Prefatory Note

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

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Authorized for Public Release

Class II FOMC – Restricted (FR)

Report to the FOMC on Economic Conditions and Monetary Policy

Book A

Economic and Financial Conditions:
Current Situation and Outlook

July 25, 2012

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

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Domestic Economic Developments and Outlook

The information we have received since the June Tealbook suggests that the recovery is proceeding at a more sluggish pace than we thought six weeks ago. Incoming news on consumer spending, government purchases, private-sector employment, and industrial production have all been softer than expected, and we have marked down our estimate of real GDP growth in the first half of this year from 1¾ percent to 1½ percent.[1] The recent data, combined with the disappointing tone of some more-forward-looking indicators, have led us to trim a similar amount from our projection for real GDP growth in the second half of this year, which now also stands at an annual rate of about 1½ percent.

The current projection takes on board the continuation of the maturity extension program (MEP) that the Committee adopted in June. However, it also sees the underlying trajectory for economic activity as having weakened somewhat. In our assessment, these two opposing influences are of roughly equal strength. As a result, the contour of our medium-term projection is quite similar to the one in the previous Tealbook. Although the situation in Europe remains a source of great uncertainty, thus far it appears to be unfolding approximately as we had expected. Financial stresses in Europe are anticipated to intensify further this year and then recede slowly thereafter, as policymakers are finally impelled to take more-aggressive steps to avert a catastrophe. Similarly, we continue to assume that domestic fiscal policy will restrain economic growth considerably next year, but that fiscal policymakers will find a way to sidestep the even more severe consolidation that would ensue if all provisions of current law were allowed to take effect. Taking into account these influences, we project that real GDP will rise 1½ percent this year, 2 percent next year, and 3¼ percent in 2014. In addition to exerting important influences on the baseline forecast, the European financial crisis and domestic fiscal situation both continue to pose significant downside risks to the outlook.

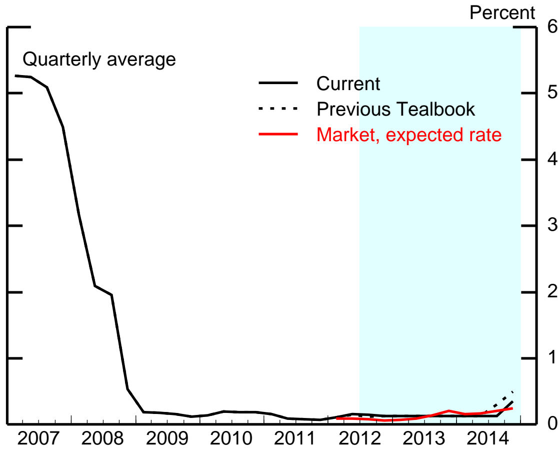
With growth in real GDP expected to be close to that of potential output through 2013, no material progress is made in reducing the slack in labor markets until late in the forecast period. Indeed, we project that the jobless rate will tick up in the second half of

[1] On Friday, the BEA will publish the annual revision to the national income and product accounts covering the first quarter of 2009 through the first quarter of 2012. At the same time, they will release the advance GDP estimate for the second quarter of this year

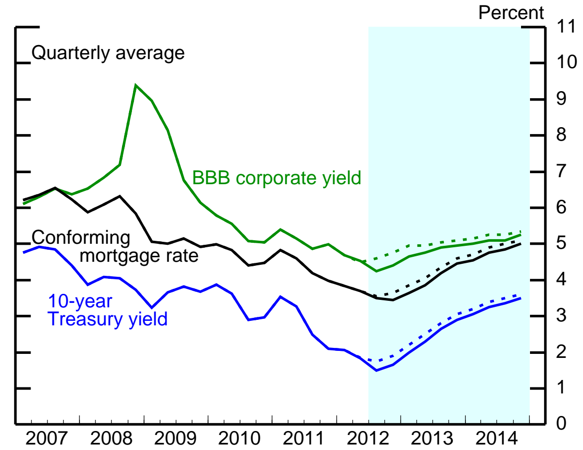
Domestic Econ Devel & Outlook

Key Background Factors underlying the Baseline Staff Projection

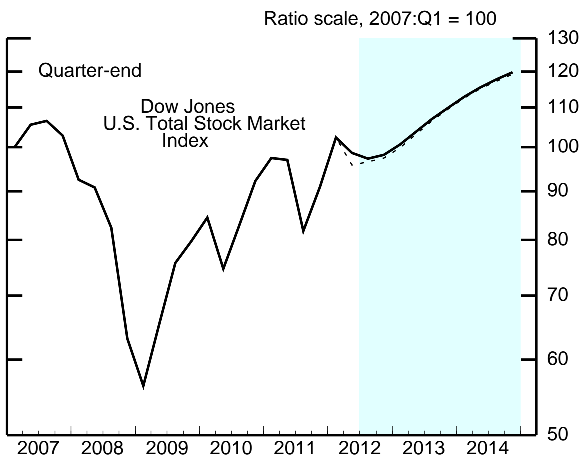
Federal Funds Rate



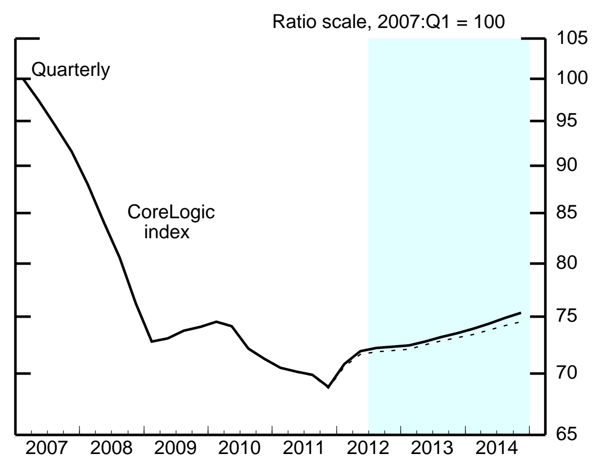
Long-Term Interest Rates



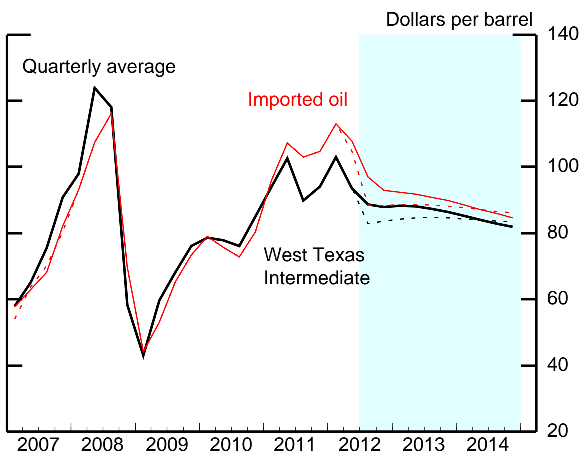
Equity Prices



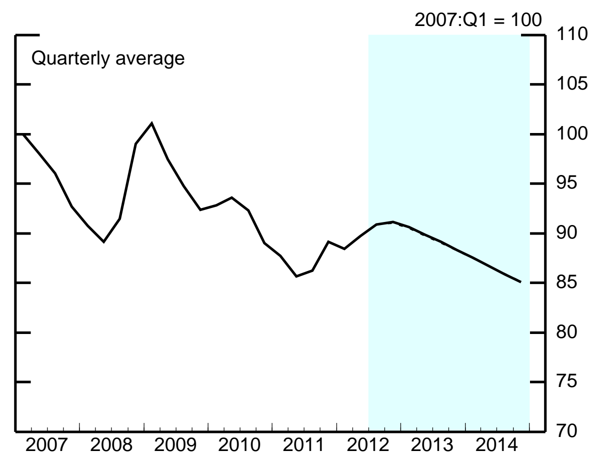
House Prices



Crude Oil Prices



Broad Real Dollar



this year before edging down ¼ percentage point to a little over 8 percent by the end of 2013. Moreover, even the slight decline next year is attributable, in our reckoning, to the expiration at the beginning of the year of the Emergency Unemployment Compensation (EUC) program. By the end of 2014, the unemployment rate is expected to decrease to 7¾ percent, about the same as in the previous Tealbook.

Readings on inflation have come in near our expectations, and the fundamental inflation picture remains as it has for some time: With long-term inflation expectations assumed to remain well anchored but wide margins of slack in labor and product markets expected to persist, our baseline forecast has inflation running at about 1½ percent over the medium term. Compared with the June Tealbook, our projection of total consumer price inflation this year is about ¼ percentage point higher, reflecting the recent rise in oil prices along with higher food price inflation later this year that is related to the current drought in the Midwest. Beyond this year, our inflation forecast is little revised.

KEY BACKGROUND FACTORS

Monetary Policy

The stance of monetary policy is slightly more accommodative in this projection. In line with the prescriptions from the estimated outcome-based policy rule, we assume that liftoff of the target federal funds rate from its effective lower bound will occur in the fourth quarter of 2014, one quarter later than in the June Tealbook. In addition, our assumed portfolio-related policy now reflects the extension of the MEP that the FOMC announced after the June meeting. We assume no additional balance-sheet actions over the projection period.

The path of the federal funds rate would differ if we had chosen some other method to set it.[2] As discussed in Book B, liftoff would occur in the second quarter of 2015 if we had used a rule that targets the level of nominal GDP, and not until the second quarter of 2016 under a standard optimal control exercise with commitment.[3] Liftoff would occur in the same quarter as in the baseline if we had followed the prescriptions of the Taylor (1999) rule. In contrast, the Taylor (1993) rule and the first-difference rule

[2] For details on the outcome-based and other policy rules, see the appendix on policy rules in Book B.

[3] The optimal control policy noted here is conducted under the strong assumption that, if economic conditions were to evolve as expected, future policymakers would remain committed to the plan currently judged to be optimal. If future policymakers were instead assumed to follow a discretionary policy of reoptimizing over time, then the optimal-control liftoff date would shift back to the second quarter of 2015.

call for a liftoff of the federal funds rate that is earlier than under the outcome-based rule; indeed, the Taylor (1993) rule prescribes an immediate and substantial increase in the target federal funds rate.[4]

Other Interest Rates

The yield on 10-year Treasury securities has decreased about 25 basis points, on net, since the June Tealbook. This decline reflects weaker-than-expected economic news, safe-haven flows related to ongoing concerns about the euro-area situation, and the announced continuation of the MEP, which was only partly priced in to yields at the time of the June Tealbook. Over the projection period, the MEP is expected to hold down the 10-year Treasury yield by about 10 basis points. Through early 2013, Treasury yields continue to be damped by safe-haven demands stemming from the European financial crisis and the effects of uncertainty about the U.S. fiscal situation on the pace of the economic recovery. As these concerns abate and the economic recovery strengthens, the path of Treasury yields rises, reflecting the movement of the 10-year valuation window through the period of near-zero short-term interest rates, along with a gradual waning of the effects of nonconventional monetary policy. In total, the 10-year Treasury rate increases by 2 percentage points over the forecast horizon, bringing the rate to around 3½ percent by late 2014.

Yields on investment-grade corporate bonds have decreased roughly 40 basis points since the June Tealbook, about 20 basis points more than yields on comparable-maturity Treasury securities. Over the projection period, we assume that the spread on BBB-rated bonds will hold fairly steady until early 2013 and then narrow nearly a full percentage point by the end of 2014 as the recovery accelerates. As a result, interest rates on BBB-rated bonds increase only half as much as those on comparable-maturity Treasury securities and are projected to be about 5¼ percent by the end of 2014. In contrast, conventional mortgage rates largely follow Treasury rates.

Equity Prices and Home Prices

Broad U.S. stock price indexes have edged up about 1 percent, on net, since the June Tealbook. We project only a modest increase in stock prices through early 2013, as concerns about the circumstances in Europe and the effects of the U.S. fiscal situation are

[4] All of these estimates allow for dynamic feedback from the stance of monetary policy to the real economy and inflation, which can have important implications for the estimated timing of tightening under the different rules.

assumed to continue to weigh on the confidence of market participants. With these tensions anticipated to ease thereafter, equity prices are projected to rise about 10 percent on average in each of 2013 and 2014.

The CoreLogic house price index rose in May about in line with our expectations. We continue to expect that the brisk pace of house price increases observed in the first half of 2012 will slow considerably later this year, partly in response to an expected increase in foreclosure proceedings, as five large mortgage servicers make progress implementing the terms of the settlement with the State Attorneys General. In total, house prices are expected to rise 5 percent this year and then increase at the more modest average rate of about 2 percent in 2013 and 2014.

Fiscal Policy

Our fiscal policy assumptions are essentially unchanged in this forecast and continue to imply that federal fiscal policy will exert a substantial drag on economic growth in the medium term. In particular, we still assume that the temporary payroll tax cut and the EUC program will expire at the beginning of next year, as scheduled under current law. We also continue to assume that federal discretionary spending will be restrained by the caps in the Budget Control Act and by reductions in defense spending as overseas military operations are scaled back. However, the additional cuts scheduled to take effect in January 2013 under the automatic sequestration stipulated by the Budget Control Act are assumed to be replaced by more-gradual budget measures that achieve the same amount of cumulative deficit reduction through fiscal year 2021. We have also maintained our assumption that most federal tax provisions set to expire at the end of this year under current law will not, in fact, be allowed to expire, but instead will be eventually extended.[5] These provisions include the tax cuts initially enacted in 2001 and 2003, relief for most taxpayers from the alternative minimum tax, and a number of other non-stimulus-related tax reductions.

The legislative process for extending these tax cuts, along with replacing the automatic spending sequestration with deficit reduction measures that are more gradual, is likely to be contentious and protracted. Accordingly, the baseline projection envisions that the process for reaching agreement will probably involve a number of short-term

[5] In addition, we assume that the debt ceiling will be lifted in time to avert a default on the federal debt.

extensions at the end of this year and in 2013. This legislative wrangling is assumed to weigh on household and business confidence.

We continue to expect fiscal policy in the aggregate will directly restrain the rate of real GDP growth (excluding multiplier effects) by ½ percentage point this year, 1 percentage point in 2013, and ¼ percentage point in 2014. Reflecting both the assumed fiscal policy tightening and an anticipated acceleration in tax revenues as the economic recovery strengthens, the budget deficit is projected to narrow from $1.1 trillion (7¼ percent of GDP) in the current fiscal year to about $700 billion (4 percent of GDP) in fiscal 2014.

Foreign Activity and the Dollar

We estimate that foreign real GDP growth slowed to 2¼ percent in the second quarter, reflecting a deceleration in emerging market economies as well as a contraction in Europe. We continue to expect rapid fiscal consolidation and elevated financial stresses to be a major drag on real GDP growth in Europe in the near term, while activity elsewhere should expand at a moderate pace. As in the June Tealbook, we anticipate that financial tensions related to Europe will increase in the near term before starting to ease next year. This easing, in conjunction with supportive monetary conditions, should pave the way for a gradual pickup in foreign GDP growth from 2¼ percent in the second half of this year to 3¼ percent in 2014. Of course, this outlook remains quite uncertain as European policymakers still must overcome major hurdles in order to address their fiscal and banking-sector vulnerabilities.

Since the June Tealbook, the dollar is about unchanged, on net, as it appreciated against the euro but depreciated against most other currencies. We expect the dollar to appreciate into the fourth quarter of 2012, similar to our projection in the June Tealbook and in line with our assumption that the euro-area crisis is likely to worsen in the near term. Thereafter, as financial stresses begin to ease, the dollar is projected to depreciate at about a 3½ percent annual rate through the end of 2014.

Oil and Other Commodity Prices

The spot price of Brent crude oil closed at $104 per barrel on July 23, up about $8 since the time of the June Tealbook.[6] The increase follows a sharp decline from late

[6] The spot price of West Texas Intermediate (WTI) crude oil closed on July 23 at $89 per barrel, about $6 higher than at the time of the June Tealbook.

March through late June that was driven largely by greater pessimism regarding global economic growth and an easing of concerns regarding Iran. The subsequent rebound in crude oil prices appears to reflect a resurgence in tensions with Iran and increased violence in the Middle East. Brent futures prices have also moved higher, although by less than the spot price, causing the Brent futures curve to become more steeply downward sloping. Our current projection calls for the price of imported oil to gradually decline from $97 per barrel in the current quarter—a level that is over $8 higher than in the previous projection—to $85 per barrel at the end of 2014, slightly below the June Tealbook.

A broad index of nonfuel commodity prices is about unchanged from the time of the June Tealbook, as a jump in food prices about offset declining prices for industrial metals. Poor growing conditions in the United States and overseas, and consequent downward revisions to production forecasts, have pushed up prices for most field crops, with corn and soybean prices reaching record highs. In contrast, metals prices have fallen, on net, likely reflecting concerns over global growth. For the projection period, we expect nonfuel commodity prices to decline slightly.

Recent Developments and the Near-Term Outlook

Economic activity now appears to have increased at an even more modest pace during the first half of this year than we had anticipated in June, and the available indicators for the second half are a little less encouraging as well. After folding in generally softer spending data, primarily for consumption expenditures and defense outlays, we now estimate that real GDP rose at an annual rate of about 1 percent in the second quarter, compared with the 1½ percent increase we had forecast previously. The data for household spending, along with news from the employment report, capital goods orders, and the downbeat tone of the handful of indicators we have for July, led us to shave our projection for GDP growth in the second half by a little more than ¼ percentage point, to an average annual rate of about 1½ percent.

The Labor Market

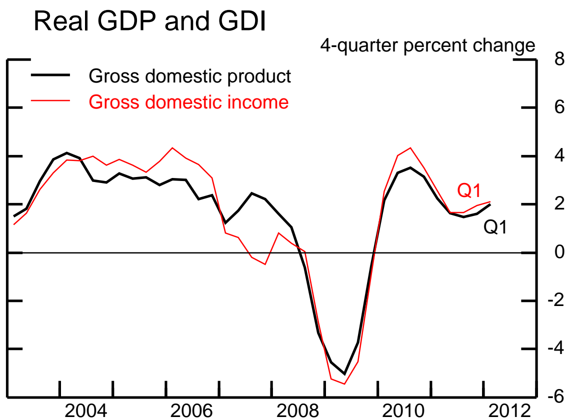
After improving significantly during the late fall and winter, conditions in the labor market have shown little to no net change over the past several months, with private payrolls posting mediocre gains and the unemployment rate leveling out. Compared with the June Tealbook, the incoming labor market news has been just a little below our expectations.

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

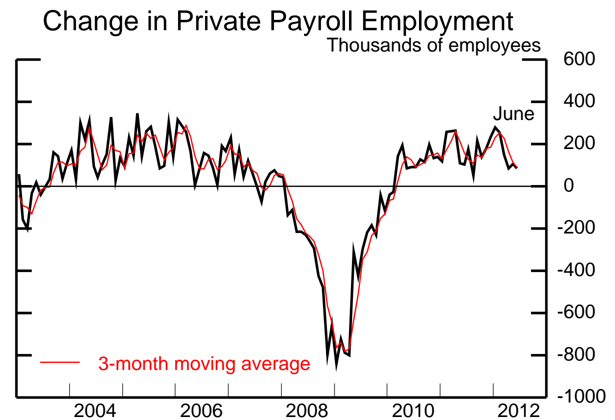
Measure	2012:Q2		2012:Q3		2012:Q4	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
Real GDP	**1.5**	**1.0**	**1.9**	**1.5**	**1.9**	**1.8**
Private domestic final purchases	2.3	1.8	2.7	2.2	2.9	2.5
Personal consumption expenditures	1.9	1.1	2.5	2.1	2.7	2.4
Residential investment	11.5	8.9	8.3	12.3	6.8	3.3
Business fixed investment	2.5	5.1	2.8	.6	3.3	3.1
Government purchases	-2.0	-3.0	-1.9	-1.4	-1.2	-1.4
Contributions to change in real GDP						
Inventory investment[1]	.2	.0	.5	.3	.1	.3
Net exports[1]	-.3	.0	-.4	-.4	-.3	-.4
Unemployment Rate[2]	**8.2**	**8.2**	**8.2**	**8.3**	**8.2**	**8.3**
PCE Chain Price Index	**.6**	**.8**	**.1**	**.8**	**1.5**	**1.5**
Ex. food and energy	1.7	1.8	1.6	1.6	1.5	1.5

1. Percentage points.
2. Percent.

Recent Nonfinancial Developments (1)



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



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

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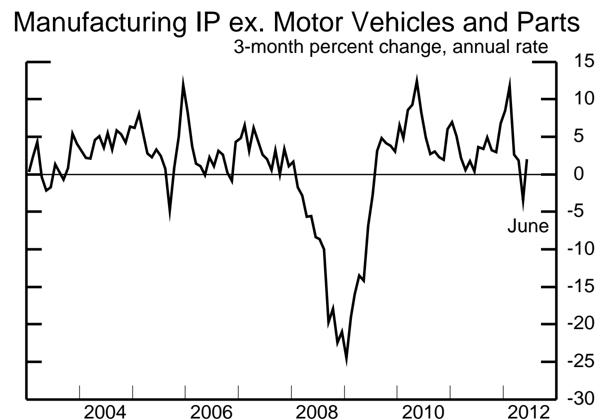


Source: Federal Reserve Board, G.17 Statistical Release, "Industrial Production and Capacity Utilization."

Private employment rose about 90,000 per month in the second quarter, well below the average gains of 225,000 per month in the first quarter. While we estimate that some of this deceleration can be explained by a payback from the warm winter weather and distortions to seasonal adjustment related to the sharp employment declines in late 2008 and early 2009, we also discern a genuine weakening in labor market conditions: Abstracting from weather and seasonal influences as well as noise in the data, the underlying pace of private payroll gains appears to have slowed from about 195,000 per month in the first quarter to about 130,000 per month in the second quarter. Meanwhile, the unemployment rate remained at 8.2 percent in June, and initial claims for unemployment insurance have continued to be in a range consistent with only modest job gains in coming months.

Taken together, the recent data on the labor market and our less favorable outlook for the broader economy have led us to weaken slightly our near-term employment forecast. We now expect the pace of private employment gains to average about 110,000 per month over the rest of the year, a little lower than our projection in the June Tealbook. We expect the unemployment rate to tick up to 8.3 percent in the second half of the year, just a bit higher than in our previous projection.

The Industrial Sector

Manufacturing production increased at an annual rate of only 1½ percent in the second quarter, a dramatic step-down from the nearly 10 percent pace registered in the first quarter. Unusually warm weather this winter and the resolution of motor vehicle supply chain disruptions related to last year's natural disasters in Japan and Thailand likely contributed to the earlier surge and subsequent pullback in factory production. Nonetheless, we think that the bulk of the slowdown represents an actual weakening of conditions in the manufacturing sector and cannot be attributed to these special factors. (For a discussion on labor market conditions in manufacturing, see the box "Skilled Labor Shortages in the Manufacturing Sector.")

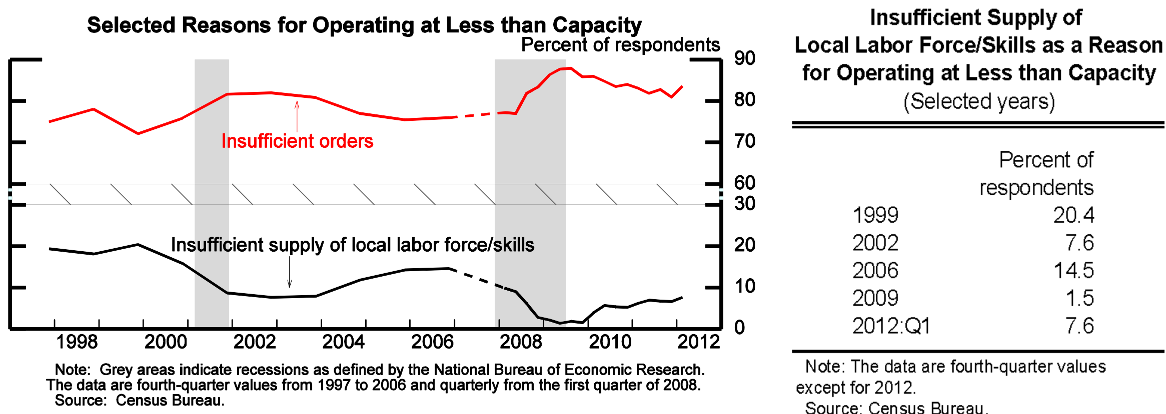
Furthermore, nearly all of the indicators of manufacturing activity in the near term have weakened in recent months. In particular, both the ISM new orders index and the average of the indexes from the regional surveys slipped below 50 in June, and the available surveys for July remain downbeat. As a result, we have revised down our near-term projection for factory output, and we now expect manufacturing production to

Skilled Labor Shortages in the Manufacturing Sector

Anecdotal reports suggest that some firms have been struggling to find sufficient numbers of skilled workers. For instance, over the past year, Beige Books have repeatedly cited this concern; the June edition mentioned "widespread reports that firms continued to face difficulty finding highly trained or skilled workers—especially in information technology, engineering, and manufacturing fields" (page vii). Here we focus on the manufacturing sector. Although manufacturing accounts for only around 11 percent of private employment, the reports of labor shortages are often specific to this sector.[1] Indeed, earlier this year, inquiries conducted by the Philadelphia and New York Federal Reserve Banks suggested that skilled labor shortages were a significant factor restraining hiring in the manufacturing sector—though slow expected growth of sales and a desire to keep costs low were the most important reasons cited.[2]

Further information about the extent of skilled labor shortages in manufacturing—and, importantly, how they have changed over time—can be seen in data from the Census Bureau's Quarterly Survey of Plant Capacity (QSPC). The QSPC, which is jointly funded by the Federal Reserve Board and the Department of Defense, provides the data used to benchmark the Federal Reserve Board's measures of manufacturing capacity. The survey asks roughly 7,500 plant managers about their plants' actual production and total sustainable productive capacities, and, when applicable, the reasons that plants are operating at less than capacity.

As shown in the figure and table below, "Insufficient supply of local labor force/skills" was cited as a factor restraining production by more than 20 percent of respondents in the late 1990s and by nearly 15 percent during the expansionary period leading up to the most recent recession.[3] The share of plant managers choosing this reason plummeted to less than 2 percent during the



Note: Grey areas indicate recessions as defined by the National Bureau of Economic Research. The data are fourth-quarter values from 1997 to 2006 and quarterly from the first quarter of 2008.
Source: Census Bureau.

Insufficient Supply of Local Labor Force/Skills as a Reason for Operating at Less than Capacity
(Selected years)

	Percent of respondents
1999	20.4
2002	7.6
2006	14.5
2009	1.5
2012:Q1	7.6

Note: The data are fourth-quarter values except for 2012.
Source: Census Bureau.

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[1] For instance, the National Association of Manufacturers stated in its *2011 Skills Gap Report* that skilled labor shortages were a pressing problem within manufacturing, but noted that "[t]his problem is not new" (p. 1).

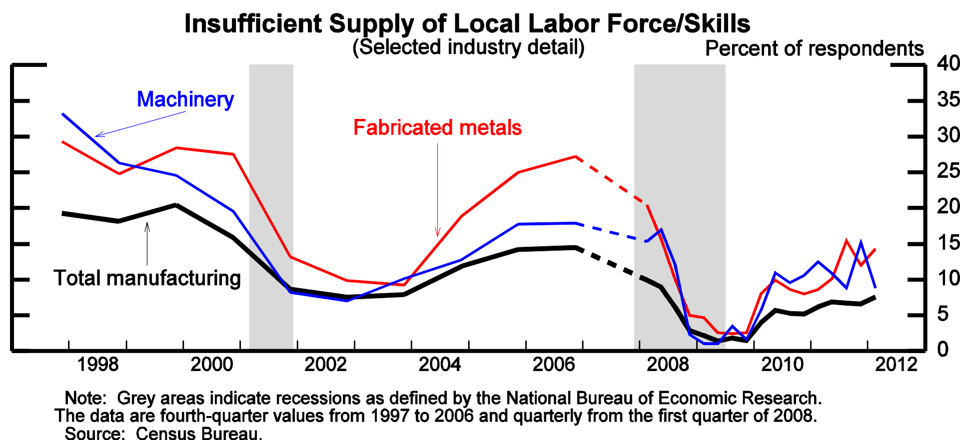
[2] "Cannot find workers with required skills" was the third most frequently named factor in the case of New York (40 percent of respondents) and fourth in the case of Philadelphia (28 percent). These figures are higher than in similar inquiries conducted in early 2011; unfortunately, comparisons are not available for periods before the most recent recession, when the labor market was tighter.

[3] The responses are weighted by plant size; unweighted results are similar.

recession. The share reporting that skills shortages were a restraint on production has moved up somewhat since then: As of the first quarter of this year, the proportion had risen to 7½ percent. Nevertheless, this share remains below its historical average, and moreover, it is consistent with a regression-based prediction using the unemployment rate and the manufacturing capacity utilization rate. Both historically and currently, the dominant reason cited by plant managers for operating at less than capacity has been "Insufficient orders" (the red line in the figure); this reason was chosen by 83 percent of respondents in the first quarter of this year and remains above its long-run average.[4]

Even when the QSPC data are disaggregated to the level of major industries within the manufacturing sector, they suggest that skilled labor shortages are not a major factor restraining production. The figure below presents results for two industries that are frequently mentioned in press reports as facing labor shortages: machinery and fabricated metals. Plant managers in these industries historically have been significantly more likely than other managers to report that skilled labor shortages are restraining production. However, even for these two industries, the share of survey respondents in recent quarters who cited skilled labor shortages as a reason for operating below capacity has remained well below the share before the recession.

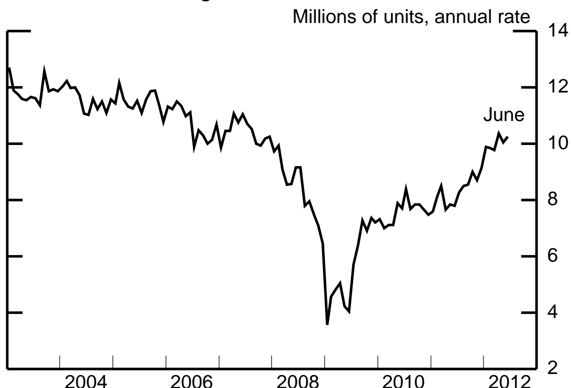
All told, while some skilled labor shortages are being reported in the manufacturing sector, the extent to which these shortages are restraining production appears about in line with the current weakness in the labor market and the degree of slack in the manufacturing sector. Furthermore, the finding that skilled labor shortages are not a significant and widespread restraint on production is consistent with recent subdued increases in manufacturing wages.



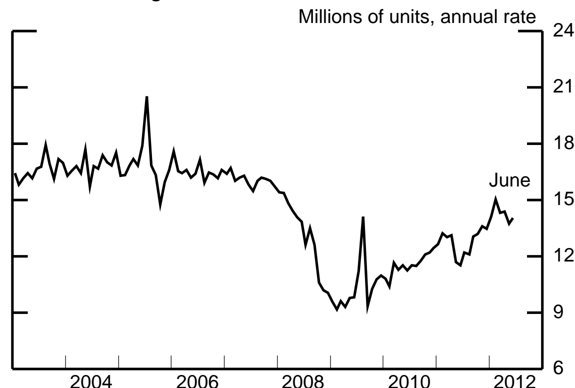
Note: Grey areas indicate recessions as defined by the National Bureau of Economic Research. The data are fourth-quarter values from 1997 to 2006 and quarterly from the first quarter of 2008.
Source: Census Bureau.

[4] In addition to "Insufficient orders" and "Insufficient supply of local labor force/skills," the other choices are: "Not most profitable to operate at capacity," "Sufficient inventory of finished goods on hand," "Insufficient supply of materials," "Equipment limitations," "Seasonal operations," "Lack of sufficient fuel or electrical energy," "Storage limitations," "Logistics/transportation constraints," "Strike or work stoppage," and "Environmental restrictions." Respondents may choose as many factors as are applicable.

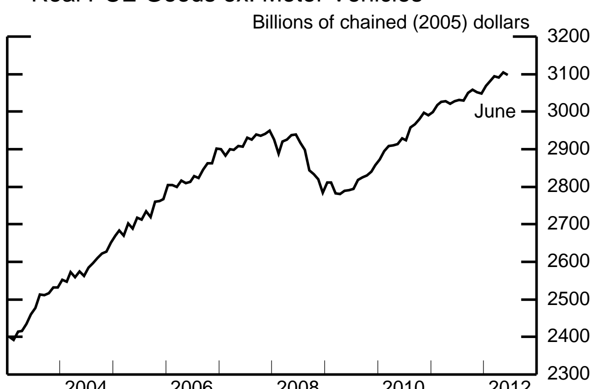
Recent Nonfinancial Developments (2)



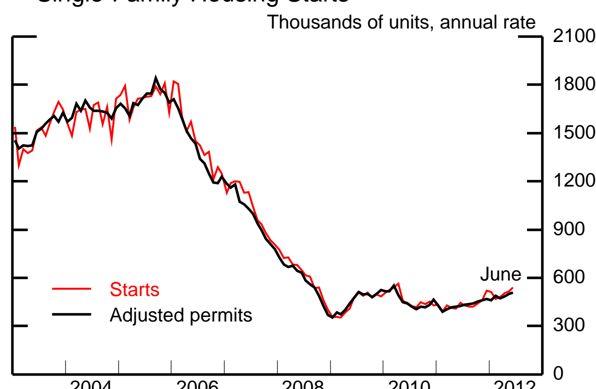
Source: Ward's Auto Infobank.



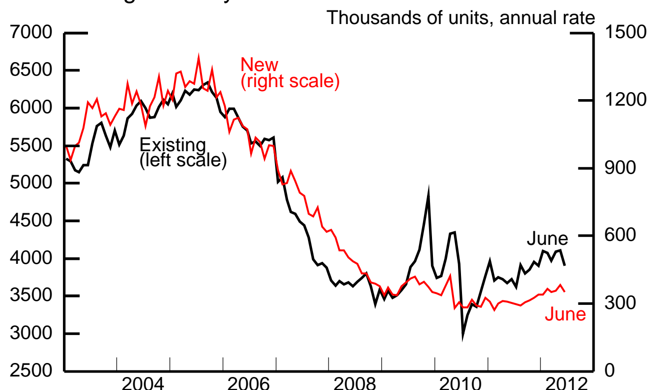
Source: Ward's Auto Infobank.



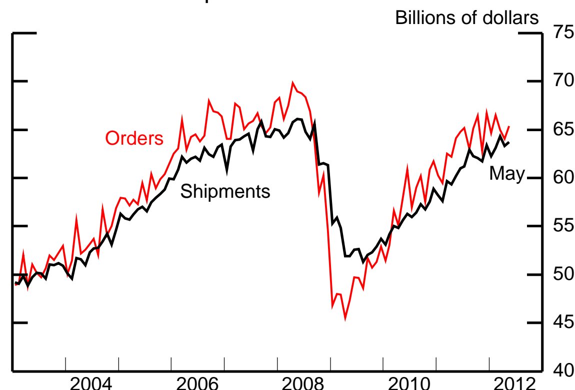
Note: Figures for April, May, and June 2012 are staff estimates based on available source data.
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.



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



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



Source: U.S. Census Bureau.

increase at an annual rate of 1¾ percent in the second half of this year, more than 1 percentage point below the pace projected in the June Tealbook.

Household Spending

After having risen at an annual rate of 2½ percent in the first quarter, real PCE is estimated to have increased only 1 percent last quarter, noticeably less than projected in the June Tealbook. If not for a rebound in spending on energy services following the unusually mild winter, the slowdown would have been still more pronounced. To be sure, a decline in outlays for motor vehicles, a volatile component of spending, was an important part of the second-quarter deceleration, and we expect a rebound in this category in the second half. Still, with consumer sentiment downbeat and the incoming news on retail sales weaker than expected, we have marked down our projection of real PCE growth about ¼ percentage point over the second half of this year, to an annual rate of 2¼ percent.

We estimate that real disposable personal income (DPI) accelerated in the second quarter to an annual rate of 2½ percent after having barely increased over the preceding year. The sharp drop in consumer energy prices following their first-quarter increases played an important role in last quarter's acceleration. Declining energy prices and ongoing growth in nominal income should continue to boost households' purchasing power in the second half. With weak consumer spending data and firming real income, the personal saving rate, which had fallen to a surprisingly low level in the first quarter, has edged up in recent months, a trend we expect to continue in the second half.

Housing activity appears to be on a gradual uptrend, albeit from a very depressed level. Smoothing as best we can through the volatility associated with the unseasonably warm weather last winter, single-family housing starts and permits look to have moved up a little from their levels late last year. In addition, some signs indicate that housing demand is slowly improving: Both new and existing home sales have edged up over the past year, on balance, and—as was noted earlier—measures of house prices have turned up since the beginning of the year. Nonetheless, given the ongoing restraint on demand from difficult credit conditions and uncertainty about employment and income prospects, as well as the likelihood that the still-abundant stock of relatively inexpensive vacant houses will continue to divert demand from new construction, we project that single-family starts will increase only slightly over the rest of the year.

In contrast, construction activity in the multifamily sector has picked up more rapidly than in the single-family sector in the past several years, likely in response to rising rents and falling vacancy rates, as many of the factors restraining home purchases have increased demand for rental units. We expect these conditions to persist, and so we project that multifamily starts will continue to move up in coming months.

Business Investment

After rising at a modest annual rate of 3½ percent in the first quarter, real business spending on equipment and software (E&S) appears to have risen at an annual rate of nearly 7 percent in the second quarter. However, we view the second-quarter pace as unlikely to be sustained: Over the past three months, new orders for capital goods have declined noticeably and the backlog of unfilled orders has decelerated sharply. Moreover, forward-looking indicators of business investment have also softened in recent months, partly reflecting concerns about the situation in Europe. Notably, indexes from various recent surveys of business conditions have dropped to low levels and analysts' earnings expectations for capital goods producers have deteriorated. As a result, we have trimmed our forecast for the increase in E&S spending over the second half of this year to an annual rate of less than 3 percent, 2 percentage points less than in the June Tealbook.

Following a period of surprising strength through much of 2011, spending on nonresidential construction (excluding drilling and mining) rose at a more moderate pace in the first half of this year, a deceleration in line with the sector's weak fundamentals. Although there are hints of some easing in financing conditions for existing commercial real estate, we anticipate that high vacancy rates, low commercial real estate prices, and difficult financing conditions for new construction will continue to put downward pressure on building activity for the foreseeable future. Meanwhile, investment in the drilling and mining sector appears to have turned down in the first half of 2012 following the brisk increases seen in 2010 and 2011. This downturn is probably related to the sizable decline in natural gas prices over the past year. Outlays for drilling and mining structures are expected to edge up some, on balance, over the rest of the year as natural gas prices have recently moved back up somewhat.

Firms in the nonfarm business sector appear to have accumulated inventories in the first half of this year at a moderate pace, only a little above that in the fourth quarter of last year. Available estimates from the staff's flow-of-goods system, book-value measures of the inventory-to-sales ratio, reports on dealer inventories of motor vehicles,

and surveys of inventory satisfaction and plans all indicate that overall inventory stocks are fairly well aligned with sales. With producers thought to be apprehensive about the sustainability of the recovery, we expect the pace of stockbuilding to rise slowly and to contribute only modestly to real GDP growth over the rest of the year.

Government

We estimate that real federal purchases fell at an annual rate of 4½ percent in the second quarter, a steeper decline than we had anticipated in the June Tealbook. In the second half of the year, we anticipate that the downtrend in these expenditures will slow to a 2½ percent rate—a pace we judge to be more in line with budget appropriations. Purchases by state and local governments have also continued to contract. We estimate that real state and local purchases fell at an annual rate of 2 percent in the second quarter, but we expect that these expenditures will only edge down in the second half, as the declines in both the payrolls and construction spending of these governments moderate. Taken together, federal, state, and local purchases are expected to subtract ½ percentage point from the rate of real GDP growth this year.

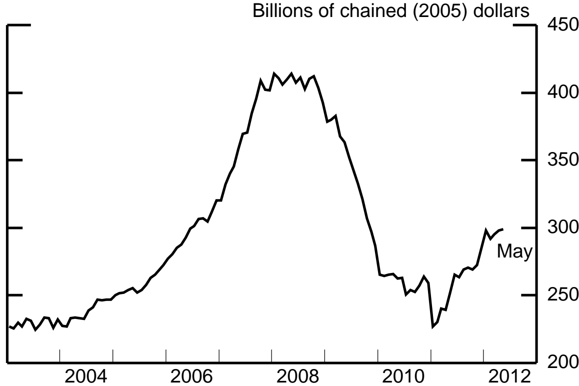
Foreign Trade

Real exports of goods and services are estimated to have increased at an annual rate of 4½ percent in the second quarter, supported by both moderate growth in emerging market economies and previous dollar depreciation. Over the second half of this year, we expect real export growth to move down to a 3¼ percent pace, as the dollar rises and the positive effect of previous declines fades. Meanwhile, real imports are estimated to have increased 3¼ percent in the second quarter of this year; this estimate is 1¼ percentage points lower than in the June Tealbook, mainly due to a large downward revision to our estimate of oil imports. Over the second half of 2012, we expect real import growth to step up to an average pace of 4¾ percent, boosted by the rising dollar over the remainder of this year. All told, net exports are now estimated to have been neutral for real GDP growth in the second quarter, an upward revision of about ¼ percentage point relative to the June Tealbook, but we anticipate that they will subtract about ½ percentage point from real GDP growth in the second half of the year, roughly unchanged from the June projection.

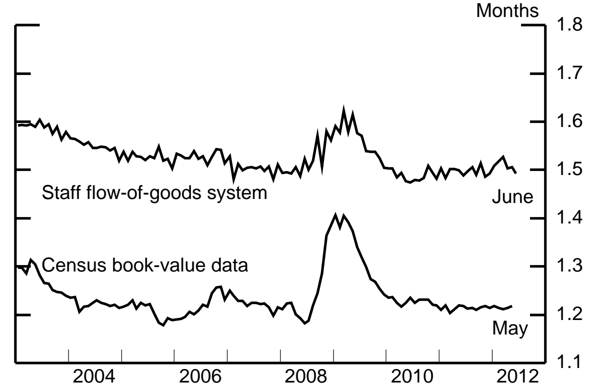
Prices and Wages

The incoming data on inflation have generally been close to our expectations, and we continue to estimate that total PCE price inflation stepped down from an annual rate

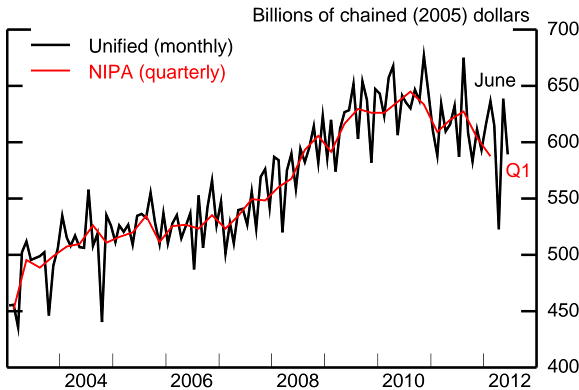
Recent Nonfinancial Developments (3)



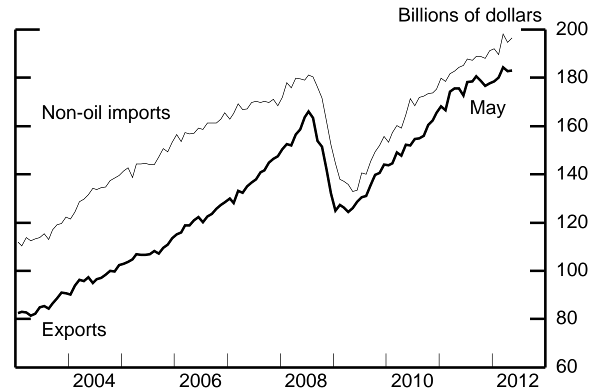
Source: U.S. Census Bureau.



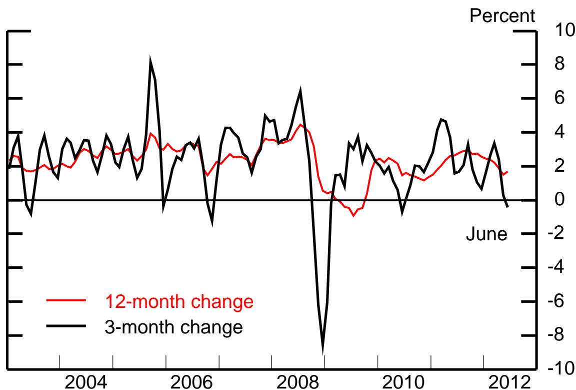
Note: Flow-of-goods system covers total industry ex. motor vehicles and parts, and inventories are relative to consumption. Census data cover manufacturing and trade ex. motor vehicles and parts, and inventories are relative to sales.
Source: U.S. Census Bureau; staff calculation.



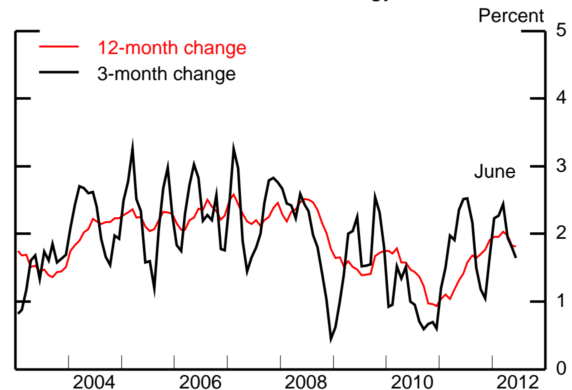
Note: The unified series is seasonally adjusted and deflated by BEA prices. The NIPA series excludes the consumption of fixed capital.
Source: *Monthly Treasury Statement*; U.S. Dept. of Commerce, Bureau of Economic Analysis.



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



Note: 3-month changes are at an annual rate. April, May, and June 2012 are staff estimates.
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.



Note: 3-month changes are at an annual rate. April, May, and June 2012 are staff estimates.
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

of 2½ percent in the first quarter to around ¾ percent in the second quarter, largely reflecting the sharp drop in energy prices in the spring. In the current quarter, we anticipate that consumer prices will again rise at a ¾ percent pace, up somewhat from the June Tealbook because the partial rebound in oil prices in recent weeks points to a less dramatic decline in gasoline prices. Later this year, a flattening in retail energy prices and a pickup in PCE food price inflation are expected to push total PCE inflation back up to about 1½ percent.

Lower-than-expected data on consumer food prices in May led us to revise down our estimate for PCE food price inflation in the second quarter to an annual rate of just ¾ percent. However, grain prices rose rapidly in late June and early July as a wide swath of the country was scorched by hot, dry weather, which cut the USDA's projections of crop yields considerably. Compared with its level at the time of the June Tealbook, a weighted average of crop-related futures prices is currently about 25 percent higher; an average of projected livestock prices also has increased, though by much less. Typically, the immediate pass-through of farm commodity price increases into PCE food prices is limited, and our third-quarter projection is only a little higher than in the June Tealbook. However, we anticipate that the pass-through will pick up steam in the fourth quarter, with retail food prices increasing at an annual rate of 3¼ percent, an upward revision of about 1¾ percentage points from the June Tealbook. Still, given the relatively small weight of food prices in overall inflation, this upward revision has only a minor effect on total consumer price inflation.

Core PCE price inflation was boosted in the first quarter by a transitory jump in the price increases of both core goods and services in January; since then, these prices have risen at a more subdued pace, consistent with our estimate that the annual rate of core price inflation was 1¾ percent in the second quarter. We expect core PCE inflation to edge down further to an annual rate of 1½ percent over the second half of 2012, as core goods prices decelerate in line with the slowing in import and commodity prices. The slightly slower pace of core inflation in the second half is consistent with the recent downturn in the price index for core intermediate materials, which fell at an annual rate of 3 percent over the three months ending in June.

Regarding wages, following two quarters of being essentially flat, compensation per hour in the nonfarm business sector is estimated to have increased at an annual rate of 2 percent in the second quarter, close to our expectations in the June Tealbook. We

project that hourly compensation will rise during the second half of this year at roughly that same pace.

THE MEDIUM-TERM OUTLOOK

Although our near-term outlook has softened, our medium-term projection for GDP growth has changed little since the June Tealbook, in large part because we have taken on board the extension of the MEP. After increasing 1½ percent this year, real GDP is projected to rise 2 percent next year and 3¼ percent in 2014. As before, the modest acceleration in real GDP is supported by further expected improvements in financial conditions, an eventual easing of the financial crisis in Europe, and rising household and business confidence in the durability of the recovery. While the tightening of fiscal policy is anticipated to impose a substantial drag on economic growth in 2013, these effects are expected to ease considerably in 2014. A number of other factors also still weigh on the outlook, including tight credit in some markets, an overhang of vacant homes restraining housing activity, and subdued foreign demand. As a result, the projected recovery remains subpar, and we anticipate that the jobless rate will not drop below 8 percent until 2014—when real GDP finally starts to grow materially faster than potential.

Part of the fiscal restraint in our projection for real GDP growth shows up directly as declines in government purchases. As in our previous projection, real federal purchases are anticipated to drop more than 4 percent in both 2013 and 2014, reflecting the expected effects of the Budget Control Act and a further drawdown of overseas military operations. The recovery in the purchases of state and local governments is projected to be quite slow, as fiscal conditions in the sector are likely to remain tight for some time, partly reflecting the relatively slow pace of the broader economic recovery. Although state tax revenues have been rising at a reasonable rate, local taxes, which are dominated by property taxes, have been stagnant, and the stimulus-related federal grants have essentially ended. As a consequence, real state and local purchases are expected to just edge up in 2013 and to rise at only a tepid pace in 2014.

The large fiscal drag we expect next year also shows through indirectly in other categories of aggregate spending. In particular, the anticipated expiration of the temporary payroll tax cut and the EUC program at the end of this year impart significant restraint on consumer spending next year. Nonetheless, real PCE growth is expected to expand 2¼ percent next year, supported by, among other factors, a rebound in household

confidence that is expected to accompany the easing in financial conditions once the situation in Europe begins to resolve and the threat of a domestic fiscal calamity recedes. In 2014, we project that consumer spending will accelerate further, as fiscal restraint ebbs, employment prospects improve, and household net worth continues to rise.

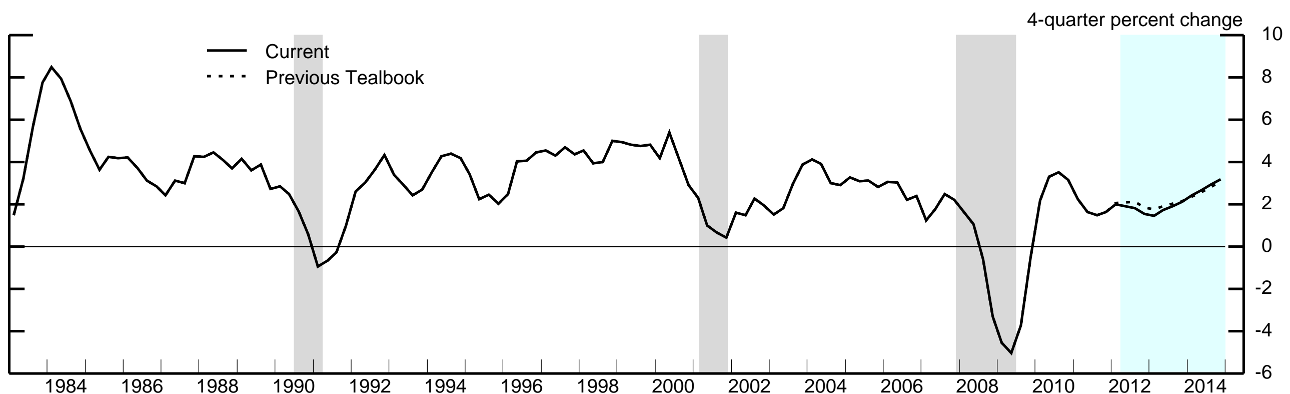
Real exports are projected to increase a subdued 3¾ percent next year, held back by weak demand from the advanced foreign economies—notably Europe—before stepping up to a 5½ percent pace in 2014, boosted by increasing foreign growth and a depreciating dollar. Meanwhile, real imports are expected to rise at an average pace of 4½ percent in 2013 and 2014. Overall, net trade is expected to make a small negative contribution to growth in 2013 and then be a neutral factor in 2014, about the same as in the previous projection.

With sluggish demand emanating from the government, consumer, and foreign sectors, businesses likely see little reason to expand capacity significantly. Despite the fact that large firms have ample cash on hand, we project that the business sector as a whole will remain cautious until the recovery is clearly on a stronger footing. We therefore expect expenditures on E&S to strengthen only gradually over the medium term, to an average annual rate of 5¾ percent in 2013 and 2014, similar to our previous projection. These same factors, along with persistently high vacancy rates, are restraining investment in structures (other than drilling and mining). As a result, we still foresee small declines through next year and only small gains in 2014. In contrast, investment in drilling and mining is expected to turn back up over the medium term following this year's retreat, as the continued deployment of horizontal drilling techniques should keep spending growth in this sector at respectable rates.

We continue to expect the recovery in housing construction to be slow. Ordinarily, historically low mortgage rates would be expected to provide a substantial boost to home purchases and to new construction over the medium term. However, this impetus is likely to continue to be markedly attenuated by ongoing difficulties for many households in accessing mortgage credit and by persistent uncertainty about job and income prospects. In addition, the flow of homes from foreclosure into the resale market is expected to remain substantial, keeping the stock of vacant houses at a high level and thus limiting the demand for new construction. Accordingly, we project single-family housing starts to move up only gradually over the forecast period to a little over 650,000

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

Measure	2011	2012 H1	2012 H2	2013	2014
Real GDP	**1.6**	**1.4**	**1.6**	**2.1**	**3.2**
Previous Tealbook	1.6	1.8	1.9	2.2	3.1
Final sales	1.5	1.4	1.3	1.8	3.0
Previous Tealbook	1.5	1.6	1.6	1.9	2.9
Personal consumption expenditures	1.6	1.8	2.3	2.2	3.3
Previous Tealbook	1.6	2.4	2.6	2.3	3.2
Residential investment	3.5	14.3	7.7	10.0	11.2
Previous Tealbook	3.5	15.5	7.5	10.2	10.8
Nonresidential structures	4.4	1.2	-.6	.8	1.6
Previous Tealbook	4.4	.1	-1.7	.7	2.1
Equipment and software	9.6	5.2	2.7	4.6	6.7
Previous Tealbook	9.6	3.6	4.9	5.6	5.9
Federal purchases	-3.2	-5.2	-2.5	-4.1	-4.2
Previous Tealbook	-3.2	-4.3	-3.1	-4.1	-4.2
State and local purchases	-2.5	-2.3	-.6	.4	1.3
Previous Tealbook	-2.5	-2.1	-.5	.5	1.3
Exports	4.7	4.3	3.2	3.7	5.6
Previous Tealbook	4.7	4.0	3.4	3.7	5.5
Imports	3.6	3.0	4.8	4.1	4.7
Previous Tealbook	3.6	3.7	5.0	4.2	4.5
	Contributions to change in real GDP (percentage points)				
Inventory change	.1	.1	.3	.3	.2
Previous Tealbook	.1	.2	.3	.3	.2
Net exports	.0	.1	-.4	-.2	-.1
Previous Tealbook	.0	-.1	-.4	-.2	.0

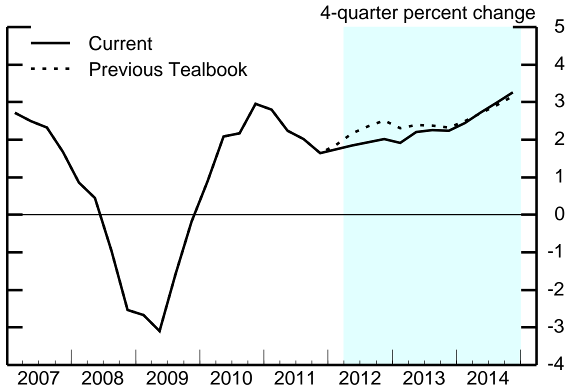


Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

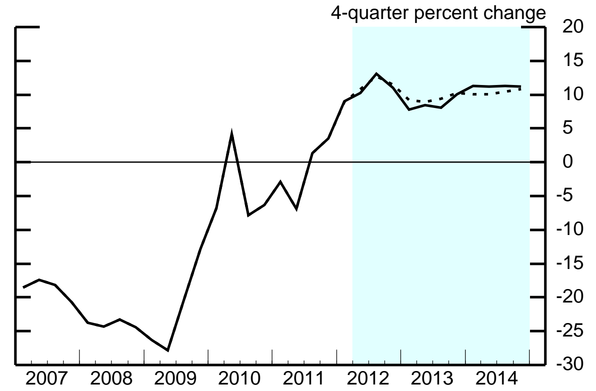
Domestic Econ Devel & Outlook

Components of Final Demand

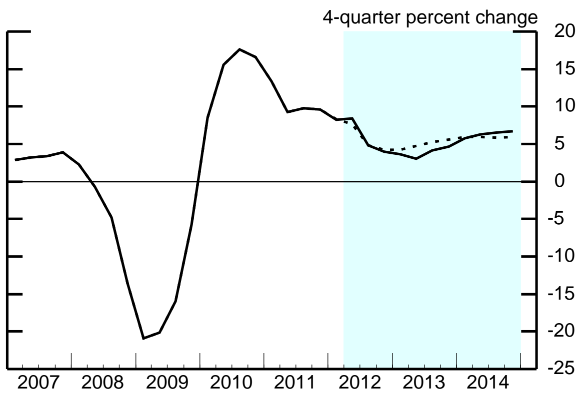
Personal Consumption Expenditures



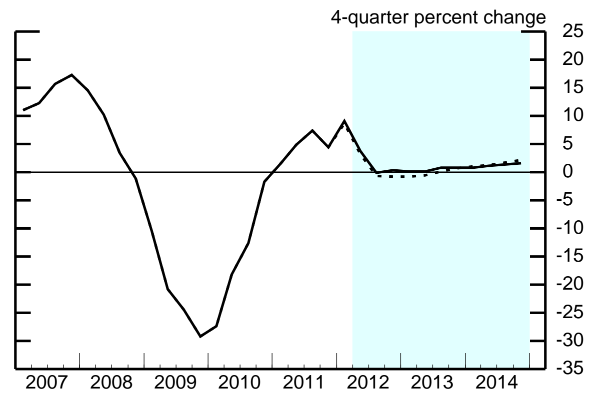
Residential Investment



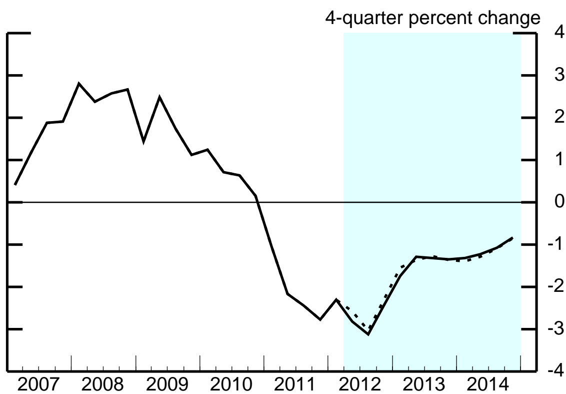
Equipment and Software



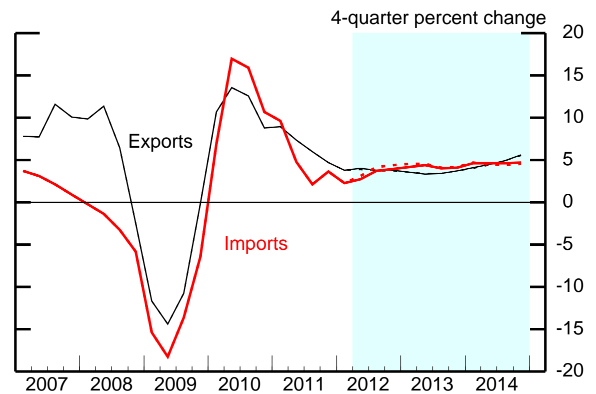
Nonresidential Structures



Government Consumption & Investment



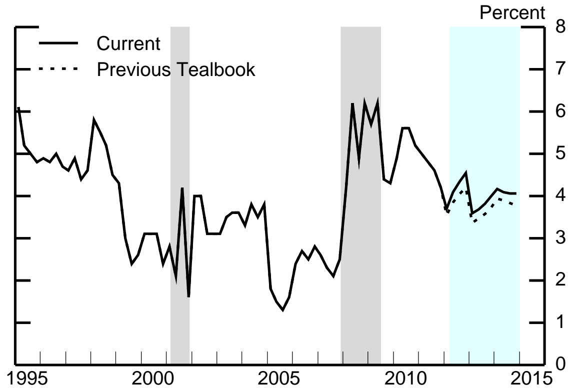
Exports and Imports



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

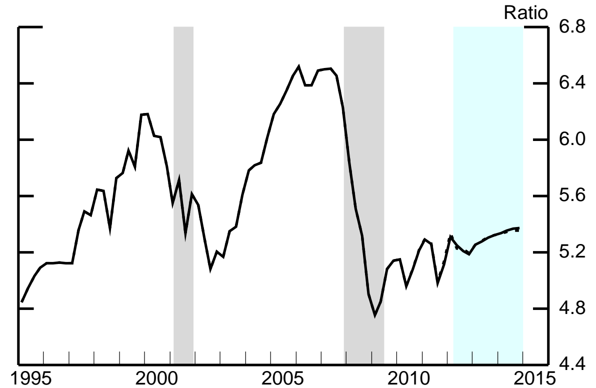
Aspects of the Medium-Term Projection

Personal Saving Rate



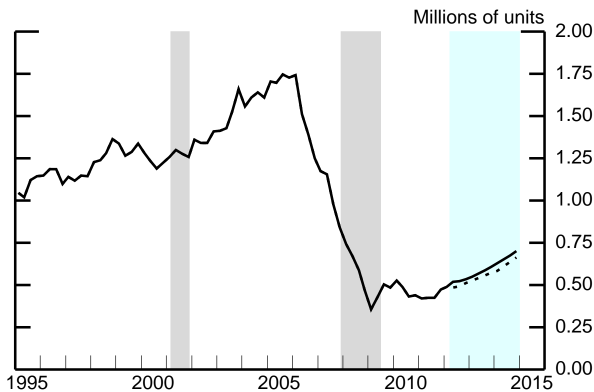
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Wealth-to-Income Ratio



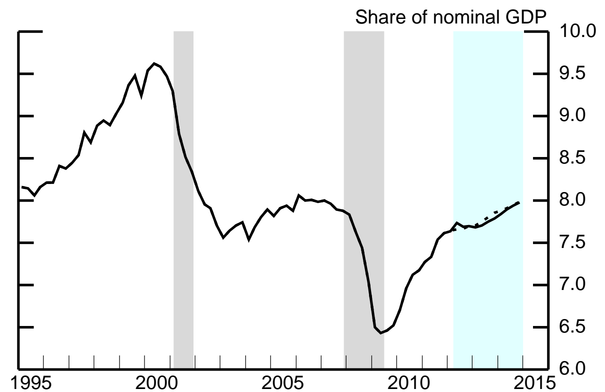
Note: Household net worth as a ratio to disposable personal income.
Source: For net worth, Federal Reserve Board, flow of funds data; for income, Dept. of Commerce, Bureau of Economic Analysis.

Single-Family Housing Starts



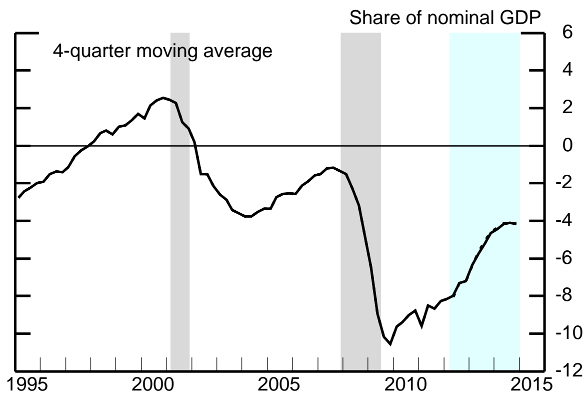
Source: U.S. Census Bureau.

Equipment and Software Spending



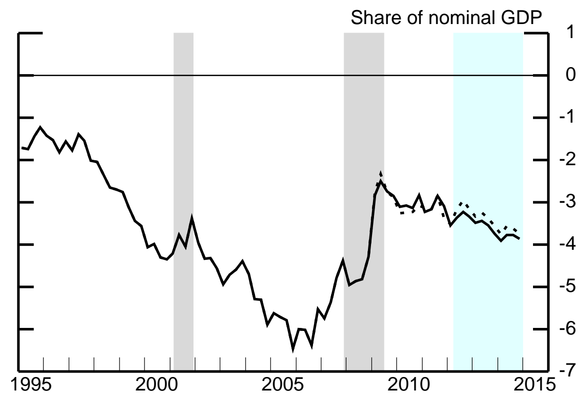
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

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.

units in 2014, still around half of the average rate over the past 40 years and little changed from our June projection.

AGGREGATE SUPPLY, THE LABOR MARKET, AND INFLATION

Potential GDP and the NAIRU

We have made no changes to our estimates of aggregate supply in this projection. We continue to assume that potential GDP will increase roughly 2 percent through 2014, and we have retained our assumption that the NAIRU will remain at 6 percent over that period.[7]

The Labor Market

Although we expect the pace of private employment growth to rebound some from the slow pace in the second and third quarters, private job gains are anticipated to remain subdued, averaging only about 120,000 per month in 2013, a bit less than in our June forecast. With this subpar rate of job creation, it is only the expiration of the EUC program—and the accompanying exit of those individuals who remained in the labor force to maintain eligibility for benefits—that induces the unemployment rate to drift down at all, from 8¼ percent currently to 8 percent by the end of 2013. In 2014, stronger growth in aggregate demand pushes up job gains to 200,000 per month and reduces the unemployment rate to 7¾ percent by the end of that year, roughly the same level as in the June Tealbook.

Resource Utilization

As in our previous projection, labor market slack remains substantial throughout our medium-term forecast, with the unemployment rate still 1¾ percentage points above our estimate of the NAIRU at the end of 2014. Likewise, our estimate of the output gap only narrows materially in 2014, ending the projection at negative 3½ percent.

Unlike the staff's measure of potential GDP, which directly incorporates trends in labor input, our concept of capacity for the industrial sector focuses on the capability of plants to produce with the equipment that is in place and ready to operate; it does not take account of the potential workforce, either inside the industrial sector or outside of it.

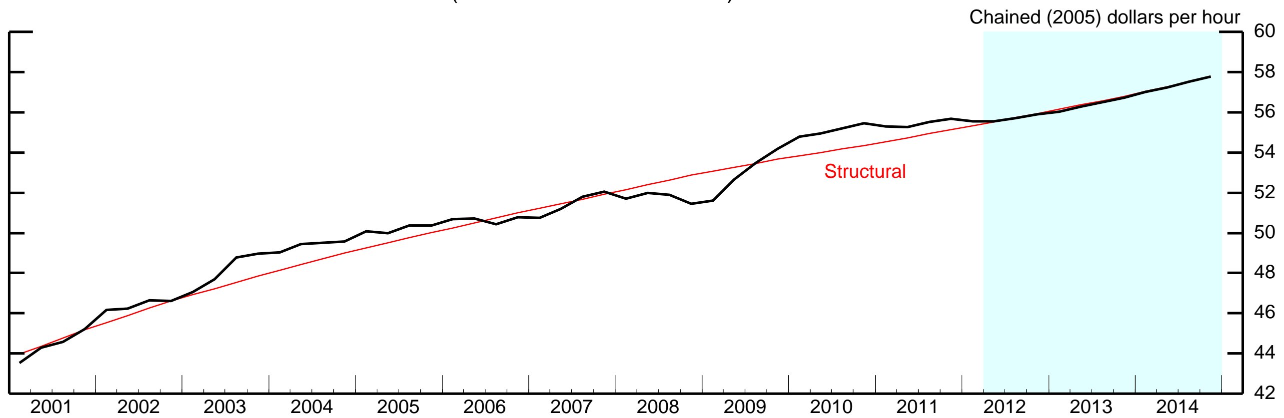
[7] We estimate that the boost to the "effective" NAIRU from the emergency and extended unemployment insurance programs has diminished and is worth only about ¼ percentage point at present. The gap between the two measures is expected to close completely next year as these programs are fully wound down.

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

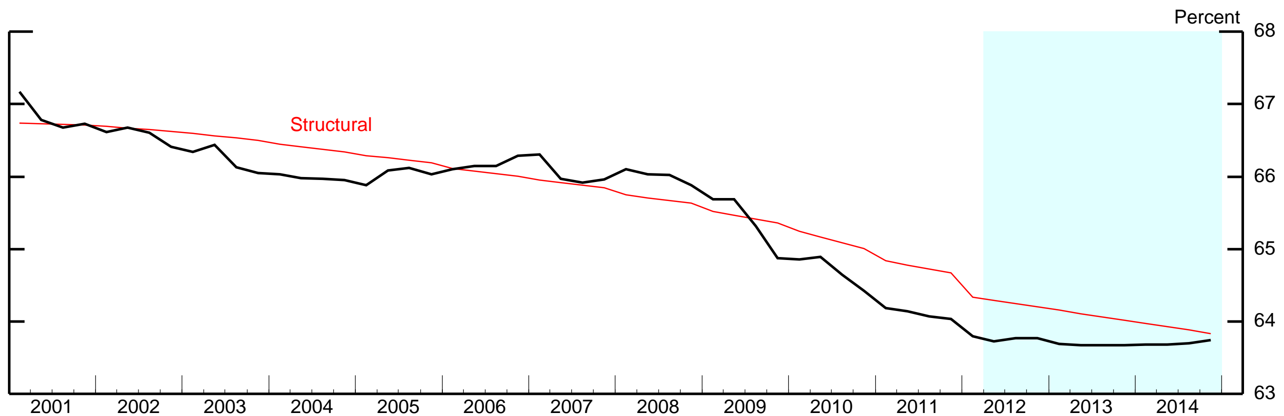
Measure	1974-1995	1996-2000	2001-2010	2011	2012	2013	2014
Potential real GDP	3.0	3.4	2.2	1.7	1.8	2.0	2.1
Previous Tealbook	3.0	3.4	2.2	1.7	1.8	2.0	2.1
Selected contributions[1]							
Structural labor productivity	1.4	2.6	2.2	1.5	1.4	1.6	1.7
Previous Tealbook	1.4	2.6	2.2	1.5	1.4	1.6	1.7
Capital deepening	.7	1.5	.7	.5	.5	.6	.7
Previous Tealbook	.7	1.5	.7	.5	.5	.6	.7
Multifactor productivity	.5	.8	1.2	.8	.8	.9	.9
Previous Tealbook	.5	.8	1.2	.8	.8	.9	.9
Structural hours	1.5	1.0	.6	.5	.6	.6	.6
Previous Tealbook	1.5	1.0	.6	.5	.6	.6	.6
Labor force participation	.4	.0	-.3	-.4	-.3	-.3	-.3
Previous Tealbook	.4	.0	-.3	-.4	-.3	-.3	-.3

Note: Components may not sum to totals because of rounding. 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.

Structural and Actual Labor Productivity
(Nonfarm business sector)



Structural and Actual Labor Force Participation Rate



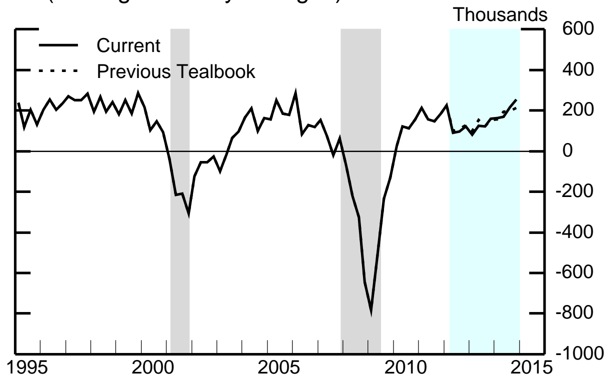
Source: U.S. Department of Labor, Bureau of Labor Statistics; Bureau of Economic Analysis; and staff assumptions.

The Outlook for the Labor Market and Resource Utilization
(Percent change from final quarter of preceding period)

Measure	2011	2012		2013	2014
		H1	H2		
Output per hour, nonfarm business	.4	-.5	1.3	1.5	1.8
Previous Tealbook	.4	.2	.7	1.5	1.8
Nonfarm private employment[1]	175	159	110	122	200
Previous Tealbook	175	163	118	132	190
Labor force participation rate[2]	64.0	63.7	63.8	63.7	63.7
Previous Tealbook	64.0	63.7	63.7	63.7	63.7
Civilian unemployment rate[2]	8.7	8.2	8.3	8.1	7.8
Previous Tealbook	8.7	8.2	8.2	8.0	7.7
Memo:					
GDP gap[3]	-4.5	-4.7	-4.8	-4.6	-3.6
Previous Tealbook	-4.5	-4.5	-4.5	-4.3	-3.4

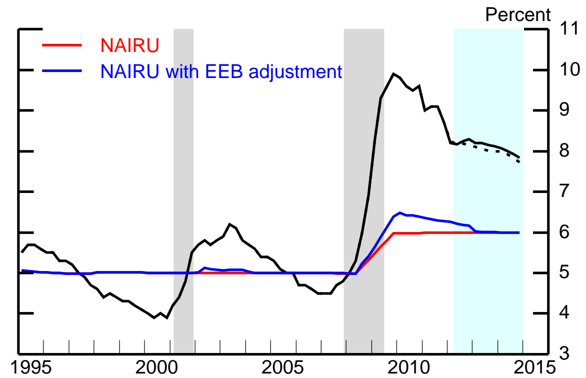
1. Thousands, average monthly changes.
2. Percent, average for the final quarter in the period.
3. Percent difference between actual and potential GDP in the final quarter of the period indicated. A negative number indicates that the economy is operating below potential.
Source: U.S. Department of Labor, BLS; staff assumptions.

Nonfarm Private Employment
(Average monthly changes)



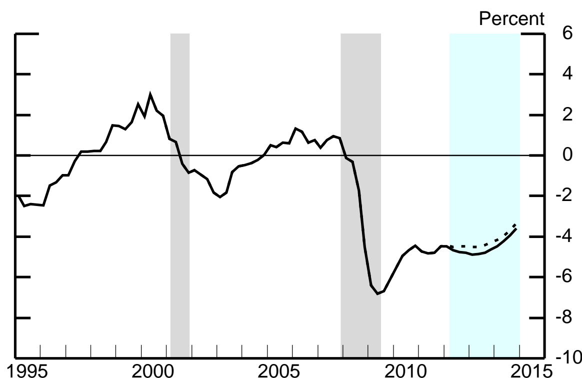
Source: U.S. Dept. of Labor, BLS.

Unemployment Rate



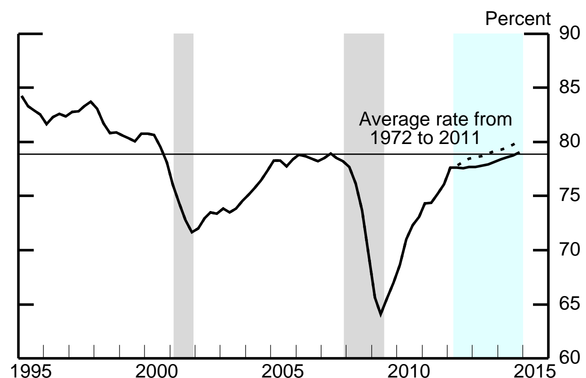
Note: The EEB adjustment is the staff estimate of the effect of extended and emergency unemployment compensation programs on the NAIRU.
Source: U.S. Dept. of Labor, BLS; staff assumptions.

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."

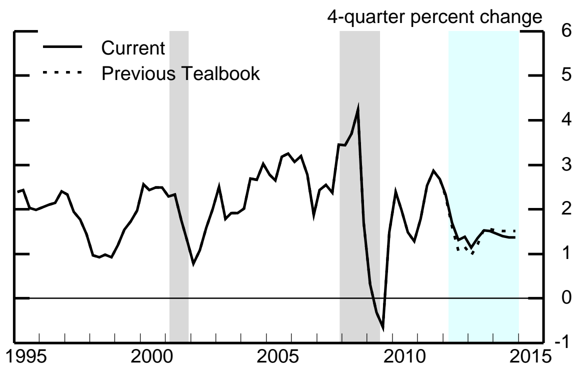
Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

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

Measure	2011	2012		2013	2014
		H1	H2		
PCE chain-weighted price index	2.7	1.7	1.1	1.5	1.4
Previous Tealbook	2.7	1.5	.8	1.5	1.5
Food and beverages	5.2	1.0	2.7	2.4	.9
Previous Tealbook	5.2	1.4	1.6	1.5	1.4
Energy	12.8	-3.4	-6.7	-1.2	-1.7
Previous Tealbook	12.8	-4.8	-10.1	.7	-.4
Excluding food and energy	1.8	2.1	1.5	1.6	1.6
Previous Tealbook	1.8	1.9	1.5	1.6	1.6
Prices of core goods imports[1]	4.3	1.1	-.5	1.1	1.4
Previous Tealbook	4.3	1.2	-1.0	1.4	1.6

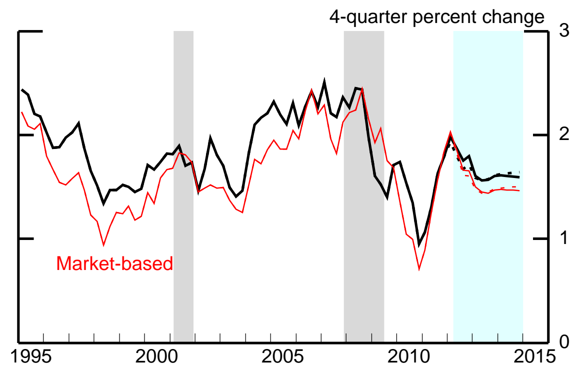
1. Core goods imports exclude computers, semiconductors, oil, and natural gas.
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Total PCE Prices



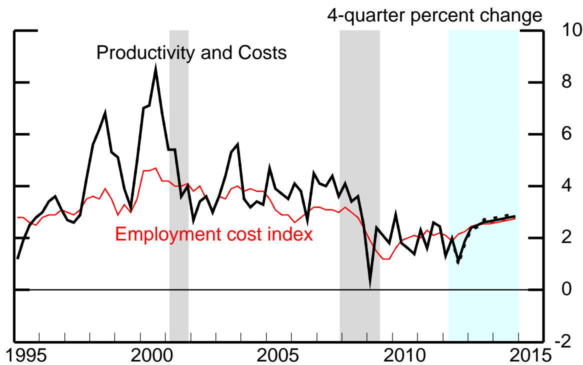
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

PCE Prices ex. Food and Energy



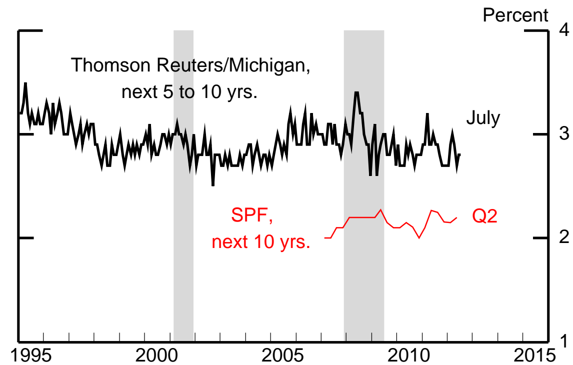
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Compensation per Hour



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

Long-Term Inflation Expectations



Note: The Survey of Professional Forecasters (SPF) projection is for the PCE price index.
Source: Thomson Reuters/University of Michigan Surveys of Consumers; Federal Reserve Bank of Philadelphia.

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

From the end of 2007 through 2010, factory capacity plunged about 6 percent. As a result, resource utilization in the industrial sector is currently higher than in the broader economy; indeed, capacity utilization in the manufacturing sector in June was 77.7 percent, only about 1 percentage point below its long-run average rate. Our projection calls for the factory operating rate to rise gradually over the projection period, reaching its long-run average by the end of 2014 despite a still-sizable GDP gap.

Prices and Compensation

We expect inflation to remain low and steady over the medium term. The stability of inflation expectations in recent years, which we expect to continue in the projection period, is one important factor underpinning our inflation trajectory. Readings on longer-term inflation expectations have remained little changed since the previous Tealbook. The median 5-to-10-year-ahead inflation expectation from the Michigan survey stood at 2.8 percent in July, well within the narrow range seen over the last few years. The TIPS-based measure of inflation compensation for the next 5 years is about unchanged since the Tealbook, and the corresponding measure for 5-to-10 years ahead is down about 20 basis points.

Import prices are another factor that we expect to contribute to continued low inflation, especially in the second half of this year when the lagged effects of a rising dollar and previous declines in commodity prices are expected to lead to a decline in core import prices. In 2013 and 2014, core import price inflation is expected to rise to an annual rate of just 1¼ percent, consistent with our projection for modest dollar depreciation and a relatively flat trajectory for commodity prices.

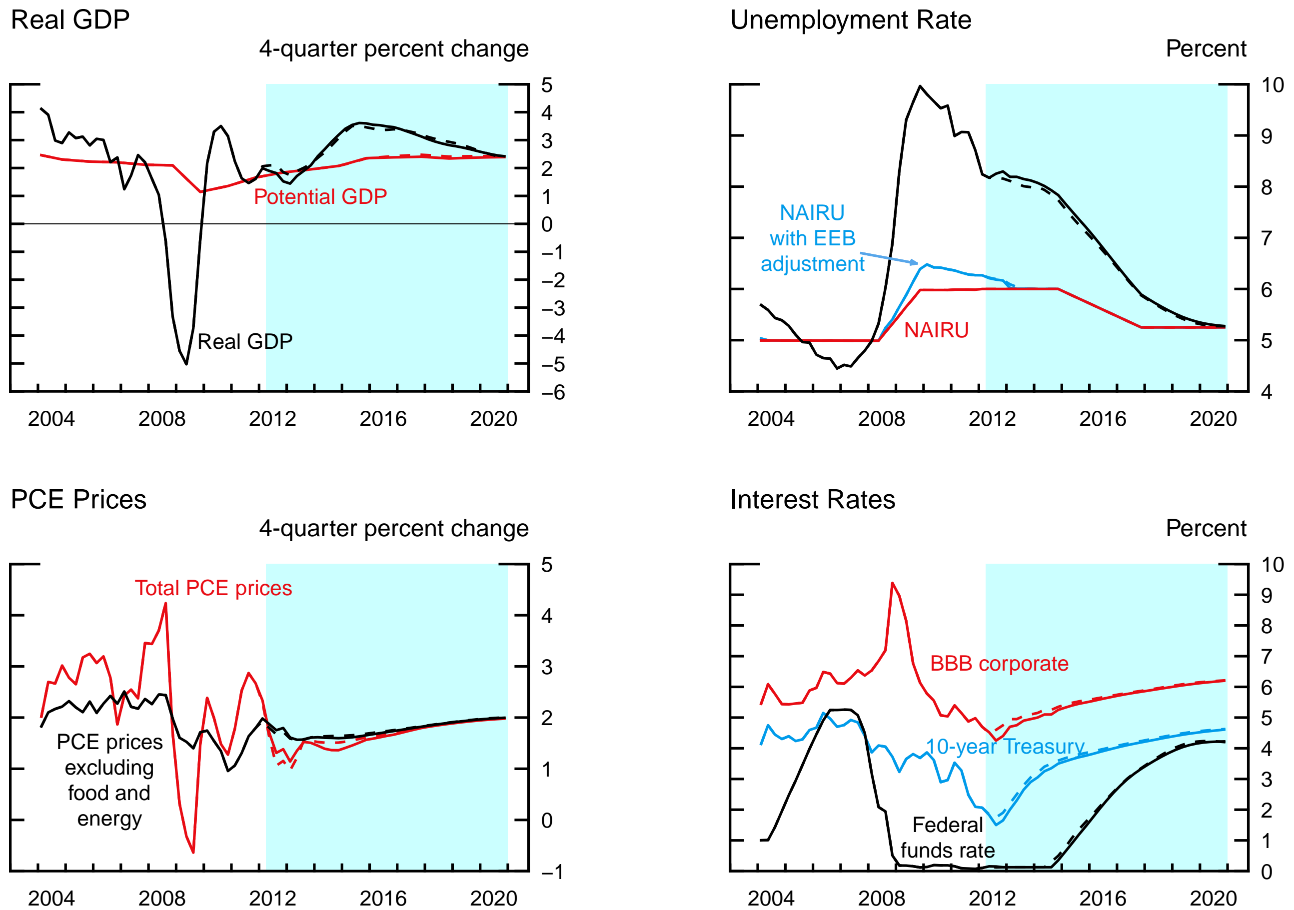
These factors, together with the considerable underutilization in labor and product markets expected over the medium term, lead us to project core inflation rates of 1.5 percent in the second half of 2012 and 1.6 percent in both 2013 and 2014. After posting sizable declines in the near term, retail energy prices are anticipated to continue to edge lower over the next couple of years, consistent with our assumed path for crude oil prices. For that reason, headline inflation is expected to run a little below core inflation in both 2013 and 2014 despite modest upward pressure from food prices, as the recent run-up in farm commodity prices passes through to retail prices late this year and early next year. With these low rates of consumer price inflation and the wide margin of slack in the labor market, nonfarm hourly compensation and the employment cost index are each projected to rise less than 3 percent in both 2013 and 2014.

The Long-Term Outlook

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

Measure	2012	2013	2014	2015	2016	2017
Real GDP	1.5	2.1	3.2	3.6	3.5	3.1
Previous Tealbook	1.9	2.2	3.1	3.5	3.4	3.2
Civilian unemployment rate[1]	8.3	8.1	7.8	7.2	6.5	5.9
Previous Tealbook	8.2	8.0	7.7	7.1	6.5	5.9
PCE prices, total	1.4	1.5	1.4	1.6	1.7	1.8
Previous Tealbook	1.2	1.5	1.5	1.6	1.7	1.8
Core PCE prices	1.8	1.6	1.6	1.7	1.7	1.8
Previous Tealbook	1.7	1.6	1.6	1.7	1.8	1.8
Federal funds rate[1]	.1	.1	.4	1.5	2.6	3.3
Previous Tealbook	.1	.1	.5	1.6	2.6	3.4
10-year Treasury yield[1]	1.7	2.9	3.5	3.8	4.0	4.2
Previous Tealbook	1.9	3.1	3.6	3.8	4.1	4.2

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



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

THE LONG-TERM OUTLOOK

We have extended the staff's forecast through 2020 using the FRB/US model and our assumptions about long-run supply-side conditions, fiscal policy, and other factors. The contour of the long-term outlook depends on the following key assumptions:

- Monetary policy seeks to stabilize PCE inflation at 2 percent, consistent with the Committee's strategy statement after the January 2012 meeting. The federal funds rate continues to be set according to the estimated outcome-based rule.

- The Federal Reserve's holdings of securities continue to put downward pressure on longer-term interest rates over the 2014–17 period. However, as the time of portfolio normalization draws nearer, this downward pressure wanes, and that waning contributes to the rise in the 10-year Treasury yield. Beyond 2017, the process of normalization should be essentially completed.

- Risk premiums on corporate equities and bonds decrease gradually to normal levels, and banks further ease their lending standards.

- The federal government budget deficit (measured on a NIPA basis) narrows somewhat further, from 4 percent of GDP in 2014 to 3¾ percent of GDP in 2017, as the boost to tax receipts from the expanding economy slightly outpaces gains in federal spending. Meanwhile, federal debt held by the public remains around 75 percent of GDP. After 2017, the deficit widens again and the ratio of federal debt to GDP begins to increase because of fast-rising transfer payments for retirement and health-care programs.

- The real foreign exchange value of the dollar depreciates 2¼ percent per year from 2014 to 2017. The pace of dollar depreciation tapers off thereafter. The price of crude oil is roughly flat from 2014 to 2016 and then holds steady in real terms. Foreign real GDP rises at an average annual rate of 3½ percent in 2015 through 2017 and then gradually edges down to a 3 percent pace by late in the decade.

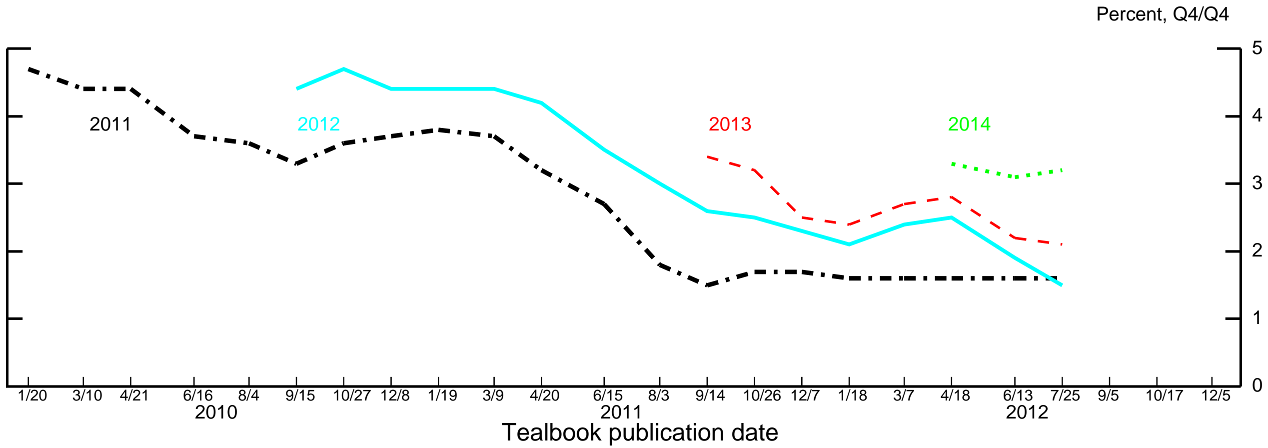
- The NAIRU declines from 6 percent in the fourth quarter of 2014 to 5¼ percent at the end of 2017 as conditions in the labor market continue to improve, and it remains at 5¼ percent in the long run. Potential GDP

increases at an average annual rate of around 2½ percent from 2015 through the end of the decade.

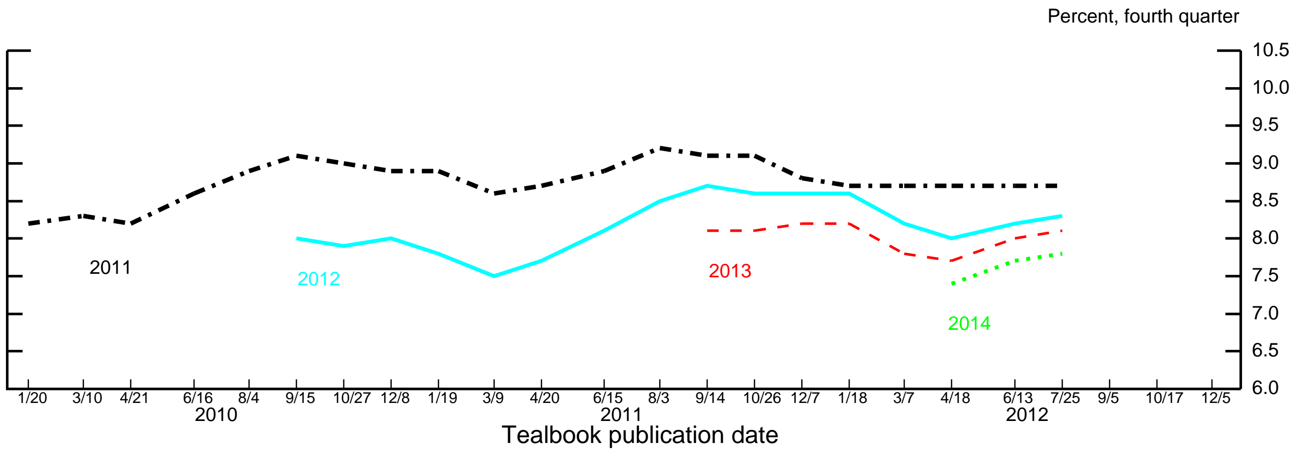
The economy is projected to enter 2015 with output still below its potential level, the unemployment rate above the assumed NAIRU, and inflation lower than the long-run objective of the Committee. In the staff's long-term forecast, further improvements in household and business confidence, diminishing uncertainty, and more-supportive financial conditions enable real GDP to rise at an average annual rate of about 3½ percent from 2015 through 2017. With real GDP expanding at a pace faster than the growth rate of potential output, labor market conditions improve further, and the unemployment rate ends 2017 at about 6 percent. With long-run inflation expectations assumed to remain well anchored and the margin of slack in labor and product markets diminishing, consumer price inflation edges up gradually but is still only 1¾ percent in 2017. Late in the decade, the economy converges to an unemployment rate near the long-run NAIRU, an inflation rate at the Committee's longer-term objective, and a nominal federal funds rate of 4¼ percent.

Evolution of the Staff Forecast

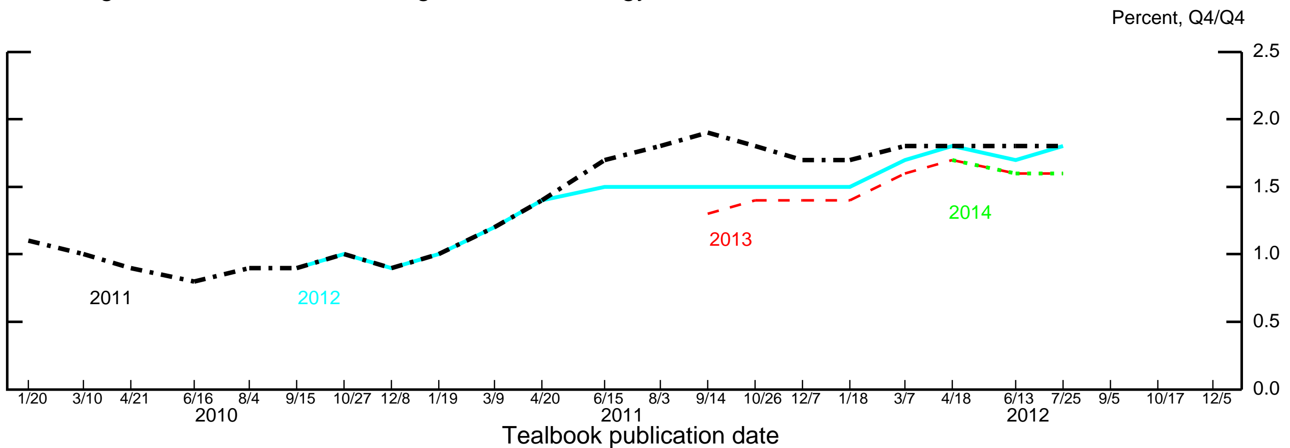
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy



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International Economic Developments and Outlook

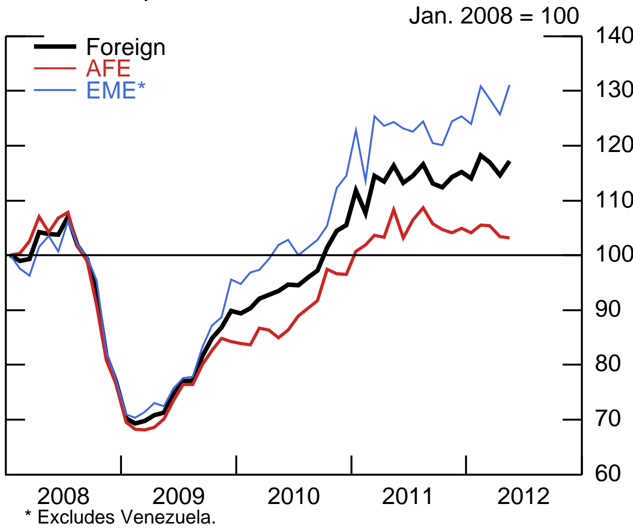
We estimate that foreign GDP growth moderated to an annual rate of 2¼ percent in the second quarter, as activity decelerated in emerging market economies (EMEs) and contracted in Europe. In the near term, fiscal retrenchment and financial stresses are expected to remain a substantial drag on GDP growth in Europe, while activity elsewhere should expand at a moderate pace. We assume that euro-area leaders take actions sufficient to allow financial tensions related to the euro-area crisis to start to ease by next year. This reduction in financial stresses, in conjunction with supportive monetary policy around the world, should pave the way for a pickup in foreign GDP growth from 2¼ percent in the second half of 2012 to 3¼ percent by 2014. Compared with the June Tealbook, this outlook is just a bit weaker in the current quarter and little changed thereafter.

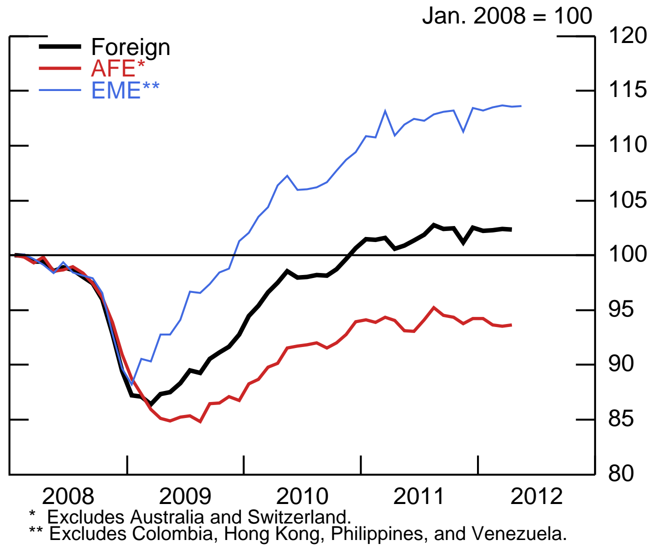
Despite a flurry of announcements by European policymakers, financial stresses in Europe have worsened since the June Tealbook. Market participants reacted positively to a cut in policy rates by the European Central Bank (ECB) and welcomed pledges by European leaders to establish a single supervisory mechanism for banks and to allow the European Stability Mechanism (ESM) to recapitalize banks directly. However, this positive response was short lived, as investors came to recognize that European policymakers must still overcome major hurdles to address their fiscal- and banking-sector vulnerabilities. Sovereign spreads climbed appreciably in Italy and Spain, and European bank stocks plunged. Accordingly, we continue to expect financial conditions in Europe to deteriorate further over the course of this year until policymakers are forced to take more-decisive policy actions, eventually leading to gradual financial and economic improvement. However, as discussed in the Risks and Uncertainty section, the possibility of more-dire outcomes remains significant.

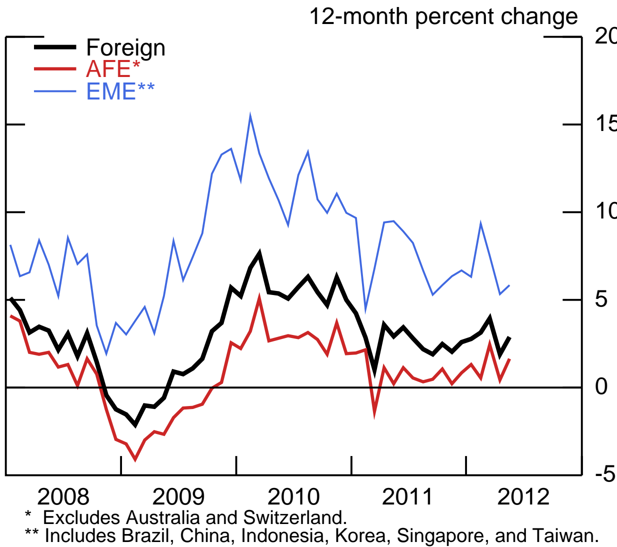
Foreign inflation slowed from 2.6 percent at an annual rate in the first quarter to an estimated 2 percent pace in the second quarter, primarily reflecting declines in retail energy prices. Inflation is expected to pick up in the current quarter, as oil prices have firmed of late and agricultural commodity prices have jumped because of droughts in North America and elsewhere. With commodity prices projected to level off over the next couple of years and economic slack widening slightly, we continue to expect foreign inflation to remain contained through the forecast period.

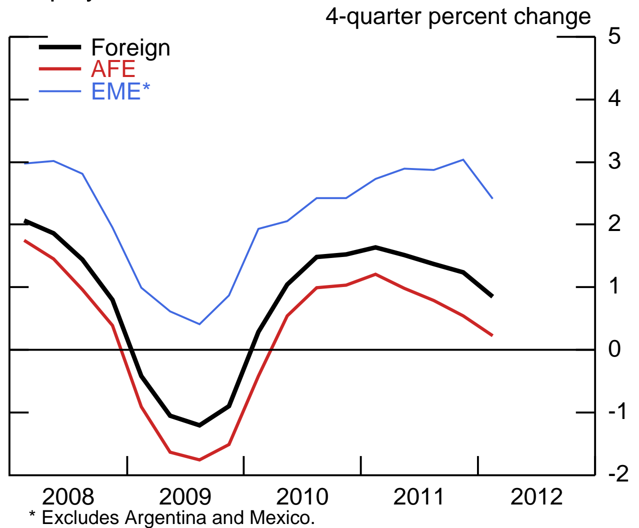
Int'l Econ Devel & Outlook

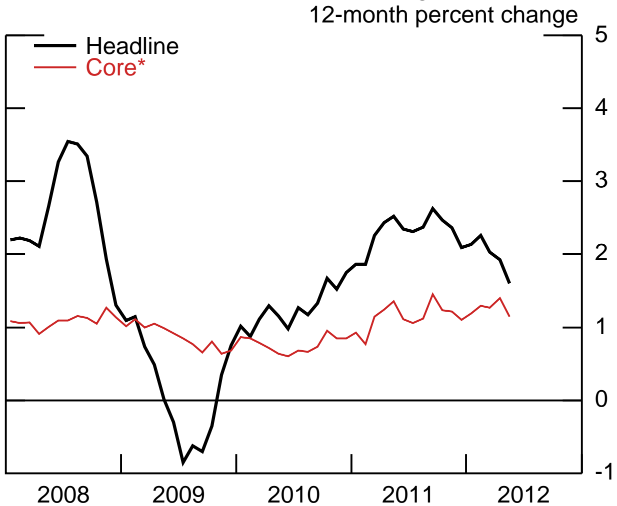
Recent Foreign Indicators

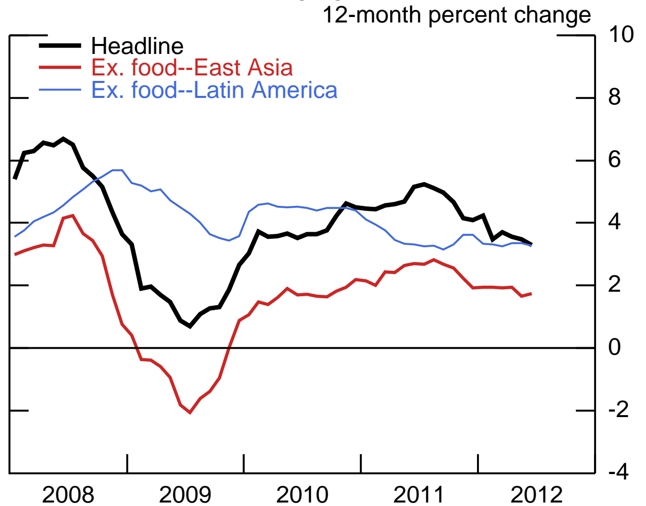












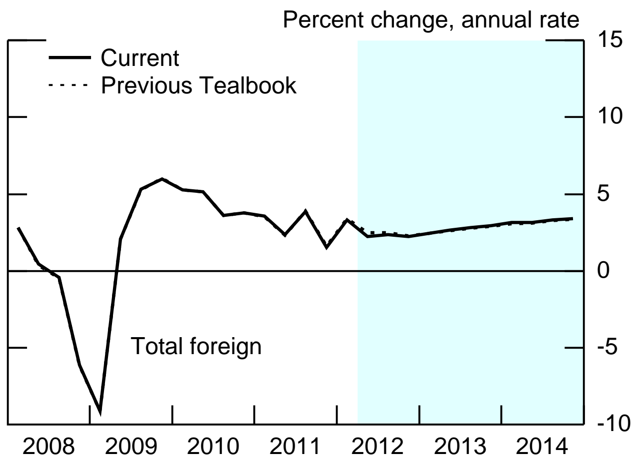
The Foreign Outlook

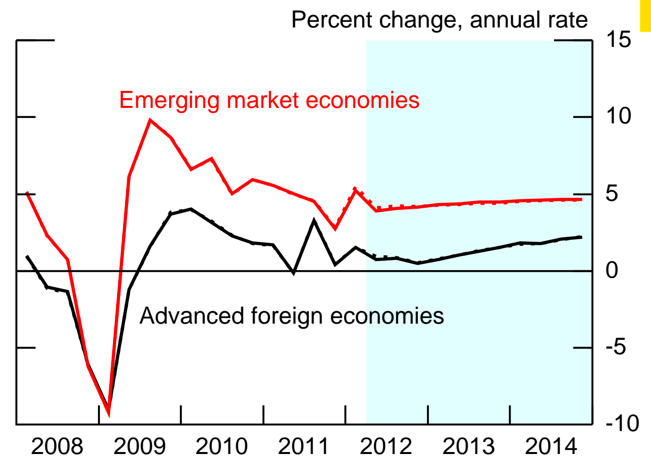
(Percent change, annual rate)

	2011	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 H2	2014
Real GDP									
Total foreign	2.8	3.3	2.3	2.4	2.2	2.5	2.6	2.9	3.2
Previous Tealbook	2.8	3.4	2.5	2.5	2.3	2.5	2.6	2.8	3.2
Advanced foreign economies	1.3	1.5	.7	.8	.5	.7	1.0	1.4	2.0
Previous Tealbook	1.3	1.5	1.0	.9	.5	.8	1.0	1.4	1.9
Emerging market economies	4.5	5.2	3.9	4.1	4.2	4.3	4.4	4.5	4.6
Previous Tealbook	4.5	5.5	4.1	4.2	4.2	4.3	4.3	4.4	4.6
Consumer Prices									
Total foreign	3.4	2.6	2.0	2.2	2.3	2.3	2.3	2.3	2.5
Previous Tealbook	3.4	2.6	2.3	2.0	2.2	2.2	2.2	2.3	2.5
Advanced foreign economies	2.2	2.2	.6	1.4	1.5	1.3	1.2	1.2	1.5
Previous Tealbook	2.2	2.2	1.4	1.1	1.3	1.2	1.2	1.2	1.5
Emerging market economies	4.3	3.0	3.0	2.9	3.0	3.1	3.1	3.1	3.2
Previous Tealbook	4.3	3.0	3.0	2.8	2.9	3.0	3.1	3.1	3.2

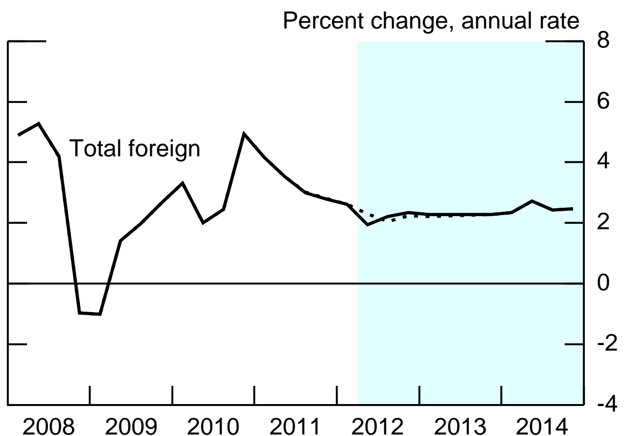
Note: Annualized percent change from final quarter of preceding period to final quarter of period indicated.

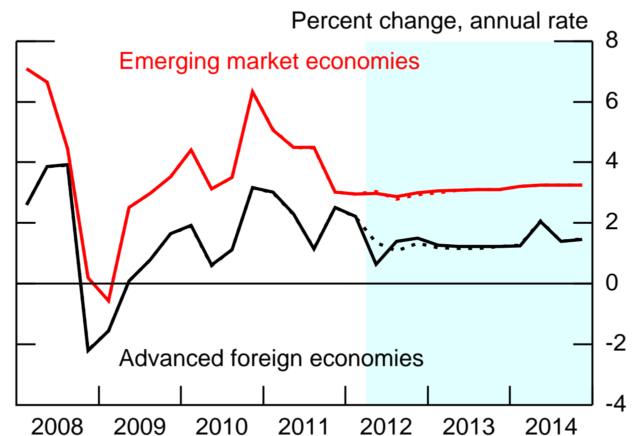
Real GDP





Consumer Prices





In response to the slowing in output growth and inflation over the first half of the year, many central banks eased the stance of monetary policy during the intermeeting period. Notably, the ECB, the People's Bank of China (PBOC), and the Central Bank of Brazil cut their policy rates, while the Bank of England (BOE) expanded its quantitative easing program and launched a new facility to support lending to the nonfinancial sector. We expect foreign central banks to take further accommodative actions in coming quarters.

ADVANCED FOREIGN ECONOMIES

Recent indicators suggest that GDP growth in advanced foreign economies (AFEs) slowed from 1.5 percent in the first quarter to around ¾ percent in the second quarter, a little weaker than in the June Tealbook, as U.K. GDP contracted much more sharply than anticipated. We expect AFE growth to remain near that anemic pace in the second half of this year. Despite agreement among European leaders to move forward on a number of fronts to address the crisis, we assume that financial tensions in the euro area will increase in coming months, leading to a deepening of the euro-area recession. Partly reflecting spillovers from the euro-area downturn, output growth in the other major AFEs should remain modest. As the euro-area recession abates and global economic conditions slowly improve, GDP growth in the AFEs should pick up to 1¼ percent in 2013 and reach 2 percent in 2014, about unchanged from the June Tealbook.

Headline inflation in the AFEs stepped down from 2.2 percent in the first quarter to less than ¾ percent in the second quarter. This decline is ¾ percentage point greater than we had anticipated, mostly reflecting a surprisingly large fall in retail energy prices in Canada. AFE inflation should average 1¼ percent through the end of 2013 before edging up to 1½ percent in 2014. Recent increases in energy prices prompted us to raise our inflation forecast a little for the second half of this year relative to the June Tealbook. Our projection for inflation is mostly unchanged thereafter. Amid subdued inflation prospects and sizable output gaps, we expect AFE central banks to ease further in the second half of this year.

Euro Area

Our projection for economic activity in the euro area is little changed relative to the June Tealbook. Recent indicators suggest that euro-area real GDP contracted at an annual rate of about 1 percent in the second quarter. Industrial production and retail sales remain well below their first-quarter levels despite an increase in May, and the

unemployment rate reached a record-high 11.1 percent in May. In June, confidence indicators edged down and the composite PMI stayed firmly in contractionary territory; flash estimates for July point to continued weakness in the current quarter. We expect GDP to fall at a 1½ percent rate in the second half of the year and ¼ percent in 2013 before increasing only 1 percent in 2014.

Euro-area inflation moderated to an annual rate of about 2 percent in the second quarter from 2.6 percent in the first quarter, largely as a result of earlier declines in energy prices. We expect inflation to remain around 2 percent in the second half of this year—a little higher than in the June Tealbook—reflecting recent euro depreciation and higher energy prices. Thereafter, we project that inflation will edge down to 1½ percent in 2013 and 2014. At its July 5 meeting, the ECB cut its benchmark policy rate to 0.75 percent and reduced the rate on its overnight deposit facility to zero. (We examine the effect of the deposit rate cut on money market functioning in the box "The Effects of the European Central Bank's Deposit Rate Cut" in the Financial Developments section.) We expect the ECB to lower its benchmark policy rate to 0.5 percent in the fourth quarter and to continue to provide significant liquidity to banks.

European leaders announced new plans to address the crisis at their June 28–29 summit, including some steps toward a banking union. During the intermeeting period, policymakers also approved a loan package of up to €100 billion to shore up the Spanish banking sector and allowed Spain more time to bring its deficit down. (For further details, see the box "Recent Developments in the Euro Area.") Investor enthusiasm was short lived, however, as it became clear that many of the agreed-upon measures still face daunting technical, legal, and political challenges. Moreover, progress on the strengthening of Europe's financial rescue facilities has flagged, with German approval of the ESM on hold pending a ruling by the German Constitutional Court scheduled for mid-September. Thus, Europe still lacks a firewall sufficient to protect vulnerable countries from possible adverse shocks, such as a breakdown of negotiations between the newly elected Greek government and its official creditors over a resumption of EU–IMF financing. Amid these ongoing uncertainties, we expect a further deterioration in financial conditions, which will eventually force policymakers to take actions aggressive enough to stabilize the situation and ultimately restore investor confidence.

Recent Developments in the Euro Area

Over the intermeeting period, euro-area leaders announced several measures designed to increase regional financial integration and enhance support for vulnerable economies, particularly Spain. Despite these announcements, financial stresses in the euro area have worsened (see the figures on the following page), as critical details of the plans have yet to be worked out, implementation is expected to be time consuming and contentious, and further policy measures will likely be needed.

At their June 28–29 summit, European leaders announced plans for deeper economic and financial integration. First, they agreed to establish a single bank supervisory mechanism involving the ECB. The European Commission intends to present specific proposals in September, and European leaders plan to consider them by the end of the year. Second, leaders agreed that when such a supervisory mechanism is established, the European Stability Mechanism (ESM) will be able to directly recapitalize banks rather than channel assistance through governments. These steps are in line with a proposal by a few key regional officials for the euro area to move toward a banking union (including a pan-European approach to deposit insurance and bank resolution) and a fiscal union (including issuance of common debt and greater constraints on national fiscal policies). Although European leaders did not endorse this proposal, they invited its authors to further develop it and to present another report in October.

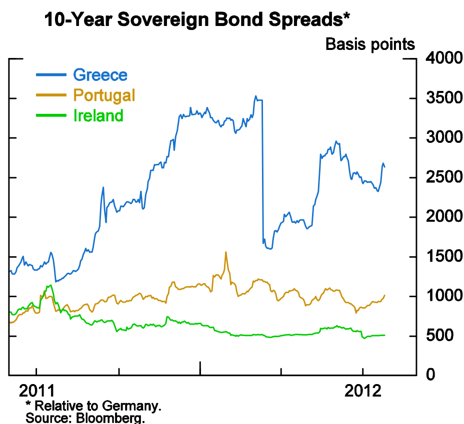
In addition, euro-area policymakers announced measures to assist vulnerable economies. They agreed to extend from 2013 to 2014 the deadline for Spain to bring its fiscal deficit below 3 percent of GDP. They also worked out key terms of Spain's financial assistance package (to fund the recapitalization of its banks), which include plans for comprehensive assessments of bank capital needs, transfers of impaired bank assets to an external asset management company, and the imposition of losses on shareholders and some junior creditors of banks. The loans provided to Spain in the package will not have explicit seniority vis-à-vis private claims and thus may avoid further constraining Spain's ability to issue new debt. Euro-area policymakers also announced that the government of Cyprus had formally requested financial assistance from euro-area governments and the IMF. Much of this assistance will likely be devoted to the recapitalization and restructuring of Cypriot banks, which are heavily exposed to Greece. Finally, euro-area member states agreed to a €120 billion (1.3 percent of euro-area GDP) growth package, which includes an increase in the capital of the European Investment Bank, reallocation of EU funds toward growth-enhancing projects, and credit enhancements for infrastructure bonds.

Although these measures are positive developments, critical details remain unsettled and implementation risks are substantial. It remains unclear how supervisory authority will be allocated between the ECB—the presumptive pan-European supervisor—and national financial supervisors. Further, following the summit, statements by some policymakers created confusion as to whether

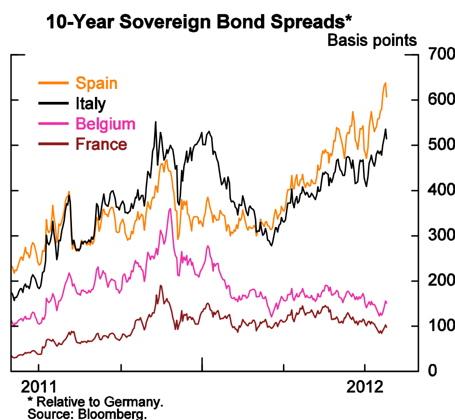
direct recapitalization by the ESM would actually absolve individual sovereigns of the cost of recapitalizing banks in their jurisdictions. As a related matter, some market participants believed that, once the single supervisory mechanism and the ESM's authority to directly recapitalize banks were both in place, the loans to Spain's government to finance recapitalization would be replaced by direct equity stakes in its banks. However, subsequent statements by euro-area policymakers have raised doubts regarding these expectations.

An additional concern is that the process of strengthening the financial backstops for vulnerable governments has met with delays. In particular, the establishment of the ESM, which is intended to supplement and supplant the resources of the temporary European Financial Stability Facility (EFSF), is falling behind schedule. The original target of July will not be met, as legal challenges will delay Germany's ratification of the ESM treaty until mid-September or later. As a result, with claims on EFSF resources growing (including financial assistance for Spanish banks and Cyprus), the financial backstops will remain inadequate in the near term for a wide range of adverse scenarios.

Greece remains a potential trigger of such scenarios. After prevailing over the far-left anti-bailout party, SYRIZA, in national parliamentary elections on June 17, the center-right New Democracy party formed a pro-bailout coalition with a strong parliamentary majority. The new coalition government is now cooperating with its official creditors in an effort to keep Greece in the euro area. However, Greece's adjustment program is substantially off track, and the Greek government cannot receive additional program funds until it agrees with its creditors on a strategy to restore credibility. Such a strategy will likely require very unpopular policy commitments by the Greek government (including additional fiscal austerity measures worth at least 5 percent of GDP). In addition, Greece's creditors will likely have to commit additional financing, debt relief, or both. Negotiations are likely to be difficult, and the timing is tight. About €3 billion of Greek government bonds held primarily by the Eurosystem will mature on August 20. Even if a makeshift solution to this immediate problem is found, Greece's official creditors will likely have to decide by September whether to augment or to suspend Greece's program.



* Relative to Germany.
Source: Bloomberg.



* Relative to Germany.
Source: Bloomberg.

Int'l Econ Devel & Outlook

United Kingdom

The U.K. economy shrank 2.8 percent at an annual rate in the second quarter according to the preliminary estimate, marking the third consecutive quarterly decline. This estimate is substantially lower than in the June Tealbook owing in part to a surprisingly sharp drop in construction. The contraction in GDP was exacerbated by a special holiday to celebrate the Queen's Diamond Jubilee. Although the Summer Olympics in London should temporarily boost activity in the third quarter, low confidence, aggressive fiscal consolidation, and negative spillovers from the euro area are expected to weigh on the underlying pace of economic activity. After contracting ¼ percent in 2012, economic activity should rise at a pace of 1¾ percent in 2013 and 2½ percent in 2014, supported by accommodative monetary policy and the diminution of financial stresses in Europe.

U.K. inflation slowed to 1 percent in the second quarter from 2.1 percent in the first quarter amid ample spare capacity and weak wage growth. We expect these factors to keep inflation just below 1¾ percent on average in 2013 and 2014. With output falling and inflation moderating, the BOE announced a £50 billion expansion of its quantitative easing program to £375 billion (almost 25 percent of GDP). In addition, the BOE released details of a new Funding for Lending Scheme that will provide banks with long-term funds at below-market rates to encourage them to lend to the nonfinancial sector. (See the box "The Bank of England's Funding for Lending Scheme" in the Financial Developments section.)

Japan

The outlook for Japan is little changed relative to the June Tealbook. We estimate that real GDP growth slowed from 4.7 percent in the first quarter to 2¼ percent in the second quarter, primarily reflecting reduced support from fiscal stimulus measures. In addition, recent data point to reduced momentum, with the composite PMI falling into contractionary territory in June. Accordingly, we expect GDP growth to slow to a modest ¾ percent pace in the second half of the year. As the global recovery gradually gains momentum, we forecast GDP growth to pick up to 1 percent in 2013 and to nearly 1½ percent in 2014.

We estimate that Japanese inflation turned negative again last quarter. Consumer prices should continue to decline at a slow pace through the end of 2013 before rising 1 percent in 2014 because of a planned 3 percentage point hike in the consumption tax.

Earlier this month, the Bank of Japan slightly altered the composition of its Asset Purchase Program but left its size unchanged. Amid ample resource slack and below-target inflation, we continue to anticipate a further easing of monetary policy going forward.

Canada

We estimate that real GDP grew 2 percent in the second quarter, the same rate as in the first quarter. Recent data are consistent with our view that the Canadian economy will continue to expand at a moderate pace in the near term. In June, the manufacturing PMI ticked up to a solid 54.8 and employment edged up following outsized gains in the spring. The latest Business Outlook Survey by the Bank of Canada (BOC) indicates that businesses have remained optimistic about sales, investment, and hiring over the coming year. As in the June Tealbook, we project that Canadian GDP will continue to expand at a 2 percent pace through the end of 2013 and then accelerate to a 2½ percent rate in 2014 as global GDP growth rises.

Consumer price inflation fell to zero in the second quarter, 1¾ percentage points below our projection in June, as Canadian retail energy prices fell sharply. With retail energy prices having bottomed out, we expect inflation to rebound to 1¾ percent in the second half of 2012 and stay close to that pace thereafter. With low inflation and with global headwinds restraining Canadian GDP growth, we continue to expect the BOC to keep its target for the overnight rate at 1 percent until the second quarter of 2014.

Emerging Market Economies

We estimate that GDP growth in the EMEs slowed to 4 percent in the second quarter, down from 5.2 percent in the first quarter. As expected, activity decelerated in most countries, reflecting in part the passing of factors that had boosted output in the first quarter, notably the bounceback from last year's flooding in Thailand. However, the tone of recent data was somewhat weaker than anticipated. For China, although second-quarter real GDP growth came in as expected, the first-quarter reading was revised down significantly. Accordingly, and consistent with the lower path for U.S. GDP growth, we marked down EME growth a touch in the near term.

The outlook for activity in the EMEs further out is little changed. After holding at a bit below trend for the next several quarters, output growth should edge up to about 4½ percent by 2014, as economic activity in the advanced economies firms and as

policymakers in the EMEs pursue more-accommodative policies. A significant deterioration of the situation in Europe and a sharp slowing of the U.S. economy are key downside risks to EME growth. In addition, we remain attentive to the risk of a sharp slowdown in China, perhaps triggered by a collapse in the property market. (See the scenario “Hard Landing in China” in the Risks and Uncertainty section.)

Headline inflation in the EMEs remained at 3 percent in the second quarter, with declines in most countries largely offset by a nearly 20 percent spike in inflation in India. We project EME inflation to hold near 3 percent before picking up to 3¼ percent by the end of the forecast period, as GDP growth strengthens. This outlook is similar to that in the June Tealbook. With inflation and economic growth moderating, some countries, including Brazil, China, and Korea, have recently loosened monetary policy.

China

Real GDP expanded at an annual rate of 7½ percent in the second quarter, up from a downwardly revised pace of 6.6 percent in the first quarter. Data were weak across all sectors of economic activity in April. However, retail sales, investment, and bank lending accelerated late in the quarter, partly in response to policy easing, suggesting a stabilization of domestic demand growth after several months of softening. China’s trade surplus widened in the second quarter, reflecting a small increase in exports and a decline in imports. For the second half of this year, we see Chinese real GDP growth remaining relatively subdued by historical standards at 7¾ percent. Output growth should then gradually strengthen to a rate of 8¼ percent by the end of 2014, reflecting policy stimulus and an improvement in global demand. Nonetheless, a hard landing in China remains a nonnegligible risk.

Chinese consumer price inflation fell sharply in June, reflecting a large drop in domestic food prices following a run-up earlier in the year. For the second quarter as whole, inflation was 2½ percent at an annual rate. The drop in food prices led us to lower our estimate of current-quarter inflation ½ percentage point, to 1¾ percent. With food price inflation expected to normalize, headline inflation is projected to be 2½ percent in the fourth quarter before edging up to 3 percent by 2014 as economic activity accelerates and wage growth remains strong. Amid contained inflation and concern about GDP growth, the PBOC cut banks’ one-year lending and deposit rates in early July to 6 percent and 3 percent, respectively, the second cut in these rates in the past two months. We assume additional monetary and fiscal accommodation in the coming quarters.

Other Emerging Asia

Elsewhere in emerging Asia, data suggest that GDP growth slowed from 5.5 percent in the first quarter to 3½ percent in the second quarter. We had anticipated that economic activity in the region would moderate after the rebound from the widespread supply disruptions following last year's floods in Thailand. However, the incoming data have been weaker than we had expected. In Singapore, the advance release indicates that real GDP fell unexpectedly in the second quarter. For other economies in the region, indicators such as industrial production, PMIs, and exports were soft. These data and the lower path of U.S. output growth in the near term led us to mark down a bit our forecast for the region in the second half of this year to 4 percent. Thereafter, the outlook is unchanged, with growth averaging 4¼ percent in 2013 and 4½ percent in 2014.

We estimate that inflation in the region increased to an annual rate of 4¼ percent in the second quarter, largely driven by an outsized rise in inflation in India, where a recent sharp depreciation of the rupee passed through to consumer prices. We expect inflation to moderate in coming quarters to about 3 percent and then to stay near that rate for the remainder of the forecast period. In Korea, with the balance of concerns shifting from inflation to output growth, the central bank lowered its policy rate by 25 basis points to 3 percent.

Latin America

In Mexico, recent indicators suggest that real GDP growth slowed to 2¾ percent in the second quarter, down from a robust 5.3 percent in the first quarter. The manufacturing PMI in the second quarter stood below its first-quarter average, and retail sales, exports, and industrial production through May also pointed to a deceleration of activity. These data, along with downward revisions to U.S. manufacturing production, led us to mark down Mexican GDP growth in the second quarter by ¼ percentage point. GDP growth is projected to increase slightly to about 3 percent over the remainder of the forecast period.

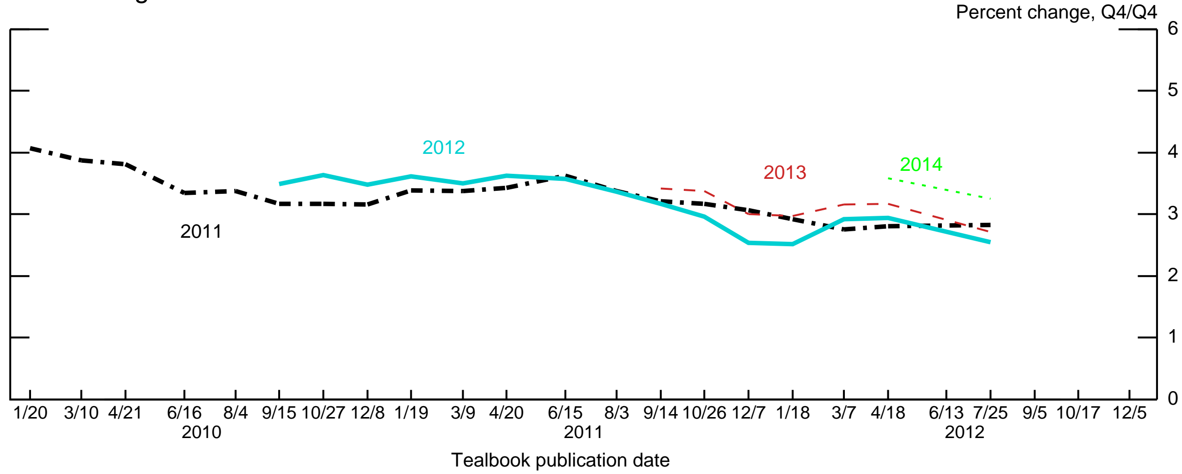
For South America, real GDP growth is estimated to have dropped from 3.2 percent in the first quarter to 2½ percent in the second quarter, largely reflecting a sharp deceleration of economic activity in Venezuela. We project that growth in the region will rise to nearly 4 percent by the end of 2014. In Brazil, favorable data on consumption and an anticipated rebound in agricultural output (which had suffered a

large weather-related contraction in the first quarter) suggest that GDP growth picked up to 2 percent in the second quarter from below 1 percent in the first quarter. This rebound is a bit smaller than estimated in the June Tealbook, as recent data on industrial production and exports have been disappointing. We expect Brazilian growth to rise to about 4 percent by the end of 2014, supported by a firming of economic activity in the advanced economies and accommodative macroeconomic policies domestically. The Brazilian central bank cut the Selic rate by 50 basis points to a historic low of 8 percent, bringing the cumulative policy rate reduction since last August to 450 basis points. In addition, Brazilian authorities announced another round of fiscal stimulus in late June.

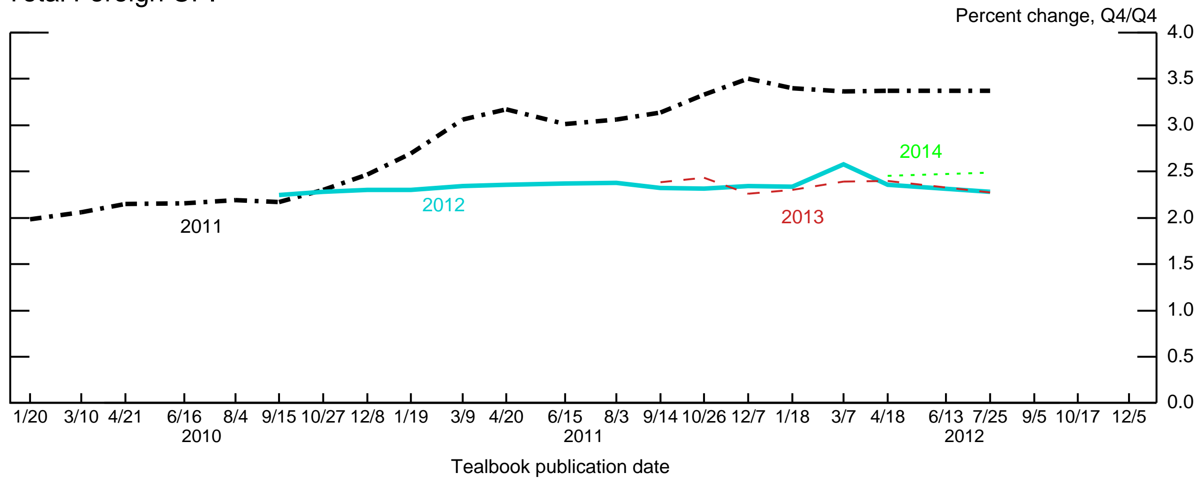
Mexican inflation declined sharply to 2½ percent in the second quarter because of the implementation of electricity subsidies. We expect that inflation will rebound to an annual rate of 4½ percent in the current quarter, reflecting the unwinding of the effect of these subsidies and increases in food prices resulting from the ongoing drought in Mexico and the United States. Mexican inflation should then moderate to 3½ percent over the remainder of the forecast period. In Brazil, inflation continued to decline against the background of weak output growth, dipping to below 4 percent in the second quarter. We project that Brazilian inflation will rise gradually to 5½ percent in 2014 as economic activity improves.

Evolution of Staff's International Forecast

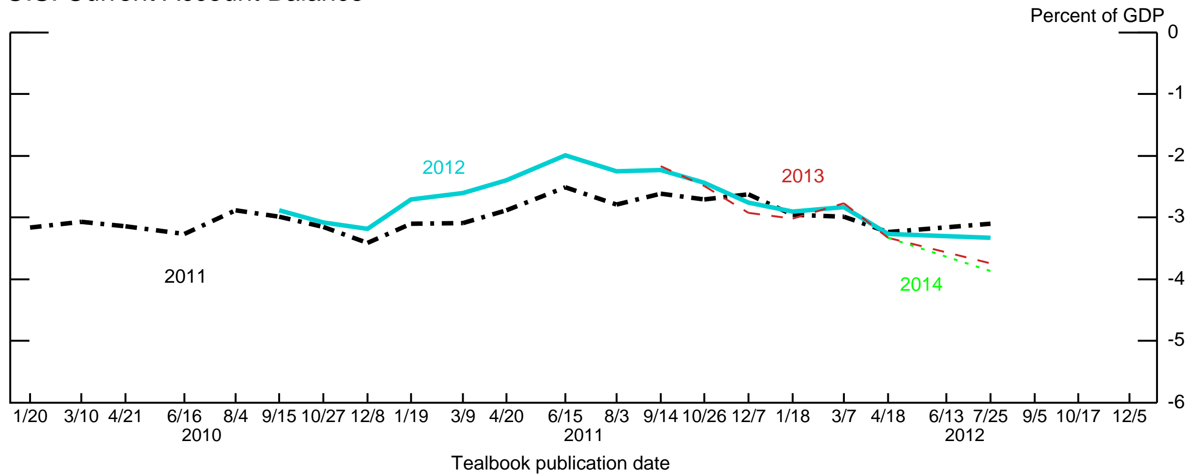
Total Foreign GDP



Total Foreign CPI



U.S. Current Account Balance



Int'l Econ Devel & Outlook

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Financial Developments

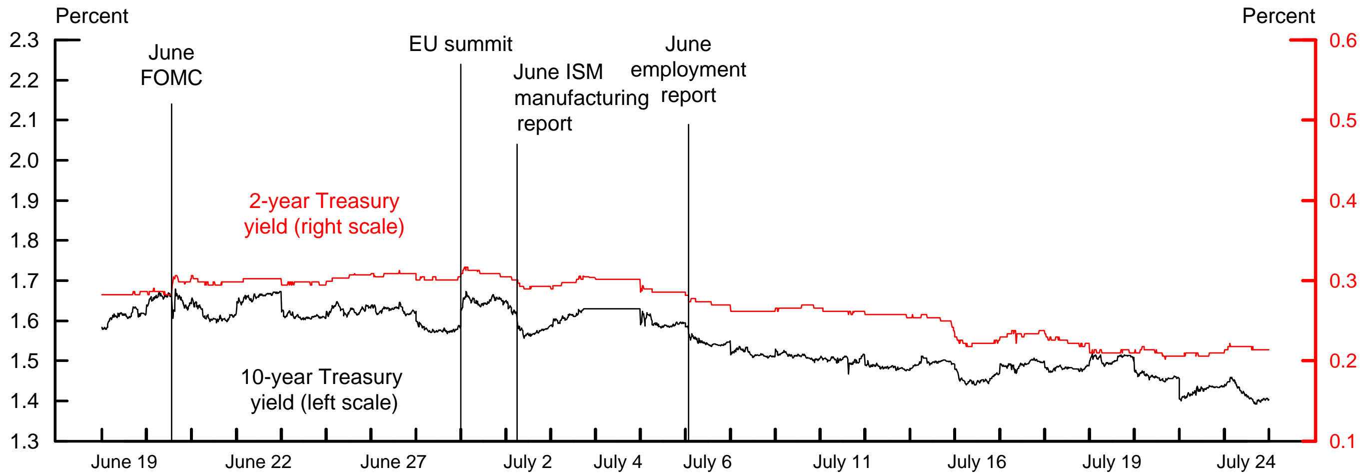
Financial conditions registered mixed changes over the intermeeting period, reflecting several important influences, including generally weaker-than-expected recent domestic economic data releases, concerns about the euro-area crisis and the outlook for global growth, actual and expected changes in U.S. monetary policy, and better-than-anticipated profits at some S&P 500 firms. On net over the period, the expected path of the federal funds rate shifted down moderately. Yields on nominal Treasury securities decreased, reflecting the lower expected federal funds rate, the continuation of the maturity extension program (MEP) through the end of the year, rising expectations that the Federal Reserve will ease monetary policy further, and increased safe-haven demands related to the euro-area crisis. Market-based measures of inflation compensation declined despite a rise in the prices of oil and agricultural commodities. Broad indexes of U.S. equity prices edged lower, on net, but spreads on investment- and speculative-grade corporate bonds relative to comparable-maturity Treasury securities narrowed slightly. Despite concerns about European developments, conditions in short-term unsecured dollar funding markets remained stable over the intermeeting period.

In foreign markets, sovereign yields generally declined over the period amid continued weak economic conditions, flight-to-safety flows, and monetary policy easing by several major central banks, including the ECB. Yields on most euro-area peripheral sovereign debt were notable exceptions. As concerns over Spanish public finances and uncertainties over future steps to be taken by European policymakers mounted, the spread on Spanish 10-year bonds relative to German bunds rose to its highest level since the beginning of the euro-area debt crisis. On net, European benchmark equity prices decreased slightly while European bank equity prices fell sharply. The broad dollar index rose as the dollar appreciated nearly 5 percent against the euro.

Domestic financing flows were relatively stable over the period. Investment-grade corporate bond issuance remained robust in June and July, and commercial and industrial (C&I) loans continued to grow briskly. Consumer credit expanded further in May. Results from the July Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS) indicate that a modest fraction of banks, on net, eased lending standards over the past three months, and demand for all major categories of

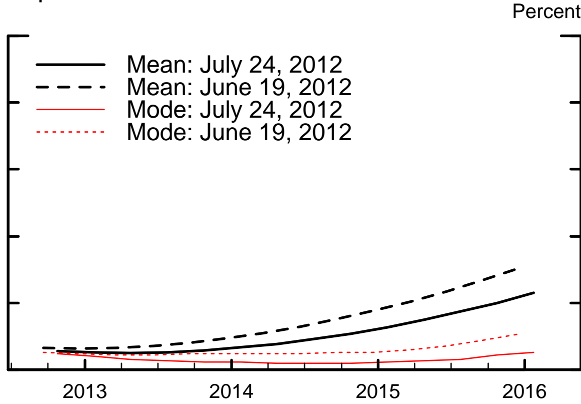
Policy Expectations and Treasury Yields

Selected Interest Rates



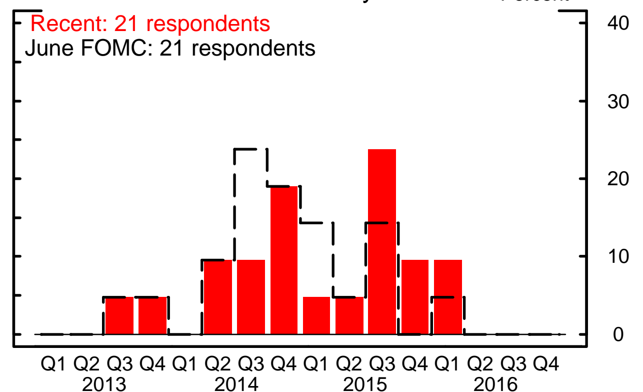
Note: 5-minute intervals. 8:00 a.m. to 4:00 p.m. No adjustments for term premiums.
Source: Bloomberg.

Implied Federal Funds Rate



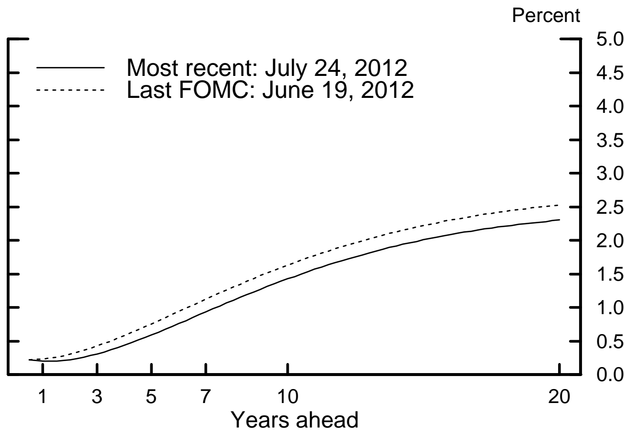
Note: Mean is estimated using overnight index swap quotes. Mode is estimated from the distribution of federal funds rate implied by interest rate caps. Both include a term premium of zero basis points per month.
Source: Bloomberg and CME Group.

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



Source: Desk's Dealer Survey from July 23, 2012.

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 the indexation-lag (carry) effect.
Source: Barclays PLC and staff estimates.

Financial Developments

loans strengthened somewhat (see appendix). Those results are consistent with the modest growth in bank credit observed over that same period. M2 has expanded at a solid pace of late, likely stemming from investors' continued desire to hold safe and liquid assets amid ongoing concerns about the euro-area and the global growth outlook.

POLICY EXPECTATIONS AND TREASURY YIELDS

The expected path of the federal funds rate shifted down modestly and Treasury yields dropped to historic lows over the intermeeting period in response to generally weak domestic economic data, heighted concerns about the euro area and the global growth outlook, and increased expectations that the Federal Reserve will ease monetary policy further. Overall, the June FOMC announcement was viewed as broadly in line with expectations. However, the FOMC's decision to continue the MEP was reportedly a slightly more substantial easing move than some market participants had expected. As a result, the nominal Treasury yield curve flattened a bit on the announcement.[1] Subsequent FOMC communications over this period, including the Chairman's monetary policy testimony, elicited limited reactions in financial markets.

The expected path of the federal funds rate implied by OIS rates shifted down some and now first rises above the current target range in the third quarter of 2014, about two quarters later than at the time of the June FOMC meeting. The modal federal funds rate path—the most likely values for future federal funds rates derived from interest rate caps—remains within the current target range through mid-2016.[2]

Results from the Open Market Desk's latest survey of primary dealers showed a significant downward shift in dealers' medium-term policy rate expectations, with the median target federal funds rate forecasts for the second half of 2014 through the second half of 2016 declining up to 50 basis points since the time of the June survey. Dealers

[1] Expectations regarding a continuation of the MEP likely moved longer-term Treasury yields lower before the extension was announced on June 20. Taking market expectations into account, the responses of Treasury yields to the announcement appeared to be broadly consistent with predictions from staff term structure models as described in Canlin Li and Min Wei (2011), "Term Structure Modeling with Supply Factors and an Application to Maturity Extension Program Evaluation," memorandum, Board of Governors of the Federal Reserve System, Division of Monetary Affairs, September 15; and Canlin Li and Min Wei (2012), "Term Structure Modeling with Treasury and Agency MBS Supply Factors," memorandum, Board of Governors of the Federal Reserve System, Division of Monetary Affairs, January 18.

[2] The effective federal funds rate averaged 16 basis points over the intermeeting period, with the intraday standard deviation averaging about 4 basis points.

now view the first quarter of 2015 as the most likely time of the first increase in the target rate, one quarter later than in the June survey. In addition, dealers revised up the probability that the FOMC will announce additional asset purchases within the next year from 50 percent to 65 percent, but saw only a 25 percent probability that such an action will be announced at the August meeting. Dealers also assigned higher odds to the Committee changing its forward guidance language or the Federal Reserve lowering the interest rate paid on excess reserves within the next year. In response to a new survey question, dealers assigned a 30 percent probability that a new tool would be used within the next year and a 40 percent probability that one would be used within the next two years. In their written commentary, dealers' views on what form the new tools would take varied, though the most frequently cited was a program similar to the Bank of England's Funding for Lending Scheme.

On net over the intermeeting period, nominal Treasury yields decreased and the yield curve flattened moderately, with 2-year yields down 8 basis points and yields on 10- to 30-year Treasury coupon securities lower by 20 to 27 basis points on net. Market contacts reported that the decline in 2-year yields reflected in part growing expectations that the interest rate paid on reserve balances may be reduced in coming months, consistent with the ECB's decision to cut its deposit rate to zero.

The staff's term structure model attributed about half of the drop in longer-term Treasury yields to lower real term premiums, likely due to continued investor demand for the relative safety and liquidity of Treasury securities amid persistent concerns about the euro-area crisis, as well as somewhat increased investor expectations for additional policy-easing actions by the FOMC. A smaller portion of the decline in long-term nominal Treasury yields appears to have reflected lower inflation expectations and inflation risk premiums. Consistent with this view and despite an increase in commodity prices, TIPS-based inflation compensation over the next five years declined 15 basis points, while the TIPS-based five-year forward measure decreased 7 basis points, on net, over the intermeeting period. Swaps- and caps-based measures of inflation compensation also fell, while survey-based measures of expected inflation were about unchanged.

The Desk's outright purchases and sales of Treasury securities under the MEP continued as planned and did not appear to have any material adverse effect on Treasury

market functioning.[3] Most measures of Treasury liquidity conditions, including average trading volumes by primary dealers and the average fitting error from the staff's nominal Treasury yield curve, were little changed over the period and stayed close to their recent averages. Bid–asked spreads were also about unchanged.

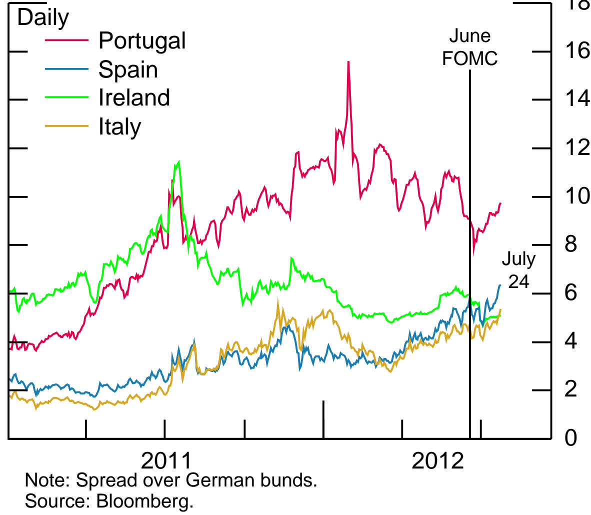
Foreign Developments

Financial stresses in the euro area have intensified, despite some initial easing following the European summit in late June. (See the box "Recent Developments in the Euro Area" in the International Economic Developments and Outlook section in this Tealbook.) Spreads on Spanish and Italian 10-year bonds over German equivalents rose more than 80 basis points over the period, and the Spanish spread reached its highest level since the beginning of the euro-area debt crisis. Amid this retreat from the periphery, the yields on 10-year sovereign bonds of Germany and the United Kingdom declined 30 basis points and 25 basis points, respectively. In addition, 2-year sovereign bonds of Germany and a few other European countries traded at yields below zero after the ECB cut its policy rates by 25 basis points. The main refinancing rate was lowered to 75 basis points, and, surprising market participants, the ECB's deposit rate—which sets a floor under overnight interest rates—was lowered to zero. (See the box "The Effects of the European Central Bank's Deposit Rate Cut.")

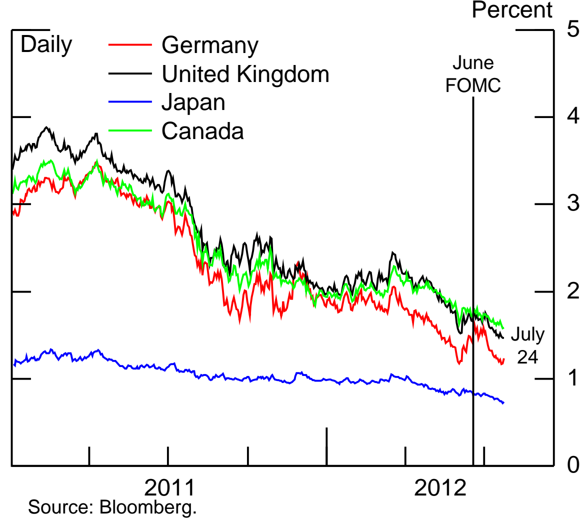
Several other foreign central banks eased policy over the intermeeting period. In support of its fixed-exchange-rate regime against the euro, Denmark's central bank reacted by lowering its short-term deposit rate to negative 20 basis points. The Bank of England increased the size of its asset purchase program by £50 billion to £375 billion. The bank also announced details on its new Funding for Lending Scheme, which is designed to boost bank lending to the nonfinancial sector. (See the box "The Bank of England's Funding for Lending Scheme.") In response to slowing growth and moderating inflation, the central banks of Brazil, China, and South Korea all reduced policy rates as well.

[3] The Federal Reserve purchased $49 billion and sold or redeemed $61 billion of Treasury securities over the intermeeting period under the MEP; the average maturity of SOMA Treasury holdings has lengthened by about three years since the beginning of the program last September. In addition, the Federal Reserve reinvested $30 billion in agency MBS from principal payments on its holdings of agency securities.

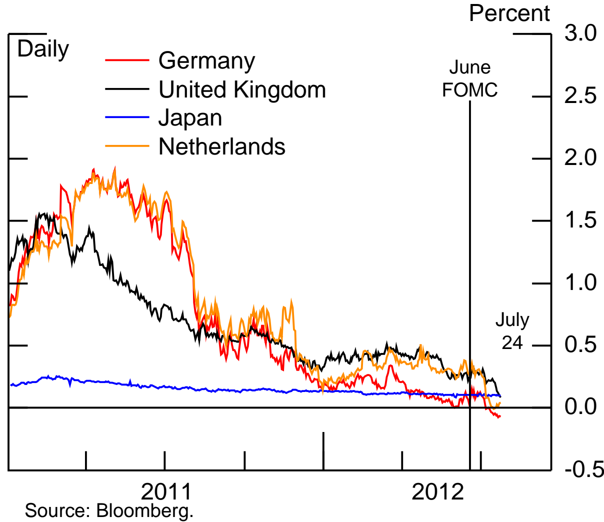
Foreign Developments



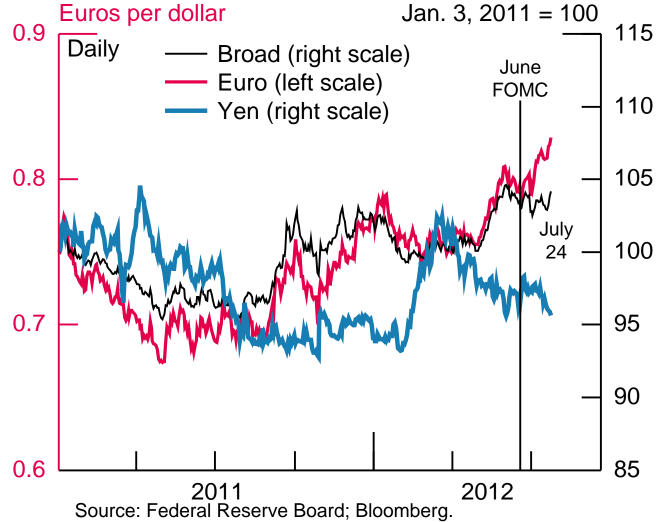
Note: Spread over German bunds.
Source: Bloomberg.



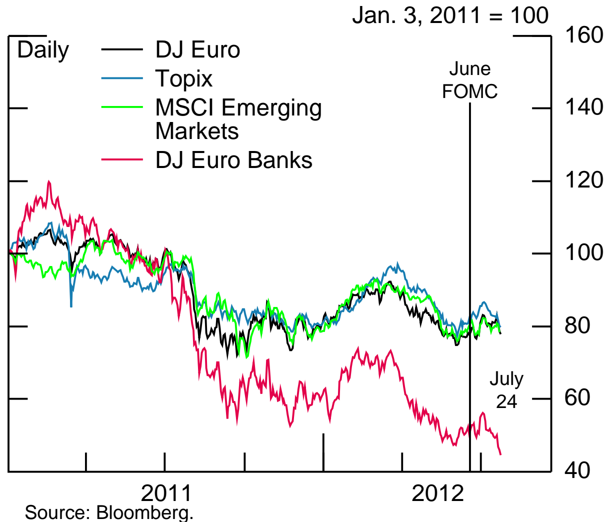
Source: Bloomberg.



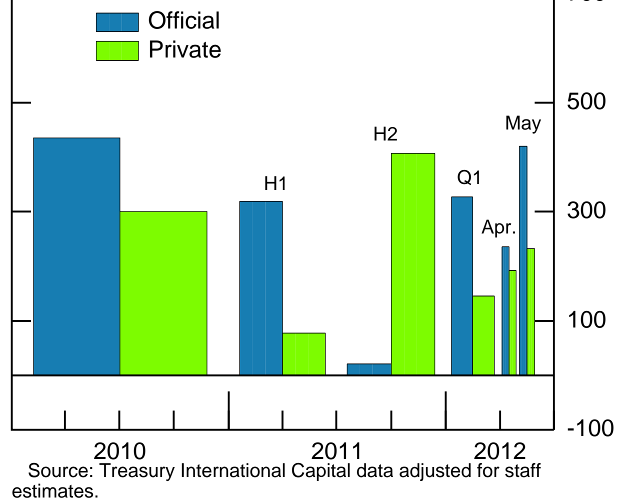
Source: Bloomberg.



Source: Federal Reserve Board; Bloomberg.



Source: Bloomberg.



Source: Treasury International Capital data adjusted for staff estimates.

The euro depreciated sharply against the dollar following the ECB's policy announcement and continued to fall as euro-area stresses intensified. However, the broad nominal index for the dollar is up only modestly over the intermeeting period, as the dollar's moves against most other currencies were small and generally offsetting.

Headline equity price indexes in the advanced foreign economies fluctuated over the period with euro-area developments but were little changed on net. Although European equity prices rose following the June 29 release of the euro-area summit statement, these gains were subsequently erased as investor sentiment regarding euro-area prospects soured again. However, shares in euro-area banks, which are highly sensitive to any concerns about sovereign conditions, decreased 14 percent over the period, in part reflecting the downgrade by Moody's Investors Service of 9 European banks with global capital market operations, as well as an additional 28 Spanish banks. Equity prices are down in many key emerging market economies on fears that their economic performance might be adversely affected by any further slowing in global growth, with prices in Brazil, China, and South Korea down more than 5 percent.

Foreign official investors' holdings of Treasury securities increased in May at about the pace seen since the beginning of the year. More-recent data on custody holdings at the Federal Reserve Bank of New York indicate further foreign official purchases of Treasury securities in June and early July, but these purchases were largely offset by sales of agency securities. Foreign private purchases of Treasury securities strengthened in May.

Short-Term Dollar Funding Markets and Financial Institutions

Conditions in short-term unsecured dollar funding markets remained stable over the intermeeting period, although most peripheral euro-area institutions continued to have little, if any, access to such markets. The three-month euro–dollar implied basis swap spread—an indicator of dollar funding pressures faced by European banks—was down slightly on net. The outstanding amount of central bank dollar liquidity swaps edged up $3 billion to $27 billion, reflecting a small increase in foreign banks' demand for dollar funding from the ECB. LIBOR–OIS spreads were little changed. While the scandal surrounding LIBOR intensified after Barclays settled charges brought by U.S. regulators, so far there have been no notable disruptions in markets for securities based on LIBOR or in funding markets more generally. In addition, the spread between the rates implied by

The Effects of the European Central Bank's Deposit Rate Cut

In response to the ongoing euro-area debt crisis and mounting downside risks to euro-area economic growth, the European Central Bank (ECB) cut its key policy rates 25 basis points during the intermeeting period. The ECB's main refinancing rate fell to ¾ percent, and the interest rate the ECB pays on deposits fell to zero. Short-term market interest rates moved down in response to the cuts, raising questions about the viability of money market funds (MMFs) and the smooth operation of securities repurchase markets and other short-term funding markets.

Following the ECB's action, the overnight interbank interest rate fell roughly 20 basis points to just above one-tenth of a percent. Short-term interest rates on sovereign securities from core euro-area countries also fell noticeably following the ECB's cut. Three-month Treasury bill rates, shown in the lower-left figure on the following page, fell into negative territory in France and the Netherlands, while German rates, which were already negative, fell further. More surprisingly, as shown in the lower-right figure on the following page, two-year bonds in Germany and the Netherlands also traded at rates below zero.

The ECB's rate cut also exerted downward pressure on short-term interest rates in neighboring countries that try to constrain exchange rate fluctuations against the euro. In Switzerland, where the foreign exchange value of the Swiss franc against the euro has stayed close to the Swiss National Bank's stated ceiling, two-year interest rates have remained quite negative. The Danish central bank, which pegs its currency to the euro, followed the ECB's cut by lowering its key policy rates, including reducing the rate on one-week certificates of deposit (not shown) to negative 0.20 percent.

Negative short-term interest rates do not appear to have disrupted market functioning in the euro area. Trading volumes in euro-area overnight funding markets (not shown), which had already been low amid the abundance of liquidity provided by the ECB, have remained at the low end of their historical range. Concerns about an increase in fails in repurchase markets, where rates have also turned negative, do not seem to have been borne out as yet. Although they play a relatively small role in money markets, several euro-denominated MMFs have closed to new investments since the ECB's cuts, given the low rates of return they expect to earn on their holdings.

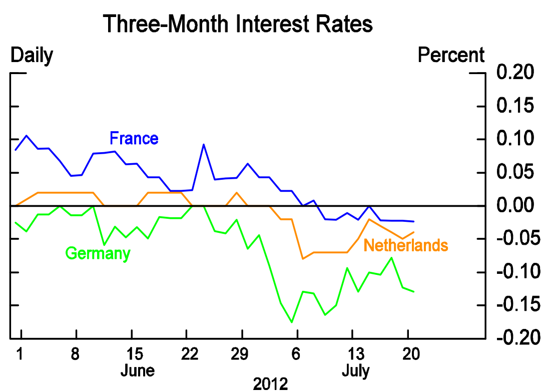
The legal structure of European MMFs differs from that in the United States in ways that may mitigate the effects of the ECB's rate cut on that sector. In particular, most euro-denominated funds are less restricted than U.S. funds in the classes of assets they can hold, and some of the funds redeem shares at

variable, rather than fixed, net asset values. As a result, at least some of these funds may be able to hold assets of slightly lower quality or longer duration that continue to offer positive returns, and some funds may also have greater flexibility in accepting negative rates. Although these funds can continue to operate, the low interest rate environment is likely to reduce their profit margins and require adjustments to their investment strategies.

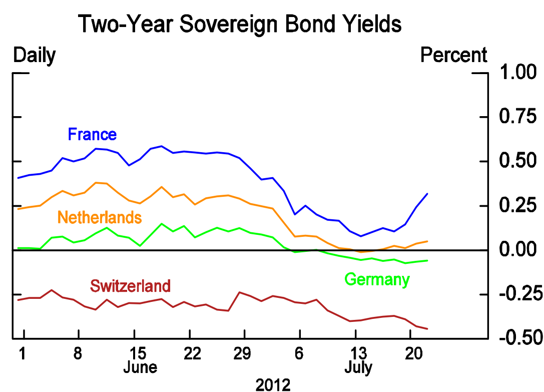
Past experiences in advanced foreign economies have shown that activity in money markets declined in low interest rate environments, although this damping effect does not appear to have been permanent. During periods of zero interest rates in Japan, activity in uncollateralized money markets was essentially nonexistent. Activity in money markets quickly recovered, however, once the Bank of Japan raised its policy rate above zero, even though the interest rate never rose above 50 basis points.

In Switzerland and Sweden, the effect of very low interest rates was even less severe. In 2003, Switzerland experienced a period of very low overnight interest rates. Trading volumes in overnight markets declined, but there were no other noticeable effects. During a period of low interest rates between July 2009 and July 2010, the central bank of Sweden, the Riksbank, charged banks 25 basis points to place funds in its overnight deposit facility. The Riksbank kept its deposit rate below zero during that period to maintain a meaningful opportunity cost for the use of its facility. In Sweden's case, the negative rate on central bank deposits had only a modest effect on money markets.

In all, the ECB's rate cuts successfully lowered euro-area short-term interest rates. The policy action is intended to ease financial conditions and, hence, to boost lending and economic activity. While it is possible some adverse effects in financial markets may develop, if short-term interest rates stay at these levels for an extended period of time, past experience suggests such effects may quickly reverse once rates begin to increase.



Source: Bloomberg.



Source: Bloomberg.

The Bank of England's Funding for Lending Scheme

In June, the governor of the Bank of England and the chancellor of the Exchequer announced plans to introduce a temporary Funding for Lending Scheme (FLS) that would reduce banks' funding costs and encourage bank lending to U.K. households and firms. Details were released in July, and the new measure is expected to be operational in August. Its success will depend in part on how much it actually reduces banks' funding costs and on whether funding costs are in fact impeding new lending.

Under the FLS, the Bank of England (BOE) will stand ready to lend U.K. Treasury bills to banks participating in the scheme. Banks will be able to initiate requests for such loans during a "drawdown period" that runs from August 2012 through January 2014, and the loans can have a maturity of up to four years. The bills borrowed by the banks can be used as high-quality collateral to obtain funding at low interest rates in private securitized lending markets. This method of providing liquidity assistance, which is also used in the BOE's Discount Window Facility, is designed to leave the overall level of bank reserves unchanged.

Although the scheme was announced jointly by the BOE and the U.K. Treasury, the Treasury is not indemnifying the Bank against losses incurred under the FLS. Rather, the BOE will rely on the collateral provided by banks as security against the loan of the Treasury bills. A wide range of collateral will be acceptable, including the banks' loans to businesses and households, and substantial haircuts will be imposed on illiquid collateral.

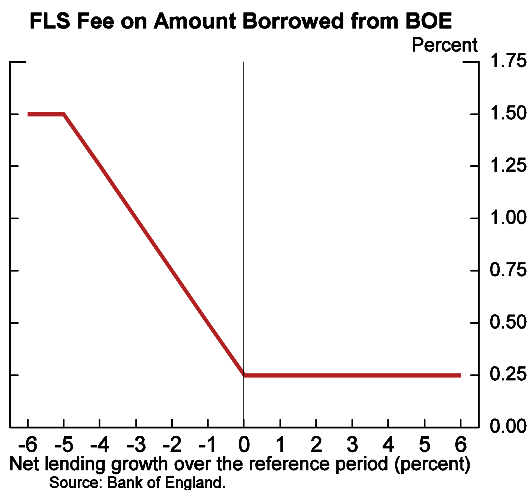
The scale of borrowing under the FLS could be large. Participating banks are given an initial borrowing allowance equal to 5 percent of their loans to the U.K. nonfinancial sector as of June 30, 2012. If that allowance were fully utilized, borrowing under the FLS would amount to about £80 billion, more than 5 percent of U.K. nominal GDP. Furthermore, the borrowing allowance for any bank will increase pound-for-pound with net lending in excess of the end-of-June amount. There is no upper limit on the size of individual or aggregate borrowing under the scheme. Amounts borrowed and lent under the scheme by each participating institution will be made public by the Bank of England on a quarterly basis.

To help stimulate lending, the cost of using the FLS for a participating bank is designed to vary inversely with its lending to the U.K. nonfinancial sector. As shown in the lower-left figure on the following page, banks that maintain or increase net lending over the period from June 30, 2012, to the end of 2013 will pay a fee of 0.25 percent per annum on the amount of Treasury bills borrowed; banks with declines in net lending over that period will pay an extra

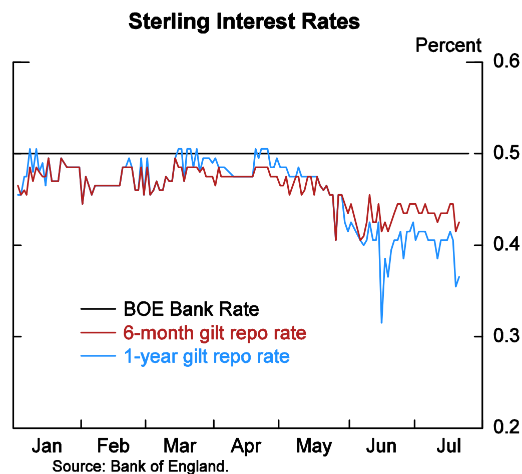
0.25 percentage points for each percentage point decline, up to a maximum fee of 1.50 percent on the amount borrowed. The overall cost of funding a new loan under the program is this fee plus the cost of obtaining private-market funding secured by Treasury bills. Based on a secured funding rate that is close to the BOE's Bank Rate, currently at 0.50 percent, the cost of funding a four-year loan for a bank that is expanding its lending could be as low as 0.75 percent. (See the sterling repo rates shown in the lower-right figure below.)

The FLS is premised on the view that loan growth has been restrained by high bank funding costs. In its May *Inflation Report*, the BOE estimated the marginal funding cost of extending variable-rate sterling loans (such as mortgages with rates that move with the BOE's Bank Rate) to be about 3½ percent on average across banks in April. If this estimate is accurate, then banks may well see borrowing via the FLS as very attractive, and participation in the scheme could be high. However, lenders with greater access to low-cost retail deposits may have substantially lower costs than those more reliant on the wholesale market for term funding and would be less likely to participate.

Even if bank participation is high, the impetus to lending provided by the FLS could be low if factors other than bank funding costs are impeding loan growth in the United Kingdom. High risk aversion, concerns about bank capital, and uncertainty over new supervisory standards could be important in restraining banks' willingness to make new loans. In addition, dim prospects for economic activity could be limiting the demand for new loans. If such factors are important, the FLS may not induce a pickup in lending. However, even flat lending activity could be judged positively if lending would have declined in the absence of the program.



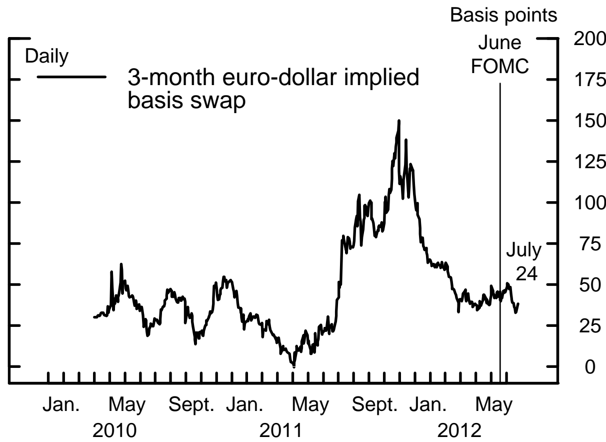
Source: Bank of England.



Source: Bank of England.

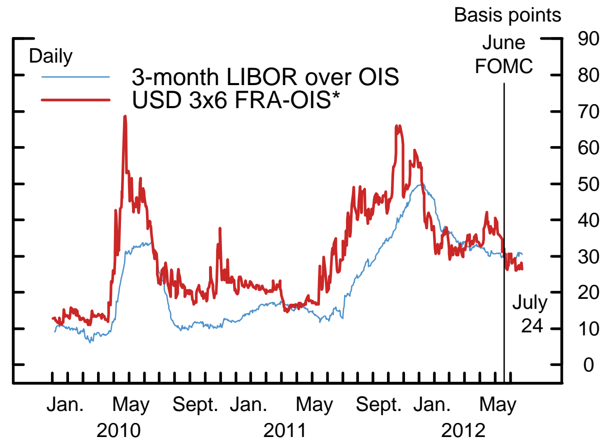
Short-Term Dollar Funding Markets and Financial Institutions

Dollar Funding Spread



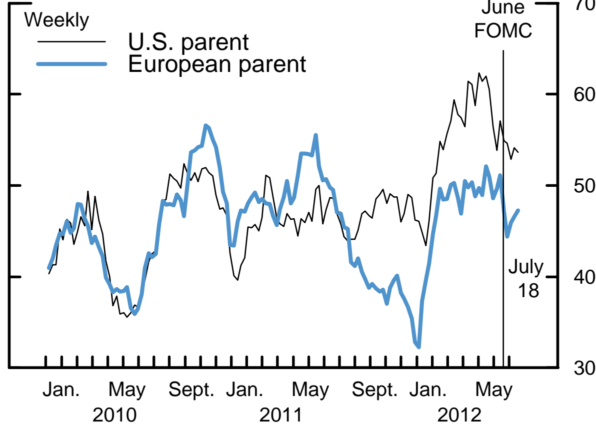
Source: Bloomberg.

Selected Spreads



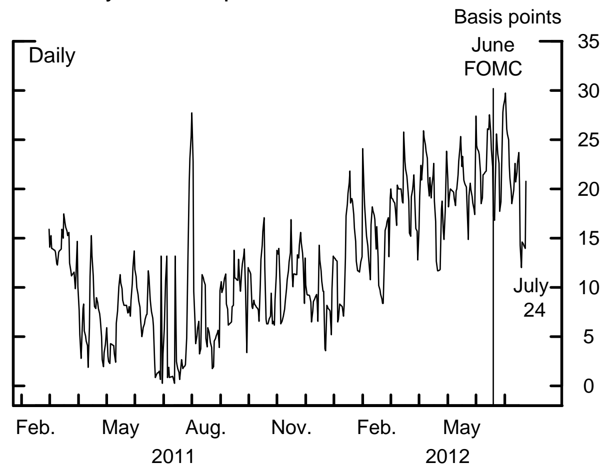
*Spread is calculated from a LIBOR forward rate agreement (FRA) 3 to 6 months in the future and the implied forward overnight index swap (OIS) rate for the same period.
Source: Bloomberg.

Average Maturity for Unsecured Financial Commercial Paper Outstanding in the U.S. Market



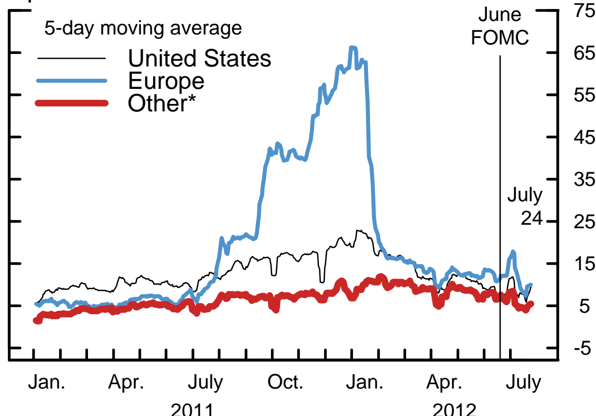
Source: Federal Reserve Board staff calculations based on data from the Depository Trust & Clearing Corporation.

Treasury GCF Repo Rate



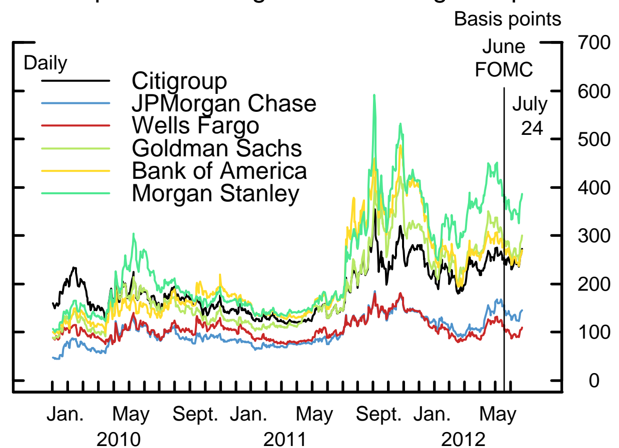
Note: Weighted average of interest rates paid on general collateral finance (GCF) repurchase agreements (repos) based on Treasury securities.
Source: Depository Trust & Clearing Corporation.

Asset-Backed Commercial Paper Overnight Spreads



Note: Spreads computed over the AA nonfinancial unsecured rate.
*Other institutions include nonbanking institutions and banks domiciled outside Europe and the United States.
Source: Depository Trust & Clearing Corporation.

CDS Spreads of Large Bank Holding Companies



Source: Markit.

the three-month forward rate agreement and the OIS rate three to six months ahead—a forward-looking measure of potential funding pressures—edged down on net.

Outstanding unsecured commercial paper (CP) issued by financial institutions with European parents increased slightly, on balance, over the intermeeting period. Even so, the average maturity of unsecured financial CP issued by institutions with European parents remained lower than that for institutions with U.S. parents.

In secured funding markets, Treasury general collateral finance repo (GCF repo) rates fluctuated some but were roughly unchanged on balance. Movements in the Treasury GCF repo rate over the period were attributed to a variety of factors, most notably changes in the level of net settlement of Treasury securities and GSE cash balances. The intermeeting period saw the introduction of a futures contract tied to the DTCC Treasury GCF Repo Index (a volume-weighted average of interdealer Treasury GCF repo trades published by the Depository Trust & Clearing Corporation), and initial interest on the part of investors was notable.[4]

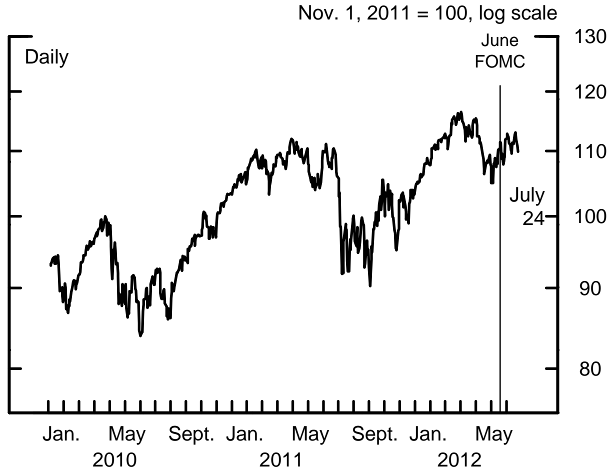
In the asset-backed commercial paper (ABCP) market, amounts outstanding remained stable for programs with sponsors domiciled in both the United States and Europe. Overnight spreads on ABCP with U.S. and European sponsors were roughly unchanged. The pace at which money market funds were reducing their exposures to Europe has apparently picked up somewhat over the period, with the direct exposures of U.S. money market funds to Europe falling 13 percent in June. However, those exposures remain sizable at $688 billion, including $290 billion in euro-zone holdings, dominated by French, German, and Dutch issuers.

Investors remained wary of large banking institutions over the intermeeting period. Moody's downgraded Bank of America, Citigroup, Goldman Sachs, JPMorgan Chase, and Morgan Stanley. However, these downgrades had been widely expected and elicited little response in financial markets. While most large-bank earnings reports were broadly in line with market expectations, investors noted some weakness in trading

[4] Trading in futures on the Treasury GCF repo index has been robust since the contracts were launched in mid-July, with open interest on contracts settling through the end of the year growing to roughly 9,500 contracts. For comparison, open interest on Eurodollar futures contracts maturing through the end of the year currently stands at about 1,958,625 contracts. The aggregate notional dollar value on repo futures contracts has already reached about 2.4 percent of the aggregate notional value for the widely traded Eurodollar futures contracts. Futures on the Treasury GCF repo index are traded on NYSE Liffe U.S.

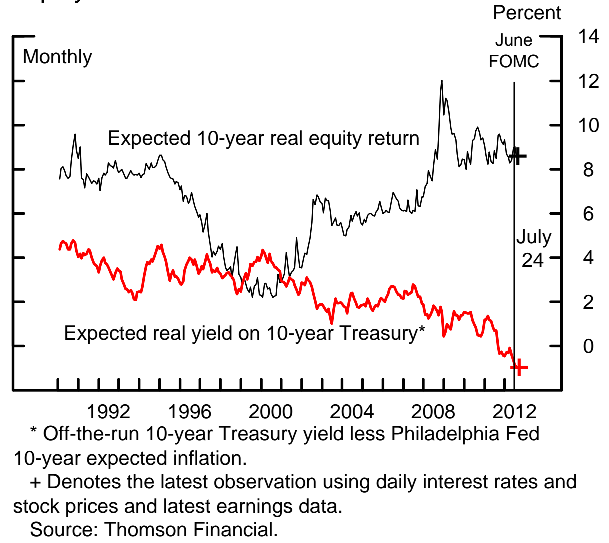
Other Domestic Asset Market Developments

S&P 500 Stock Price Index



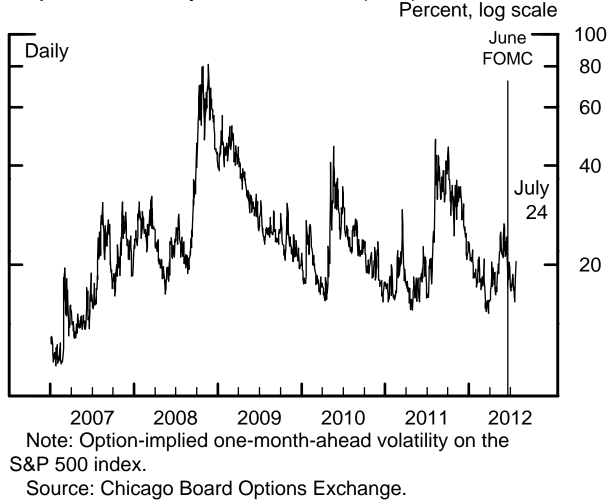
Source: Bloomberg.

Equity Risk Premium



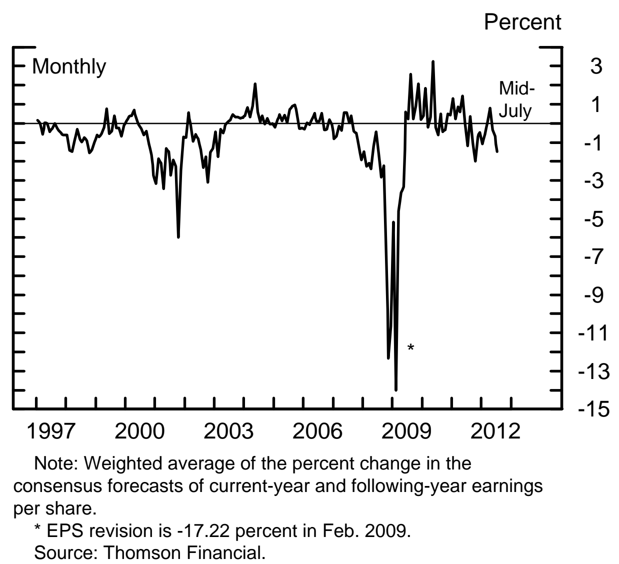
* Off-the-run 10-year Treasury yield less Philadelphia Fed 10-year expected inflation.
\+ Denotes the latest observation using daily interest rates and stock prices and latest earnings data.
Source: Thomson Financial.

Implied Volatility on S&P 500 (VIX)



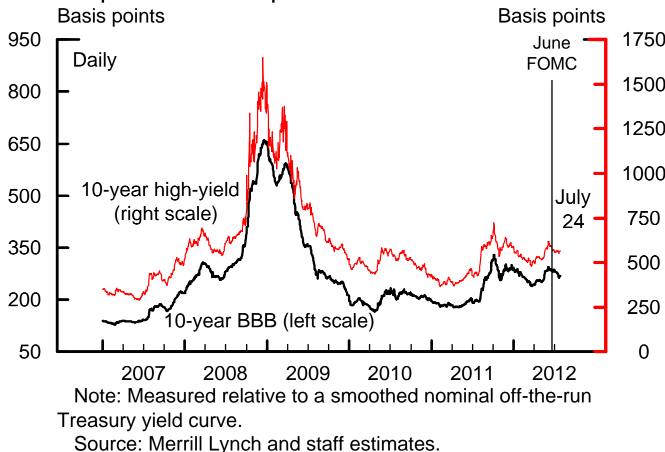
Note: Option-implied one-month-ahead volatility on the S&P 500 index.
Source: Chicago Board Options Exchange.

Revisions to S&P 500 Earnings per Share



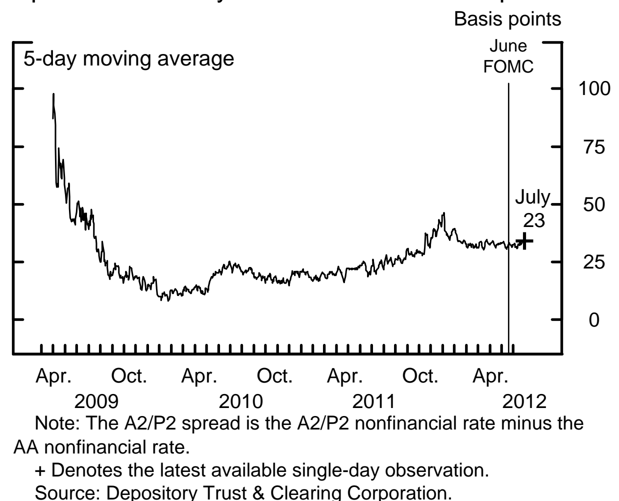
Note: Weighted average of the percent change in the consensus forecasts of current-year and following-year earnings per share.
* EPS revision is -17.22 percent in Feb. 2009.
Source: Thomson Financial.

Corporate Bond Spreads



Note: Measured relative to a smoothed nominal off-the-run Treasury yield curve.
Source: Merrill Lynch and staff estimates.

Spread on 30-Day A2/P2 Commercial Paper



Note: The A2/P2 spread is the A2/P2 nonfinancial rate minus the AA nonfinancial rate.
\+ Denotes the latest available single-day observation.
Source: Depository Trust & Clearing Corporation.

Financial Developments

revenues, and expenses due to litigation and mortgage putbacks by the GSEs also weighed on earnings. In addition, concerns about the situation in Europe continued to damp sentiment toward these institutions. Consequently, stock prices for most large domestic bank holding companies fell over the period, with some declining more than 10 percent, and CDS for those firms moved higher. By contrast, large regional banks' share prices edged up, as second-quarter earnings results generally beat expectations on strong mortgage banking performance and improved credit quality.

The mean quarterly return for the hedge fund industry was negative 2.6 percent in the second quarter, about on par with the S&P 500 return over the same period. In spite of the negative performance, there was a net capital inflow of $4.1 billion over this period. Inflows were concentrated at the industry's largest firms, while smaller funds experienced net redemptions. The use of leverage remained low across funds.

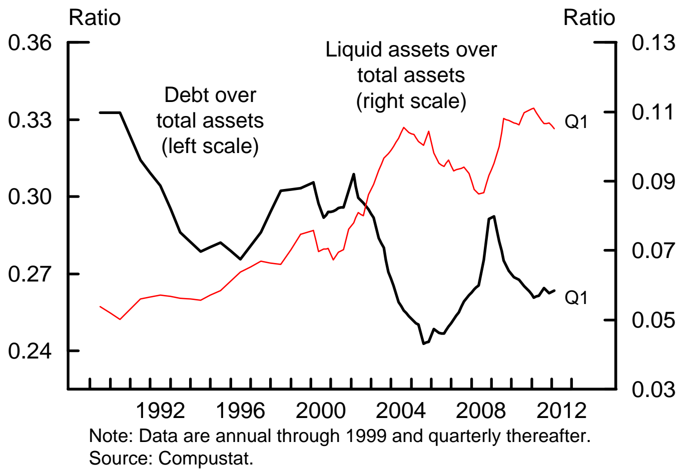
Other Domestic Asset Market Developments

Broad equity price indexes edged lower, on net, over the intermeeting period, as share prices were buffeted by developments in Europe, worrisome domestic economic data reports, and the first wave of corporate earnings reports for the second quarter, which were, on balance, not as gloomy as had been feared. The staff's estimate of the spread between the expected real return on equity among S&P 500 firms and the real 10-year Treasury yield—a rough gauge of the equity premium—was little changed over the intermeeting period and remained very wide by historical standards.

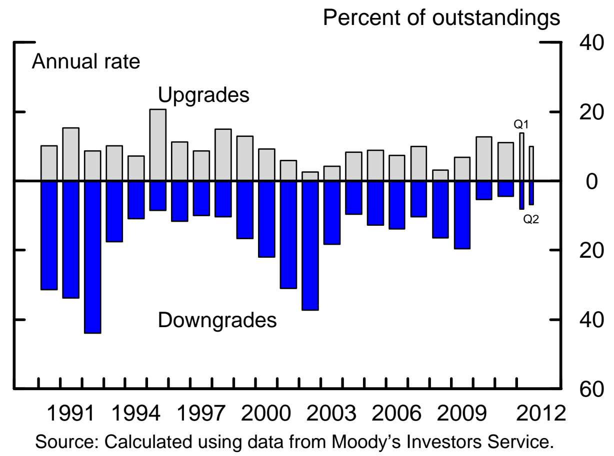
Options-implied one-month-ahead volatility on the S&P 500 index, as measured by the VIX index, increased slightly, on net, over the intermeeting period but remained in the lower portion of its range over the past five years. Staff analysis suggests that the recent level of the VIX is somewhat low conditional on other measures of macroeconomic uncertainty. However, options-implied volatility 12 months ahead, while also about unchanged for the intermeeting period, is somewhat less depressed relative to historical norms, suggesting that market participants are less sanguine about risks to equity market performance over the medium term.

On balance, second-quarter earnings reports appear to have been less weak than market participants anticipated, though expectations were set quite low; the reaction of share prices to earnings reports has been, on the whole, positive. Earnings from the roughly one-third of S&P 500 firms that have reported for the second quarter, together

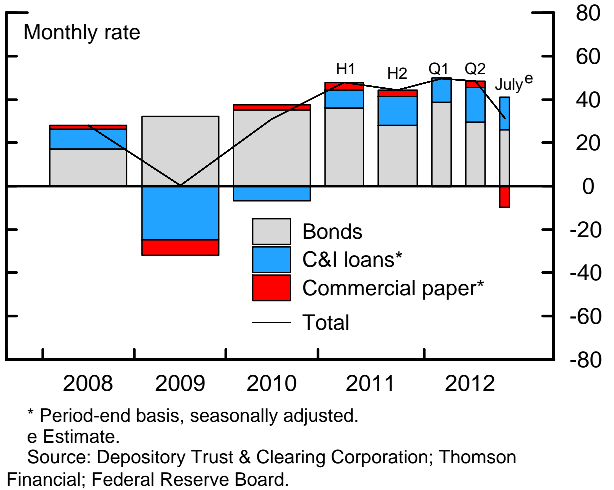
Business Finance



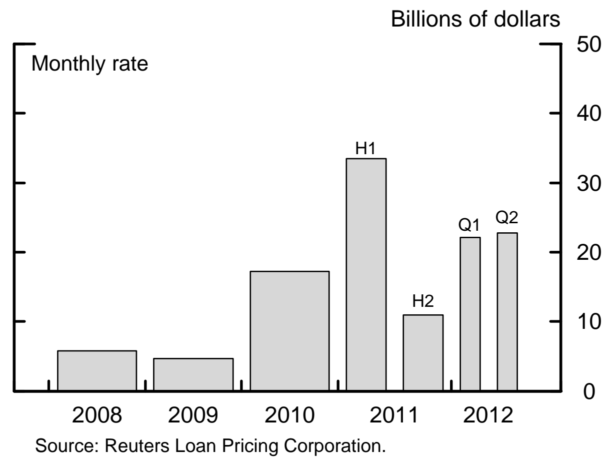
Note: Data are annual through 1999 and quarterly thereafter.
Source: Compustat.



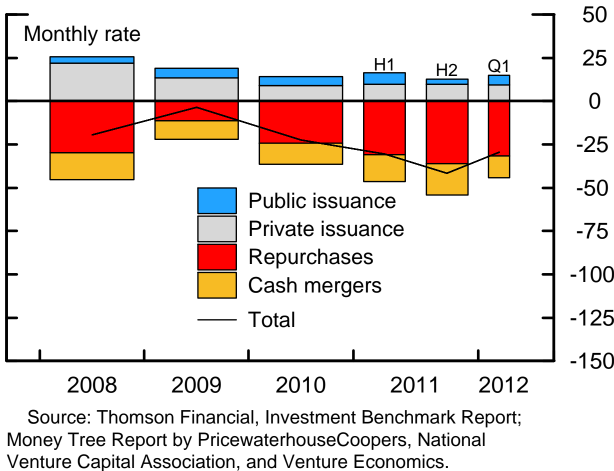
Source: Calculated using data from Moody's Investors Service.



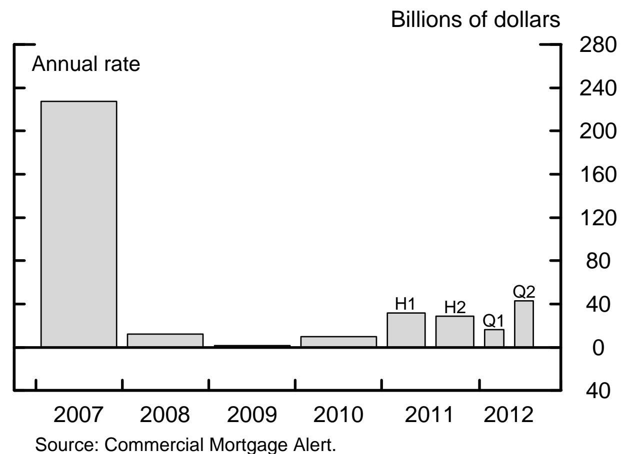
* Period-end basis, seasonally adjusted.
e Estimate.
Source: Depository Trust & Clearing Corporation; Thomson Financial; Federal Reserve Board.



Source: Reuters Loan Pricing Corporation.



Source: Thomson Financial, Investment Benchmark Report; Money Tree Report by PricewaterhouseCoopers, National Venture Capital Association, and Venture Economics.



Source: Commercial Mortgage Alert.

with Wall Street analysts' forecasts for the remaining firms, suggest that aggregate profits for the nonfinancial sector likely fell slightly on a quarterly basis, while those for the financial sector experienced a more pronounced decline. Wall Street analysts revised down their forecasts of year-ahead earnings for S&P 500 firms notably over the four-week period ending in mid-July.

Yields on investment- and speculative-grade corporate bonds fell further over the intermeeting period, approaching record lows. The spread of yields on corporate bonds over those on comparable-maturity Treasury securities also narrowed slightly, on net, but remained somewhat elevated relative to average levels prior to the financial crisis. The spreads of yields on A2/P2 unsecured CP issued by nonfinancial firms over yields on A1/P1-rated issues were about flat, on balance, over the intermeeting period.

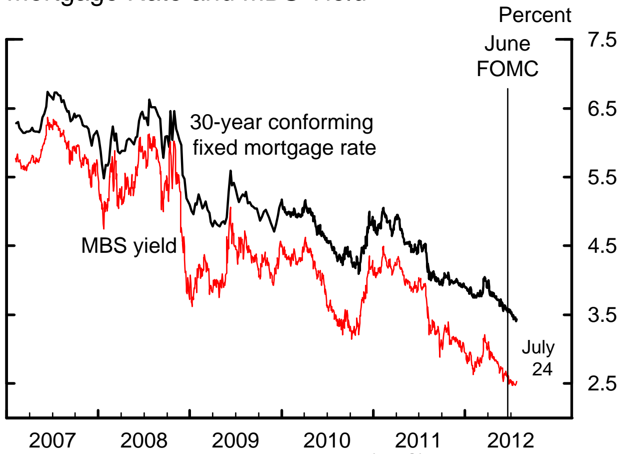
BUSINESS FINANCE

Available indicators of the credit quality of nonfinancial corporations continued to be quite solid as firms generally maintained strong balance sheets. The aggregate ratio of debt to assets was stable at a relatively low level in the first quarter, and the liquid asset ratio remained near its highest level in more than 20 years. In the second quarter, the volume of nonfinancial corporate bonds upgraded by Moody's exceeded the volume of bonds downgraded yet again. The six-month trailing bond default rate for nonfinancial firms remained low in June. The expected year-ahead default rate for nonfinancial firms from the Moody's KMV model was unchanged in June and July; it remained slightly elevated by historical standards, reflecting relatively depressed equity prices, which the model translates into low corporate asset values.

Overall, the rate of issuance of debt by financial and nonfinancial firms remained strong over the intermeeting period. Bond issuance by nonfinancial firms, particularly those with investment-grade ratings, was robust late in the second quarter and continued to be strong in July. Many issuers reported intending to use the proceeds to pay down other debt or to finance acquisitions. Bond issuance by financial firms has also been robust. The volume of nonfinancial CP outstanding rose early in the second quarter but decreased slightly in June, reflecting weak issuance across most industries. The volume of C&I loans outstanding increased notably over the intermeeting period. In the syndicated leveraged loan market, institutional issuance remained solid in the second quarter, supported by continued strong interest on the part of traditionally unleveraged investors such as pension funds and insurance companies. Based on conversations with

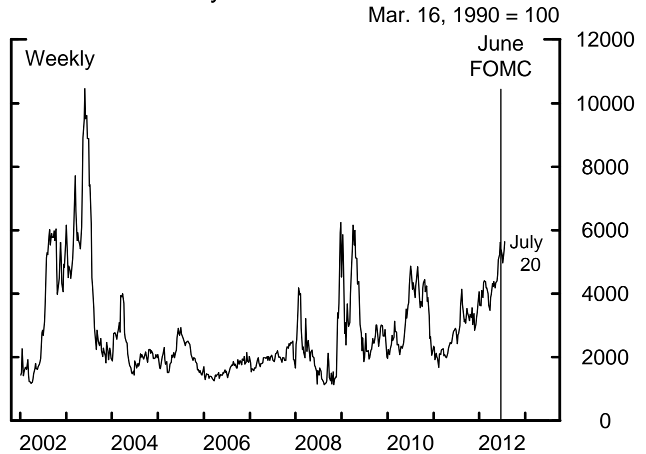
Household Finance

Mortgage Rate and MBS Yield



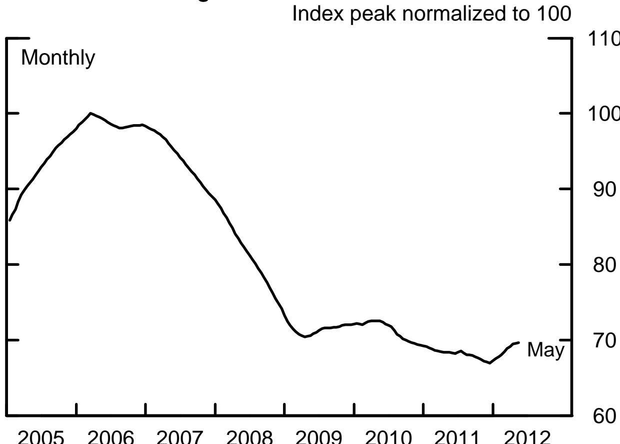
Note: For mortgage-backed securities (MBS) yield, the data are daily and consist of the Fannie Mae 30-year current-coupon rate; for mortgage rate, the data are weekly before 2010 and daily thereafter.
Source: For MBS yield, Barclays; for mortgage rate, Freddie Mac (before 2010) and Loansifter (from 2010).

Refinance Activity



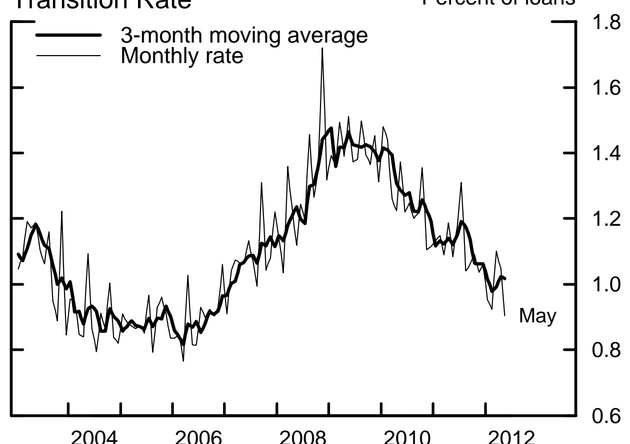
Note: Seasonally adjusted by FRB staff.
Source: Mortgage Bankers Association.

Prices of Existing Homes



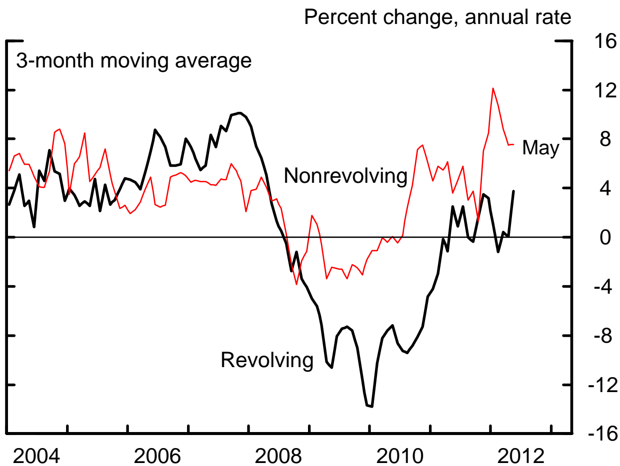
Source: CoreLogic.

Delinquencies on Prime Mortgages, Transition Rate



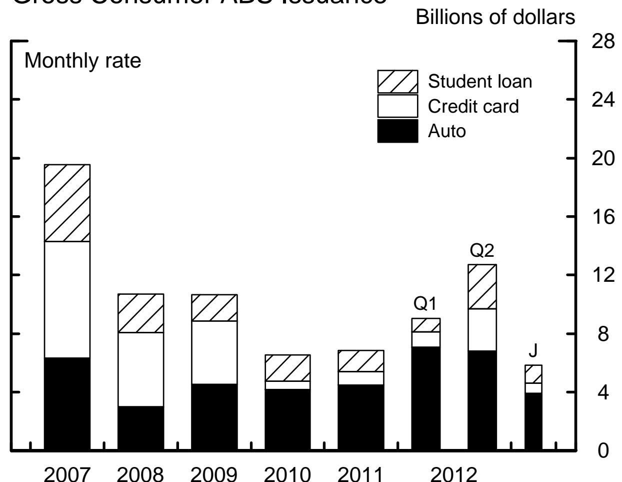
Note: Percent of previously current mortgages that transition to being at least 30 days delinquent each month.
Source: LPS Applied Analytics.

Consumer Credit



Source: Federal Reserve Board.

Gross Consumer ABS Issuance



Source: Inside MBS & ABS; Merrill Lynch; Bloomberg; Federal Reserve Board.

Financial Developments

market participants, terms and structures of new leveraged loan deals have loosened modestly on the margin.

Gross public equity issuance by nonfinancial firms was anemic in June and July. The near freeze in the IPO market reportedly reflected in part the poor post-IPO performance of Facebook share prices, as well as pronounced volatility in global financial markets associated with heightened concerns about the euro area. The most recent data on share repurchases and stock-financed mergers by nonfinancial firms indicated that equity retirements overall remained robust in the first quarter, leaving net equity issuance deeply negative for that quarter. Announcements of mergers and new share repurchase programs suggested that equity retirements likely remained strong in the second quarter.

Financial conditions in the commercial real estate (CRE) market remained somewhat strained against a backdrop of weak fundamentals and still-tight underwriting. Prices for CRE properties, on balance, were stable at low levels, while vacancy and delinquency rates stayed elevated. Results from the July SLOOS indicate that lending standards for major categories of CRE loans remain tighter than the midpoint of their range since 2005 at a large number of banks despite a modest net fraction that reported having eased standards on such loans over the past few surveys. That said, larger fractions of banks reported stronger demand for CRE loans, on net, in the July SLOOS than in the previous survey. In addition, issuance of commercial mortgage-backed securities rose noticeably in the second quarter, and, according to market reports, issuance for the remainder of the year is expected to be solid.

HOUSEHOLD FINANCE

Mortgage rates declined further during the intermeeting period, with the interest rate on 30-year fixed-rate conforming mortgages falling to around 3½ percent. Despite new historical lows for mortgage rates, while refinancing continued to increase, activity remained muted relative to what staff models would have predicted based on fundamentals. This muted refinancing is broadly consistent with evidence from the July SLOOS indicating that mortgage underwriting standards at banks generally have not eased much from their tightest post-crisis levels, even for prime conforming loans. Mortgage refinancing through HARP—perhaps accounting for around one-third of overall refinancing activity in recent months—apparently continued to tick up, but activity related to the program appears to have varied widely across mortgage servicers,

with some respondents in the SLOOS reporting that capacity constraints were limiting their participation in the HARP. The spread between agency MBS and the 10-year Treasury yield narrowed somewhat over the intermeeting period. (For information about the so-called GSE keepwell agreements with the Treasury Department, see the accompanying box "GSE 'Keepwell' Agreements with the U.S. Treasury.")

Changes in residential mortgage credit quality appear somewhat mixed. House prices continue to increase, and the increases are reaching a larger share of metropolitan areas. The CoreLogic house price index climbed for a fifth consecutive month in May, leaving the index 4 percent higher than its low in the fourth quarter of 2011. Seventy percent of metropolitan areas experienced a three-month price increase of more than 1 percent, the highest share since early 2006. Even with these increases in house prices, however, around one-fourth of mortgage borrowers are estimated to remain underwater on their loans. Although the rate at which mortgages are entering delinquency has been trending down—likely reflecting the tight underwriting that has been in place for a few years—the fraction of existing mortgages that are seriously delinquent remains very elevated.

Consumer credit continued to expand briskly in recent months. Nonrevolving credit grew at a robust pace in May, owing to both rapid growth in student loans originated by the federal government and, to a lesser extent, auto loans made by private lenders. Revolving credit also rose in May but was merely 1.6 percent higher than its level a year before. Delinquency rates for consumer credit remained low, especially for revolving credit, largely reflecting a compositional shift of credit supply over the past few years toward the least-risky borrowers. The rate of issuance of consumer ABS picked up appreciably in June, making total issuance in the second quarter the highest since the end of the TALF, and issuance has remained robust in July.

Government Finance

Since the June FOMC meeting, the Treasury has auctioned $200 billion in nominal securities and $22 billion in 10- and 30-year TIPS. The auctions were generally well received, with bid-to-cover ratios mostly above, and indirect bidding ratios close to, their recent averages.

Despite continued significant fiscal pressures facing state and local governments, gross long-term issuance of municipal bonds was robust in June and thus far in July.

Net issuance of long-term bonds turned positive in the second quarter after staying in negative territory for more than a year. Ratings downgrades of municipal bonds by Moody's continued to substantially outpace upgrades in the first quarter, and higher-frequency data on ratings changes suggest that this trend continued in the second quarter.

In June and July, three cities in California voted to file for bankruptcy. Two of the cities attributed the filing mainly to sharply declining tax revenue due to the housing downturn and growing costs of public employee pensions and salaries; these cities reportedly have a total of around $600 million in bonds outstanding. Despite these events, in general default rates on municipal bonds remained very low. Market participants reportedly do not expect the practice of bankruptcy filing by municipalities to spread widely. As a result, the municipal bond market showed little reaction to the news, and yields on long-term general obligation municipal bonds generally followed Treasury yields lower over the intermeeting period. CDS spreads for states were roughly unchanged on net.

Commercial Banking and Money

Bank credit grew modestly in June and in the second quarter more broadly, though at a slightly slower pace than in the first quarter. The slowdown reflected a significant step-down in the growth of securities during the second half of the quarter, while growth of loans remained modest over the past three months. C&I loans continued their brisk expansion in recent months, primarily due to strength at large domestic banks. In contrast, CRE loans and home equity loans declined in June at rates broadly in line with recent experience. Closed-end mortgages rose, on balance, in the second quarter, the fourth consecutive quarter of modest growth in this category. The drop in this measure in June reportedly reflected substantial sales to the GSEs that more than offset a pickup in originations. Consumer loans increased modestly during the quarter as tepid growth in credit card balances was augmented by a somewhat stronger expansion in other consumer loans. Noncore loans grew at a faster pace in May and June than earlier in the year, boosting overall second-quarter loan growth, as reverse repos at large banks rose rapidly and the category for other loans and leases accelerated at domestic banks. The slower growth in securities in May and June was accounted for primarily by decreases in non–U.S. government securities as well as reductions in agency MBS at a few large domestic banks.

GSE "Keepwell" Agreements with the U.S. Treasury

When Fannie Mae and Freddie Mac entered conservatorship in August 2008, the U.S. Treasury agreed to provide up to $100 billion in capital support to each agency to maintain positive net worth as part of the Senior Preferred Stock Purchase Agreements. In February 2009, the capital support levels were increased to $200 billion for each agency. Then in December 2009, these "keepwell" agreements were amended to provide unlimited capital support from 2010 through the end of 2012. Through the first quarter of 2012, the GSEs have drawn a combined $187 billion from the U.S. Treasury.

After 2012, the limit for capital support for each GSE will revert to $200 billion, less the capital drawn during 2008 and 2009. Essentially, the effect of the amendment to provide unlimited support for the period between 2010 and 2012 was to raise the cap by the amount of the draws during those years, which amounted to more than $60 billion. As a result, Fannie Mae will still have $125 billion in available capital support and Freddie Mac will have $149 billion ($274 billion combined) at the end of this year. The expiration date for unlimited support is not expected to be postponed by the Congress.[1]

In October 2011, the Federal Housing Finance Agency (FHFA) provided projections of capital draws through 2014 for each of the GSEs under several house price scenarios and found that the GSEs are not likely to approach their capital support limits even under an adverse scenario. In its baseline scenario, in which house prices were assumed to decline modestly through mid-2012 and to increase thereafter, the GSEs were expected to draw an additional $8 billion in 2013 and 2014 (combined). Under the FHFA's adverse scenario, in which house prices were assumed to fall more than 15 percent by mid-2012 and to increase thereafter, the GSEs were expected to draw an additional $28 billion in capital support in 2013 and 2014, leaving a combined $246 billion of unused support

[1] As part of their ongoing strategic planning, the Federal Housing Finance Agency announced on July 23, 2012, that it will hire a consultant to develop a receivership plan for Fannie Mae and Freddie Mac after the keepwell agreements expire.

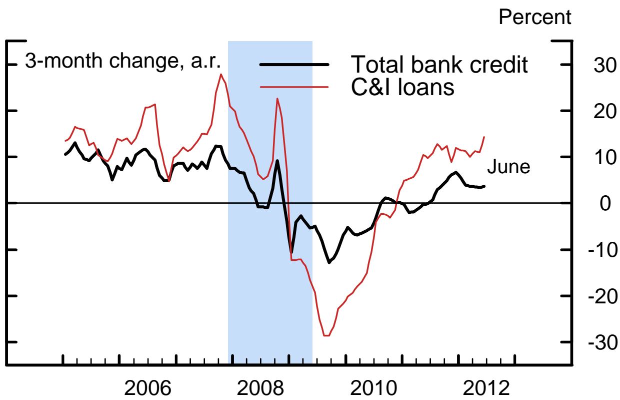
available. By comparison, the most recent Comprehensive Capital Analysis and Review (CCAR) supervisory stress scenario included house price declines of 8 percent from the first quarter of 2011 through mid-2012 (much of which was data by the time of the CCAR), an additional decline of 15 percent through early 2014, and only a slight improvement toward the end of 2014. Under the CCAR supervisory stress scenario, GSE capital draws could be substantially higher than in the FHFA's adverse scenario and place the GSEs closer to their limits.

Since the FHFA made its projections, the GSEs' earnings profiles have improved markedly, suggesting that these projections might well overstate the likely draws in those scenarios. In the first quarter of 2012, Fannie Mae posted positive earnings, thereby avoiding a capital draw. In addition, Freddie Mac requested only $19 *million* in capital support that quarter. Smaller-than-expected single-family portfolio losses have supported these improved earnings. Moreover, the better outlooks for house prices and mortgage delinquencies in recent months have further improved agency earnings prospects. That said, the mandatory 10 percent dividend payments to the U.S. Treasury continue to weigh on agency earnings.

To date, market participants do not appear concerned about the expiration of unlimited capital support for the GSEs arguably because the remaining capital support is large relative to the agencies' cumulative draws of capital from 2008 through early this year. However, a significant deterioration in the housing sector beyond that considered by the FHFA could lead investors to focus more attention on the risk that the GSEs could require Treasury support beyond the remaining amounts available to them. In that event, the prices of GSE debt and MBS could be significantly affected.

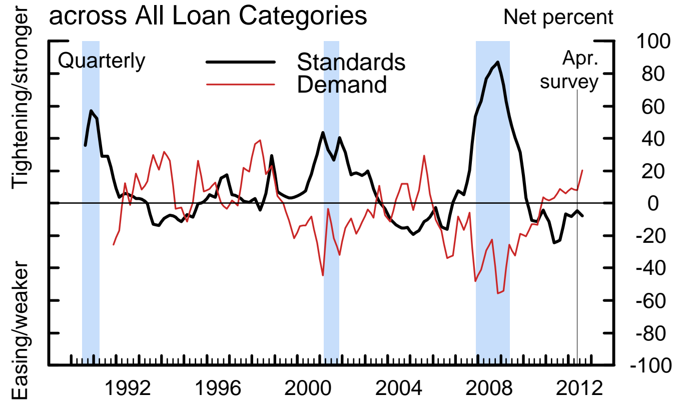
Commercial Banking and Money

Changes in Bank Credit



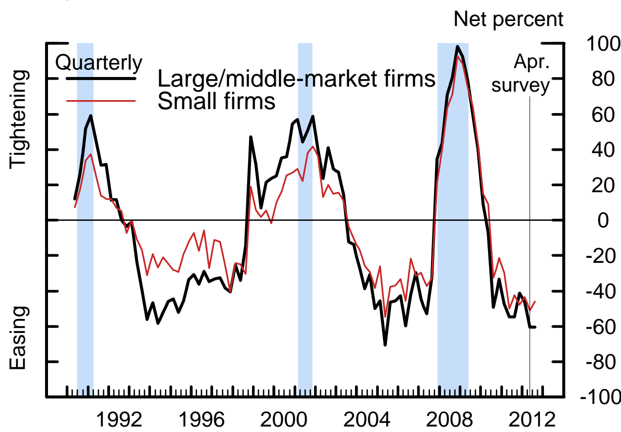
Note: The data have been adjusted to remove the estimated effects of certain changes to accounting standards and nonbank structure activity of $5 billion or more.
Source: Federal Reserve Board.

Weighted Changes in Standards and Demand across All Loan Categories



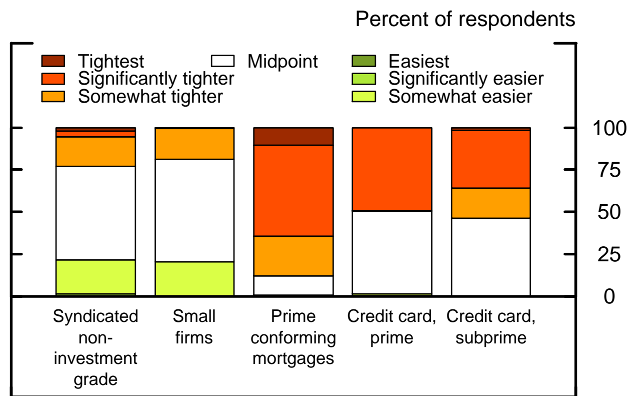
Note: A composite index that represents the net percentage of loans on respondents' balance sheets that were in categories for which banks reported tighter lending standards or stronger loan demand over the past 3 months.
Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending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

Spreads of C&I Loan Rates over Cost of Funds



Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

Level of Standards on Select Loans



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 weighted by survey respondents' holdings of relevant loan types, as reported on the March 31, 2012, Call Report.
Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices.

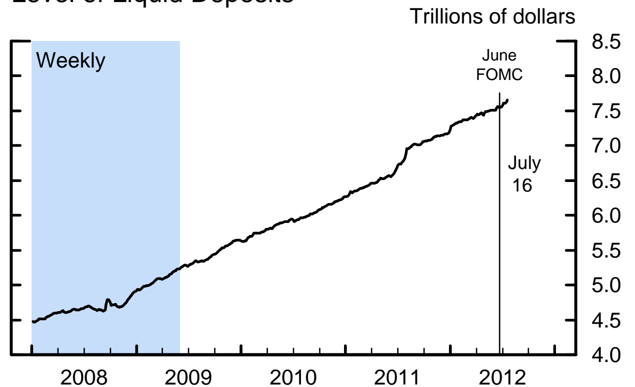
Growth of M2 and Its Components

Percent, s.a.a.r.

	M2	Liquid deposits	Small time deposits	Retail MMFs	Curr.
2011	9.7	15.4	-18.5	-2.1	8.8
2012:H1	6.9	10.4	-16.5	-7.2	9.4
2012:Q2	4.9	7.8	-19.3	-4.7	8.0
May	4.3	6.8	-19.8	1.3	5.1
June(p)	5.7	8.3	-16.7	-0.9	6.8
July(e)	6.2	9.4	-19.9	-4.5	7.2

Note: Retail MMFs are retail money market funds.
p Preliminary.
e Estimate.
Source: Federal Reserve Board.

Level of Liquid Deposits



Note: Seasonally adjusted.
Source: Federal Reserve Board.

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

Financial Developments

According to the July SLOOS, modest net fractions of domestic banks, on balance, reported having eased their lending standards further over the past three months for most categories of loans, while relatively large net fractions reported stronger demand for many types of loans. In particular, a modest fraction of domestic banks reported that C&I loan standards for large and middle-market firms had eased, on net, and large fractions continued to report that the spread of rates on such loans over their bank's cost of funds had decreased. However, significantly smaller fractions of domestic respondents, on average, reported stronger demand for C&I loans than had done so in the previous survey. According to a set of annual questions asked in the July SLOOS, lending standards on C&I loans have returned to about the middle of the range that those standards have occupied since 2005, but for all other major loan categories, banks continued to report that their credit standards remained at least somewhat tighter, on balance, than the middle of their respective ranges over that same period.

M2 advanced at an annual rate of 6¼ percent, on average, in June and July. The level of M2 remained elevated relative to what would be expected based on historical relationships with nominal income and opportunity costs. The elevated level is likely related to investors' continued desire to hold safe and liquid assets amid ongoing concerns about the European crisis and the global growth outlook. Liquid deposits, the largest component of M2, increased at an annual rate of 9½ percent, largely because of another sizable shift of deposits from offshore bank branches to onshore entities. These funds likely accounted for an uptick in the amount of noninterest-bearing deposits that currently receive unlimited FDIC insurance.[5]

Currency grew at a rate slightly above its historical average in June and July, while retail money funds and small time deposits continued to decline. The monetary base rose as reserve balances and currency expanded over the period. The increase in reserve balances was driven in large part by fluctuations in the Treasury's general account, movements in which are typically volatile. (See the box "Balance Sheet Developments over the Intermeeting Period.")

[5] Offshore deposits have been included in the FDIC's assessment base since April 2011, negating some of the benefits to banks of booking these deposits abroad. The staff estimates that this most recent shift of deposits boosted M2 growth by 2.1 percentage points, on average, over June and July.

The Dodd–Frank Act provides temporary, unlimited deposit insurance coverage for noninterest-bearing transaction accounts in excess of $250,000 from December 31, 2010, through December 31, 2012. These deposits are estimated to have grown nearly 50 percent from December 31, 2010, and currently make up about 15 percent of M2 or about $1.5 trillion.

Balance Sheet Developments over the Intermeeting Period

Over the intermeeting period, total assets of the Federal Reserve edged down $10 billion to $2,856 billion (see the table on the next page).

Since the June FOMC meeting, the Open Market Desk conducted 22 operations as part of the maturity extension program: The Desk purchased $49 billion in Treasury securities with remaining maturities of 6 to 30 years and sold or allowed to mature without reinvestment $61 billion in Treasury securities with maturities of 3 years or less.[1] Since the maturity extension program was announced last September, the average maturity of the Federal Reserve's Treasury holdings has risen from 6.1 years to 9.1 years. In addition, the Desk reinvested $30 billion of agency debt and agency MBS principal payments in agency MBS securities.[2]

Foreign central bank liquidity swaps increased $3 billion to $27 billion, reflecting an increase in draws by the European Central Bank (ECB). Following the ECB's cut in its deposit rate, market rates on euro-denominated repo transactions against the safest collateral turned negative, and the Desk placed euro-denominated funds in the Exchange Stabilization Fund and System Open Market Account on deposit at official institutions rather than invest in repos at negative rates. The net portfolio holdings of Maiden Lane III LLC and Maiden Lane LLC decreased $6 billion and $1 billion, respectively, because of asset sales. Proceeds from asset sales from Maiden Lane III portfolios enabled the repayment of the remaining equity contribution by American International Group, Inc. Proceeds from asset sales from the Maiden Lane portfolio enabled the repayment of the remaining balances of the loans extended by JPMorgan Chase & Co. Loans outstanding under the Term Asset-Backed Securities Loan Facility (TALF) were slightly lower. On June 28, 2012, the Federal Reserve Board announced that it agreed with the Treasury Department that it was appropriate to reduce from $4 billion to $1 billion the credit protection that Treasury is providing for TALF. To date, TALF has experienced no losses, and the Board continues to see it as highly unlikely that any recourse to the Treasury protection will be necessary.

Liabilities of the Federal Reserve also decreased slightly. The U.S. Treasury's General Account, which is highly volatile from month to month, decreased $91 billion, while reserve balances at depository institutions increased $82 billion. Term deposits held by depository institutions increased $3 billion, as a small-value operation of the Term Deposit Facility was conducted on July 16.

[1] A purchase of $5 billion conducted on July 23, 2012, and a purchase of $2 billion conducted on July 24, 2012, are reflected in the text but not in the table. A purchase of $2 billion conducted on June 19, 2012, is reflected in the table but not in the text, as settlement occurred after June 20, 2012.

[2] Because of agency MBS market conventions, settlements of these transactions can occur well after the trade is executed.

Federal Reserve Balance Sheet
Billions of dollars

	Change since last FOMC	Current (07/23/12)
Total assets	**-10**	**2,856**
Selected assets:		
Liquidity programs for financial firms	3	27
Primary, secondary, and seasonal credit	+0	+0
Foreign central bank liquidity swaps	3	27
Term Asset-Backed Securities Loan Facility (TALF)	-2	4
Net portfolio holdings of Maiden Lane LLCs	-7	8
Maiden Lane	-1	2
Maiden Lane II	-0	+0
Maiden Lane III	-6	6
Securities held outright*	-14	2,603
U.S. Treasury securities	-17	1,645
Agency debt securities	-1	91
Agency mortgage-backed securities	4	867
Total liabilities	**-10**	**2,801**
Selected liabilities:		
Federal Reserve notes in circulation	2	1,068
Reverse repurchase agreements	1	84
Foreign official and international accounts	1	84
Others	0	0
Reserve balances of depository institutions**	82	1,550
Term deposits held by depository institutions	3	3
U.S. Treasury, General Account	-91	48
U.S. Treasury, Supplementary Financing Account	0	0
Other deposits	-0	30
Total capital	**+0**	**55**

Note: +0 (-0) denotes positive (negative) value rounded to zero.
* Par value.
** Includes required clearing balances through July 11, 2012. Also includes overdrafts and excludes as-of adjustments.

Financial Developments

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Appendix

Senior Loan Officer Opinion Survey on Bank Lending Practices

In the July Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS), modest fractions of domestic banks, on balance, continued to report having eased their lending standards across most loan types over the past three months.[1] In addition, relatively large fractions reported stronger demand for many types of loans over that period. Staff models suggest that the amount of easing reported was about in line with what would be expected after accounting for a number of bank-specific factors and several key macroeconomic variables over the survey period. In contrast, reflecting the continued financial strains in Europe, lending standards at branches and agencies of foreign banks continued to tighten for commercial and industrial (C&I) loans and were unchanged for commercial real estate (CRE) loans; demand for both types of loans reportedly weakened, on net, at those institutions. The July survey also contained a number of special questions on lending to, and competition from, European banks. In addition, the survey asked about the revised Home Affordable Refinance Program (HARP 2.0) and repeated a set of special questions from a year ago on the current level of standards relative to their range since 2005 for a broad variety of loan categories.

Bank lending policies for C&I loans at domestic banks generally eased over the past three months, though mostly for large and middle-market firms. Although a modest fraction of domestic banks reported having eased standards on C&I loans to those firms, standards on loans to small firms were little changed on balance.[2] In addition, domestic banks continued to ease many terms on C&I loans to all types of firms, though the net proportion of banks doing so was generally smaller than that in the April survey. Loan demand from large and middle-market firms strengthened somewhat further over the past three months, on net, but the increase was much less widespread than indicated in the April survey. Meanwhile, loan demand from small firms was unchanged, on balance, over this period.

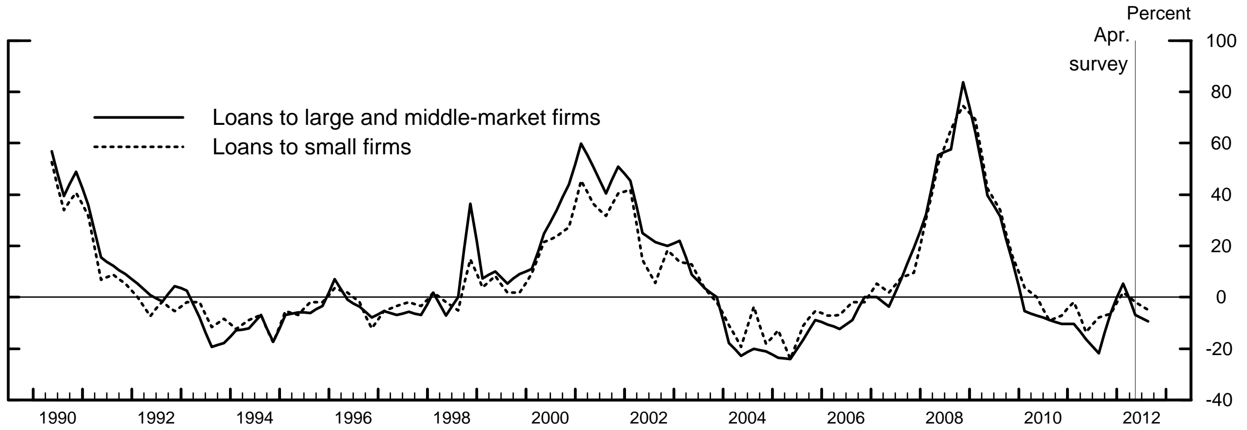
The July SLOOS also indicated that strains in the European financial system continued to affect business lending activity in the United States. About one-third of domestic banks and

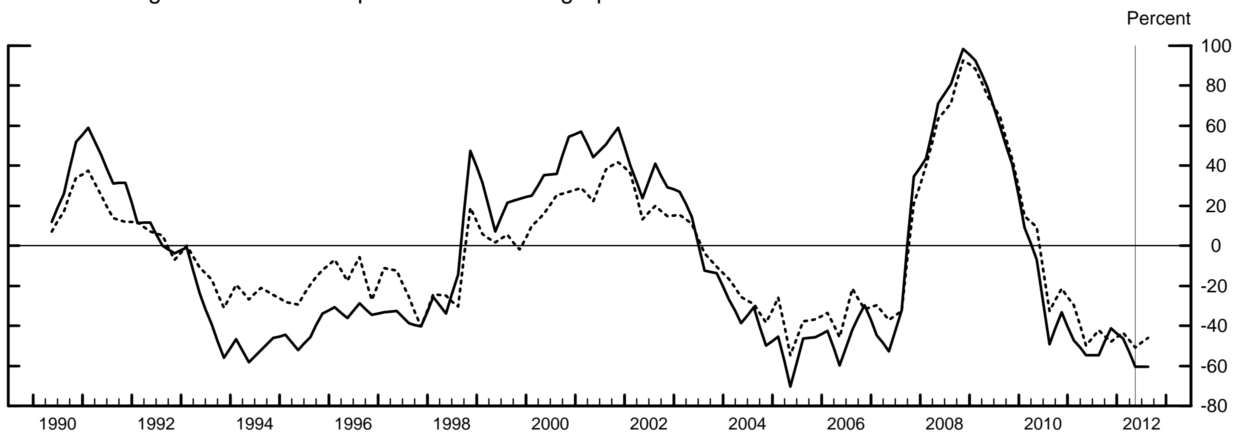
[1] The July 2012 survey addressed changes in the supply of, and demand for, loans to businesses and households over the past three months. This appendix is based on responses from 64 domestic banks and 23 U.S. branches and agencies of foreign banks. As part of the recent renewal of the SLOOS, 7 domestic banks have been added to the previous sample of banks. These additions did not materially change the net fraction of banks responding to a particular question. Respondent banks received the survey on or after July 3, 2012, and responses were due by July 17, 2012.

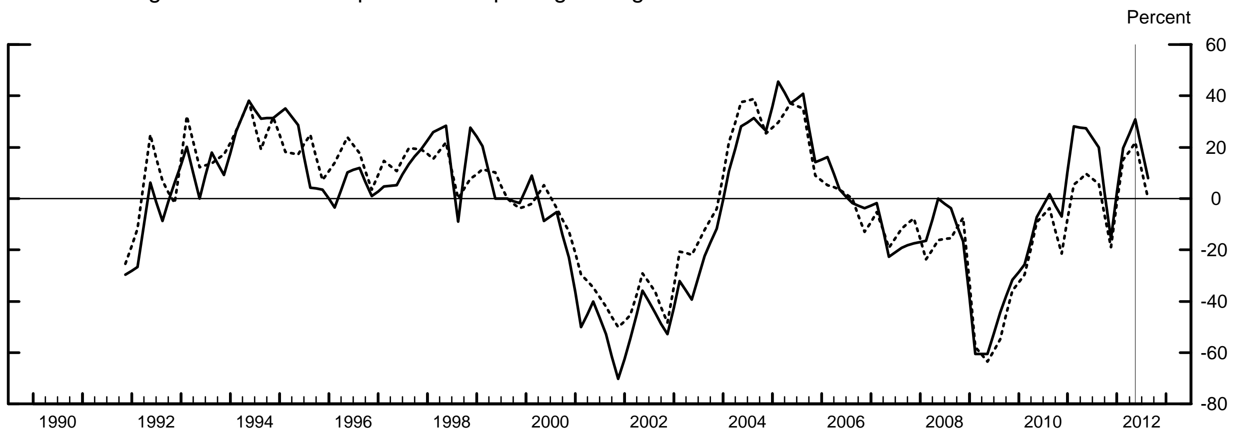
For questions that ask about lending standards or terms, reported net fractions equal the fraction of banks that reported having tightened standards minus the fraction of banks that reported having eased standards. For questions that ask about demand, reported net fractions equal the fractions of banks that reported stronger demand minus the fraction of banks that reported weaker demand.

[2] *Large and middle-market firms* are generally defined as firms with annual sales of $50 million or more and *small firms* as those with annual sales of less than $50 million.

Measures of Supply and Demand for Commercial and Industrial Loans, by Size of Firm Seeking Loan







Financial Developments

two-thirds of foreign banks reported that they extend credit to banks headquartered in Europe or their affiliates or subsidiaries. Large fractions of these institutions indicated that they had tightened standards on such loans over the past three months—fractions that were significantly higher than those in the April survey. For the third consecutive survey, a sizable fraction of domestic banks, weighted by C&I loans, reported that their business had increased due to decreased competition from European banks. Furthermore, a very large majority of domestic banks reported that they remain willing to accommodate business in the second half of 2012 arising from decreased European competition.

Lending conditions for CRE loans at domestic banks also reportedly continued to ease from very tight levels. A modest fraction of such banks, on balance, reported that they had eased standards over the past three months, while a relatively sizable fraction, on net, continued to indicate that demand for such loans had strengthened. In light of the responses to special questions on the level of standards for different types of CRE loans, the easing reported in recent surveys likely reflects changes in standards for loans secured by multifamily real estate and to a lesser extent by nonfarm, nonresidential properties.

Meanwhile, lending standards over the past three months were little changed for prime mortgages, and tightened somewhat for nontraditional mortgages on net. However, a relatively large fraction of respondents reported having experienced stronger demand for prime mortgages over the past three months, likely related to a pickup in refinancing activity.

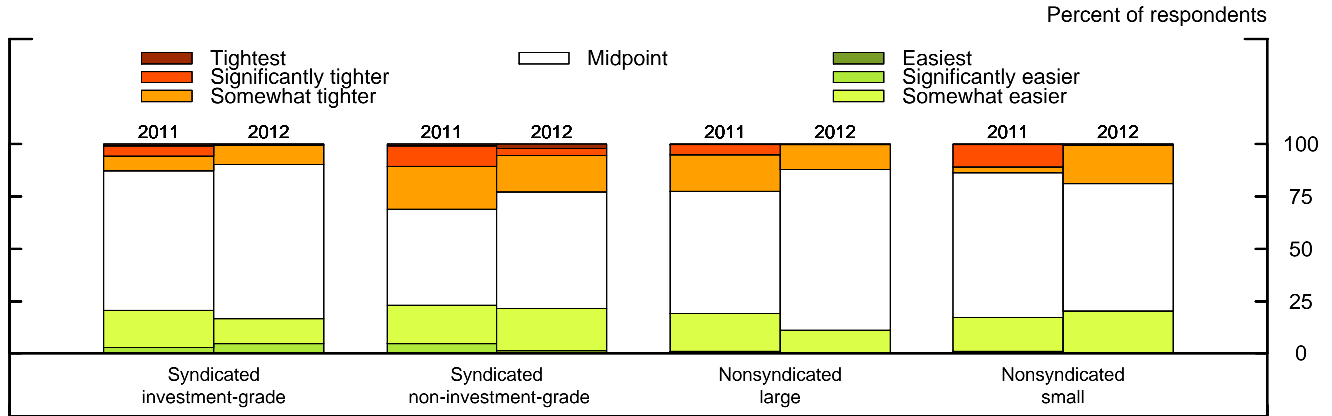
Responses to the set of special questions on HARP 2.0 indicate that a majority of large mortgage lenders are participating in the program, though many smaller banks are not. Weighted by closed-end residential mortgages held on banks' books, the majority of respondents that are participating reported that the proportion of HARP refinance applications relative to total refinance applications had been significant over the past three months. An even larger majority indicated that they anticipate that more than 60 percent of HARP applications will be approved and successfully completed. More than one-half of domestic banks, on a weighted basis, reported that capacity constraints were limiting the number of HARP applications that they could process and that they were restricting their participation in the program to those mortgages that are already serviced or held by their banks.

Lending conditions for consumer loans reportedly eased over the past three months. Domestic banks indicated that standards on auto loans had eased moderately, while those on credit card loans had eased modestly on net. Standards on other consumer loans remained little changed. In addition, small net fractions of banks reported increased demand for credit card and other consumer loans, while a relatively large fraction of banks reported an increase in demand for auto loans.

A final set of special questions, which were also asked in the July 2011 survey, prompted banks to assess their current lending standards relative to the middle of the range that those standards have occupied since 2005. On a portfolio-weighted basis, lending standards on C&I

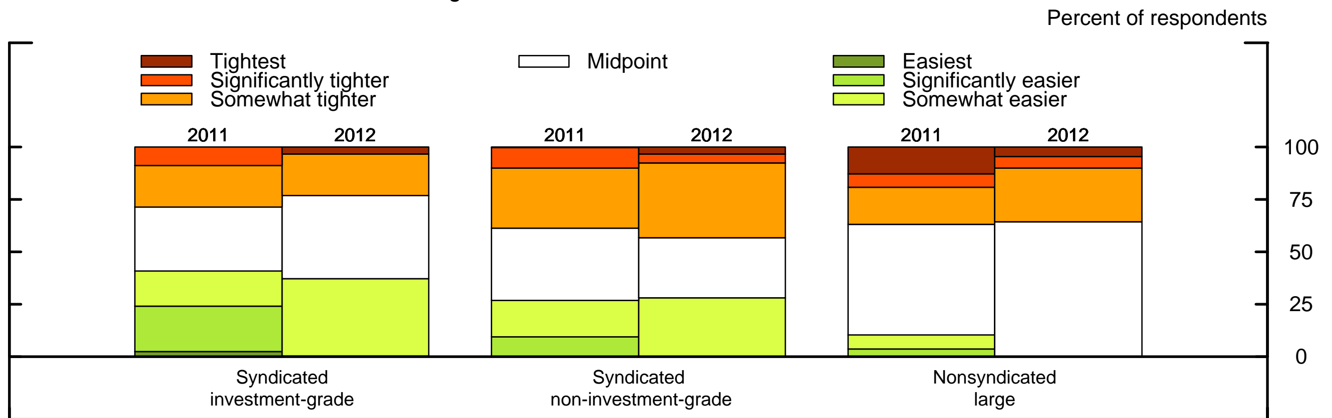
Level of Standards on Loans to Businesses*

Commercial and Industrial Loans at Domestic Banks



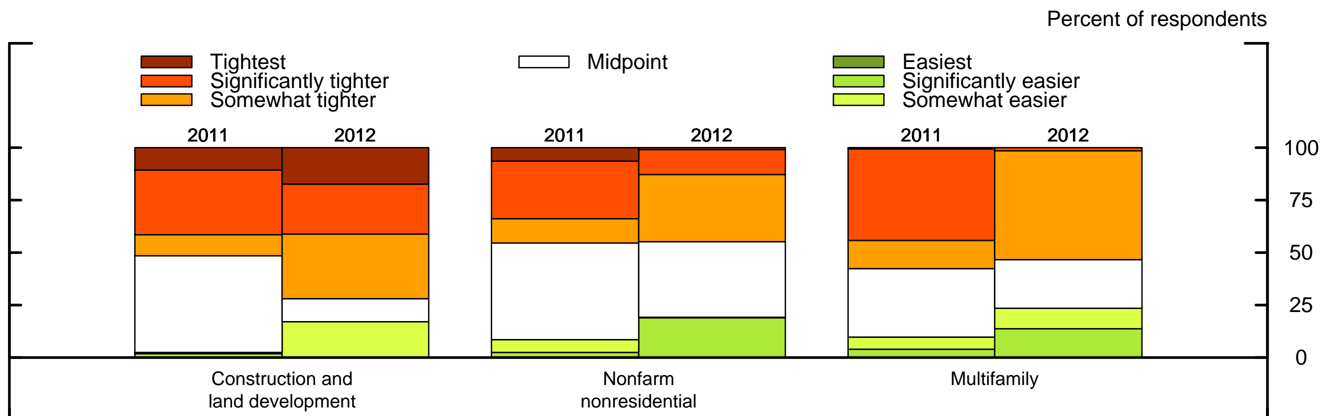
Note: Banks were asked to describe their current level of standards in relation to the midpoint of the range of standards at their bank between 2005 and the present. Responses are weighted by survey respondents' holdings of relevant loan types, as reported on the March 31, 2011 and 2012, Call Reports where relevant.

Commercial and Industrial Loans at Foreign Banks



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 and 2012, FFIEC 002 where relevant.

Commercial Real Estate Loans at Domestic Banks



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 and 2012, Call Reports where relevant.

* Relative to their range from 2005 to the present.

Financial Developments

loans at domestic banks reportedly have almost fully returned to about the middle of that range. However, credit standards for all other categories of loans remained at least somewhat tighter, on balance, than the middle of their respective ranges over the same period. In particular, across all residential mortgage categories, including prime conforming loans, the majority of banks indicated that their standards are currently either significantly tighter than the middle of the range or still at the tightest level that standards have been since 2005.

LENDING TO BUSINESSES

Questions on Commercial and Industrial Lending

A modest fraction of domestic banks continued to report having eased standards on C&I loans to large and middle-market firms; standards on loans to small firms were little changed, on balance, for the third consecutive survey. As in the previous survey, no domestic bank indicated having tightened standards on loans to either type of firm. In contrast, a small number of U.S. branches and agencies of foreign banks reported having tightened their standards on C&I loans for the fourth consecutive quarter. Consistent with the ongoing strains in the European financial system, the few foreign respondents that reported having tightened over this period were predominantly subsidiaries of European banks.

Domestic banks continued to ease many terms on C&I loans, on balance, to all types of firms, though the proportion of banks doing so was generally smaller than that in the April survey. One exception was the cost of credit lines, for which relatively more respondents reported having eased their lending terms over the past three months. In addition, relatively large fractions of respondents continued to indicate that they had narrowed the spreads on C&I loan rates over their cost of funds and had reduced their use of interest rate floors. However, when the responses for loans to small firms are weighted by the volume of small C&I loans on banks' books (a proxy for the amount of lending to small businesses), the responses suggest that declines in the spreads on such loans have not been as widespread as indicated by the unweighted responses. The weighted responses are more consistent with the stubbornly elevated spreads for smaller C&I loans still observed in the Survey of Terms of Business Lending. Foreign banks, on the other hand, reported little change in most C&I lending terms over the past three months, with the exception of the cost of credit lines, the maximum size of credit lines, and premiums charged on riskier loans, for which terms have tightened slightly on net.

Almost all domestic banks that reported having eased standards or terms on C&I loans continued to cite more-aggressive competition from other banks and nonbank lenders as a reason. Only about one-fourth of the banks that had eased lending policies had done so because of a more favorable or less uncertain economic outlook, and few banks cited any of the other reasons listed in the survey. Meanwhile, large majorities of the few banks, both domestic and foreign, that reported having tightened C&I credit standards or terms cited a less favorable or more uncertain economic outlook as a reason.

A significantly smaller fraction of banks than in the previous survey reported stronger demand for C&I loans over the past three months. Only a modest fraction of domestic banks indicated that the demand for C&I loans by large and middle-market firms had been stronger, on balance, while demand for loans by small firms was unchanged. However, weighted by C&I loans outstanding, a moderate fraction of banks, on balance, reported increased demand for loans to large and middle-market firms, more consistent with the strong growth in aggregate outstanding C&I loans in the H.8 bank credit data. On net, domestic banks also continued to report a rise in the number of inquiries from potential business borrowers regarding new or increased credit lines. In contrast, demand for C&I loans at foreign banks reportedly had weakened somewhat further for the second consecutive survey.

A large majority of banks that reported stronger demand for C&I loans cited increases in customers' funding needs related to inventories and accounts receivable, mergers and acquisitions, and investment in plant or equipment as important factors underlying the increase. At the same time, at least three-fourths of the domestic and foreign banks indicating that demand had decreased reported that a *decrease* in investment in plant or equipment was an important factor.

Special Questions on Lending to and Competition from European Banks

The July survey asked a set of special questions about lending to, and competition from, banks headquartered in Europe and their affiliates and subsidiaries (regardless of the location of the affiliates or subsidiaries). Many of these questions were also asked in the previous three surveys. The survey responses continued to show that while strains in the European financial system are affecting the distribution of business lending activity in the United States, overall credit availability has not been noticeably reduced.

A large fraction of both domestic and foreign banks that extend credit to European banks had tightened standards on such loans over the past three months—a fraction that was significantly higher than that in the April survey. Loan demand by European banks at both domestic and foreign banks, however, was little changed on net.

Weighted by C&I loans, about one-half of domestic banks that compete with European banks continued to report that business has increased due to decreased competition from such banks. Furthermore, a very large majority of domestic respondents reported that they were willing to accommodate additional business in the second half of 2012 arising from decreased European competition. In weighted terms, slightly less than one-half of the domestic banks that experienced increases in C&I loans over the first half of this year indicated that either a moderate or a small portion of that increase had been attributable to purchases of loans from European banks.

Questions on Commercial Real Estate Lending

Lending conditions for CRE loans at domestic banks also reportedly continued to ease. A modest fraction of domestic banks, on balance, reported having eased standards on CRE loans

over the past three months, while a relatively sizable fraction, on net, continued to indicate having experienced stronger demand for such loans. However, weighted responses to the special question on the current level of standards relative to their recent range on specific CRE loan categories (discussed in greater detail below) suggest that lending standards on construction and land development loans, in particular, have actually tightened somewhat since last year, suggesting that the thaw in CRE lending standards seen in recent surveys likely has been limited to other CRE loan categories. In addition, foreign survey respondents, which held a relatively minor share of the outstanding CRE loans held in the U.S. banking sector, indicated that standards on such loans were unchanged for the second straight survey and that demand had been noticeably weaker, on net, over the past three months.

LENDING TO HOUSEHOLDS

Questions on Residential Real Estate Lending

Standards for residential real estate loans remained very tight despite some brighter news in the housing sector recently. Domestic banks continued to report little change in lending standards for prime mortgages and having tightened standards somewhat for nontraditional mortgages over the past three months on net. Meanwhile, a relatively large fraction of respondents reported having experienced stronger demand for prime mortgages over the same time period on balance. Some of the stronger demand may have been attributable to recently heightened refinancing activity, even though banks were specifically asked to consider only new originations and not to consider refinances in the survey. A relatively large fraction of banks also reported stronger demand for nontraditional mortgages, though one very large bank reported that demand had been weaker in that segment.

In contrast, lending conditions for home equity lines of credit (HELOCs) remained stable. Changes in both lending standards and demand for such loans were relatively muted over the past three months.

Special Questions on the Revised Home Affordable Refinance Program

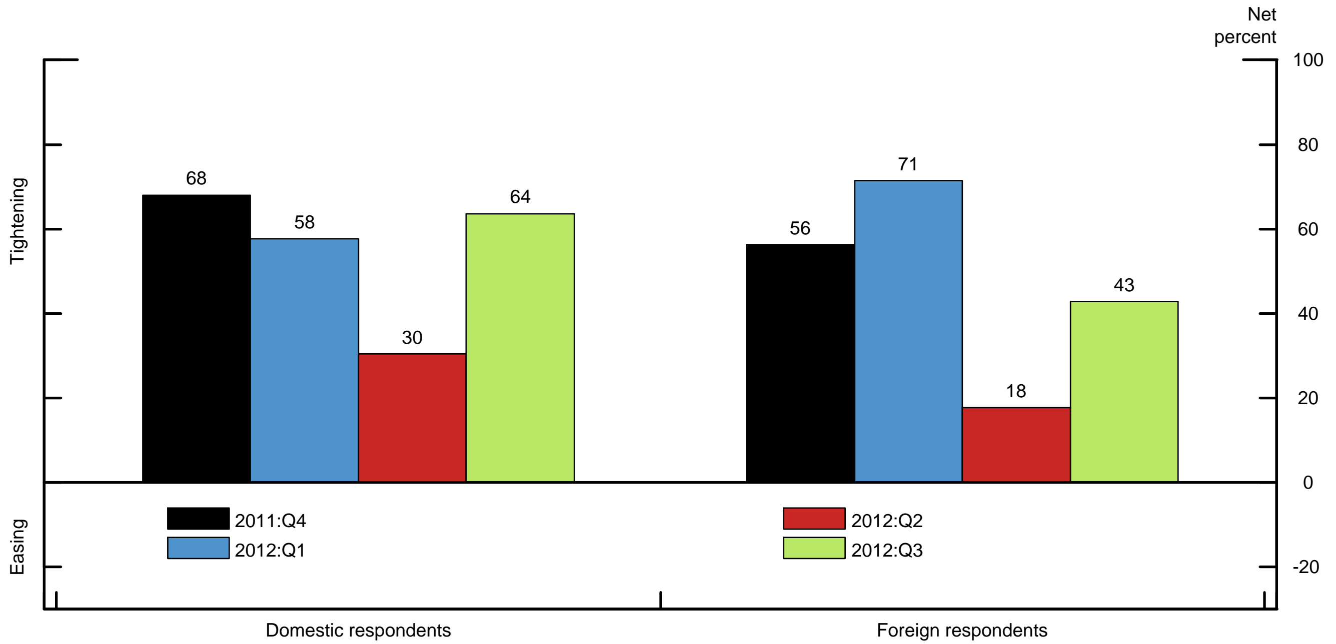
The July survey also contained special questions related to HARP 2.0. Although only about one-half of respondents reported participating significantly in HARP, those banks held most of the mortgage loans on the balance sheets of the banks surveyed.

Weighting the individual responses by outstanding closed-end mortgage balances held on those banks' books, the majority of respondents reported that the proportion of HARP refinance applications relative to total refinance applications had been between 30 and 70 percent over the past three months.[3] An even larger majority indicated that they anticipate that more than

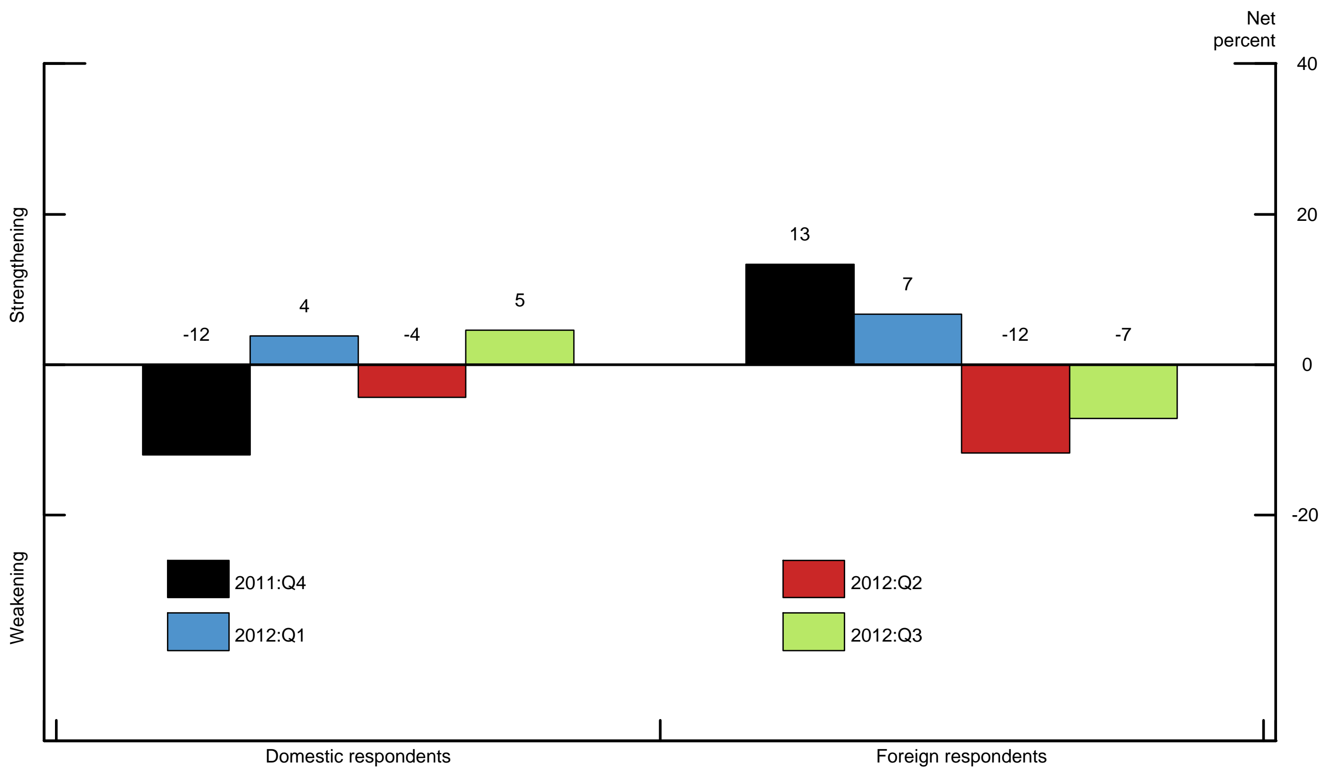
[3] None of the aggregated responses for the HARP special questions change materially whether we weight responses by a broader measure of total mortgage exposure, calculated by adding agency MBS holdings to outstanding closed-end mortgage loans, or by a measure of total mortgage origination activity, calculated by summing outstanding closed-end mortgage loans and outstanding balances of residential

Financial Developments

Special Questions on Lending to and Competition from European Banks



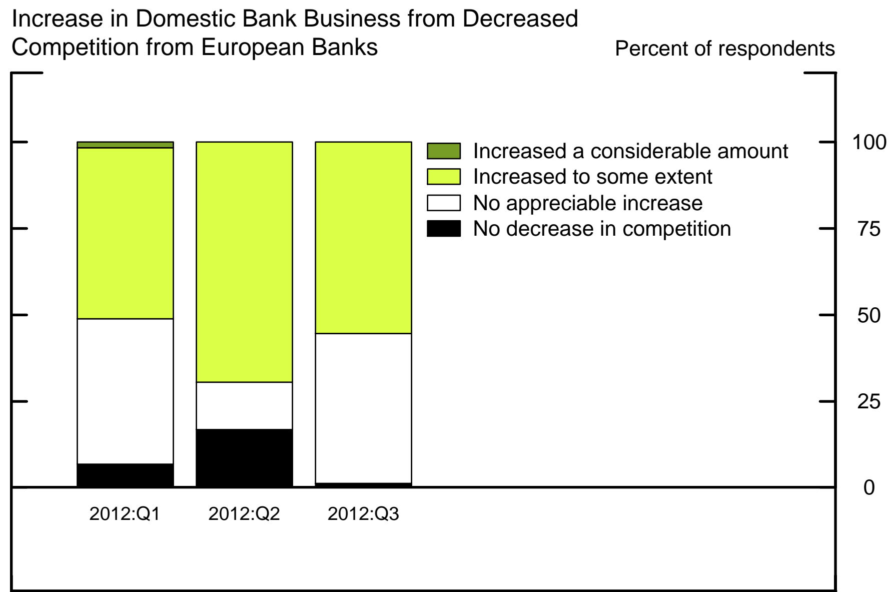
* Includes affiliates and subsidiaries.



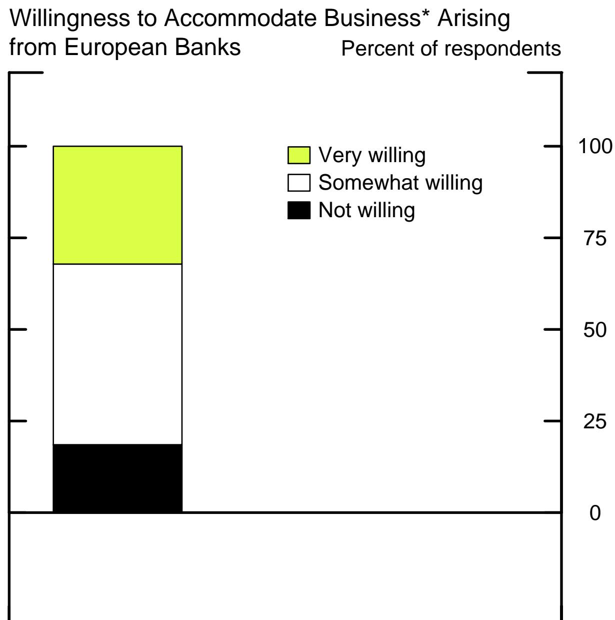
* Includes affiliates and subsidiaries.

Financial Developments

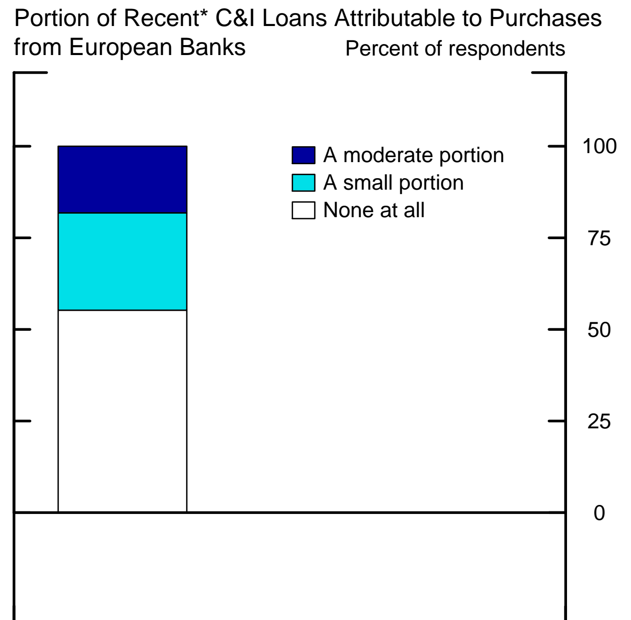
Special Questions on Lending to and Competition from European Banks



Note: Responses are weighted by survey respondents' holdings of C&I loans.



* In the second half of 2012.

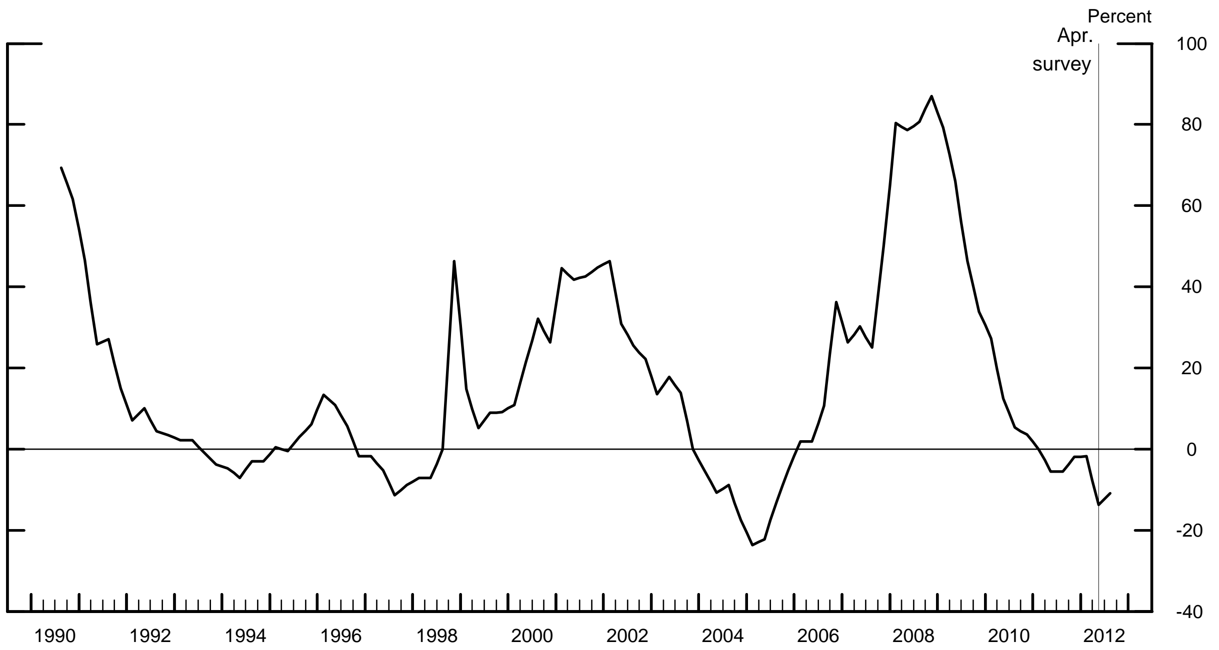


* Over the first six months of 2012, if oustanding C&I loans have increased over that time period.
Note: Responses are weighted by survey respondents' holdings of C&I loans.

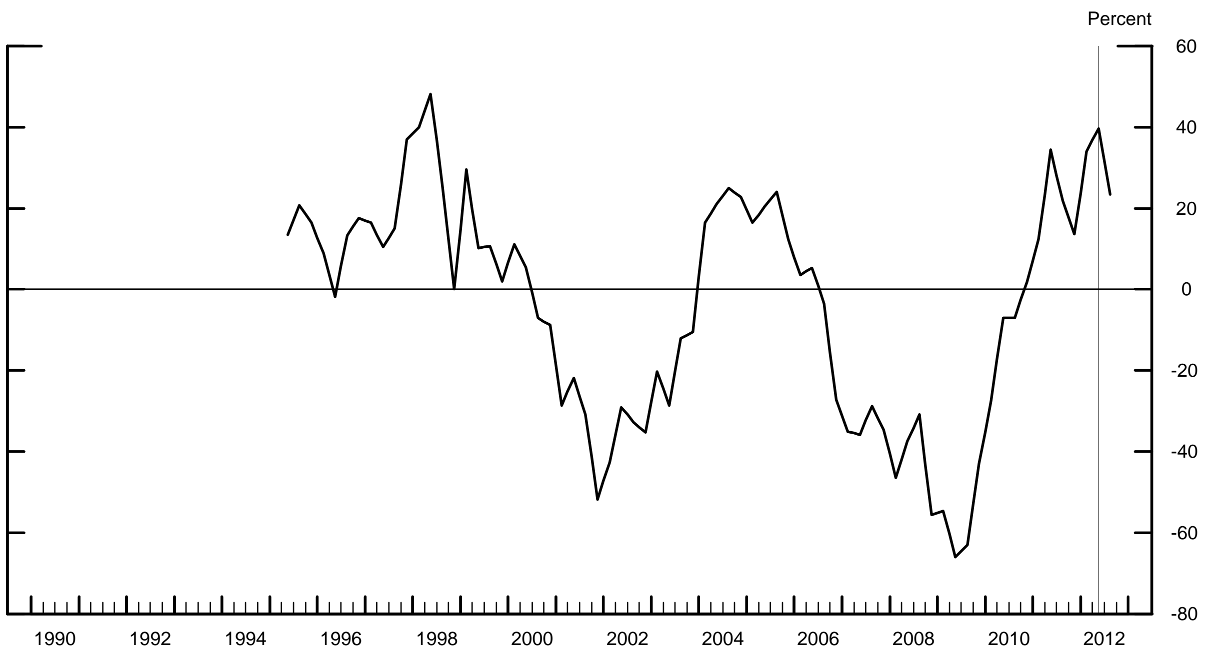
Financial Developments

Measures of Supply and Demand for Commercial Real Estate Loans

Net Percentage of Domestic Respondents Tightening Standards for Commercial Real Estate Loans

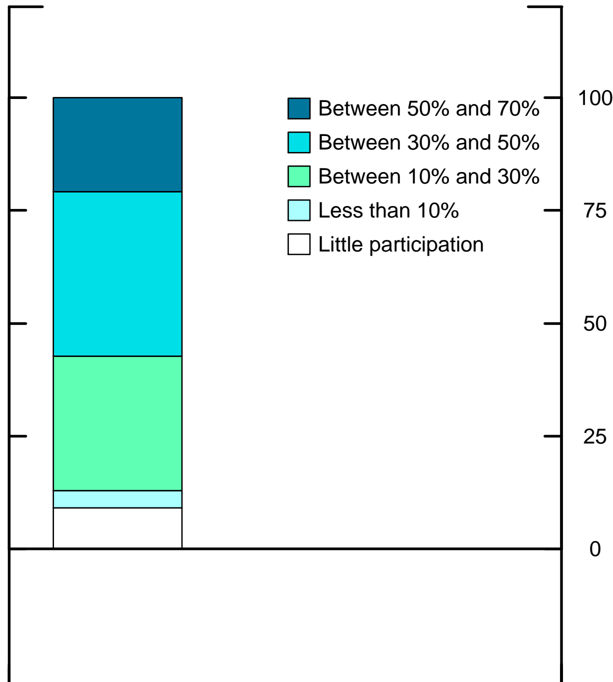


Net Percentage of Domestic Respondents Reporting Stronger Demand for Commercial Real Estate Loans

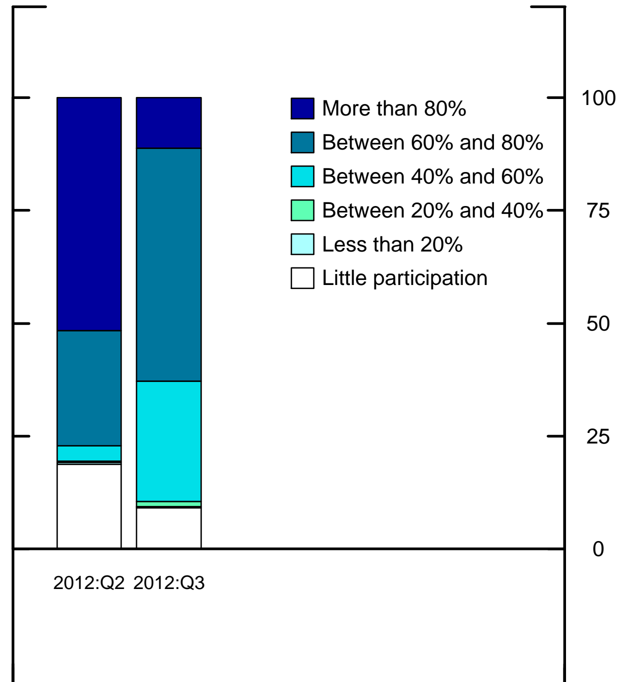


Financial Developments

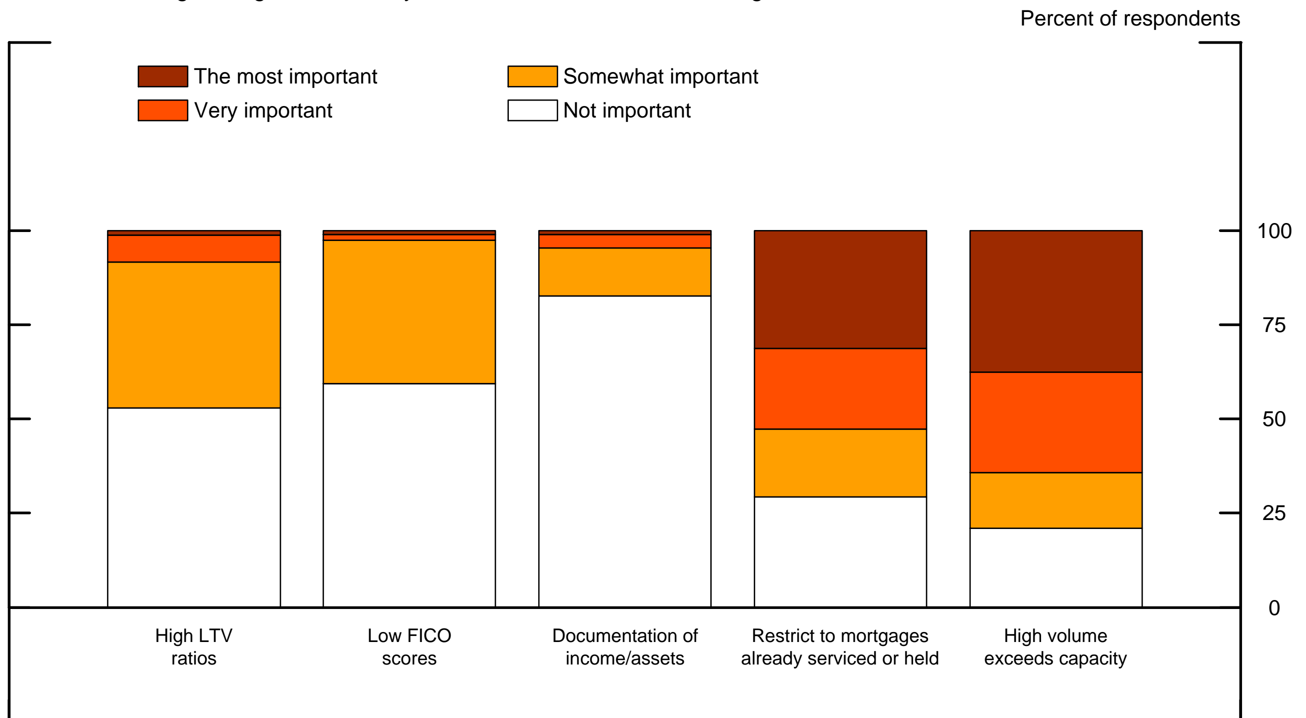
Special Questions on Residential Real Estate Lending



Note: Responses are weighted by survey respondents' holdings of residential real estate loans (excluding multifamily loans and HELOCs).



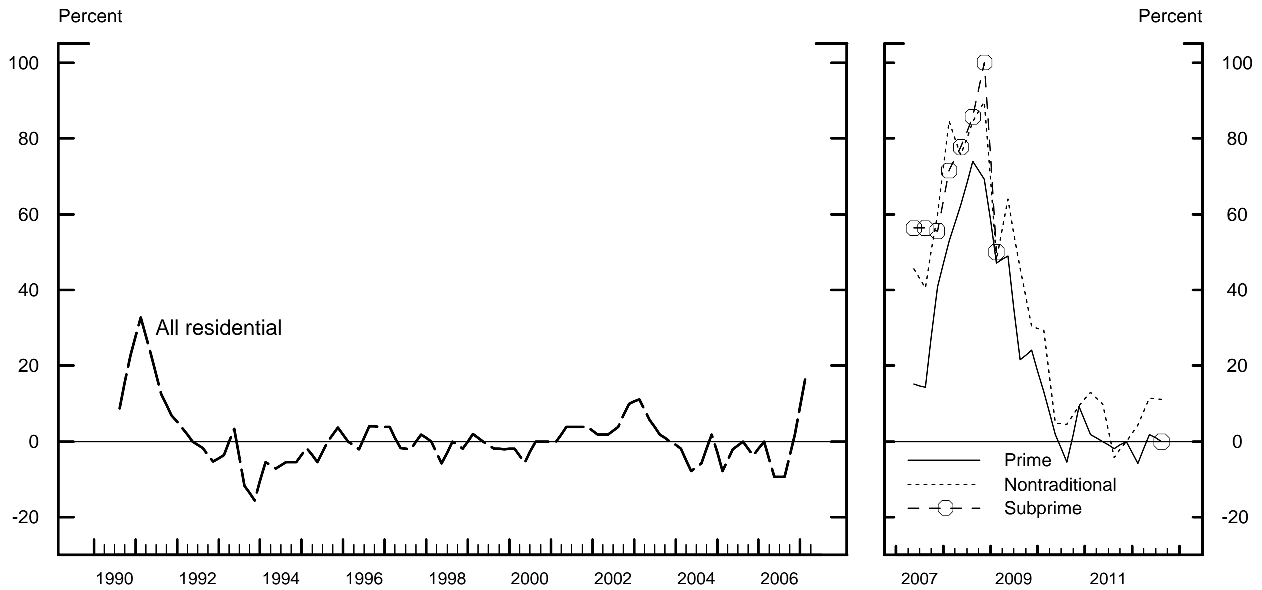
Note: Responses are weighted by survey respondents' holdings of residential real estate loans (excluding multifamily loans and HELOCs).



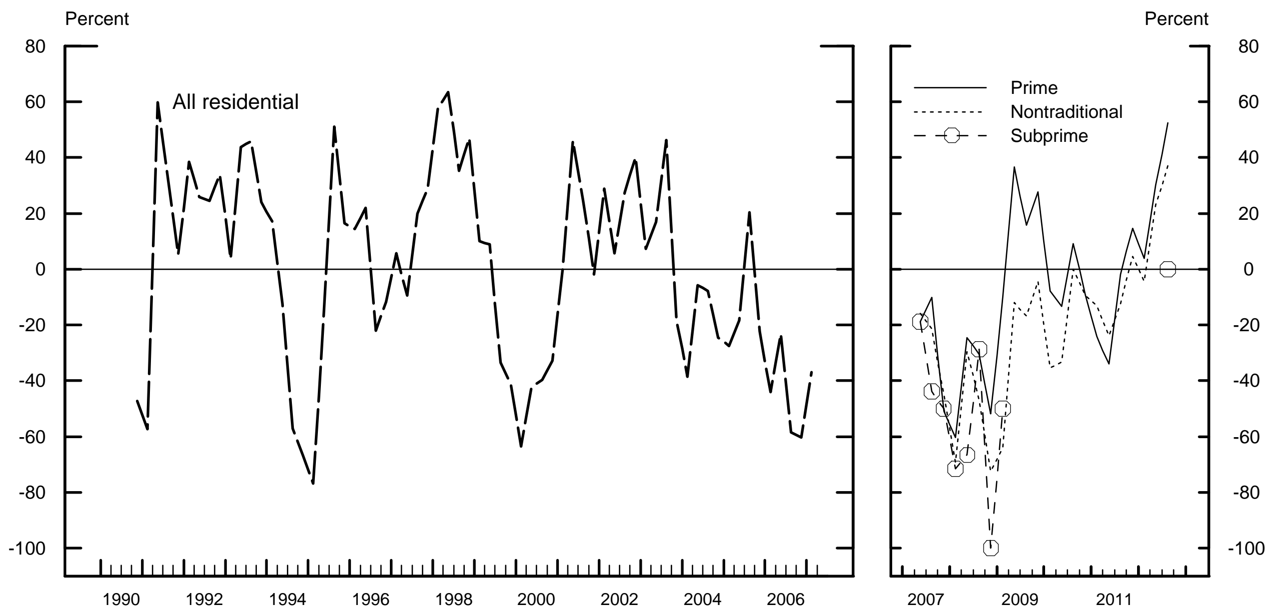
Note: Responses are weighted by survey respondents' holdings of residential real estate loans (excluding multifamily loans and HELOC

Financial Developments

Measures of Supply and Demand for Residential Mortgage Loans



Note: For data starting in 2007:Q2, changes in standards for prime, nontraditional, and subprime mortgage loans are reported separately. Series are not reported when the number of respondents is three or fewer.



Note: For data starting in 2007:Q2, changes in demand for prime, nontraditional, and subprime mortgage loans are reported separately. Series are not reported when the number of respondents is three or fewer.

Financial Developments

60 percent of HARP applications will be approved and successfully completed. More than one-half of domestic banks, on a weighted basis, reported that capacity constraints at their bank were either the most important factor or a very important factor limiting the number of HARP applications that they could process. Similar fractions indicated that their bank had decided to restrict its participation in HARP to those mortgages that it already serviced or held. Many banks also reported that credit overlays that they had imposed on top of the HARP requirements were somewhat important factors in limiting their participation—nearly one-half of all respondents, on a weighted basis, reported being unwilling to offer HARP refinance loans to some customers with high loan-to-value (LTV) ratios or with low FICO scores.

Questions on Consumer Lending

Moderate fractions of domestic banks reported that standards on auto loans had eased, on net, while somewhat smaller net fractions indicated that standards on credit card loans had eased. Standards on other consumer loans remained little changed. Banks again reported having narrowed spreads on auto loans, while other terms across the three categories of consumer loans remained relatively little changed on net.

The fraction of respondents that indicated that they were more willing to make consumer installment loans now as opposed to three months ago remained elevated by historical standards, for the second consecutive survey.

Demand for all types of consumer loans strengthened on net. A relatively large fraction of banks reported stronger demand for auto loans, on balance, while only modest net fractions of banks reported stronger demand for credit card loans and for other consumer loans. However, the share of banks that indicated that they had experienced higher demand decreased a bit, on net, for all three loan categories relative to the previous survey.

Special Questions on the Levels of Lending Standards Relative to Longer-Term Norms

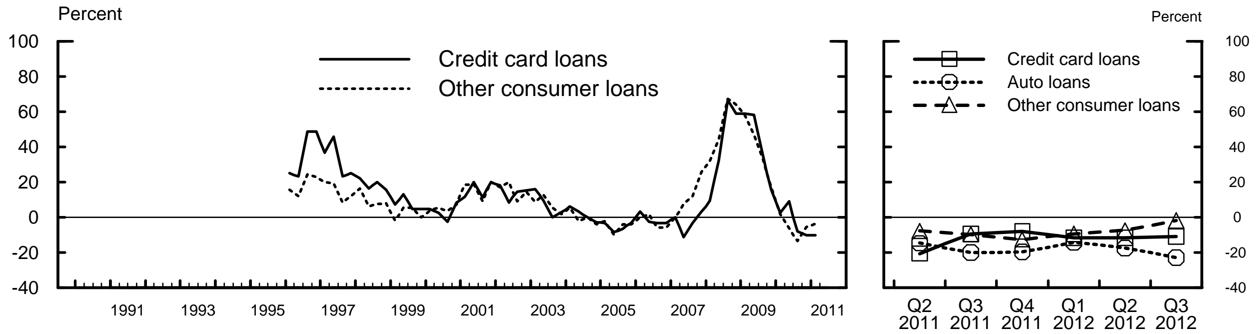
The July survey repeated a set of special questions from July 2011 that asked respondents to describe the current level of lending standards at their bank, rather than changes in standards over the survey period.[4] Banks were asked to consider the range over which standards have varied between 2005 and the present and to report where standards reside relative to the midpoint of that range. With the exception of standards on C&I loans at domestic banks, banks continued to report, on balance, that their credit standards remained at least somewhat tighter than the middle of the range. Still, consistent with the modest easing of standards, on average, that was

mortgage loans sold. The latter measure includes mortgages sold to the GSEs, with servicing retained or with recourse or other seller-provided credit enhancements.

[4] The description of the results in this section is based on responses weighted by the outstanding loans in the respective loan category. Results based on unweighted responses can be materially different, especially when a limited number of large banks dominate a particular lending market and the remainder of the banks respond to related questions in a different manner from those large banks.

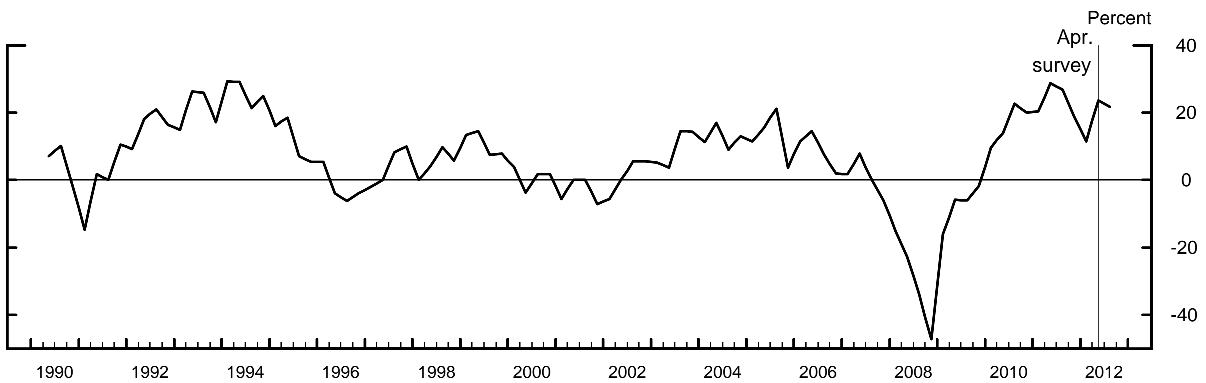
Measures of Supply and Demand for Consumer Loans

Net Percentage of Domestic Respondents Tightening Standards for Consumer Loans

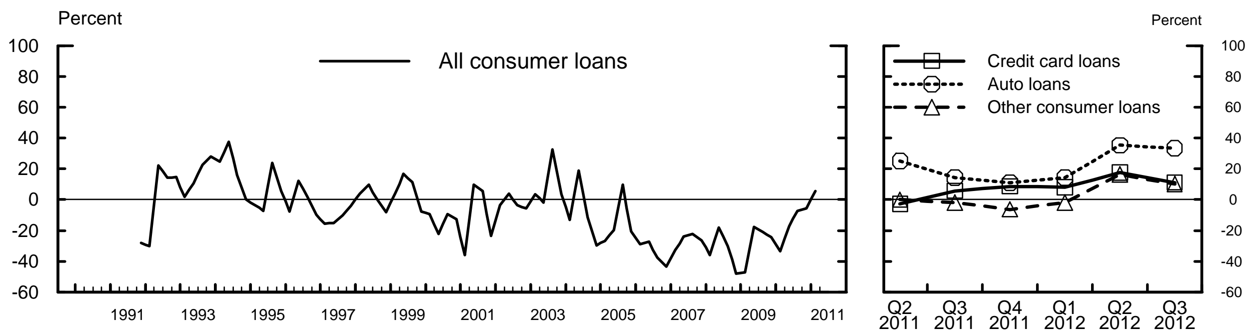


Note: For data starting in 2011:Q2, changes in standards for auto loans and consumer loans excluding credit card and auto loans are reported separately. In 2011:Q2 only, new and used auto loans are reported separately and equally weighted to calculate the auto loans series.

Net Percentage of Domestic Respondents Reporting Increased Willingness to Make Consumer Installment Loans



Net Percentage of Domestic Respondents Reporting Stronger Demand for Consumer Loans



Note: For data starting in 2011:Q2, changes in demand for credit card loans, auto loans, and consumer loans excluding credit card and auto loans are reported separately.

Financial Developments

reported across most categories of loans in the quarterly surveys over the past year, the levels of standards at domestic banks were generally not quite as tight as in July 2011.

A majority of domestic banks reported that lending standards on four different categories of C&I loans (investment-grade and noninvestment-grade syndicated loans, other loans to large firms, and loans to small firms) were about at the middle of the range that those standards have occupied since 2005. That result appears to be consistent with the robust aggregate growth in C&I loans since 2011. However, the fraction of foreign banks that indicated that the levels of standards on large C&I loans were tighter than the middle of the range was somewhat higher than that of domestic banks.[5]

A significant net fraction of domestic banks reported that the current level of standards on all types of CRE loans (construction and land development loans; loans secured by nonfarm, nonresidential structures; and loans secured by multifamily structures) is tighter than the middle of the range that those standards have occupied since 2005. Moreover, the net fraction of banks that reported that lending standards for construction and land development loans were at least somewhat tighter than the midpoint of their range since 2005 increased, on net, relative to when the same set of questions was asked in July 2011. In contrast, both for loans secured by nonfarm, nonresidential properties and for lending supported by multifamily properties, a number of large banks shifted their response from "significantly tighter" to "somewhat tighter" than the midpoint of their respective ranges, suggesting that conditions in those markets had eased to some extent over the past year.

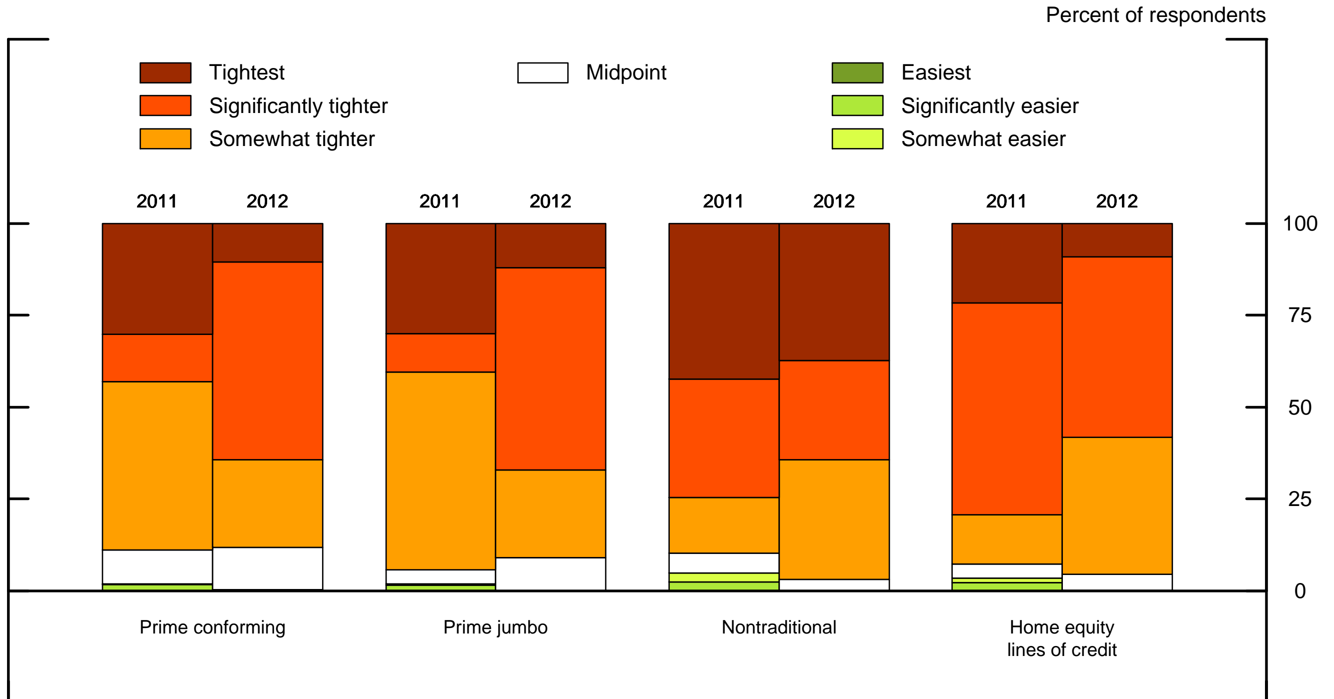
The levels of lending standards appear to be relatively little changed, on balance, since July 2011 for all four categories of residential mortgage loans included in the survey (prime conforming mortgages, prime jumbo mortgages, nontraditional mortgages, and HELOCs). As was the case in last year's survey, almost all banks reported that standards are still at least somewhat tighter than the middle of the range that those standards have occupied since 2005. For prime conforming loans and for prime jumbo loans, the fraction of banks indicating that standards were the tightest they had been since 2005 fell somewhat, but the fraction reporting that standards were significantly tighter than the midpoint of the recent range increased by a larger amount, suggesting little change in overall conditions on net.

With respect to consumer loans, large fractions of domestic banks continued to report that lending standards were tighter than the middle of the range that those standards have occupied since 2005 for prime credit card, subprime credit card, auto, and other consumer loans. However, the fractions of respondents that reported that standards on these loan categories were significantly tighter fell noticeably, while the fractions reporting that standards were only somewhat tighter rose since last year, suggesting some easing of overall standards on net.

[5] As only a limited number of foreign respondents reported on the level of standards on loans to small firms and CRE loans, we do not report those responses here.

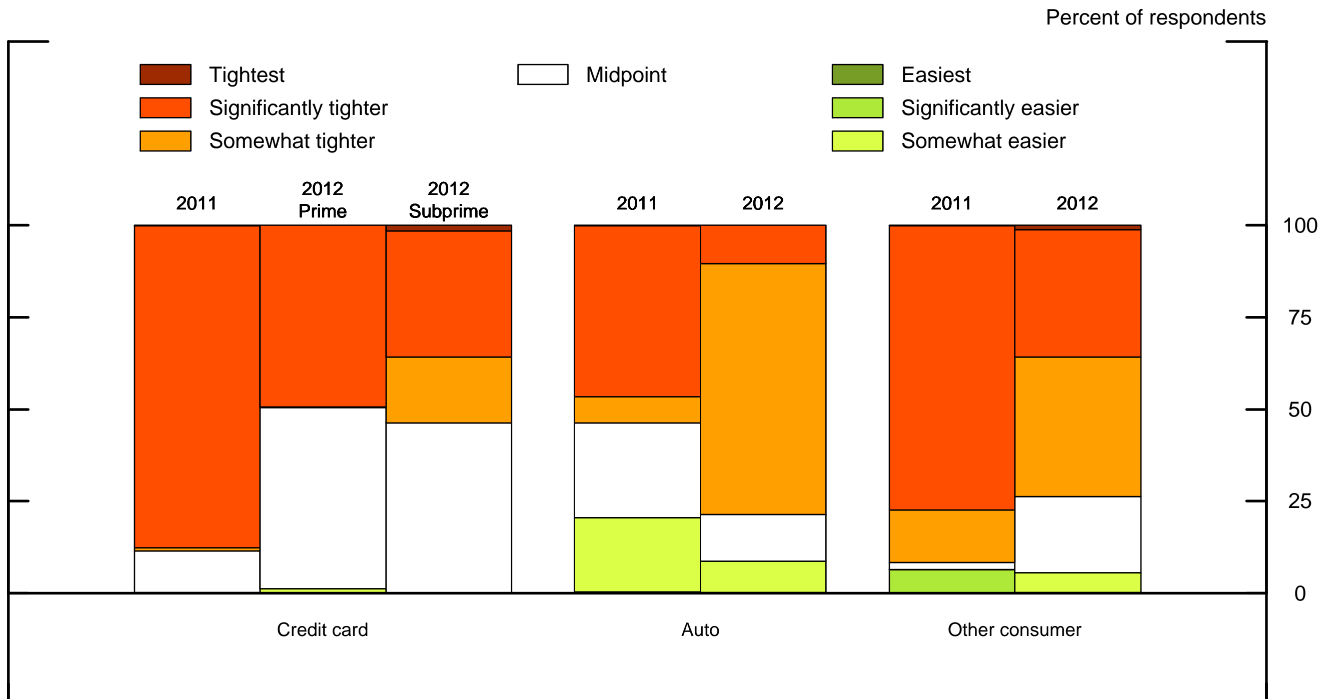
Level of Standards on Loans to Households at Domestic Banks*

Residential Real Estate Loans



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 and 2012, Call Reports where relevant.

Consumer Loans



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 and 2012, Call Reports where relevant.

* Relative to their range from 2005 to the present.

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. The first two scenarios consider opposing risks to domestic demand—the downside risk associated with the fiscal cliff at the beginning of next year and the upside risk that the underlying pace of the recovery is more robust than the recent economic news seems to suggest. The next two scenarios focus on opposing risks to inflation—the possibility that we have underestimated the extent of labor market damage that has occurred, implying greater upward pressure on prices in coming years, and the chance that the stability of various measures of expected inflation turns out to be misleading us about the potential for disinflation. The final two scenarios consider risks to the U.S. economic outlook associated with developments abroad. In the first, a much more severe fiscal and financial crisis in Europe spills over to the United States and the rest of the global economy; in the second, a substantial deceleration in economic activity in China and other Asian countries slows the pace of the U.S. recovery.

We generate the first four scenarios using the FRB/US model and the last two scenarios using the multicountry SIGMA model. For the simulations with the FRB/US model, we use the same estimated monetary policy rule that governs the path of the federal funds rate in the baseline. For the simulations with the SIGMA model, we use a generally similar policy rule that employs an alternative concept of resource utilization.[1] In all of the scenarios, the size and composition of the SOMA portfolio are assumed to follow their baseline paths. In this Tealbook we are including two new exhibits, "Alternative Projections" and "Assessment of Key Macroeconomic Risks." (See the box "New Exhibits in the Risks and Uncertainty Section" and the related exhibits at the end of this section.)

[1] In particular, in the simulations using the FRB/US model, the federal funds rate follows the estimated outcome-based rule described in the appendix on policy rules in Book B. In the simulations using SIGMA, the policy rule is broadly similar but 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.

Alternative Scenarios

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

Measure and scenario	2012		2013	2014	2015	2016-17
	H1	H2				
Real GDP						
Extended Tealbook baseline	1.4	1.6	2.1	3.2	3.6	3.3
Fiscal cliff	1.4	1.6	.9	2.4	3.8	4.2
Faster recovery	1.4	2.6	4.1	3.4	2.7	2.6
Damaged labor market	1.4	1.4	2.0	2.7	2.9	2.4
Disinflation	1.4	1.6	1.8	2.6	3.3	3.8
European crisis with severe spillovers	1.4	-2.7	-3.3	2.1	4.5	4.4
Hard landing in China	1.4	1.1	1.2	2.9	3.9	3.7
Unemployment rate[1]						
Extended Tealbook baseline	8.2	8.3	8.1	7.8	7.2	5.9
Fiscal cliff	8.2	8.3	8.6	8.8	8.3	6.0
Faster recovery	8.2	8.2	7.1	6.4	6.2	5.9
Damaged labor market	8.2	8.3	8.3	8.1	7.9	7.5
Disinflation	8.2	8.3	8.2	8.2	7.8	6.0
European crisis with severe spillovers	8.2	8.8	10.8	11.2	10.2	7.9
Hard landing in China	8.2	8.4	8.5	8.4	7.8	6.2
Total PCE prices						
Extended Tealbook baseline	1.7	1.1	1.5	1.4	1.6	1.7
Fiscal cliff	1.7	1.1	1.5	1.2	1.2	1.3
Faster recovery	1.7	1.1	1.6	1.6	2.0	2.1
Damaged labor market	1.7	1.2	1.8	1.9	2.3	2.4
Disinflation	1.7	.9	1.1	.6	.5	.4
European crisis with severe spillovers	1.7	-1.1	-.6	.8	1.8	2.1
Hard landing in China	1.7	.5	.7	.9	1.4	1.8
Core PCE prices						
Extended Tealbook baseline	2.1	1.5	1.6	1.6	1.7	1.8
Fiscal cliff	2.1	1.5	1.6	1.4	1.3	1.4
Faster recovery	2.1	1.5	1.7	1.8	2.1	2.2
Damaged labor market	2.1	1.6	1.9	2.1	2.4	2.5
Disinflation	2.1	1.3	1.2	.8	.6	.5
European crisis with severe spillovers	2.1	.6	.3	.9	1.6	2.0
Hard landing in China	2.1	1.3	1.2	1.2	1.5	1.8
Federal funds rate[1]						
Extended Tealbook baseline	.2	.1	.1	.4	1.5	3.3
Fiscal cliff	.2	.1	.1	.1	.2	3.0
Faster recovery	.2	.2	1.5	2.6	2.9	3.6
Damaged labor market	.2	.1	.4	1.6	3.1	4.5
Disinflation	.2	.1	.1	.1	.1	1.3
European crisis with severe spillovers	.2	.1	.1	.1	.1	1.2
Hard landing in China	.2	.1	.1	.1	.7	2.4

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

Risks & Uncertainty

Fiscal Cliff

Our baseline projection assumes that most federal tax provisions that are nearing expiration—including the tax cuts initially enacted in 2001 and 2003, relief for most taxpayers from the alternative minimum tax, and a number of other non-stimulus-related tax reductions—will eventually be extended.[2] In contrast, this scenario assumes that all of these tax provisions are allowed to expire next year, thereby increasing total tax payments from households and businesses by about 2½ percent of GDP relative to baseline. The automatic spending cuts required by the sequestration associated with the Budget Control Act of 2011 take full effect in 2013, further restraining federal purchases by about ¼ percent of GDP relative to baseline.[3] In addition, these fiscal policy developments are assumed to weigh on consumer and business confidence by more than in the baseline. As a result, real GDP expands only 1 percent in 2013 and 2½ percent in 2014, on average 1 percentage point per year slower than in the baseline. The unemployment rate rises to 8¾ percent in 2014.[4] With a wider margin of slack in both labor and product markets, inflation declines to 1¼ percent by 2015, and the federal funds rate does not begin to increase from its effective lower bound until early 2016.

Faster Recovery

This scenario assumes that both the staff and financial market participants have underestimated the future pace of the economic recovery, in part because seasonal-adjustment distortions and other factors have obscured the underlying strength of the real economy. In particular, both business investment and consumer outlays on durable goods rise faster than expected, as firms and households work to bring the still-depressed levels of these capital stocks closer to their longer-run trends. In addition,

[2] As described in "Key Background Factors" of the Domestic Economic Developments and Outlook section, the staff's baseline forecast assumes that the temporary payroll tax cut and the EUC program will expire at the beginning of next year, that federal discretionary spending will be restrained by the caps set in the Budget Control Act and by reductions in defense spending as overseas military operations draw down, and that more-gradual deficit-reduction policies will replace the automatic spending sequestration. These policy assumptions in the baseline account for almost one-half of the deficit reduction associated with the full effect of the policies related to the entire fiscal cliff.

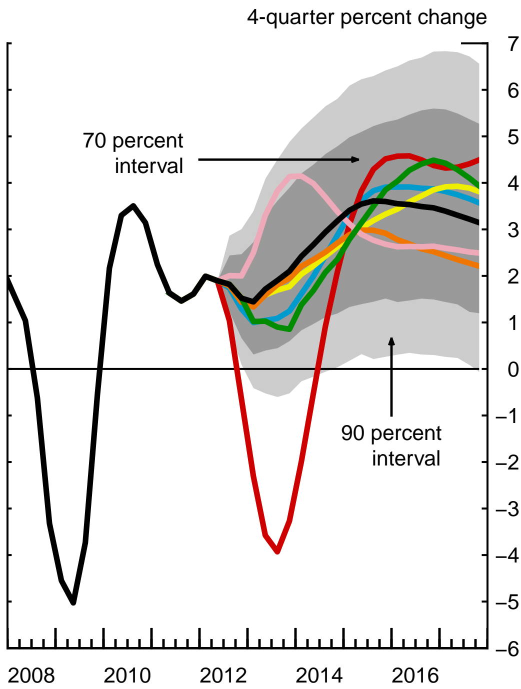
[3] After 2014, both tax rates and government spending gradually return to their baseline trajectories, leading eventually to budget deficits that are about the same as in the baseline. However, because those deficits follow a period of greater fiscal restraint, the ratio of government debt to GDP is lower over the longer term in the alternative scenario.

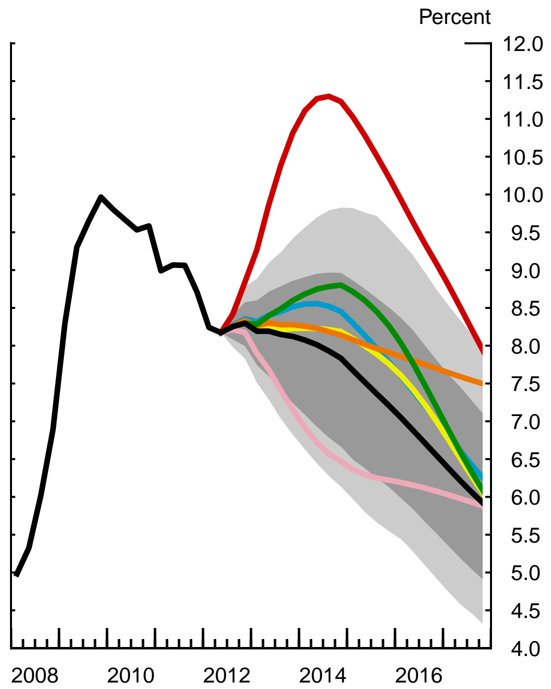
[4] Although taxes increase by more than 2 percent of GDP in 2013 in the alternative scenario relative to the baseline, the initial negative effect on real GDP next year is smaller as households in the FRB/US model adjust their spending gradually in response to the decline in their disposable income; accordingly, real GDP growth in 2014 is also restrained.

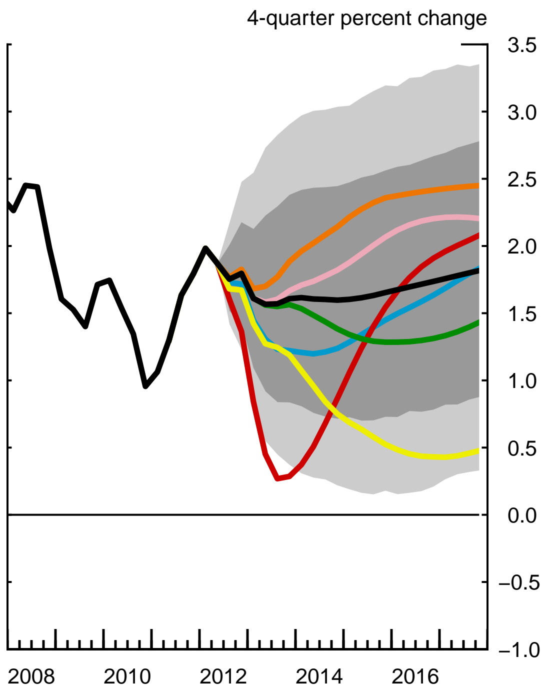
Forecast Confidence Intervals and Alternative Scenarios

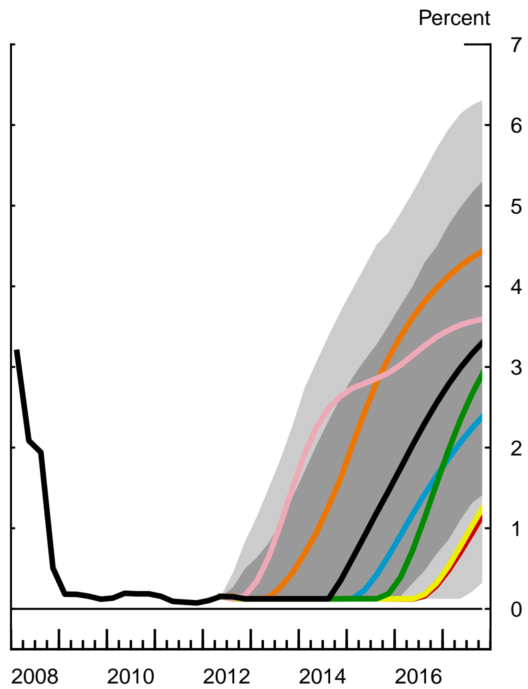
Confidence Intervals Based on FRB/US Stochastic Simulations

Extended Tealbook baseline
Fiscal cliff
Faster recovery
Damaged labor market
Disinflation
European crisis with severe spillovers
Hard landing in China









Risks & Uncertainty

the greater-than-expected increases in house prices seen since the beginning of the year turn out to signal that a significant headwind for the recovery is abating more rapidly than anticipated, with favorable implications for construction, household wealth, and the willingness of financial institutions to extend credit. In this environment, investor sentiment recovers more quickly, leading to a faster decline in risk premiums, and hence lower borrowing costs and higher wealth. These factors, in turn, contribute to a cycle of increased confidence, employment, credit availability, and spending that boosts the pace of the recovery further. Real GDP accelerates to an average annual growth rate of 3¾ percent in 2013 and 2014, bringing the unemployment rate down to 6½ percent by the end of 2014. Upward pressure on inflation is initially tempered by the effects of stronger capital investment on labor productivity and unit labor costs. Over time, however, greater resource utilization causes inflation to move above baseline to a level consistent with long-run inflation expectations (which remain well anchored) and the Committee's longer-run objective. In response to the stronger pace of real activity, the federal funds rate begins to rise from its effective lower bound in the first half of 2013.

Damaged Labor Market

The unusual depth and breadth of the downturn may have impaired the efficiency of labor markets and boosted the NAIRU by more than estimated in the baseline. In this scenario, we assume that the NAIRU reached 7 percent in early 2011 (1 percentage point above baseline) and that it will remain at this level for the indefinite future. Furthermore, the trend labor force participation rate is assumed to decline further and is 1 percentage point below baseline by 2015. These conditions imply lower long-run levels of household income and corporate earnings; as a result, underlying aggregate demand is weaker, and the unemployment rate barely inches down over the next few years. Nonetheless, labor market slack remains persistently narrower in this scenario than in the baseline because of the higher NAIRU, implying higher unit labor costs and greater upward pressure on consumer prices. These price pressures are magnified by policymakers' initial failure to recognize the weaker supply-side conditions, which leads them to maintain a more accommodative stance of monetary policy than they would have chosen with a more accurate assessment of the supply side. As a result, the public's long-run inflation expectations move up and actual inflation gradually rises to 2½ percent. In response to these more inflationary conditions, the federal funds rate begins to rise earlier and more rapidly than in the baseline.

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

Measure	2012	2013	2014	2015	2016	2017
Real GDP						
(percent change, Q4 to Q4)						
Projection	1.5	2.1	3.2	3.6	3.5	3.1
Confidence interval						
Tealbook forecast errors	.2–2.8	.3–3.9	. . .	. . .	. . .	. . .
FRB/US stochastic simulations	.7–2.5	.6–3.9	1.2–4.8	1.5–5.3	1.5–5.6	1.2–5.2
Civilian unemployment rate						
(percent, Q4)						
Projection	8.3	8.1	7.8	7.2	6.5	5.9
Confidence interval						
Tealbook forecast errors	7.8–8.8	7.3–8.9	. . .	. . .	. . .	. . .
FRB/US stochastic simulations	8.0–8.6	7.2–8.9	6.7–9.0	6.1–8.5	5.5–7.8	4.9–7.1
PCE prices, total						
(percent change, Q4 to Q4)						
Projection	1.4	1.5	1.4	1.6	1.7	1.8
Confidence interval						
Tealbook forecast errors	.6–2.1	.3–2.7	. . .	. . .	. . .	. . .
FRB/US stochastic simulations	.8–2.0	.5–2.5	.2–2.5	.4–2.7	.5–2.8	.6–3.0
PCE prices excluding food and energy						
(percent change, Q4 to Q4)						
Projection	1.8	1.6	1.6	1.7	1.7	1.8
Confidence interval						
Tealbook forecast errors	1.3–2.3	.9–2.3	. . .	. . .	. . .	. . .
FRB/US stochastic simulations	1.4–2.2	.8–2.4	.7–2.4	.7–2.6	.8–2.7	.9–2.8
Federal funds rate						
(percent, Q4)						
Projection	.1	.1	.4	1.5	2.6	3.3
Confidence interval						
FRB/US stochastic simulations	.1–.5	.1–1.4	.1–2.6	.1–3.5	.7–4.5	1.4–5.3

Note: Shocks underlying FRB/US stochastic simulations are randomly drawn from the 1969–2009 set of model equation residuals.

Intervals derived from Tealbook forecast errors are based on projections made from 1979–2009, except for PCE prices excluding food and energy, where the sample is 1981–2009.

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

Disinflation

The stability of various measures of expected inflation may be misleading us about the potential for further disinflation, particularly in the context of the baseline assessment that considerable margins of slack in labor and product markets will persist for some time. In this scenario, both expected and actual inflation drift down over time, with headline inflation falling to about ½ percent by 2014; such declines would be in line with the predictions of some accelerationist Phillips curve models. Real interest rates are higher, reflecting both lower inflation in conjunction with the effective zero lower bound and higher bond premiums resulting from investors' concern about the durability of the recovery. The higher real interest rates restrain aggregate spending modestly and raise unemployment relative to baseline. The federal funds rate remains at its effective lower bound until late 2016.

European Crisis with Severe Spillovers

In this scenario, the current stress in European financial markets intensifies further and causes Europe to plunge into a severe financial crisis and a deep recession. This outcome could result from the exit of Greece from the euro area, widespread runs on bank deposits, a disorderly sovereign default, or the failure of a large European bank.[5] Reflecting the greater financial stress, both sovereign and private borrowing costs in Europe soar—with corporate bond spreads rising 400 basis points above baseline—and the confidence of European households and businesses plummets. Real GDP in Europe declines about 9 percent relative to baseline by the end of 2013, notwithstanding a 25 percent depreciation in the real effective foreign exchange value of the euro. Europe's difficulties are assumed to have important financial and economic spillovers to the rest of the world, including the United States. U.S. economic activity contracts sharply, as U.S. corporate bond spreads rise more than 300 basis points, the stock market plunges, credit availability is restricted, and household and business confidence erodes. In addition, weaker foreign economic activity and the stronger exchange value of the dollar depress U.S. net exports. All told, U.S. real GDP declines at an average annual rate of about 3 percent through the end of next year. The unemployment rate rises to 11¼ percent in 2014 before beginning to gradually decline. With substantially greater resource slack and lower import prices, overall U.S. consumer prices fall in the second half of 2012 and in

[5] European policymakers could take more-sizable steps toward resolving the crisis than assumed in the baseline, thereby substantially easing financial and fiscal stresses and prompting a faster European recovery. This possibility was analyzed in one of the alternative scenarios presented in Book A of the March 2012 Tealbook.

2013; inflation turns positive in 2014 as a recovery in economic activity begins to take hold.[6] Under these conditions, the federal funds rate remains at its effective lower bound until early 2017.

Hard Landing in China

Although real GDP growth in China has slowed substantially in recent quarters, in our baseline forecast China's economy continues to expand at close to an 8 percent rate. However, important downside risks attend this outlook, including a real estate collapse or a sharp deceleration in the supply of credit if problems mount in China's banking sector. In this scenario, despite stimulative government policies, real GDP growth in China falls to a 5 percent pace over the next two years due to tighter credit conditions, lower investment, and reduced household and business confidence. Moreover, we assume that China's slowdown has pronounced global spillovers, especially to other major U.S. trading partners in Asia. As a result, the trade-weighted exchange value of the dollar appreciates about 5 percent above baseline and total foreign growth falls 1 percentage point below baseline. The stronger dollar and weaker foreign growth, in combination, represent an unusually large shock to the U.S. external sector, particularly as these restraining factors persist for over two years. U.S. real net exports decline substantially, leading U.S. real GDP to expand at an annual rate of only about 1 percent in the second half of this year and in 2013. The unemployment rate rises to 8½ percent by the end of this year and remains at that level through 2014. Core PCE inflation declines to just above 1¼ percent in 2013 and 2014 because of both the appreciation in the foreign exchange value of the dollar and lower resource utilization. The liftoff of the federal funds rate from its effective lower bound is delayed until the middle of 2015.

[6] The rebound in consumer price inflation after 2013 in the simulation reflects the forward-looking nature of inflation determination in SIGMA and the relatively modest degree of structural inflation persistence. In particular, long-run inflation expectations remain firmly anchored at 2 percent, marginal costs are expected to rise as the economy recovers, and productivity is weaker (reflecting reduced capital spending). In addition, import price inflation runs significantly higher than in the baseline as the dollar's initial appreciation is gradually reversed. Under alternative specifications of SIGMA that, for instance, allowed for more structural persistence in the inflation process or a less firm anchoring of inflation expectations, inflation would remain low for a longer period.

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New Exhibits in the Risks and Uncertainty Section

With this Tealbook, we introduce two new exhibits in the Risks and Uncertainty section. One exhibit, "Alternative Projections," compares the staff's baseline forecast with three alternative economic projections. The second exhibit, "Assessment of Key Macroeconomic Risks," presents estimates of the likelihood of specific economic events associated with inflation, unemployment, and a recession. These exhibits will ordinarily be presented for reference, without explanatory text.

The first page of the two-page exhibit "Alternative Projections" compares the Tealbook baseline projection with forecasts from the staff's FRB/US and EDO models along with the consensus forecast from the Blue Chip survey. The second page provides a graphical representation of the Blue Chip consensus forecast and the staff's baseline projection along with information about the range of forecasts from the Blue Chip panel. The FRB/US model is a workhorse model of the Board staff. It is used for a variety of purposes, including to generate most of the alternative scenarios that appear in this section. EDO is another workhorse model of the Board staff; it is an estimated dynamic stochastic general equilibrium (DSGE) model, similar in structure to several other DSGE models in use around the System, and forecasts from EDO are regularly included in the Systemwide analysis of DSGE models. In addition, the staff has long consulted forecasts from both the FRB/US and EDO models when preparing its judgmental economic projection.

The "Alternative Projections" table can be used to assess how the latest forecasts from these four sources compare, as well as to see how each has evolved since the time of the previous Tealbook. For example, the FRB/US forecast currently shows a gradual acceleration in real GDP through 2014 that is a bit steeper but not greatly different than the staff projection. In comparison, the EDO forecast shows an acceleration in real GDP earlier in the projection period. In regard to revisions since the last Tealbook, the FRB/US forecast for real GDP growth has revised up in 2013, relative to June, while the other projections are nearly unchanged. The upward revision to the FRB/US projection reflects that model's more favorable estimates of underlying financial conditions and trend output growth.

The two-page exhibit "Assessment of Key Macroeconomic Risks" presents estimated probabilities of selected macroeconomic events based on stochastic simulations of the FRB/US and EDO models as well as two other, nonstructural models, namely, a Bayesian vector autoregressive (BVAR) model and a factor model. The BVAR model contains six quarterly variables: real GDP growth, the unemployment rate, total PCE inflation, the percent change in the relative price of crude oil, the federal funds rate, and the spread of the BBB bond rate over the 90-day Treasury bill rate. The spareness of structure and judgment underlying

the BVAR model provides a useful comparison with the staff's FRB/US and EDO models, both of which naturally embody the views of the model builders. Finally there is the factor model—the same one that was described in the box "Assessing the Near-Term Outlook with Factor Models" in the March 2012 Tealbook—which, because of its orientation toward short-term forecasting, is used only in the bottom panel of the table.

The top panels of both pages focus on inflation; the table on the first page presents estimated probabilities that total PCE inflation over the next four quarters—currently, the four quarters ending in the second quarter of 2013—will be either 1 percentage point above or 1 percentage point below the Committee's stated long-run objective. In the top panel on the second page, time series are displayed of the probabilities from two of the models used to generate the results in the table. These time series of probabilities, which are estimated using real-time data, provide a historical perspective on what constitutes an unusually high or low probability and on how these probabilities fluctuate over time. The middle panels of both pages present probabilities that the unemployment rate will increase or decrease by 1 percentage point over the four quarters following the latest quarterly observation. (Currently, therefore, the probabilities describe the distribution of the change in the unemployment rate from the second quarter of 2012 to the second quarter of 2013.) The bottom panel of both pages presents the models' estimated probabilities that real GDP will decline in both of the next two quarters, a commonly used definition of a recession.

The event probabilities around the staff projection (the first column in the table) are based on historical Tealbook forecast errors applied to the Tealbook baseline, similar to the procedure for the confidence intervals based on Tealbook projection errors that are regularly presented in the exhibit "Selected Tealbook Projections and 70 Percent Confidence Intervals" in this section. All of the other probability estimates shown are based on stochastic simulations of the relevant model carried out with respect to each model's baseline forecast, with the shocks drawn from the distribution of each model's historical residuals.

As noted earlier, the charts on the second page provide a historical perspective on the event probabilities estimated from two of the models. To take inflation as an example, both the FRB/US and BVAR models viewed the risk of inflation being higher than 3 percent to be elevated in early 2008, owing to increases in food and energy prices at that time. But that assessment turned out to be short lived as the recession deepened, and by the end of 2008 and into 2009, both models instead saw the risk of inflation being below 1 percent to be elevated. In contrast, the two models differed in their views of inflation risks during the 2001–04 period: In late 2001, the BVAR model saw very high risks of low inflation while the FRB/US model was relatively sanguine; the reverse pattern occurred in 2003.

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

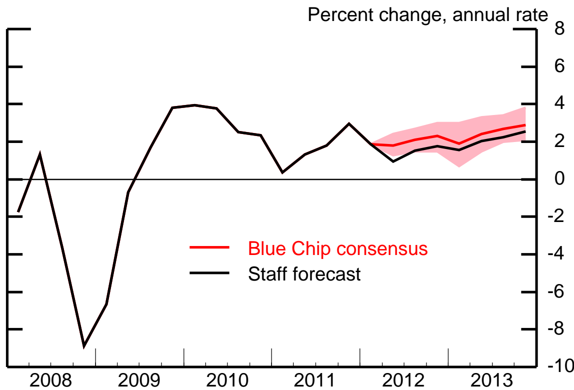
Measure and projection	2012		2013		2014	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
Real GDP						
Staff	1.9	1.5	2.2	2.1	3.1	3.2
FRB/US	1.5	1.4	1.7	2.2	3.4	3.6
EDO	2.6	2.3	3.3	3.3	3.1	3.1
Blue Chip	2.1	2.0	2.6	2.5	...	...
Unemployment rate[1]						
Staff	8.2	8.3	8.0	8.1	7.7	7.8
FRB/US	8.3	8.4	8.8	8.8	8.2	8.2
EDO	8.0	8.0	7.5	7.6	7.3	7.3
Blue Chip	8.0	8.1	7.6	7.7	...	...
Total PCE prices						
Staff	1.2	1.4	1.5	1.5	1.5	1.4
FRB/US	1.0	1.2	1.1	1.1	1.1	1.0
EDO	1.5	1.6	1.5	1.6	1.6	1.6
Blue Chip[2]	2.0	1.7	2.2	2.2	...	...
Core PCE prices						
Staff	1.7	1.8	1.6	1.6	1.6	1.6
FRB/US	1.5	1.6	1.2	1.2	1.2	1.2
EDO	1.7	1.8	1.5	1.6	1.6	1.6
Blue Chip	...	...	...	...	...	...
Federal funds rate[1]						
Staff	.1	.1	.1	.1	.5	.4
FRB/US	.0	.0	.0	.1	1.0	1.3
EDO	.6	.6	1.4	1.5	2.1	2.1
Blue Chip[3]	.1	.1	.3	.3	...	...

Note: Blue Chip forecast completed on July 10, 2012.
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

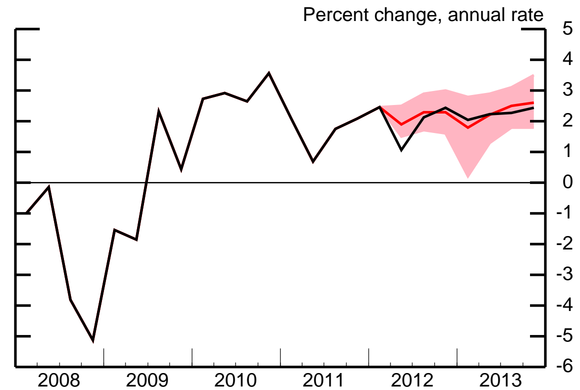
Tealbook Forecast Compared with Blue Chip
(Blue Chip survey released July 10, 2012)

Real GDP

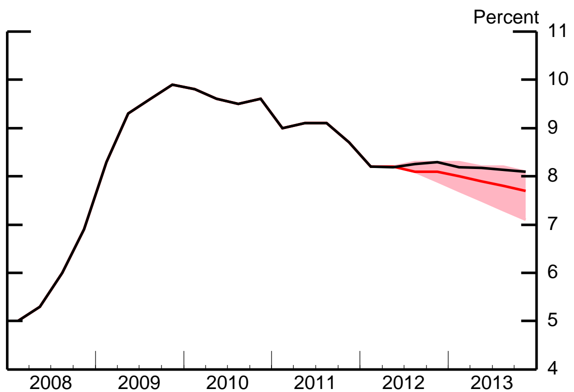


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

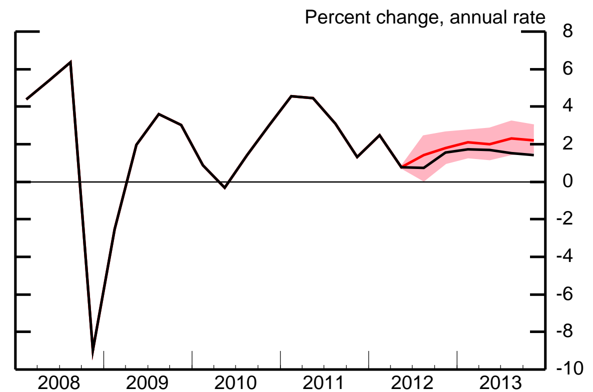
Real PCE



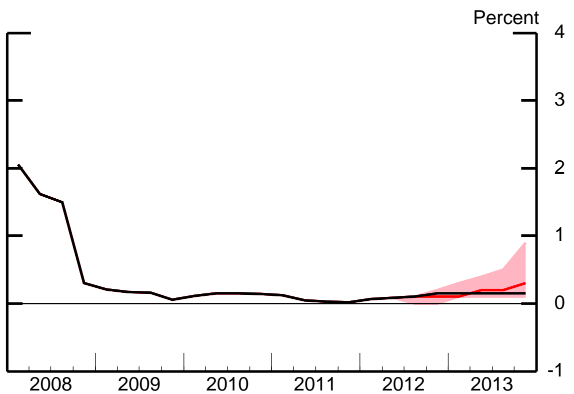
Unemployment Rate



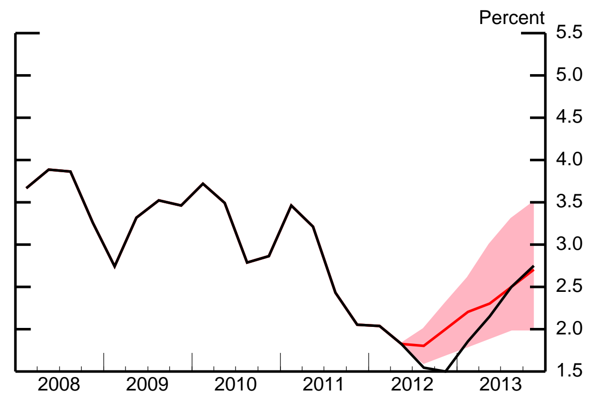
Consumer Price Index



Treasury Bill Rate



10-Year Treasury Yield



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

Risks & Uncertainty

Assessment of Key Macroeconomic Risks (1)

Probability of Inflation Events

(4 quarters ahead—2013: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	.03	.10	.04
Previous Tealbook	.04	.01	.09	.04
Less than 1 percent				
Current Tealbook	.33	.49	.31	.23
Previous Tealbook	.40	.63	.33	.24

Probability of Unemployment Events

(4 quarters ahead—2013:Q2)

Probability that the unemployment rate will ...	Staff	FRB/US	EDO	BVAR
Increase by 1 percentage point				
Current Tealbook	.04	.17	.17	.02
Previous Tealbook	.03	.25	.17	.01
Decrease by 1 percentage point				
Current Tealbook	.02	.00	.32	.19
Previous Tealbook	.04	.00	.31	.24

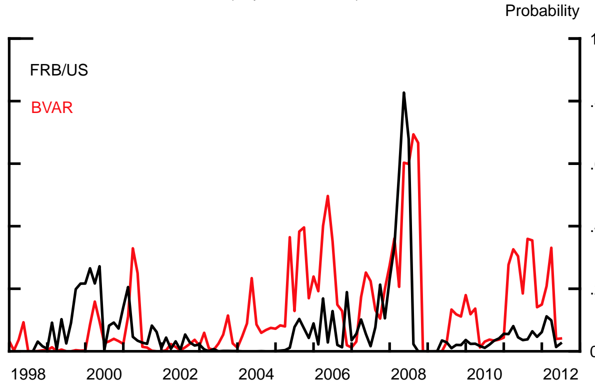
Probability of Near-Term Recession

Probability that real GDP declines in each of 2012:Q3 and 2012:Q4	Staff	FRB/US	EDO	BVAR	Factor Model
Current Tealbook	.07	.10	.05	.07	.21
Previous Tealbook	.04	.14	.05	.04	.27

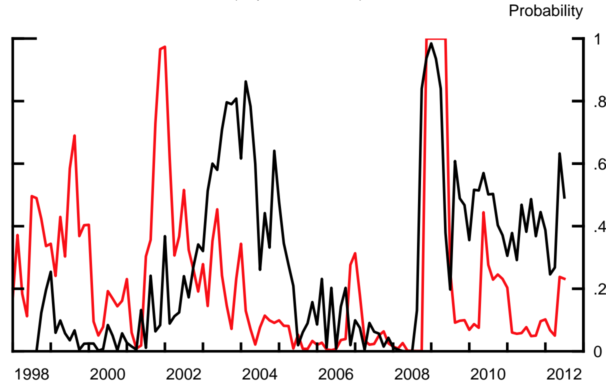
Note: "Staff" represents Tealbook forecast errors applied to the Tealbook baseline; baselines for FRB/US, BVAR, EDO, and the factor model are generated by those models themselves, up to the current-quarter estimate. The current quarter is taken as data from the staff estimate for the second Tealbook in each quarter, otherwise the preceding quarter is taken as the latest historical observation.

Assessment of Key Macroeconomic Risks (2)

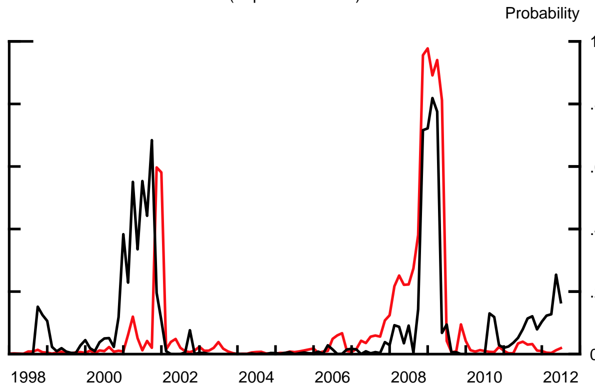
Probability that Total PCE Inflation Is above 3 Percent
(4 quarters ahead)



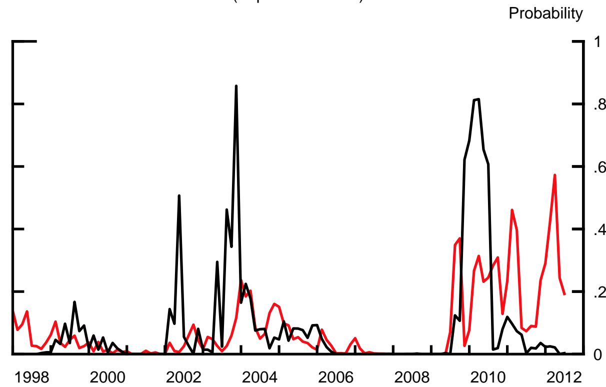
Probability that Total PCE Inflation Is below 1 Percent
(4 quarters ahead)



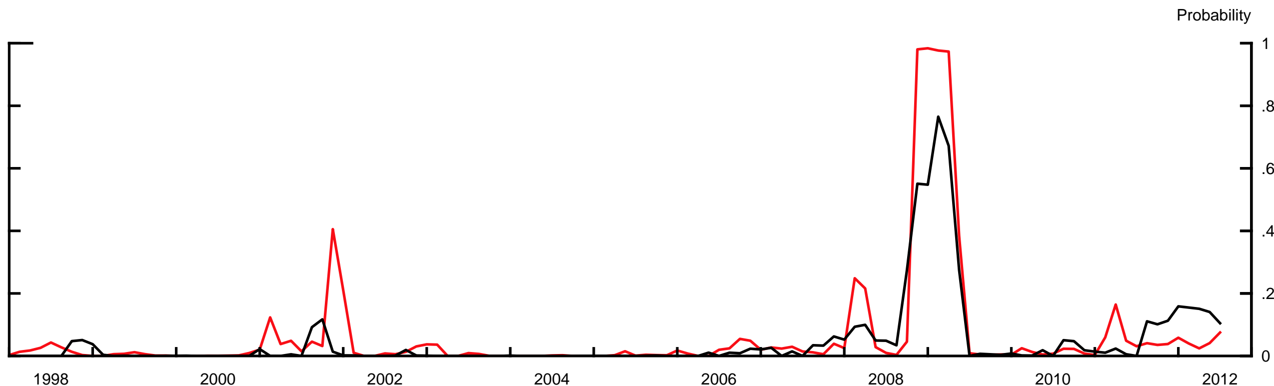
Probability that the Unemployment Rate Increases 1 ppt
(4 quarters ahead)



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]	
	06/13/12	07/25/12	06/13/12	07/25/12	06/13/12	07/25/12	06/13/12	07/25/12	06/13/12	07/25/12
Quarterly										
2011:Q1	3.1	3.1	.4	.4	3.9	3.9	1.6	1.6	9.0	9.0
Q2	4.0	4.0	1.3	1.3	3.3	3.3	2.3	2.3	9.1	9.1
Q3	4.4	4.4	1.8	1.8	2.3	2.3	2.1	2.1	9.1	9.1
Q4	3.8	3.8	3.0	3.0	1.2	1.2	1.3	1.3	8.7	8.7
2012:Q1	3.9	3.9	2.2	1.9	2.4	2.6	2.1	2.3	8.2	8.2
Q2	2.8	1.8	1.5	1.0	.6	.8	1.7	1.8	8.2	8.2
Q3	4.2	3.8	1.9	1.5	.1	.8	1.6	1.6	8.2	8.3
Q4	3.5	3.7	1.9	1.8	1.5	1.5	1.5	1.5	8.2	8.3
2013:Q1	3.4	3.2	1.7	1.6	1.6	1.6	1.6	1.6	8.1	8.2
Q2	3.6	3.6	2.1	2.0	1.6	1.6	1.6	1.6	8.1	8.2
Q3	3.8	3.7	2.3	2.2	1.5	1.5	1.6	1.6	8.0	8.1
Q4	4.0	4.0	2.5	2.5	1.5	1.4	1.6	1.6	8.0	8.1
Two-quarter[2]										
2011:Q2	3.5	3.5	.8	.8	3.6	3.6	1.9	1.9	-.5	-.5
Q4	4.1	4.1	2.4	2.4	1.8	1.8	1.7	1.7	-.4	-.4
2012:Q2	3.3	2.8	1.8	1.4	1.5	1.7	1.9	2.1	-.5	-.5
Q4	3.8	3.7	1.9	1.6	.8	1.1	1.5	1.5	.0	.1
2013:Q2	3.5	3.4	1.9	1.8	1.6	1.6	1.6	1.6	-.1	-.1
Q4	3.9	3.9	2.4	2.4	1.5	1.4	1.6	1.6	-.1	-.1
Four-quarter[3]										
2010:Q4	4.7	4.7	3.1	3.1	1.3	1.3	1.0	1.0	-.3	-.3
2011:Q4	3.8	3.8	1.6	1.6	2.7	2.7	1.8	1.8	-.9	-.9
2012:Q4	3.6	3.3	1.9	1.5	1.2	1.4	1.7	1.8	-.5	-.4
2013:Q4	3.7	3.6	2.2	2.1	1.5	1.5	1.6	1.6	-.2	-.2
2014:Q4	4.6	4.7	3.1	3.2	1.5	1.4	1.6	1.6	-.3	-.3
Annual										
2010	4.2	4.2	3.0	3.0	1.8	1.8	1.4	1.4	9.6	9.6
2011	3.9	3.9	1.7	1.7	2.5	2.5	1.4	1.4	8.9	8.9
2012	3.7	3.5	2.0	1.8	1.5	1.7	1.8	1.9	8.2	8.2
2013	3.6	3.5	2.0	1.8	1.3	1.4	1.6	1.6	8.0	8.2
2014	4.2	4.3	2.7	2.8	1.5	1.4	1.6	1.6	7.9	8.0

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	2011			2012				2013							
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2011[1]	2012[1]	2013[1]	2014[1]
Real GDP	1.3	1.8	3.0	1.9	1.0	1.5	1.8	1.6	2.0	2.2	2.5	1.6	1.5	2.1	3.2
Previous Tealbook	1.3	1.8	3.0	2.2	1.5	1.9	1.9	1.7	2.1	2.3	2.5	1.6	1.9	2.2	3.1
Final sales	1.6	3.2	1.1	1.8	.9	1.2	1.5	1.4	1.8	2.0	1.9	1.5	1.4	1.8	3.0
Previous Tealbook	1.6	3.2	1.1	2.1	1.2	1.4	1.9	1.7	1.8	2.1	2.0	1.5	1.6	1.9	2.9
Priv. dom. final purch.	1.9	3.3	2.7	3.0	1.8	2.2	2.5	2.2	2.7	2.8	2.9	2.5	2.4	2.6	3.8
Previous Tealbook	1.9	3.3	2.7	3.3	2.3	2.7	2.9	2.4	2.8	3.0	3.1	2.5	2.8	2.8	3.6
Personal cons. expend.	.7	1.7	2.1	2.5	1.1	2.1	2.4	2.0	2.2	2.3	2.4	1.6	2.0	2.2	3.3
Previous Tealbook	.7	1.7	2.1	2.9	1.9	2.5	2.7	2.1	2.3	2.4	2.5	1.6	2.5	2.3	3.2
Durables	-5.3	5.7	16.1	13.7	-3.4	5.2	8.3	5.9	7.0	6.5	7.3	6.8	5.7	6.7	7.7
Nondurables	.2	-.5	.8	2.1	1.4	1.1	1.9	1.3	1.6	1.6	1.7	.5	1.6	1.5	2.6
Services	1.9	1.9	.4	.8	1.7	2.0	1.7	1.6	1.7	1.8	1.9	1.2	1.6	1.8	2.7
Residential investment	4.2	1.3	11.6	20.0	8.9	12.3	3.3	6.8	11.6	10.8	10.9	3.5	11.0	10.0	11.2
Previous Tealbook	4.2	1.3	11.6	19.7	11.5	8.3	6.8	10.4	10.3	10.1	10.0	3.5	11.5	10.2	10.8
Business fixed invest.	10.3	15.7	5.2	3.1	5.1	.6	3.1	1.9	3.5	4.5	4.4	8.2	2.9	3.6	5.3
Previous Tealbook	10.3	15.7	5.2	2.8	2.5	2.8	3.3	2.8	4.3	5.0	4.9	8.2	2.9	4.2	4.9
Equipment & software	6.2	16.2	7.5	3.5	6.8	1.5	3.9	2.2	4.5	5.9	5.8	9.6	3.9	4.6	6.7
Previous Tealbook	6.2	16.2	7.5	3.7	3.4	4.6	5.1	3.7	5.6	6.6	6.4	9.6	4.2	5.6	5.9
Nonres. structures	22.6	14.4	-.9	1.9	.5	-1.8	.7	1.0	.8	.8	.7	4.4	.3	.8	1.6
Previous Tealbook	22.6	14.4	-.9	.3	-.2	-1.8	-1.5	.4	.7	.7	.8	4.4	-.8	.7	2.1
Net exports[2]	-416	-403	-411	-407	-405	-417	-429	-434	-442	-444	-453	-414	-414	-443	-462
Previous Tealbook[2]	-416	-403	-411	-408	-415	-429	-440	-445	-454	-458	-467	-414	-423	-456	-473
Exports	3.6	4.7	2.7	4.2	4.4	3.7	2.8	3.2	3.6	3.9	4.1	4.7	3.8	3.7	5.6
Imports	1.4	1.2	3.7	2.7	3.3	5.1	4.5	3.6	4.2	3.6	4.9	3.6	3.9	4.1	4.7
Gov't. cons. & invest.	-.9	-.1	-4.2	-4.0	-3.0	-1.4	-1.4	-1.2	-1.2	-1.4	-1.6	-2.8	-2.4	-1.4	-.8
Previous Tealbook	-.9	-.1	-4.2	-4.0	-2.0	-1.9	-1.2	-1.0	-1.3	-1.6	-1.6	-2.8	-2.3	-1.4	-.9
Federal	1.9	2.1	-6.9	-5.9	-4.5	-1.9	-3.1	-3.6	-3.6	-4.4	-4.8	-3.2	-3.8	-4.1	-4.2
Defense	7.0	5.0	-12.1	-8.3	-5.5	-1.6	-3.4	-4.2	-4.1	-5.3	-5.9	-3.6	-4.8	-4.9	-5.0
Nondefense	-7.6	-3.8	4.5	-.8	-2.4	-2.4	-2.5	-2.4	-2.5	-2.5	-2.5	-2.5	-2.0	-2.5	-2.7
State & local	-2.8	-1.6	-2.2	-2.7	-1.9	-1.0	-.2	.3	.4	.5	.6	-2.5	-1.5	.4	1.3
Change in bus. inventories[2]	39	-2	52	54	59	69	79	84	93	100	120	35	65	99	140
Previous Tealbook[2]	39	-2	52	58	65	79	81	83	91	100	115	35	71	98	133
Nonfarm[2]	51	6	61	64	59	72	82	83	92	99	119	44	69	98	139
Farm[2]	-9	-6	-6	-7	0	-3	-3	1	1	1	1	-7	-3	1	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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Real GDP	2.8	2.4	2.2	-3.3	-.5	3.1	1.6	1.5	2.1	3.2
Previous Tealbook	2.8	2.4	2.2	-3.3	-.5	3.1	1.6	1.9	2.2	3.1
Final sales	2.7	2.8	2.4	-2.6	-.8	2.4	1.5	1.4	1.8	3.0
Previous Tealbook	2.7	2.8	2.4	-2.6	-.8	2.4	1.5	1.6	1.9	2.9
Priv. dom. final purch.	3.2	2.4	1.2	-4.5	-2.5	3.6	2.5	2.4	2.6	3.8
Previous Tealbook	3.2	2.4	1.2	-4.5	-2.5	3.6	2.5	2.8	2.8	3.6
Personal cons. expend.	2.8	3.2	1.7	-2.5	-.2	3.0	1.6	2.0	2.2	3.3
Previous Tealbook	2.8	3.2	1.7	-2.5	-.2	3.0	1.6	2.5	2.3	3.2
Durables	2.8	7.0	4.6	-13.0	3.0	10.9	6.8	5.7	6.7	7.7
Nondurables	3.1	2.9	.8	-3.1	.6	3.5	.5	1.6	1.5	2.6
Services	2.7	2.6	1.4	-.5	-.9	1.6	1.2	1.6	1.8	2.7
Residential investment	5.3	-15.7	-20.7	-24.4	-12.9	-6.3	3.5	11.0	10.0	11.2
Previous Tealbook	5.3	-15.7	-20.7	-24.4	-12.9	-6.3	3.5	11.5	10.2	10.8
Business fixed invest.	4.5	7.8	7.9	-9.4	-14.4	11.1	8.2	2.9	3.6	5.3
Previous Tealbook	4.5	7.8	7.9	-9.4	-14.4	11.1	8.2	2.9	4.2	4.9
Equipment & software	6.2	6.0	3.9	-13.6	-5.8	16.6	9.6	3.9	4.6	6.7
Previous Tealbook	6.2	6.0	3.9	-13.6	-5.8	16.6	9.6	4.2	5.6	5.9
Nonres. structures	-.1	13.0	17.3	-1.2	-29.3	-1.8	4.4	.3	.8	1.6
Previous Tealbook	-.1	13.0	17.3	-1.2	-29.3	-1.8	4.4	-.8	.7	2.1
Net exports[1]	-723	-729	-649	-495	-359	-422	-414	-414	-443	-462
Previous Tealbook[1]	-723	-729	-649	-495	-359	-422	-414	-423	-456	-473
Exports	6.7	10.2	10.1	-2.5	-.1	8.8	4.7	3.8	3.7	5.6
Imports	5.2	4.1	.8	-5.9	-6.5	10.7	3.6	3.9	4.1	4.7
Gov't. cons. & invest.	.7	1.5	1.9	2.7	1.1	.1	-2.8	-2.4	-1.4	-.8
Previous Tealbook	.7	1.5	1.9	2.7	1.1	.1	-2.8	-2.3	-1.4	-.9
Federal	1.2	2.2	3.1	8.8	4.6	2.9	-3.2	-3.8	-4.1	-4.2
Defense	.4	4.4	2.6	9.8	3.5	1.5	-3.6	-4.8	-4.9	-5.0
Nondefense	2.6	-2.3	4.2	6.8	6.9	5.7	-2.5	-2.0	-2.5	-2.7
State & local	.4	1.2	1.2	-.9	-1.1	-1.7	-2.5	-1.5	.4	1.3
Change in bus. inventories[1]	50	59	28	-36	-145	59	35	65	99	140
Previous Tealbook[1]	50	59	28	-36	-145	59	35	71	98	133
Nonfarm[1]	50	63	29	-38	-144	61	44	69	98	139
Farm[1]	0	-4	-1	1	-1	-1	-7	-3	1	1

1. Billions of chained (2005) dollars.

Greensheets

Greensheets

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

Item	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2011[1]	2012[1]	2013[1]	2014[1]
Real GDP	1.3	1.8	3.0	1.9	1.0	1.5	1.8	1.6	2.0	2.2	2.5	1.6	1.5	2.1	3.2
Previous Tealbook	1.3	1.8	3.0	2.2	1.5	1.9	1.9	1.7	2.1	2.3	2.5	1.6	1.9	2.2	3.1
Final sales	1.6	3.2	1.2	1.8	.9	1.2	1.5	1.4	1.8	2.0	1.9	1.5	1.3	1.8	3.0
Previous Tealbook	1.6	3.2	1.2	2.0	1.2	1.4	1.8	1.7	1.8	2.0	2.0	1.5	1.6	1.9	2.9
Priv. dom. final purch.	1.6	2.8	2.3	2.5	1.5	1.9	2.1	1.8	2.2	2.4	2.5	2.0	2.0	2.2	3.2
Previous Tealbook	1.6	2.8	2.3	2.8	1.9	2.2	2.4	2.0	2.3	2.5	2.6	2.0	2.3	2.4	3.1
Personal cons. expend.	.5	1.2	1.5	1.7	.8	1.5	1.7	1.4	1.6	1.6	1.7	1.2	1.4	1.6	2.3
Previous Tealbook	.5	1.2	1.5	2.1	1.4	1.7	1.9	1.5	1.6	1.7	1.8	1.2	1.8	1.7	2.3
Durables	-.4	.4	1.2	1.0	-.3	.4	.6	.5	.5	.5	.6	.5	.4	.5	.6
Nondurables	.0	-.1	.1	.3	.2	.2	.3	.2	.3	.3	.3	.1	.3	.2	.4
Services	.9	.9	.2	.4	.8	.9	.8	.8	.8	.9	.9	.6	.7	.8	1.3
Residential investment	.1	.0	.3	.4	.2	.3	.1	.2	.3	.3	.3	.1	.2	.2	.3
Previous Tealbook	.1	.0	.3	.4	.3	.2	.2	.2	.3	.3	.3	.1	.3	.3	.3
Business fixed invest.	1.0	1.5	.5	.3	.5	.1	.3	.2	.4	.5	.5	.8	.3	.4	.6
Previous Tealbook	1.0	1.5	.5	.3	.3	.3	.3	.3	.4	.5	.5	.8	.3	.4	.5
Equipment & software	.4	1.1	.6	.3	.5	.1	.3	.2	.3	.4	.4	.7	.3	.4	.5
Previous Tealbook	.4	1.1	.6	.3	.3	.3	.4	.3	.4	.5	.5	.7	.3	.4	.5
Nonres. structures	.5	.4	.0	.1	.0	-.1	.0	.0	.0	.0	.0	.1	.0	.0	.0
Previous Tealbook	.5	.4	.0	.0	.0	-.1	.0	.0	.0	.0	.0	.1	.0	.0	.1
Net exports	.2	.4	-.3	.1	.0	-.4	-.4	-.2	-.2	-.1	-.3	.0	-.2	-.2	-.1
Previous Tealbook	.2	.4	-.3	.1	-.3	-.4	-.3	-.2	-.3	-.1	-.3	.0	-.2	-.2	.0
Exports	.5	.6	.4	.6	.6	.5	.4	.4	.5	.5	.6	.6	.5	.5	.8
Imports	-.2	-.2	-.6	-.5	-.6	-.9	-.8	-.6	-.7	-.6	-.8	-.6	-.7	-.7	-.8
Gov't. cons. & invest.	-.2	.0	-.8	-.8	-.6	-.3	-.3	-.2	-.2	-.3	-.3	-.6	-.5	-.3	-.2
Previous Tealbook	-.2	.0	-.8	-.8	-.4	-.4	-.2	-.2	-.2	-.3	-.3	-.6	-.5	-.3	-.2
Federal	.2	.2	-.6	-.5	-.4	-.1	-.2	-.3	-.3	-.3	-.4	-.3	-.3	-.3	-.3
Defense	.4	.3	-.7	-.5	-.3	-.1	-.2	-.2	-.2	-.3	-.3	-.2	-.3	-.2	-.2
Nondefense	-.2	-.1	.1	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1
State & local	-.3	-.2	-.3	-.3	-.2	-.1	.0	.0	.0	.1	.1	-.3	-.2	.1	.1
Change in bus. inventories	-.3	-1.4	1.8	.1	.0	.3	.3	.2	.3	.2	.6	.1	.2	.3	.2
Previous Tealbook	-.3	-1.4	1.8	.1	.2	.5	.1	.1	.2	.3	.5	.1	.2	.3	.2
Nonfarm	-.3	-1.5	1.8	.1	-.2	.4	.3	.0	.3	.2	.6	.1	.2	.3	.2
Farm	.0	.1	.0	.0	.2	-.1	.0	.1	.0	.0	.0	.0	.0	.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	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2011[1]	2012[1]	2013[1]	2014[1]
GDP chain-wt. price index	2.5	2.6	.9	2.0	.8	2.2	1.9	1.6	1.5	1.4	1.4	2.1	1.7	1.5	1.5
Previous Tealbook	2.5	2.6	.9	1.7	1.3	2.2	1.6	1.6	1.5	1.5	1.5	2.1	1.7	1.5	1.5
PCE chain-wt. price index	3.3	2.3	1.2	2.6	.8	.8	1.5	1.6	1.6	1.5	1.4	2.7	1.4	1.5	1.4
Previous Tealbook	3.3	2.3	1.2	2.4	.6	.1	1.5	1.6	1.6	1.5	1.5	2.7	1.2	1.5	1.5
Energy	15.0	3.3	-3.2	7.9	-13.6	-12.1	-.9	-.7	-1.1	-1.6	-1.3	12.8	-5.1	-1.2	-1.7
Previous Tealbook	15.0	3.3	-3.2	7.9	-16.1	-21.0	2.4	2.3	.7	.0	-.2	12.8	-7.5	.7	-.4
Food	6.4	4.7	3.3	1.3	.7	2.1	3.3	3.4	3.2	2.2	.9	5.2	1.8	2.4	.9
Previous Tealbook	6.4	4.7	3.3	1.3	1.5	1.7	1.5	1.5	1.5	1.4	1.4	5.2	1.5	1.5	1.4
Ex. food & energy	2.3	2.1	1.3	2.3	1.8	1.6	1.5	1.6	1.6	1.6	1.6	1.8	1.8	1.6	1.6
Previous Tealbook	2.3	2.1	1.3	2.1	1.7	1.6	1.5	1.6	1.6	1.6	1.6	1.8	1.7	1.6	1.6
Ex. food & energy, market based	2.4	2.3	1.4	2.1	1.7	1.5	1.4	1.5	1.5	1.5	1.5	1.8	1.7	1.5	1.5
Previous Tealbook	2.4	2.3	1.4	2.0	1.6	1.4	1.4	1.5	1.5	1.5	1.5	1.8	1.6	1.5	1.5
CPI	4.4	3.1	1.3	2.5	.8	.7	1.6	1.7	1.7	1.5	1.4	3.3	1.4	1.6	1.4
Previous Tealbook	4.4	3.1	1.3	2.5	.6	-.4	1.6	1.8	1.7	1.6	1.6	3.3	1.1	1.6	1.5
Ex. food & energy	2.4	2.5	1.9	2.1	2.6	2.1	1.5	1.7	1.7	1.7	1.7	2.2	2.0	1.7	1.7
Previous Tealbook	2.4	2.5	1.9	2.1	2.5	1.8	1.5	1.7	1.7	1.7	1.7	2.2	1.9	1.7	1.7
ECI, hourly compensation[2]	3.2	1.4	2.1	1.7	2.3	2.5	2.5	2.6	2.5	2.6	2.6	2.2	2.3	2.6	2.8
Previous Tealbook[2]	3.2	1.4	2.1	1.7	2.3	2.5	2.5	2.6	2.5	2.6	2.6	2.2	2.3	2.6	2.8
Nonfarm business sector															
Output per hour	-.3	1.8	1.2	-.8	-.1	1.2	1.5	.9	1.7	1.7	1.7	.4	.4	1.5	1.8
Previous Tealbook	-.3	1.8	1.2	-.4	.8	.4	1.1	1.4	1.4	1.5	1.7	.4	.5	1.5	1.8
Compensation per hour	-.5	5.7	-.4	.5	2.1	2.2	2.6	2.6	2.6	2.7	2.7	2.5	1.9	2.6	2.9
Previous Tealbook	-.5	5.7	-.4	.4	2.3	1.6	2.7	2.7	2.7	2.8	2.8	2.5	1.8	2.7	2.9
Unit labor costs	-.1	3.9	-1.5	1.3	2.3	1.0	1.2	1.7	.9	1.0	1.0	2.1	1.4	1.1	1.0
Previous Tealbook	-.1	3.9	-1.5	.9	1.5	1.2	1.7	1.3	1.3	1.2	1.1	2.1	1.3	1.2	1.1
Core goods imports chain-wt. price index[3]	7.2	2.4	-.4	.4	1.7	-1.1	.1	.8	1.2	1.3	1.3	4.3	.3	1.1	1.4
Previous Tealbook[3]	7.2	2.4	-.4	.4	2.0	-1.6	-.3	.9	1.4	1.6	1.6	4.3	.1	1.4	1.6

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.

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

Item	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GDP chain-wt. price index	3.5	2.9	2.6	2.1	.7	1.6	2.1	1.7	1.5	1.5
Previous Tealbook	3.5	2.9	2.6	2.1	.7	1.6	2.1	1.7	1.5	1.5
PCE chain-wt. price index	3.2	1.9	3.5	1.7	1.5	1.3	2.7	1.4	1.5	1.4
Previous Tealbook	3.2	1.9	3.5	1.7	1.5	1.3	2.7	1.2	1.5	1.5
Energy	21.5	-3.7	19.3	-8.8	2.6	6.2	12.8	-5.1	-1.2	-1.7
Previous Tealbook	21.5	-3.7	19.3	-8.8	2.6	6.2	12.8	-7.5	.7	-.4
Food	1.5	1.7	4.7	7.0	-1.7	1.3	5.2	1.8	2.4	.9
Previous Tealbook	1.5	1.7	4.7	7.0	-1.7	1.3	5.2	1.5	1.5	1.4
Ex. food & energy	2.3	2.3	2.4	2.0	1.7	1.0	1.8	1.8	1.6	1.6
Previous Tealbook	2.3	2.3	2.4	2.0	1.7	1.0	1.8	1.7	1.6	1.6
Ex. food & energy, market based	2.0	2.2	2.1	2.2	1.7	.7	1.8	1.7	1.5	1.5
Previous Tealbook	2.0	2.2	2.1	2.2	1.7	.7	1.8	1.6	1.5	1.5
CPI	3.7	2.0	4.0	1.6	1.5	1.2	3.3	1.4	1.6	1.4
Previous Tealbook	3.7	2.0	4.0	1.6	1.5	1.2	3.3	1.1	1.6	1.5
Ex. food & energy	2.1	2.7	2.3	2.0	1.7	.6	2.2	2.0	1.7	1.7
Previous Tealbook	2.1	2.7	2.3	2.0	1.7	.6	2.2	1.9	1.7	1.7
ECI, hourly compensation[1]	2.9	3.2	3.0	2.4	1.2	2.1	2.2	2.3	2.6	2.8
Previous Tealbook[1]	2.9	3.2	3.0	2.4	1.2	2.1	2.2	2.3	2.6	2.8
Nonfarm business sector										
Output per hour	1.6	.8	2.5	-1.1	5.3	2.3	.4	.4	1.5	1.8
Previous Tealbook	1.6	.8	2.5	-1.1	5.3	2.3	.4	.5	1.5	1.8
Compensation per hour	3.5	4.5	3.6	2.5	1.8	1.4	2.5	1.9	2.6	2.9
Previous Tealbook	3.5	4.5	3.6	2.5	1.8	1.4	2.5	1.8	2.7	2.9
Unit labor costs	1.9	3.6	1.1	3.7	-3.3	-.9	2.1	1.4	1.1	1.0
Previous Tealbook	1.9	3.6	1.1	3.7	-3.3	-.9	2.1	1.3	1.2	1.1
Core goods imports chain-wt. price index[2]	2.2	2.5	2.9	3.7	-1.7	2.6	4.3	.3	1.1	1.4
Previous Tealbook[2]	2.2	2.5	2.9	3.7	-1.7	2.6	4.3	.1	1.4	1.6

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

Other Macroeconomic Indicators

Item	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4	2011[1]	2012[1]	2013[1]	2014[1]
Employment and production															
Nonfarm payroll employment[2]	.6	.3	.5	.7	.3	.2	.3	.3	.3	.4	.4	1.8	1.6	1.4	2.4
Unemployment rate[3]	9.1	9.1	8.7	8.2	8.2	8.3	8.3	8.2	8.2	8.1	8.1	8.7	8.3	8.1	7.8
Previous Tealbook[3]	9.1	9.1	8.7	8.2	8.2	8.2	8.2	8.1	8.1	8.0	8.0	8.7	8.2	8.0	7.7
NAIRU[3]	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Previous Tealbook[3]	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
GDP gap[4]	-4.8	-4.8	-4.5	-4.5	-4.7	-4.8	-4.8	-4.9	-4.9	-4.8	-4.6	-4.5	-4.8	-4.6	-3.6
Previous Tealbook[4]	-4.8	-4.8	-4.5	-4.4	-4.5	-4.5	-4.5	-4.5	-4.5	-4.4	-4.3	-4.5	-4.5	-4.3	-3.4
Industrial production[5]	1.2	5.6	5.1	5.8	2.2	3.4	2.5	2.5	2.4	2.5	2.7	4.1	3.5	2.5	3.1
Previous Tealbook[5]	1.2	5.6	5.0	5.7	3.6	3.7	2.4	2.2	2.3	2.7	2.6	4.0	3.9	2.4	3.1
Manufacturing industr. prod.[5]	.2	5.1	5.6	9.8	1.4	1.2	2.2	1.8	2.4	2.7	3.1	4.2	3.6	2.5	3.4
Previous Tealbook[5]	.2	5.1	5.6	9.8	1.7	2.7	2.5	2.1	2.3	2.9	2.8	4.2	4.1	2.5	3.4
Capacity utilization rate - mfg.[3]	74.4	75.2	76.1	77.6	77.6	77.5	77.7	77.7	77.8	77.9	78.2	76.1	77.7	78.2	79.0
Previous Tealbook[3]	74.4	75.2	76.1	77.7	77.8	78.1	78.4	78.5	78.7	78.9	79.2	76.1	78.4	79.2	80.1
Housing starts[6]	.6	.6	.7	.7	.7	.8	.8	.9	.9	1.0	1.0	.6	.8	.9	1.1
Light motor vehicle sales[6]	12.1	12.4	13.4	14.5	14.1	14.3	14.4	14.5	14.8	15.0	15.2	12.7	14.3	14.9	15.7
Income and saving															
Nominal GDP[5]	4.0	4.4	3.8	3.9	1.8	3.8	3.7	3.2	3.6	3.7	4.0	3.8	3.3	3.6	4.7
Real disposable pers. income[5]	-.5	.7	.2	.7	2.6	3.3	3.5	-1.9	2.7	2.9	3.2	.4	2.5	1.7	3.3
Previous Tealbook[5]	-.5	.7	.2	.5	3.2	3.4	3.5	-1.3	2.8	2.9	3.2	.4	2.6	1.9	3.2
Personal saving rate[3]	4.8	4.6	4.2	3.7	4.1	4.3	4.6	3.6	3.7	3.8	4.0	4.2	4.6	4.0	4.1
Previous Tealbook[3]	4.8	4.6	4.2	3.6	3.9	4.0	4.2	3.4	3.5	3.6	3.7	4.2	4.2	3.7	3.8
Corporate profits[7]	13.7	6.9	3.5	-1.3	-2.3	-.7	1.7	-3.8	-1.6	-.7	-.9	7.0	-.6	-1.7	1.8
Profit share of GNP[3]	12.7	12.8	12.8	12.7	12.5	12.4	12.4	12.1	12.0	11.9	11.8	12.8	12.4	11.8	11.5
Net federal saving[8]	-1,275	-1,161	-1,114	-988	-1,023	-970	-961	-763	-751	-739	-728	-1,188	-985	-745	-701
Net state & local saving[8]	-40	-83	-81	-84	-63	-54	-50	-44	-26	-22	-16	-66	-63	-27	-6
Gross national saving rate[3]	12.4	12.9	13.0	12.9	13.0	13.4	13.5	13.4	13.5	13.5	13.7	13.0	13.5	13.7	14.1
Net national saving rate[3]	-.4	.2	.3	.0	.3	.8	.8	.8	.8	.8	1.0	.3	.8	1.0	1.5

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

Greensheets

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

Item	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Employment and production										
Nonfarm payroll employment[1]	2.4	2.1	1.2	-2.8	-5.6	.8	1.8	1.6	1.4	2.4
Unemployment rate[2]	5.0	4.5	4.8	6.9	9.9	9.6	8.7	8.3	8.1	7.8
Previous Tealbook[2]	5.0	4.5	4.8	6.9	9.9	9.6	8.7	8.2	8.0	7.7
NAIRU[2]	5.0	5.0	5.0	5.3	6.0	6.0	6.0	6.0	6.0	6.0
Previous Tealbook[2]	5.0	5.0	5.0	5.3	6.0	6.0	6.0	6.0	6.0	6.0
GDP gap[3]	.6	.8	.9	-4.5	-6.1	-4.4	-4.5	-4.8	-4.6	-3.6
Previous Tealbook[3]	.6	.8	.9	-4.5	-6.1	-4.4	-4.5	-4.5	-4.3	-3.4
Industrial production[4]	2.3	2.1	2.5	-9.0	-5.7	6.3	4.1	3.5	2.5	3.1
Previous Tealbook[4]	2.3	2.1	2.5	-9.0	-5.7	6.3	4.0	3.9	2.4	3.1
Manufacturing industr. prod.[4]	3.4	1.8	2.8	-11.8	-6.5	6.5	4.2	3.6	2.5	3.4
Previous Tealbook[4]	3.4	1.8	2.8	-11.8	-6.5	6.5	4.2	4.1	2.5	3.4
Capacity utilization rate - mfg.[2]	78.4	78.2	78.2	69.7	67.0	73.1	76.1	77.7	78.2	79.0
Previous Tealbook[2]	78.4	78.2	78.2	69.7	67.0	73.1	76.1	78.4	79.2	80.1
Housing starts[5]	2.1	1.8	1.4	.9	.6	.6	.6	.8	.9	1.1
Light motor vehicle sales[5]	16.9	16.5	16.1	13.1	10.3	11.5	12.7	14.3	14.9	15.7
Income and saving										
Nominal GDP[4]	6.4	5.3	4.9	-1.2	.0	4.7	3.8	3.3	3.6	4.7
Real disposable pers. income[4]	.6	4.6	1.6	1.0	-2.4	3.5	.4	2.5	1.7	3.3
Previous Tealbook[4]	.6	4.6	1.6	1.0	-2.4	3.5	.4	2.6	1.9	3.2
Personal saving rate[2]	1.6	2.8	2.5	6.2	4.3	5.2	4.2	4.6	4.0	4.1
Previous Tealbook[2]	1.6	2.8	2.5	6.2	4.3	5.2	4.2	4.2	3.7	3.8
Corporate profits[6]	19.6	3.7	-8.1	-33.5	61.8	18.2	7.0	-.6	-1.7	1.8
Profit share of GNP[2]	11.8	11.6	10.1	6.8	11.0	12.4	12.8	12.4	11.8	11.5
Net federal saving[7]	-283	-204	-245	-613	-1218	-1274	-1188	-985	-745	-701
Net state & local saving[7]	26	51	12	-72	-78	-25	-66	-63	-27	-6
Gross national saving rate[2]	15.6	16.5	13.9	12.6	11.3	12.3	13.0	13.5	13.7	14.1
Net national saving rate[2]	3.6	4.4	1.7	-.6	-1.9	-.4	.3	.8	1.0	1.5

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				2011				2012				2013			
	2011[a]	2012	2013	2014	Q1[a]	Q2[a]	Q3[a]	Q4[a]	Q1[a]	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Unified budget					Not seasonally adjusted											
Receipts[1]	2302	2433	2693	2911	488	714	568	555	509	760	609	589	567	835	702	668
Outlays[1]	3599	3565	3524	3594	949	855	895	877	966	885	836	907	899	870	848	904
Surplus/deficit[1]	-1297	-1132	-831	-683	-460	-141	-326	-322	-457	-125	-227	-318	-332	-34	-146	-236
Previous Tealbook	*-1297*	*-1134*	*-812*	*-684*	*-460*	*-141*	*-326*	*-322*	*-457*	*-140*	*-215*	*-320*	*-332*	*-29*	*-131*	*-251*
On-budget	-1364	-1168	-828	-680	-451	-202	-311	-346	-458	-187	-177	-323	-312	-80	-112	-256
Off-budget	67	37	-3	-2	-10	61	-15	24	1	62	-50	6	-20	46	-34	20
Means of financing																
Borrowing	1110	1183	864	763	260	93	389	326	398	198	261	311	332	54	166	256
Cash decrease	252	-27	15	0	225	-19	79	-28	42	-48	7	-6	20	0	0	0
Other[2]	-65	-25	-48	-80	-24	67	-142	23	17	-25	-40	12	-20	-20	-20	-20
Cash operating balance, end of period	58	85	70	70	118	137	58	86	43	91	85	90	70	70	70	70
NIPA federal sector					Seasonally adjusted annual rates											
Receipts	2534	2698	2947	3150	2528	2554	2583	2594	2717	2729	2750	2787	2970	3000	3032	3063
Expenditures	3765	3721	3751	3861	3729	3829	3744	3708	3705	3752	3720	3748	3733	3752	3771	3791
Consumption expenditures	1070	1062	1048	1023	1059	1078	1085	1067	1067	1059	1057	1053	1052	1047	1040	1033
Defense	715	705	694	673	701	723	733	710	708	702	701	698	697	693	687	681
Nondefense	355	357	354	350	358	354	352	357	358	357	356	355	355	354	353	352
Other spending	2695	2659	2703	2838	2670	2752	2659	2641	2639	2693	2663	2695	2681	2704	2731	2758
Current account surplus	-1231	-1024	-804	-711	-1201	-1275	-1161	-1114	-988	-1023	-970	-961	-763	-751	-739	-728
Gross investment	165	152	144	134	161	160	164	159	152	149	148	147	145	143	141	138
Gross saving less gross investment[3]	-1260	-1031	-793	-681	-1227	-1298	-1185	-1132	-997	-1027	-970	-957	-755	-739	-722	-706
Fiscal indicators[4]																
High-employment (HEB) surplus/deficit	-994	-777	-509	-429	-966	-1030	-917	-871	-748	-775	-713	-690	-466	-448	-432	-417
Change in HEB, percent of potential GDP	-.3	-1.6	-1.8	-.6	-.7	.3	-.8	-.3	-.8	.1	-.4	-.2	-1.4	-.1	-.1	-.1
Fiscal impetus (FI), percent of GDP	-0.4	-0.8	-1.2	-0.5	-0.7	0.2	-0.1	-0.9	-0.9	-1.1	-0.6	-0.6	-2.0	-1.1	-0.9	-0.8
Previous Tealbook	*-0.3*	*-0.8*	*-1.2*	*-0.5*	*-0.6*	*0.4*	*-0.1*	*-1.0*	*-1.0*	*-0.8*	*-0.7*	*-0.5*	*-1.9*	*-1.0*	*-1.1*	*-0.8*

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 NAIRU. 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.

Change in Debt of the Domestic Nonfinancial Sectors
(Percent)

Period[1]	Total	Households			Business	State and local governments	Federal government	Memo: Nominal GDP
		Total	Home mortgages	Consumer credit				
Year								
2007	8.4	6.6	6.8	5.9	13.6	5.4	4.9	4.9
2008	5.9	-.1	-.5	.8	6.1	.7	24.2	-1.2
2009	3.1	-1.7	-1.4	-4.5	-2.3	3.9	22.7	.0
2010	4.1	-2.2	-2.9	-1.3	.8	2.2	20.2	4.7
2011	3.6	-1.5	-2.3	4.0	4.5	-1.9	11.4	3.8
2012	4.8	.6	-1.2	6.4	5.0	.6	11.2	3.3
2013	4.1	2.2	.7	7.3	4.3	.9	7.0	3.6
2014	4.1	2.5	1.0	7.4	4.5	1.0	6.3	4.7
Quarter								
2010:1	3.7	-2.8	-4.4	-3.1	.1	2.4	20.6	5.5
2	3.7	-2.2	-2.6	-3.5	-2.0	-.5	22.5	5.4
3	4.0	-2.2	-3.0	-.6	2.7	2.1	16.0	3.9
4	4.6	-1.5	-1.7	2.2	2.3	4.8	16.4	4.2
2011:1	2.4	-1.6	-2.2	3.5	4.1	-3.3	7.9	3.1
2	2.4	-3.0	-3.1	3.3	5.0	-3.5	8.6	4.0
3	4.5	-1.1	-2.3	2.3	3.8	.0	14.1	4.4
4	4.9	-.2	-1.7	6.7	4.9	-1.0	13.1	3.8
2012:1	4.7	-.4	-2.9	5.9	5.2	-1.8	12.4	3.9
2	5.1	.2	-1.4	6.0	5.4	1.0	11.6	1.8
3	4.1	.9	-.6	6.3	4.5	1.9	7.8	3.8
4	5.2	1.5	.1	6.7	4.4	1.1	11.2	3.7
2013:1	4.6	2.1	.7	7.0	4.3	1.0	8.8	3.2
2	3.7	2.1	.7	7.1	4.1	.9	5.7	3.6
3	3.2	2.1	.7	7.1	4.2	.8	4.1	3.7
4	4.6	2.2	.7	7.2	4.3	.8	8.6	4.0

Note: Quarterly data are at seasonally adjusted annual rates.
1. Data after 2012:Q1 are staff projections. Changes are measured from end of the preceding period to end of period indicated except for annual nominal GDP growth, which is calculated from Q4 to Q4.

Flow of Funds Projections: Highlights
(Billions of dollars at seasonally adjusted annual rates except as noted)

Category	2011	2012	2013	2014	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1	2013 Q2	2013 Q3	2013 Q4
Domestic nonfinancial sectors														
Net funds raised														
Total	854.8	1456.0	1305.1	1353.3	1070.5	1391.0	1470.1	1468.3	1209.9	1675.9	1516.8	1154.7	988.3	1560.7
Net equity issuance	-473.4	-393.5	-340.0	-360.0	-617.7	-440.2	-340.8	-493.1	-380.0	-360.0	-340.0	-340.0	-340.0	-340.0
Net debt issuance	1328.2	1849.5	1645.1	1713.3	1688.2	1831.2	1810.9	1961.4	1589.9	2035.9	1856.8	1494.7	1328.3	1900.7
Borrowing indicators														
Debt (percent of GDP)[1]	248.6	250.3	252.8	252.3	247.3	247.8	248.4	250.3	250.8	251.4	252.5	252.9	252.8	252.8
Borrowing (percent of GDP)	8.8	11.8	10.2	10.2	11.1	12.0	11.7	12.6	10.1	12.9	11.6	9.3	8.2	11.6
Households														
Net borrowing[2]	-191.0	75.4	280.0	327.3	-136.4	-26.6	-53.0	32.2	121.4	200.8	270.8	277.7	282.0	289.2
Home mortgages	-232.6	-117.9	68.1	93.1	-230.0	-168.0	-286.7	-136.5	-58.3	9.7	67.9	68.0	68.2	68.3
Consumer credit	96.6	160.5	193.5	212.9	56.5	164.8	149.1	153.9	164.1	174.7	185.8	191.7	195.1	201.4
Debt/DPI (percent)[3]	112.3	108.5	106.6	104.2	111.2	110.7	109.7	108.8	107.9	106.9	107.5	106.9	106.3	105.7
Business														
Financing gap[4]	-196.8	-86.4	90.7	204.4	-252.9	-191.3	-128.5	-96.6	-78.1	-42.4	36.0	71.4	104.6	150.8
Net equity issuance	-473.4	-393.5	-340.0	-360.0	-617.7	-440.2	-340.8	-493.1	-380.0	-360.0	-340.0	-340.0	-340.0	-340.0
Credit market borrowing	509.8	586.9	529.6	575.6	440.9	565.7	617.5	649.8	541.4	538.8	528.0	518.1	529.0	543.2
State and local governments														
Net borrowing	-58.6	17.3	26.8	29.8	1.0	-29.1	-53.5	31.0	57.8	33.8	29.8	25.8	25.8	25.8
Current surplus[5]	224.9	195.4	226.4	255.9	212.1	215.3	208.0	182.0	192.5	199.1	206.9	226.0	232.3	240.2
Federal government														
Net borrowing	1067.9	1168.5	808.8	780.6	1382.6	1321.2	1300.0	1248.4	869.3	1262.5	1028.1	673.1	491.5	1042.4
Net borrowing (n.s.a.)	1067.9	1168.5	808.8	780.6	389.1	326.0	398.3	198.2	260.7	311.3	331.9	54.4	166.3	256.3
Unified deficit (n.s.a.)	1249.6	1127.9	749.1	700.6	326.3	321.7	457.3	125.3	227.5	317.9	332.2	34.4	146.3	236.3
Depository institutions														
Funds supplied	195.0	393.8	503.4	610.2	499.1	575.1	276.6	321.0	512.5	465.0	489.7	489.0	504.7	530.3

Note: Data after 2012:Q1 are staff projections.
1. Average debt levels in the period (computed as the average of period-end debt positions) divided by nominal GDP.
2. Includes change in liabilities not shown in home mortgages and consumer credit.
3. Average debt levels in the period (computed as the average of period-end debt positions) divided by disposable personal income.
4. For corporations, excess of capital expenditures over U.S. internal funds.
5. NIPA state and local government saving plus consumption of fixed capital and net capital transfers.
n.s.a. Not seasonally adjusted.

Greensheets

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

									Projected			
	2011				2012				2013			
Measure and country	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Real GDP [1]												
Total foreign	3.6	2.3	3.9	1.5	3.3	2.3	2.4	2.2	2.5	2.6	2.8	3.0
Previous Tealbook	*3.5*	*2.3*	*3.9*	*1.6*	*3.4*	*2.5*	*2.5*	*2.3*	*2.5*	*2.6*	*2.8*	*2.9*
Advanced foreign economies	1.7	-.1	3.3	.4	1.5	.7	.8	.5	.7	1.0	1.3	1.5
Canada	3.6	-1.0	4.5	1.9	1.9	2.1	1.9	1.8	1.7	1.8	2.0	2.2
Japan	-7.7	-1.7	7.8	.1	4.7	2.3	1.0	.5	.8	1.1	1.2	1.3
United Kingdom	1.9	-.4	2.4	-1.4	-1.3	-2.8	2.9	.1	1.2	1.5	2.1	2.2
Euro area	2.9	.7	.4	-1.3	.1	-1.1	-1.4	-1.5	-.9	-.4	.0	.4
Germany	5.5	1.1	2.3	-.7	2.1	.6	-.2	-.5	-.2	.3	.6	1.2
Emerging market economies	5.6	5.0	4.5	2.7	5.2	3.9	4.1	4.2	4.3	4.4	4.5	4.5
Asia	7.7	5.2	4.9	2.5	5.9	4.9	5.2	5.2	5.5	5.5	5.6	5.7
Korea	5.3	3.4	3.4	1.3	3.5	2.8	3.1	3.2	3.3	3.5	3.7	3.9
China	9.1	10.0	9.5	7.8	6.6	7.4	7.7	7.7	7.9	7.9	8.0	8.0
Latin America	3.2	4.9	4.0	3.0	4.6	2.7	2.8	3.1	3.1	3.2	3.3	3.3
Mexico	2.0	5.7	4.8	2.9	5.3	2.8	2.8	3.0	3.0	3.0	3.1	3.1
Brazil	3.5	1.9	-.6	.6	.8	2.0	2.6	3.2	3.3	3.4	3.7	3.7
Consumer prices [2]												
Total foreign	4.2	3.5	3.0	2.8	2.6	2.0	2.2	2.3	2.3	2.3	2.3	2.3
Previous Tealbook	*4.2*	*3.5*	*3.0*	*2.8*	*2.6*	*2.3*	*2.0*	*2.2*	*2.2*	*2.2*	*2.3*	*2.3*
Advanced foreign economies	3.0	2.3	1.1	2.5	2.2	.6	1.4	1.5	1.3	1.2	1.2	1.2
Canada	3.3	3.4	1.0	2.9	2.1	.1	1.7	1.8	1.7	1.6	1.7	1.8
Japan	.0	-.7	.1	-.7	2.3	-.6	-.2	-.2	-.2	-.2	-.1	-.1
United Kingdom	6.9	3.9	3.8	4.2	2.1	1.0	1.3	3.2	2.0	1.4	1.5	1.9
Euro Area	3.6	2.8	1.4	3.9	2.6	1.9	2.1	1.9	1.6	1.6	1.4	1.3
Germany	3.4	2.4	1.9	2.8	2.5	1.3	2.5	2.4	2.1	2.0	1.7	1.6
Emerging market economies	5.1	4.5	4.5	3.0	3.0	3.0	2.9	3.0	3.1	3.1	3.1	3.1
Asia	5.5	5.2	4.9	2.2	2.4	3.1	2.2	2.7	2.8	2.9	2.9	2.9
Korea	5.5	3.4	4.4	2.6	1.6	1.2	2.2	2.6	2.7	2.8	2.8	2.8
China	5.1	6.1	5.7	1.4	2.0	2.5	1.7	2.4	2.6	2.8	2.8	2.8
Latin America	3.7	2.9	3.9	5.2	4.6	2.6	4.5	3.7	3.8	3.7	3.7	3.7
Mexico	3.2	2.4	3.5	4.9	4.5	2.5	4.6	3.6	3.6	3.4	3.4	3.4
Brazil	7.8	6.8	6.2	6.0	4.0	3.8	4.6	4.9	5.2	5.4	5.6	5.6

[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	2006	2007	2008	2009	2010	2011	------------- 2012	Projected 2013	------------- 2014
Real GDP [1]									
Total foreign	4.2	4.3	-.9	.9	4.4	2.8	2.5	2.7	3.2
Previous Tealbook	*4.2*	*4.4*	*-.9*	*.9*	*4.4*	*2.8*	*2.7*	*2.7*	*3.2*
Advanced foreign economies	2.6	2.6	-1.9	-1.4	2.8	1.3	.9	1.1	2.0
Canada	1.9	2.5	-.7	-1.4	3.3	2.2	1.9	1.9	2.5
Japan	2.1	1.7	-4.8	-.6	3.3	-.5	2.1	1.1	1.4
United Kingdom	2.0	3.8	-4.6	-.9	1.5	.6	-.3	1.8	2.5
Euro area	3.8	2.3	-2.2	-2.3	2.2	.7	-1.0	-.2	1.1
Germany	4.9	2.4	-1.9	-2.2	3.8	2.0	.5	.5	1.7
Emerging market economies	6.3	6.7	.4	3.6	6.2	4.5	4.3	4.4	4.6
Asia	7.8	8.8	.8	8.0	7.7	5.0	5.3	5.6	5.8
Korea	4.6	5.8	-3.2	6.3	5.0	3.4	3.1	3.6	4.2
China	12.8	13.7	7.7	11.3	9.7	9.1	7.3	7.9	8.1
Latin America	4.8	4.4	-.2	-.7	4.6	3.8	3.3	3.2	3.3
Mexico	4.1	3.5	-1.1	-2.1	4.3	3.9	3.5	3.0	3.1
Brazil	4.9	6.6	.9	5.2	5.3	1.4	2.2	3.5	4.0
Consumer prices [2]									
Total foreign	2.2	3.7	3.3	1.3	3.2	3.4	2.3	2.3	2.5
Previous Tealbook	*2.2*	*3.7*	*3.3*	*1.3*	*3.2*	*3.4*	*2.3*	*2.2*	*2.5*
Advanced foreign economies	1.4	2.2	2.0	.2	1.7	2.2	1.4	1.2	1.5
Canada	1.4	2.5	1.8	.8	2.2	2.7	1.4	1.7	1.9
Japan	.3	.5	1.1	-2.0	-.3	-.3	.3	-.2	1.0
United Kingdom	2.7	2.1	3.9	2.2	3.4	4.7	1.9	1.7	1.6
Euro Area	1.8	2.9	2.3	.4	2.0	2.9	2.1	1.5	1.5
Germany	1.3	3.1	1.7	.3	1.6	2.6	2.2	1.8	1.7
Emerging market economies	2.9	5.1	4.6	2.1	4.3	4.3	3.0	3.1	3.2
Asia	2.4	5.5	3.6	1.3	4.3	4.4	2.6	2.9	3.1
Korea	2.1	3.4	4.5	2.4	3.2	4.0	1.9	2.8	3.0
China	2.1	6.7	2.5	.6	4.6	4.6	2.1	2.7	3.0
Latin America	4.1	4.2	6.7	3.9	4.4	3.9	3.8	3.7	3.7
Mexico	4.1	3.8	6.2	4.0	4.3	3.5	3.8	3.5	3.4
Brazil	3.1	4.3	6.3	4.3	5.6	6.7	4.3	5.4	5.5

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

Greensheets

U.S. Current Account

Quarterly Data

	2011				2012				2013			
						-----	-----	Projected	-----	-----	-----	-----
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Billions of dollars, s.a.a.r.											
U.S. current account balance	**-480.0**	**-476.5**	**-432.6**	**-474.6**	**-549.3**	**-523.4**	**-505.9**	**-527.2**	**-557.4**	**-554.9**	**-575.5**	**-613.8**
Previous Tealbook	*-466.2*	*-479.1*	*-431.0*	*-517.3*	*-545.7*	*-494.9*	*-466.6*	*-501.9*	*-535.3*	*-523.6*	*-551.6*	*-587.9*
Current account as percent of GDP	-3.2	-3.2	-2.9	-3.1	-3.6	-3.4	-3.2	-3.3	-3.5	-3.4	-3.5	-3.7
Previous Tealbook	*-3.1*	*-3.2*	*-2.8*	*-3.4*	*-3.5*	*-3.2*	*-3.0*	*-3.2*	*-3.3*	*-3.2*	*-3.4*	*-3.6*
Net goods & services	-548.9	-566.2	-539.3	-585.1	-604.0	-579.5	-548.3	-561.7	-585.4	-571.6	-576.5	-600.7
Investment income, net	217.9	232.8	241.9	247.4	197.8	194.3	183.9	178.0	170.0	154.9	142.5	130.4
Direct, net	314.9	318.2	323.4	330.2	283.9	270.7	246.8	229.2	220.4	210.5	206.5	205.7
Portfolio, net	-97.1	-85.4	-81.4	-82.8	-86.0	-76.4	-62.9	-51.2	-50.4	-55.6	-64.0	-75.4
Other income and transfers, net	-148.9	-143.1	-135.3	-136.9	-143.1	-138.1	-141.4	-143.5	-142.0	-138.1	-141.4	-143.5

Annual Data

							------	Projected	------
	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Billions of dollars								
U.S. current account balance	**-800.6**	**-710.3**	**-677.1**	**-381.9**	**-442.0**	**-465.9**	**-526.4**	**-575.4**	**-646.6**
Previous Tealbook	*-800.6*	*-710.3*	*-677.1*	*-374.4*	*-465.6*	*-473.4*	*-502.3*	*-549.6*	*-621.1*
Current account as percent of GDP	-6.0	-5.1	-4.7	-2.7	-3.0	-3.1	-3.4	-3.6	-3.8
Previous Tealbook	*-6.0*	*-5.1*	*-4.7*	*-2.7*	*-3.2*	*-3.1*	*-3.2*	*-3.4*	*-3.7*
Net goods & services	-753.3	-696.7	-698.3	-379.2	-494.7	-559.9	-573.4	-583.6	-607.4
Investment income, net	54.7	111.1	157.8	127.6	191.0	235.0	188.5	149.4	102.1
Direct, net	174.0	244.6	284.3	253.0	297.9	321.7	257.6	210.8	205.8
Portfolio, net	-119.4	-133.5	-126.5	-125.4	-106.9	-86.7	-69.1	-61.3	-103.7
Other income and transfers, net	-102.0	-124.7	-136.6	-130.3	-138.2	-141.1	-141.5	-141.3	-141.3

Abbreviations

ABCP	asset-backed commercial paper
ABS	asset-backed securities
AFE	advanced foreign economy
BOE	Bank of England
CDS	credit default swap
C&I	commercial and industrial
CP	commercial paper
CRE	commercial real estate
DPI	disposable personal income
ECB	European Central Bank
EME	emerging market economy
E&S	equipment and software
ESM	European Stability Mechanism
EU	European Union
EUC	Emergency Unemployment Compensation
FDIC	Federal Deposit Insurance Corporation
FOMC	Federal Open Market Committee; also, the Committee
GC	general collateral
GDP	gross domestic product
GSE	government-sponsored enterprise
HARP	Home Affordable Refinance Program
HELOC	home equity line of credit
IMF	International Monetary Fund
IPO	initial public offering
ISM	Institute for Supply Management
LIBOR	London interbank offered rate
LSAP	large-scale asset purchase

LTV	loan-to-value
MBS	mortgage-backed securities
MEP	maturity extension program
Michigan survey	Thomson Reuters/University of Michigan Surveys of Consumers
NAIRU	non-accelerating inflation rate of unemployment
NIPA	national income and product accounts
OIS	overnight index swap
PBOC	People's Bank of China
PCE	personal consumption expenditures
PMI	purchasing managers index
repo	repurchase agreement
SLOOS	Senior Loan Officer Opinion Survey on Bank Lending Practices
SOMA	System Open Market Account
S&P	Standard & Poor's
TALF	Term Asset-Backed Securities Loan Facility
TIPS	Treasury inflation-protected securities
USDA	U.S. Department of Agriculture
VIX	Chicago Board Options Exchange Market Volatility Index