Previous Tealbook	2.2	1.6	1.4	1.0	1.8	1.7	1.2	1.5	1.7	1.8
Ex. food & energy, market based	2.1	2.2	1.8	.7	1.9	1.5	1.2	1.4	1.6	1.7
Previous Tealbook	2.1	2.2	1.8	.7	1.9	1.5	1.2	1.4	1.7	1.8
CPI	4.0	1.6	1.5	1.2	3.3	1.9	1.2	2.0	1.6	1.7
Previous Tealbook	4.0	1.6	1.5	1.2	3.3	1.9	1.2	2.0	1.7	1.7
Ex. food & energy	2.3	2.0	1.8	.6	2.2	1.9	1.7	2.0	1.9	1.9
Previous Tealbook	2.3	2.0	1.8	.6	2.2	1.9	1.7	1.9	2.0	2.0
ECI, hourly compensation[1]	3.0	2.4	1.2	2.1	2.2	1.8	2.0	2.1	2.6	3.1
Previous Tealbook[1]	3.0	2.4	1.2	2.1	2.2	1.8	2.0	2.5	2.9	3.2
Nonfarm business sector										
Output per hour	2.4	-.5	5.5	1.9	.4	.8	1.4	.5	1.5	1.8
Previous Tealbook	2.4	-.5	5.5	1.9	.4	.8	1.4	.9	1.6	1.9
Compensation per hour	3.9	3.0	1.2	1.6	1.0	5.3	.3	2.1	2.9	3.3
Previous Tealbook	3.9	3.0	1.2	1.6	1.0	5.3	.3	2.5	3.2	3.4
Unit labor costs	1.5	3.5	-4.0	-.3	.5	4.4	-1.1	1.6	1.4	1.5
Previous Tealbook	1.5	3.5	-4.0	-.3	.5	4.4	-1.0	1.6	1.6	1.5
Core goods imports chain-wt. price index[2]	3.0	3.9	-1.9	2.3	4.2	.1	-1.1	1.4	1.2	1.3
Previous Tealbook[2]	3.0	3.9	-1.9	2.3	4.2	.1	-1.1	1.3	1.3	1.3

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

Other Macroeconomic Indicators

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

1. Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise indicated.
2. Change, millions.
3. Percent; annual values are for the fourth quarter of the year indicated.
4. Percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential. Annual values are for the fourth quarter of the year indicated.
5. Percent change, annual rate.
6. Level, millions; annual values are annual averages.
7. Percent change, annual rate, with inventory valuation and capital consumption adjustments.
8. Billions of dollars; annual values are annual averages.

Greensheets

Other Macroeconomic Indicators

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

Item	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Employment and production										
Nonfarm payroll employment[1]	1.2	-2.8	-5.6	.8	2.0	2.2	2.4	2.6	2.5	2.6
Unemployment rate[2]	4.8	6.9	9.9	9.5	8.7	7.8	7.0	6.0	5.4	5.0
Previous Tealbook[2]	4.8	6.9	9.9	9.5	8.7	7.8	7.0	6.2	5.6	5.1
Natural rate of unemployment[2]	5.3	5.6	6.2	6.2	6.0	5.8	5.4	5.2	5.2	5.2
Previous Tealbook[2]	5.3	5.6	6.2	6.2	6.0	5.8	5.5	5.3	5.2	5.2
GDP gap[3]	1.0	-4.0	-5.8	-4.8	-4.3	-3.9	-2.8	-1.7	-.4	.8
Previous Tealbook[3]	1.0	-4.0	-5.8	-4.8	-4.3	-3.9	-2.9	-2.0	-.7	.4
Industrial production[4]	2.6	-8.9	-5.5	6.2	3.2	3.2	3.3	4.1	3.8	3.4
Previous Tealbook[4]	2.6	-8.9	-5.5	6.2	3.2	3.2	3.3	4.2	3.8	3.5
Manufacturing industr. prod.[4]	2.8	-11.6	-6.1	6.4	3.1	3.5	2.9	3.2	3.5	3.4
Previous Tealbook[4]	2.8	-11.6	-6.1	6.4	3.1	3.5	2.9	3.4	3.6	3.6
Capacity utilization rate - mfg.[2]	78.5	70.0	67.1	72.7	74.6	75.5	76.4	76.8	77.5	78.3
Previous Tealbook[2]	78.5	70.0	67.1	72.7	74.6	75.5	76.4	76.9	77.6	78.1
Housing starts[5]	1.4	.9	.6	.6	.6	.8	.9	1.0	1.3	1.5
Light motor vehicle sales[5]	16.1	13.1	10.4	11.5	12.7	14.4	15.5	16.1	16.7	16.9
Income and saving										
Nominal GDP[4]	4.4	-1.0	.1	4.6	3.9	3.8	4.1	4.0	4.8	5.0
Real disposable pers. income[4]	1.2	1.1	-.6	2.5	1.4	3.6	-.2	2.8	3.2	3.3
Previous Tealbook[4]	1.2	1.1	-.6	2.5	1.4	3.6	-.1	3.0	3.3	3.2
Personal saving rate[2]	2.9	6.1	5.7	5.5	5.0	6.6	4.3	3.7	3.4	3.8
Previous Tealbook[2]	2.9	6.1	5.7	5.5	5.0	6.6	4.3	3.8	3.4	3.7
Corporate profits[6]	-9.0	-30.8	54.5	17.0	8.4	2.7	6.2	1.7	3.5	5.0
Profit share of GNP[2]	9.9	6.9	10.7	11.9	12.4	12.3	12.5	12.3	12.2	12.2
Net federal saving[7]	-267	-635	-1,250	-1,330	-1,248	-1,110	-752	-685	-637	-666
Net state & local saving[7]	-73	-165	-272	-237	-213	-253	-221	-217	-177	-151
Gross national saving rate[2]	16.3	15.0	14.7	15.2	15.8	16.9	18.1	17.8	18.0	18.5
Net national saving rate[2]	1.0	-1.6	-1.6	-.4	.5	1.7	3.1	3.3	3.5	4.0

1. Change, millions.
2. Percent; values are for the fourth quarter of the year indicated.
3. Percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential. Values are for the fourth quarter of the year indicated.
4. Percent change.
5. Level, millions; values are annual averages.
6. Percent change, with inventory valuation and capital consumption adjustments.
7. Billions of dollars; values are annual averages.

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

Item	Fiscal year				2013				2014				2015			
	2013[a]	2014	2015	2016	Q1[a]	Q2[a]	Q3[a]	Q4[a]	Q1[a]	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Unified budget					Not seasonally adjusted											
Receipts[1]	2,775	3,007	3,243	3,451	581	891	687	665	656	930	756	724	670	1,028	822	763
Outlays[1]	3,455	3,494	3,683	3,916	888	800	857	837	897	891	869	938	941	917	886	967
Surplus/deficit[1]	-680	-487	-439	-464	-307	91	-170	-173	-241	39	-112	-214	-272	111	-65	-203
Previous Tealbook	*-680*	*-451*	*-422*	*-451*	*-307*	*91*	*-170*	*-173*	*-241*	*70*	*-108*	*-198*	*-273*	*113*	*-65*	*-192*
On-budget	-719	-522	-463	-479	-303	36	-143	-183	-238	-18	-83	-239	-254	61	-32	-224
Off-budget	39	35	24	14	-4	55	-28	10	-3	57	-30	25	-18	50	-33	21
Means of financing:																
Borrowing	702	776	476	584	336	-17	69	371	262	-43	186	160	302	-81	95	233
Cash decrease	-3	-65	84	0	14	-56	46	-74	20	12	-23	84	0	0	0	0
Other[2]	-20	-224	-120	-120	-43	-18	55	-124	-42	-8	-50	-30	-30	-30	-30	-30
Cash operating balance, end of period	88	154	70	70	79	135	88	162	142	130	154	70	70	70	70	70
NIPA federal sector					Seasonally adjusted annual rates											
Receipts	2,938	3,159	3,360	3,547	2,900	3,167	2,976	3,119	3,092	3,191	3,233	3,278	3,344	3,386	3,431	3,472
Expenditures	3,797	3,842	4,006	4,201	3,753	3,820	3,826	3,772	3,821	3,871	3,905	3,937	4,004	4,023	4,058	4,094
Consumption expenditures	981	956	950	948	982	976	972	953	959	957	956	952	955	949	943	940
Defense	620	600	594	593	620	616	615	598	602	601	598	595	597	594	591	589
Nondefense	361	357	356	355	363	360	358	356	357	356	358	357	358	355	353	351
Other spending	2,815	2,886	3,056	3,253	2,771	2,844	2,853	2,819	2,862	2,914	2,949	2,986	3,049	3,074	3,115	3,154
Current account surplus	-859	-683	-646	-654	-853	-653	-850	-653	-729	-680	-672	-659	-661	-637	-627	-622
Gross investment	277	262	251	245	273	277	279	271	262	259	256	254	252	249	247	245
Gross saving less gross investment[3]	-870	-674	-619	-616	-860	-663	-861	-654	-720	-667	-654	-639	-636	-608	-595	-586
Fiscal indicators[4]																
High-employment (HEB) surplus/deficit	-655.0	-502.0	-540.0	-621.5	-630.3	-442.6	-662.7	-476.9	-522.7	-496.1	-512.4	-520.6	-546.6	-541.7	-551.2	-564.0
Change in HEB, percent of potential GDP	-1.8	-1.0	.1	.3	-1.5	-1.1	1.2	-1.1	.2	-.2	.1	.0	.1	-.1	.0	.0
Fiscal impetus (FI), percent of GDP	-1.2	-.6	-.3	-.1	-1.9	-.8	-.5	-1.6	-.7	-.7	-.4	-.5	-.6	-.2	-.2	-.2
Previous Tealbook	*-1.2*	*-.5*	*-.3*	*-.1*	*-1.9*	*-.8*	*-.5*	*-1.6*	*-.5*	*-.7*	*-.4*	*-.4*	*-.7*	*-.2*	*-.2*	*-.2*

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

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

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

4. HEB is gross saving less gross investment (NIPA) of the federal government in current dollars, with cyclically sensitive receipts and outlays adjusted to the staff's measure of potential output and the natural rate of unemployment. The sign on Change in HEB, as a percent of nominal potential GDP, is reversed. FI is the weighted difference of discretionary changes in federal spending and taxes in chained (2009) dollars, scaled by real GDP. The FI estimates are calendar year contributions to Q4/Q4 real GDP growth. Also, for FI and the change in HEB, positive values indicate aggregate demand stimulus. Quarterly figures for change in HEB and FI are not at annual rates.

a Actual.

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

Measure and country	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2 (Projected)	2014 Q3 (Projected)	2014 Q4 (Projected)	2015 Q1 (Projected)	2015 Q2 (Projected)	2015 Q3 (Projected)	2015 Q4 (Projected)
Real GDP[1]												
Total foreign	2.1	2.1	3.2	2.6	2.1	2.5	3.2	3.2	3.2	3.3	3.4	3.1
Previous Tealbook	*2.0*	*2.4*	*3.0*	*2.8*	*2.3*	*2.7*	*3.2*	*3.2*	*3.2*	*3.3*	*3.3*	*3.1*
Advanced foreign economies	1.9	2.0	2.1	2.0	2.0	1.7	2.2	2.2	2.2	2.2	2.4	1.8
Canada	3.0	1.9	3.0	2.7	1.2	3.1	2.7	2.6	2.6	2.6	2.6	2.6
Japan	5.3	2.9	1.3	.3	6.7	-4.5	2.0	1.9	1.5	1.2	2.7	-2.5
United Kingdom	1.4	3.1	3.4	2.7	3.3	2.9	2.9	3.0	2.7	2.7	2.6	2.4
Euro area	-.8	1.3	.5	1.0	.7	1.6	1.4	1.4	1.7	1.8	1.8	1.9
Germany	.0	2.9	1.3	1.5	3.3	1.2	1.9	1.9	2.0	2.0	2.2	2.2
Emerging market economies	2.4	2.3	4.3	3.3	2.2	3.3	4.1	4.2	4.3	4.3	4.3	4.4
Asia	3.6	5.0	5.9	5.9	3.6	4.5	5.5	5.5	5.5	5.5	5.4	5.4
Korea	2.5	4.1	4.4	3.6	3.8	3.0	4.3	4.3	4.2	4.2	4.2	4.2
China	6.5	7.2	8.8	8.0	5.5	6.2	7.5	7.5	7.3	7.3	7.2	7.2
Latin America	1.2	-.4	3.1	.8	.9	2.2	2.9	3.1	3.2	3.3	3.4	3.4
Mexico	1.0	-2.9	3.9	.5	1.1	2.5	3.3	3.5	3.5	3.6	3.6	3.7
Brazil	1.5	6.6	-1.2	1.8	.7	1.2	2.0	2.2	2.5	2.5	2.6	2.6
Consumer prices[2]												
Total foreign	2.3	1.9	2.7	2.4	2.0	2.7	2.6	2.5	2.5	2.5	2.5	3.0
Previous Tealbook	*2.3*	*1.9*	*2.7*	*2.4*	*2.0*	*3.0*	*2.5*	*2.5*	*2.5*	*2.5*	*2.6*	*3.0*
Advanced foreign economies	1.0	.5	2.0	.7	1.1	2.6	1.3	1.4	1.4	1.4	1.5	2.6
Canada	1.6	-.1	1.9	.5	2.8	2.3	1.7	1.7	1.7	1.7	1.8	1.8
Japan	.0	.8	3.0	1.9	.4	8.5	.7	.8	.9	1.0	1.1	6.5
United Kingdom	2.3	1.8	2.8	1.4	1.0	1.6	1.8	2.2	1.7	1.7	1.8	2.3
Euro area	.8	.7	1.6	.1	.2	.4	1.2	1.3	1.3	1.3	1.4	1.4
Germany	1.4	.8	2.4	.8	.1	.5	1.3	1.5	1.6	1.6	1.6	1.6
Emerging market economies	3.4	3.0	3.2	3.7	2.7	2.8	3.6	3.4	3.4	3.4	3.4	3.3
Asia	3.4	2.0	3.5	3.4	1.5	2.3	3.5	3.2	3.2	3.2	3.2	3.2
Korea	1.0	.4	1.7	1.1	1.3	2.6	2.9	3.1	3.2	3.2	3.2	3.1
China	3.2	2.1	3.4	3.0	.8	1.7	3.5	3.0	3.0	3.0	3.0	3.0
Latin America	3.5	5.4	2.6	4.5	5.7	3.9	3.9	3.8	3.8	3.8	3.8	3.8
Mexico	3.2	5.3	2.0	4.2	5.2	2.9	3.4	3.3	3.3	3.3	3.3	3.3
Brazil	7.0	5.8	4.6	6.0	6.9	7.9	6.1	5.6	5.4	5.4	5.4	5.4

[1] Foreign GDP aggregates calculated using shares of U.S. exports.
[2] Foreign CPI aggregates calculated using shares of U.S. non-oil imports.

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

Measure and country	2008	2009	2010	2011	2012	2013	2014	2015	2016
							Projected		
Real GDP[1]									
Total foreign	-.7	.9	4.7	3.0	2.3	2.5	2.7	3.2	3.3
Previous Tealbook	*-.6*	*.9*	*4.7*	*3.0*	*2.3*	*2.5*	*2.8*	*3.2*	*3.3*
Advanced foreign economies	-1.6	-1.5	3.0	1.5	.3	2.0	2.0	2.1	2.2
Canada	.1	-1.4	3.6	2.4	1.0	2.7	2.4	2.6	2.6
Japan	-4.8	-.6	3.5	.3	-.3	2.4	1.4	.7	1.1
United Kingdom	-4.3	-2.5	1.8	1.1	.2	2.7	3.0	2.6	2.5
Euro area	-2.2	-2.3	2.3	.7	-1.0	.5	1.3	1.8	1.9
Germany	-1.8	-2.2	4.2	2.2	.3	1.4	2.1	2.1	2.3
Emerging market economies	.4	3.9	6.5	4.6	4.3	3.1	3.4	4.3	4.4
Asia	1.1	7.8	8.0	5.0	5.6	5.1	4.8	5.4	5.4
Korea	-1.6	4.9	6.1	3.0	2.1	3.6	3.9	4.2	4.1
China	7.7	11.3	9.7	8.7	7.8	7.6	6.7	7.2	7.1
Latin America	-.6	.0	4.7	4.1	3.2	1.2	2.3	3.3	3.5
Mexico	-1.3	-1.2	4.5	4.2	3.3	.6	2.6	3.6	3.7
Brazil	.9	5.3	5.4	1.4	1.8	2.2	1.5	2.5	2.7
Consumer prices[2]									
Total foreign	3.3	1.2	3.2	3.4	2.3	2.3	2.5	2.6	2.6
Previous Tealbook	*3.3*	*1.2*	*3.2*	*3.4*	*2.3*	*2.3*	*2.5*	*2.6*	*2.6*
Advanced foreign economies	2.0	.2	1.7	2.2	1.3	1.0	1.6	1.7	1.6
Canada	1.8	.8	2.2	2.7	.9	1.0	2.1	1.7	1.9
Japan	1.1	-2.0	-.3	-.3	-.2	1.4	2.6	2.3	1.3
United Kingdom	3.9	2.2	3.4	4.6	2.6	2.1	1.6	1.9	1.8
Euro area	2.3	.4	2.0	2.9	2.3	.8	.8	1.4	1.4
Germany	1.7	.3	1.6	2.6	2.0	1.3	.8	1.6	1.7
Emerging market economies	4.6	2.0	4.3	4.3	3.1	3.3	3.1	3.4	3.3
Asia	3.7	1.2	4.3	4.5	2.6	3.1	2.6	3.2	3.2
Korea	4.5	2.4	3.2	3.9	1.7	1.1	2.5	3.2	3.2
China	2.5	.6	4.7	4.6	2.1	2.9	2.3	3.0	3.0
Latin America	6.6	3.9	4.4	4.0	4.3	4.0	4.3	3.8	3.7
Mexico	6.2	4.0	4.3	3.5	4.1	3.7	3.7	3.3	3.3
Brazil	6.2	4.2	5.6	6.7	5.6	5.8	6.6	5.4	5.3

[1] Foreign GDP aggregates calculated using shares of U.S. exports.
[2] Foreign CPI aggregates calculated using shares of U.S. non-oil imports.

Greensheets

U.S. Current Account

Quarterly Data

	2013				Projected 2014				Projected 2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Billions of dollars, s.a.a.r.											
U.S. current account balance	**-416.2**	**-404.4**	**-384.1**	**-318.6**	**-400.3**	**-401.9**	**-405.7**	**-407.8**	**-431.4**	**-404.4**	**-425.8**	**-437.4**
Previous Tealbook	*-420.2*	*-387.0*	*-385.5*	*-324.5*	*-368.5*	*-350.9*	*-385.7*	*-408.2*	*-438.9*	*-414.7*	*-440.9*	*-454.2*
Current account as percent of GDP	-2.5	-2.4	-2.3	-1.9	-2.3	-2.3	-2.3	-2.3	-2.4	-2.2	-2.3	-2.3
Previous Tealbook	*-2.5*	*-2.3*	*-2.3*	*-1.9*	*-2.1*	*-2.0*	*-2.2*	*-2.3*	*-2.4*	*-2.3*	*-2.4*	*-2.4*
Net goods & services	-483.8	-487.2	-484.8	-449.8	-507.3	-503.8	-508.4	-514.7	-520.3	-503.4	-512.1	-519.7
Investment income, net	208.3	229.5	245.4	266.5	242.8	244.0	247.4	249.7	243.8	235.2	225.1	218.7
Direct, net	273.4	287.4	301.4	321.0	285.8	301.1	307.3	318.5	323.3	327.2	333.3	342.7
Portfolio, net	-65.1	-57.9	-56.0	-54.5	-42.9	-57.1	-60.0	-68.8	-79.5	-92.0	-108.2	-124.1
Other income and transfers, net	-140.7	-146.7	-144.7	-135.3	-135.9	-142.1	-144.7	-142.8	-154.9	-136.2	-138.8	-136.4

Annual Data

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

Abbreviations

AFE	advanced foreign economy
BEA	Bureau of Economic Analysis
BHC	bank holding companies
BOE	Bank of England
BOJ	Bank of Japan
CDS	credit default swaps
C&I	commercial and industrial
CLO	collateralized loan obligation
CMBS	commercial mortgage-backed securities
CPI	consumer price index
CRE	commercial real estate
Desk	Open Market Desk
ECB	European Central Bank
ECI	employment cost index
E&I	equipment and intangibles
EME	emerging market economy
EU	European Union
EUC	emergency unemployment compensation
FOMC	Federal Open Market Committee; also, the Committee
GDI	gross domestic income
GDP	gross domestic product
GSE	government-sponsored enterprise
LSAP	large-scale asset purchase
MBS	mortgage-backed securities
OIS	overnight index swap
ON RRP	overnight reverse repurchase agreement
PCE	personal consumption expenditures
PMI	purchasing managers index

Q&A	question and answer
repo	repurchase agreement
SEP	Summary of Economic Projections
SOMA	System Open Market Account
S&P	Standard & Poor's
TBA	to be announced
TDF	Term Deposit Facility
TIPS	Treasury Inflation-Protected Securities