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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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

July 24, 2013

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

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Editorial note:

Beginning with this edition of the Tealbook, we are running an experiment in which we are examining whether we can provide you with the forecast-related information that you need in a more concise, efficient manner. Specifically, the idea is to explore whether we should intersperse four traditional-format versions of the Tealbook (delivered in advance of SEP meetings) with four short-form versions (prepared for non-SEP meetings). In this first attempt at the short-form document, the sections Domestic Economic Developments and Outlook and International Economic Developments and Outlook appear in condensed form.

We are drawn to the possibility that a four-plus-four model for the Tealbook might better serve your needs based partly on the observation that time generally moves relatively slowly in the nonfinancial economy. To be sure, from one meeting to the next, we do routinely revise some aspects of the nonfinancial outlook—both domestic and foreign; but almost invariably, the general contour of the outlook remains the same. Accordingly, our goal in the short-form version is to focus mostly on the key factors that shaped the *revisions* to the outlook during the intermeeting period and to give relatively less attention to rehearsing the *contour* of the forecast—for the most part reserving the latter discussion for the long-form document.

Even in the abbreviated format, we will continue to use boxes to illuminate aspects of the forecast that we believe warrant special attention. Indeed, the abbreviated format should free up staff time that can be devoted, in part, to more such special-topic analysis. We will also continue to provide a full treatment of risks to the forecast in the Risks and Uncertainty section.

As part of the process of considering whether to go forward with alternating forms of the Tealbook, we make two important commitments to the Committee: First, the underlying forecast preparation process will be the same during all eight rounds; there will be no stinting on the care with which we sift the incoming data and assess how best to revise the outlook. The only change would be in the Tealbook itself where we explain the forecast. Second, we will maintain the capacity to produce a full-length Tealbook even during a non-SEP round (given some reasonable period of forewarning) if circumstances warrant.

We will come back to you after the upcoming FOMC meeting for your observations on and suggestions for this experiment.

David Wilcox and Steven Kamin

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Domestic Economic Developments and Outlook

The data we have received in recent weeks suggest that economic activity rose at a slower pace over the first half of this year than we projected in the June Tealbook. Our estimate of the average pace of real GDP growth in the first and second quarters now stands at 1½ percent, ½ percentage point less than in our June forecast. Some of the shortfall in growth relative to our expectations occurred in consumer spending and residential construction. Our reading of these data suggests that some of the surprise in these categories is likely to carry forward into the second half of the year; as a result, we have extrapolated forward a good portion of the miss. However, some of the weaker-than-expected data during the first half pertained to net exports and inventories; in these areas, we expect the contributions to growth to rebound during the second half of this year. On balance, these influences leave our projection for real GDP growth down only a bit in the second half of the year relative to the June Tealbook, and we continue to show a substantial step-up in the pace of economic activity in the second half, averaging 2¾ percent over that period, about 0.1 percentage point less than in the June Tealbook. If not for the resilience of the labor market, we would have marked down the forecast more.

With mixed financial market developments and little change to other key conditioning assumptions, our projection for GDP growth over the medium term is essentially unrevised from June. Nevertheless, as a result of the weaker growth this year, the level of real GDP at the end of 2015 is expected to be ½ percent below what was envisioned in the June Tealbook.

In contrast to the spending data, the jobs report for June was a little better than we had expected, with payroll employment coming in above our forecast and the unemployment rate essentially meeting our expectation. Nevertheless, given the somewhat weaker level of economic activity in this forecast, the unemployment rate is projected to cross the Committee's 6½ percent threshold one quarter later than in the June Tealbook and to finish 2015 at 6 percent, ¼ percentage point higher than before.

Although inflation has been very low, we continue to think that the soft readings seen during the first half of the year partly reflected transitory influences. Indeed the latest readings on core consumer prices have been slightly higher than we were expecting. With long-run inflation expectations remaining stable, and slack in labor and product markets gradually diminishing, our baseline forecast calls for core PCE price inflation to edge up over the medium term, reaching 1.7 percent in 2015. Headline inflation is projected to run a little below core inflation over the medium term, as consumer energy prices are expected to decline in line with our forecast for crude oil prices.

As always, numerous risks attend the outlook. Among these risks at present are the uncertain effects of fiscal policy—including not only how the actions taken earlier this year will continue to play out, but also the need this fall to lift the debt ceiling and to enact annual appropriations measures. In addition, the rise in mortgage rates could weigh on the housing sector by more than we are projecting, or activity abroad—including in China and Europe—could fail to meet our expectations. With regard to our projection for inflation, the most pressing risk, in our view, is that the recent softness fails to abate as we anticipate. Moreover, with the federal funds rate at the effective lower bound and given the uncertain efficacy and costs associated with portfolio policy, monetary policy has a limited capacity to counteract the effects of any downside developments either with respect to real activity or inflation.

KEY BACKGROUND FACTORS

Monetary Policy

- We revised up our assumption for the cumulative amount of purchases of long-term securities under the current LSAP program. We now assume that purchases will begin to slow later this year and end by the middle of next year, cumulating to $1.2 trillion (up from our assumption of $750 billion in the June Tealbook). In addition, we now assume that the Federal Reserve will not sell any of its holdings of agency mortgage-backed securities. As best we can tell, market participants' current expectations for asset purchases are roughly in line with our own.

- With the unemployment rate projected to fall below the Committee's 6½ percent threshold in the second quarter of 2015, we now assume that the federal funds rate will begin to rise from its effective lower bound in the third quarter of 2015—one quarter later than in the June Tealbook.

Other Interest Rates

- The 10-year Treasury yield has increased about 35 basis points, on net, since the June Tealbook. We attribute most of that increase to a rise in the term premium and some to market expectations of a higher path for the federal funds rate. We assume that the Treasury term premium will gradually converge back to the upward-sloping path we had previously projected, and we assume that market participants' expected path for the federal funds rate will gradually drop back to ours. As a result, the level of the 10-year yield at the end of 2015—3.85 percent—is unchanged from the June Tealbook. (For further discussion, see the box "Interpretations of Developments in Key Financial Markets.")

- Yields on investment-grade corporate bonds have moved up about 25 basis points since the June Tealbook, and we assume that yields on these corporate bonds will reach 5½ percent at the end of 2015. This path is somewhat higher through the first half of 2015 than it was in the June Tealbook but is unrevised at the end of the projection period.

- Conventional 30-year fixed-rate mortgage rates have increased about 35 basis points since the June Tealbook, and we expect these mortgage rates to reach about 5¼ percent by the end of 2015. This path is also somewhat higher through the first half of 2015 than it was in the June Tealbook and is unrevised at the end of the projection period.

Equity Prices and Home Prices

- Despite the increase in Treasury and other yields, equity prices have increased 4½ percent since the time of the June Tealbook. We project equity prices to rise at an average annual rate of about 7 percent over the medium term, leaving them 1½ percent higher at the end of 2015 than in the previous Tealbook.

- With recent readings about in line with our expectations, our projection for house prices is roughly unchanged. We assume that house prices will increase at an annual rate of 8½ percent over the second half of 2013 before stepping down to growth rates of 5 percent in 2014 and 4 percent in 2015.

Fiscal Policy

- We made no revisions to our fiscal policy assumptions. The drag on real GDP growth from changes in fiscal policy (at all levels of government) is still assumed to be 1¼ percentage points in 2013 and then to diminish to

Interpretations of Developments in Key Financial Markets

We have been surprised by the significant moves in key financial markets during the past few months. Since the April Tealbook (that is, two Tealbooks ago), the 10-year Treasury yield has increased 85 basis points, the 30-year fixed-rate mortgage rate and the BBB-rated corporate bond yield have moved up a bit more than that, and stock prices have climbed almost 8 percent.

In putting together our baseline projection, we have interpreted these financial developments as mainly reflecting three factors. First, it appears that reduced risk aversion in equity markets has helped boost stock prices. Second, we think that participants in a variety of asset markets have interpreted the balance of FOMC communications as pointing to a tighter stance of monetary policy for any given outlook for the economy. Third, money managers and retail investors have reportedly come to view a range of fixed-income securities as offering a less favorable risk–return tradeoff than they had previously thought. With respect to this third point, we think that FOMC communications in recent months caused investors to shift away from positions that seemed to be predicated on the view that interest rates and interest rate volatilities would remain unusually low long into the future.

Despite the large increase in the 10-year Treasury yield since the April Tealbook, we have made essentially no revision to our projection for the level of that yield at the end of the 2015. That is, we have interpreted the recent increases in the 10-year Treasury yield as partly reflecting transitory influences—we expect the market to eventually reverse its recent move toward anticipating an earlier liftoff of the federal funds rate—and partly as pulling forward increases in the Treasury term premium that we had expected to occur later in the forecast period. We have similarly flattened the projected path of equity prices in response to the larger-than-expected increase we have seen in recent months.

Of course, interpreting market moves is fraught with uncertainty, and projecting the evolution of market beliefs is more difficult still. For example, the recent rise in the 10-year Treasury term premium might be part of a continuing trend rather than a one-time shift. In the "Higher Long-Term Interest Rates" alternative scenario in the Risks and Uncertainty section, we explore the potential macroeconomic effects of a further rise in long-term interest rates.

With regard to the stock market, the rise of equity prices in our baseline projection depends importantly on an assumed gradual decline in the equity risk premium over the medium term. As noted above, a drop in the equity premium appears to have been an important driver of the recent stock market rally. However, the equity premium could decline more slowly than we assume or level off, in which case we would expect a lower path for equity prices. Conversely, the recent combination of stock price increases and higher bond yields could signal the beginning of a more marked reversal than we have assumed in our baseline projection of the flight-to-safety pressures that have reduced Treasury yields and limited equity price appreciation since 2009. In that case, the equity premium at the end of the projection period might be substantially lower, prompting a stronger rise in the stock market. The macroeconomic effects of this latter interpretation of recent developments are explored in the alternative scenario "Increased Risk Appetite" in the Risks and Uncertainty section.

¾ percentage point in 2014 and ¼ percentage point in 2015 (excluding multiplier effects).

Foreign Economic Activity and the Dollar

- Our outlook for foreign economic growth is revised down just a touch, reflecting disappointing data from emerging market economies and the expected drag from the recent tightening of financial conditions in foreign economies. We estimate that foreign GDP growth increased at an annual rate of 2¼ percent in the second quarter; we project foreign GDP growth to pick up over the medium term, reaching a pace of 3½ percent in 2015.

- Our outlook for the broad real dollar is little changed since the previous Tealbook. With financial stresses in Europe anticipated to abate and trend depreciation against the currencies of the emerging market economies expected to continue, we project the broad real dollar to depreciate at an annual rate of 2½ percent.

Oil and Other Commodity Prices

- The spot price of Brent crude oil has increased moderately since the time of the June Tealbook, primarily because of tensions in the Middle East. In contrast, oil price futures at longer-dated maturities were pushed down by concerns about slower future growth in oil demand. Consistent with these market developments, the price of imported oil is expected to fall more rapidly over the medium term, from $104 per barrel in the second half of this year to $89 per barrel by the end of 2015.

- A broad index of nonfuel commodity prices has declined about 1 percent since the June Tealbook. We expect prices to decrease at an annual rate of 3½ percent in the second half of 2013 and to flatten out thereafter.

Recent Developments and the Near-Term Outlook for Real GDP

Incoming data have led us to revise down our estimate of real GDP growth in the first half of the year by ½ percentage point to an annual rate of 1½ percent.[1] Nonetheless, we continue to project that real GDP growth will pick up substantially in the second half of the year as the drag from fiscal policy wanes and consumer spending is boosted by recent gains in wealth and improved sentiment.

- Since the June Tealbook, we have received disappointing news on consumer outlays and residential investment; in response, we have tamped our projection for spending in these categories in the second half of the year. We also received negative readings on net exports and inventory investment, but we expect the contributions of these categories to rebound in the second half.

- The growth rate of real PCE during the first half of the year fell short of our expectation—2 percent at an annual rate versus our forecast of 2½ percent. We have interpreted the more modest first-half spending growth as reflecting both a slightly faster adjustment by consumers to the tax increases put in place at the beginning of the year and a lower underlying pace of consumer spending. On balance, the downward revision to our forecast for PCE growth in 2013:H2 is about half as large as the downward revision to our estimate over 2013:H1.

- We have revised down our projection for the growth rate of residential investment in the second half of 2013 based partly on the two most recent readings on single-family housing starts, which have been on the soft side of our expectations. Nonetheless, we continue to see housing construction activity as trending up, as suggested by the steadier numbers on building permits.

  - We do not think the increase in mortgage rates since May was responsible for the disappointing June starts figures. That said, we do expect the higher level of mortgage rates in this projection to have a

[1] On the second day of the July FOMC meeting, the BEA will release its advance estimate of real GDP growth in 2013:Q2, along with revised figures for earlier periods. Importantly, this revision will expand the concept of investment to include expenditures on a wider array of intellectual property products. We have not attempted to take this new concept into account in our current forecast of GDP.

modest restraining effect on the growth of residential investment over the second half.

- While we were also surprised on the downside by the incoming data on net exports and inventory investment, for these categories we have interpreted the negative first-half news as pointing toward a more positive contribution to GDP growth (up ¼ percentage point) in the second half.

- The recent data have included some upbeat news on economic activity. The level of nonfarm payroll employment in June stands about 100,000 above our projection in the previous Tealbook. Motor vehicle sales moved up to an annual rate of 15.9 million units in June—their highest reading since 2007—and sales in July appear to be running at nearly this pace. New orders of nondefense capital goods have increased noticeably over the past three months. In addition, factory output moved up in May and June after declining in the prior two months, and readings from the national and regional manufacturing surveys have improved, on balance, recently.

THE MEDIUM-TERM OUTLOOK FOR REAL GDP

Over the medium term, our forecast for GDP growth is little revised from the June Tealbook. We now expect real GDP to rise 3¼ percent pace in 2014 and 3½ percent in 2015.

- The higher trajectory for interest rates in the current projection is a modest restraint on consumer and business spending, which is offset by the upward revision to our assumed path for equity prices. The effects of other changes to our key assumptions are also small and offsetting.

- With no changes to our supply-side assumptions this round, the GDP gap is ½ percentage point wider than in our previous projection, largely due to the downward revisions to growth this year.

The Outlook for the Labor Market

Despite the negative surprise to GDP growth during the first half of this year, the labor market appears to have firmed a bit more than we had anticipated in the June Tealbook.

- In the payroll survey, employers in the nonfarm sector are now reported to have added an average of 200,000 jobs per month in the second quarter, about 30,000 more per month than in our last projection and similar to the pace seen since late last year.

- In the household survey, the unemployment rate remained at 7.6 percent in June, a few basis points above our previous forecast, leaving the second quarter average at 7.5 percent, unrevised from our June Tealbook forecast.

- The staff's Labor Market Conditions Index, which summarizes the movements of 19 labor market indicators, rose further in June.

- We project payroll gains of 180,000 per month in the second half of the year (15,000 more per month than in the previous projection), and we forecast the unemployment rate to edge down to 7.4 percent by 2013:Q4 (revised up 0.1 percentage point).

Over the medium term, the labor market is anticipated to gradually improve in line with the overall pace of economic activity.

- With a somewhat wider output gap, the unemployment rate is projected to fall more gradually than in the June Tealbook. The rate is projected to reach 7 percent by the middle of 2014 and to fall below the Committee's threshold of 6½ percent in the second quarter of 2015. By the end of 2015, we now have the rate at 6 percent, ¼ percentage point higher than in the previous forecast.

- We expect total payroll gains to average 200,000 per month in 2014 and then to step up to a monthly pace of 250,000 in 2015, a bit lower than in the June Tealbook.

- For a discussion of some of the implications of the Affordable Care Act, see the box "Potential Effects of the ACA on Labor Markets."

The Outlook for Inflation

Our forecast for inflation is little changed from the June Tealbook.

- We estimate that the overall PCE price index rose at an annual rate of ½ percent in the first half of this year, held down by sharp declines in energy prices and unusually low core inflation. We continue to think that the recent low readings on core PCE prices reflect, in part, transitory influences from nonmarket and medical prices (see the box "What Is behind the Surprisingly Low Rate of Inflation?").

- Since the June Tealbook, the data on core consumer prices have been just a little higher than we expected, leaving our projection for core inflation in the second half of the year a touch higher at 1½ percent.

- Incoming data on consumer energy prices have been slightly higher than expected, and the recent increase in crude oil prices suggests that consumer energy prices will move up noticeably in the third quarter. Thereafter, energy prices are projected to decline, reflecting the downward tilt in the path of futures prices for crude oil.

- With core PCE inflation anticipated to edge up over the medium term in response to rising resource utilization, total PCE inflation is projected to run at about 1¼ percent in 2014 and 1½ percent in 2015. Thus, throughout the medium term, the PCE inflation projection remains below both the Committee's long-run objective of 2 percent and the threshold level of 2½ percent.

Potential Effects of the ACA on Labor Markets

As has been discussed widely in the media, the Affordable Care Act (ACA) contains several provisions that could affect the labor market. Our analysis—supplemented by a set of special questions that the Reserve Banks posed to their Beige Book contacts in late June and early July—suggests that the ACA is likely to have only small labor market effects, a conclusion also reached by the Congressional Budget Office and other outside analysts. Thus, the Obama Administration's recent decision to delay the employer requirement to provide health insurance to employees by one year does not materially affect our labor market outlook.[1]

The most relevant provisions of the ACA for the labor market are the employer and individual mandates and the expansion of health insurance subsidies. The employer mandate requires firms with 50 or more full-time equivalent (FTE) workers (where "full-time" is defined as 30 hours or more per week) to offer qualifying health insurance to their full-time employees or else pay an annual penalty of $2,000 per full-time worker; there is no requirement or penalty for part-time workers. Firms who do offer insurance but whose insurance is deemed "unaffordable" face annual penalties of $3,000 for each full-time worker who turns down that insurance and enrolls in subsidized health insurance through the new exchanges. These subsidies are quite generous but are only available to individuals without access to affordable employer-provided insurance.[2]

The ACA is unlikely to have sizable labor market effects because—as shown on the table on the next page—almost all of the firms subject to the employer mandate already offer health insurance to their employees. For example, 94 percent of firms with 50 to 200 employees offer health insurance (and the fraction offering health insurance is even higher for larger firms), and 90 percent of employees work for firms that offer health insurance. To be sure, the ACA may still raise costs somewhat for firms already offering insurance, as some of them may have to make their health insurance more comprehensive, more affordable, or offer it to a larger share of their employees (although most of the workers who are currently ineligible for insurance are part-time workers who would not have to be covered under the ACA, a small share of them are full-time workers who would have to be covered). In addition, the share of eligible employees who accept insurance (the take-up rate) may increase somewhat as a result of the individual mandate. For most firms, however, the increase in labor costs is likely to be small.

The ACA could, in principle, lead to an increase in the share of part-time workers in the economy. The exclusion of part-time employees from the employer mandate, combined with the generosity of the exchange subsidies (which are available *only* to those without access to affordable employer-provided health insurance), gives some firms the incentive to shift from full-time to part-time workers to avoid penalties and gives some low-income

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[1] The employer mandate has been delayed until 2015, but other elements of the ACA will continue to be implemented as originally scheduled on January 1, 2014.

[2] For families with income below 400 percent of the poverty level, the subsidies limit premium costs to a share of income that ranges between 2 and 9.5 percent (with the limits increasing with income).

workers the incentive to switch from full-time to part-time work (possibly taking multiple part-time jobs) to gain access to the exchange subsidies. However, any such shifts are likely to occur only gradually and would largely affect the composition of the workforce—there would be more part-time workers but also more part-time jobs—and, given that the magnitude of these shifts is likely to be small, we do not see a reason for aggregate work hours to be affected significantly.[3] Accordingly, we have not built any material effect of the ACA (and its partially delayed implementation) into the staff's labor market forecast.

The responses to our Beige Book questions also suggest that the labor market effects of the ACA likely will be small. Only a relatively small share of firms reported that they plan to do one or more of the following: make more use of part-time workers (9 percent), outsource more work (9 percent), and refrain from hiring to keep under the 50 FTE threshold (6 percent). Similarly, a relatively small share of firms reported that they are planning to make changes to their health insurance, including one or more of: making their insurance more comprehensive (11 percent), offering it to more employees (6 percent), and cutting back or dropping coverage (5 percent). In their comments, many firms expressed concerns about the ACA's administrative costs as well as the possibility that the ACA would eventually drive up the costs of health insurance. A sizable number of firms said they are likely to raise prices, reduce other employee benefits, or both, to defray some of the higher costs. Finally, many firms reported that they were still quite uncertain about the effects of the ACA on both their own bottom line and that of their customers.

Employer-Provided Health Insurance, 2012

Firm size (No. of workers)	Percent of firms	Percent of workers	Percent of firms offering insurance	In firms that offer insurance: Percent of workers eligible	In firms that offer insurance: Take-up rate
			Firms exempt from employer mandate		
3–25	85	18	60	81	75
25–49	8	7	87	78	79
			Firms subject to employer mandate		
50–200	6	14	94	76	81
200–1,000	1	13	97	78	80
1,000+	.3	48	100	78	82
Note:	Percent of workers in firms that offer insurance				90
	Percent of workers offered and eligible for insurance				70

Source: Kaiser Family Foundation 2012 Employer Health Benefits Survey.

[3] The ACA also could affect labor force participation. The generosity of the exchange subsidies may allow some of those who work only to get affordable health insurance to exit the labor force (for example, workers who would like to retire but are too young for Medicare), but it will also induce some people to enter the labor force (like low-income or disabled individuals who currently stay out of the labor force in order to maintain eligibility for public health insurance programs).

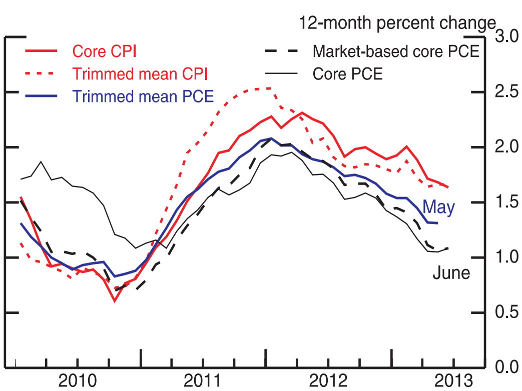
What Is behind the Surprisingly Low Rate of Inflation?

Readings on PCE inflation have been quite low recently. Over the 12 months ending in June, headline PCE prices are estimated to have risen about 1¼ percent, while core PCE prices are estimated to have risen only about 1 percent. As can be seen in the lower-left figure, many different measures of underlying inflation have moved down over the past year; however, the decline in core PCE inflation has been especially noticeable. In evaluating how transitory we should expect the recent low PCE inflation to be, we find it instructive to compare recent inflation performance with our earlier expectations.

Following the low readings on core PCE inflation over the second half of 2012, we projected in January that core inflation would pick up in the first half of this year. However, as shown in the table on the next page, both total and core PCE inflation have come in lower than we projected. Nevertheless, we have not changed our view that inflation will eventually and gradually move back up toward the Committee's 2 percent goal, as we see this year's lower-than-expected readings on headline and core inflation as being largely attributable to a few factors that we expect to be transitory.

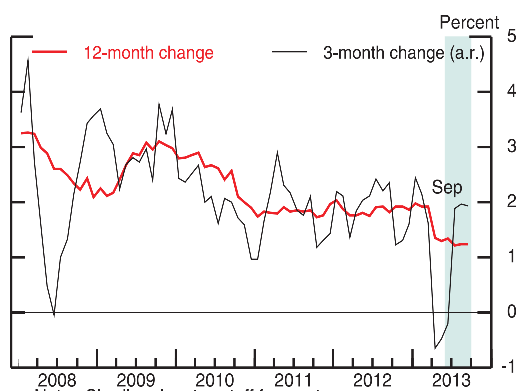
First, the nonmarket component of PCE prices was much softer in the first quarter than we expected in January. This component is erratic and susceptible to significant revisions, and, as a result, we take very little forecasting signal from recent readings.[1] Indeed, with the most recent data, nonmarket prices now look to have increased in the second quarter by about as much as we had projected in the January Tealbook; nevertheless, the average rate of increase over the first half is still below our January projection.

Measures of Underlying Inflation



Note: PCE values, excluding the trimmed mean, for April–June 2013 are staff estimates.
Source: For trimmed mean CPI, Federal Reserve Bank of Cleveland; for trimmed mean PCE, Federal Reserve Bank of Dallas; for CPI, U.S. Dept. of Labor, Bureau of Labor Statistics; for PCE, U.S. Dept. of Commerce, Bureau of Economic Analysis.

PCE Medical Services Price Inflation



Note: Shading denotes staff forecast.
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

[1] In its upcoming comprehensive revisions, the BEA will bring in new data that could result in historical revisions to nonmarket prices. In addition, the BEA will adjust the methodology used to compute imputed financial services charges—an important component of nonmarket prices.

Market-based core PCE inflation rebounded in the first quarter by a bit more than we had expected but was subsequently held down by two factors that we had not anticipated. First, as shown in the lower-right figure on the previous page, a one-time decrease in Medicare reimbursements (related to the federal spending sequestration) temporarily led the PCE measure of medical services prices to drop sharply in April. In May and June, these prices appear to have returned to a more normal rate of increase. Second, prices of core imports, which we estimate to pass through fairly quickly into consumer goods prices, have been much softer over the first half of the year than we anticipated in January.

Finally, consumer energy prices, which are of course volatile, declined more rapidly over the first half than we projected. In all, headline PCE prices edged up at an annual rate of only ½ percent in the first half—well below what we projected in January.

As noted, the very soft readings on medical prices are probably already behind us, and nonmarket prices, while quite uncertain, also appear to be rising at a more typical rate. In the second half of this year, consumer energy prices are projected to edge up on net; we also expect core import prices to flatten out after having declined in the second quarter, although if this occurred, it would still leave them much softer than we had anticipated in January.[2] Thus, as these specific influences holding down inflation in the first half recede, we project headline and core inflation to rise from their recent low rates to a pace of just under 1½ percent in the second half—a pace we think is more reflective of underlying conditions than are the especially low rates observed over the past 6 or 12 months.

The Staff Inflation Forecast Compared with the January Tealbook
(Percent change, annual rate)

	2012	2013			
Category	H2	Q1	Q2[e]	H1[e]	H2[f]
Total PCE	**1.6**	**1.0**	**-.1**	**.5**	**1.4**
January TB	*1.4*	*.9*	*1.9*	*1.4*	*1.4*
Energy	**10.2**	**-3.7**	**-13.1**	**-8.5**	**.8**
January TB	*8.0*	*-11.0*	*3.6*	*-3.9*	*-2.4*
Core PCE	**1.1**	**1.3**	**.8**	**1.1**	**1.5**
January TB	*1.0*	*1.6*	*1.7*	*1.7*	*1.6*
Market-based core	**1.1**	**1.6**	**.6**	**1.1**	**1.3**
January TB	*1.1*	*1.4*	*1.6*	*1.5*	*1.5*
Nonmarket-based core	**.8**	**-.4**	**2.5**	**1.0**	**2.3**
January TB	*.2*	*2.3*	*2.5*	*2.4*	*2.5*
Memo: Core imports	**-.3**	**.2**	**-2.0**	**-.9**	**.1**
January TB	*-.5*	*2.5*	*1.6*	*2.0*	*1.3*

e Staff estimate.
f Staff forecast.
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

[2] Our projection of core import prices depends importantly on the staff's assumed paths for exchange rates and commodity prices, around which there is considerable uncertainty.

THE LONG-TERM OUTLOOK

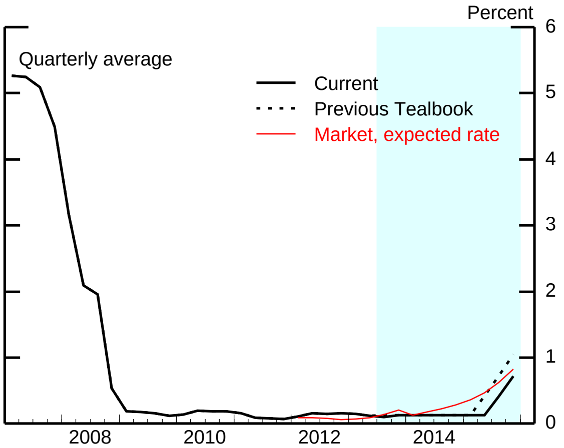
- After the unemployment threshold is crossed, the federal funds rate is set according to the prescriptions of the inertial Taylor (1999) rule, assuming that monetary policy seeks to stabilize PCE inflation at 2 percent over the longer term. The Federal Reserve's holdings of securities continue to put downward pressure on longer-term interest rates, and the process of returning the SOMA portfolio to a normal size is expected to be completed by 2021.

- Further increases in household and business confidence, diminishing uncertainty, and further improvements in credit availability support real GDP growth of 3 percent in 2016. Thereafter, the pace of gains in real GDP gradually moves down toward the longer-run growth rate of potential output of 2¼ percent, with the unemployment rate reaching its natural rate of 5¼ percent in late 2017.

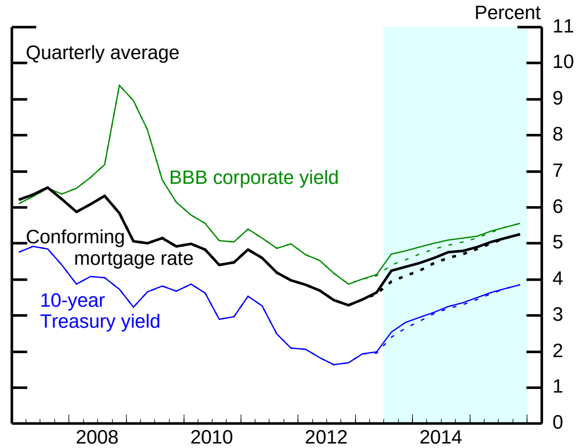
- Long-run inflation expectations are assumed to remain well anchored, and, with the margin of slack in labor and product markets diminishing, consumer price inflation moves up to 2 percent by 2017. The nominal federal funds rate is projected to eventually stabilize at around 4 percent later in the decade.

Key Background Factors underlying the Baseline Staff Projection

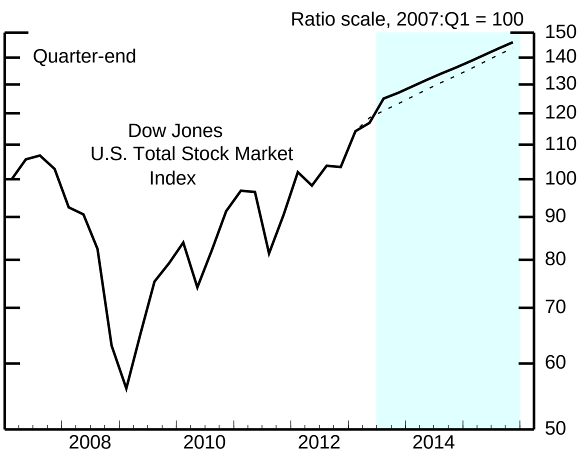
Federal Funds Rate



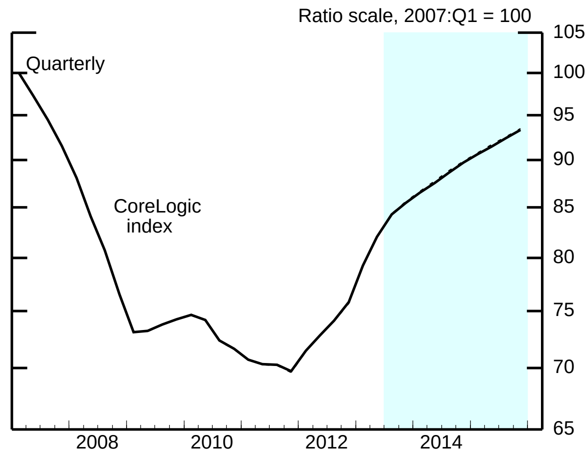
Long-Term Interest Rates



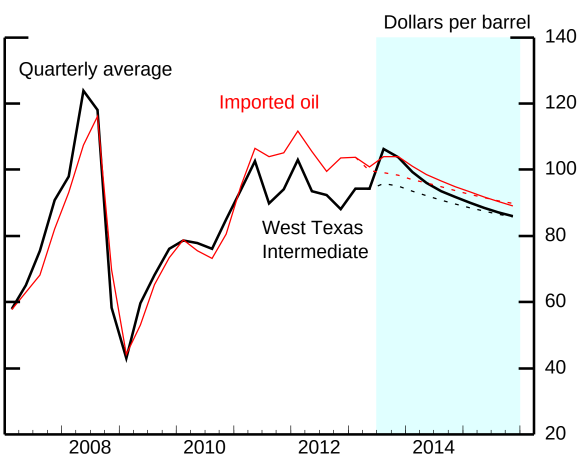
Equity Prices



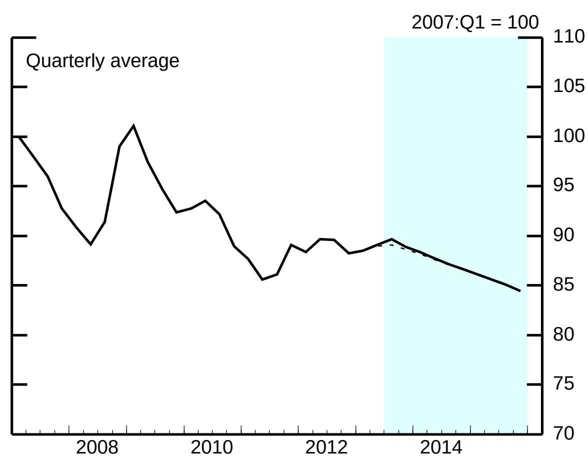
House Prices



Crude Oil Prices



Broad Real Dollar



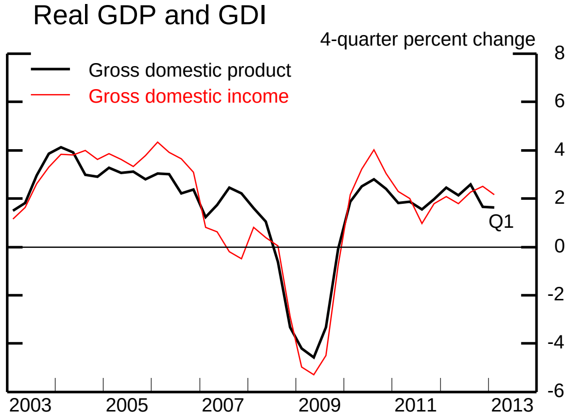
Summary of the Near-Term Outlook
(Percent change at annual rate except as noted)

Measure	2013:Q2 Previous Tealbook	2013:Q2 Current Tealbook	2013:Q3 Previous Tealbook	2013:Q3 Current Tealbook	2013:Q4 Previous Tealbook	2013:Q4 Current Tealbook
Real GDP	**1.8**	**1.1**	**2.5**	**2.3**	**3.3**	**3.3**
Private domestic final purchases	2.6	2.5	3.7	2.8	4.2	4.0
Personal consumption expenditures	2.1	1.5	3.1	2.6	3.6	3.5
Residential investment	18.6	9.8	13.9	4.2	15.3	17.3
Business fixed investment	2.4	7.2	5.7	3.7	6.0	4.0
Government purchases	-3.4	-3.7	-3.8	-3.2	-2.0	-2.0
Contributions to change in real GDP						
Inventory investment[1]	.0	-.1	.1	.2	.3	.6
Net exports[1]	.2	-.2	.0	.4	-.2	-.2
Unemployment rate[2]	**7.5**	**7.5**	**7.4**	**7.5**	**7.3**	**7.4**
PCE chain price index	**-.1**	**-.1**	**1.2**	**1.8**	**1.3**	**1.0**
Ex. food and energy	.8	.8	1.3	1.5	1.5	1.4

1. Percentage points.
2. Percent.

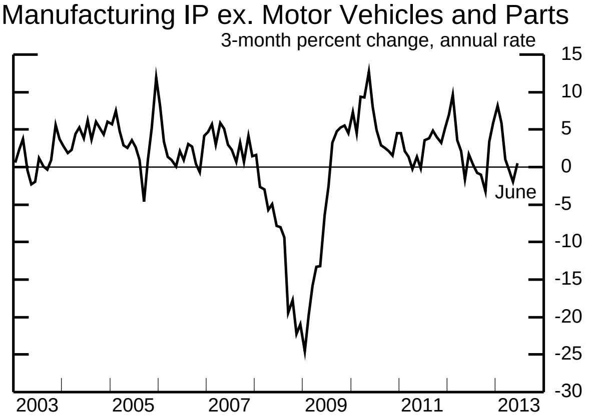
Recent Nonfinancial Developments (1)

Real GDP and GDI



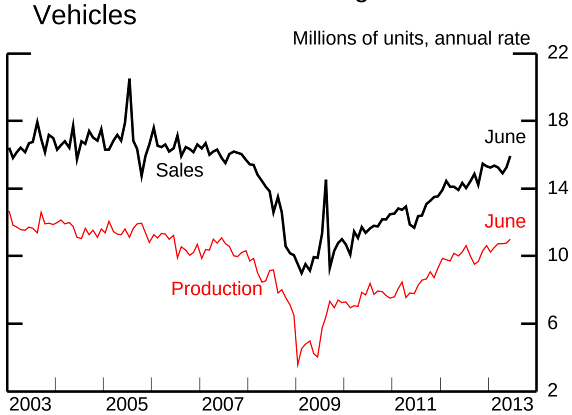
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Manufacturing IP ex. Motor Vehicles and Parts



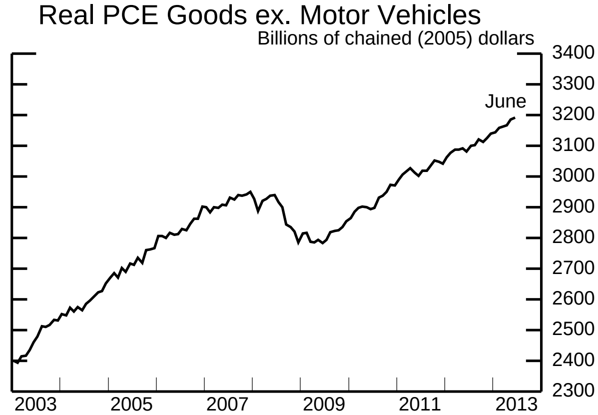
Source: Federal Reserve Board, G.17 Statistical Release, "Industrial Production and Capacity Utilization."

Sales and Production of Light Motor Vehicles



Source: Ward's Auto Infobank.

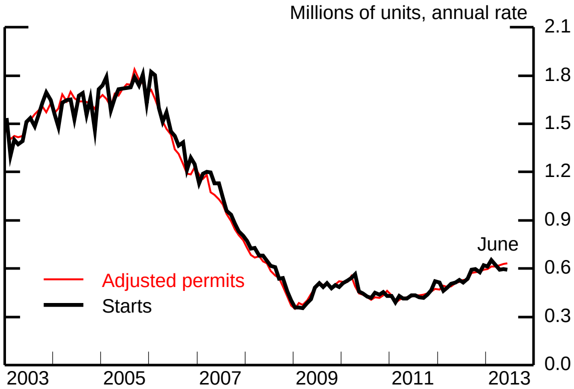
Real PCE Goods ex. Motor Vehicles



Note: Figures for April, May, and June 2013 are staff estimates based on available source data.
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

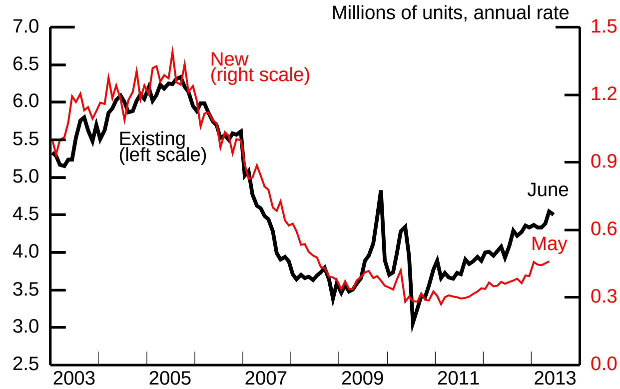
Recent Nonfinancial Developments (2)

Single-Family Housing Starts



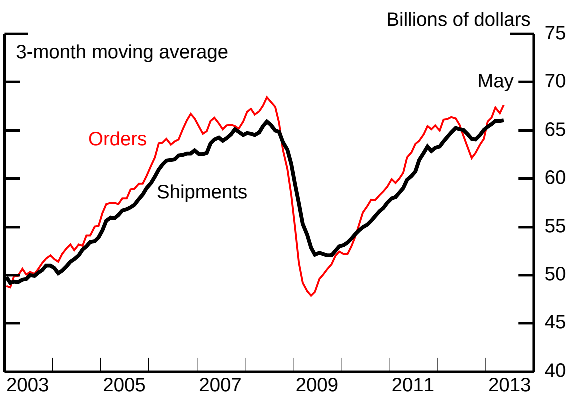
Note: Adjusted permits equal permits plus starts outside of permit-issuing areas.
Source: U.S. Census Bureau.

Single-Family Home Sales



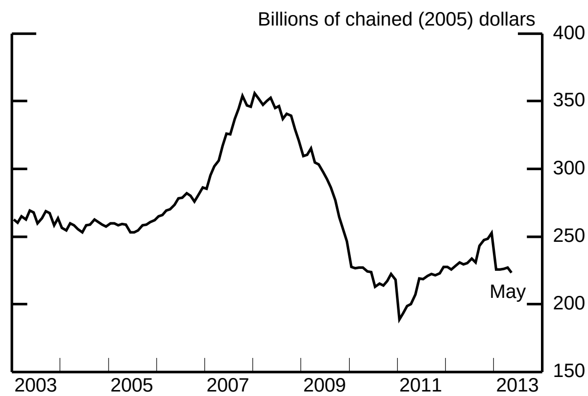
Source: For existing, National Association of Realtors; for new, U.S. Census Bureau.

Nondefense Capital Goods ex. Aircraft



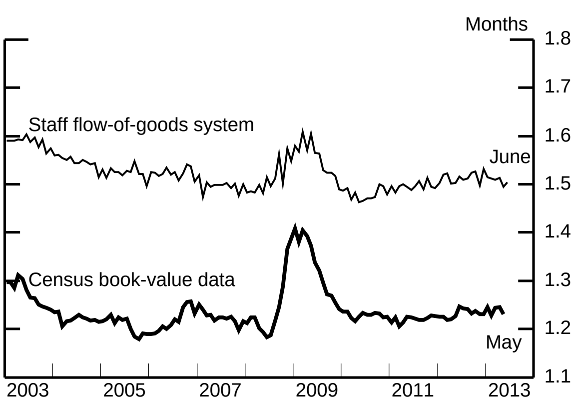
Source: U.S. Census Bureau.

Nonresidential Construction Put in Place



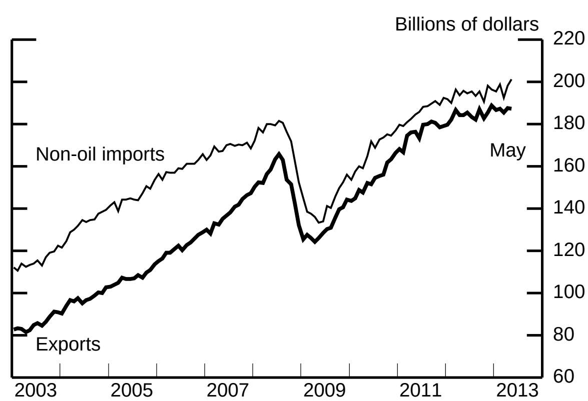
Note: Nominal CPIP deflated by BEA prices through 2013:Q1 and by staff's estimated deflator thereafter.
Source: U.S. Census Bureau.

Inventory Ratios ex. Motor Vehicles



Note: Flow-of-goods system covers total industry ex. motor vehicles and parts, and inventories 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 calculation.

Exports and Non-oil Imports

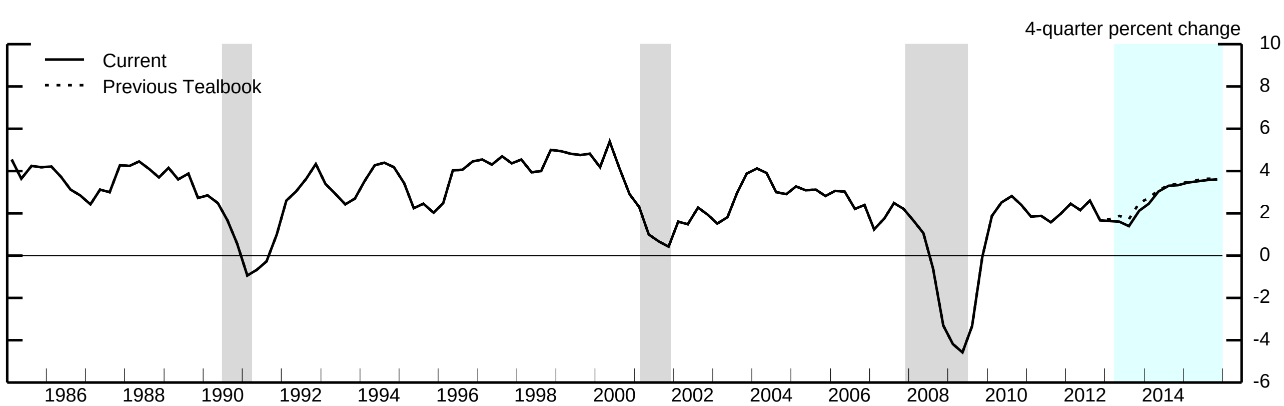


Source: U.S. Dept. of Commerce, Bureau of Economic Analysis; U.S. Census Bureau.

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

Measure	2012	2013	2013 H1	2013 H2	2014	2015
Real GDP	**1.7**	**2.1**	**1.4**	**2.8**	**3.3**	**3.6**
Previous Tealbook	1.7	2.5	2.0	2.9	3.4	3.6
Final sales	2.1	1.8	1.2	2.4	3.2	3.8
Previous Tealbook	2.1	2.2	1.6	2.7	3.3	3.8
Personal consumption expenditures	1.8	2.5	2.1	3.0	3.7	3.9
Previous Tealbook	1.8	3.0	2.6	3.3	3.8	3.9
Residential investment	14.9	11.2	11.9	10.6	18.9	16.0
Previous Tealbook	14.9	15.3	15.9	14.6	17.8	15.2
Nonresidential structures	7.3	1.3	-1.2	3.9	2.5	3.1
Previous Tealbook	7.3	1.3	-1.9	4.5	3.4	3.4
Equipment and software	4.7	4.8	5.8	3.8	5.7	6.2
Previous Tealbook	4.7	4.7	3.1	6.4	6.3	6.4
Federal purchases	-2.8	-7.6	-8.9	-6.3	-5.5	-3.8
Previous Tealbook	-2.8	-7.6	-8.3	-6.9	-5.5	-3.8
State and local purchases	-1.1	-.7	-1.1	-.3	.0	1.0
Previous Tealbook	-1.1	-.8	-1.3	-.3	.0	1.0
Exports	2.1	3.4	3.0	3.8	4.8	6.4
Previous Tealbook	2.1	3.1	2.2	4.0	5.1	6.5
Imports	.2	2.9	3.2	2.7	4.7	5.4
Previous Tealbook	.2	2.7	1.6	3.8	4.7	5.4
	Contributions to change in real GDP (percentage points)					
Inventory change	-.4	.3	.3	.4	.1	-.2
Previous Tealbook	-.4	.3	.4	.2	.1	-.2
Net exports	.3	.0	-.1	.1	-.1	.0
Previous Tealbook	.3	.0	.0	-.1	-.1	.0

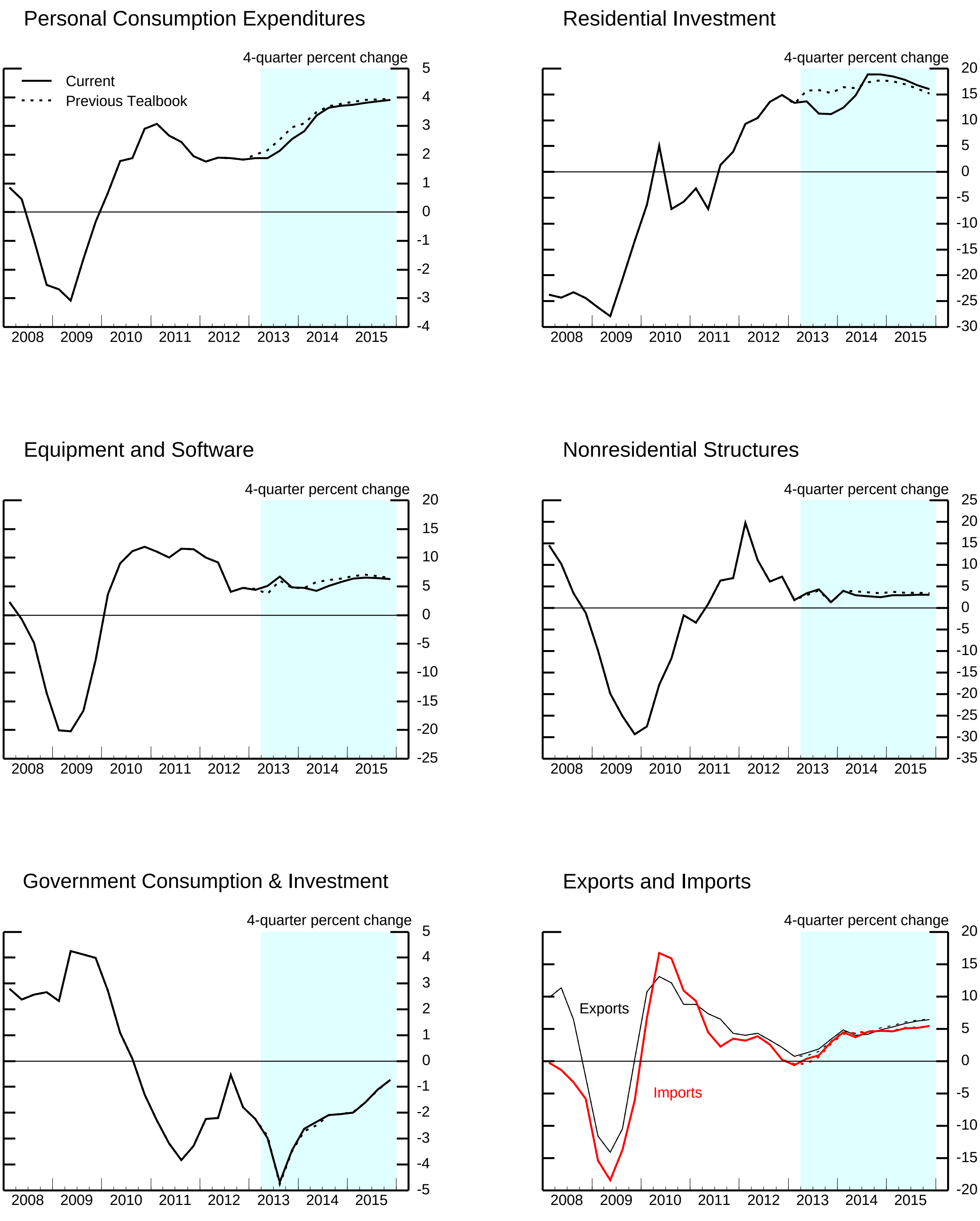
Real GDP



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

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

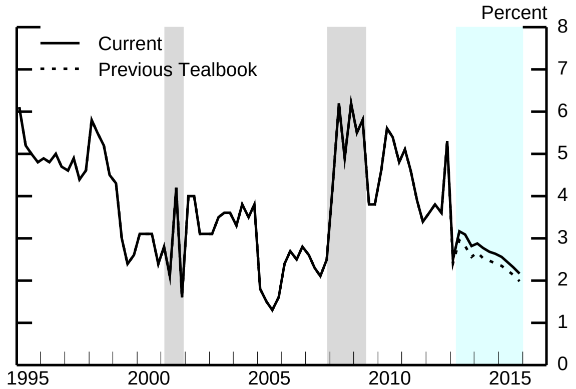
Components of Final Demand



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

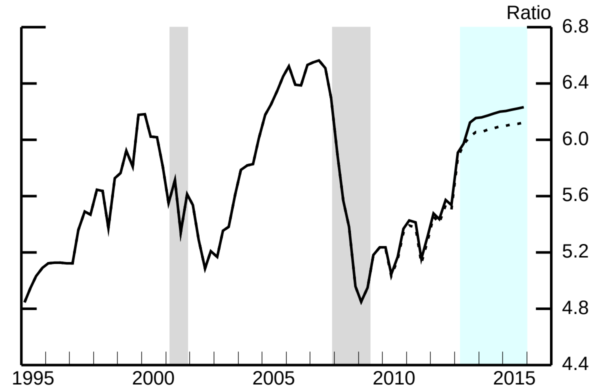
Aspects of the Medium-Term Projection

Personal Saving Rate



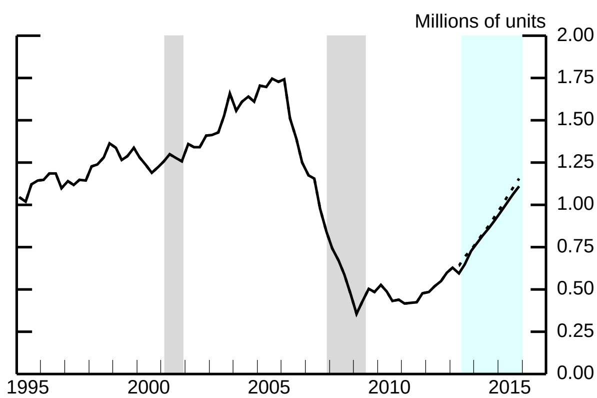
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Wealth-to-Income Ratio



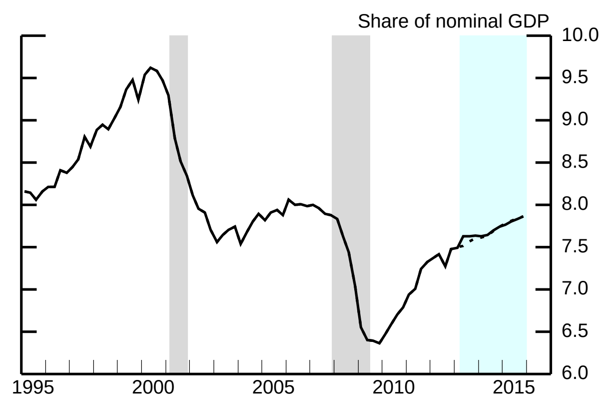
Note: Household net worth as a ratio to disposable personal income.
Source: For net worth, Federal Reserve Board, flow of funds data; for income, U.S. Dept. of Commerce, Bureau of Economic Analysis.

Single-Family Housing Starts



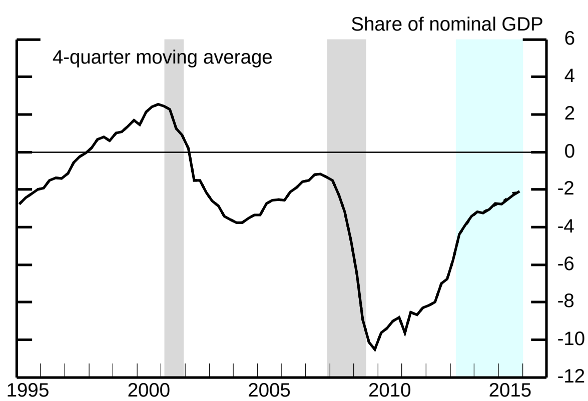
Source: U.S. Census Bureau.

Equipment and Software Spending



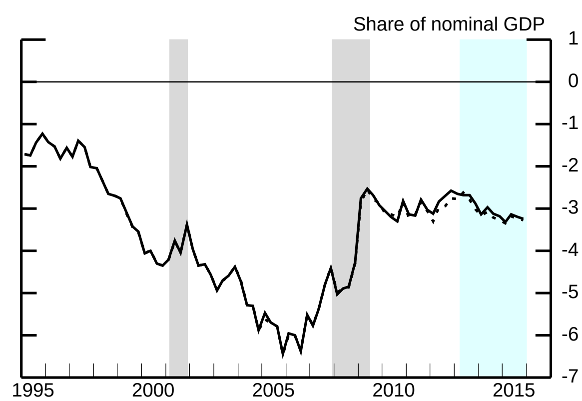
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Federal Surplus/Deficit



Source: *Monthly Treasury Statement.*

Current Account Surplus/Deficit



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

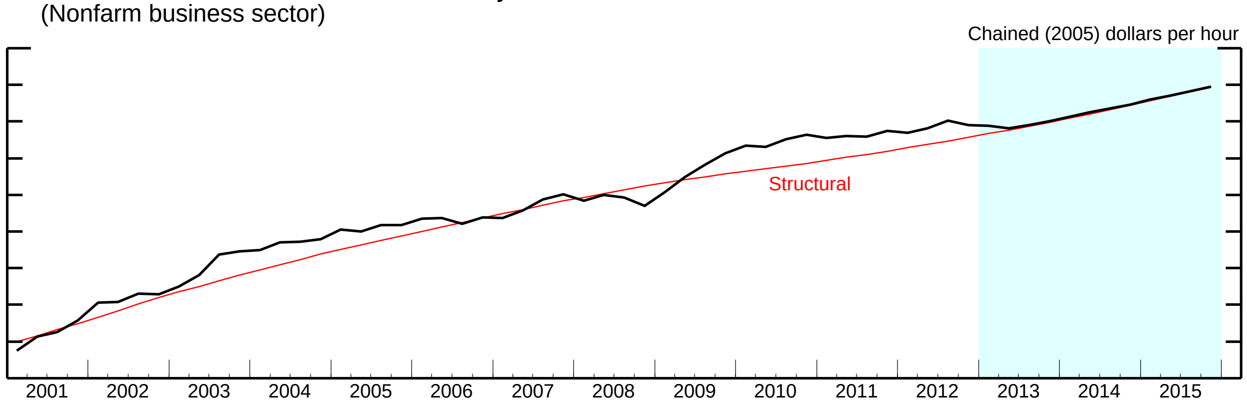
Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

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

Measure	1974-95	1996-2000	2001-10	2011	2012	2013	2014	2015
Potential real GDP	3.0	3.4	2.1	1.6	1.9	2.0	2.1	2.1
Previous Tealbook	3.0	3.4	2.1	1.6	1.9	2.0	2.1	2.1
Selected contributions[1]								
Structural labor productivity	1.4	2.6	2.1	1.3	1.4	1.5	1.7	1.7
Previous Tealbook	1.4	2.6	2.1	1.3	1.4	1.5	1.7	1.7
Capital deepening	.7	1.5	.7	.2	.4	.5	.6	.7
Previous Tealbook	.7	1.5	.7	.2	.4	.5	.6	.7
Multifactor productivity	.5	.8	1.2	.9	.9	.9	.9	.9
Previous Tealbook	.5	.8	1.2	.9	.9	.9	.9	.9
Structural hours	1.5	1.0	.6	.6	.7	.7	.6	.6
Previous Tealbook	1.5	1.0	.6	.6	.7	.7	.6	.6
Labor force participation	.4	.0	-.3	-.4	-.3	-.4	-.3	-.3
Previous Tealbook	.4	.0	-.3	-.4	-.3	-.4	-.3	-.3
Memo:								
GDP gap[2]	-2.4	1.9	-4.0	-3.6	-3.9	-3.8	-2.6	-1.2
Previous Tealbook	-2.4	1.9	-4.0	-3.6	-3.9	-3.4	-2.2	-.8

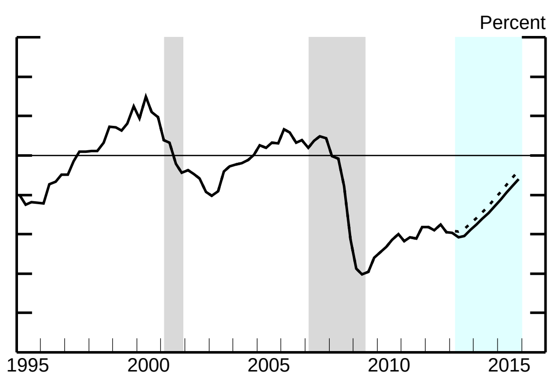
Note: For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.
1. Percentage points.
2. Percent difference between actual and potential GDP in the final quarter of the period indicated. A negative number indicates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

Structural and Actual Labor Productivity
(Nonfarm business sector)



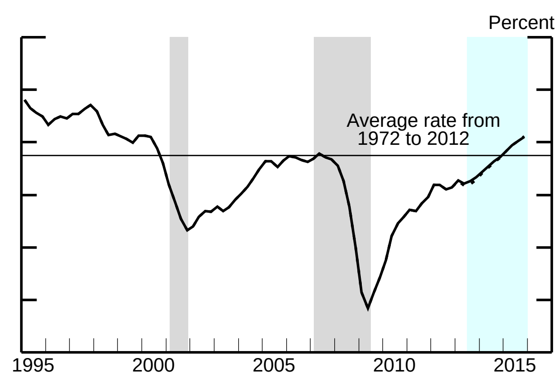
Source: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce, Bureau of Economic Analysis; staff assumptions.

GDP Gap



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

Manufacturing Capacity Utilization Rate



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

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

The Outlook for the Labor Market

Measure	2012	2013	2013 H1	2013 H2	2014	2015
Output per hour, nonfarm business[1]	.6	.3	-.7	1.4	1.6	1.7
Previous Tealbook	.6	.9	.3	1.5	1.6	1.6
Nonfarm private employment[2]	189	198	206	190	209	250
Previous Tealbook	189	183	190	175	218	265
Labor force participation rate[3]	63.7	63.4	63.4	63.4	63.3	63.3
Previous Tealbook	63.7	63.4	63.4	63.4	63.3	63.3
Civilian unemployment rate[3]	7.8	7.4	7.5	7.4	6.8	6.0
Previous Tealbook	7.8	7.3	7.5	7.3	6.6	5.8

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.

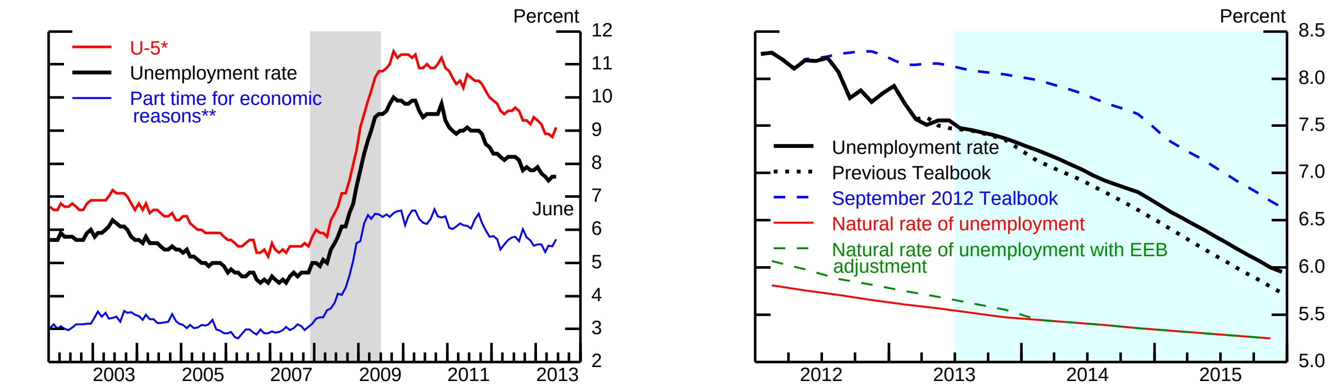
Inflation Projections
(Percent change at annual rate from final quarter of preceding period)

Measure	2012	2013	2013 H1	2013 H2	2014	2015
PCE chain-weighted price index	1.6	.9	.5	1.4	1.3	1.5
Previous Tealbook	1.6	.9	.4	1.3	1.4	1.6
Food and beverages	1.1	1.0	.9	1.1	.8	1.3
Previous Tealbook	1.1	1.2	1.2	1.1	.9	1.4
Energy	3.2	-4.0	-8.5	.8	-2.4	-1.6
Previous Tealbook	3.2	-5.0	-9.1	-.8	-.9	-.9
Excluding food and energy	1.5	1.3	1.1	1.5	1.6	1.7
Previous Tealbook	1.5	1.2	1.0	1.4	1.6	1.8
Prices of core goods imports[1]	.1	-.4	-.9	.1	1.4	1.5
Previous Tealbook	.1	-.1	-.4	.2	1.4	1.5

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

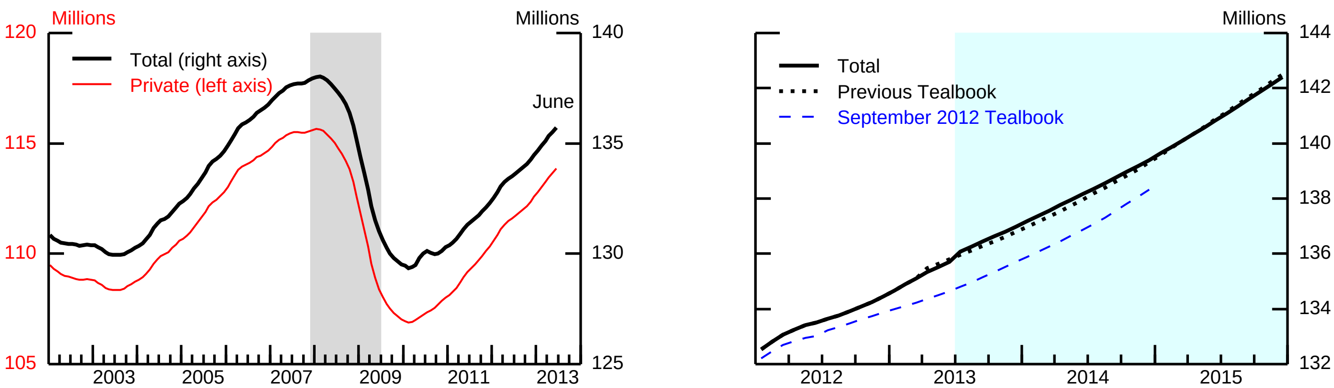
Labor Market Developments and Outlook

Measures of Labor Underutilization



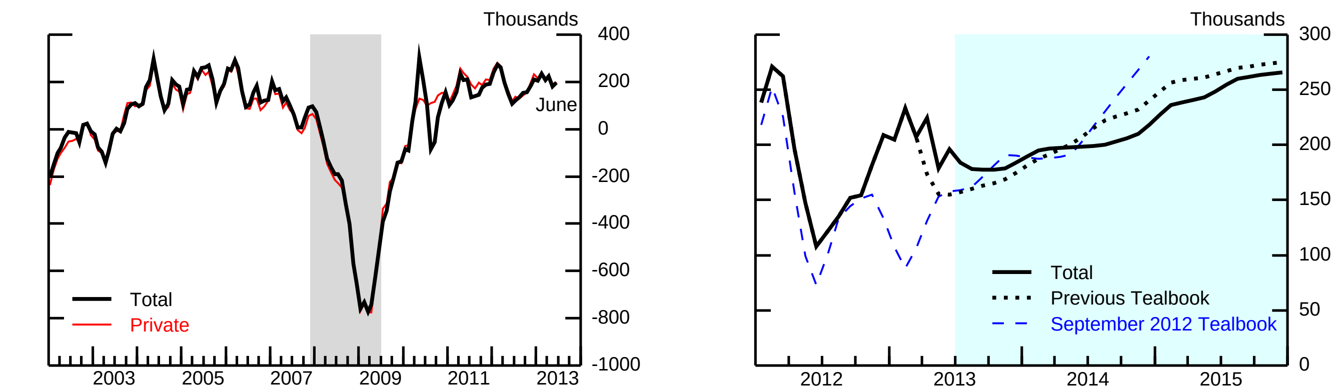
* U-5 measures total unemployed plus all marginally attached to the labor force, as a percent of the labor force plus persons marginally attached to the labor force.
** Percent of Current Population Survey employment.
EEB Extended and emergency unemployment benefits.
Source: U.S. Department of Labor,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

Level of Payroll Employment*



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

Change in Payroll Employment*

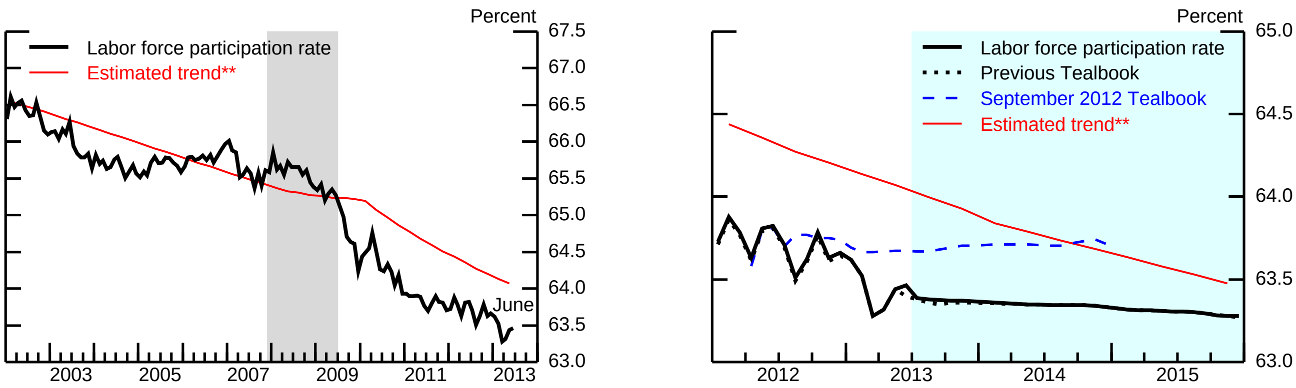


* 3-month moving averages in history; average monthly changes in each quarter during the forecast period.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

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

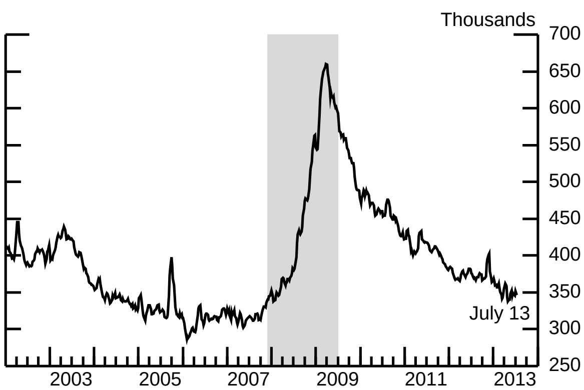
Labor Market Developments and Outlook (2)

Labor Force Participation Rate*



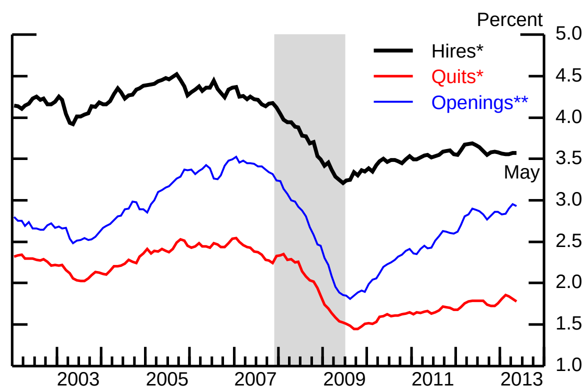
* Published data adjusted by staff to account for changes in population weights.
** Includes staff estimate of the effect of extended and emergency unemployment benefits.
Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

Initial Unemployment Insurance Claims*



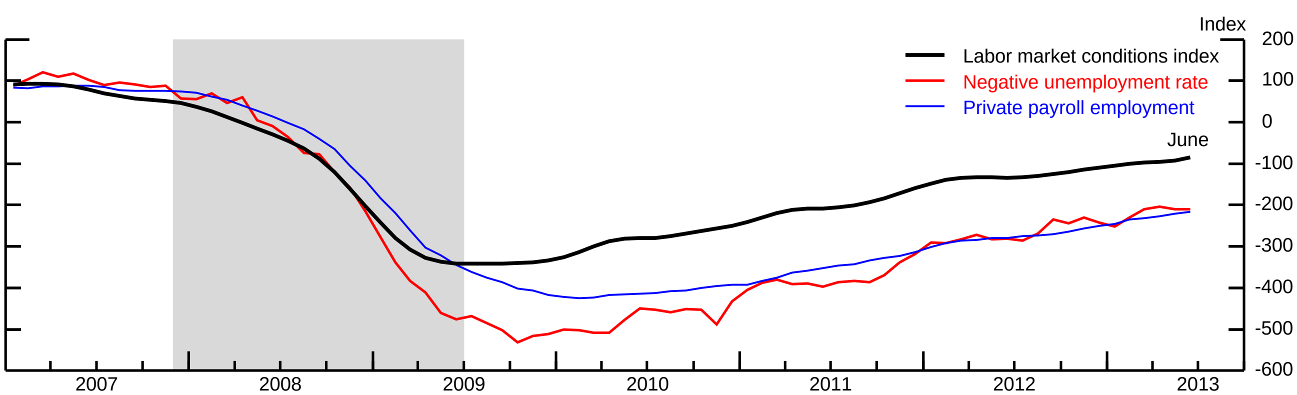
* 4-week moving average.
Source: U.S. Department of Labor, Employment and Training Administration.

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.

Indexes of Selected Labor Market Indicators



Note: Labor market conditions index estimated by staff; indexes for unemployment rate and private payroll employment are deviation from estimated trend normalized to have mean zero and unit standard deviation over the period July 1976 to September 2008, multiplied by 100.

Labor Market Data and Projections

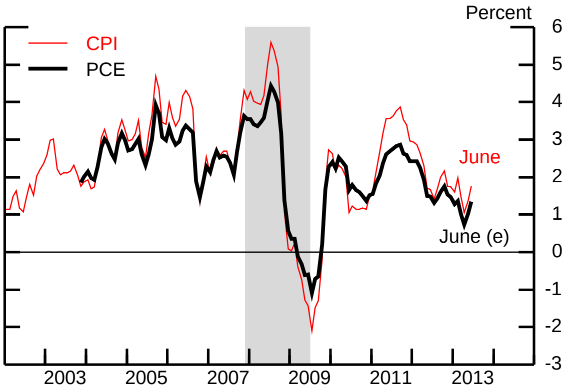
Indicator	Aug. 2012[1]	Projection for mid-2014[2] in the Tealbook dated:			
		Sept. 2012	Dec. 2012	June 2013[3]	July 2013[3]
Unemployment rate (percent)	8.1	7.8	7.6	6.9	7.0
Labor force participation rate (percent)	63.5	63.7	63.7	63.3	63.3
Monthly change in payroll employment (thousands, three-month averages)					
Total	94	212	197	211	199
Private	109	210	195	219	207
Level of total payroll employment (millions)	133.3	137.0	137.1	138.1	138.3
Total hours worked (percent change)[4]	1.0	2.3	2.0	2.6	2.5
Total hours worked (billions)[4]	184.6	190.3	190.8	193.2	193.3

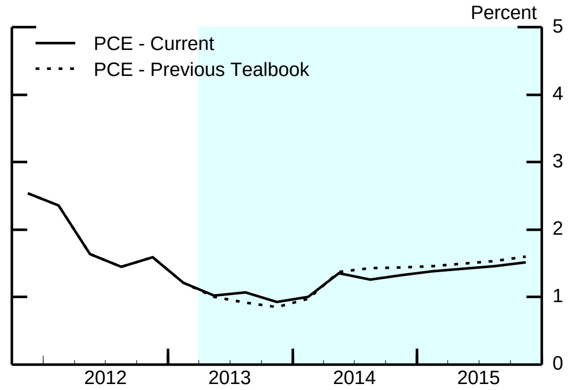
1. The figures for August 2012 refer to data as originally published in the September employment situation release along with the staff's real-time translation of those data into hours worked. These were the latest available data at the time of the September FOMC meeting.
2. Calculated as the mean of the 2014:Q2 and 2014:Q3 projections.
3. Projections of payrolls and hours worked include the effects of the benchmark revision to the payroll survey.
4. Total hours worked are aggregate hours in the nonfarm business sector. Because that series is available only on a quarterly basis, the August 2012 figures refer to the quarterly percent change and level in 2012:Q3. The percent changes and levels in hours are at annual rates.
Source: U.S. Department of Labor, Bureau of Labor Statistics; staff projections.

Domestic Econ Devel & Outlook

Inflation Developments and Outlook
(Percent change from year-earlier period)

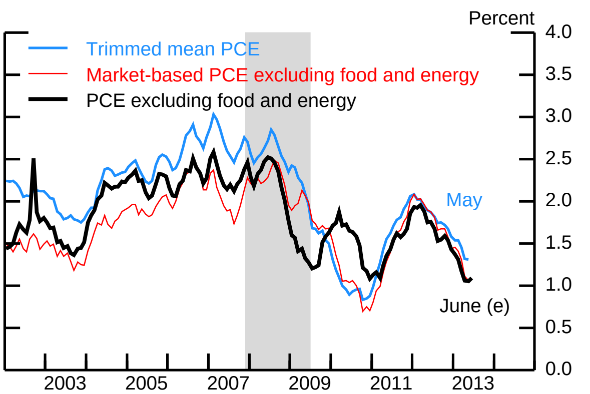
Headline Consumer Price Inflation

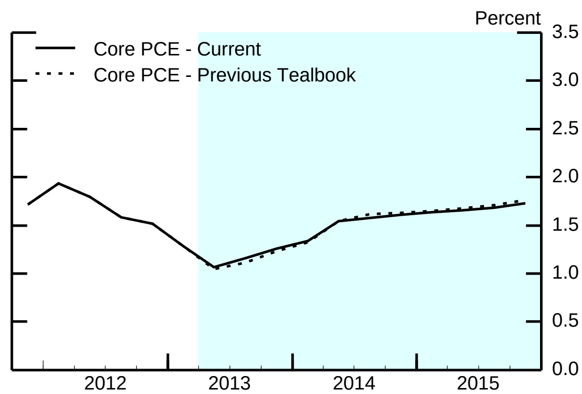




Note: PCE prices from April to June 2013 are staff estimates.
Source: For CPI, U.S. Department of Labor, Bureau of Labor Statistics; for PCE, U.S. Department of Commerce, Bureau of Economic Analysis.

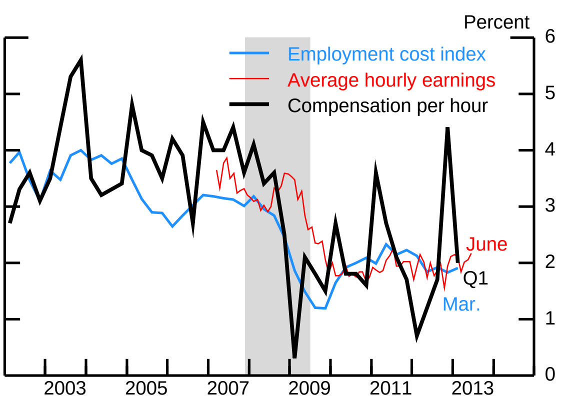
Measures of Underlying PCE Price Inflation

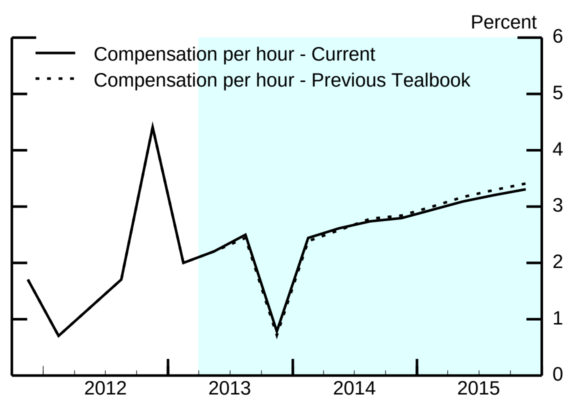




Note: Core PCE prices from April to June 2013 are staff estimates.
Source: For trimmed mean PCE, Federal Reserve Bank of Dallas; otherwise, U.S. Department of Commerce, Bureau of Economic Analysis.

Labor Cost Growth (Private Industry)



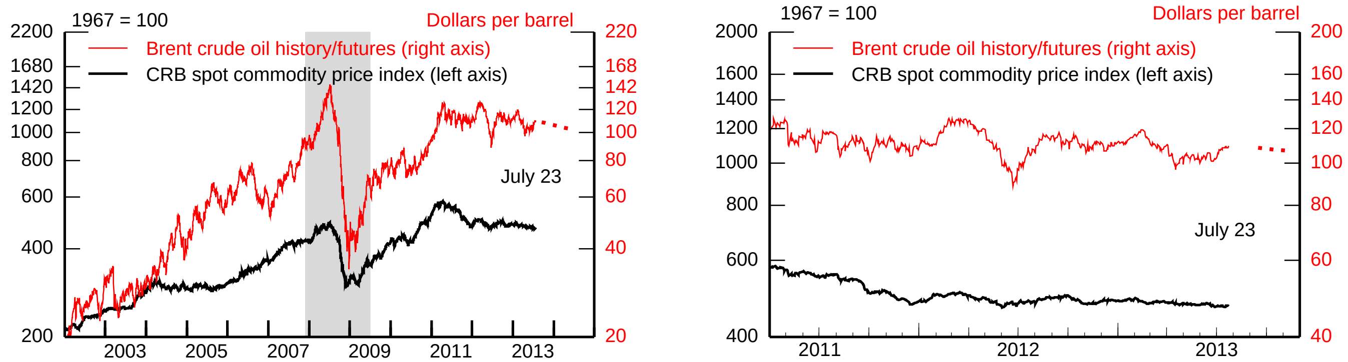


Note: The compensation per hour value for 2013:Q1 is a staff estimate.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Inflation Developments and Outlook (2)

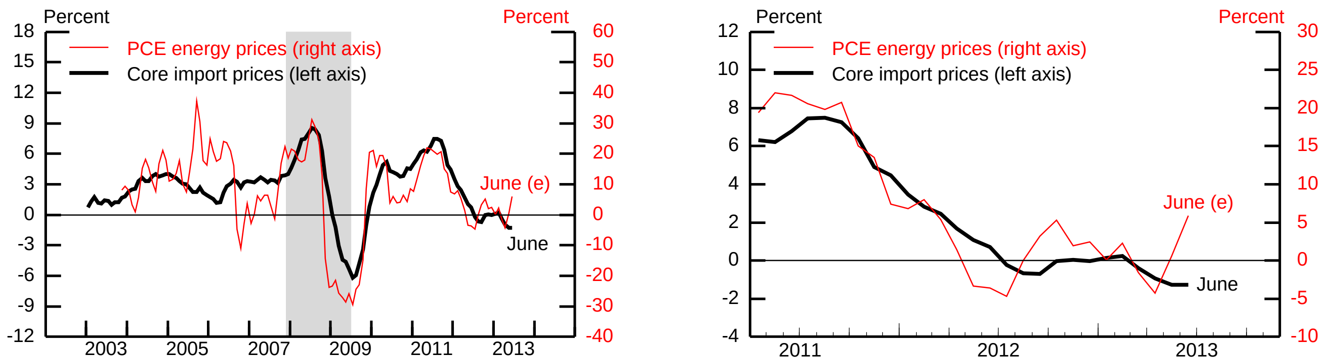
(Percent change from year-earlier period, except as noted)

Commodity and Oil Price Levels



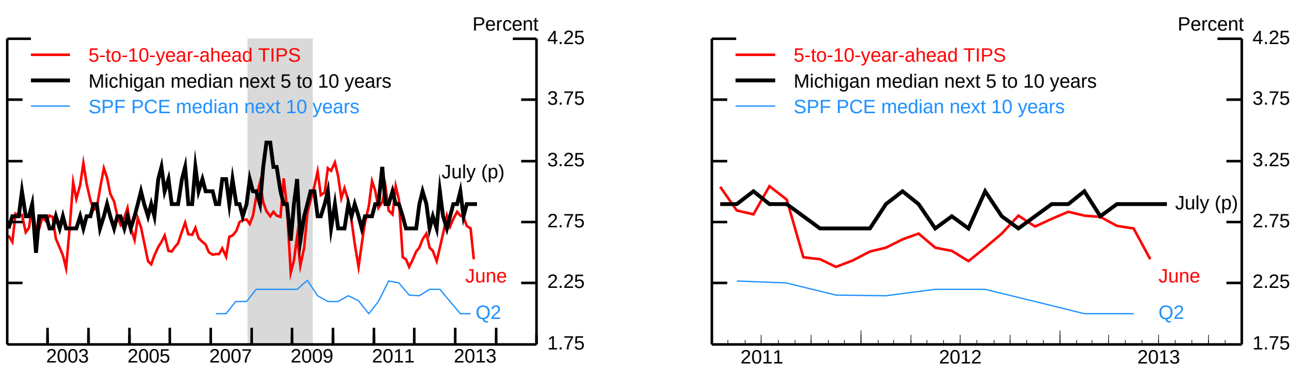
Note: Futures prices are the latest observations on monthly futures contracts.
Source: For oil prices, U.S. Department of Energy, Energy Information Agency; for commodity prices, Conference Research Board (CRB).

Energy and Import Price Inflation



Note: PCE prices from April to June 2013 are staff estimates.
Source: For core import prices, U.S. Dept. of Labor, Bureau of Labor Statistics; for PCE, U.S. Dept. of Commerce, Bureau of Economic Analysis.

Long-Term Inflation Expectations



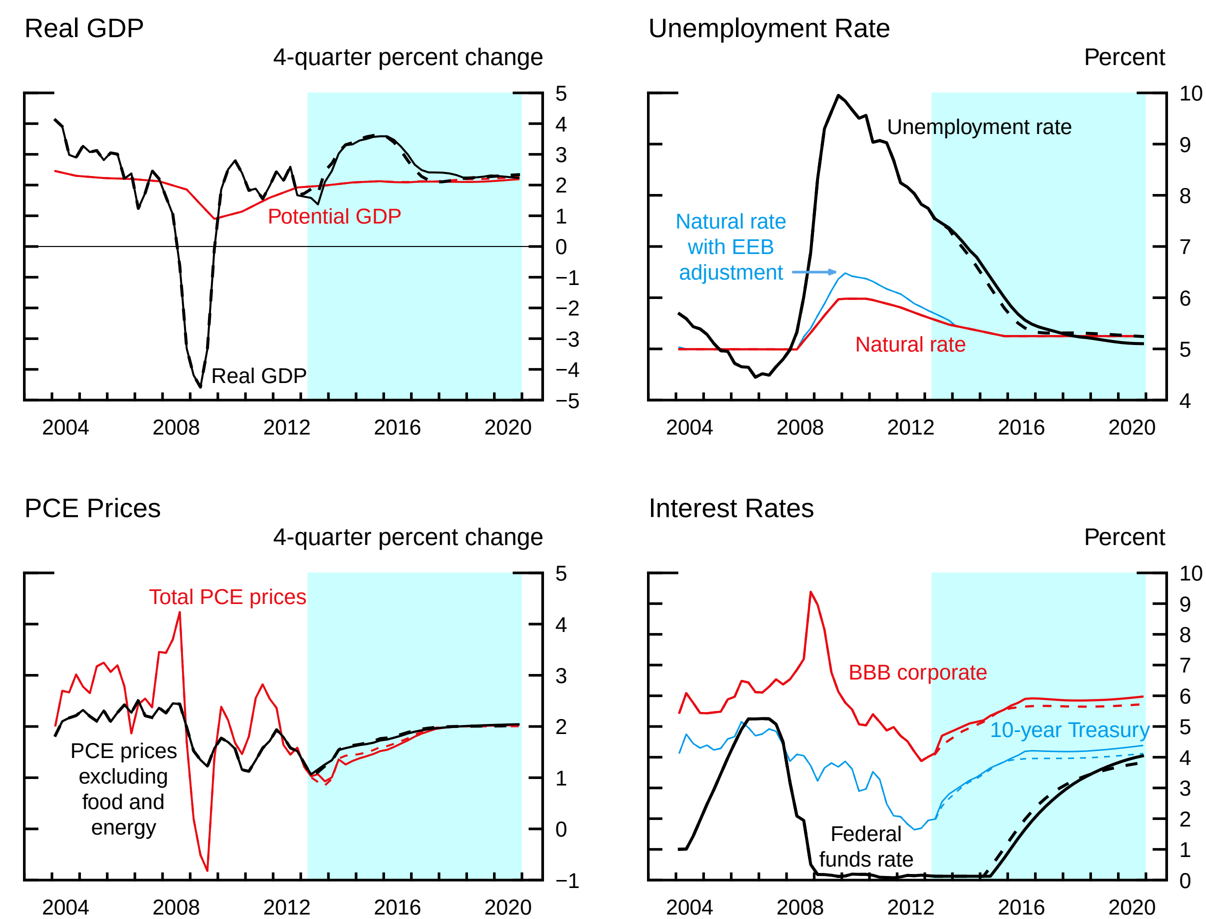
Note: Based on a comparison of an estimated TIPS (Treasury inflation-protected securities) yield curve with an estimated nominal off-the-run Treasury yield curve, with an adjustment for the indexation-lag effect.
p Preliminary.
SPF Survey of Professional Forecasters.
Source: For Michigan, Thomson Reuters/University of Michigan Surveys of Consumers; for SPF, the Federal Reserve Bank of Philadelphia; for TIPS, FRB staff calculations.

The Long-Term Outlook

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

Measure	2013	2014	2015	2016	2017	Longer run
Real GDP	2.1	3.3	3.6	3.0	2.4	2.3
Previous Tealbook	2.5	3.4	3.6	2.8	2.1	2.3
Civilian unemployment rate[1]	7.4	6.8	6.0	5.5	5.3	5.2
Previous Tealbook	7.3	6.6	5.8	5.3	5.3	5.2
PCE prices, total	.9	1.3	1.5	1.7	2.0	2.0
Previous Tealbook	.9	1.4	1.6	1.8	2.0	2.0
Core PCE prices	1.3	1.6	1.7	1.9	2.0	2.0
Previous Tealbook	1.2	1.6	1.8	1.9	2.0	2.0
Federal funds rate[1]	.1	.1	.7	1.9	2.8	4.0
Previous Tealbook	.1	.1	1.0	2.2	3.0	4.0
10-year Treasury yield[1]	2.8	3.4	3.9	4.2	4.2	4.8
Previous Tealbook	2.7	3.3	3.9	4.0	4.0	4.8

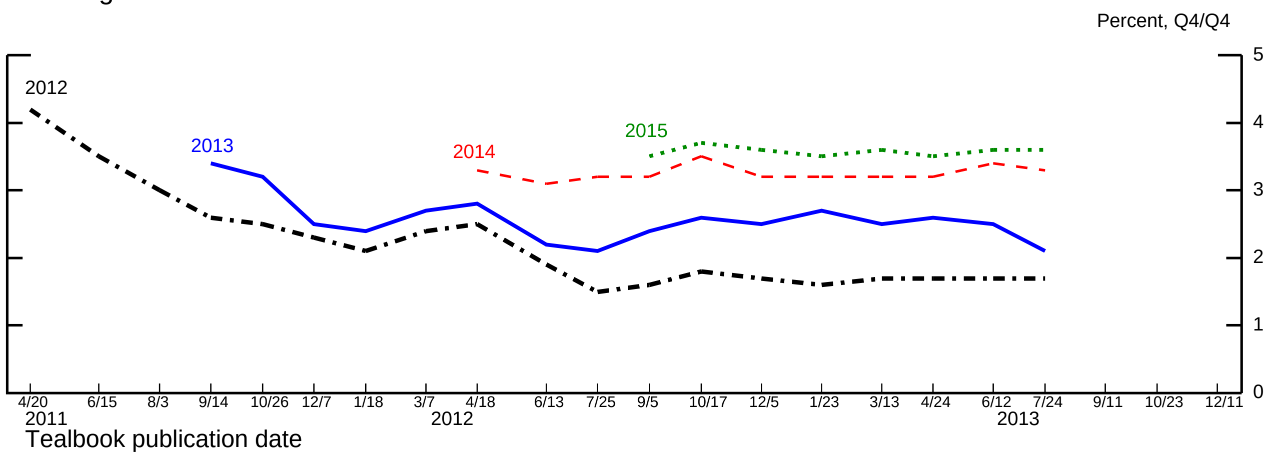
1. Percent, average for the final quarter of the period.



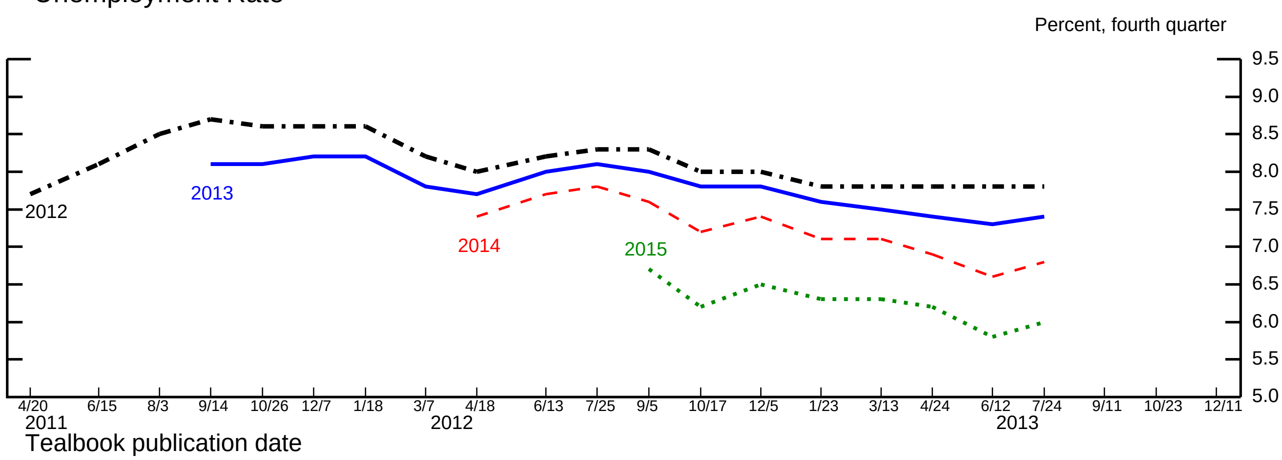
Note: In each panel, shading represents the projection period, and dashed lines are the previous Tealbook.

Evolution of the Staff Forecast

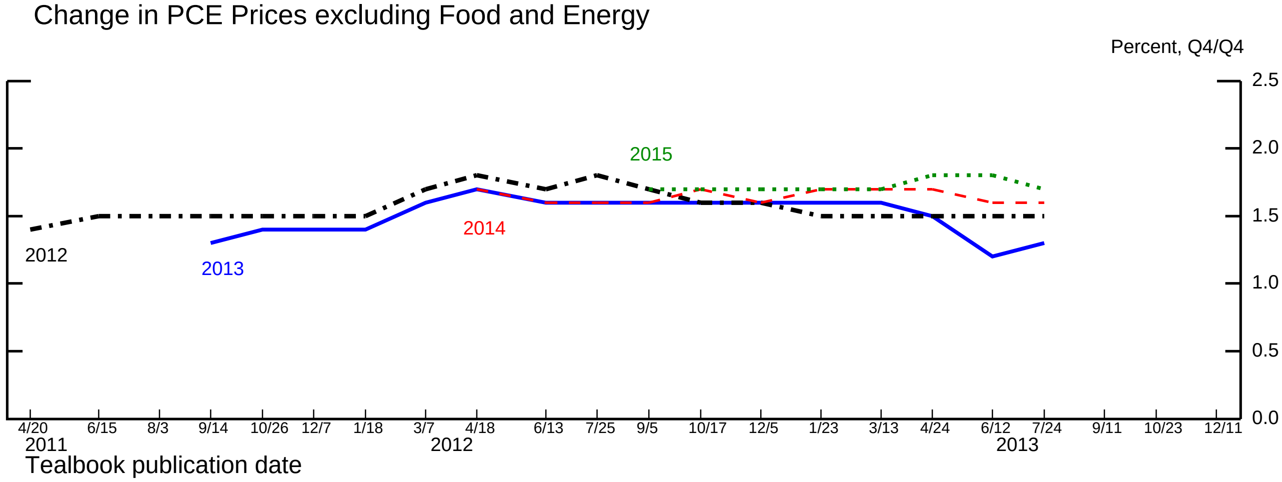
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy



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International Economic Developments and Outlook

Real activity in the foreign economies continues to be subdued. After a very weak first quarter, we estimate that total foreign GDP growth edged up to a still-anemic 2¼ percent in the second quarter. This outcome was in line with our forecast in the June Tealbook, as moderately better news in the advanced foreign economies (AFEs) was offset by less promising developments in the emerging market economies (EMEs). Output in the euro area appears to have finally bottomed out after six consecutive quarters of contraction, and growth in Japan likely put in another strong performance. In contrast, Chinese GDP growth remained at its moderate first-quarter pace, and indicators for other EMEs point to growth that continues to be well below trend.

Going forward, we anticipate that total foreign GDP growth will rise from 2¾ percent this quarter to 3½ percent in 2015. This recovery is supported by continued accommodative monetary policy, lessening drag from fiscal consolidation, some further reduction in financial stresses in Europe, and firming growth in the United States.

Our forecast is only a touch weaker than in the June Tealbook. Part of this revision reflects our extrapolation of some of the recent weakness in EME data. In addition, we built in a slight drag from the tightening of financial conditions in recent months. In particular, long-term interest rates have increased abroad, especially in the EMEs. (See the box "Assessing Recent Developments in EME Asset Markets" in the Financial Developments section.) However, in many countries we expect the negative effects of higher financing costs on growth to be somewhat offset by the positive effects of depreciated exchange rates.

Our projection of a modest recovery in foreign growth continues to face important risks. Market reaction to the eventual normalization of advanced economy monetary policy could result in much greater financial dislocations and spillovers to global activity than the limited effects we currently assume. In addition, the ongoing slowdown in the EMEs, particularly in China, could prove sharper and more deep-seated—a possibility we explore in the Risks and Uncertainty section. And, as has been the case for some time, the situation in Europe could deteriorate, pushing that region back into recession and possibly destabilizing global financial markets.

With output growth subdued, our outlook has inflation in the AFEs edging up from 1¼ percent in the current quarter to only 1½ percent in 2015 (excluding the effects of the Japanese consumption tax hikes). EME inflation also remains generally contained over the forecast period. In the near term, we revised inflation in both regions up a little because of the recent jump in oil prices and depreciation of foreign currencies.

In this low-inflation environment, monetary policy in the AFEs is set to remain accommodative. Indeed, the European Central Bank (ECB) issued forward guidance indicating that its rates would remain low for an "extended period," and the Bank of England (BOE) stated that market expectations of early tightening were not justified by economic developments. In contrast, EME central banks have refrained from a further loosening of monetary policy in the face of capital outflows and depreciation pressures, and some countries have tightened policy, intervened in foreign exchange markets, or reversed previous measures that restricted capital inflows.

EMERGING MARKET ECONOMIES

- ***China***. The release of second-quarter real GDP data and historical revisions have led to a smoother path for Chinese GDP over the past year, with growth stepping down from a roughly 8 percent pace in the second half of last year to a subtrend 7 percent pace in the first half of this year. Going forward, we expect growth to recover to almost 8 percent by early next year, supported by improving demand in the advanced economies. Thereafter, output growth slows slightly, in line with the downward trend in potential output growth.

  We lowered our outlook for Chinese growth almost ¼ percentage point over the forecast period, reflecting both the more subdued tone of the incoming data and our view that Chinese authorities will accept more moderate growth as they work to rebalance the economy toward consumption and reduce the risks of financial instability. Indeed, the authorities have taken further steps recently to curb credit growth, including an apparent crackdown by the People's Bank of China on risky balance sheet practices of financial institutions (see the box "Recent Developments in China's Interbank Market").

- ***Other Emerging Asia***. We estimate that GDP growth in the rest of emerging Asia stepped up to a still-subdued 3 percent annual pace in the second quarter from 1½ percent in the first. This acceleration primarily reflects a return to positive growth in the economies of Malaysia, Taiwan, and Thailand, all of which had unexpectedly contracted in the first quarter amid weak demand from the advanced economies and China. GDP growth in the region should rise to 4½ percent by 2015 as external demand picks up. However, we marked down growth ¼ percentage point in the second half of this year and next year, because of weaker data, spillovers from China, and the recent tightening of financial conditions.

- ***Latin America***. We estimate GDP growth in **Mexico** held steady at 1¾ percent in the second quarter, well below its trend rate. This pace is about ½ percentage point below our previous Tealbook forecast, as industrial production fell, on balance, through May and consumer confidence dropped sharply. Going forward, we call for Mexican growth to pick up to 3¾ percent by 2014 and to stay at that rate in 2015, a little less than projected in June, owing to a downward revision to the outlook for U.S. manufacturing activity.

  We estimate that GDP in **Brazil** rose 2½ percent in the second quarter, ¼ percentage point below that projected in the June Tealbook. This revision reflects not only weaker-than-expected data, but also increased political tension following a recent wave of street protests that have shaken business confidence and amplified the financial stresses already hitting Brazil. Moreover, the inflationary pressures resulting from the substantial recent currency depreciation and the desire to damp capital outflows prompted the central bank of Brazil to further tighten monetary policy. These factors have led us to revise down GDP growth for the second half of this year and 2014 by ¼ percentage point. However, we expect growth to pick up from its below-trend pace, rising to about 3¾ percent in 2015, supported by recovery in the advanced economies and the boost to exports that should result from the recent decline of the *real*.

Recent Developments in China's Interbank Market

In June, interbank interest rates surged to record highs in China. The overnight Shanghai Interbank Offered Rate (SHIBOR) moved up from around 4 percent at the end of May to a peak of 13 percent on June 20 (see left-hand figure on the next page). SHIBOR remained elevated for several days until the People's Bank of China (PBOC) issued a statement on June 25 that it had injected liquidity and was committed to stabilizing money markets. Subsequently, SHIBOR gradually moved lower and is currently close to typical levels. Interbank repo rates have moved in a similar fashion.

China's interbank market has grown significantly over the past few years, and brief liquidity squeezes driven by seasonal or temporary factors have occurred periodically. Indeed, part of the recent rate increase can be attributed to such factors, including high demand for cash ahead of the Dragon Boat festival holiday.

What makes the recent episode unusual was the magnitude of the jump in interest rates and its duration, which is generally believed to at least partially reflect a conscious decision by the PBOC to limit its response. In the past, the PBOC had always injected liquidity when there was upward pressure on money market rates, and, as a consequence, the SHIBOR rate had never reached double-digit levels. But in this most recent episode, the PBOC appears to have delayed its usual response to the surge in rates, likely in order to signal that it is serious about encouraging better liquidity management, promoting sounder banking practices more generally, and restraining excessive credit growth—including, as will be discussed below, in the "shadow banking" sector.

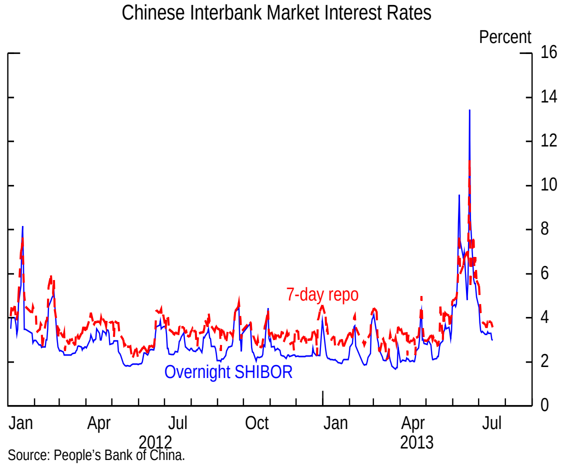
As shown in the right-hand figure on the next page, total credit to China's nonfinancial private sector ballooned from 120 percent of GDP in 2008 to about 175 percent of GDP in 2012, with much of the growth occurring through lending channels that are less regulated than traditional, deposit-funded bank credit. Such shadow banking includes lending via trust companies, corporate bond issuance by financing intermediaries, off-balance-sheet bank loans, and curbside lending. This lending is often funded by wealth management products (WMPs), which are typically off-balance-sheet instruments offering investors higher returns than are permitted on bank deposits. Estimates of the total size of the shadow banking sector vary widely, but, based on the Bank for International Settlements data on nonbank credit shown in the figure, it has reached about 35 percent of annual GDP.

WMPs typically have relatively short maturities but are used to fund illiquid longer-term assets. When large amounts of WMPs are due, as at the end of the second quarter, this situation can create temporary demand for liquidity.[1] In addition, recent efforts by authorities to restrain the issuance of new WMPs may have further exacerbated some banks' funding needs. By refusing to inject liquidity immediately into the interbank market when rates soared, Chinese authorities likely hoped to provide stronger incentives for banks to better manage their liquidity risk. This shot across the bow could also encourage more prudent credit decisions.

Given its short-lived nature, the interbank liquidity squeeze should not, by itself, significantly weigh on the Chinese economy going forward. However, the episode highlights some of the risks to economic activity and financial stability posed by rapid and poorly regulated credit growth, including channeling credit toward unproductive projects, promoting underutilized infrastructure and overcapacity in some manufacturing sectors, spurring excessive development and inflated prices in the real estate sector, and undermining the strength and resiliency of domestic financial institutions.

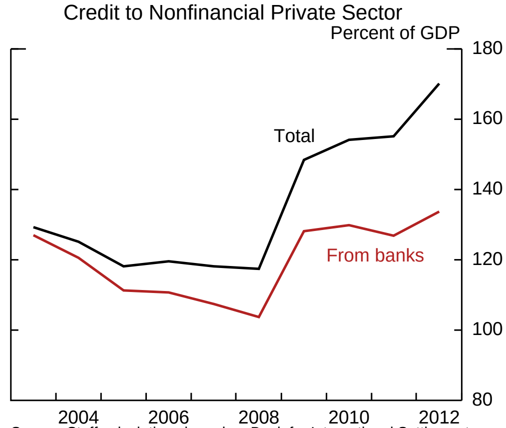
At present, we do not believe that a major eruption of financial difficulties is the most likely outcome. First, Chinese authorities appear to be taking serious steps to rein in the shadow banking sector before problems become unmanageable. Second, the government has ample resources to shore up the banking sector, should that become necessary. Moreover, China's still-rapid pace of economic growth should, over the longer term, generate the demand needed to absorb much of the expansion of capacity financed by the credit boom. But in an environment of mounting indebtedness combined with slowing economic growth, the risks of severe financial problems and a more abrupt and prolonged slowing of economic activity certainly exist, and we will continue to monitor the situation closely.

Chinese Interbank Market Interest Rates



Source: People's Bank of China.

Credit to Nonfinancial Private Sector



Source: Staff calculations based on Bank for International Settlements data.

[1] The temporary demand for liquidity is likely exacerbated by the relative inefficiency with which the interbank market in China recycles funds, so that institutions with ample funds may not lend them to institutions having difficulty financing WMP withdrawals.

ADVANCED FOREIGN ECONOMIES

- ***Euro area***. We now estimate that the euro area economy finally bottomed out in the second quarter. This estimate is a touch better than projected in the June Tealbook, reflecting stronger industrial production, a modest increase in retail sales, and rising consumer confidence. Despite the second-quarter improvement, we tempered the strength of the recovery a bit in response to slightly tighter financial conditions, partly reflecting political tensions in some peripheral countries. All told, we continue to expect a sluggish recovery, with GDP growth of less than ½ percent in the second half, 1 percent in 2014, and just 2 percent in 2015, as financial stresses abate and the drag from fiscal consolidation lessens.

  At its July meeting, in response to the increase in long-term yields over the previous several weeks, the ECB stated that it "expects the key ECB interest rates to remain at present or lower levels for an extended period of time."[1] In line with this guidance, we expect the ECB to keep rates on hold until late 2015.

- ***United Kingdom***. Surprisingly strong activity in the services sector led us to revise up our estimate of second-quarter U.K. GDP growth by almost 1½ percentage points to 2½ percent. This greater momentum should help keep growth at about 2 percent over the rest of the year, somewhat faster than previously expected. Growth should then move back up to 2½ percent in 2015, supported by continued accommodative monetary policy, diminished fiscal drag, and euro-area recovery. We do not expect the BOE to expand its asset purchase program further, but instead to provide forward guidance to reinforce its accommodative stance, possibly making use of thresholds in its communications.

- ***Japan***. Recent indicators have been better than we had expected: Industrial production soared in May, and the Tankan survey showed a broad-based

[1] See Mario Draghi (2013), "Introductory Statement to the Press Conference," speech delivered at the European Central Bank, Frankfurt, Germany, July 4, www.ecb.int/press/pressconf/2013/html/is130704.en.html.

improvement in corporate sentiment. We now estimate that GDP rose at a 3¾ percent pace in the second quarter, ½ percentage point faster than in the June Tealbook forecast, and we expect it to expand at a solid 3 percent rate in the second half of the year. However, we continue to expect growth to slow markedly to an average pace of 1 percent in 2014 and 2015 despite aggressive easing on the part of the Bank of Japan (BOJ), largely owing to fiscal consolidation efforts. Data through May point to a ½ percent increase in consumer prices in the second quarter, a bit more than we had expected in June. With the BOJ maintaining its asset purchase program through the end of 2015, inflation (excluding the effects of consumption tax hikes) should rise to 1¼ percent by the end of the forecast period.

- ***Canada***. Although recent data have been relatively strong, the impact of flooding in Alberta and Toronto in June is expected to hold second-quarter GDP growth to 1¾ percent, a little below the June Tealbook estimate. We expect growth to rebound in the current quarter and to average about 2½ percent over the rest of the forecast. Surprising weakness in core prices held consumer prices flat in the second quarter, but we expect inflation to bounce back to 1¾ percent in the third quarter and to edge up to 2 percent by the end of 2015.

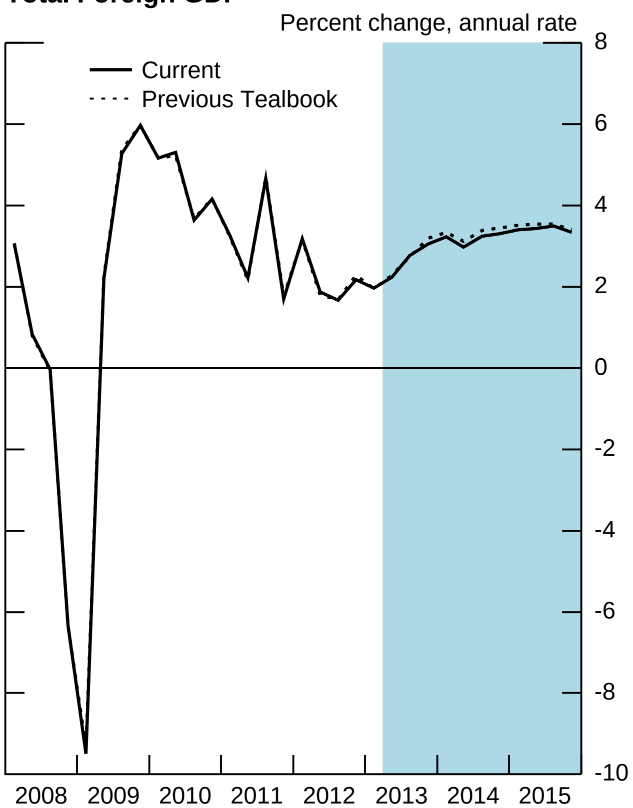
The Foreign GDP Outlook

Real GDP* Percent change, annual rate

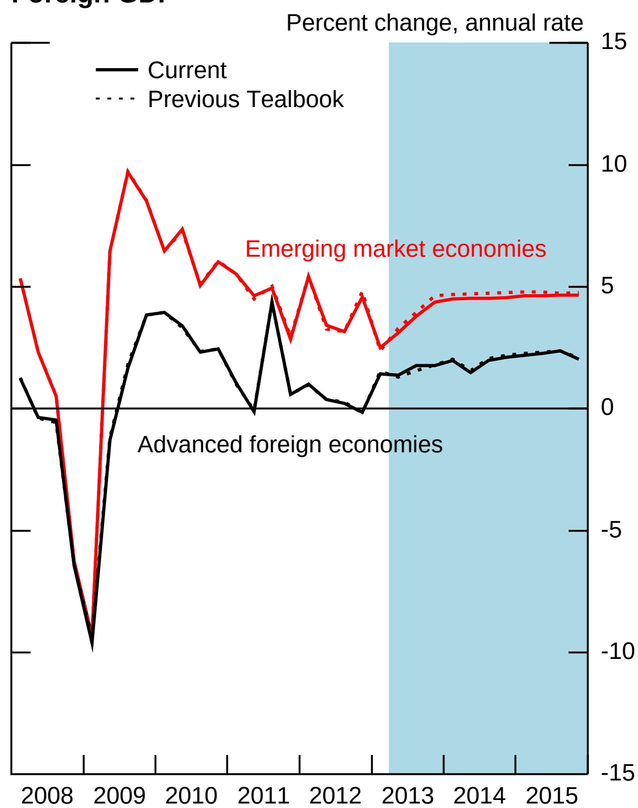
	2012 Q4	2013 Q1	2013 Q2	2013 H2	2014	2015
1. Total Foreign	**2.2**	**2.0**	**2.2**	**2.9**	**3.2**	**3.4**
Previous Tealbook	*2.3*	*2.0*	*2.3*	*3.0*	*3.3*	*3.5*
2. Advanced Foreign Economies	**-0.1**	**1.4**	**1.4**	**1.8**	**1.9**	**2.2**
Previous Tealbook	*-0.2*	*1.5*	*1.3*	*1.7*	*2.0*	*2.3*
3. Canada	0.9	2.5	1.7	2.4	2.5	2.6
4. Euro Area	-2.4	-1.1	-0.1	0.4	1.1	1.9
5. Japan	1.2	4.1	3.8	3.1	0.9	1.0
6. United Kingdom	-0.9	1.1	2.4	2.0	2.2	2.6
7. Emerging Market Economies	**4.6**	**2.5**	**3.1**	**4.1**	**4.5**	**4.6**
Previous Tealbook	*4.8*	*2.4*	*3.3*	*4.3*	*4.7*	*4.8*
8. China	8.1	7.0	6.9	7.5	7.8	7.7
9. Emerging Asia ex. China	4.9	1.4	2.9	3.7	4.2	4.5
10. Mexico	2.7	1.8	1.7	3.2	3.7	3.7
11. Brazil	2.6	2.2	2.5	3.1	3.4	3.8

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

Total Foreign GDP



Foreign GDP



The Foreign Inflation Outlook

Consumer Prices*

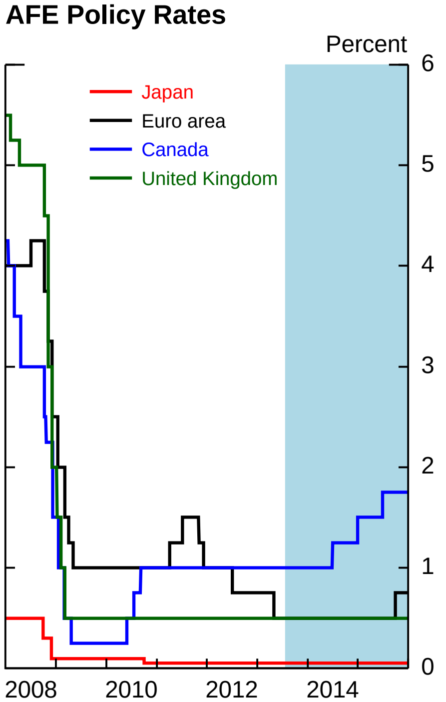
Percent change, annual rate

	2012 Q4	2013 Q1	2013 Q2	2013 H2	2014	2015
1. Total Foreign	**2.4**	**2.3**	**1.9**	**2.3**	**2.6**	**2.7**
Previous Tealbook	*2.3*	*2.3*	*1.9*	*2.2*	*2.6*	*2.7*
2. Advanced Foreign Economies	**1.6**	**0.9**	**0.5**	**1.3**	**1.7**	**1.8**
Previous Tealbook	*1.6*	*0.8*	*0.6*	*1.2*	*1.7*	*1.9*
3. Canada	1.4	1.6	0.1	1.7	1.7	1.8
4. Euro Area	2.3	0.7	0.6	1.4	1.4	1.6
5. Japan	0.0	-0.4	0.6	0.4	2.6	2.5
6. United Kingdom	4.1	2.3	1.4	2.4	1.9	2.0
7. Emerging Market Economies	**3.0**	**3.4**	**3.0**	**3.1**	**3.3**	**3.3**
Previous Tealbook	*2.8*	*3.5*	*2.9*	*2.9*	*3.3*	*3.3*
8. China	2.6	3.2	2.1	2.6	3.0	3.0
9. Emerging Asia ex. China	3.0	3.5	1.7	3.5	3.4	3.4
10. Mexico	3.1	3.5	5.5	3.0	3.4	3.4
11. Brazil	7.0	7.0	5.8	5.7	5.3	5.3

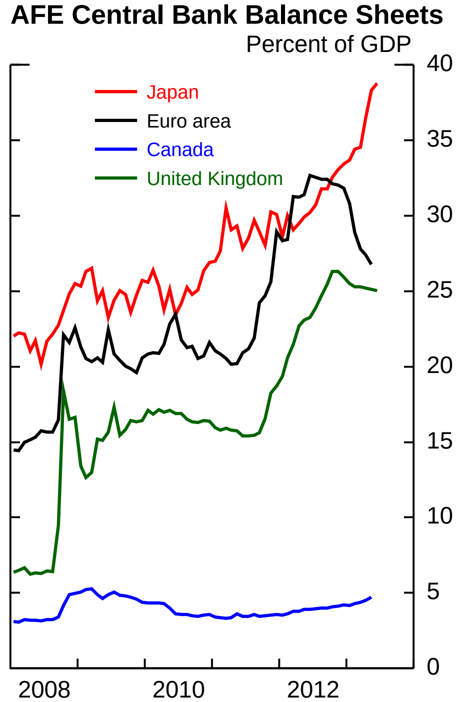
* CPI aggregates weighted by shares of U.S. non-oil imports.

Foreign Monetary Policy

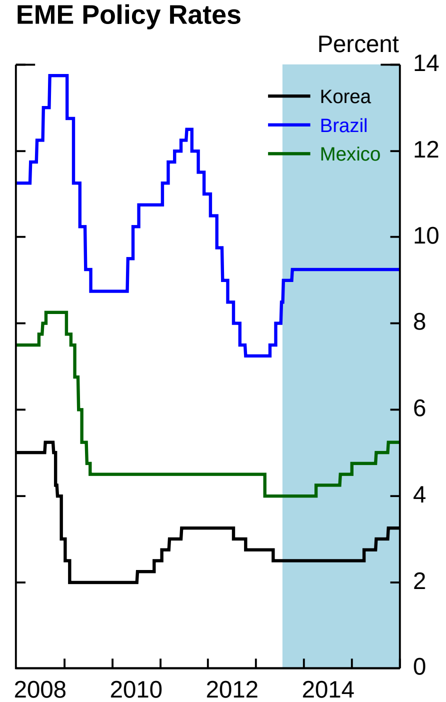
AFE Policy Rates



AFE Central Bank Balance Sheets



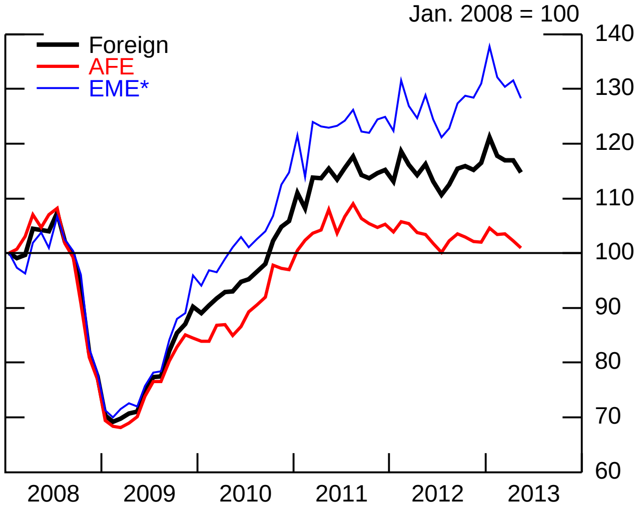
EME Policy Rates



Int'l Econ Devel & Outlook

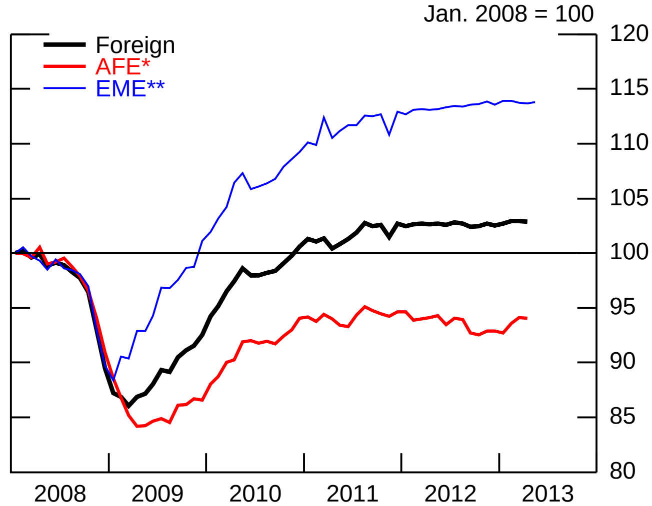
Recent Foreign Indicators

Nominal Exports



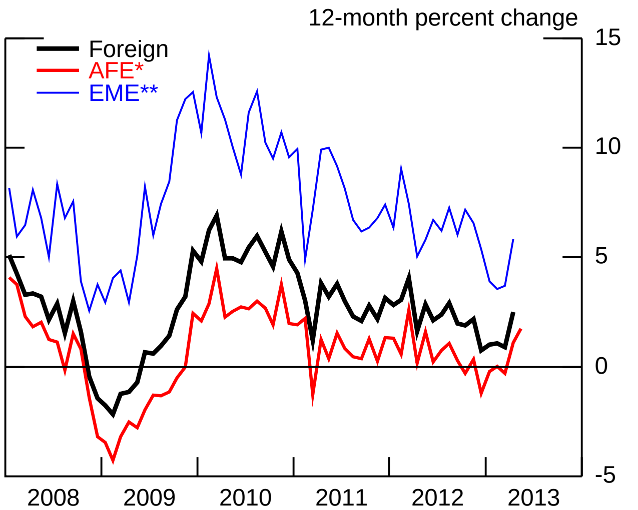
* Excludes Venezuela.

Industrial Production



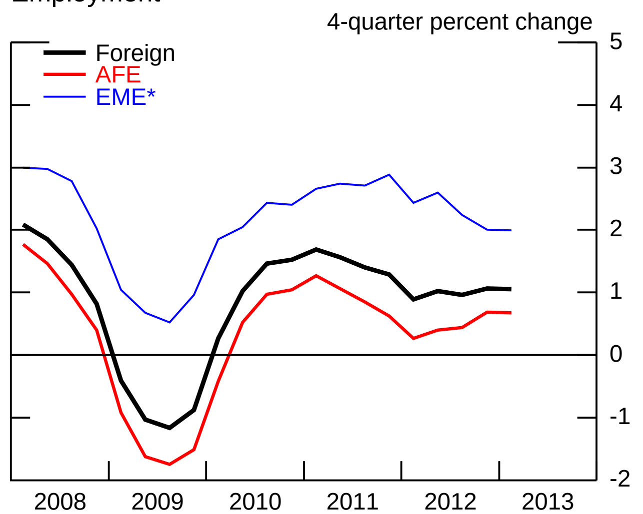
* Excludes Australia and Switzerland.
** Excludes Colombia, Hong Kong, the Philippines, and Venezuela.

Retail Sales



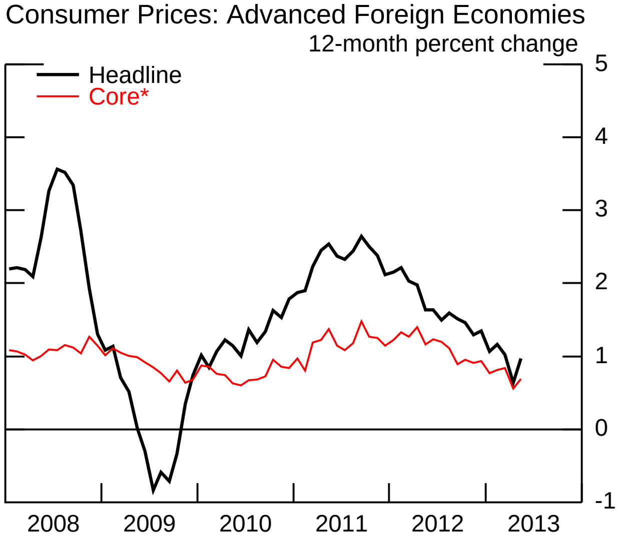
* Excludes Australia and Switzerland.
** Includes Brazil, China, Indonesia, Korea, Singapore, and Taiwan.

Employment



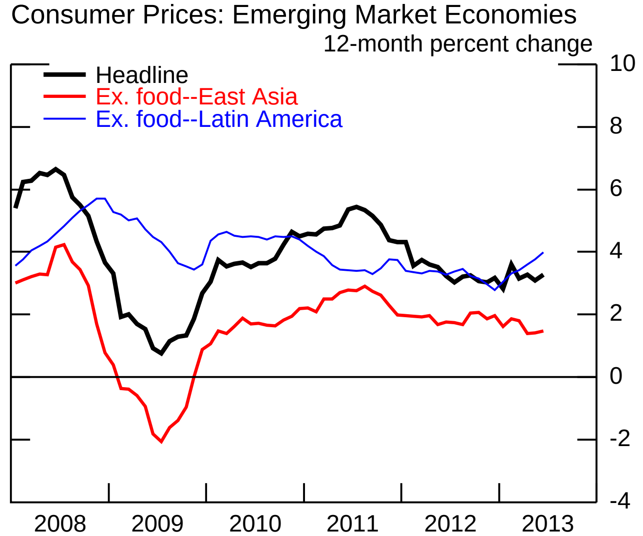
* Excludes Argentina and Mexico.

Consumer Prices: Advanced Foreign Economies



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

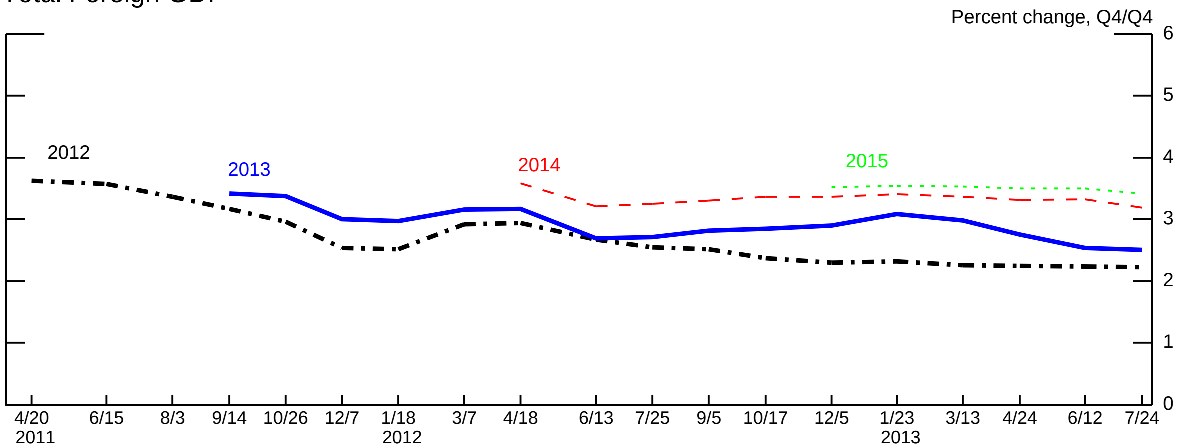
Consumer Prices: Emerging Market Economies



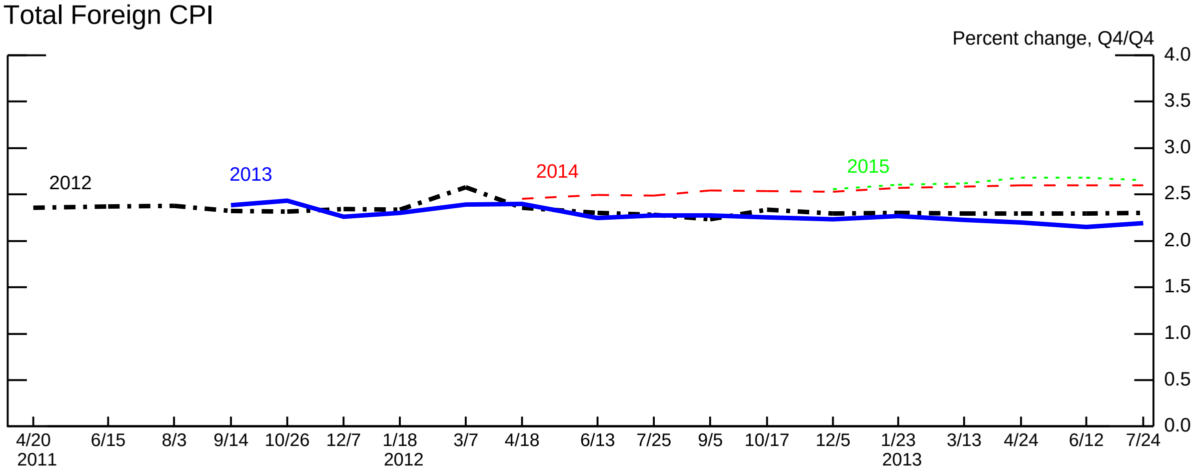
Source: Haver Analytics and CEIC.

Evolution of Staff's International Forecast

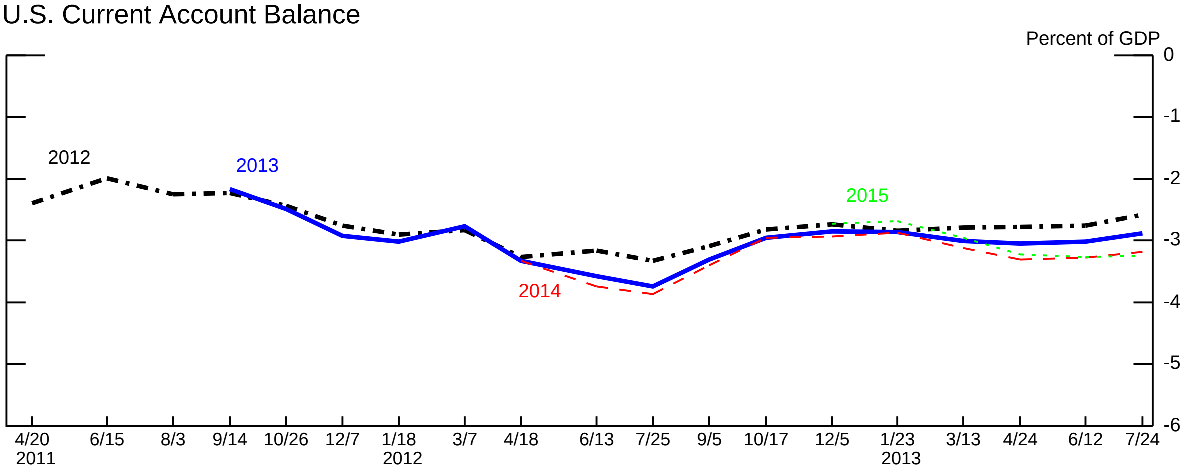
Total Foreign GDP



Total Foreign CPI



U.S. Current Account Balance



Int'l Econ Devel & Outlook

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Financial Developments

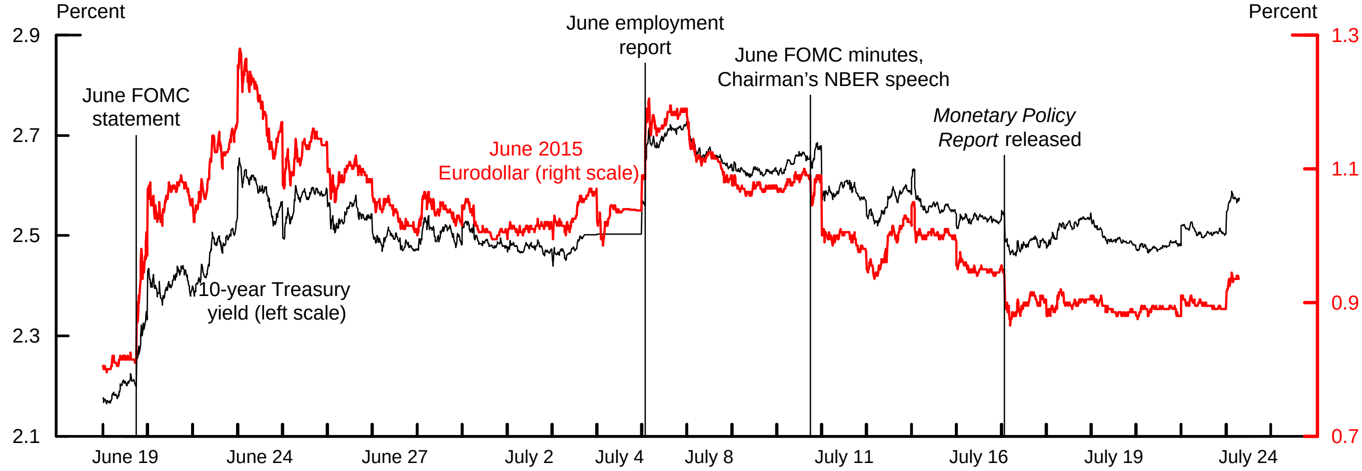
Financial markets were volatile over the intermeeting period, with interest rates and stock prices moving up on net. Investors reportedly read the balance of Federal Reserve communications as suggesting a less accommodative stance for policy going forward than they had previously anticipated. Market participants' perception of a tighter policy outlook was reinforced by incoming economic data—particularly the June employment report—that were seen as pointing to further improvement in labor market conditions. All told, longer-term interest rates moved up appreciably, on net, over the period. Despite the rise in rates, equity prices also moved higher, evidently buoyed by investors' more optimistic assessment of the economic outlook. Price movements in a number of fixed-income markets were reportedly amplified over the period by an unwinding of carry trades and related deleveraging and other technical factors.

On balance, yields on intermediate- and longer-term Treasury securities rose 21 to 34 basis points, with staff models attributing most of the increases to a rise in term premiums and the remainder to an upward revision in the expected path of short-term rates. Market-based measures of inflation compensation moved up modestly. Yields on speculative-grade corporate bonds were little changed, leaving their risk spreads narrower. In contrast, yields on agency MBS advanced slightly more than those on Treasury securities with comparable duration. In the advanced foreign economies, increases in sovereign yields were smaller than those on Treasury securities, reflecting in part forward guidance and other statements by the ECB and the Bank of England that were read as affirming their accommodative policies. On net over the period, the dollar generally appreciated against the currencies of the advanced foreign economies and was little changed against emerging market currencies.

Financing flows to businesses and households were mixed. Issuance of syndicated loans, which carry floating rates, remained sizable, although bond issuance by nonfinancial corporations declined markedly in June, as the higher interest rates made refinancing less attractive. Similarly, the pace of mortgage purchase applications held about steady, while the volume of refinancing applications fell sharply over the intermeeting period as home mortgage rates rose. Consumer credit continued to expand in May at a solid pace. Core bank loans to households and businesses continued to grow modestly in the second quarter. In the July 2013 Senior Loan Officer Opinion Survey on

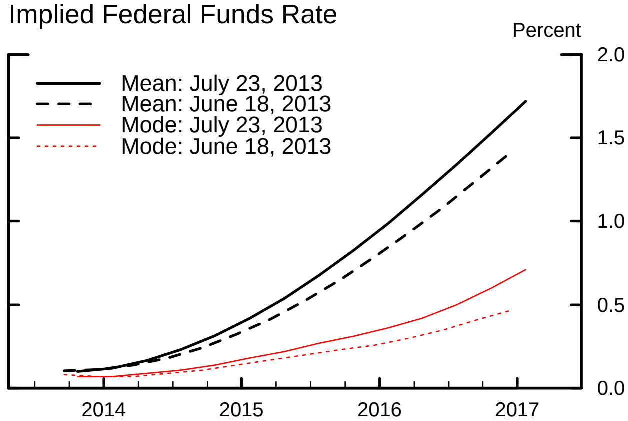
Policy Expectations and Treasury Yields

Selected Interest Rates



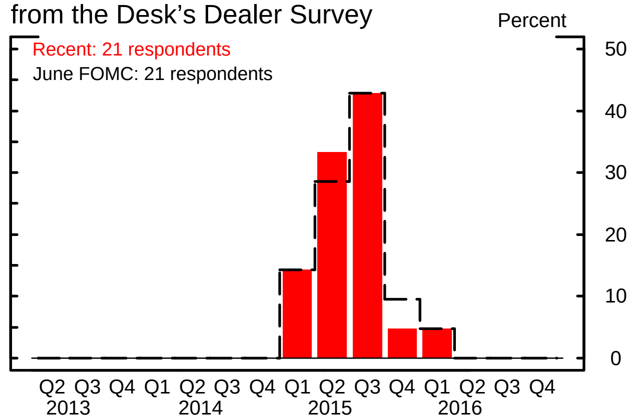
Note: 5-minute intervals. 8:00 a.m. to 4:00 p.m. No adjustments for term premiums.
Source: Bloomberg.

Implied Federal Funds Rate



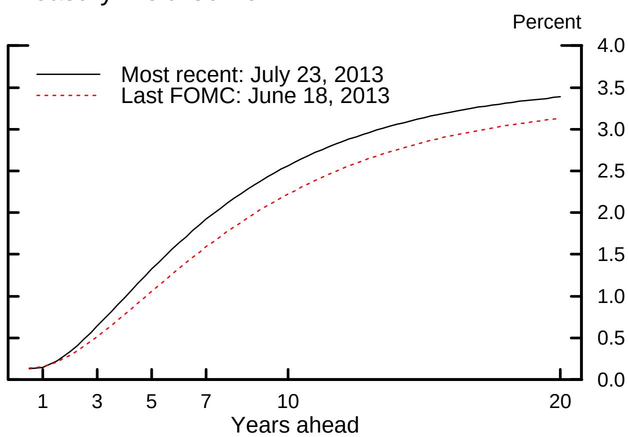
Note: Mean is estimated using overnight index swap quotes. Mode is estimated from the distribution of federal funds rate implied by interest rate caps. Both include a term premium of zero basis points per month.
Source: Bloomberg and CME Group.

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



Source: Desk's dealer survey from July 22, 2013.

Treasury Yield Curve



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

Inflation Compensation

Note: Estimates based on smoothed nominal and inflation-indexed Treasury yield curves.
* Adjusted for lagged indexation of Treasury inflation-protected securities (carry effect).
Source: Barclays PLC and staff estimates.

Bank Lending Practices (SLOOS), moderate net fractions of banks generally reported a further easing of lending policies and an increase in demand across most loan categories in the second quarter. Bond mutual funds experienced substantial redemptions in June and some continued outflows in July, with part of the proceeds reportedly being reallocated into M2, which accelerated over these two months.

TREASURY YIELDS, POLICY EXPECTATIONS, AND AGENCY MBS YIELDS

Longer-term Treasury yields rose significantly, on net, over the intermeeting period.[1] The largest increases occurred following the release of the June FOMC statement, the results of the Summary of Economic Projections, and the Chairman's accompanying press conference, all of which were seen as suggesting a less accommodative stance of monetary policy going forward and appeared to contribute to increased uncertainty about the level of interest rates. The better-than-anticipated June employment report also contributed to the rise in longer-term yields. Large portions of the rate increases early in the period were subsequently retraced following additional communications that were read as reaffirming the Federal Reserve's commitment to a highly accommodative policy stance for the foreseeable future. Overall, uncertainty about future short- and long-term interest rates remained elevated compared with their levels recorded around the time of the May FOMC meeting.

Five-, 10-, and 30-year Treasury yields rose 26 basis points, 34 basis points, and 21 basis points, respectively, over the period. Increases in intermediate-horizon forward rates were notably larger than those in longer-horizon forward rates, consistent with an outlook for more-rapid increases in the federal funds rate after liftoff. Market participants noted that many market forces may have contributed to the magnitude and speed of price moves, as investors apparently continued to pull back from strategies predicated on an environment of low rates and low volatility. These forces included an unwinding of carry trades, outflows from long-duration bond funds, MBS convexity-hedging flows, and diminished liquidity in some markets. The diminished liquidity reportedly reflected in part a reduction in the willingness of dealers to purchase positions from clients with the expectation of subsequently working these into the relevant market. Staff term structure models suggest that a rise in term premiums accounts for about two-thirds of the increase in the 10-year Treasury yield, consistent with higher interest

[1] See the forthcoming memo to the Committee "Recent Interest Rate Developments" for an in-depth discussion of changes in interest rates over recent months.

rate uncertainty, perhaps some modest downward revisions to LSAP expectations, and the effects of the pronounced market dynamics just described.

The federal funds rate path implied by a straight read of financial market quotes steepened significantly early in the period and then mostly retraced, largely in response to policymakers' communications.[2] On net, the expected policy rate path implied by overnight index swaps at the end of 2016 was up 22 basis points. However, this standard measure does not incorporate an adjustment for term premiums. A staff term structure model that accounts for the zero lower bound on nominal yields attributes about half of the increase in the overnight index swap curve to higher term premiums, implying only a modest rise in the expected path of the federal funds rate. Heightened policy rate uncertainty likely contributed to the rise in term premiums.

The results from the Open Market Desk's July Survey of Primary Dealers showed little change in the projected liftoff date for the federal funds rate relative to the June survey.[3] The median expectation of the most likely time of the first increase in the target federal funds rate remained in the third quarter of 2015, at which point the unemployment rate is projected to be 6.3 percent according to the median dealer, lower than the 6.5 percent threshold announced in the December FOMC statement. The projected federal funds rate path was little changed, perhaps pointing to a small increase in the pace of tightening after the first funds rate increase. The median estimate of the aggregate size of the current asset purchase program was lowered slightly relative to the June survey.[4] In a special question, dealers were asked to rate the importance of a range of factors that potentially contributed to the recent increase in the expected policy path extracted from financial market quotes. Dealers rated "higher uncertainty around path of policy rates" and "change in perception of FOMC's view of appropriate asset purchase path" as important factors driving changes in the expected policy path over the intermeeting period. Dealers also pointed to an improved economic outlook and perceptions of

[2] The effective federal funds rate averaged 9 basis points over the intermeeting period, with the intraday standard deviation averaging about 6 basis points.

[3] Following the June FOMC meeting, primary dealers were asked to update their expectation for the timing of the first federal funds target rate increase. Their median expectation for liftoff moved in one quarter relative to the June survey; however, in the current survey, the median shifted back to about the same date as reported in the June survey.

[4] Following the June FOMC meeting, primary dealers were asked to update their expectation for asset purchases. Their median expectation for the aggregate size of the current purchase program declined slightly relative to the June survey and remained about unchanged in the current survey.

changes in the FOMC's view of the appropriate path of policy rates as contributing to the revision in policy expectations over the period.

Measures of inflation compensation derived from TIPS increased modestly, on net, reversing declines posted early in the period that likely reflected, at least in part, reduced liquidity in the market. Inflation compensation derived from inflation swaps was similarly somewhat higher on balance. Consistent with these developments, the risk-neutral distribution of inflation calculated from inflation caps shifted slightly to the right at both the 5- and 10-year horizons. Survey-based measures of longer-term inflation expectations remained in recent ranges.

Yields on agency MBS rose slightly more than those on Treasury securities with comparable duration over the intermeeting period. The option-adjusted spread for production-coupon MBS widened by 11 basis points, possibly reflecting a downward revision in the market's expectation for Federal Reserve MBS purchases, an increase in uncertainty about longer-term interest rates, and convexity-related MBS selling. On net, 30-year conforming mortgage rates rose about in line with MBS yields and ended the period about 40 basis points higher at 4¼ percent.

Treasury and Agency Finance and Market Functioning

Since the June FOMC meeting, the Treasury Department auctioned $200 billion in nominal securities and $22 billion in TIPS. Bid-to-cover ratios were generally below historical average levels. The Treasury continued to operate under a "debt issuance suspension period" declared by Treasury Secretary Lew on May 19, which allows the Treasury to use accounting measures to remain under the debt limit while issuing new securities.[5] Staff projections suggest that these measures should allow federal debt to stay below the statutory debt ceiling at least until late September.

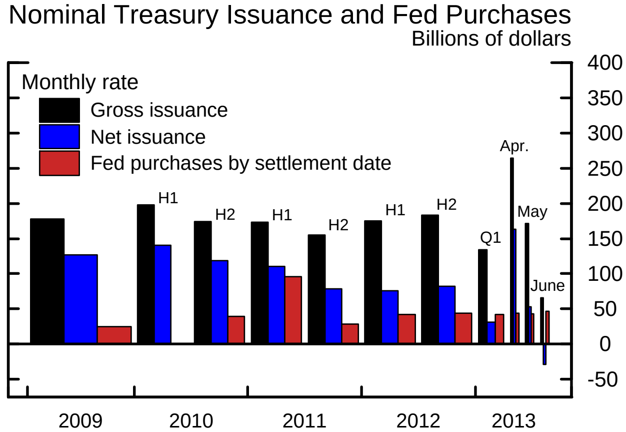
The Desk conducted outright purchases of Treasury securities and agency MBS as planned.[6] While the purchases did not seem to have material adverse effects on the

[5] The accounting measures available to the Treasury include suspending daily reinvestment of the Treasury securities held by the Government Securities Investment Fund, redeeming existing investments and suspending new investment in the Civil Service Retirement and Disability Fund, and suspending the daily reinvestment of dollar balances held by the Exchange Stabilization Fund into Treasury securities.

[6] Over the intermeeting period, the Desk purchased $46 billion in Treasury securities under the flow-based Treasury purchase program. In addition, the Desk purchased $79 billion in agency MBS under the flow-based MBS program and the reinvestment program.

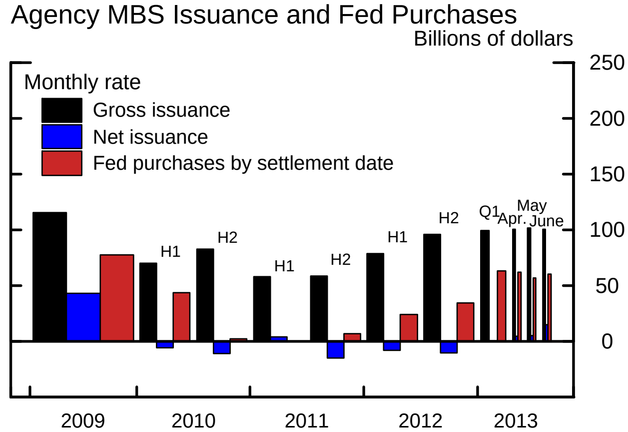
Treasury and Agency Finance and Market Functioning

Nominal Treasury Issuance and Fed Purchases



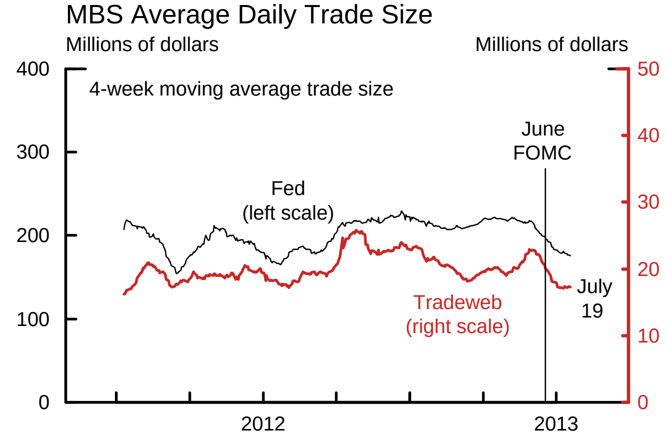
Note: Excludes bills.
Source: U.S. Department of the Treasury; Federal Reserve Bank of New York.

Agency MBS Issuance and Fed Purchases



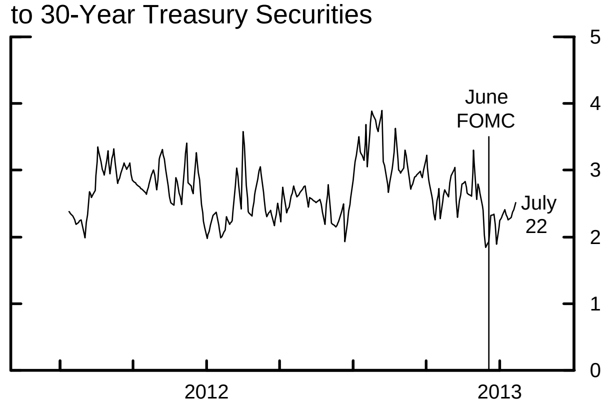
Note: Issuance and purchases of 30-year fixed-rate agency MBS.
Source: Federal Reserve Bank of New York.

MBS Average Daily Trade Size



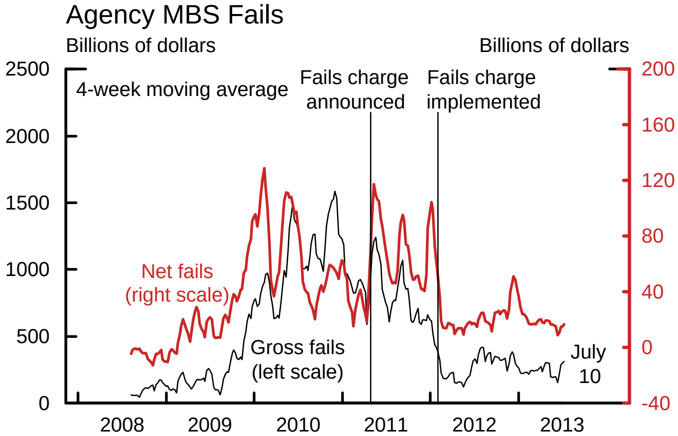
Note: Calculated from Fannie Mae 30-year 3.0% and 3.5% securities.
Source: Tradeweb.

Offer-to-Cover Ratio for Fed Purchases of 17- to 30-Year Treasury Securities



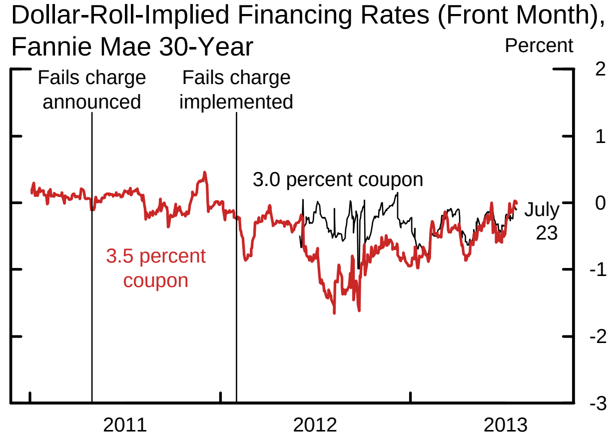
Source: Federal Reserve Bank of New York.

Agency MBS Fails



Note: Par value. Gross fails are the sum of fails-to-receive and fails-to-deliver, while net fails are the difference.
Source: Federal Reserve Board, FR 2004, Government Securities Dealers Reports.

Dollar-Roll-Implied Financing Rates (Front Month), Fannie Mae 30-Year



Source: J.P. Morgan.

Financial Developments

functioning of either the Treasury or MBS markets, liquidity in these markets, particularly in agency MBS, reportedly deteriorated somewhat during the intermeeting period amid heightened volatility—especially in the days following the June FOMC meeting. Bid–asked spreads for some Treasury securities edged up a bit initially but then retraced, while average MBS trade sizes declined somewhat throughout the period. The offer-to-cover ratio on Desk purchases of Treasury securities at longer maturities remained somewhat below its average recorded since the beginning of the year, and the spread between the executed and the second-most-favorable price offered in MBS operations—a measure of liquidity—widened. That said, fails-to-deliver in both the Treasury and MBS markets generally remained relatively low, and dollar-roll-implied financing rates for 30-year Fannie Mae 3.0 percent and 3.5 percent coupon securities suggested little settlement pressure in the TBA market for these securities. In light of the latter, the Desk's dollar roll activity in the June and July settlement cycles diminished somewhat compared with earlier in the year.

SHORT-TERM FUNDING MARKETS AND FINANCIAL INSTITUTIONS

Despite the volatility in longer-term fixed-income markets, conditions in short-term dollar funding markets remained fairly benign throughout the intermeeting period. The spread between three-month LIBOR and comparable-maturity OIS rates and the spread between the three-month forward rate agreement three months ahead and the corresponding forward OIS rate were both about unchanged on balance.

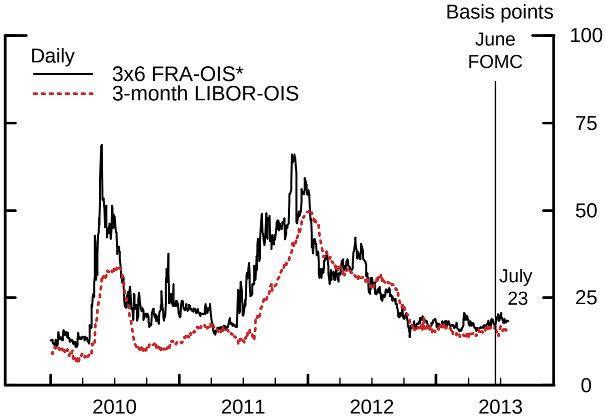
In secured funding markets, Treasury general collateral finance (GCF) repo rates declined, on net, over the intermeeting period, in part because of a reduction in net Treasury securities issuance. The reduction in issuance, in turn, primarily reflected limited funding needs as a result of a $59 billion dividend payment from Fannie Mae in June.[7] MBS GCF repo rates moved down in line with the decrease in Treasury GCF repo rates. Haircuts on repo contracts for OMO-eligible collateral remained unchanged, though they increased slightly for ABS collateral.

In commercial paper (CP) markets, interest rates on unsecured CP for U.S. financial issuers increased somewhat but stayed at the low end of the range seen over the past several years, while the amount outstanding edged down. Consistent with the trends

[7] In addition to its regular quarterly payment to the Treasury, Fannie Mae's dividend on June 28, 2013, included a one-time transfer of $51 billion, which was the result of a change in the accounting treatment for Fannie Mae's deferred tax asset.

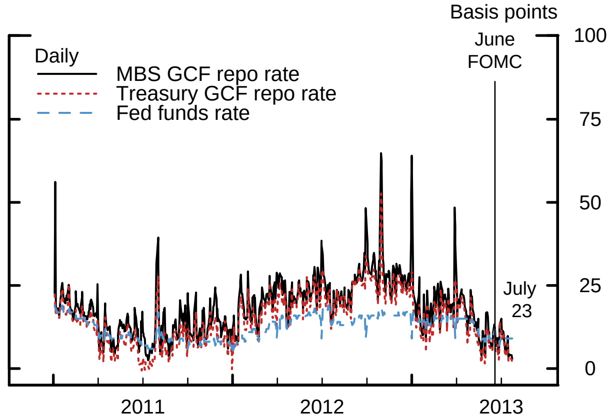
Short-Term Funding Markets and Financial Institutions

Funding Spreads



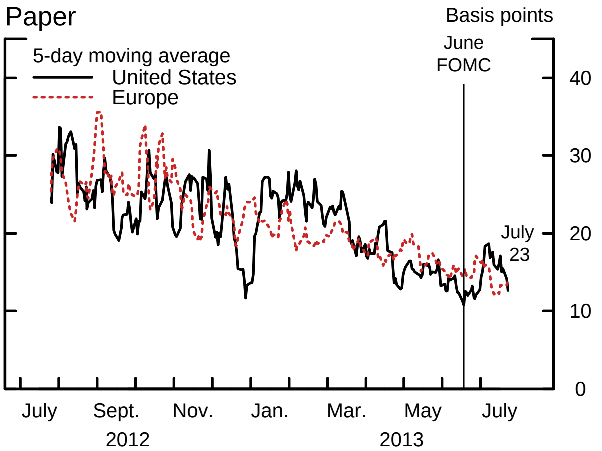
* Spread is calculated from a LIBOR forward rate agreement (FRA) 3 to 6 months in the future and the forward overnight index swap (OIS) rate for the same period.
Source: Bloomberg.

Overnight Funding Rate



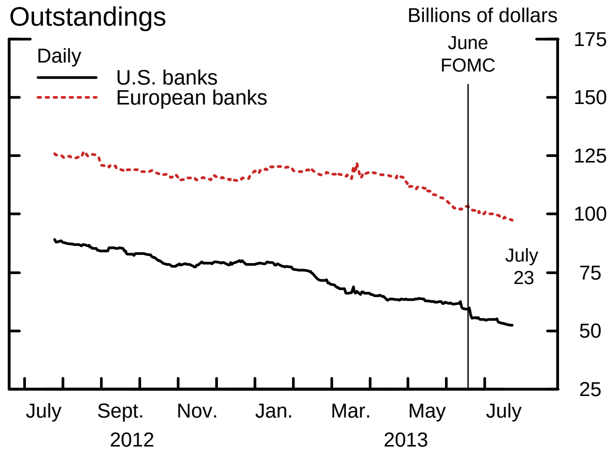
Note: GCF is general collateral finance; repo is repurchase agreement.
Source: Depository Trust & Clearing Corporation (DTCC); Federal Reserve.

30-Day Rates on Unsecured Financial Commercial Paper



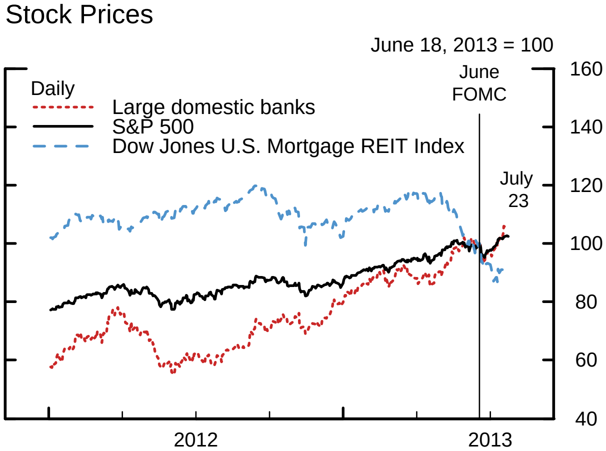
Source: DTCC.

Asset-Backed Commercial Paper Daily Outstandings



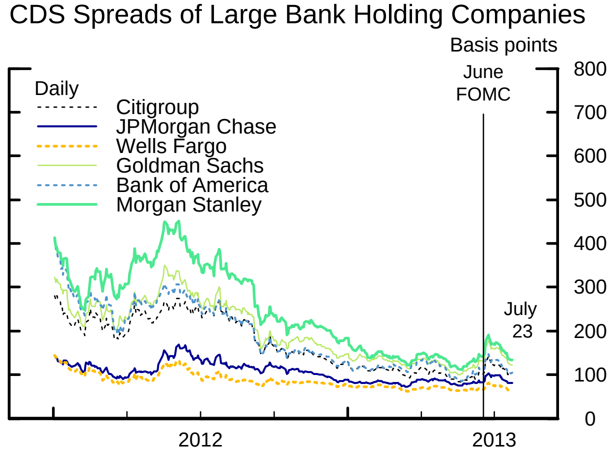
Source: DTCC.

Stock Prices



Source: Compustat; Yahoo! Finance; Bloomberg.

CDS Spreads of Large Bank Holding Companies



Source: Markit.

in the unsecured CP market, outstanding asset-backed commercial paper for programs with both U.S. and European sponsors decreased, on net, while rates were little changed.

Stock prices of large domestic banks followed the broad trend in the S&P 500, declining a bit after the June FOMC meeting but later reversing, and ended the period about 7 percent higher. In contrast, equity prices of agency mortgage REITs continued their recent declines. Following trends in broad credit indexes, CDS spreads for the largest bank holding companies edged down, on net, and they remained near the bottom of their ranges over the past five years.

All of the largest banks reported second-quarter earnings that were above analysts' expectations. Higher-than-expected earnings were driven primarily by increased revenues in investment banking activities and asset management operations, cost-reduction efforts, and improving loan performance that allowed for further reductions in loss provisions. Net interest margins remained flat to slightly down at most banks. Meanwhile, some of the largest U.S. banking institutions stepped up dividend payouts and share repurchases.

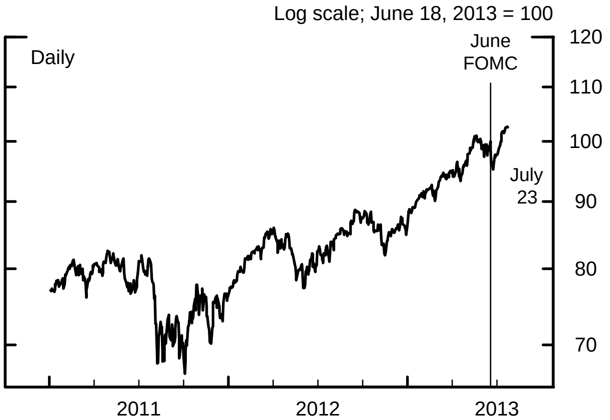
OTHER DOMESTIC ASSET MARKET DEVELOPMENTS

Despite the rise in longer-term interest rates, broad U.S. equity price indexes rose 3 percent, on net, over the intermeeting period, apparently boosted by an upward revision in market participants' outlook for the economy. The staff's estimate of the spread between the expected real equity return for the S&P 500 index and the real 10-year Treasury yield—a gauge of the equity premium—narrowed further. Although the estimated level of the equity premium remains above its historical norm, it has receded substantially—by nearly 200 basis points—since the turn of the year. The VIX, an options-based index of volatility on one-month returns on the S&P 500 index, increased notably early in the intermeeting period but subsequently fell back to its lowest level in several months.

To date, a little less than one-half of the nonfinancial firms in the S&P 500 have posted earnings results for the second quarter. Those reports, together with Wall Street analyst forecasts for firms that have yet to report, suggest that aggregate earnings per share were about flat relative to the level seen four quarters earlier. Many firms attributed weakness in profit growth to sluggish economic conditions abroad and the relative strength of the U.S. dollar, as those conditions held down profits from foreign

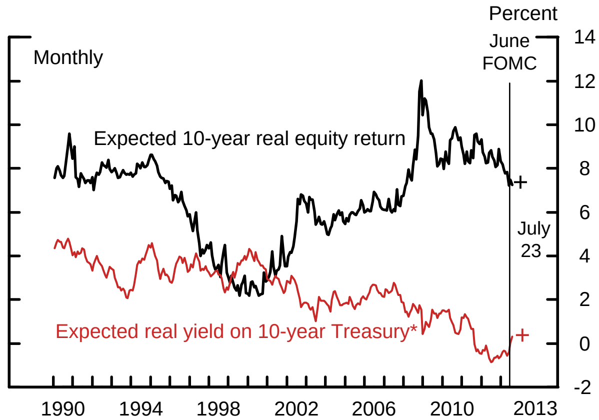
Other Domestic Asset Market Developments

S&P 500 Stock Price Index



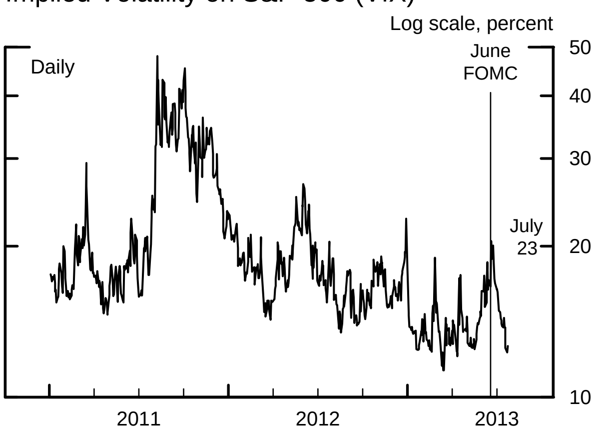
Source: Bloomberg.

Equity Risk Premium



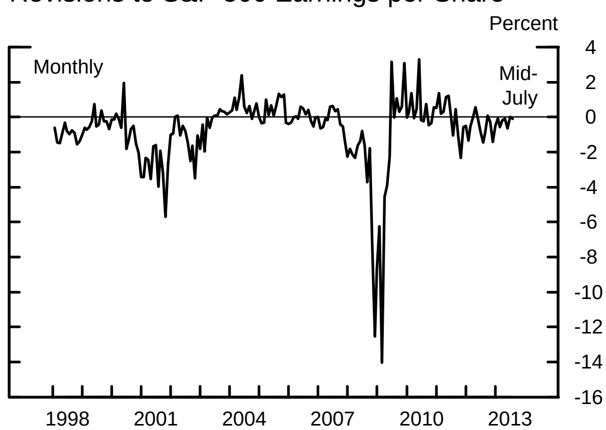
* Off-the-run 10-year Treasury yield less Philadelphia Fed 10-year expected inflation.
\+ Denotes the latest observation using daily interest rates and stock prices and latest earnings data.
Source: Thomson Reuters.

Implied Volatility on S&P 500 (VIX)



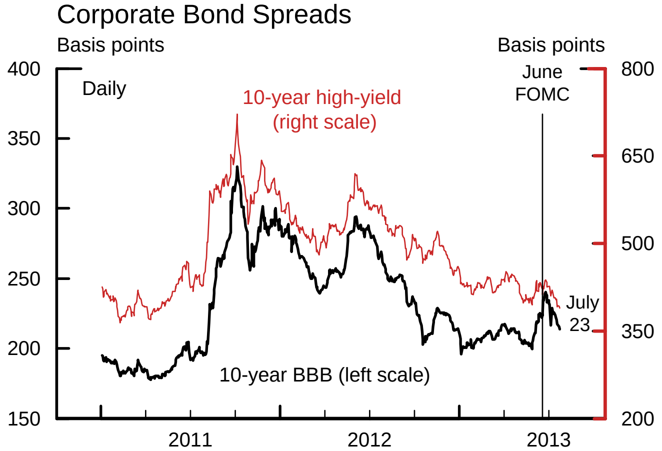
Source: Chicago Board Options Exchange.

Revisions to S&P 500 Earnings per Share



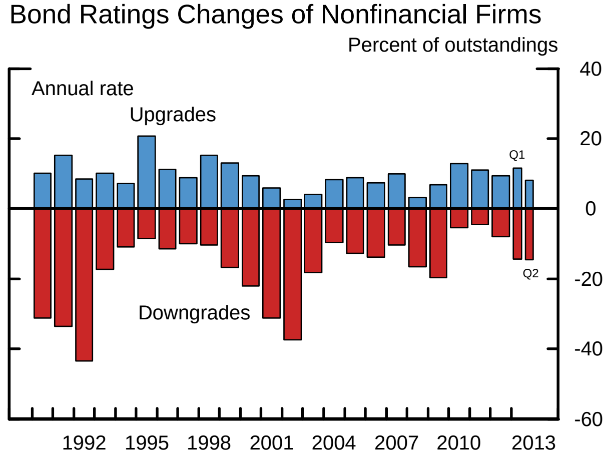
Note: Weighted average of the percent change in the consensus forecasts of current-year and following-year earnings per share.
Source: Thomson Reuters.

Corporate Bond Spreads



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.

Bond Ratings Changes of Nonfinancial Firms



Source: Calculated using data from Moody's Investors Service.

operations. Despite the lackluster growth in profits, the level of profitability—for instance, as measured by the ratio of profits to sales—remained high, in aggregate.

Early in the period, yields on investment- and speculative-grade corporate bonds rose significantly. Amid the associated capital losses for investors, bond mutual funds and bond exchange-traded funds experienced very heavy net redemptions in June. Outflows from both types of funds slowed in early July but remained sizable. Liquidity in the secondary market for corporate bonds appeared to deteriorate early in the intermeeting period but recovered more recently. For the period as a whole, yields on investment-grade bonds moved about in line with Treasury yields. However, yields on speculative-grade bonds were little changed, on net, with their risk spreads narrowing noticeably.

Available indicators suggest that the credit quality of nonfinancial corporations continued to be solid on the whole. Readings on the six-month trailing bond default rate and the KMV expected year-ahead default rate for nonfinancial firms both remained low by historical standards. The volume of nonfinancial corporate bonds that were upgraded by Moody’s Investors Service in the second quarter was roughly matched by the volume of downgrades, leaving little net imprint on the overall distribution of ratings.

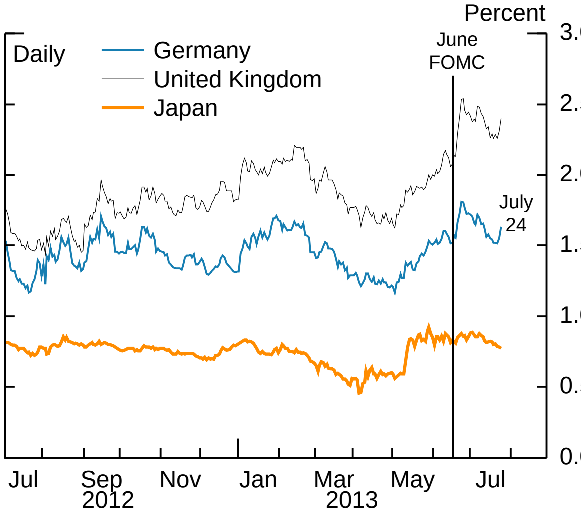
Foreign Developments

The increase in U.S. yields prompted 10-year sovereign yields in the advanced foreign economies to rise, as investors apparently shifted toward U.S. securities in the wake of the June FOMC statement and the better-than-expected U.S. employment report. However, benchmark sovereign yields and longer-dated OIS rates in the euro area and the United Kingdom fell back some after the ECB provided forward guidance that it will keep policy rates low for an extended period of time and after the Bank of England stated that the market-implied rise in the expected future path of its policy rate was not warranted by recent developments in the domestic economy. On net, 10-year sovereign yields in Germany were little changed, and U.K. yields rose 18 basis points, in part because of the release of stronger-than-expected U.K. service-sector data during the period. Japanese government bond yields were fairly stable over the period after experiencing substantial volatility in May.

The staff's broad nominal dollar index has risen about ¾ percent since the June FOMC meeting. The dollar appreciated 2¼ percent against the currencies of the

Foreign Developments

10-Year Nominal Benchmark Yields

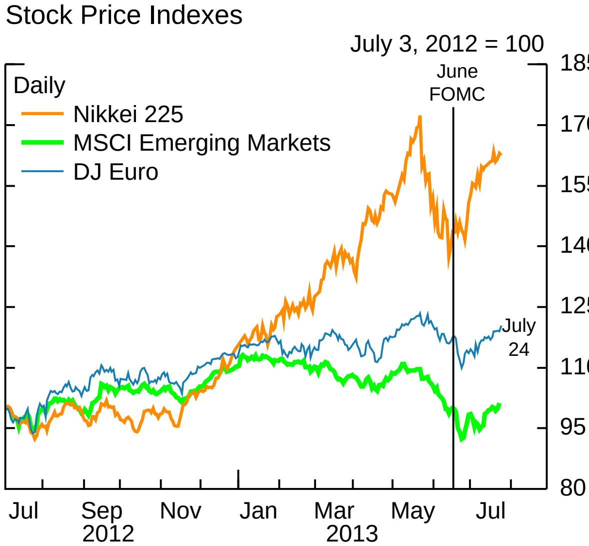


Source: Bloomberg.

Dollar Exchange Rate Indexes

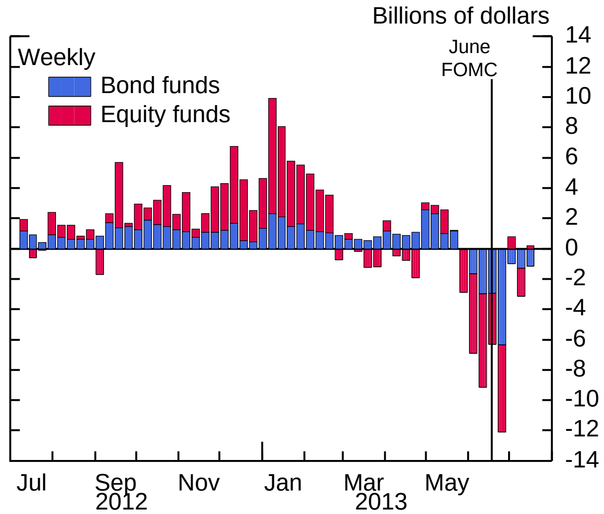
Source: Federal Reserve Board; Bloomberg.

Stock Price Indexes



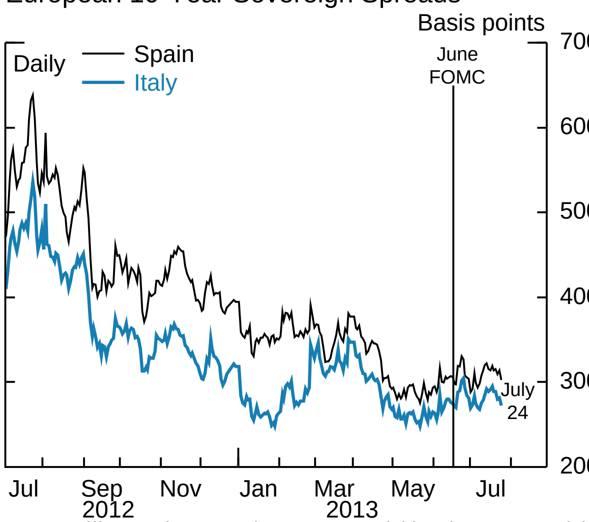
Source: Bloomberg.

Flows to Emerging Market Economies Funds



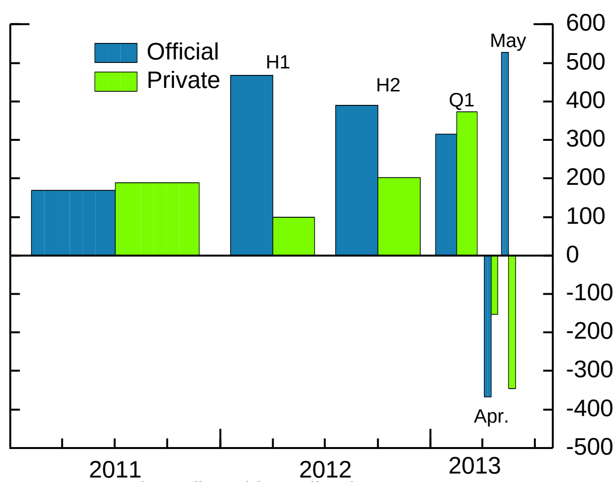
Source: Emerging Portfolio Fund Research.

European 10-Year Sovereign Spreads



Note: Difference between given country's yield and Germany's yield.
Source: Bloomberg.

Foreign Net Purchases of U.S. Treasury Securities



Source: TIC data adjusted for staff estimates.

Financial Developments

advanced foreign economies, consistent with the larger increase in U.S. interest rates than in foreign rates over the period. Emerging market economy (EME) currencies generally depreciated following the June FOMC communications and again after the release of the June employment report, but they subsequently recovered somewhat in response to statements from FOMC officials, which lessened concerns about near-term policy tightening. The Mexican peso rebounded particularly robustly, ending the period up about 3 percent. In contrast, weak macroeconomic data, along with political tensions and social unrest, weighed on the Brazilian real, which depreciated 2¼ percent, on net, against the dollar despite official foreign exchange intervention to support the currency.

Foreign equity prices mirrored those in the United States, declining after the June FOMC meeting but rebounding later. Euro-area stock prices increased slightly, on balance, but the Nikkei index rose 13½ percent, reflecting better-than-expected data on industrial production and business sentiment in Japan. Equity prices were up in most EMEs, with the prominent exception of China. Chinese equity prices declined 5¼ percent as investors exhibited concern over further signs that the economy was slowing and over recent volatility in Chinese interbank funding markets (see the box "Recent Developments in China's Interbank Market" in the International Economic Developments and Outlook section). Outflows from emerging market equity and bond funds were particularly rapid in late June but moderated in July (see the box "Assessing Recent Developments in EME Asset Markets"). In response to inflationary pressures that may have been exacerbated by currency depreciation in May and June, the central banks of Brazil, India, Indonesia, and Turkey tightened monetary policy.

Peripheral sovereign spreads over German bunds rose early in the intermeeting period but ended the period little changed. Political uncertainty in Portugal increased in early July but subsided as the prime minister staved off early elections. Euro-area leaders conditionally approved the next tranche of aid for Greece, but political uncertainty remained high as one of the political parties withdrew from the governing coalition. S&P downgraded Italian sovereign debt to BBB from BBB+ over the intermeeting period, but this announcement had little effect on market prices.

Foreign private investors made sizable net sales of Treasury and agency securities in May and moderate net sales of U.S. equities, while U.S. investors continued to make substantial purchases of foreign assets. Foreign official purchases of U.S. securities recovered in May following sales in April. However, data on custody holdings at the

Assessing Recent Developments in EME Asset Markets

Foreign interest rates have increased substantially since the May FOMC meeting (that is, two meetings ago), rising along with U.S. Treasury yields, as can be seen in the upper-left figure on the next page. Emerging market yields have increased even more than rates in the United States and other advanced economies. In addition, emerging market equity prices have declined almost 3 percent on net over the same period amid large outflows from mutual funds investing in equities and bonds of the emerging market economies (EMEs) (upper-right figure), and EME currencies have depreciated over 3 percent against the dollar on average.[1]

To be sure, it is not surprising to see foreign yields rise in response to an increase in U.S. yields as investors rebalance their portfolios toward U.S. assets. These reallocations also likely contributed to declines in foreign equity prices and depreciation of some foreign currencies against the dollar. In addition, prospects of tighter monetary policies in response to capital outflows and the inflationary pressures created by depreciating currencies may have boosted yields. Furthermore, increased market uncertainty about the future path of U.S. interest rates, reflected in higher implied volatilities in U.S. and foreign markets, may have added to global term premiums.

At this juncture, however, emerging markets may have been particularly sensitive to the combination of rising rates in the advanced economies and increasing volatility. Over the past several years, low and stable interest rates in the advanced economies prompted some investors to seek higher returns via EME "carry trades"—investments in EME debt funded by borrowing in the advanced economies—which are highly sensitive to both narrowing interest rate differentials and increased market volatility. Furthermore, although EME macroeconomic and financial policies have improved considerably in recent years, these countries still tend to have lower credit ratings than the major advanced economies, and lower-rated assets tend to be affected more heavily by any pullback from risk. Finally, the recent run-up in U.S. rates occurred as macroeconomic indicators showed growth to be slowing in many EMEs, and this likely also decreased the attractiveness of EME investments.

How much of the turbulence in emerging markets over the past several months represents a typical reaction to movements in U.S. financial markets and how much appears to reflect the specific circumstances of this period? To address this question, we estimated a model relating changes in EME sovereign yields, exchange rates, and equity prices to a set of U.S. financial market variables, as well as global commodity prices, estimated over the period from the end of 2001 to mid-2012.[2] As can be seen in the lower-left figure on the next page, EME yields declined more than our empirical model predicts through early this year, as interest rates and interest-rate volatility in advanced economies remained quite low and capital flows to EMEs surged. The subsequent sharp reversal in EME yields in May and June was also more than our empirical model predicts. Similarly, the dollar fell a bit more against EME currencies than the empirical model predicts before the May FOMC meeting (lower-middle figure) and then rebounded more strongly thereafter. And the recent decline in EME equity prices (lower-right figure) is also unusual; ordinarily, as indicated by the prediction from our empirical model, EME equity prices move fairly closely with U.S. equity prices, but stock prices in EMEs started moving down early this year and then plunged after April.

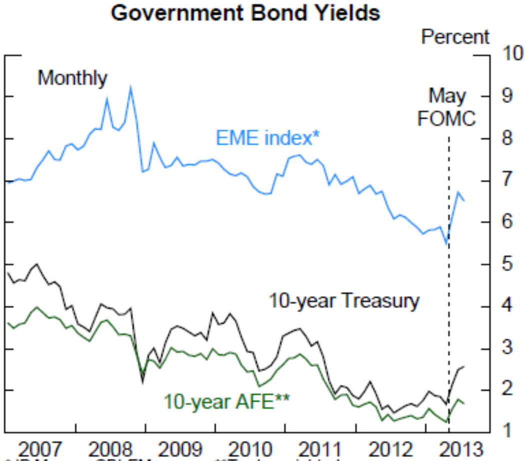
[1] Based on the EME dollar index excluding China and India.

[2] The U.S. financial variables included in the model are the 10-year Treasury yield, the implied-volatility index (VIX), the return of the S&P 500 index, and the yield spread of BBB-rated corporate bonds over Treasury securities.

In sum, some EME asset price increases through the early part of this year appear to have been outsized, likely fueled in part, as discussed above, by carry trades predicated not only on low interest rates but also on an abnormally low level of market volatility. Perhaps as a result, the recent rise in U.S. interest rates and associated increase in volatility appears to have depressed EME financial markets to an unusual degree. The slowing of EME economic growth also appears to have played a role, leading stock prices in EMEs to turn down well before they did in the advanced economies and likely exacerbating the weakness of EME asset prices more generally since May.

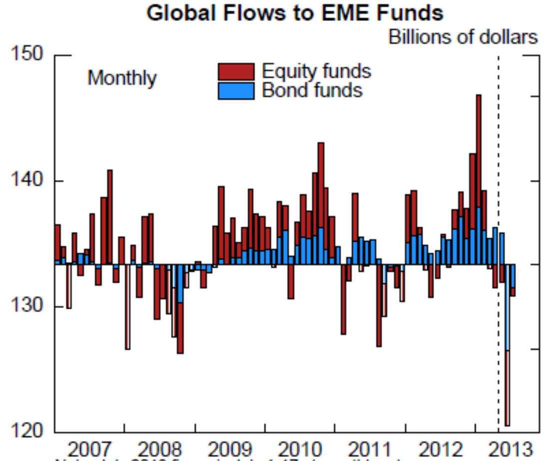
Although EME asset prices have recovered slightly and the pace of outflows has slowed in July, questions remain regarding how EME financial markets will react going forward to the eventual normalization of interest rates and monetary policies in advanced economies. We cannot rule out the possibility that further increases in U.S. interest rates will again exert outsized effects on EMEs. However, it is possible that at least some of the positioning that relied, perhaps excessively, on low and stable U.S. interest rates has been reduced, and this could lessen the reaction that might occur when U.S. yields rise further.

Government Bond Yields



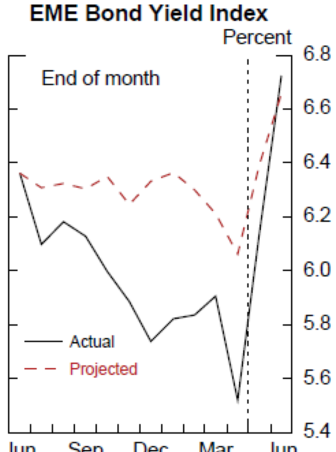
*JP Morgan GBI-EM. **Trade-weighted average.
Source: Bloomberg, staff calculations.

Global Flows to EME Funds



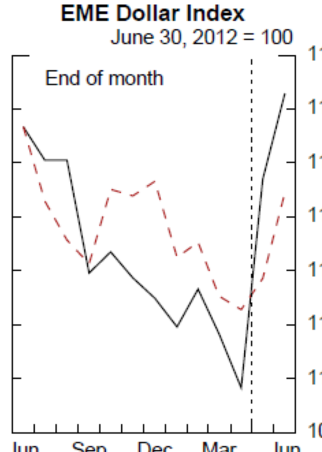
Note: July 2013 figure is July 1-17 at monthly rate.
Source: EPFR.

EME Bond Yield Index



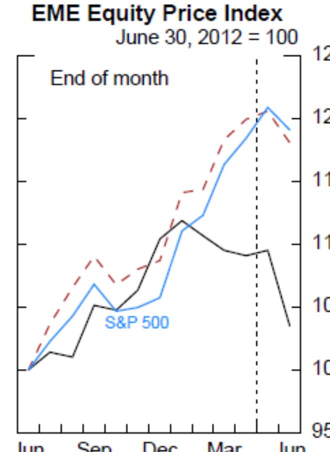
Source: staff calculations.

EME Dollar Index



Note: OITP excluding China and India.

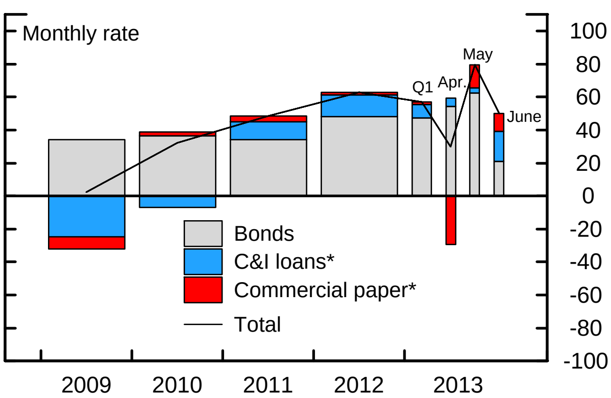
EME Equity Price Index



Note: MSCI Emerging Markets (local currency).

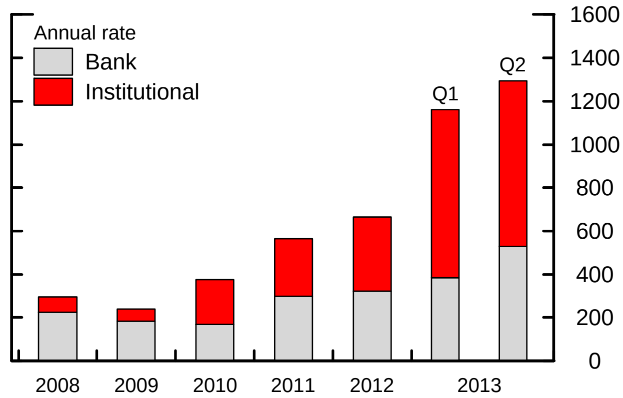
Business and Municipal Finance

Selected Components of Net Debt Financing, Nonfinancial Firms



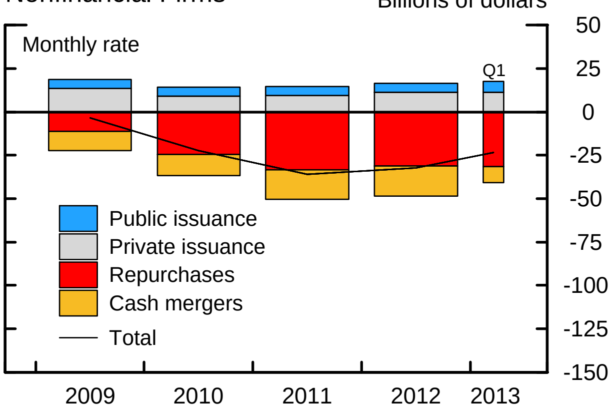
* Period-end basis, seasonally adjusted.
Source: Depository Trust & Clearing Corporation; Thomson Reuters Financial; Federal Reserve Board.

Leveraged Loan Issuance, by Lender Type



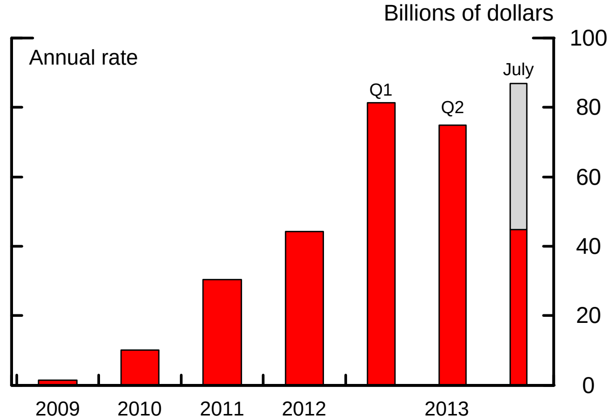
Source: Thomson Reuters LPC LoanConnector.

Selected Components of Net Equity Issuance, Nonfinancial Firms



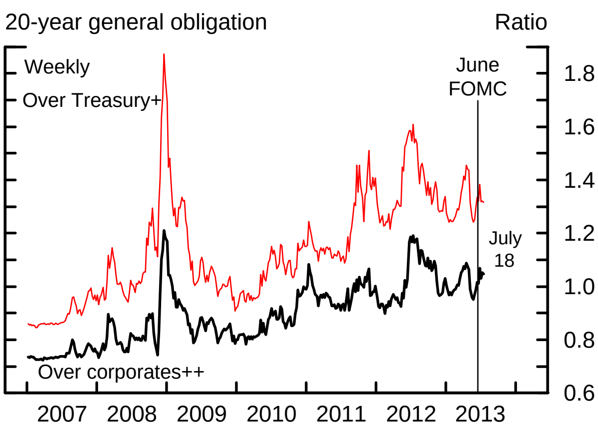
Source: Thomson Reuters Financial, Investment Benchmark Report; PricewaterhouseCoopers and National Venture Capital Association, MoneyTree Report.

CMBS Issuance



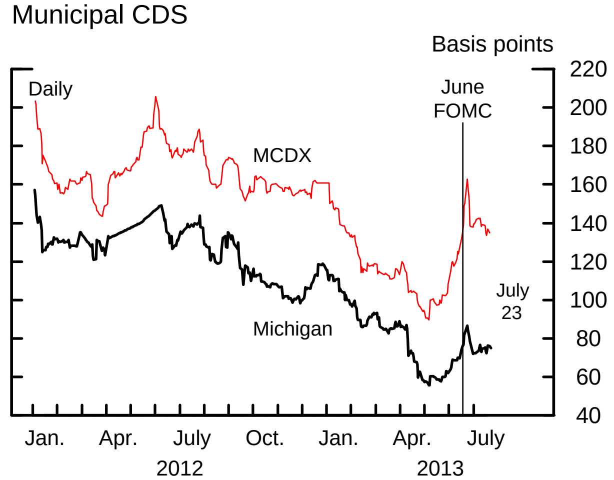
Note: CMBS is commercial mortgage-backed securities. Gray bar indicates CMBS deals that have been priced and are scheduled to close in July.
Source: Commercial Mortgage Alert.

Municipal Bond Yield Ratio



+ Bond Buyer GO 20-year index over 20-year Treasury.
++ Bond Buyer GO 20-year index over estimated AAA 20-year yield.
Source: Bond Buyer; Merrill Lynch.

Municipal CDS



Note: The MCDX is a municipal credit default swap index.
Source: Markit.

Financial Developments

Federal Reserve Bank of New York suggest that foreign official investors sold U.S. assets again in June, as some EMEs may have used the proceeds to fund intervention efforts to support their currencies.

Business and Municipal Finance

Credit flows to nonfinancial businesses were mixed over the intermeeting period. Reflecting the reduced incentive to refinance as longer-term interest rates rose, the pace of gross issuance of investment- and speculative-grade bonds dropped in June. By contrast, the net issuance of CP remained positive. Corporate leveraged loan issuance continued to be robust, as the demand for these floating-rate instruments among investors stayed strong.

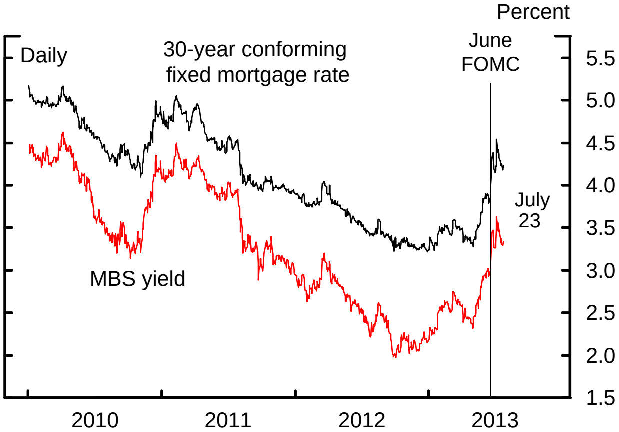
Turning to equity finance, gross issuance by nonfinancial firms maintained its recent strength in June, boosted by robust initial public offerings and a surge in the volume of secondary equity offerings. Largely owing to completion of a few large deals, the volume of cash-financed mergers edged up some in the second quarter, but overall activity remained sluggish by historical standards. Announcements of share repurchase programs in the second quarter suggested that equity retirement by nonfinancial corporations is likely to continue at a brisk pace.

Financing conditions for commercial real estate (CRE) continued to recover slowly. CRE lending at commercial banks moved up again in the second quarter, and responses to the July SLOOS indicated that lending standards for CRE loans eased somewhat over the past three months, with demand picking up. Commercial property vacancy and delinquency rates, although still elevated, declined further. Moreover, liquidity conditions in the commercial property market continued to improve, with increased sales, shorter durations on the market, and smaller gaps between asking and sales prices. In addition, CMBS issuance remained strong despite widening spreads that were apparently associated with the heightened volatility in fixed-income markets during the period.

Yields on 20-year general obligation municipal bonds rose sharply over the intermeeting period, about matching the increase in yields on Treasury securities. Nevertheless, gross issuance of long-term municipal bonds remained solid in June and was split roughly evenly between refunding and new-capital issuance. However, net issuance of long-term bonds became deeply negative, reflecting outsized bond

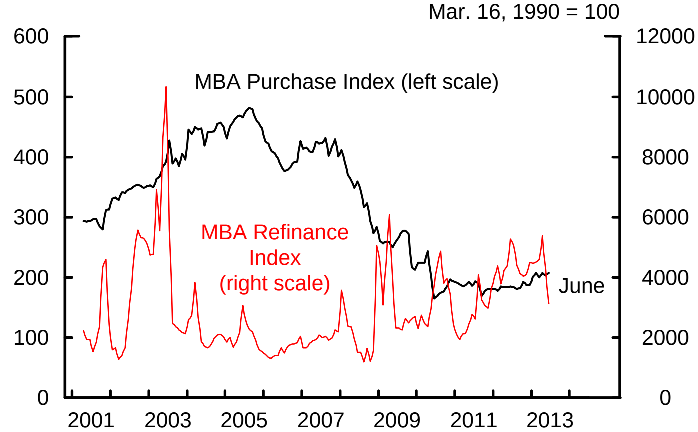
Household Finance

Mortgage Rate and MBS Yield



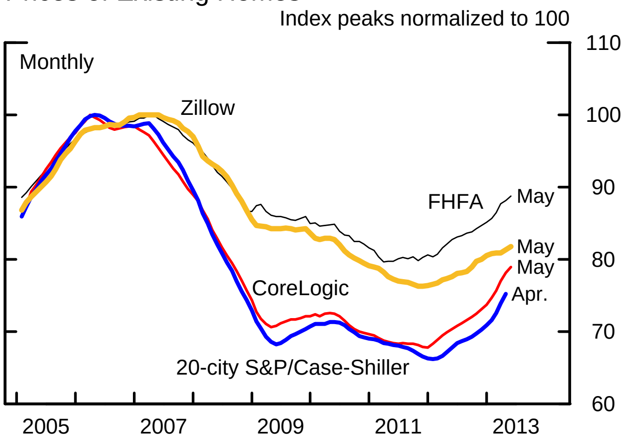
Note: The MBS yield is the Fannie Mae 30-year current-coupon rate.
Source: For MBS yield, Barclays; for mortgage rate, Loansifter.

Purchase and Refinance Activity



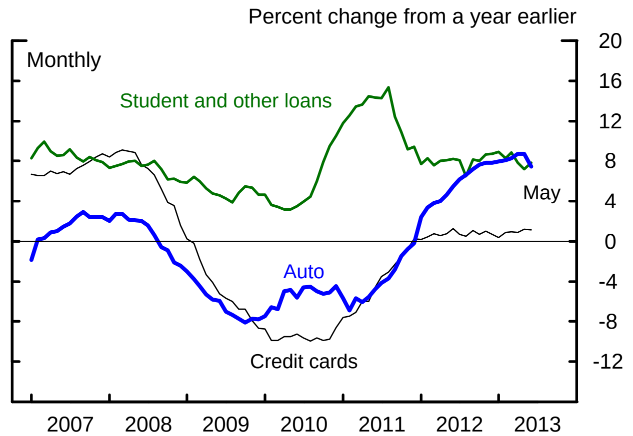
Note: The data are seasonally adjusted by FRB staff.
Source: Mortgage Bankers Association.

Prices of Existing Homes



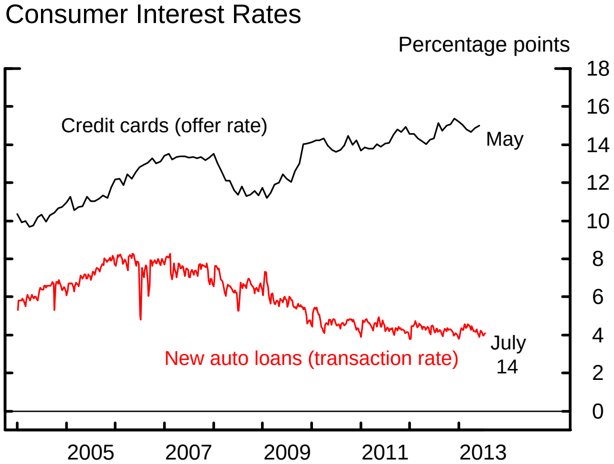
Source: For FHFA, Federal Housing Finance Agency; for CoreLogic, CoreLogic; for S&P/Case-Shiller, Standard & Poor's; for Zillow, Zillow.

Consumer Credit



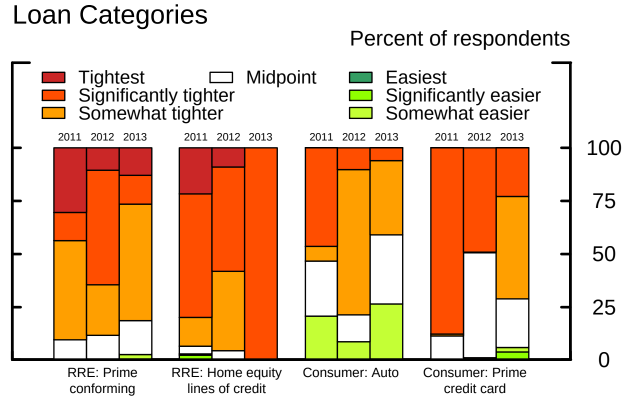
Note: The data are not seasonally adjusted.
Source: Federal Reserve Board.

Consumer Interest Rates



Note: For credit cards, monthly; for auto loans, weekly.
Source: For credit cards, Mintel; for auto loans, PIN.

Levels of Standards on Selected Household Loan Categories



Note: Banks were asked to describe their current level of standards in relation to the midpoint of the range of standards at their bank between 2005 and the present. Responses are weighted by survey respondents' holdings of relevant loan types, as reported on the March 31, 2011, 2012, and 2013 Call Reports where relevant.
Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

Financial Developments

retirements by state and local governments. Meanwhile, although rating downgrades of municipal bonds by Moody's continued to substantially outpace upgrades in the first quarter, higher-frequency data on ratings changes suggested that this trend is likely to have been reversed in the second quarter amid some easing of state and local budget pressures.

Over the intermeeting period, the City of Detroit filed for bankruptcy, with about $18 billion of debt reportedly being affected. The filing was widely anticipated by market participants, and the broad market reaction was muted. Longer-tenor municipal bond yields across states with a variety of credit ratings traded 5 to 10 basis points higher in the days following the announcement. CDS spreads on the state of Michigan were little changed over the period, as were the spreads on the MCDX, which is a broad CDS index of municipal obligations.

HOUSEHOLD FINANCE

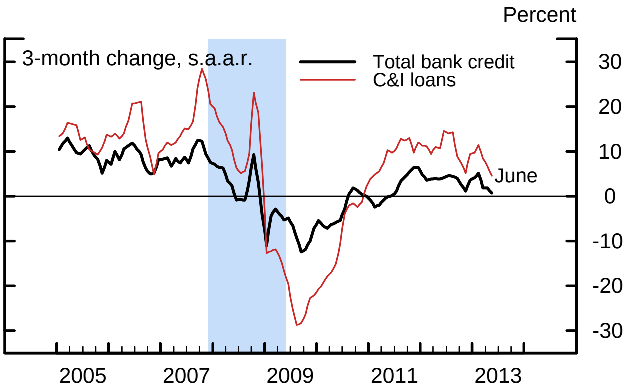
Financing conditions in the household sector continued to improve in recent months. Although the increase in mortgage rates will likely weigh somewhat on the housing sector going forward, most factors affecting this sector still remained favorable over the intermeeting period. Mortgage purchase applications held about steady, even as refinancing applications fell off sharply with the rise in mortgage rates. New delinquencies on mortgages continued to hover near their historical lows, in part due to the tight underwriting standards for new mortgages that have prevailed over the past several years. National house price indexes increased between 5 and 12 percent year over year for the period ending in May. The price increases were broad based, with almost all areas of the country experiencing positive gains over the past year.

In the July SLOOS, a moderate net fraction of banks reported having eased standards on prime residential mortgage loans over the second quarter, and a large fraction indicated that they had experienced increased demand for new originations of such loans.[8] Modest net fractions of respondents also eased standards and terms on home equity lines of credit. That said, responses to special questions on the July survey indicated that standards on all types of residential real estate loans remained tighter than

[8] See the forthcoming memo to the Committee "The July 2013 Senior Loan Officer Opinion Survey on Bank Lending Practices," by John Driscoll and Vladimir Yankov of the Federal Reserve Board, for a more detailed discussion of the results of the SLOOS. To avoid bottlenecks in document production, the SLOOS results will no longer be presented in an appendix to this section of Tealbook, Book A.

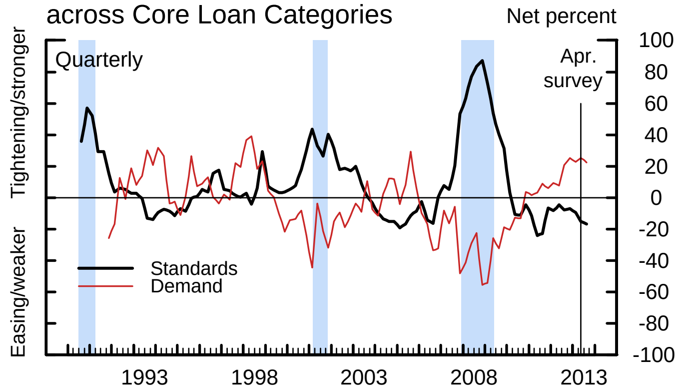
Commercial Banking and Money

Change in Bank Credit



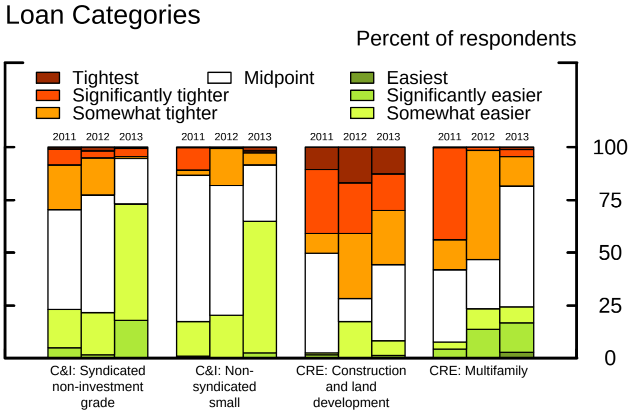
Note: The data have been adjusted to remove the estimated effects of certain changes to accounting standards and nonbank structure activity of $5 billion or more. C&I is commercial and industrial.
Source: Federal Reserve Board.

Change in Standards and Demand across Core Loan Categories



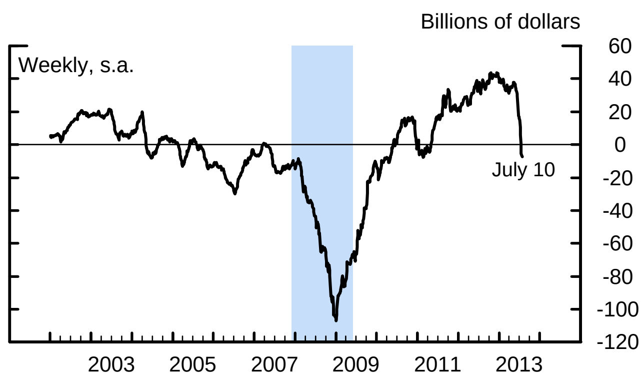
Note: A composite index that represents the net percentage of loans on respondents' balance sheets that were in categories for which banks reported tighter lending standards or stronger loan demand over the past 3 months, with results weighted by survey respondents' holdings of loans in each category.
Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

Levels of Standards on Selected Business Loan Categories



Note: Banks were asked to describe their current level of standards in relation to the midpoint of the range of standards at their bank between 2005 and the present. Responses are weighted by survey respondents' holdings of relevant loan types, as reported on the March 31, 2011, 2012, and 2013 Call Reports where relevant.
Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

Unrealized Gains on Available-for-Sale Securities



Source: Federal Reserve Board.

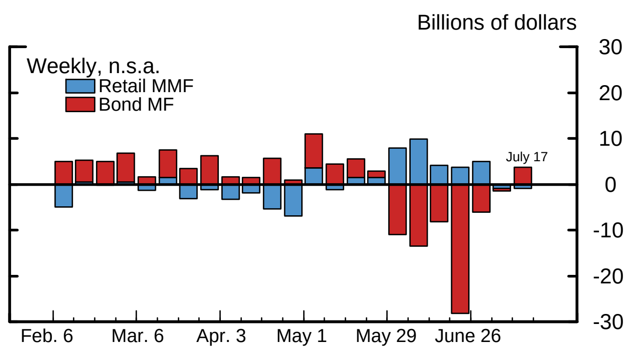
Growth of M2 and Its Components

Percent, s.a.a.r.

	M2	Liquid deposits	Small time deposits	Retail MMFs	Curr.
2012	7.5	11.1	-16.9	-5.3	9.0
2013:H1	4.7	6.7	-19.8	2.5	6.0
2013:Q1	4.9	6.8	-20.4	5.6	5.8
2013:Q2	4.4	6.4	-20.2	-.6	6.0
June & July (e)	6.7	6.9	-25.3	31.3	8.0

Note: Retail MMFs are retail money market funds.
(e) Staff estimate.
Source: Federal Reserve Board.

Mutual Fund Flows



Note: Retail MMFs are retail money market funds, and bond MFs are bond mutual funds.
Source: Investment Company Institute, Lipper.

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

Financial Developments

the midpoints of the wide range those standards have occupied since 2005—and, in some cases, tighter than they were at this time last year.

Consumer credit continued to expand at a solid pace in May, driven by sustained growth in student loans originated by the federal government and in auto loans. Although revolving credit balances stepped up in May, the year-over-year increase continued to be quite small. Interest rates on credit card mail offers remained close to their historical highs, while interest rates on auto loans generally stayed flat at low levels in recent weeks despite the appreciable increase in Treasury yields. Consumer credit delinquency rates, with the exception of those on student loans, continued to decline in recent months. Consumer credit ABS issuance was moderate in June, after a very strong month in May, and decreased further in July, reportedly reflecting in part the heightened market uncertainty that prevailed over the intermeeting period.

In the July SLOOS, moderate net fractions of respondents reportedly eased standards and terms on, and experienced stronger demand for, credit card loans and auto loans. Banks reported little change in standards on, and some strengthening in demand for, other consumer loans. Standards on auto loans were reported to be close to the midpoint of their range since 2005. In contrast, standards on prime credit card loans were said to be tighter than the midpoint of their range over the same period.

Commercial Banking and Money

Growth of bank credit slowed in the second quarter. Core loans advanced modestly and securities holdings declined. Commercial and industrial (C&I) loan growth moderated last quarter as loan balances at large banks increased sluggishly in April and May. CRE loans held by all commercial banks increased modestly in the second quarter amid firmer growth at smaller banks. Growth of closed-end residential mortgages on banks' books slowed a bit from an already tepid pace, and the runoff in home equity loan balances continued in line with its recent trend. Credit card loans on banks' books rose modestly after having been flat in the first quarter, and, as has been the case for some time, a sizable increase in other consumer loans reportedly owed in part to strong auto loan originations.

In the July SLOOS, moderate net fractions of banks generally reported having eased their lending standards on core loans and experienced stronger demand for such loans in the second quarter. Regarding loans to businesses, a modest net fraction of banks indicated having eased standards on C&I loans, and moderate-to-large net fractions reported having eased pricing terms on such loans. However, for the second consecutive survey, demand for C&I loans reportedly weakened, particularly at larger banks. A large number of banks indicated that standards on most types of C&I loans were currently easier than the midpoints of the respective ranges that those standards have occupied since 2005. Banks also indicated that the levels of standards on all three types of CRE loans were returning to the midpoints of their recent ranges, although standards for construction and land development loans reportedly remain somewhat tighter than those for nonfarm nonresidential and multifamily loans.

The book value of banks' securities holdings fell slightly in the second quarter as several large banks completed sizable sales. In addition, the recent rise in longer-term interest rates reduced the market value of securities held in banks' available-for-sale (AFS) portfolios; indeed, banks reported a decline of about $40 billion in net unrealized gains on their AFS securities over the second quarter—the largest quarterly decline since data became available in 1996.[9] Analysis by the staff suggests that the recent sensitivity is in line with the historical relationship between changes in the value of banks' AFS securities and changes in long-term interest rates.

M2 grew at an annual rate of 6¾ percent in June and July, supported by flows into liquid deposits and retail money market funds. Both of these components of M2 may have been boosted recently by sizable redemptions from bond mutual funds. Meanwhile, over the past two months, currency increased at a rate slightly faster than its average historical pace amid signs of strong demand from abroad.

The monetary base continued to expand rapidly in June and July, driven mainly by the increase in reserve balances resulting from the Federal Reserve's asset purchases. This recent growth in reserve balances was absorbed by domestic depository institutions,

[9] Of course, the values of other on- and off-balance-sheet exposures also change when longer-term interest rates change, such as banks' interest rate derivative positions and deposit franchises. In addition, banks' net interest margins can also be affected. Under Basel III, changes in the market value of AFS securities holdings will feed through directly to banks' regulatory capital positions. For example, the three largest U.S. banks recently reported that the increase in longer-term interest rates that occurred over the second quarter pushed down their Basel III tier 1 common ratio by an average of ¼ percentage point.

and the current stock of reserve balances was about evenly split between foreign and domestic institutions.[10]

[10] During the intermeeting period, the Federal Reserve conducted a second offering of term deposits with a fixed-rate, full-allotment format under the Term Deposit Facility. Tenders totaled $11.9 billion at a rate of 26 basis points, with 25 depository institutions participating.

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Risks and Uncertainty

ALTERNATIVE SCENARIOS

To illustrate some of the risks to the outlook, we construct a number of alternatives to the baseline projection using simulations of staff models. In the first scenario, term premiums and long-term interest rates are persistently higher than in the baseline and so restrain the recovery. The second scenario also features higher long-term interest rates than in the baseline, but in this case they reflect a move toward greater risk appetite, so the higher rates are associated with a rising stock market, greater optimism, and a faster economic recovery. The third scenario considers the risk that the recent softness in consumer price inflation turns out to be more persistent than expected. The fourth scenario explores the possibility that various headwinds impose greater restraint on household spending than anticipated in the baseline, and the fifth, the possibility that the baseline forecast may be underestimating the persistence of supply-side damage from the recent recession and slow recovery. The final two scenarios explore risks to the U.S. economy from foreign economic developments—in the sixth scenario, that growth in China is weaker than we currently anticipate, and in the seventh, that the exchange value of the dollar is stronger than in the baseline.

We generate the first five scenarios using the FRB/US model and the last two using the multicountry SIGMA model. In the FRB/US simulations, as in the baseline forecast, the federal funds rate follows an inertial version of the Taylor (1999) rule, subject to the FOMC's thresholds for the unemployment rate and projected inflation. For the SIGMA simulations, we use a broadly similar policy rule, subject to the same thresholds but employing an alternative concept of resource utilization.[1] In all cases, we assume that the size and composition of the SOMA portfolio follow their baseline paths.

Higher Long-Term Interest Rates

In the staff's baseline forecast, long-term interest rates rise steadily and substantially over the medium term, in part reflecting a rise in term premiums as the effects of the Federal Reserve's asset purchases wane. But our understanding of the

[1] The SIGMA policy rule 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.

Risks & Uncertainty

Alternative Scenarios

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

Measure and scenario	2013 H1	2013 H2	2014	2015	2016-17
Real GDP					
Extended Tealbook baseline	1.4	2.8	3.3	3.6	2.7
Higher long-term interest rates	1.4	2.7	2.4	2.8	2.9
Increased risk appetite	1.4	3.8	4.9	3.9	1.7
Low inflation	1.4	2.5	2.5	2.7	3.3
Consumer restraint	1.4	1.9	2.0	2.7	3.0
Supply-side damage	1.4	2.5	2.6	2.2	1.3
Weaker growth in China	1.4	2.2	2.5	3.7	3.1
Stronger dollar	1.4	2.6	2.5	3.5	2.9
Unemployment rate[1]					
Extended Tealbook baseline	7.5	7.4	6.8	6.0	5.3
Higher long-term interest rates	7.5	7.4	7.1	6.8	5.9
Increased risk appetite	7.5	7.3	6.0	4.9	5.4
Low inflation	7.5	7.4	7.1	6.7	5.6
Consumer restraint	7.5	7.5	7.6	7.3	6.5
Supply-side damage	7.5	7.3	6.2	5.2	5.5
Weaker growth in China	7.5	7.5	7.2	6.5	5.5
Stronger dollar	7.5	7.4	7.1	6.5	5.6
Total PCE prices					
Extended Tealbook baseline	.5	1.4	1.3	1.5	1.8
Higher long-term interest rates	.5	1.4	1.3	1.4	1.6
Increased risk appetite	.5	1.4	1.4	1.7	2.1
Low inflation	.5	.7	.2	.1	.1
Consumer restraint	.5	1.4	1.2	1.2	1.2
Supply-side damage	.5	1.4	1.4	1.5	1.7
Weaker growth in China	.5	.6	.6	1.4	1.9
Stronger dollar	.5	.6	.6	1.3	1.7
Core PCE prices					
Extended Tealbook baseline	1.1	1.5	1.6	1.7	1.9
Higher long-term interest rates	1.1	1.5	1.6	1.6	1.7
Increased risk appetite	1.1	1.5	1.7	1.9	2.2
Low inflation	1.1	.8	.5	.3	.2
Consumer restraint	1.1	1.5	1.5	1.4	1.3
Supply-side damage	1.1	1.5	1.7	1.7	1.8
Weaker growth in China	1.1	1.3	1.2	1.5	1.9
Stronger dollar	1.1	1.2	1.0	1.4	1.8
Federal funds rate[1]					
Extended Tealbook baseline	.1	.1	.1	.7	2.8
Higher long-term interest rates	.1	.1	.1	.1	1.3
Increased risk appetite	.1	.1	.6	2.4	3.6
Low inflation	.1	.1	.1	.1	.5
Consumer restraint	.1	.1	.1	.1	.1
Supply-side damage	.1	.1	.5	2.1	3.1
Weaker growth in China	.1	.1	.1	.1	2.4
Stronger dollar	.1	.1	.1	.1	2.3

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

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factors influencing term premiums is limited, and Treasury yields could climb even more quickly than we project for any number of reasons, including an increase in inflation risk premiums or a further unexpected repositioning of investors in anticipation of a cessation of asset purchases by the Federal Reserve. In this scenario, long-term interest rates are assumed to run persistently above baseline and are about 75 basis points higher than in the baseline forecast by early next year. The resulting tightening in overall financial conditions shaves about ¾ percentage point off the average annual growth rate of real GDP through 2015. The unemployment rate remains above 7 percent through early 2015, while inflation runs close to 1½ percent through the end of 2016. The shortfall in economic performance relative to the baseline causes the first increase in the federal funds rate to be delayed until late 2016.

Increased Risk Appetite

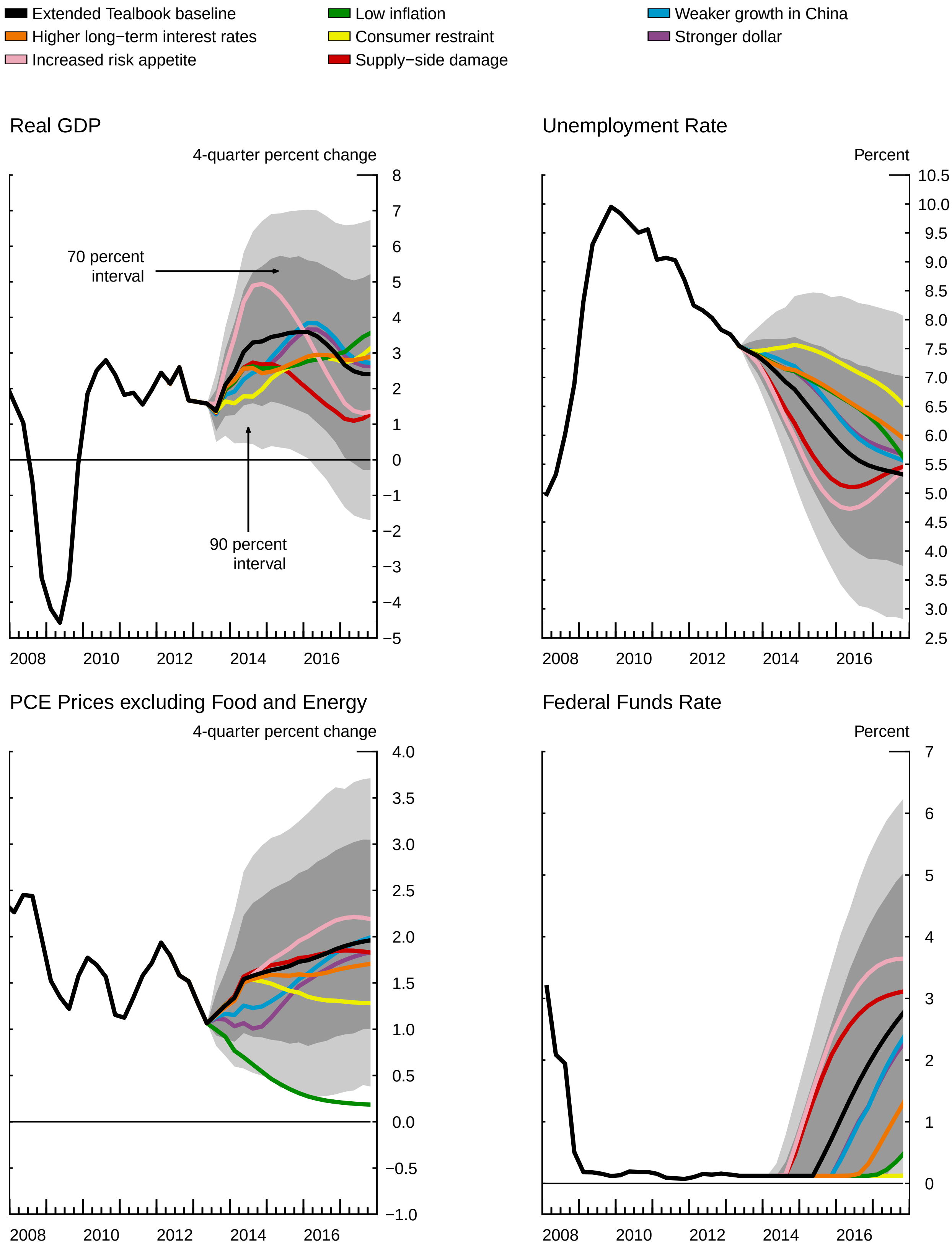
The fact that the substantial rise in Treasury yields since April has coincided with a pronounced run-up in stock market values could point to an increasing willingness of investors to bear risk. In this scenario, we assume that this shift in risk appetites continues, so that the increase in term premiums in the previous scenario is accompanied by a path for equity prices that is higher than assumed in the baseline. As a result, the level of households' stock market wealth is 13 percent above baseline at the end of 2014. Similarly, households and businesses become more optimistic, further stimulating aggregate demand. Real GDP accelerates to a growth rate of 5 percent in 2014, bringing the unemployment rate below 6½ percent by the third quarter of 2014. Starting in 2015, consumer price inflation is ¼ percentage point higher than baseline. The federal funds rate begins to rise from its effective lower bound in the fourth quarter of 2014, three quarters earlier than in the baseline.

Low Inflation

In the baseline forecast, recent low readings on core inflation are anticipated to be partially transitory, and over the next few years, inflation gradually moves back toward 2 percent. In this scenario, the deceleration of core consumer prices over the past year instead proves to be a harbinger of a longer-lasting decline in actual inflation, accompanied by a decrease in long-run inflation expectations. Inflation is below 1 percent in the near term and edges down further in the medium term, falling close to zero after next year. In this environment, investors become increasingly concerned that the economy is mired in a weak state with inflation running substantially below 2 percent and monetary policy persistently constrained by the effective lower bound. As a result,

Forecast Confidence Intervals and Alternative Scenarios

Confidence Intervals Based on FRB/US Stochastic Simulations



bond premiums rise and put upward pressure on real long-term interest rates, thereby modestly restraining household and business spending and boosting unemployment relative to the baseline over the next few years. While the unemployment rate falls below its 6½ percent threshold in the third quarter of 2016, the policy rule does not prescribe the first increase in the federal funds rate until mid-2017. By then, the unemployment rate is nearly at its natural rate. But given the persistent shift in inflation expectations, inflation remains well below the FOMC's long-run objective.

Consumer Restraint

In the baseline forecast, strong gains in household spending are an important driver of the projected acceleration in the recovery. But a number of risks surround this outlook. In particular, the staff projection relies on a significant response of spending to higher levels of wealth, which may not materialize. Furthermore, the recent tax increases may weigh more persistently on spending than we have allowed in the baseline, and depressed expectations of future income gains may also restrain household spending by more than we assume. Finally, recent increases in mortgage interest rates may impose a greater drag on residential construction than in the baseline. In this scenario, personal consumption expenditures and residential construction spending rise considerably more slowly than in the baseline and the personal saving rate remains near recent levels through 2015, rather than falling as in the baseline. Consequently, the unemployment rate stays above 7 percent through the end of 2016. Because margins of resource slack are still wide, inflation remains close to 1½ percent rather than rising. With inflation persistently below the FOMC's longer-run objective and the unemployment rate far above its natural rate, the federal funds rate stays near zero through 2017.

Supply-Side Damage

In previous Tealbooks, we revised down our estimates of potential GDP in light of a falling unemployment rate and modest gains in real GDP in recent years. But it is possible that we may still be underestimating the damage done to aggregate supply because of the recession and slow recovery. This scenario assumes that potential output has been expanding at an annual rate of only 1¼ percent since 2011, ½ percentage point lower than in the baseline; this slower pace of growth in potential output is assumed to continue through 2015. Actual output in this scenario stands 2¾ percent below potential at the beginning of the simulation, implying an output gap that is 1½ percentage points narrower than in the baseline. Real GDP rises at a rate below 2½ percent per year, on average, through 2015, but the unemployment rate nonetheless continues to decline at

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

Measure	2013	2014	2015	2016	2017
Real GDP					
(percent change, Q4 to Q4)					
Projection	2.1	3.3	3.6	3.0	2.4
Confidence interval					
Tealbook forecast errors	1.3–2.9	1.4–5.2	1.5–5.7	. . .	. . .
FRB/US stochastic simulations	1.2–3.1	1.5–5.4	1.4–5.7	.5–5.3	-.3–5.2
Civilian unemployment rate					
(percent, Q4)					
Projection	7.4	6.8	6.0	5.5	5.3
Confidence interval					
Tealbook forecast errors	7.0–7.7	6.0–7.6	4.7–7.4	. . .	. . .
FRB/US stochastic simulations	7.1–7.7	5.7–7.7	4.5–7.4	3.9–7.2	3.7–7.0
PCE prices, total					
(percent change, Q4 to Q4)					
Projection	.9	1.3	1.5	1.7	2.0
Confidence interval					
Tealbook forecast errors	.5–1.4	.2–2.5	.3–2.7	. . .	. . .
FRB/US stochastic simulations	.3–1.6	.4–2.4	.4–2.7	.6–3.0	.8–3.2
PCE prices excluding food and energy					
(percent change, Q4 to Q4)					
Projection	1.3	1.6	1.7	1.9	2.0
Confidence interval					
Tealbook forecast errors	.9–1.6	.9–2.3	.7–2.7	. . .	. . .
FRB/US stochastic simulations	.9–1.6	.9–2.4	.9–2.7	.9–2.9	1.0–3.0
Federal funds rate					
(percent, Q4)					
Projection	.1	.1	.7	1.9	2.8
Confidence interval					
FRB/US stochastic simulations	.1–.1	.1–.7	.1–2.6	.1–4.2	.5–5.1

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

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

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

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roughly the same pace as it has since late 2010 and falls below its threshold value by the third quarter of 2014. Accordingly, the federal funds rate begins to rise from its effective lower bound in the fourth quarter of 2014, three quarters earlier than in the baseline.

Weaker Growth in China

Although real GDP growth in China appears to have slowed in the first half of this year, in our baseline forecast we expect it to return to a pace close to 8 percent by the first half of 2014. But important downside risks attend this outlook, including a sharp slowdown in credit growth, a real estate bust, and a collapse in construction spending. In this scenario, we assume that real GDP growth in China slows to only 5 percent over the next year, before gradually returning to the baseline. Moreover, we assume that the slowdown in China's economy has pronounced spillovers to other major U.S. trading partners in emerging Asia. In this environment, the trade-weighted exchange value of the dollar averages about 3 percent higher than in the baseline over the next two years. U.S. real net exports decline relative to the baseline in response to weaker foreign economic growth and the dollar's appreciation. U.S. real GDP expands only 2½ percent in 2014, and the unemployment rate is still above 7 percent at the end of next year, about ½ percentage point higher than in the baseline. Core PCE inflation remains below 1½ percent until the end of 2015, because of both the appreciation in the dollar and lower resource utilization. With a higher unemployment rate, the federal funds rate lifts off from its effective lower bound in the first quarter of 2016.

Stronger Dollar

In light of the pronounced response of international financial markets to recent increases in U.S. interest rates, we cannot preclude the possibility that the foreign exchange value of the dollar will respond to the projected further increases in U.S. interest rates to a greater extent than we have assumed. To capture this possibility, this scenario introduces a shock to the foreign exchange risk premium that causes the dollar to rise 10 percent above baseline by the first half of next year before gradually receding. The stronger dollar restrains U.S. real net exports and causes the trade balance as a share of GDP to fall 1½ percentage points by the end of 2014. Growth in U.S. real GDP slows to 2½ percent in 2014, and the unemployment rate remains above 7 percent throughout next year, about ¼ percentage point higher than in our baseline. Core inflation falls to 1 percent in 2014, because of weaker U.S. real activity and lower import prices. With a higher unemployment rate and lower inflation, the federal funds rate lifts off from its effective lower bound in the first quarter of 2016.

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

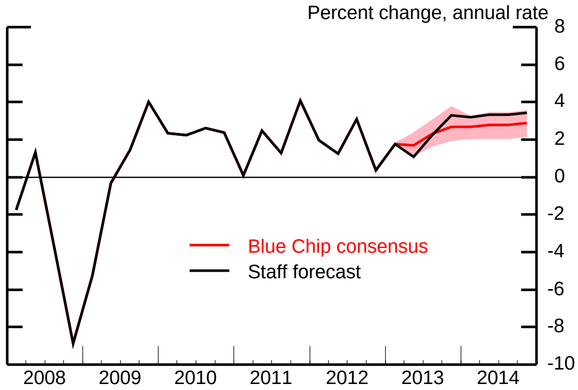
Measure and projection	2013 Previous Tealbook	2013 Current Tealbook	2014 Previous Tealbook	2014 Current Tealbook	2015 Previous Tealbook	2015 Current Tealbook
Real GDP						
Staff	2.5	2.1	3.4	3.3	3.6	3.6
FRB/US	2.1	1.6	3.3	3.0	4.0	3.5
EDO	2.5	2.1	2.9	3.0	2.8	2.9
Blue Chip	2.3	2.1	2.8	2.8	...	...
Unemployment rate[1]						
Staff	7.3	7.4	6.6	6.8	5.8	6.0
FRB/US	7.5	7.6	7.3	7.7	6.4	7.1
EDO	7.5	7.6	7.3	7.3	7.1	7.1
Blue Chip	7.4	7.3	6.9	6.9	...	...
Total PCE prices						
Staff	.9	.9	1.4	1.3	1.6	1.5
FRB/US	.8	.9	1.1	1.0	1.1	.9
EDO	.8	.9	1.4	1.5	1.5	1.5
Blue Chip[2]	1.5	1.3	2.2	2.0	...	...
Core PCE prices						
Staff	1.2	1.3	1.6	1.6	1.8	1.7
FRB/US	1.2	1.2	1.3	1.2	1.3	1.1
EDO	1.1	1.2	1.4	1.5	1.5	1.5
Blue Chip	...	...	...	...	...	...
Federal funds rate[1]						
Staff	.1	.1	.1	.1	1.0	.7
FRB/US	.1	.1	.1	.1	.1	.1
EDO	.7	.7	1.6	1.6	2.3	2.3
Blue Chip[3]	.1	.1	.2	.2	...	...

Note: Blue Chip forecast completed on July 10, 2013.
1. Percent, average for Q4.
2. Consumer price index.
3. Treasury bill rate.
... Not applicable. The Blue Chip forecast typically extends about 2 years.

Risks & Uncertainty

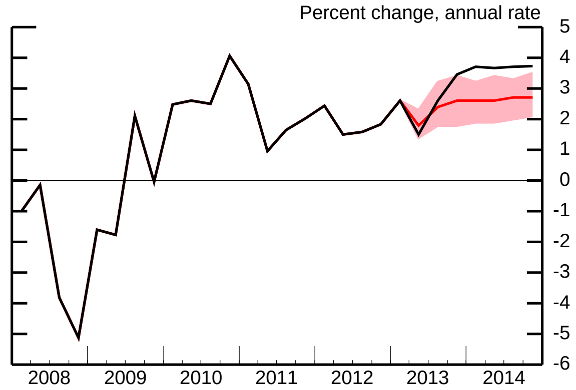
Tealbook Forecast Compared with Blue Chip
(Blue Chip survey released July 10, 2013)

Real GDP

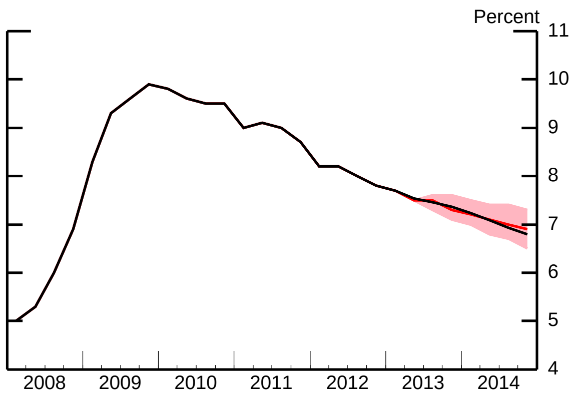


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

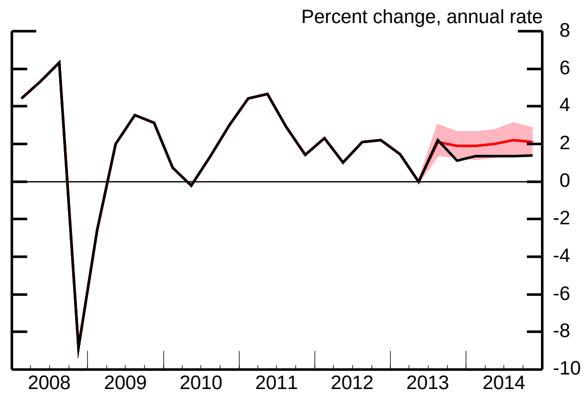
Real PCE



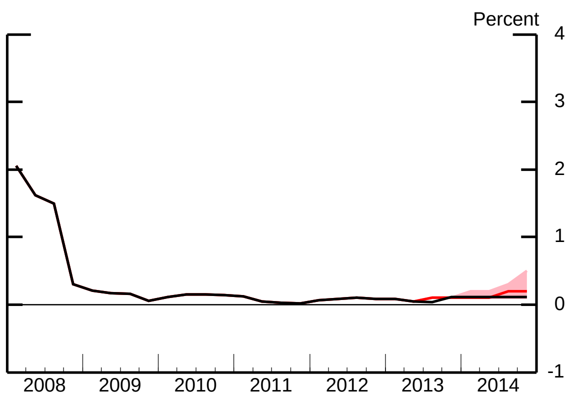
Unemployment Rate



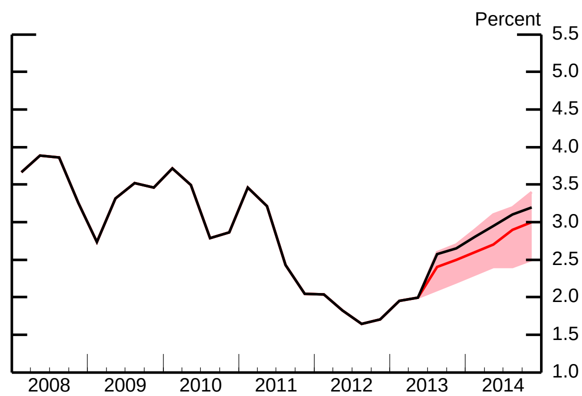
Consumer Price Index



Treasury Bill Rate



10-Year Treasury Yield



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

Assessment of Key Macroeconomic Risks (1)

Probability of Inflation Events
(4 quarters ahead—2014:Q2)

Probability that the 4-quarter change in total PCE prices will be ...	Staff	FRB/US	EDO	BVAR
Greater than 3 percent				
Current Tealbook	.05	.04	.10	.01
Previous Tealbook	.05	.04	.09	.01
Less than 1 percent				
Current Tealbook	.32	.41	.34	.45
Previous Tealbook	.31	.40	.36	.43

Probability of Unemployment Events
(4 quarters ahead—2014:Q2)

Probability that the unemployment rate will ...	Staff	FRB/US	EDO	BVAR
Increase by 1 percentage point				
Current Tealbook	.01	.09	.22	.02
Previous Tealbook	.01	.05	.19	.01
Decrease by 1 percentage point				
Current Tealbook	.19	.03	.21	.17
Previous Tealbook	.24	.06	.24	.22

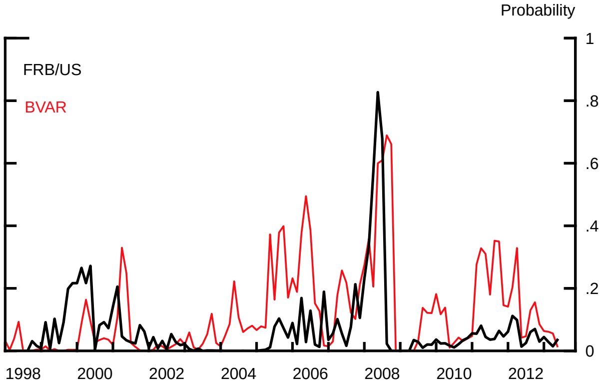
Probability of Near-Term Recession

Probability that real GDP declines in each of 2013:Q3 and 2013:Q4	Staff	FRB/US	EDO	BVAR	Factor Model
Current Tealbook	.02	.04	.05	.09	.16
Previous Tealbook	.02	.03	.04	.04	.11

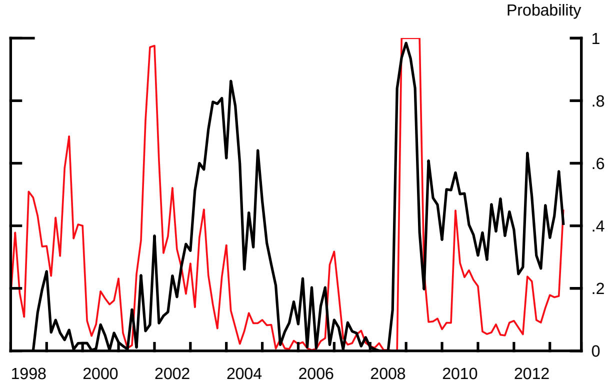
Note: "Staff" represents Tealbook forecast errors applied to the Tealbook baseline; baselines for FRB/US, BVAR, EDO, and the factor model are generated by those models themselves, up to the current-quarter estimate. Data for the current quarter are taken from the staff estimate for the second Tealbook 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)

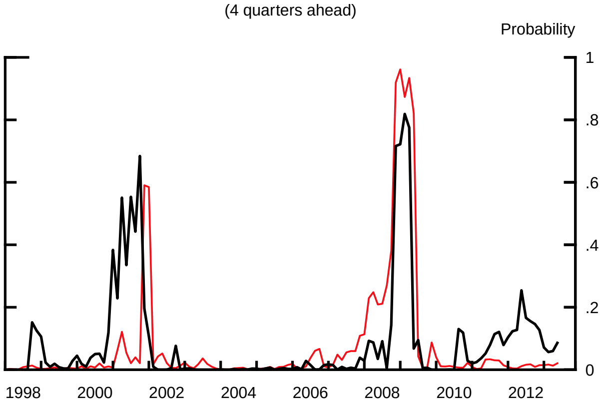
Probability that Total PCE Inflation Is above 3 Percent
(4 quarters ahead)



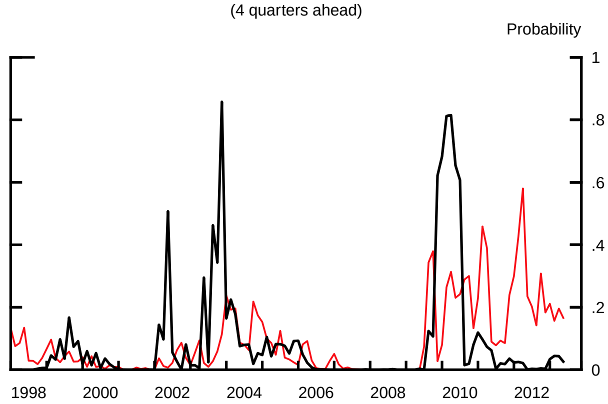
Probability that Total PCE Inflation Is below 1 Percent
(4 quarters ahead)



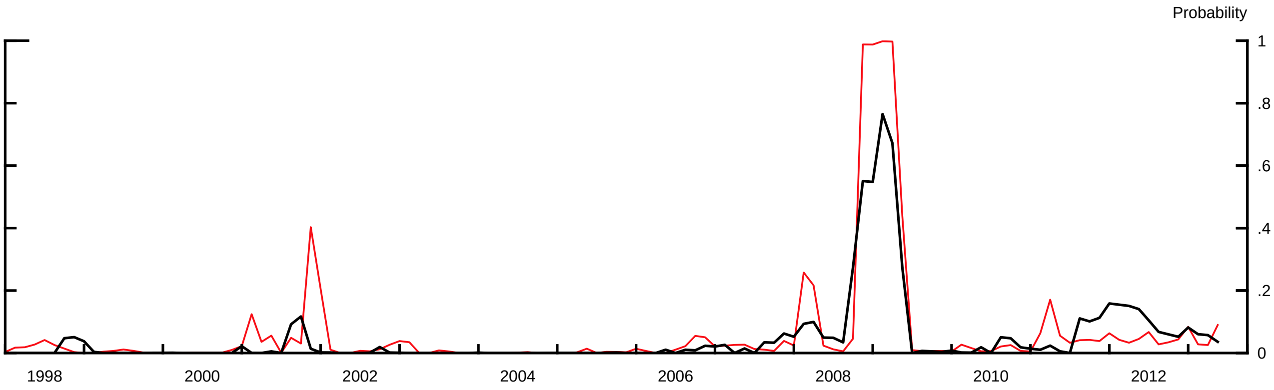
Probability that the Unemployment Rate Increases 1 ppt
(4 quarters ahead)



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 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]	
	06/12/13	07/24/13	06/12/13	07/24/13	06/12/13	07/24/13	06/12/13	07/24/13	06/12/13	07/24/13
Quarterly										
2012:Q1	4.2	4.2	2.0	2.0	2.5	2.5	2.2	2.2	8.2	8.2
Q2	2.8	2.8	1.3	1.3	.7	.7	1.7	1.7	8.2	8.2
Q3	5.9	5.9	3.1	3.1	1.6	1.6	1.1	1.1	8.0	8.0
Q4	1.3	1.3	.4	.4	1.6	1.6	1.0	1.0	7.8	7.8
2013:Q1	3.4	3.1	2.2	1.8	1.0	1.0	1.3	1.3	7.7	7.7
Q2	2.1	1.1	1.8	1.1	-.1	-.1	.8	.8	7.5	7.5
Q3	3.9	4.3	2.5	2.3	1.2	1.8	1.3	1.5	7.4	7.5
Q4	4.8	4.4	3.3	3.3	1.3	1.0	1.5	1.4	7.3	7.4
2014:Q1	4.8	4.9	3.2	3.2	1.5	1.3	1.7	1.6	7.1	7.2
Q2	4.9	5.0	3.3	3.3	1.4	1.3	1.6	1.6	7.0	7.1
Q3	5.0	4.9	3.5	3.3	1.4	1.3	1.6	1.6	6.8	6.9
Q4	5.2	5.0	3.6	3.4	1.4	1.3	1.6	1.6	6.6	6.8
Two-quarter[2]										
2012:Q2	3.5	3.5	1.6	1.6	1.6	1.6	2.0	2.0	-.5	-.5
Q4	3.6	3.6	1.7	1.7	1.6	1.6	1.1	1.1	-.4	-.4
2013:Q2	2.7	2.1	2.0	1.4	.4	.5	1.0	1.1	-.3	-.3
Q4	4.4	4.4	2.9	2.8	1.3	1.4	1.4	1.5	-.2	-.1
2014:Q2	4.9	4.9	3.2	3.3	1.5	1.3	1.7	1.6	-.3	-.3
Q4	5.1	4.9	3.5	3.4	1.4	1.3	1.6	1.6	-.4	-.3
Four-quarter[3]										
2011:Q4	4.0	4.0	2.0	2.0	2.5	2.5	1.7	1.7	-.8	-.8
2012:Q4	3.5	3.5	1.7	1.7	1.6	1.6	1.5	1.5	-.9	-.9
2013:Q4	3.5	3.2	2.5	2.1	.9	.9	1.2	1.3	-.5	-.4
2014:Q4	5.0	4.9	3.4	3.3	1.4	1.3	1.6	1.6	-.7	-.6
2015:Q4	5.4	5.3	3.6	3.6	1.6	1.5	1.8	1.7	-.8	-.8
Annual										
2011	4.0	4.0	1.8	1.8	2.4	2.4	1.4	1.4	8.9	8.9
2012	4.0	4.0	2.2	2.2	1.8	1.8	1.7	1.7	8.1	8.1
2013	3.2	2.9	1.9	1.7	1.0	1.1	1.2	1.2	7.5	7.5
2014	4.6	4.5	3.1	3.0	1.3	1.2	1.5	1.5	6.9	7.0
2015	5.2	5.2	3.6	3.5	1.5	1.4	1.7	1.7	6.1	6.3

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

Greensheets

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

Item	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2012[1]	2013[1]	2014[1]	2015[1]
Real GDP	1.3	3.1	.4	1.8	1.1	2.3	3.3	3.2	3.3	3.3	3.4	1.7	2.1	3.3	3.6
Previous Tealbook	1.3	3.1	.4	2.2	1.8	2.5	3.3	3.2	3.3	3.5	3.6	1.7	2.5	3.4	3.6
Final sales	1.7	2.4	1.9	1.2	1.1	2.1	2.7	2.9	3.1	3.3	3.5	2.1	1.8	3.2	3.8
Previous Tealbook	1.7	2.4	1.9	1.5	1.8	2.4	3.0	2.8	3.2	3.5	3.8	2.1	2.2	3.3	3.8
Priv. dom. final purch.	1.9	1.5	3.6	2.7	2.5	2.8	4.0	4.1	4.3	4.5	4.5	2.6	3.0	4.4	4.6
Previous Tealbook	1.9	1.5	3.6	3.1	2.6	3.7	4.2	4.2	4.4	4.7	4.7	2.6	3.4	4.5	4.6
Personal cons. expend.	1.5	1.6	1.8	2.6	1.5	2.6	3.5	3.7	3.7	3.7	3.7	1.8	2.5	3.7	3.9
Previous Tealbook	1.5	1.6	1.8	3.1	2.1	3.1	3.6	3.6	3.7	3.8	3.9	1.8	3.0	3.8	3.9
Durables	-.2	8.9	13.6	7.6	5.7	11.3	8.7	9.5	9.6	9.3	9.2	8.3	8.3	9.4	8.6
Nondurables	.6	1.2	.1	2.8	1.0	1.6	2.8	2.9	2.9	2.9	2.9	.9	2.0	2.9	3.2
Services	2.1	.6	.6	1.7	1.0	1.6	2.8	3.0	2.9	3.0	3.1	1.1	1.8	3.0	3.3
Residential investment	8.5	13.5	17.6	14.0	9.8	4.2	17.3	19.2	19.3	19.6	17.4	14.9	11.2	18.9	16.0
Previous Tealbook	8.5	13.5	17.6	13.3	18.6	13.9	15.3	17.8	17.8	18.3	17.1	14.9	15.3	17.8	15.2
Business fixed invest.	3.6	-1.8	13.2	.4	7.2	3.7	4.0	3.1	4.7	5.7	5.6	5.4	3.8	4.8	5.3
Previous Tealbook	3.6	-1.8	13.2	.9	2.4	5.7	6.0	4.0	5.1	6.3	6.5	5.4	3.7	5.5	5.5
Equipment & software	4.8	-2.6	11.8	4.1	7.4	3.6	4.1	3.8	5.5	6.9	6.7	4.7	4.8	5.7	6.2
Previous Tealbook	4.8	-2.6	11.8	4.6	1.6	6.2	6.6	4.7	5.6	7.4	7.6	4.7	4.7	6.3	6.4
Nonres. structures	.6	.0	16.7	-8.3	6.6	3.8	3.9	1.4	2.9	2.8	2.7	7.3	1.3	2.5	3.1
Previous Tealbook	.6	.0	16.7	-7.9	4.5	4.4	4.7	2.2	4.1	3.7	3.8	7.3	1.3	3.4	3.4
Net exports[2]	-407	-395	-385	-388	-393	-381	-388	-399	-402	-405	-402	-401	-387	-402	-405
Previous Tealbook[2]	-407	-395	-385	-391	-382	-382	-388	-401	-401	-402	-399	-401	-386	-401	-401
Exports	5.3	1.9	-2.8	-1.1	7.2	4.5	3.1	4.4	4.1	5.1	5.7	2.1	3.4	4.8	6.4
Imports	2.8	-.6	-4.2	-.4	7.0	1.5	3.9	5.6	4.0	4.8	4.3	.2	2.9	4.7	5.4
Gov't. cons. & invest.	-.7	3.9	-7.0	-4.8	-3.7	-3.2	-2.0	-1.5	-2.7	-2.2	-1.9	-1.8	-3.4	-2.1	-.7
Previous Tealbook	-.7	3.9	-7.0	-4.8	-3.4	-3.8	-2.0	-1.6	-2.5	-2.3	-1.8	-1.8	-3.5	-2.1	-.7
Federal	-.2	9.5	-14.8	-8.7	-9.1	-7.6	-5.0	-3.8	-7.0	-6.0	-5.2	-2.8	-7.6	-5.5	-3.8
Defense	-.2	12.9	-22.1	-12.0	-10.7	-7.9	-3.7	-3.8	-7.9	-6.5	-6.2	-5.0	-8.6	-6.1	-4.1
Nondefense	-.4	3.0	1.7	-2.1	-6.2	-7.1	-7.3	-3.8	-5.1	-5.0	-3.3	1.5	-5.7	-4.3	-3.3
State & local	-1.0	.3	-1.5	-2.1	-.1	-.4	-.2	.0	.0	.0	.1	-1.1	-.7	.0	1.0
Change in bus. inventories[2]	41	60	13	37	32	38	56	67	75	76	73	43	41	73	66
Previous Tealbook[2]	41	60	13	37	38	42	52	63	66	64	59	43	42	63	49
Nonfarm[2]	53	88	35	27	24	30	48	60	70	70	68	60	32	67	65
Farm[2]	-8	-19	-15	8	8	8	8	6	5	5	5	-11	8	6	1

1. Change from fourth quarter of previous year to fourth quarter of year indicated.
2. Billions of chained (2005) 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	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Real GDP	2.4	2.2	-3.3	-.1	2.4	2.0	1.7	2.1	3.3	3.6
Previous Tealbook	2.4	2.2	-3.3	-.1	2.4	2.0	1.7	2.5	3.4	3.6
Final sales	2.8	2.4	-2.6	-.5	1.7	1.7	2.1	1.8	3.2	3.8
Previous Tealbook	2.8	2.4	-2.6	-.5	1.7	1.7	2.1	2.2	3.3	3.8
Priv. dom. final purch.	2.4	1.2	-4.5	-2.8	3.2	2.9	2.6	3.0	4.4	4.6
Previous Tealbook	2.4	1.2	-4.5	-2.8	3.2	2.9	2.6	3.4	4.5	4.6
Personal cons. expend.	3.2	1.7	-2.5	-.3	2.9	1.9	1.8	2.5	3.7	3.9
Previous Tealbook	3.2	1.7	-2.5	-.3	2.9	1.9	1.8	3.0	3.8	3.9
Durables	7.0	4.6	-13.0	3.0	9.5	5.9	8.3	8.3	9.4	8.6
Nondurables	2.9	.8	-3.1	.4	3.0	1.4	.9	2.0	2.9	3.2
Services	2.6	1.4	-.5	-1.1	1.9	1.5	1.1	1.8	3.0	3.3
Residential investment	-15.7	-20.7	-24.4	-13.3	-5.7	3.9	14.9	11.2	18.9	16.0
Previous Tealbook	-15.7	-20.7	-24.4	-13.3	-5.7	3.9	14.9	15.3	17.8	15.2
Business fixed invest.	7.8	7.9	-9.4	-15.7	7.7	10.2	5.4	3.8	4.8	5.3
Previous Tealbook	7.8	7.9	-9.4	-15.7	7.7	10.2	5.4	3.7	5.5	5.5
Equipment & software	6.0	3.9	-13.6	-7.8	11.9	11.4	4.7	4.8	5.7	6.2
Previous Tealbook	6.0	3.9	-13.6	-7.8	11.9	11.4	4.7	4.7	6.3	6.4
Nonres. structures	13.0	17.3	-1.2	-29.4	-1.8	6.9	7.3	1.3	2.5	3.1
Previous Tealbook	13.0	17.3	-1.2	-29.4	-1.8	6.9	7.3	1.3	3.4	3.4
Net exports[1]	-729	-649	-495	-355	-420	-408	-401	-387	-402	-405
Previous Tealbook[1]	-729	-649	-495	-355	-420	-408	-401	-386	-401	-401
Exports	10.2	10.1	-2.5	.3	8.8	4.3	2.1	3.4	4.8	6.4
Imports	4.1	.8	-5.9	-6.1	10.9	3.5	.2	2.9	4.7	5.4
Gov't. cons. & invest.	1.5	1.9	2.7	4.0	-1.3	-3.3	-1.8	-3.4	-2.1	-.7
Previous Tealbook	1.5	1.9	2.7	4.0	-1.3	-3.3	-1.8	-3.5	-2.1	-.7
Federal	2.2	3.1	8.8	5.1	2.3	-4.2	-2.8	-7.6	-5.5	-3.8
Defense	4.4	2.6	9.8	4.1	1.0	-4.0	-5.0	-8.6	-6.1	-4.1
Nondefense	-2.3	4.2	6.8	7.2	5.2	-4.6	1.5	-5.7	-4.3	-3.3
State & local	1.2	1.2	-.9	3.3	-3.6	-2.7	-1.1	-.7	.0	1.0
Change in bus. inventories[1]	59	28	-36	-139	51	31	43	41	73	66
Previous Tealbook[1]	59	28	-36	-139	51	31	43	42	63	49
Nonfarm[1]	63	29	-38	-138	58	36	60	32	67	65
Farm[1]	-4	-1	1	-1	-6	-4	-11	8	6	1

1. Billions of chained (2005) dollars.

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

Item	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2012[1]	2013[1]	2014[1]	2015[1]
Real GDP	1.3	3.1	.4	1.8	1.1	2.3	3.3	3.2	3.3	3.3	3.4	1.7	2.1	3.3	3.6
Previous Tealbook	1.3	3.1	.4	2.2	1.8	2.5	3.3	3.2	3.3	3.5	3.6	1.7	2.5	3.4	3.6
Final sales	1.7	2.4	1.9	1.2	1.1	2.1	2.7	2.9	3.1	3.3	3.5	2.1	1.8	3.2	3.7
Previous Tealbook	1.7	2.4	1.9	1.5	1.8	2.4	3.0	2.8	3.2	3.5	3.8	2.1	2.2	3.3	3.8
Priv. dom. final purch.	1.6	1.3	3.0	2.2	2.1	2.4	3.3	3.5	3.7	3.8	3.8	2.2	2.5	3.7	3.9
Previous Tealbook	1.6	1.3	3.0	2.6	2.2	3.1	3.6	3.5	3.7	4.0	4.0	2.2	2.9	3.8	3.9
Personal cons. expend.	1.1	1.1	1.3	1.8	1.1	1.9	2.5	2.6	2.6	2.6	2.7	1.3	1.8	2.6	2.8
Previous Tealbook	1.1	1.1	1.3	2.2	1.5	2.2	2.5	2.6	2.6	2.7	2.8	1.3	2.1	2.7	2.8
Durables	.0	.7	1.0	.6	.4	.9	.7	.7	.8	.7	.7	.6	.6	.8	.7
Nondurables	.1	.2	.0	.5	.2	.3	.5	.5	.5	.5	.5	.1	.3	.5	.5
Services	1.0	.3	.3	.8	.5	.7	1.3	1.4	1.4	1.4	1.5	.5	.8	1.4	1.6
Residential investment	.2	.3	.4	.3	.3	.1	.5	.5	.6	.6	.5	.3	.3	.6	.5
Previous Tealbook	.2	.3	.4	.3	.5	.4	.4	.5	.5	.6	.5	.3	.4	.5	.5
Business fixed invest.	.4	-.2	1.3	.0	.7	.4	.4	.3	.5	.6	.6	.6	.4	.5	.6
Previous Tealbook	.4	-.2	1.3	.1	.3	.6	.6	.4	.5	.7	.7	.6	.4	.6	.6
Equipment & software	.4	-.2	.8	.3	.5	.3	.3	.3	.4	.5	.5	.3	.4	.4	.5
Previous Tealbook	.4	-.2	.8	.3	.1	.5	.5	.4	.4	.6	.6	.3	.4	.5	.5
Nonres. structures	.0	.0	.5	-.3	.2	.1	.1	.0	.1	.1	.1	.2	.0	.1	.1
Previous Tealbook	.0	.0	.5	-.2	.1	.1	.1	.1	.1	.1	.1	.2	.0	.1	.1
Net exports	.2	.4	.3	-.1	-.2	.4	-.2	-.3	-.1	-.1	.1	.3	.0	-.1	.0
Previous Tealbook	.2	.4	.3	-.2	.2	.0	-.2	-.4	.0	.0	.1	.3	.0	-.1	.0
Exports	.7	.3	-.4	-.2	1.0	.6	.4	.6	.6	.7	.8	.3	.5	.7	.9
Imports	-.5	.1	.7	.1	-1.2	-.3	-.7	-.9	-.7	-.8	-.7	.0	-.5	-.8	-.9
Gov't. cons. & invest.	-.1	.8	-1.4	-.9	-.7	-.6	-.4	-.3	-.5	-.4	-.3	-.4	-.7	-.4	-.1
Previous Tealbook	-.1	.8	-1.4	-.9	-.7	-.7	-.4	-.3	-.4	-.4	-.3	-.4	-.7	-.4	-.1
Federal	.0	.7	-1.2	-.7	-.7	-.6	-.4	-.3	-.5	-.4	-.3	-.2	-.6	-.4	-.2
Defense	.0	.6	-1.3	-.6	-.5	-.4	-.2	-.2	-.4	-.3	-.3	-.3	-.4	-.3	-.2
Nondefense	.0	.1	.0	-.1	-.2	-.2	-.2	-.1	-.1	-.1	-.1	.0	-.1	-.1	-.1
State & local	-.1	.0	-.2	-.3	.0	.0	.0	.0	.0	.0	.0	-.1	-.1	.0	.1
Change in bus. inventories	-.5	.7	-1.5	.6	-.1	.2	.6	.3	.3	.0	-.1	-.4	.3	.1	-.2
Previous Tealbook	-.5	.7	-1.5	.7	.0	.1	.3	.3	.1	-.1	-.2	-.4	.3	.1	-.2
Nonfarm	-.3	1.1	-1.7	-.3	-.1	.2	.6	.4	.3	.0	-.1	-.3	.1	.2	-.1
Farm	-.2	-.4	.1	.8	.0	.0	.0	-.1	.0	.0	.0	-.1	.2	.0	.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	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2012[1]	2013[1]	2014[1]	2015[1]
GDP chain-wt. price index	1.6	2.7	1.0	1.2	.0	2.0	1.1	1.6	1.6	1.5	1.5	1.8	1.1	1.5	1.6
Previous Tealbook	1.6	2.7	1.0	1.2	.2	1.3	1.5	1.6	1.6	1.5	1.5	1.8	1.0	1.6	1.7
PCE chain-wt. price index	.7	1.6	1.6	1.0	-.1	1.8	1.0	1.3	1.3	1.3	1.3	1.6	.9	1.3	1.5
Previous Tealbook	.7	1.6	1.6	1.0	-.1	1.2	1.3	1.5	1.4	1.4	1.4	1.6	.9	1.4	1.6
Energy	-13.6	10.5	9.9	-3.7	-13.1	6.6	-4.7	-2.7	-2.5	-2.2	-2.0	3.2	-4.0	-2.4	-1.6
Previous Tealbook	-13.6	10.5	9.9	-3.7	-14.1	-.9	-.8	-.4	-.8	-1.1	-1.1	3.2	-5.0	-.9	-.9
Food	.7	.6	1.8	1.3	.4	1.3	.9	.7	.8	.8	1.0	1.1	1.0	.8	1.3
Previous Tealbook	.7	.6	1.8	1.3	1.1	1.3	.9	.7	.8	1.0	1.2	1.1	1.2	.9	1.4
Ex. food & energy	1.7	1.1	1.0	1.3	.8	1.5	1.4	1.6	1.6	1.6	1.6	1.5	1.3	1.6	1.7
Previous Tealbook	1.7	1.1	1.0	1.3	.8	1.3	1.5	1.7	1.6	1.6	1.6	1.5	1.2	1.6	1.8
Ex. food & energy, market based	1.8	1.3	.9	1.6	.6	1.4	1.3	1.5	1.5	1.5	1.4	1.6	1.2	1.5	1.6
Previous Tealbook	1.8	1.3	.9	1.6	.4	1.2	1.4	1.6	1.5	1.5	1.4	1.6	1.1	1.5	1.7
CPI	1.0	2.1	2.2	1.4	.0	2.2	1.1	1.3	1.3	1.4	1.4	1.9	1.2	1.4	1.6
Previous Tealbook	1.0	2.1	2.2	1.4	-.2	1.4	1.4	1.6	1.5	1.5	1.5	1.9	1.0	1.5	1.7
Ex. food & energy	2.4	1.6	1.7	2.1	1.4	1.8	1.7	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.9
Previous Tealbook	2.4	1.6	1.7	2.1	1.3	1.7	1.7	1.9	1.8	1.8	1.8	1.9	1.7	1.8	2.0
ECI, hourly compensation[2]	2.1	1.7	1.7	1.7	2.4	2.5	2.5	2.6	2.6	2.7	2.7	1.8	2.3	2.6	2.9
Previous Tealbook[2]	2.1	1.7	1.7	1.4	2.4	2.5	2.5	2.6	2.6	2.7	2.7	1.9	2.2	2.6	3.0
Nonfarm business sector															
Output per hour	1.7	3.1	-1.7	-.3	-1.1	1.2	1.5	1.7	1.8	1.6	1.6	.6	.3	1.6	1.7
Previous Tealbook	1.7	3.1	-1.7	.3	.2	1.5	1.6	1.6	1.6	1.6	1.5	.6	.9	1.6	1.6
Compensation per hour	1.2	1.2	9.9	-3.8	2.0	2.4	2.7	2.7	2.7	2.9	2.9	4.4	.8	2.8	3.3
Previous Tealbook	1.2	1.2	9.9	-3.8	2.0	2.1	2.7	2.8	2.8	2.9	3.0	4.4	.7	2.8	3.4
Unit labor costs	-.5	-1.9	11.8	-3.5	3.1	1.1	1.2	1.0	.9	1.3	1.3	3.8	.4	1.1	1.6
Previous Tealbook	-.5	-1.9	11.8	-4.1	1.8	.6	1.1	1.1	1.2	1.3	1.4	3.8	-.2	1.3	1.7
Core goods imports chain-wt. price index[3]	1.2	-2.3	1.7	.2	-2.0	-.3	.6	1.2	1.4	1.7	1.5	.1	-.4	1.4	1.5
Previous Tealbook[3]	1.2	-2.3	1.7	.2	-1.1	-.2	.5	1.0	1.4	1.7	1.4	.1	-.1	1.4	1.5

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	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
GDP chain-wt. price index	2.9	2.6	2.1	.5	1.8	2.0	1.8	1.1	1.5	1.6
Previous Tealbook	2.9	2.6	2.1	.5	1.8	2.0	1.8	1.0	1.6	1.7
PCE chain-wt. price index	1.9	3.5	1.7	1.4	1.5	2.5	1.6	.9	1.3	1.5
Previous Tealbook	1.9	3.5	1.7	1.4	1.5	2.5	1.6	.9	1.4	1.6
Energy	-3.7	19.3	-8.8	2.7	6.5	11.9	3.2	-4.0	-2.4	-1.6
Previous Tealbook	-3.7	19.3	-8.8	2.7	6.5	11.9	3.2	-5.0	-.9	-.9
Food	1.7	4.7	7.0	-1.7	1.3	5.1	1.1	1.0	.8	1.3
Previous Tealbook	1.7	4.7	7.0	-1.7	1.3	5.1	1.1	1.2	.9	1.4
Ex. food & energy	2.3	2.4	2.0	1.6	1.2	1.7	1.5	1.3	1.6	1.7
Previous Tealbook	2.3	2.4	2.0	1.6	1.2	1.7	1.5	1.2	1.6	1.8
Ex. food & energy, market based	2.2	2.1	2.2	1.7	.7	1.9	1.6	1.2	1.5	1.6
Previous Tealbook	2.2	2.1	2.2	1.7	.7	1.9	1.6	1.1	1.5	1.7
CPI	2.0	4.0	1.6	1.5	1.2	3.3	1.9	1.2	1.4	1.6
Previous Tealbook	2.0	4.0	1.6	1.5	1.2	3.3	1.9	1.0	1.5	1.7
Ex. food & energy	2.7	2.3	2.0	1.7	.6	2.2	1.9	1.8	1.8	1.9
Previous Tealbook	2.7	2.3	2.0	1.7	.6	2.2	1.9	1.7	1.8	2.0
ECI, hourly compensation[1]	3.2	3.0	2.4	1.2	2.1	2.2	1.8	2.3	2.6	2.9
Previous Tealbook[1]	3.2	3.0	2.4	1.2	2.1	2.2	1.9	2.2	2.6	3.0
Nonfarm business sector										
Output per hour	.8	2.4	-1.2	5.6	1.9	.4	.6	.3	1.6	1.7
Previous Tealbook	.8	2.4	-1.2	5.6	1.9	.4	.6	.9	1.6	1.6
Compensation per hour	4.5	3.6	2.5	1.5	1.6	1.7	4.4	.8	2.8	3.3
Previous Tealbook	4.5	3.6	2.5	1.5	1.6	1.7	4.4	.7	2.8	3.4
Unit labor costs	3.6	1.1	3.7	-3.9	-.2	1.3	3.8	.4	1.1	1.6
Previous Tealbook	3.6	1.1	3.7	-3.9	-.2	1.3	3.8	-.2	1.3	1.7
Core goods imports chain-wt. price index[2]	2.5	2.9	3.7	-1.7	2.7	4.3	.1	-.4	1.4	1.5
Previous Tealbook[2]	2.5	2.9	3.7	-1.7	2.7	4.3	.1	-.1	1.4	1.5

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

Other Macroeconomic Indicators

Item	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2014 Q1	2014 Q2	2014 Q3	2014 Q4	2012[1]	2013[1]	2014[1]	2015[1]
Employment and production															
Nonfarm payroll employment[2]	.5	.4	.5	.6	.6	.6	.5	.6	.6	.6	.6	2.2	2.3	2.4	3.0
Unemployment rate[3]	8.2	8.0	7.8	7.7	7.5	7.5	7.4	7.2	7.1	6.9	6.8	7.8	7.4	6.8	6.0
Previous Tealbook[3]	8.2	8.0	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.8	6.6	7.8	7.3	6.6	5.8
Natural rate of unemployment[3]	5.8	5.7	5.7	5.6	5.6	5.5	5.5	5.4	5.4	5.4	5.4	5.7	5.5	5.4	5.3
Previous Tealbook[3]	5.8	5.7	5.7	5.6	5.6	5.5	5.5	5.4	5.4	5.4	5.4	5.7	5.5	5.4	5.3
GDP gap[4]	-3.8	-3.5	-3.9	-3.9	-4.2	-4.1	-3.8	-3.5	-3.2	-2.9	-2.6	-3.9	-3.8	-2.6	-1.2
Previous Tealbook[4]	-3.8	-3.5	-3.9	-3.8	-3.9	-3.8	-3.4	-3.2	-2.9	-2.6	-2.2	-3.9	-3.4	-2.2	-.8
Industrial production[5]	2.9	.3	2.5	4.2	.6	4.4	4.4	5.3	5.1	4.4	3.4	2.8	3.4	4.6	4.2
Previous Tealbook[5]	2.9	.3	2.6	4.4	.7	4.3	4.7	5.4	4.7	4.5	4.2	2.8	3.5	4.7	4.3
Manufacturing industr. prod.[5]	1.6	-.5	2.4	5.1	-.2	2.9	3.7	4.4	4.5	4.4	4.1	2.8	2.9	4.4	4.5
Previous Tealbook[5]	1.6	-.5	2.5	5.0	-.6	2.8	4.0	5.2	4.7	4.6	4.6	2.9	2.8	4.8	4.7
Capacity utilization rate - mfg.[3]	75.9	75.5	75.7	76.4	76.0	76.3	76.7	77.2	77.7	78.2	78.6	75.7	76.7	78.6	80.5
Previous Tealbook[3]	75.9	75.5	75.7	76.3	75.9	76.0	76.4	77.0	77.6	78.1	78.6	75.7	76.4	78.6	80.6
Housing starts[6]	.7	.8	.9	1.0	.9	1.0	1.1	1.2	1.3	1.3	1.4	.8	1.0	1.3	1.6
Light motor vehicle sales[6]	14.1	14.5	15.0	15.3	15.3	15.6	15.5	15.7	15.8	16.0	16.1	14.4	15.4	15.9	16.4
Income and saving															
Nominal GDP[5]	2.8	5.9	1.3	3.1	1.1	4.3	4.4	4.9	5.0	4.9	5.0	3.5	3.2	4.9	5.3
Real disposable pers. income[5]	2.2	.7	8.9	-8.6	4.6	2.2	2.3	3.9	3.2	3.3	3.5	3.8	.0	3.5	3.5
Previous Tealbook[5]	2.2	.7	8.9	-8.4	4.5	2.6	2.5	4.1	3.2	3.6	3.6	3.8	.2	3.6	3.5
Personal saving rate[3]	3.8	3.6	5.3	2.5	3.2	3.1	2.8	2.9	2.8	2.7	2.6	5.3	2.8	2.6	2.2
Previous Tealbook[3]	3.8	3.6	5.3	2.4	3.0	2.8	2.6	2.7	2.5	2.5	2.4	5.3	2.6	2.4	2.0
Corporate profits[7]	4.7	9.9	9.6	-5.5	3.7	3.3	1.6	1.0	3.4	3.9	5.6	3.1	.7	3.5	2.8
Profit share of GNP[3]	12.1	12.3	12.5	12.2	12.3	12.3	12.2	12.1	12.1	12.1	12.1	12.5	12.2	12.1	11.8
Net federal saving[8]	-1,115	-1,087	-1,036	-781	-553	-616	-664	-602	-579	-568	-555	-1,074	-654	-576	-505
Net state & local saving[8]	-124	-140	-125	-110	-87	-91	-80	-78	-54	-49	-43	-129	-92	-56	4
Gross national saving rate[3]	12.3	12.3	13.6	13.8	14.5	14.6	14.8	14.7	14.9	15.0	15.1	13.6	14.8	15.1	15.4
Net national saving rate[3]	-.4	-.3	1.2	1.2	3.7	3.1	2.5	2.4	2.7	2.7	2.9	1.2	2.5	2.9	3.3

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

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

Item	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Employment and production										
Nonfarm payroll employment[1]	2.1	1.2	-2.8	-5.6	.8	2.0	2.2	2.3	2.4	3.0
Unemployment rate[2]	4.5	4.8	6.9	9.9	9.5	8.7	7.8	7.4	6.8	6.0
Previous Tealbook[2]	4.5	4.8	6.9	9.9	9.5	8.7	7.8	7.3	6.6	5.8
Natural rate of unemployment[2]	5.0	5.0	5.3	6.0	6.0	5.8	5.7	5.5	5.4	5.3
Previous Tealbook[2]	5.0	5.0	5.3	6.0	6.0	5.8	5.7	5.5	5.4	5.3
GDP gap[3]	.8	.9	-4.3	-5.2	-4.0	-3.6	-3.9	-3.8	-2.6	-1.2
Previous Tealbook[3]	.8	.9	-4.3	-5.2	-4.0	-3.6	-3.9	-3.4	-2.2	-.8
Industrial production[4]	2.1	2.7	-8.9	-5.5	6.2	3.3	2.8	3.4	4.6	4.2
Previous Tealbook[4]	2.1	2.7	-8.9	-5.5	6.2	3.3	2.8	3.5	4.7	4.3
Manufacturing industr. prod.[4]	1.7	2.9	-11.6	-6.1	6.4	3.3	2.8	2.9	4.4	4.5
Previous Tealbook[4]	1.7	2.9	-11.6	-6.1	6.4	3.3	2.9	2.8	4.8	4.7
Capacity utilization rate - mfg.[2]	78.1	78.4	69.9	67.2	72.9	74.8	75.7	76.7	78.6	80.5
Previous Tealbook[2]	78.1	78.4	69.9	67.2	72.9	74.8	75.7	76.4	78.6	80.6
Housing starts[5]	1.8	1.4	.9	.6	.6	.6	.8	1.0	1.3	1.6
Light motor vehicle sales[5]	16.5	16.1	13.1	10.4	11.5	12.7	14.4	15.4	15.9	16.4
Income and saving										
Nominal GDP[4]	5.3	4.9	-1.2	.4	4.3	4.0	3.5	3.2	4.9	5.3
Real disposable pers. income[4]	4.6	1.6	1.0	-3.0	3.5	.3	3.8	.0	3.5	3.5
Previous Tealbook[4]	4.6	1.6	1.0	-3.0	3.5	.3	3.8	.2	3.6	3.5
Personal saving rate[2]	2.8	2.5	6.2	3.8	4.8	3.4	5.3	2.8	2.6	2.2
Previous Tealbook[2]	2.8	2.5	6.2	3.8	4.8	3.4	5.3	2.6	2.4	2.0
Corporate profits[6]	3.7	-8.1	-33.5	57.0	17.3	9.2	3.1	.7	3.5	2.8
Profit share of GNP[2]	11.6	10.1	6.8	10.7	12.0	12.5	12.5	12.2	12.1	11.8
Net federal saving[7]	-204	-245	-613	-1,229	-1,308	-1,237	-1,074	-654	-576	-505
Net state & local saving[7]	51	12	-72	-113	-90	-102	-129	-92	-56	4
Gross national saving rate[2]	16.5	13.9	12.6	11.0	12.1	12.4	13.6	14.8	15.1	15.4
Net national saving rate[2]	4.4	1.7	-.6	-2.3	-.6	-.3	1.2	2.5	2.9	3.3

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 2012[a]	2013	2014	2015	2012 Q1[a]	Q2[a]	Q3[a]	Q4[a]	2013 Q1[a]	Q2	Q3	Q4	2014 Q1	Q2	Q3	Q4
Unified budget					Not seasonally adjusted											
Receipts[1]	2,449	2,805	3,052	3,282	509	760	625	616	581	891	718	682	637	960	773	747
Outlays[1]	3,538	3,431	3,559	3,685	966	885	810	909	888	800	834	902	911	884	862	924
Surplus/deficit[1]	-1,089	-626	-507	-403	-457	-125	-185	-293	-307	91	-116	-219	-274	76	-89	-176
Previous Tealbook	*-1,089*	*-632*	*-503*	*-387*	*-457*	*-125*	*-185*	*-293*	*-307*	*90*	*-121*	*-221*	*-269*	*76*	*-90*	*-192*
On-budget	-1,151	-666	-542	-425	-458	-187	-160	-311	-303	36	-89	-247	-260	23	-58	-200
Off-budget	62	40	34	22	1	62	-25	17	-4	55	-27	27	-15	52	-31	23
Means of financing:																
Borrowing	1,152	604	864	523	398	198	230	314	336	-17	-29	505	285	-46	119	206
Cash decrease	-27	1	15	0	42	-48	6	-7	14	-56	50	-5	20	0	0	0
Other[2]	-36	21	-371	-120	17	-25	-51	-13	-43	-18	95	-281	-30	-30	-30	-30
Cash operating balance, end of period	85	85	70	70	43	91	85	93	79	135	85	90	70	70	70	70
NIPA federal sector					Seasonally adjusted annual rates											
Receipts	2,633	3,006	3,195	3,415	2,665	2,659	2,673	2,736	2,947	3,205	3,136	3,075	3,196	3,234	3,273	3,318
Expenditures	3,744	3,753	3,798	3,939	3,724	3,775	3,761	3,772	3,729	3,758	3,752	3,739	3,798	3,813	3,842	3,874
Consumption expenditures	1,062	1,020	973	939	1,056	1,055	1,086	1,042	1,033	1,013	994	987	981	968	957	949
Defense	709	664	634	608	703	701	728	682	672	657	644	643	639	630	623	616
Nondefense	353	357	339	330	352	354	358	360	361	356	350	343	342	338	334	332
Other spending	2,682	2,732	2,825	3,000	2,668	2,720	2,674	2,730	2,696	2,745	2,759	2,752	2,817	2,845	2,884	2,925
Current account surplus	-1,111	-747	-603	-524	-1,059	-1,115	-1,087	-1,036	-781	-553	-616	-664	-602	-579	-568	-555
Gross investment	156	145	131	121	152	156	155	155	145	139	139	135	133	130	127	124
Gross saving less gross investment[3]	-1,126	-746	-584	-489	-1,071	-1,130	-1,100	-1,048	-781	-546	-608	-650	-585	-557	-542	-525
Fiscal indicators[4]																
High-employment (HEB) surplus/deficit	-922.1	-512.9	-383.2	-360.5	-869.8	-925.3	-907.7	-837.0	-550.3	-304.1	-360.1	-412.9	-380.8	-368.2	-370.7	-370.2
Change in HEB, percent of potential GDP	-1.1	-2.6	-.9	-.2	-.8	.3	-.2	-.5	-1.8	-1.5	.3	.3	-.2	-.1	.0	.0
Fiscal impetus (FI), percent of GDP	-.7	-1.4	-.7	-.4	-.7	-.6	.3	-1.5	-2.0	-1.4	-1.2	-.9	-.9	-.8	-.7	-.5
Previous Tealbook	*-.7*	*-1.4*	*-.8*	*-.4*	*-.7*	*-.6*	*.3*	*-1.5*	*-2.0*	*-1.2*	*-1.3*	*-.9*	*-.9*	*-.9*	*-.7*	*-.5*

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 (2005) 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)

					Projected							
	2012				2013				2014			
Measure and country	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Real GDP[1]												
Total foreign	3.2	1.9	1.7	2.2	2.0	2.2	2.8	3.1	3.2	3.0	3.2	3.3
Previous Tealbook	*3.2*	*1.8*	*1.7*	*2.3*	*2.0*	*2.3*	*2.7*	*3.2*	*3.3*	*3.1*	*3.4*	*3.5*
Advanced foreign economies	1.0	.4	.2	-.1	1.4	1.4	1.8	1.8	2.0	1.5	2.0	2.1
Canada	.8	1.6	.8	.9	2.5	1.7	2.5	2.2	2.3	2.5	2.6	2.6
Japan	4.8	-.6	-3.6	1.2	4.1	3.8	3.0	3.1	3.8	-2.5	1.1	1.2
United Kingdom	.0	-2.0	3.0	-.9	1.1	2.4	1.9	2.0	2.0	2.1	2.3	2.5
Euro area	-.2	-.7	-.4	-2.4	-1.1	-.1	.2	.6	.8	1.0	1.3	1.5
Germany	2.5	.7	.9	-2.7	.3	1.3	1.3	1.4	1.6	1.7	1.9	2.0
Emerging market economies	5.4	3.4	3.2	4.6	2.5	3.1	3.8	4.4	4.5	4.5	4.5	4.6
Asia	6.0	4.2	4.7	6.0	3.3	4.3	4.7	5.3	5.4	5.5	5.5	5.5
Korea	3.3	1.2	.2	1.1	3.4	2.7	3.3	3.7	3.8	3.9	4.0	4.1
China	7.1	7.7	8.1	8.1	7.0	6.9	7.3	7.7	7.9	7.9	7.8	7.8
Latin America	5.0	2.7	1.5	3.3	1.7	1.9	2.8	3.5	3.6	3.6	3.6	3.6
Mexico	5.8	3.0	1.4	2.7	1.8	1.7	2.8	3.7	3.8	3.8	3.7	3.7
Brazil	.5	1.3	1.2	2.6	2.2	2.5	3.1	3.2	3.3	3.3	3.5	3.5
Consumer prices[2]												
Total foreign	2.5	2.0	2.2	2.4	2.3	1.9	2.3	2.3	2.4	3.0	2.5	2.5
Previous Tealbook	*2.6*	*2.1*	*2.2*	*2.3*	*2.3*	*1.9*	*2.1*	*2.3*	*2.4*	*3.0*	*2.5*	*2.5*
Advanced foreign economies	1.9	.9	.8	1.6	.9	.5	1.3	1.3	1.3	2.7	1.4	1.5
Canada	2.0	.2	.1	1.4	1.6	.1	1.7	1.7	1.7	1.7	1.8	1.8
Japan	1.2	-.7	-1.5	.0	-.4	.6	.4	.4	.5	8.7	.7	.9
United Kingdom	1.8	1.7	3.0	4.1	2.3	1.4	2.1	2.7	1.7	1.6	1.7	2.7
Euro area	2.5	2.4	2.0	2.3	.7	.6	1.4	1.3	1.3	1.3	1.4	1.4
Germany	2.2	1.6	2.0	2.1	1.4	.6	1.7	1.7	1.7	1.7	1.8	1.8
Emerging market economies	3.0	2.9	3.4	3.0	3.4	3.0	3.0	3.1	3.2	3.3	3.3	3.3
Asia	2.2	3.0	2.4	2.7	3.3	1.9	2.8	3.0	3.1	3.1	3.2	3.2
Korea	1.8	1.4	1.1	2.5	.6	.3	1.8	2.8	3.0	3.0	3.0	3.1
China	1.7	2.2	1.8	2.6	3.2	2.1	2.4	2.8	2.9	3.0	3.0	3.0
Latin America	5.1	2.7	5.7	3.7	3.8	5.5	3.5	3.4	3.6	3.7	3.7	3.7
Mexico	5.2	2.4	5.7	3.1	3.5	5.5	3.0	3.1	3.3	3.4	3.4	3.4
Brazil	4.1	4.8	6.6	7.0	7.0	5.8	5.9	5.5	5.4	5.3	5.3	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.

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

Measure and country	2007	2008	2009	2010	2011	2012	-------Projected------- 2013	2014	2015
Real GDP[1]									
Total foreign	4.3	-.7	.8	4.6	3.0	2.2	2.5	3.2	3.4
Previous Tealbook	*4.3*	*-.7*	*.9*	*4.6*	*3.0*	*2.2*	*2.5*	*3.3*	*3.5*
Advanced foreign economies	2.4	-1.5	-1.5	3.0	1.5	.4	1.6	1.9	2.2
Canada	2.3	.1	-1.4	3.6	2.4	1.0	2.2	2.5	2.6
Japan	1.6	-4.8	-.5	3.5	.0	.4	3.5	.9	1.0
United Kingdom	3.7	-4.3	-2.5	1.8	1.1	.0	1.8	2.2	2.6
Euro area	2.3	-2.1	-2.3	2.2	.7	-.9	-.1	1.1	1.9
Germany	2.4	-1.9	-2.2	4.2	1.9	.3	1.1	1.8	2.4
Emerging market economies	6.7	.4	3.5	6.2	4.5	4.1	3.4	4.5	4.6
Asia	8.9	.8	8.0	7.8	4.9	5.2	4.4	5.5	5.6
Korea	5.8	-3.2	6.3	5.0	3.4	1.4	3.3	3.9	4.4
China	13.7	7.6	11.3	9.7	8.7	7.8	7.2	7.8	7.7
Latin America	4.4	-.3	-.8	4.5	3.9	3.1	2.5	3.6	3.7
Mexico	3.5	-1.1	-2.2	4.1	3.9	3.2	2.5	3.7	3.7
Brazil	6.6	.9	5.3	5.3	1.4	1.4	2.8	3.4	3.8
Consumer prices[2]									
Total foreign	3.7	3.3	1.2	3.2	3.4	2.3	2.2	2.6	2.7
Previous Tealbook	*3.7*	*3.3*	*1.2*	*3.2*	*3.4*	*2.3*	*2.1*	*2.6*	*2.7*
Advanced foreign economies	2.2	2.0	.2	1.7	2.2	1.3	1.0	1.7	1.8
Canada	2.5	1.8	.8	2.2	2.7	.9	1.3	1.7	1.8
Japan	.5	1.1	-2.0	-.2	-.3	-.2	.3	2.6	2.5
United Kingdom	2.1	3.9	2.2	3.4	4.6	2.6	2.1	1.9	2.0
Euro area	2.9	2.3	.4	2.0	2.9	2.3	1.0	1.4	1.6
Germany	3.1	1.7	.3	1.6	2.6	2.0	1.4	1.7	1.8
Emerging market economies	5.1	4.6	2.1	4.3	4.3	3.1	3.1	3.3	3.3
Asia	5.5	3.7	1.3	4.3	4.5	2.6	2.8	3.1	3.2
Korea	3.4	4.5	2.4	3.2	3.9	1.7	1.4	3.0	3.2
China	6.7	2.5	.6	4.7	4.6	2.1	2.6	3.0	3.0
Latin America	4.2	6.6	3.9	4.4	4.0	4.3	4.1	3.7	3.7
Mexico	3.8	6.2	4.0	4.3	3.5	4.1	3.8	3.4	3.4
Brazil	4.3	6.2	4.2	5.6	6.7	5.6	6.1	5.3	5.3

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

U.S. Current Account

Quarterly Data

	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3 (Projected)	2013 Q4 (Projected)	2014 Q1 (Projected)	2014 Q2 (Projected)	2014 Q3 (Projected)	2014 Q4 (Projected)
	Billions of dollars, s.a.a.r.											
U.S. current account balance	**-483.4**	**-442.0**	**-427.0**	**-409.3**	**-424.6**	**-429.7**	**-435.6**	**-471.7**	**-520.2**	**-499.7**	**-531.5**	**-547.9**
Previous Tealbook	*-512.5*	*-464.0*	*-466.5*	*-437.5*	*-445.1*	*-421.5*	*-453.5*	*-495.0*	*-527.4*	*-517.5*	*-547.2*	*-565.3*
Current account as percent of GDP	-3.1	-2.8	-2.7	-2.6	-2.7	-2.7	-2.7	-2.9	-3.1	-3.0	-3.1	-3.2
Previous Tealbook	*-3.3*	*-3.0*	*-3.0*	*-2.8*	*-2.8*	*-2.6*	*-2.8*	*-3.0*	*-3.2*	*-3.1*	*-3.2*	*-3.3*
Net goods & services	-571.8	-541.2	-516.1	-509.5	-494.6	-502.6	-493.7	-521.9	-534.7	-513.2	-524.9	-532.5
Investment income, net	227.5	238.6	227.0	235.9	215.7	215.2	204.4	188.0	169.1	151.0	134.7	122.4
Direct, net	290.6	297.2	283.4	302.8	281.9	274.1	268.0	266.7	257.9	249.1	242.9	240.5
Portfolio, net	-63.0	-58.6	-56.4	-66.9	-66.2	-58.9	-63.6	-78.7	-88.8	-98.1	-108.2	-118.2
Other income and transfers, net	-139.1	-139.5	-137.9	-135.7	-145.7	-142.3	-146.3	-137.8	-154.6	-137.6	-141.2	-137.8

Annual Data

	2007	2008	2009	2010	2011	2012	2013 (Projected)	2014 (Projected)	2015 (Projected)
	Billions of dollars								
U.S. current account balance	**-713.4**	**-681.3**	**-381.6**	**-449.5**	**-457.7**	**-440.4**	**-440.4**	**-524.8**	**-573.4**
Previous Tealbook	*-712.6*	*-681.1*	*-386.4*	*-446.6*	*-462.9*	*-470.1*	*-453.8*	*-539.3*	*-581.8*
Current account as percent of GDP	-5.1	-4.8	-2.7	-3.1	-3.0	-2.8	-2.7	-3.1	-3.2
Previous Tealbook	*-5.1*	*-4.8*	*-2.8*	*-3.1*	*-3.1*	*-3.0*	*-2.8*	*-3.2*	*-3.3*
Net goods & services	-699.1	-702.3	-383.7	-499.4	-556.8	-534.7	-503.2	-526.3	-533.6
Investment income, net	111.1	157.8	132.3	185.7	240.7	232.3	205.8	144.3	102.9
Direct, net	244.6	284.3	257.7	288.0	310.6	293.5	272.7	247.6	250.9
Portfolio, net	-133.5	-126.5	-125.4	-102.3	-69.8	-61.2	-66.9	-103.3	-148.0
Other income and transfers, net	-125.4	-136.9	-130.2	-135.8	-141.6	-138.0	-143.0	-142.8	-142.8

Abbreviations

ABS	asset-backed securities
ACA	Affordable Care Act
AFE	advanced foreign economy
AFS	available-for-sale
BHC	bank holding company
BOE	Bank of England
BOJ	Bank of Japan
CDS	credit default swaps
C&I	commercial and industrial
CMBS	commercial mortgage-backed securities
CP	commercial paper
CRE	commercial real estate
Desk	Open Market Desk
ECB	European Central Bank
EME	emerging market economy
ETF	exchange-traded funds
FOMC	Federal Open Market Committee; also, the Committee
GCF	general collateral finance
GDP	gross domestic product
LIBOR	London interbank offered rate
LSAP	large-scale asset purchase
MBS	mortgage-backed securities
Michigan survey	Thomson Reuters/University of Michigan Surveys of Consumers
OIS	overnight index swap
OMO	Open Market operations
PCE	personal consumption expenditures
REIT	real estate investment trust

repo	repurchase agreement
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
SOMA	System Open Market Account
S&P	Standard & Poor’s
TBA	to be announced (for example, TBA market)
TIPS	Treasury inflation-protected securities