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Class II FOMC – Restricted (FR)

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# Report to the FOMC on Economic Conditions and Monetary Policy



## Book A

### Economic and Financial Conditions: Current Situation and Outlook

September 5, 2012

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

Authorized for Public Release

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## Domestic Economic Developments and Outlook

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The information we have received since the July Tealbook suggests that economic activity is increasing at nearly its trend pace, similar to our view a month ago. To be sure, there were some upside surprises among the incoming data—most notably, retail sales and payroll employment. However, several indicators of the near-term pace of economic activity, including capital goods orders, private construction spending, and surveys of consumer and business sentiment, have been disappointing. As a result, we have upgraded only slightly our assessment of the pace of activity in the nonfarm economy over the second half of this year. Taking on board the effects of the drought, which now look likely to have a larger effect on farm output than we previously estimated, our forecast for the growth of real GDP over the second half of the year is about unchanged at an average annual rate of 1½ percent.

As a platform for Committee discussion, our medium-term projection is conditioned on the assumption of no changes in monetary policy. In particular, we have assumed that the maturity extension program will continue through the end of this year and that no additional balance sheet actions will be taken. In contrast, market participants believe that the Committee is likely to announce—perhaps as soon as at the end of the September meeting—a significant expansion of the System portfolio and an extension of the date used in the Committee’s forward guidance. Because these market expectations are not fulfilled in our baseline projection, asset prices gradually reflect over the next couple of quarters a recognition that monetary policy will be more restrictive over the medium term than market participants had previously believed.

Under these assumptions, our economic projection for the medium term is broadly similar to that in the July Tealbook; it features a modest pickup in the pace of economic activity and a reduction in the unemployment rate over the next three years.<sup>1</sup> We have upgraded the outlook a touch, reflecting, in part, a slightly better outlook for Europe and our assessment that not all of the recent improvement in equity prices is related to heightened expectations of further accommodation in monetary policy. Accordingly, we project that real GDP will rise nearly 2½ percent in 2013 and will then accelerate to a

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<sup>1</sup> In line with the extension of the Summary of Economic Projections (SEP) being undertaken in conjunction with the current FOMC meeting, we discuss our expectations for SEP-level variables through 2015. For more detailed aspects of the projection, the discussion is confined to the period ending in 2014.

3¼ percent pace in 2014, reflecting a lessening of the restraint from fiscal policy and further improvements in financial conditions, credit availability, and household and business confidence. We project that the unemployment rate will edge down to 8 percent by the end of 2013. Thereafter, with the pace of activity picking up, the downward tilt in unemployment becomes more pronounced; by the end of 2015, we have it moving below 7 percent—still about 1 percentage point above our estimate of its natural rate. In addition to importantly influencing the contours of the baseline forecast, both the European financial crisis and the domestic federal fiscal situation continue to present significant downside risks to the outlook.

Readings on core inflation have come in about as we expected in the previous projection, and the inflation forecast is essentially unchanged: With long-term inflation expectations well anchored, significant margins of slack in labor and product markets projected to persist, and relatively small movements projected for commodity prices and import prices, we expect core PCE inflation to hold steady at about 1½ percent through 2014. In 2015, with the margin of slack diminishing somewhat further, core inflation is expected to edge up to 1¾ percent. Our projection for total consumer price inflation this year, at 1¾ percent, is about ¼ percentage point higher than in the July Tealbook, reflecting the recent rise in oil prices. Thereafter, total PCE inflation is anticipated to run slightly below core, as energy prices edge down and the higher food price inflation that is expected to begin later this year, which is related to the drought in the Midwest, proves to be transitory.

## **KEY BACKGROUND FACTORS**

### **Monetary Policy**

Consistent with the results 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 third quarter of 2014.<sup>2</sup> Liftoff occurs one quarter earlier than in the July Tealbook, reflecting the slightly stronger economic outlook in this projection; this earlier date returns the liftoff assumption to where it was in the June projection.

The path of the federal funds rate in the baseline projection can be sensitive to the choice of policy rule. As discussed in Book B, the Taylor (1999) rule projects the same

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<sup>2</sup> For details on the outcome-based and other policy rules, see the appendix on policy rules in Book B.

## Revisions to the Staff Projection since the Previous SEP

The FOMC last published its Survey of Economic Projections (SEP) following the June FOMC meeting. The table below summarizes revisions to the staff economic projection since the June Tealbook and extends the projection to 2015.

The staff projection for real activity is little changed since June. Both the downward revision to the projection for real GDP growth in the second half of 2012 and the upward revision to growth in 2013 largely reflect the effect of the drought on farm production this year and its expected return to normal next year. Accordingly, the projection for the unemployment rate through 2014 is about unchanged from the June Tealbook. In 2015, the staff projects a further strengthening of GDP growth and a somewhat more pronounced decline in the unemployment rate, reflecting a further waning of the headwinds that have been restraining activity. Nonetheless, significant slack remains even at the end of 2015.

The staff projection for core PCE inflation is also about unchanged since June. The projection for overall PCE inflation has been revised up in the second half of this year, primarily reflecting the upward movement in crude oil prices since the time of the June Tealbook. But these effects are projected to be short-lived, and overall PCE inflation after this year remains a touch below core inflation, about the same as the staff projected in June. In 2015, with a smaller degree of slack, inflation is projected to edge up closer to the FOMC's long-run objective of 2 percent.

With the economic outlook about unchanged, the outcome-based policy rule calls for the federal funds rate to move above its effective lower bound in the third quarter of 2014, the same as in the June Tealbook. By the end of 2015, the federal funds rate is now projected to reach about 2¼ percent.

**Staff Economic Projections Compared with the June Tealbook**

| Variable                        | 2012 |     | 2012 | 2013 | 2014 | 2015 | Longer run |
|---------------------------------|------|-----|------|------|------|------|------------|
|                                 | H1   | H2  |      |      |      |      |            |
| Real GDP <sup>1</sup>           | 1.8  | 1.5 | 1.6  | 2.4  | 3.2  | 3.6  | 2.5        |
| June Tealbook                   | 1.8  | 1.9 | 1.9  | 2.2  | 3.1  |      | 2.5        |
| Unemployment rate <sup>2</sup>  | 8.2  | 8.3 | 8.3  | 8.0  | 7.6  | 6.7  | 5.2        |
| June Tealbook                   | 8.2  | 8.2 | 8.2  | 8.0  | 7.7  |      | 5.2        |
| PCE inflation <sup>1</sup>      | 1.6  | 1.8 | 1.7  | 1.4  | 1.4  | 1.5  | 2.0        |
| June Tealbook                   | 1.5  | .8  | 1.2  | 1.5  | 1.5  |      | 2.0        |
| Core PCE inflation <sup>1</sup> | 2.0  | 1.4 | 1.7  | 1.6  | 1.6  | 1.7  | n.a.       |
| June Tealbook                   | 1.9  | 1.5 | 1.7  | 1.6  | 1.6  |      | n.a.       |
| Federal funds rate <sup>2</sup> | .15  | .13 | .13  | .13  | .65  | 2.06 | 4.25       |
| June Tealbook                   | .15  | .13 | .13  | .13  | .50  |      | 4.25       |
| Memo:                           |      |     |      |      |      |      |            |
| Federal funds rate,             |      |     |      |      |      |      |            |
| end of period                   | .13  | .13 | .13  | .13  | .75  | 2.25 | 4.25       |
| June Tealbook                   | .13  | .13 | .13  | .13  | .50  |      | 4.25       |

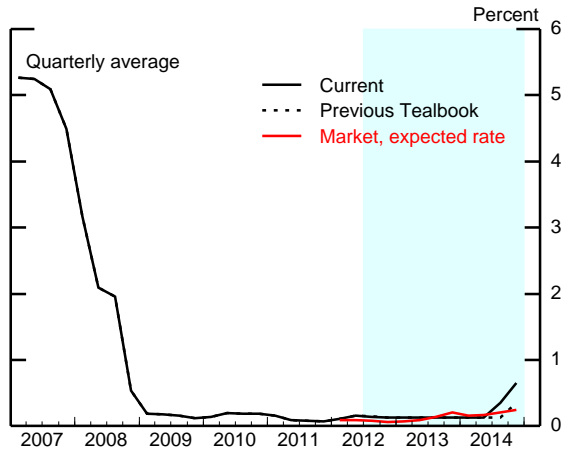
1. Percent change from final quarter of preceding period to final quarter of period indicated.

2. Percent, final quarter of period indicated.

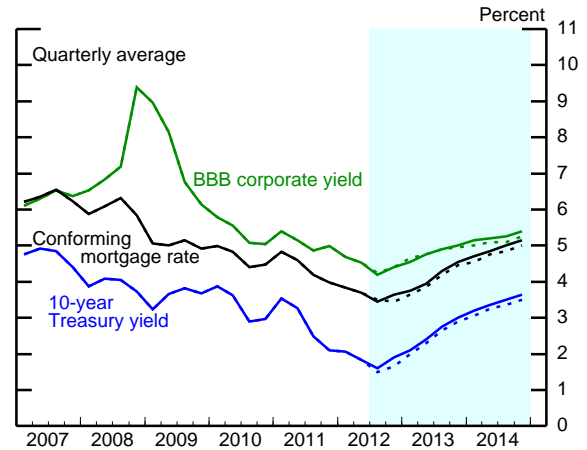
n.a. Not available.

# Key Background Factors underlying the Baseline Staff Projection

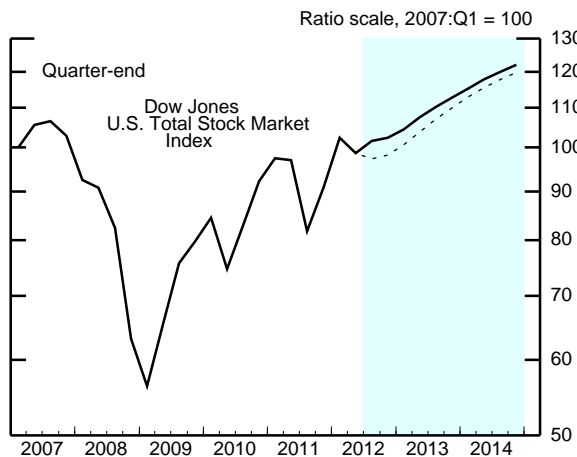
## Federal Funds Rate



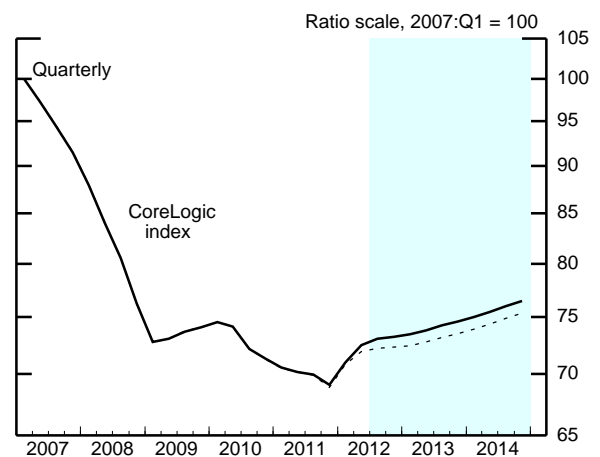
## Long-Term Interest Rates



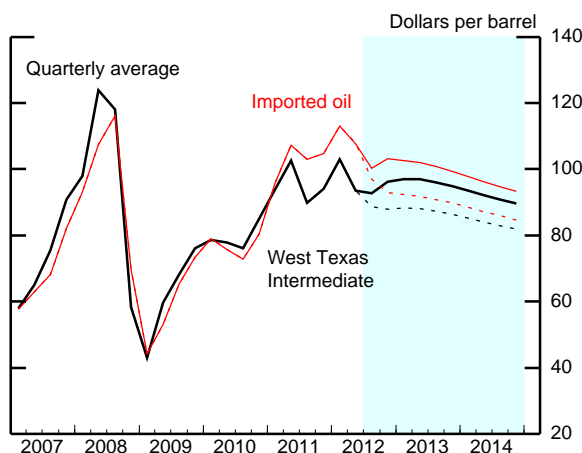
## Equity Prices



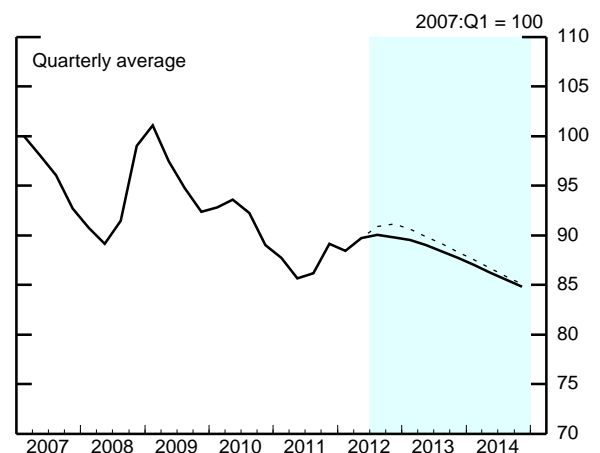
## House Prices



## Crude Oil Prices



## Broad Real Dollar



liftoff date as does the outcome-based rule. However, the rule that targets the level of nominal GDP would postpone liftoff until the fourth quarter of 2014, while the standard optimal-control exercise indicates that increases in the federal funds rate would begin in the fourth quarter of 2015.<sup>3</sup> In contrast, the Taylor (1993) rule and the first-difference rule call for firming to begin earlier than under the outcome-based rule. Indeed, the Taylor (1993) rule calls for an immediate and substantial increase in the federal funds rate.<sup>4</sup>

As noted earlier, we have conditioned the September Tealbook projection on the balance sheet policies to which the FOMC agreed at its most recent meeting. In particular, we assume that the maturity extension program will continue through the end of this year and that no additional balance sheet actions will be taken. Because industry reports and surveys suggest that financial market participants place substantial odds on the Committee adopting a new program of large-scale asset purchases (LSAPs), our projection incorporates some surprise among market participants as they gradually come to realize, in a process completed by early 2013, that a further LSAP program is not forthcoming and that the current forward guidance regarding the federal funds rate will remain in place.<sup>5</sup>

## Other Interest Rates

The 10-year Treasury yield has risen about 15 basis points, on net, since the time of the July Tealbook. This increase reflects economic data that were, on the whole, better than market participants had expected as well as less pessimism about the European crisis. The effects of these developments on Treasury yields evidently more than offset increased market expectations for additional monetary easing in the near term.

We assume that the downward pressure that is currently being placed on the 10-year Treasury yield by expectations of further monetary accommodation will dissipate by early next year. More broadly, we project that the yield on 10-year Treasury bonds

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<sup>3</sup> The optimal-control policy noted here is conducted with the FRB/US model under the strong assumption that future policymakers will remain committed to the plan currently deemed optimal as long as economic conditions evolve as expected. If we assume instead that future policy may reoptimize at their discretion, then the optimal-control liftoff date would shift back to the first quarter of 2015.

<sup>4</sup> All of these estimates allow for dynamic feedback from the stance of monetary policy to the real economy and inflation using the FRB/US model; such feedback can have important implications for the estimated timing of tightening under the different rules.

<sup>5</sup> The July Tealbook also incorporated this type of learning about unconventional policy on the part of market participants.



will rise about 2 percentage points to around 3¾ percent in the fourth quarter of 2014. This projected increase primarily reflects the movement of the 10-year valuation window through the period of extremely low short-term interest rates and a gradual waning of the effects of nonconventional monetary policy. In addition, we assume that downward pressure on Treasury rates will lessen next year as concerns abate about both the crisis in Europe and the fiscal situation at home and as the domestic economic recovery gains traction.

Yields on investment-grade corporate bonds were little changed over the intermeeting period despite the increase in yields on comparable-maturity Treasury bonds, leaving the implied risk spread about 15 basis points narrower. We expect this spread to hold fairly steady through the first half of next year and then to narrow more than ½ percentage point in 2013 and 2014 as concerns about Europe and the U.S. fiscal situation diminish. Thus, we expect that the yield on investment-grade corporate bonds will increase 1¼ percentage points during the projection period. Conventional mortgage rates have not changed much since late July, so their spreads to Treasury yields have narrowed as well. In the July Tealbook, we had anticipated a narrowing largely along these lines, so we have not revised the medium-term projection for this spread. All told, we expect mortgage rates to rise about 1¾ percentage points during the projection period.

### **Equity Prices and Home Prices**

Broad U.S. stock price indexes have increased about 5 percent, on net, since the July Tealbook, as market participants appeared to take solace from developments in Europe and incoming economic data, and as they appeared to build in heightened expectations of additional monetary easing. Equity prices are projected to show only a small increase over the next few quarters as concerns about the European crisis and the U.S. fiscal situation continue to weigh on investor sentiment and as the market reacts to the absence of a new LSAP. However, with these concerns anticipated to diminish, we continue to project increases in equity prices of about 9 percent per year in 2013 and 2014. On average, the trajectory of equity prices is about 2½ percent higher in those two years than in the July projection.

Recent readings for the CoreLogic house price index were stronger than we had expected and indicate that house price gains were robust through July. We marked up the projected path for house prices over the projection period by about 1½ percent. However, we continue to project that growth in house prices will slow in the second half

of this year, in part because we expect to see an increase in the supply of distressed properties for sale as some of the largest mortgage servicers step up the pace of foreclosure proceedings upon implementing the terms of their recent settlement with the State Attorneys General. In total, house prices are expected to increase about 6 percent this year but only 2 percent, on average, in 2013 and 2014.

## Fiscal Policy

Our fiscal policy assumptions are little changed in this forecast and continue to imply that federal fiscal policy will exert a substantial drag on economic growth in the medium term, especially next year. 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 act's automatic sequestration 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, other than the temporary payroll tax cut, most federal tax provisions set to expire at the end of this year under current law will, in fact, be eventually extended.<sup>6</sup> 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, plausibly involving a number of short-term extensions of these policies at the end of this year and in 2013. This legislative wrangling is assumed to increase uncertainty about that eventual outcome—and to weigh on household and business spending—beginning later this year and even more so in early 2013.

We expect that fiscal policy at all levels of government will directly restrain the rate of real GDP growth by about ½ percentage point this year (excluding multiplier effects), 1 percentage point in 2013, and almost ½ percentage point in 2014. Reflecting

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<sup>6</sup> In addition, we assume that the federal debt ceiling will be lifted in time to avert a disruption in the timely payment of all federal obligations, including a default on the federal debt.

both the assumed federal fiscal policy tightening in this projection and an anticipated acceleration in tax revenues as the economic recovery strengthens, the federal budget deficit is anticipated to narrow from \$1.1 trillion (7 percent of GDP) in the current fiscal year to around \$600 billion (4 percent of GDP) in fiscal 2014.

### **Foreign Activity and the Dollar**

Foreign real GDP growth slowed to an estimated  $2\frac{1}{4}$  percent pace in the second quarter (somewhat less than our estimated trend of about 3 percent), a result of a deceleration in emerging market economies as well as a contraction in Europe. In the current quarter and next, we see foreign economic growth remaining subdued at about its second-quarter pace, owing to ongoing financial stresses and a relatively weak U.S. economy. As discussed in the International Economic Developments and Outlook section, we continue to assume that financial tensions in Europe will intensify in the near term as policymakers struggle to settle on and implement their plans to stabilize euro-area sovereigns and banks before beginning to improve next year, as policymakers finally make more progress. Although this narrative is similar to the July Tealbook, statements by the ECB over the intermeeting period have suggested a greater commitment to containing financial stresses, and we now expect these tensions to peak at a lower level and correspondingly project a less severe euro-area recession. Next year, as the euro-area recession comes to an end, as U.S. economic activity strengthens, and as monetary policies remain accommodative, foreign growth is expected to pick up, reaching  $3\frac{1}{2}$  percent by the end of 2014. This outlook remains uncertain as European policymakers still must overcome major hurdles to address their fiscal and banking-sector vulnerabilities. (For further details, see the box “Effects of the European Situation on the U.S. Outlook.”)

Since the time of the July Tealbook, the nominal exchange value of the dollar has moved down somewhat, in part as the prospect of increased ECB action led to an improvement in market sentiment and to an appreciation of the euro. Nonetheless, from this lower starting point, we expect the dollar to appreciate in the near term, as financial stresses in the euro area move back up somewhat and investors gradually reduce their expectations of additional asset purchases by the Federal Reserve. Thereafter, we assume that the dollar depreciates in real terms at about a 3 percent annual rate through the end of 2014, in part reflecting the gradual abatement of financial stresses that pushed up the dollar earlier. All told, the level of the real dollar is a little below that projected in the

July Tealbook through most of the forecast period before converging to a similar level by the end of 2014.

### **Oil and Other Commodity Prices**

The spot price of Brent crude oil closed at about \$114 per barrel on September 4, up \$10 since the time of the July Tealbook. Much of the increase likely reflects a continued rise in geopolitical tensions associated with Iran and, to a smaller extent, improved sentiment regarding the situation in Europe. Both the Brent futures curve and our forecast for the price of imported oil continue to be steeply downward sloping. The price of imported oil is projected to remain at about \$100 per barrel for most of 2013 and then to slowly decline over the remainder of the forecast period, reaching \$93 per barrel at the end of 2014. Relative to the July Tealbook, this projection is about \$9 higher over the forecast period, reflecting both higher futures prices as well as a lessening of our negative adjustment to the futures curve to account for differences between the staff outlook for global growth and that of outside forecasters.<sup>7</sup>

A broad index of nonfuel commodity prices has risen about 2¼ percent since the July Tealbook. The increase was concentrated in prices for metals and likely reflected some improvement in economic sentiment and the recent depreciation of the dollar. Prices for agricultural commodities are little changed since the time of the previous Tealbook, but they remain elevated following steep increases in June and early July as the effect of this summer's drought on crop yields became apparent. Overall, nonfuel commodity prices are projected to remain flat through the remainder of this year and then to decrease at a 1¼ percent pace thereafter, a forecast in line with quotes from futures markets.

### **RECENT DEVELOPMENTS AND THE NEAR-TERM OUTLOOK**

Economic activity is estimated to have increased at a somewhat faster—though still only modest—pace during the first half of this year than we had anticipated in the July Tealbook, but our projection for growth in the second half of the year is little changed on net. The third quarter appears to have begun promisingly, as the readings for July on retail sales, payroll employment, and capital goods shipments each were better

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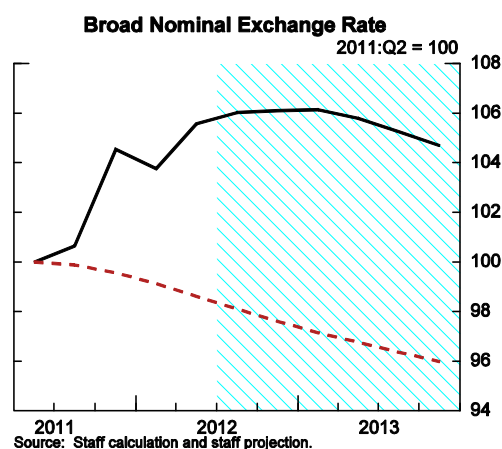
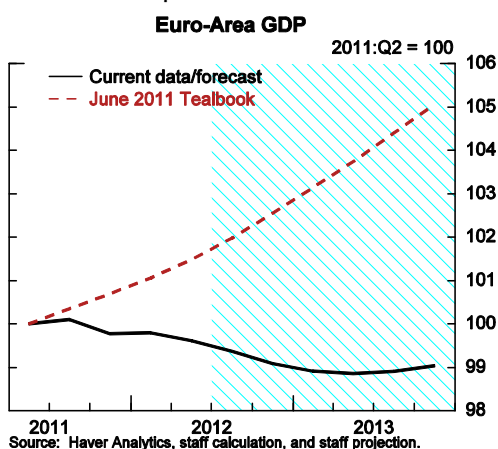
<sup>7</sup> Our negative adjustment, which pushes down the forecast path of oil prices relative to the futures curve, reflects a staff outlook for global growth that is weaker than that of outside forecasters. However, relative to the July Tealbook, the slight upward revision to the staff forecast and downward revision to outside forecasts have narrowed this difference, and we have lessened our negative adjustment accordingly.

## Effects of the European Situation on the U.S. Outlook

Concerns about the fiscal and financial crisis in Europe increased sharply in the summer of 2011 as financial stresses spread to Italy and Spain. On balance since a year ago, the foreign exchange value of the dollar has increased and the European and global economic outlook has deteriorated, with adverse effects for U.S. foreign trade. Heightened concerns about the European situation have also affected U.S. asset prices. To gauge the consequences of these developments for the overall U.S. economic outlook, we use staff models to simulate the implications for U.S. real GDP, the unemployment rate, and inflation.

Prior to the intensification of the crisis, the staff projected in the June 2011 Tealbook that real GDP growth in the euro area would be moderate (the red line of the lower-left figure). However, real GDP in the euro area has actually declined (the black line), and it is currently projected to fall further this year and part of next year. The staff's outlook for foreign economic growth outside the euro area (not shown) is also considerably weaker than a year ago, in part because of spillovers from the crisis. In addition, safe-haven demands stemming from the crisis have contributed to a steep appreciation of the broad nominal exchange value of the dollar (shown in the lower-right figure).

The intensification of the crisis in Europe since June 2011 has also left an imprint on U.S. asset prices. The staff estimates that the European crisis has had a cumulative negative effect on domestic equity prices of about 10 percent. The staff also believes that this downward pressure on equity prices resulted from revisions by market participants to their outlooks for corporate profits over the medium term in addition to an increase in the rate of return required by investors to hold equities because the downside risks to the global economic outlook increased. In addition, these concerns are calculated to have lowered the term-premium component of yields on long-term nominal Treasury securities about 80 basis points as the European crisis exacerbated flight-to-safety demands. The staff estimates that yields of private domestic securities have also been held down by the European situation, though not by as much as Treasury yields. In particular, yields on BBB-rated corporate bonds are judged to have decreased only about 40 basis points, while the comparable figure for 30-year residential mortgage rates is about 60 basis points.



The table below shows the aggregate effects on U.S. economic activity and inflation of the changes in both foreign conditions and U.S. financial conditions that the staff judges to have occurred because of the intensification of the European crisis since June 2011.<sup>1</sup> The simulation indicates that the rate of real U.S. GDP growth (line 1) was held down about ¼ percentage point last year, and will be about ¾ percentage point lower both this year and next.<sup>2</sup> The appreciation of the exchange value of the dollar, which boosts imports and lowers exports, is estimated to have the largest negative effect (line 2) on U.S. economic activity, reducing the rate of real GDP growth about ½ percentage point in both 2012 and 2013. The staff estimates that lower economic activity in the euro area (line 3), which also lowers U.S. exports, has reduced and will continue to reduce the rate of U.S. real GDP growth about 0.1 percentage point, on average, from 2011 through 2013. Negative spillovers to economic activity in other trading partners contribute a similar amount (line 4).<sup>3</sup> The net effects of the changes in domestic financial conditions (line 5) on U.S. GDP are small because the drag from lower equity prices is essentially offset by the boost from lower private long-term interest rates.

All told, the unemployment rate (line 6) is expected to be almost ½ percentage point higher by the end of this year and is anticipated to be about ¾ percentage point higher by the end of next year as a result of the European crisis. Inflation (line 7) is slightly lower, reflecting both the higher exchange value of the dollar and lower resource utilization.

| <b>Aggregate Effects of European Crisis on<br/>U.S. Economic Activity (percentage point changes)</b> |      |      |      |  |
|--|------|------|------|--|
|  | 2011 | 2012 | 2013 |  |
| 1. Real GDP (Q4/Q4)  | -.2  | -.8  | -.7  |  |
| <i>Contributions to Q4/Q4 change in real GDP:<sup>a</sup></i>  |      |      |      |  |
| 2. Exchange rate   | -.1  | -.5  | -.5  |  |
| 3. Euro-area GDP   | -.1  | -.1  | -.1  |  |
| 4. Rest-of-world GDP spillovers  | -.1  | -.1  | -.1  |  |
| 5. Domestic asset prices   | .0   | -.1  | .0   |  |
| 6. Unemployment rate (Q4 level)  | .1   | .4   | .8   |  |
| 7. PCE inflation (Q4/Q4)   | -.1  | -.1  | -.1  |  |

<sup>a</sup> Contributions include estimated general equilibrium effects. Contributions may not add to the total because of rounding.

<sup>1</sup> The table reflects calculations from several staff models. In particular, the decomposition of the trade effects uses the trade model maintained by the International Finance Division, while the estimate of the overall macroeconomic effects is based on simulations of the FRB/US model. In the FRB/US simulations, the federal funds rate is set using the same estimated policy rule that is used in the staff baseline projection, and nonconventional policy retains its baseline setting.

<sup>2</sup> These adverse effects are slightly smaller than would have been estimated at the time of the July Tealbook as the situation in Europe appears to have improved a bit recently.

<sup>3</sup> The effect of negative spillovers from other trading partners is estimated by assuming that a 1 percentage point reduction in the rate of change in euro-area real GDP translates to a ¼ percentage point reduction in the rate of real GDP growth in the rest of the world. Because the rest of the world makes up a much larger share of U.S. exports than the euro area, this spillover effect ends up roughly the same as the euro-area effect.

### Summary of the Near-Term Outlook

(Percent change at annual rate except as noted)

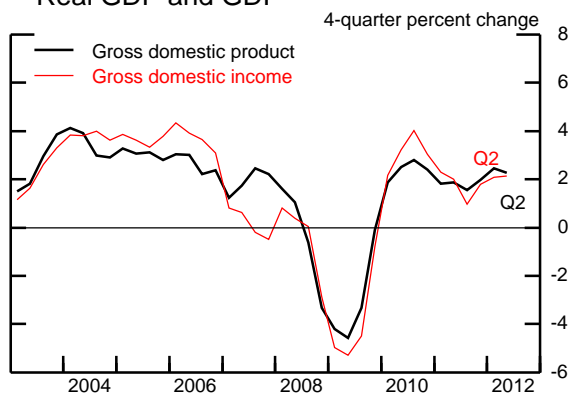
| Measure                                    | 2012:Q2           |                  | 2012:Q3           |                  | 2012:Q4           |                  |
|--|-------------------|------------------|-------------------|------------------|-------------------|------------------|
|  | Previous Tealbook | Current Tealbook | Previous Tealbook | Current Tealbook | Previous Tealbook | Current Tealbook |
| <b>Real GDP</b>                            | <b>1.0</b>        | <b>1.7</b>       | <b>1.5</b>        | <b>1.3</b>       | <b>1.8</b>        | <b>1.7</b>       |
| Private domestic final purchases           | 1.8               | 2.0              | 2.2               | 2.1              | 2.5               | 2.2              |
| Personal consumption expenditures          | 1.1               | 1.7              | 2.1               | 2.3              | 2.4               | 2.2              |
| Residential investment                     | 8.9               | 8.4              | 12.3              | 9.7              | 3.3               | 5.5              |
| Business fixed investment                  | 5.1               | 3.1              | .6                | -1.0             | 3.1               | 1.5              |
| Government purchases                       | -3.0              | -.7              | -1.4              | -1.7             | -1.4              | -1.1             |
| <i>Contributions to change in real GDP</i> |                   |                  |                   |                  |                   |                  |
| Inventory investment <sup>1</sup>          | .0                | -.2              | .3                | -.1              | .3                | .2               |
| Net exports <sup>1</sup>                   | .0                | .3               | -.4               | .0               | -.4               | -.2              |
| <b>Unemployment Rate<sup>2</sup></b>       | <b>8.2</b>        | <b>8.2</b>       | <b>8.3</b>        | <b>8.3</b>       | <b>8.3</b>        | <b>8.3</b>       |
| <b>PCE Chain Price Index</b>               | <b>.8</b>         | <b>.7</b>        | <b>.8</b>         | <b>1.9</b>       | <b>1.5</b>        | <b>1.7</b>       |
| Ex. food and energy                        | 1.8               | 1.8              | 1.6               | 1.3              | 1.5               | 1.5              |

1. Percentage points.

2. Percent.

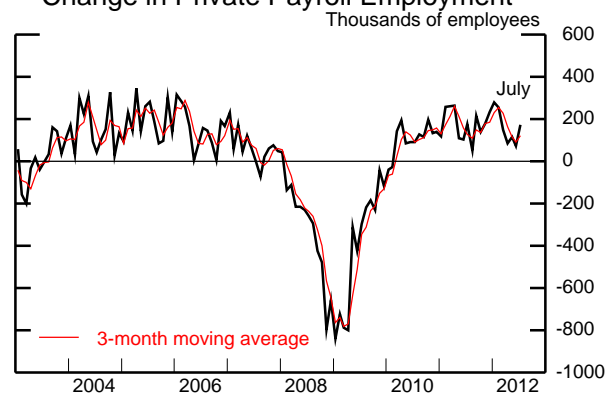
### Recent Nonfinancial Developments (1)

Real GDP and GDI



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

Change in Private Payroll Employment



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

Unemployment Rate



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

Manufacturing IP ex. Motor Vehicles and Parts



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



than expected. However, the recent forward-looking indicators have been disappointing, on balance, and we estimate that the drought will pull down real GDP growth in the second half of this year. Consequently, we estimate that real GDP will advance at an annual rate of just 1½ percent over this period, the same in as the July Tealbook. At the same time, we expect the unemployment rate to hold near its current level.

### **The Labor Market**

Private payroll employment rose 172,000 in July, about 70,000 more than we had expected. However, the unemployment rate edged up to 8.3 percent in July and has been moving essentially sideways since early this year. Likewise, the labor force participation rate was 63.7 percent in July, about the same as in the first and second quarters. (For a broader discussion, see the box “Labor Force Participation Rate.”) Other indicators of labor market activity are also little changed since the most recent Tealbook: Initial claims for unemployment insurance remain close to their levels as of the July Tealbook, surveys of small businesses’ hiring plans have changed little in recent months, and households’ expectations of future labor market conditions remain subdued.

With output projected to rise only modestly in the second half of the year, we expect the labor market to continue to improve only slowly in the near term. We have taken some signal from the July employment report, and we now expect private employers to add 120,000 jobs per month, on average, in August and September and about 150,000 per month in the fourth quarter; both of these figures are about 25,000 per month higher than in the July Tealbook forecast.<sup>8</sup> However, as before, we anticipate that the unemployment rate will remain at 8.3 percent for the rest of the year, as the modest job gains we project (even though slightly better than in July) are insufficient to reduce the jobless rate.

### **The Industrial Sector**

After monthly increases averaging only ¼ percent in the second quarter, manufacturing industrial production (IP) rose ½ percent in July. Motor vehicle assemblies stepped up to an annual rate of 10.7 million units in July, partly reflecting a shortening of the usual summer shutdowns at some auto companies; however, automakers’ assembly schedules suggest much of this gain is likely to be unwound in August and September, leaving the average pace of production this quarter similar to that

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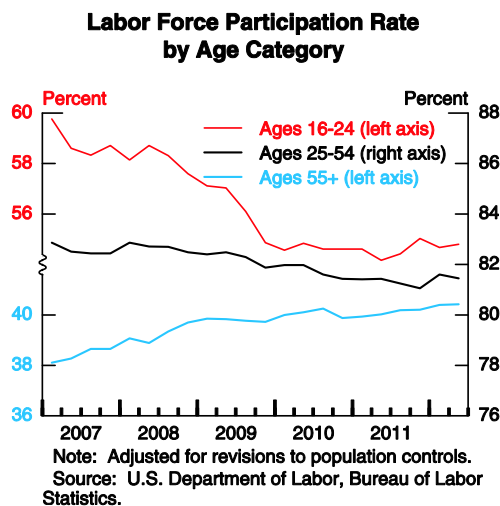
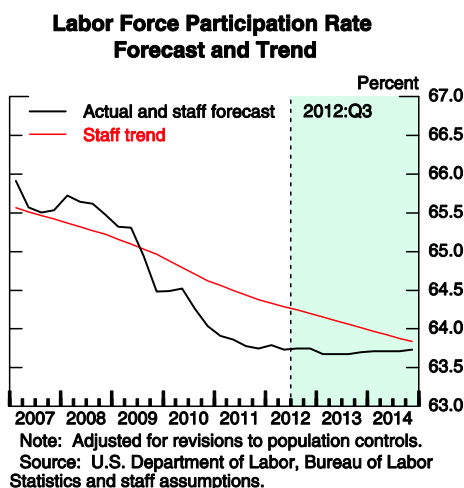
<sup>8</sup> After accounting for our estimates of the distortion of the seasonal-adjustment factors, the underlying pace of employment gains in both the third and fourth quarters is projected to be about 130,000 per month.



## The Labor Force Participation Rate

The labor force participation rate (the black line in the lower-left figure) fell  $1\frac{3}{4}$  percentage points from the business cycle peak in the last quarter of 2007 through the second quarter of this year.<sup>1</sup> The staff estimates that a little over 1 percentage point of this decline can be attributed to the long-term trend in participation (the red line). This long-term downtrend has two major components. First, the share of the population at older ages, which has lower-than-average participation rates, has been rising.<sup>2</sup> Second, the participation rates of young persons (the red line, on the left scale, in the lower-right figure), especially teenagers, have been falling for more than a decade. This downtrend among young persons is likely a response to increased incentives for education and to shrinking job opportunities for their age group as the ongoing polarization of the labor market has led to jobs traditionally held by young workers being increasingly taken by older workers.<sup>3</sup>

The participation rate also seems to have been influenced by the financial crisis, the recession, and their aftermath. For example, early in the recession, the drop in household wealth and the many job losses may have led some workers to delay retirement and others to enter the labor force. In addition, the introduction of extended and emergency unemployment compensation likely led some job losers to remain in the labor force longer than they would have otherwise.<sup>4</sup> By 2009, however, these influences were probably far overshadowed by the downward pressure on participation rates associated with the decision of some prospective workers not to search for work in the face of poor job opportunities. The staff believes that this cyclical response by prospective workers explains a large portion of the overall decline in the participation rate since 2007.



<sup>1</sup> This figure adjusts for revisions to population weighting in the published data. On a published basis, the rate has fallen  $2\frac{1}{4}$  percentage points. The discussion in this box abstracts from these revisions.

<sup>2</sup> Although the participation rates at older ages (the blue line, on the left scale, in the lower-right figure) have risen over the past few years, they remain well below the average at lower ages, so the aging of the population has resulted in a lower overall participation rate.

<sup>3</sup> More education tends to lead to greater participation later in life. However, the net effect of the increased incentives for education is likely to be to depress the aggregate participation rate. Polarization refers to the shifting of the demand for labor away from middle-skilled jobs and toward both higher- and lower-skilled jobs.

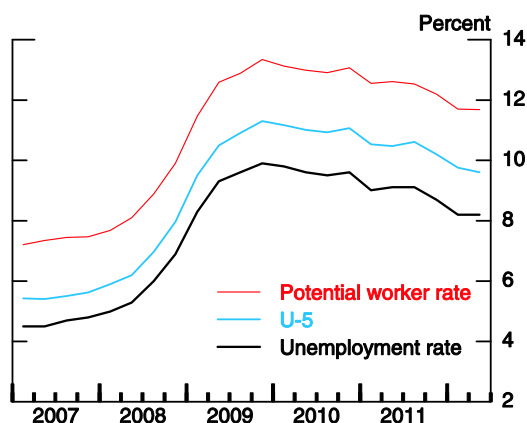
<sup>4</sup> The staff estimates that these programs boosted the level of participation last quarter by 0.1 percentage point.

In previous recessions, the labor force participation rate did not fall as sharply as in the recent recession. However, the current cyclical decline in participation does not appear to be fundamentally out of line with the especially steep deterioration and slow recovery in job opportunities. Hence, we think that the current low participation rate is not significantly distorting the signal for labor utilization from the unemployment rate. The household survey provides some evidence in this regard. Its measure of persons not in the labor force but marginally attached is an indicator of those who are most likely to be out of the labor force because of poor job prospects.<sup>5</sup> The figure below shows a measure of labor underutilization that includes marginally attached persons (U-5, the blue line) as well as one that includes all persons out of the labor force who say they want a job (the potential worker rate, the red line). Historically, these rates have moved fairly well in tandem with the official unemployment rate (the black line), and they have continued to be well aligned more recently.

Parsing the decline in participation into trend and cyclical components is difficult, especially in real time. Indeed, over the past few years the staff has revised down its estimate of the trend in participation, mostly because research has suggested that more of the ongoing weakness in participation reflects long-term forces (such as polarization) than we had assumed, and also because we have judged that some of the response to overall poor job prospects would persist even if labor demand were to recover soon. To be sure, uncertainty in this regard remains considerable. Moreover, labor market developments need not fit neatly into the separate categories of trend and cycle. For example, some workers may have accelerated their planned retirements in reaction to poor job prospects. As time goes by, these early retirees reach ages at which they would have retired in any case. In this example, the trend in participation declined sooner in response to the business cycle but with no net effect on the level of the trend some years hence.

Looking ahead, the staff expects the cyclical downward pressure on labor force participation to diminish as the demand for labor improves, even as the long-term downtrend continues. In our projection these two forces are roughly offsetting in the medium term, and the participation rate remains fairly flat, converging slowly to its long-term trend.

**Unemployment Rate and Potential Worker Rate**

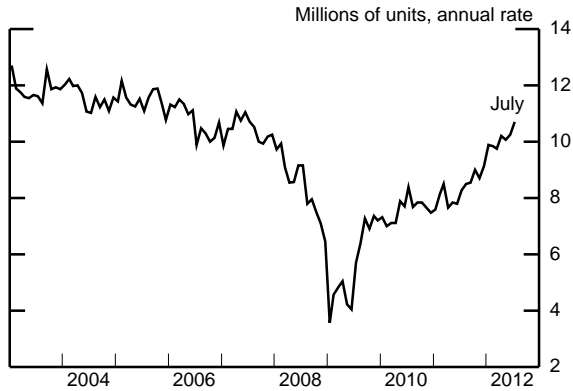


Source: U.S. Department of Labor, Bureau of Labor Statistics.

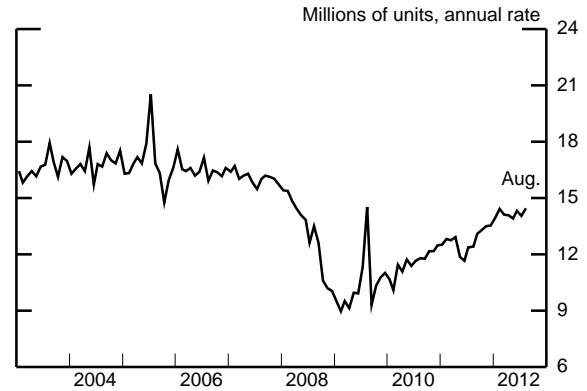
<sup>5</sup> Marginally attached persons are those who are not currently looking for work but want a job, are available to work, and have looked for work sometime in the past 12 months.

## Recent Nonfinancial Developments (2)

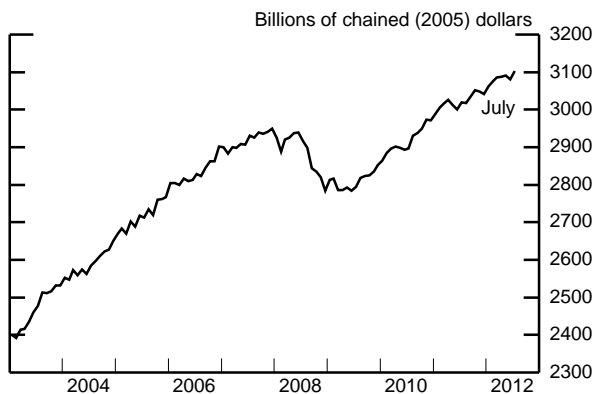
Production of Light Motor Vehicles



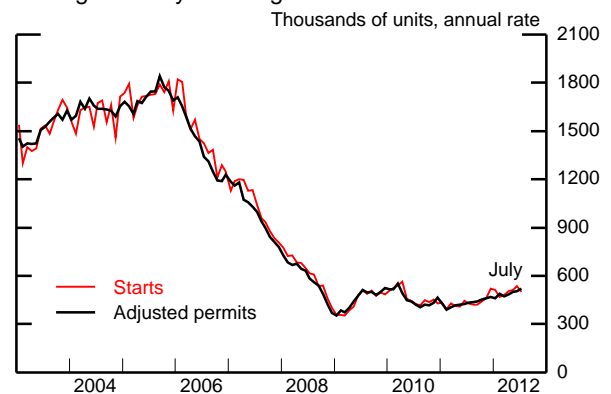
Sales of Light Motor Vehicles



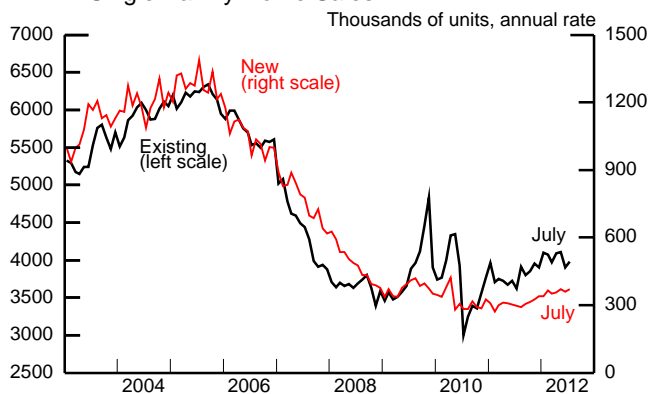
Real PCE Goods ex. Motor Vehicles



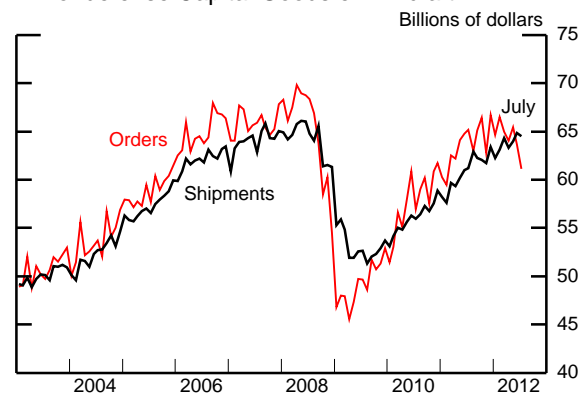
Single-Family Housing Starts



Single-Family Home Sales



Nondefense Capital Goods ex. Aircraft



in the second quarter. Outside motor vehicles and parts, manufacturing output moved up just 0.2 percent in July after having edged down in the second quarter.

Moreover, the available indicators of near-term factory activity remain downbeat.<sup>9</sup> With data through August, the new orders diffusion index from the national ISM survey and the orders indexes from the regional manufacturing surveys, on balance, remained weak for a third consecutive month. Taking into account these surveys and the flat trajectory for motor vehicle assemblies in the coming months, we expect factory output to expand at a tepid 2½ percent annual rate in the second half of the year.

### Household Spending

Real PCE rose 0.4 percent in July, reflecting a surprisingly large jump in retail sales. However, those data are quite erratic, and with gasoline prices having moved up, job gains remaining modest, and consumer sentiment still relatively downbeat, we have not extrapolated forward the July strength in spending; indeed, we anticipate smaller gains in coming months. In all, real PCE is projected to rise at an annual rate of 2¼ percent over the second half of the year, similar to our forecast in the July Tealbook.

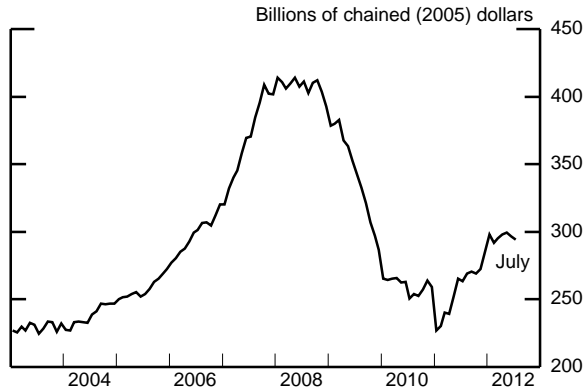
The incoming data continue to point to a gradual recovery in housing activity, albeit from a very depressed level. Single-family housing starts have risen, on net, since last fall, and permits for new construction have steadily edged up, though both measures remain less than one-third of their levels of several years ago. In addition, some signs indicate that housing demand has firmed over the past year: Home sales have stepped up, while the homeowner vacancy rate has declined; measures of house prices have risen noticeably since the beginning of this year; and indicators of home builders' and realtors' sentiment have improved. Even so, demand remains constrained by difficult mortgage credit conditions and uncertainty about future income and employment prospects. Furthermore, the stock of vacant homes held off the market, which is not included in the homeowner vacancy rate, remains elevated. This "shadow inventory," which includes many bank-owned properties, will likely redirect demand from new construction to existing homes once these properties are put on the market. All told, we project single-family starts to increase only modestly in the near term.

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<sup>9</sup> We currently estimate that Hurricane Isaac reduced the rate of change in total IP in August by about 0.3 percentage point, principally from the preventative idling of nearly all of the oil and gas extraction in the Gulf of Mexico and, to a lesser extent, from the shutdown of several Gulf Coast petroleum refineries. Production in the affected industries is expected to return to pre-hurricane levels by the end of September.

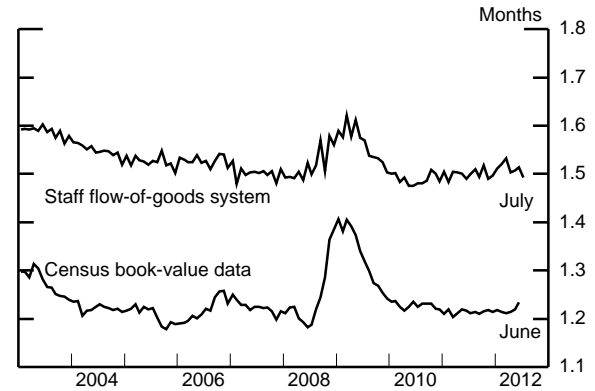
## Recent Nonfinancial Developments (3)

Nonresidential Construction Put in Place



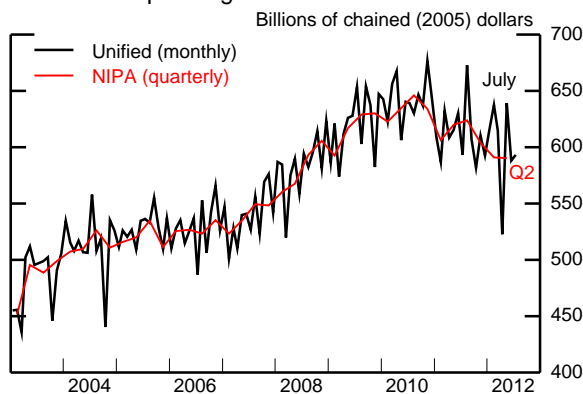
Source: U.S. Census Bureau.

Inventory Ratios ex. Motor Vehicles



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

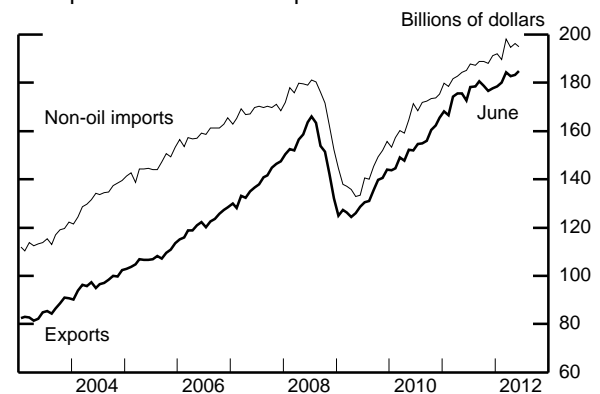
Defense Spending



Note: The unified series is seasonally adjusted and deflated by BEA prices. The NIPA series excludes the consumption of fixed capital.

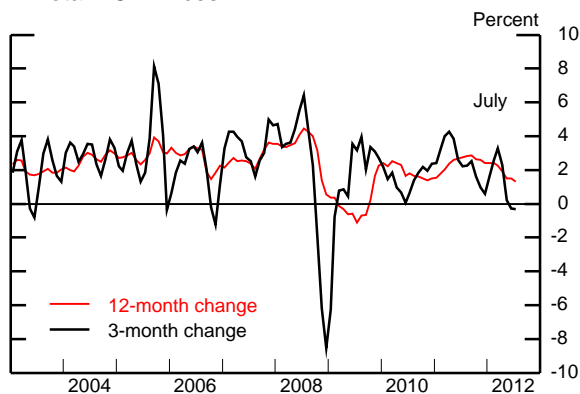
Source: *Monthly Treasury Statement*; U.S. Dept. of Commerce, Bureau of Economic Analysis.

Exports and Non-Oil Imports



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

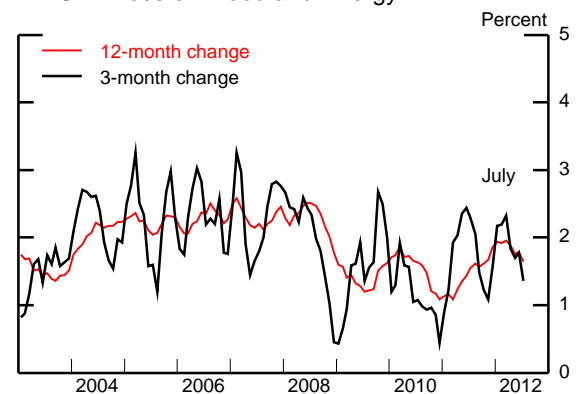
Total PCE Prices



Note: 3-month changes are at an annual rate.

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

PCE Prices ex. Food and Energy



Note: 3-month changes are at an annual rate.

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

At the same time, some of the factors restraining home purchases have fueled demand for rental units, leading to falling vacancy rates and rising rents. Consequently, activity in the multifamily sector has picked up more rapidly than in the single-family sector, and we expect to see a continued upswing in multifamily starts in coming months as these conditions persist.

### **Business Investment**

We estimate that real business spending on equipment and software (E&S) rose at a modest annual rate of about 4 percent in the second quarter, somewhat less than projected in the July Tealbook. We expect spending to decelerate further in the second half of the year as concerns about the European situation, the U.S. fiscal situation, and the sluggish pace of the domestic recovery make businesses more reluctant to invest. Indeed, new orders for nondefense capital goods outside of transportation have fallen sharply over the past several months and currently stand notably below the level of shipments.

Consistent with this view, a number of other forward-looking indicators of business investment also point to subdued increases in business outlays. For example, indexes from various surveys of business conditions have been at low levels for several months, surveys of capital spending plans have continued to be downbeat, and corporate bond spreads remain somewhat elevated. As a result, we expect E&S spending to increase at an annual rate of only around 1 percent over the second half of this year.

After a year of surprising strength, incoming data suggest that spending on nonresidential construction (excluding drilling and mining) rose at a moderate pace in the second quarter. However, the spending data for July, the subdued readings from the architectural billings index, and the sector's poor fundamentals lead us to project that outlays will decline somewhat in the second half of this year. Moreover, 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.

In the drilling and mining sector, investment edged down in the first half of 2012, likely reflecting the low natural gas prices that have prevailed since the second half of last year. Nevertheless, spending remains at a high level following brisk increases in the previous two years that were driven by rising crude oil prices and by new drilling

techniques. We expect outlays for drilling and mining structures to remain near current levels in the near term, in line with the relatively flat trajectories of energy prices.

Firms in the nonfarm business sector appear to have accumulated inventories in the second quarter at a rate similar to that in the first quarter, as some further restocking of auto dealers' lots offset a slowing in the pace of accumulation elsewhere. Available estimates from the staff's flow-of-goods system, reports on dealer inventories of motor vehicles, and surveys of inventory satisfaction generally indicate that inventory stocks are fairly well aligned with sales in most sectors, although some indicators suggest perhaps less comfort with inventories than was the case earlier in the year. In the current economic environment we expect producers to be cautious in boosting the pace of stockbuilding, and so we expect inventory investment to contribute only a little to real GDP growth over the rest of the year.

By contrast, we estimate that the sharp drop in farm production stemming from the drought will lead to a significant drawdown in farm inventories this quarter, which by itself will subtract about  $\frac{1}{2}$  percentage point (annual rate) from real GDP growth. We expect that farm stocks will be liquidated at about the same pace in the fourth quarter, which will consequently have no arithmetic effect on GDP growth in that quarter.

## Government

Real federal purchases fell at an annual rate of  $2\frac{1}{4}$  percent in the first half of 2012, driven by declines in defense spending. As in the July Tealbook, we anticipate broadly similar reductions in total federal purchases in the second half of the year.

By contrast, the contraction in the state and local sector appears to be gradually moderating, as fiscal conditions of these governments become somewhat less tight. After dropping at an annual rate of  $2\frac{1}{4}$  percent in the first quarter, real state and local purchases fell 1 percent in the second quarter, and we anticipate an even smaller decline in the second half of the year. In part, the moderation is reflected in a slowing in the pace of decline in real public construction expenditures in the second quarter, a trend that we expect to continue over the rest of the year. In addition, the decrease in state and local payrolls during the first half of the year was considerably smaller than in 2011; we expect payrolls to decline a little further in the third quarter before stabilizing in the fourth quarter. In total, federal, state, and local purchases are expected to subtract  $\frac{1}{4}$  percentage point from the annual rate of real GDP growth in the second half of this year.



## Foreign Trade

After having risen at an annual rate of 6 percent in the second quarter, real exports of goods and services are expected to decelerate to a  $3\frac{1}{4}$  percent increase over the second half of this year, more in line with the relatively sluggish pace of foreign growth that we anticipate as well as the prior appreciation of the dollar. This forecast is about the same as in the July Tealbook, as our reaction to the strength of exports in the trade data for June and the effects of the decline in the dollar since July offset weaker projected exports of agricultural products as a consequence of this summer's drought. Meanwhile, real imports of goods and services are expected to increase  $3\frac{1}{4}$  percent over the second half of 2012, almost  $1\frac{1}{2}$  percentage points less than in the previous Tealbook, reflecting the lower dollar, our response to a weaker-than-expected reading on imports in June, and a markdown to our forecast for oil import growth. All told, we expect the external sector to be about neutral for GDP growth in the third quarter and to subtract  $\frac{1}{4}$  percentage point from growth in the fourth quarter, a contour that is on average about  $\frac{1}{4}$  percentage point less of a drag than projected in July.

## Prices and Wages

Total PCE price inflation stepped down from an annual rate of  $2\frac{1}{2}$  percent in the first quarter to  $\frac{3}{4}$  percent in the second quarter, reflecting both the large drop in energy prices during the spring and some deceleration in core PCE prices. Over the second half of this year, total PCE prices are projected to rise at an average annual rate of about  $1\frac{3}{4}$  percent, reflecting the rebound in oil prices since the July Tealbook. Compared with our previous projection, total PCE inflation is nearly  $\frac{3}{4}$  percentage point higher on average in the second half of this year.

Spot and futures prices of food commodities soared through mid-July as the severity of this summer's drought became apparent, and these prices have remained elevated in recent weeks. The pass-through of farm commodity price changes into consumer food prices tends to occur with a lag, and, moreover, a lower-than-expected reading on consumer food prices in July led us to revise *down* our current-quarter estimate for PCE food price inflation by about  $\frac{3}{4}$  percentage point, to an annual rate of  $1\frac{1}{2}$  percent. Looking ahead, we project that PCE food price inflation will move up to an annual rate of  $3\frac{1}{2}$  percent in the fourth quarter as the pass-through of farm commodity price increases into PCE food prices begins in earnest. Notwithstanding these substantial swings, the projected acceleration in food prices provides only a small boost to total



consumer price inflation because of the relatively small weight of food in overall consumer expenditures.

The incoming data on core consumer price inflation have been close to our expectations. Core PCE price inflation slowed from an annual rate of 2¼ percent in the first quarter to 1¾ percent in the second quarter, and core prices were flat in July. We continue to expect core PCE inflation to run at an annual rate of 1½ percent over the second half of 2012, reflecting, in part, recent declines in the prices of core imports and industrial materials.

In the latest data, the quarterly pattern of private hourly compensation was revised up noticeably for the first half of the year. However, this series is particularly volatile, and the second quarter was only a little more than 2 percent above its level four quarters earlier, the same as in the July Tealbook. In addition, the employment cost index for private industry workers rose about 2 percent in the second quarter, close to what we had expected. We anticipate that hourly compensation will rise during the second half of this year at roughly that pace, similar to our forecast in the July Tealbook.

## THE MEDIUM-TERM OUTLOOK

The broad contour of the medium-term projection is similar to our forecast in the July Tealbook. In particular, we continue to project that further improvements in financial conditions, an eventual easing of the financial crisis in Europe, and rising household and business confidence will support a modest acceleration in real GDP. In addition, although the tightening of fiscal policy in 2013 is anticipated to impose a substantial drag on economic growth next year, the fiscal restraint on growth is expected to ease significantly in 2014, which contributes materially to the acceleration in real GDP in that year. Still, a number of persistent headwinds are expected to ease only slowly and so continue to weigh on the pace of the recovery over the projection period, including tight credit for some households and businesses, the ongoing drag from the widespread losses in home equity, an overhang of vacant homes that continues to hold back residential construction, and foreign demand that remains subdued.

We raised our projection for real GDP growth a bit in 2013, in part because the expected rebound in farm production after the drought-stricken harvest of 2012 boosts aggregate output. In addition, the recent decline in the dollar in response to developments in Europe implies less drag on U.S. activity from the external sector. Also,

the small upward revisions we made to stock prices and house prices boosts household wealth. These positive factors modestly outweigh the drag from higher oil prices next year. As a result, after increasing about 1½ percent this year, real GDP is projected to rise 2½ percent next year (about ¼ percentage point more than in the July Tealbook) and then to expand 3¼ percent in 2014 and 3½ percent in 2015. With real GDP expected to increase at about the same pace as the growth rate of potential output this year and next, the unemployment rate does not decline to below 8 percent until 2014—when real GDP begins to rise materially faster than potential. By the end of 2015, the unemployment rate is projected to have declined to 6¾ percent.

As has been the case for some time, part of the fiscal restraint in our projection shows through as declining federal purchases. After decreasing 4¼ percent in 2011 and 2½ percent this year, real federal purchases are expected to fall about 4¼ percent in both 2013 and 2014, reflecting the effects of the Budget Control Act and the continued drawdown of overseas military operations. In the state and local sector, fiscal conditions are likely to remain tight for some time; although *state* tax revenues have been rising at a pace consistent with income growth, *local* taxes, which are dominated by property taxes, have been stagnant, and federal stimulus-related grants have essentially ended. Consequently, we expect real state and local purchases to be about flat in 2013 and to rise at a tepid pace in 2014. In total, federal, state, and local purchases are anticipated to subtract about ¼ percentage point from real GDP growth in 2013 and in 2014.

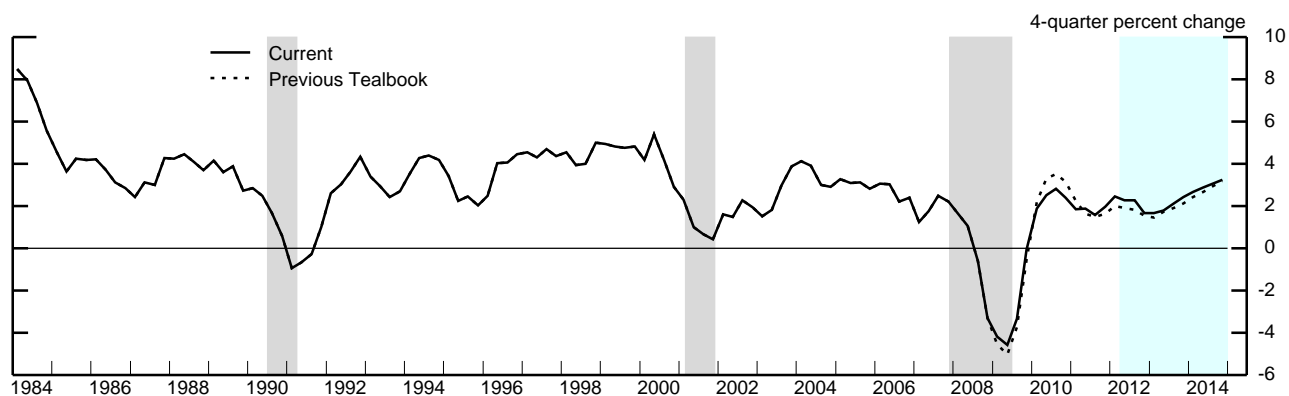
The large fiscal drag we expect next year also shows through indirectly to the growth in consumer spending. The assumed expiration at the end of this year of both the temporary payroll tax cut and the EUC program will subtract significantly from income growth in 2013, and thus will likely weigh on consumer spending, particularly early in the year. By contrast, higher equity wealth, increasing household confidence, and a modestly improving labor market should provide support for consumer spending. In total, real PCE is expected to expand 2½ percent in 2013, only about ¼ percentage point faster than this year. In 2014, consumer spending is projected to accelerate further, as the drag from fiscal policy wanes and as employment prospects, income growth, and household net worth continue to improve.

With the economies of our trading partners anticipated to improve, and with the dollar expected to depreciate over the medium term, real exports are projected to increase 4½ percent in 2013 and 5¾ percent in 2014. Real imports are expected to grow at an

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

| Measure  | 2011       | 2012       |            | 2013       | 2014       |
|--|------------|------------|------------|------------|------------|
|  |            | H1         | H2         |            |            |
| <b>Real GDP</b>  | <b>2.0</b> | <b>1.8</b> | <b>1.5</b> | <b>2.4</b> | <b>3.2</b> |
| Previous Tealbook  | 1.6        | 1.4        | 1.6        | 2.1        | 3.2        |
| Final sales  | 1.7        | 2.1        | 1.4        | 2.1        | 3.1        |
| Previous Tealbook  | 1.5        | 1.4        | 1.3        | 1.8        | 3.0        |
| Personal consumption expenditures                          | 1.9        | 2.1        | 2.3        | 2.4        | 3.4        |
| Previous Tealbook  | 1.6        | 1.8        | 2.3        | 2.2        | 3.3        |
| Residential investment                                     | 3.9        | 14.3       | 7.6        | 11.9       | 12.4       |
| Previous Tealbook  | 3.5        | 14.3       | 7.7        | 10.0       | 11.2       |
| Nonresidential structures                                  | 6.9        | 6.5        | -2.3       | 2.2        | 2.2        |
| Previous Tealbook  | 4.4        | 1.2        | -.6        | .8         | 1.6        |
| Equipment and software                                     | 11.4       | 4.8        | 1.3        | 5.1        | 7.2        |
| Previous Tealbook  | 9.6        | 5.2        | 2.7        | 4.6        | 6.7        |
| Federal purchases  | -4.2       | -2.2       | -2.8       | -4.2       | -4.3       |
| Previous Tealbook  | -3.2       | -5.2       | -2.5       | -4.1       | -4.2       |
| State and local purchases                                  | -2.7       | -1.6       | -.5        | .3         | .9         |
| Previous Tealbook  | -2.5       | -2.3       | -.6        | .4         | 1.3        |
| Exports  | 4.3        | 5.2        | 3.3        | 4.5        | 5.7        |
| Previous Tealbook  | 4.7        | 4.3        | 3.2        | 3.7        | 5.6        |
| Imports  | 3.5        | 3.0        | 3.3        | 4.2        | 4.8        |
| Previous Tealbook  | 3.6        | 3.0        | 4.8        | 4.1        | 4.7        |
| Contributions to change in real GDP<br>(percentage points) |            |            |            |            |            |
| Inventory change   | .3         | -.3        | .0         | .3         | .1         |
| Previous Tealbook  | .1         | .1         | .3         | .3         | .2         |
| Net exports  | .0         | .2         | -.1        | -.1        | .0         |
| Previous Tealbook  | .0         | .1         | -.4        | -.2        | -.1        |

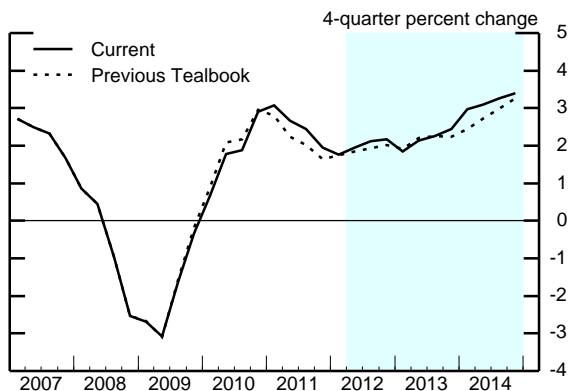
### Real GDP



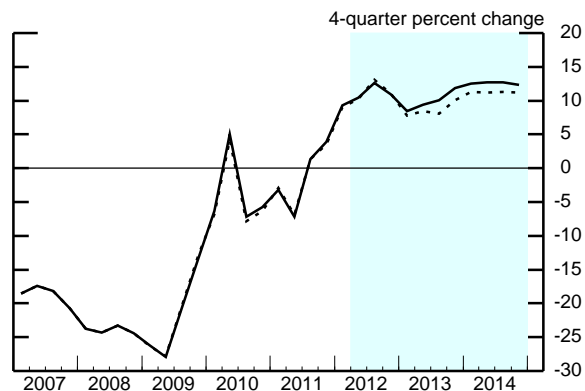
Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.  
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

## Components of Final Demand

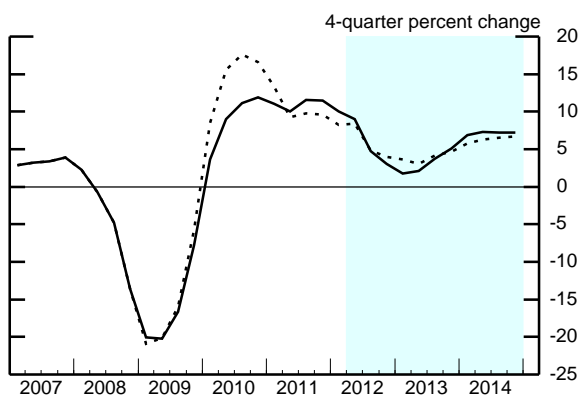
Personal Consumption Expenditures



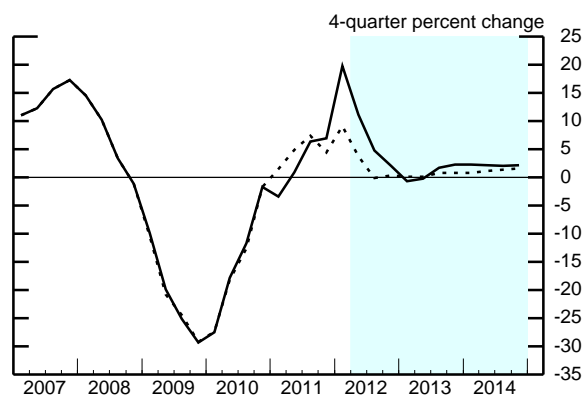
Residential Investment



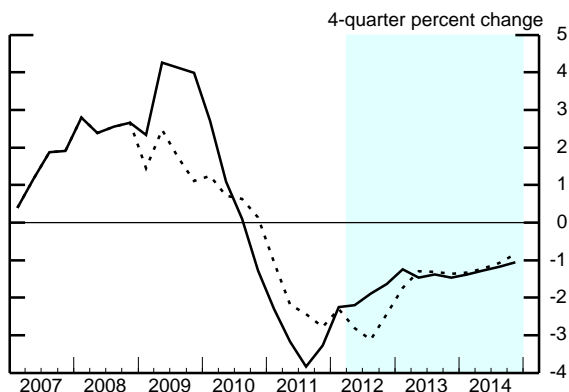
Equipment and Software



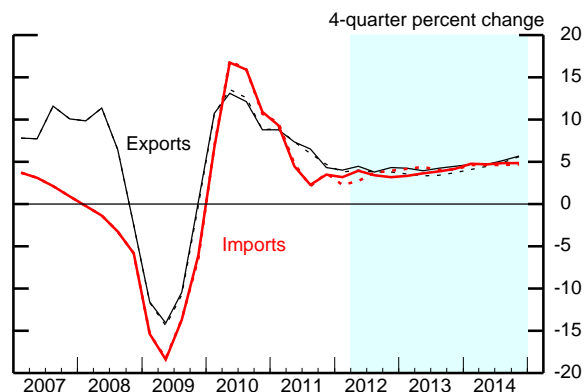
Nonresidential Structures



Government Consumption & Investment



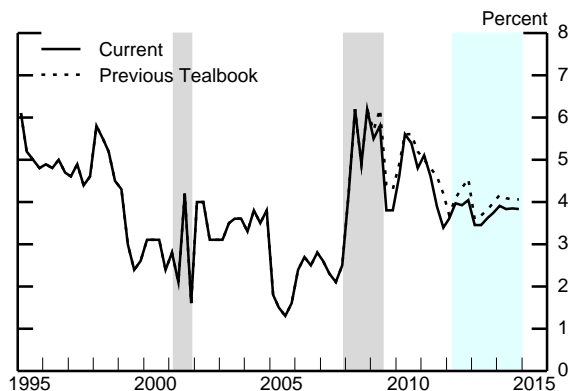
Exports and Imports



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

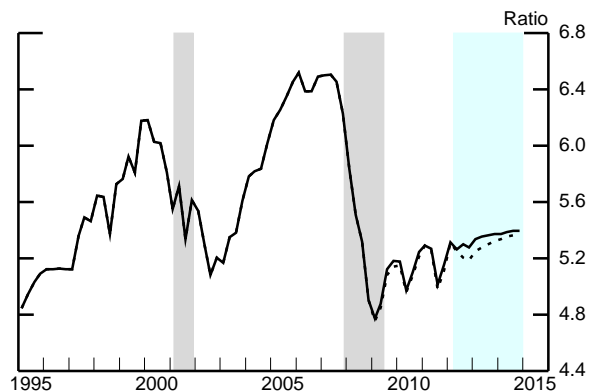
## Aspects of the Medium-Term Projection

Personal Saving Rate



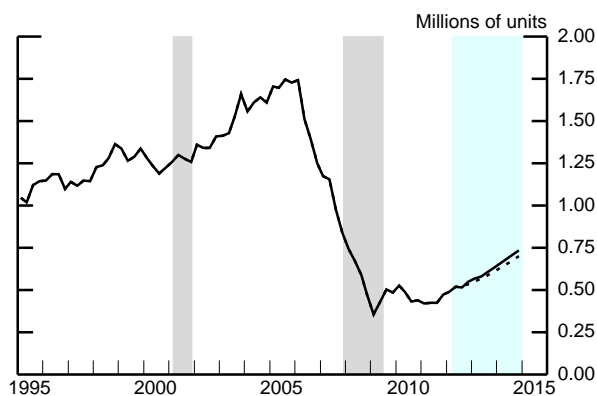
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Wealth-to-Income Ratio



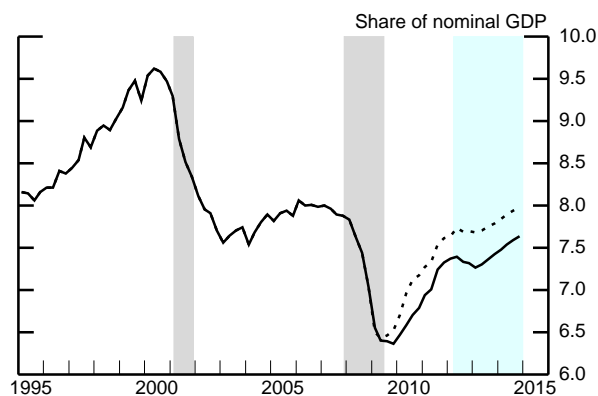
Note: Household net worth as a ratio to disposable personal income.  
Source: For net worth, Federal Reserve Board, flow of funds data; for income, Dept. of Commerce, Bureau of Economic Analysis.

Single-Family Housing Starts



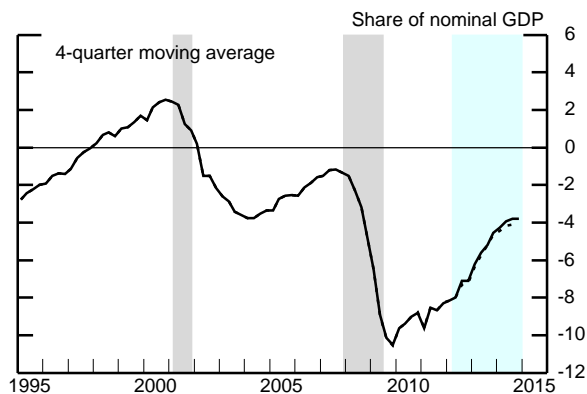
Source: U.S. Census Bureau.

Equipment and Software Spending



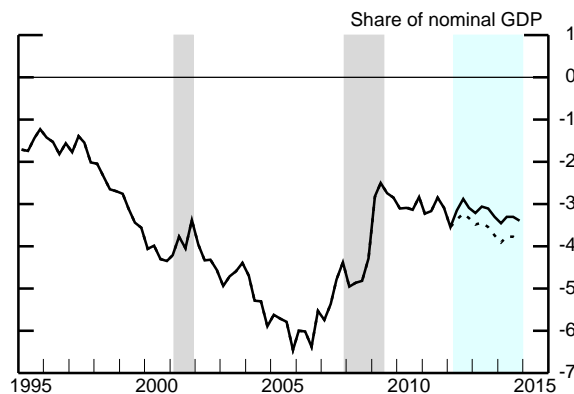
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

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.

average pace of 4½ percent over the medium term, supported by a pickup in the pace of U.S. economic activity that more than offsets the drag stemming from a depreciating dollar. Overall, we expect net trade to make small negative contributions to real GDP growth next year and in 2014; this drag is slightly less than in the previous Tealbook due to the lower path for the exchange value of the dollar.

Despite the fact that many large firms have ample cash on hand and ready access to capital markets, lackluster demand and uncertainty about sales prospects appear to be restraining businesses' capital spending plans. Moreover, until the recovery is clearly on a stronger footing, the business sector as a whole will likely remain cautious. We therefore continue to expect expenditures on E&S to strengthen only gradually over the medium term, rising 5 percent in 2013 before stepping up to a growth rate of about 7 percent in 2014, as economic conditions and business sentiment continue to improve.

Many of these same factors are holding back business investment in nonresidential structures (other than drilling and mining). In addition, with persistently high vacancy rates and continued tight conditions for construction and development loans, we expect real construction spending to be about flat next year and to manage only small gains in 2014. In contrast, investment in drilling and mining is expected to rise over the medium term following its decline this year, as the new horizontal drilling techniques are further deployed.

Although the incoming data point to an ongoing improvement in housing activity, the recovery in this sector is still expected to be meager. Historically low mortgage rates would normally be expected to bolster home purchases and lead to a significant increase in new construction over the medium term. However, the ongoing difficulties faced by many households in accessing mortgage credit, coupled with lingering uncertainty about employment and income prospects, are likely to materially restrain the impetus from low mortgage rates. In addition, the flow of homes from foreclosure into the resale market is expected to remain substantial, thus limiting the demand for new construction. Accordingly, we project single-family housing starts to rise only gradually over the forecast period to an annual rate nearing 750,000 units by the end of 2014.

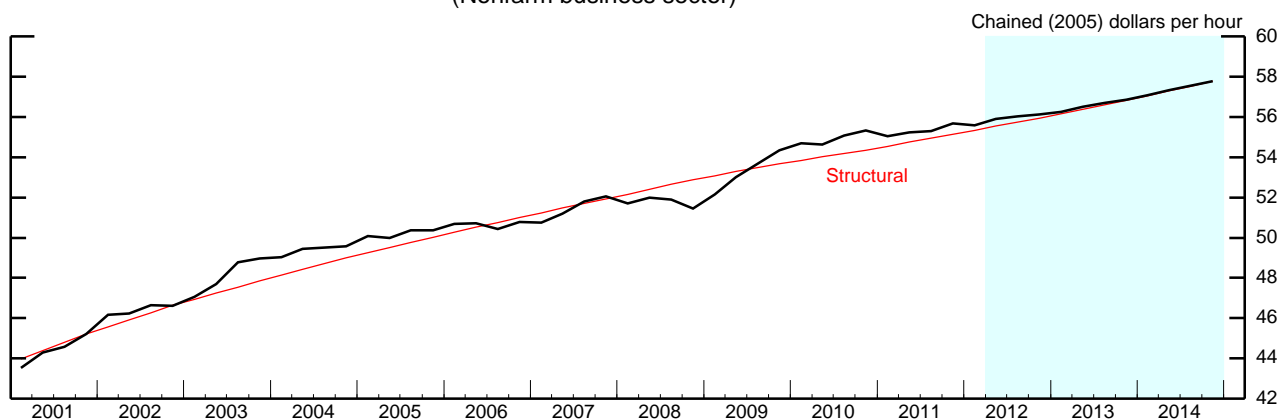
**Decomposition of Potential GDP**  
(Percent change, Q4 to Q4, except as noted)

| 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  |
| <i>Selected contributions<sup>1</sup></i> |           |           |           |      |      |      |      |
| 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        | .4   | .5   | .6   | .7   |
| Previous Tealbook                         | .7        | 1.5       | .7        | .5   | .5   | .6   | .7   |
| Multifactor productivity                  | .5        | .8        | 1.2       | .9   | .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  |

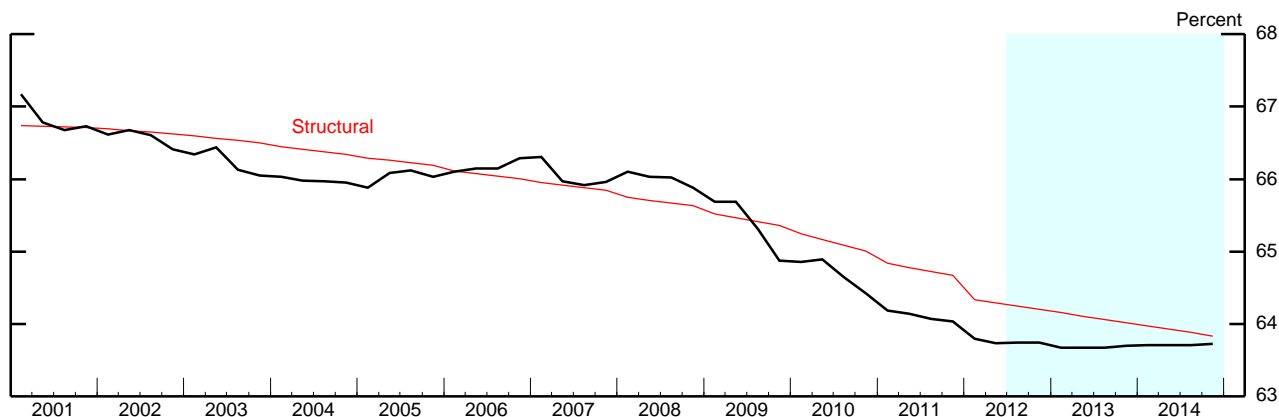
Note: Components may not sum to totals because of rounding. For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.

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.

## AGGREGATE SUPPLY, THE LABOR MARKET, AND INFLATION

### Potential GDP and the Natural Rate of Unemployment

We have made no material changes to our estimates of aggregate supply in this projection. We estimate that, after rising about  $1\frac{3}{4}$  percent this year, potential GDP will increase about 2 percent through 2014. We continue to assume that the natural rate of unemployment will remain at 6 percent through 2014.<sup>10</sup>

### Productivity and the Labor Market

Output per hour in the nonfarm business sector rose at an annual rate of about  $\frac{3}{4}$  percent in the first half of this year, roughly the same pace as in 2011 but somewhat faster than we had anticipated in the July Tealbook. We estimate that the level of labor productivity was about  $\frac{1}{2}$  percent above its structural trend in the second quarter, compared with no gap being shown in our previous forecast. We expect that this gap will essentially close over the projection period as labor productivity rises a bit less than its trend rate. The slower rise in labor productivity—around  $\frac{1}{4}$  percentage point per year less than in the July projection—occurs as firms bring their labor inputs into better alignment with their production needs by increasing hours and employment somewhat more quickly than in the July Tealbook.

The projected path for payroll employment also reflects the slightly faster increase in real GDP in this projection. In 2013, increases in private payroll employment are expected to average about 150,000 per month, a little greater than in the July Tealbook. As GDP growth moves well above its trend rate in 2014, private employment gains pick up to a more solid pace of around 225,000 per month. The employment gains we project for 2013 are still fairly modest, and the decline in the unemployment rate, from  $8\frac{1}{4}$  percent currently to 8 percent in the final quarter of next year, is mostly attributable to the expiration of the EUC program at the end of this year. The somewhat faster pace of hiring in 2014 brings down the unemployment rate to just above  $7\frac{1}{2}$  percent at the end of 2014.

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<sup>10</sup> We estimate that the boost to the “effective” natural rate of unemployment from the emergency and extended unemployment insurance programs has diminished and is worth only about  $\frac{1}{4}$  percentage point at present. This effect is expected to dissipate completely next year as these programs are fully wound down.



## 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           | .6   | .8   | .9   | 1.3  | 1.6  |
| Previous Tealbook                           | .4   | -.5  | 1.3  | 1.5  | 1.8  |
| Nonfarm private employment <sup>1</sup>     | 175  | 159  | 145  | 153  | 218  |
| Previous Tealbook                           | 175  | 159  | 110  | 122  | 200  |
| Labor force participation rate <sup>2</sup> | 64.0 | 63.7 | 63.7 | 63.7 | 63.7 |
| Previous Tealbook                           | 64.0 | 63.7 | 63.8 | 63.7 | 63.7 |
| Civilian unemployment rate <sup>2</sup>     | 8.7  | 8.2  | 8.3  | 8.0  | 7.6  |
| Previous Tealbook                           | 8.7  | 8.2  | 8.3  | 8.1  | 7.8  |
| Memo:<br>GDP gap <sup>3</sup>               | -4.4 | -4.4 | -4.6 | -4.1 | -3.1 |
| Previous Tealbook                           | -4.5 | -4.7 | -4.8 | -4.6 | -3.6 |

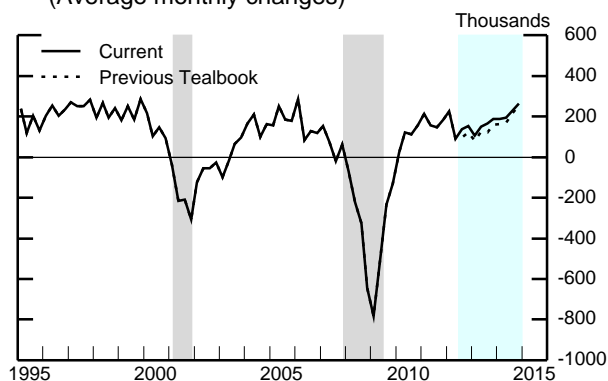
1. Thousands, average monthly changes.

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.

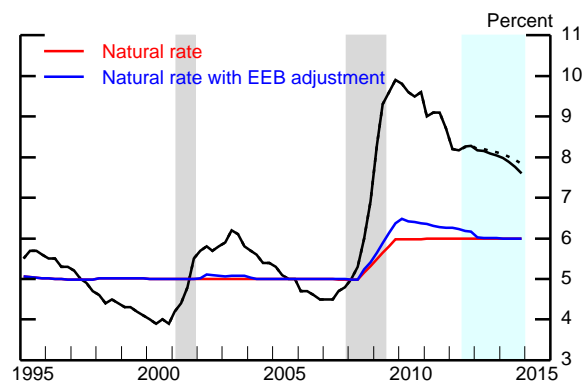
Source: U.S. Department of Labor, BLS; staff assumptions.

### Nonfarm Private Employment (Average monthly changes)



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

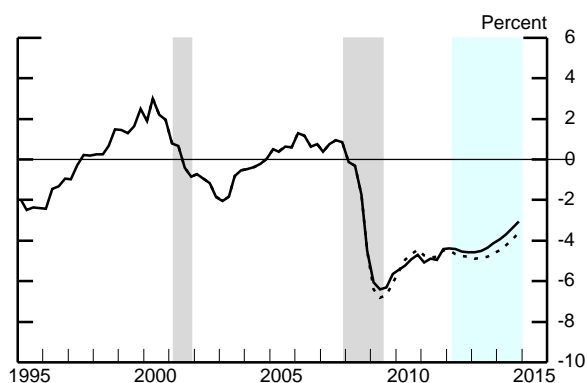
### Unemployment Rate



Note: The EEB adjustment is the staff estimate of the effect of extended and emergency unemployment compensation programs on the natural rate of unemployment.

Source: U.S. Dept. of Labor, BLS; staff assumptions.

### GDP Gap

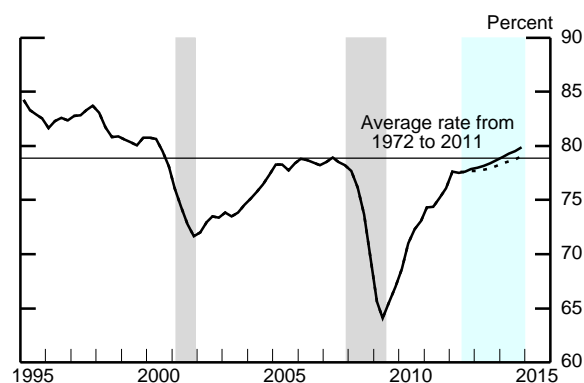


Note: The GDP gap is the percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential.

Source: U.S. Dept. of Commerce, BEA; staff assumptions.

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

### Manufacturing Capacity Utilization Rate



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

## Resource Utilization

Labor market slack remains considerable throughout the medium-term forecast, with the unemployment rate at the end of 2014 still 1½ percentage points above our estimate of the natural rate. The gap between actual and potential GDP narrows only slightly next year and does not begin to shrink perceptibly until 2014; real GDP at the end of 2014 is a bit more than 3 percent below our estimate of potential output.

From the end of 2007 through 2010, manufacturing capacity plunged about 6 percent, and it has increased only sluggishly since then. Notwithstanding some important conceptual differences between capacity utilization and the measures of resource utilization mentioned earlier, there appears to be less slack in the manufacturing sector currently than in the broader economy.<sup>11</sup> Indeed, capacity utilization in manufacturing in July, at 77.8 percent, was only 1 percentage point below its long-run average rate. Consequently, even as the amount of slack in the manufacturing sector and in the broader economy narrow at comparable rates over the rest of the projection period, the factory operating rate reaches its long-run average in early 2014 despite the still-sizeable GDP gap.

## Prices and Compensation

Overall inflation is expected to remain subdued over the projection period. A key factor influencing this projection is our assumption that inflation expectations will remain stable. Expectations for PCE price inflation over the next 10 years, as measured by the Survey of Professional Forecasters, were unchanged at 2.2 percent in the third quarter, whereas 10-year CPI inflation expectations edged down to 2.4 percent. In the Michigan survey for August, median 5-to-10-year expected inflation increased to 3 percent. However, we suspect that this increase stems from the recent rise in gasoline prices and is thus likely to be transitory, similar to the pattern we saw back in the spring; moreover, the latest reading is within the range in which this measure of inflation expectations has fluctuated over the past 10 years. The TIPS-based measure of inflation compensation over the next 5 years rose 20 basis points since the July Tealbook, and the measure for 5-to-10 years ahead rose 5 basis points.

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<sup>11</sup> 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 it.

### Inflation Projections

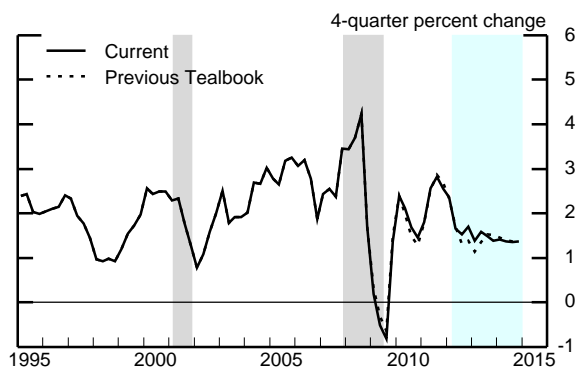
(Percent change at annual rate from final quarter of preceding period)

| Measure                                   | 2011 | 2012 |      | 2013 | 2014 |
|---|------|------|------|------|------|
|   |      | H1   | H2   |      |      |
| PCE chain-weighted price index            | 2.5  | 1.6  | 1.8  | 1.4  | 1.4  |
| Previous Tealbook                         | 2.7  | 1.7  | 1.1  | 1.5  | 1.4  |
| Food and beverages                        | 5.1  | 1.0  | 2.4  | 2.6  | .9   |
| Previous Tealbook                         | 5.2  | 1.0  | 2.7  | 2.4  | .9   |
| Energy                                    | 11.9 | -3.3 | 6.3  | -3.4 | -2.2 |
| Previous Tealbook                         | 12.8 | -3.4 | -6.7 | -1.2 | -1.7 |
| Excluding food and energy                 | 1.7  | 2.0  | 1.4  | 1.6  | 1.6  |
| Previous Tealbook                         | 1.8  | 2.1  | 1.5  | 1.6  | 1.6  |
| Prices of core goods imports <sup>1</sup> | 4.3  | .5   | -1.1 | 1.1  | 1.4  |
| Previous Tealbook                         | 4.3  | 1.1  | -.5  | 1.1  | 1.4  |

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

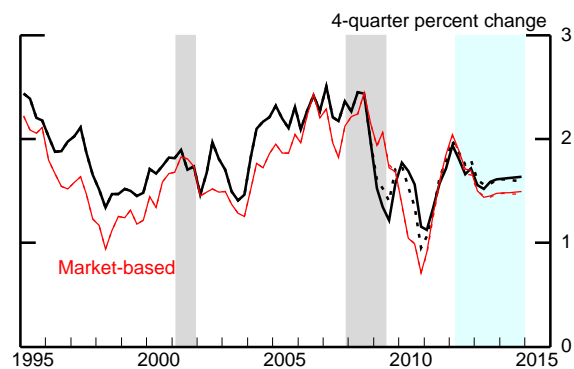
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Total PCE Prices



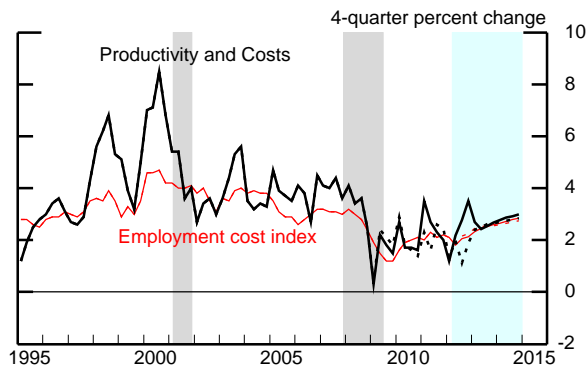
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

PCE Prices ex. Food and Energy



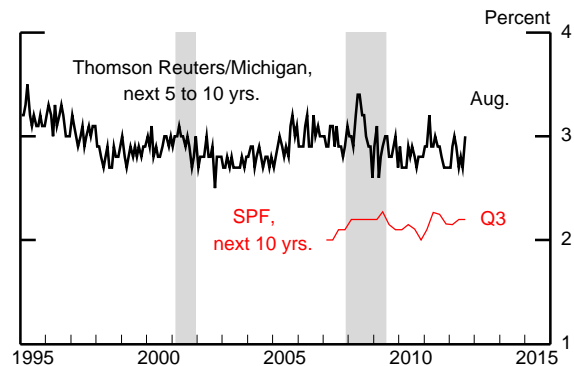
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

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/Michigan, next 5 to 10 yrs. Aug. SPF, next 10 yrs. Q3

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

Another important element contributing to the low rates of inflation in this projection is import prices. Prices of imported core goods are expected to decrease at a 1 percent annual rate in the second half of this year, a decline that is about  $\frac{1}{2}$  percentage point larger than in the July projection, reflecting the lagged effects of previous declines in commodity prices and past dollar appreciation. For the remainder of the forecast period, core import price inflation is expected to run at a  $1\frac{1}{4}$  percent pace, unchanged from the previous Tealbook.

These factors and the still-considerable underutilization in labor and product markets expected over the medium term lead us to project core inflation of 1.6 percent in both 2013 and 2014, rates that are the same as the previous projection. Meanwhile, total PCE inflation is projected to run a little below core over the medium term, as the anticipated declines in crude oil prices put downward pressure on retail energy prices. In 2015, inflation is expected to edge up, as resource utilization increases.

In our projection, persistent labor market slack, stable inflation expectations, and low rates of price inflation restrain gains in our forecast for hourly compensation. Both the nonfarm hourly compensation measure and the employment cost index are projected to rise at or a bit below 3 percent in 2013 and in 2014.

## 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 in 2015 through 2017. However, as the time when normalization of the portfolio draws nearer, this downward pressure diminishes, which contributes to the rise in the 10-year Treasury yield. Beyond 2017, the process of portfolio normalization should be essentially completed.

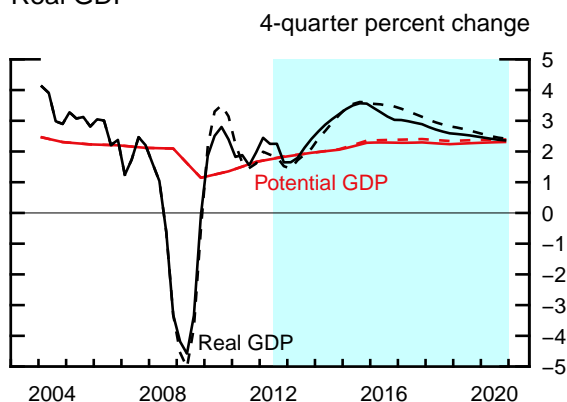
**The Long-Term Outlook**

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

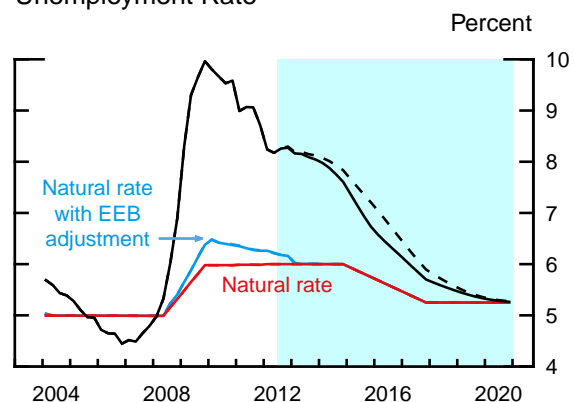
| Measure                                 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|------|------|------|------|------|------|
| Real GDP                                | 1.6  | 2.4  | 3.2  | 3.6  | 3.0  | 2.9  |
| Previous Tealbook                       | 1.5  | 2.1  | 3.2  | 3.6  | 3.5  | 3.1  |
| Civilian unemployment rate <sup>1</sup> | 8.3  | 8.0  | 7.6  | 6.7  | 6.2  | 5.7  |
| Previous Tealbook                       | 8.3  | 8.1  | 7.8  | 7.2  | 6.5  | 5.9  |
| PCE prices, total                       | 1.7  | 1.4  | 1.4  | 1.5  | 1.8  | 1.9  |
| Previous Tealbook                       | 1.4  | 1.5  | 1.4  | 1.6  | 1.7  | 1.8  |
| Core PCE prices                         | 1.7  | 1.6  | 1.6  | 1.7  | 1.8  | 1.9  |
| Previous Tealbook                       | 1.8  | 1.6  | 1.6  | 1.7  | 1.7  | 1.8  |
| Federal funds rate <sup>1</sup>         | .1   | .1   | .6   | 2.1  | 2.9  | 3.5  |
| Previous Tealbook                       | .1   | .1   | .4   | 1.5  | 2.6  | 3.3  |
| 10-year Treasury yield <sup>1</sup>     | 1.9  | 3.0  | 3.7  | 4.2  | 4.3  | 4.4  |
| Previous Tealbook                       | 1.7  | 2.9  | 3.5  | 3.8  | 4.0  | 4.2  |

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

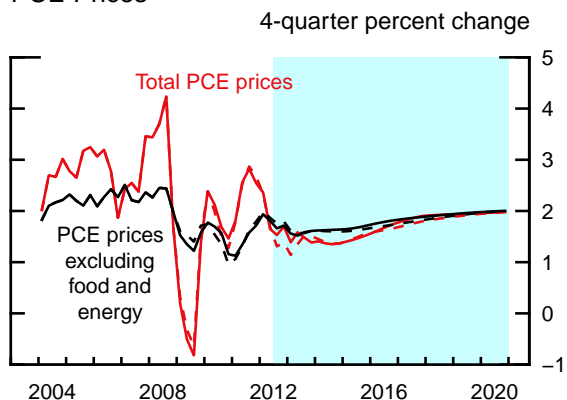
Real GDP



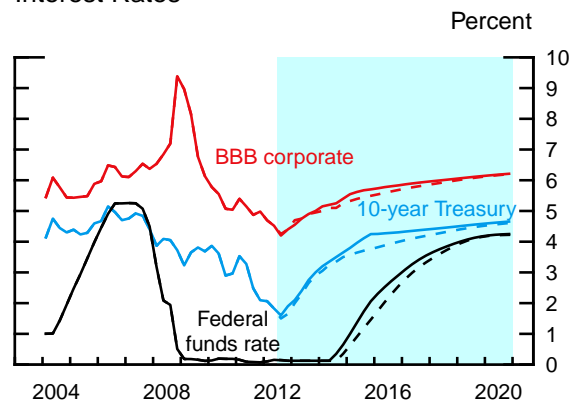
Unemployment Rate



PCE Prices



Interest Rates



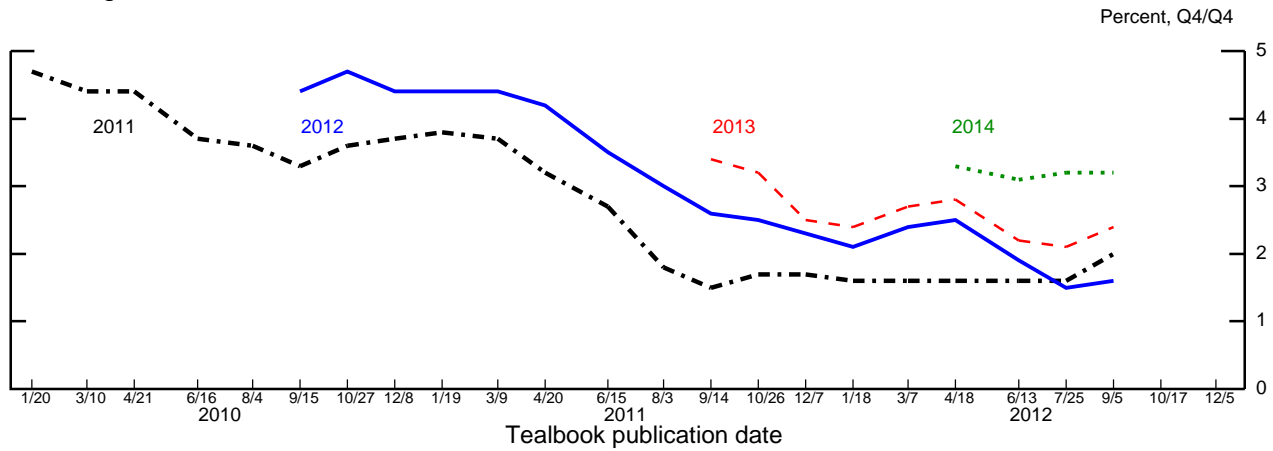
Note: In each panel, shading represents the projection period, and dashed lines are the previous Tealbook.

- Risk premiums on corporate equities and bonds decrease gradually to normal levels, and financial institutions further ease their lending standards.
- The federal budget deficit (measured on a NIPA basis) narrows a bit further to  $3\frac{3}{4}$  percent of GDP in 2015 but widens thereafter, reflecting fast-rising transfer payments for retirement and health-care programs. Federal debt increases from around 75 percent of GDP in 2015 to 80 percent by the end of the decade.
- The real foreign exchange value of the dollar depreciates  $2\frac{1}{4}$  percent per year in 2015 through 2017; thereafter, the pace of depreciation tapers off. The price of crude oil edges down in 2015 and 2016 and then holds steady in real terms. Foreign real GDP growth rises slightly to a  $3\frac{1}{2}$  percent pace in 2015 and then declines very gradually to a 3 percent annual rate late in the decade.
- The natural rate of unemployment declines from 6 percent in the fourth quarter of 2014 to  $5\frac{1}{4}$  percent at the end of 2017 as conditions in the labor market continue to improve, and it remains at that level in the long run. Potential GDP increases at an average annual rate of about  $2\frac{1}{4}$  percent in 2015 through the end of the decade.

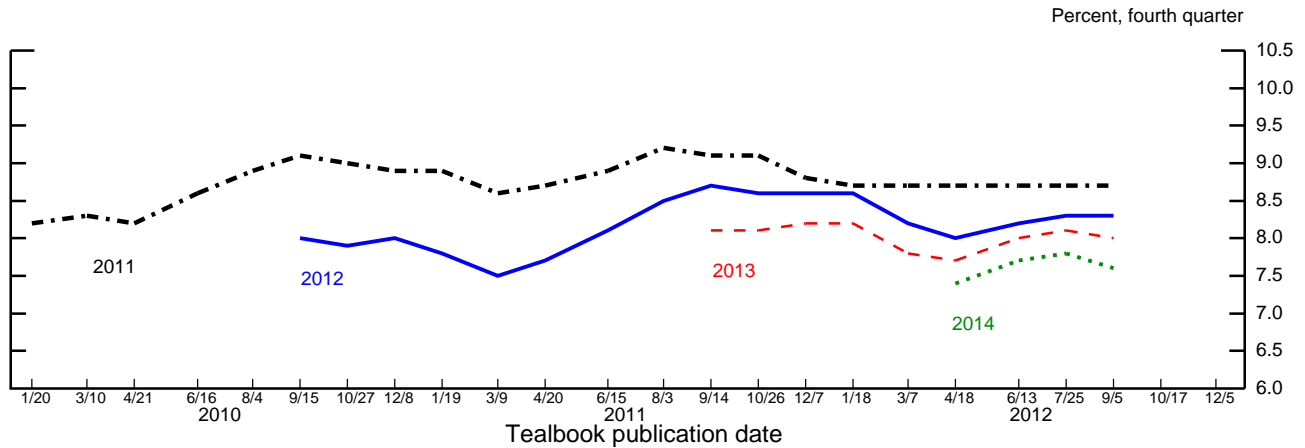
The economy is projected to enter 2015 with output still below its potential level, unemployment above its assumed natural rate, and inflation below the long-run objective of the Committee. In the staff's long-term forecast, further improvements in household and business confidence, diminishing uncertainty, and supportive financial conditions enable real GDP to rise at an average annual rate of more than 3 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  $5\frac{3}{4}$  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. Late in the decade, the economy converges to an unemployment rate near its long-run natural rate, an inflation rate at the Committee's longer-term objective, and a nominal federal funds rate of  $4\frac{1}{4}$  percent.

## Evolution of the Staff Forecast

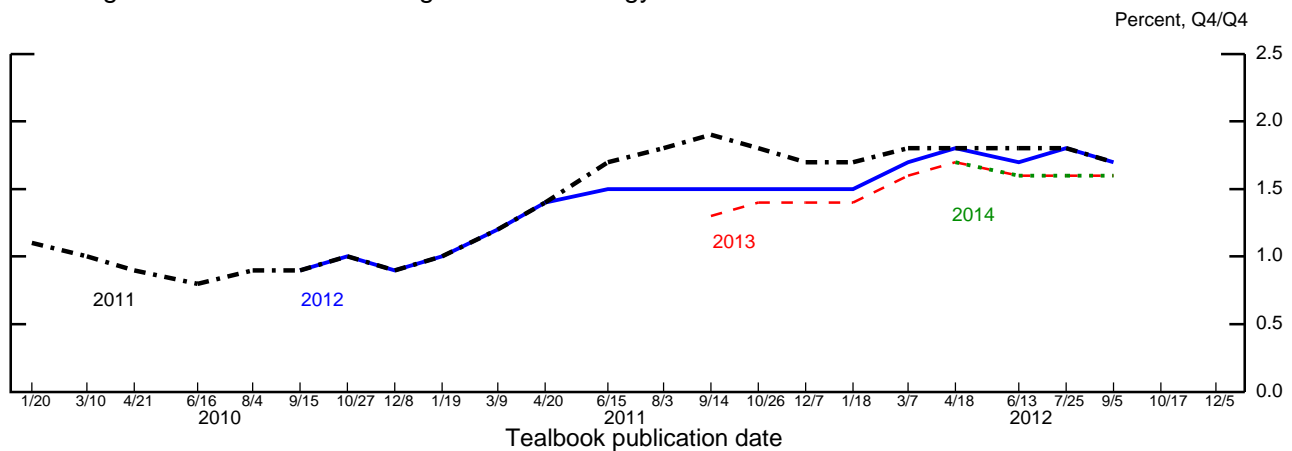
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy



## International Economic Developments and Outlook

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Foreign economic growth slowed to an annual rate of 2¼ percent in the second quarter, and we see foreign growth remaining at this subdued pace in the second half of this year, restrained by ongoing financial and fiscal stresses in Europe and a relatively weak U.S. economy. In 2013, as the euro-area recession is projected to end, aggregate foreign growth is forecast to edge up to 2¾ percent, a touch below its trend pace. It rises further to 3¼ percent in 2014 as the euro-area economy starts growing and the U.S. expansion picks up strength. This projection is little changed from that in the previous Tealbook. We marked up our forecast of growth in the euro area, where policy developments have been more positive and financial conditions improved somewhat over the intermeeting period. However, we made downward revisions to near-term growth in many other foreign economies, where recent data have been weaker than we had expected.

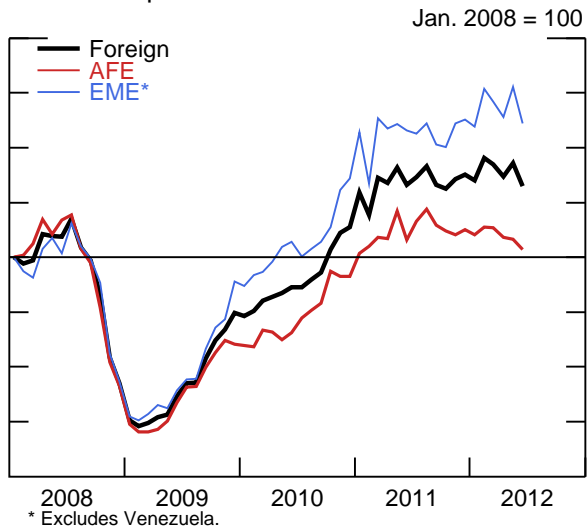
In the euro area, real GDP fell in the second quarter and more recent data point to a further decline in the second half of this year. However, recent policy developments have been more promising. Since the close of the July Tealbook, the European Central Bank (ECB) has indicated a stronger commitment than was anticipated to resolve the crisis, likely through secondary-market purchases of peripheral sovereign debt, and officials in Spain and Italy have signaled that they may consider requesting external assistance. In response, financial market sentiment has generally improved, and although some of this improvement may well be reversed as European leaders struggle to implement these measures, we nevertheless anticipate that financial stresses in the next several quarters will be somewhat less pronounced than we assumed in the July Tealbook. By next year, we assume financial tensions will start to ease on a more sustained basis amid further progress on the reform agenda, but full normalization of market conditions will likely take years to achieve.

Notwithstanding these improvements, the foreign outlook remains very uncertain. The risk of a much more severe intensification of the crisis remains serious. Conversely, if European leaders act forcefully, market conditions could improve more rapidly than we

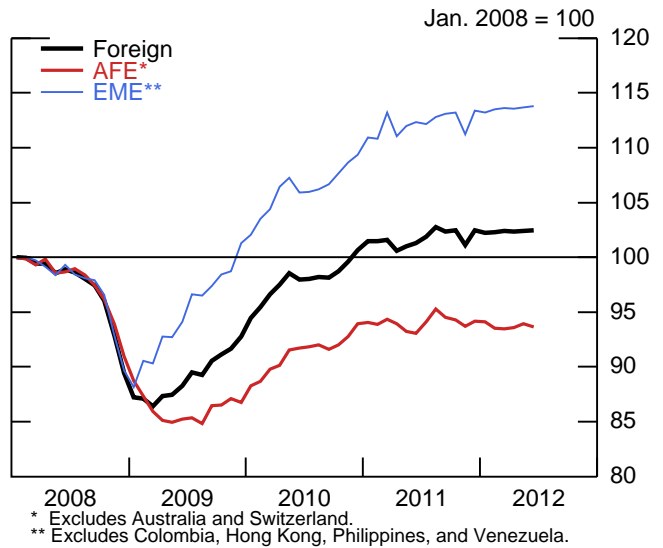


## Recent Foreign Indicators

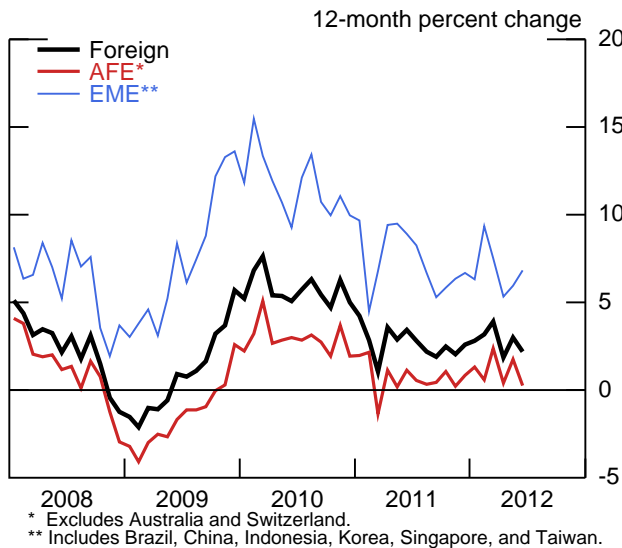
### Nominal Exports



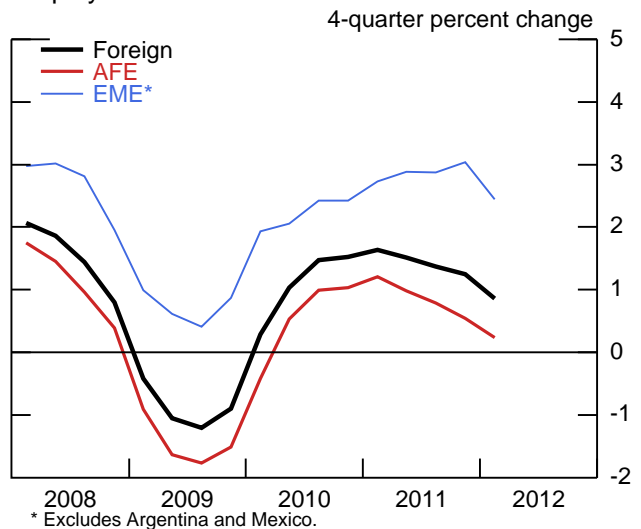
### Industrial Production



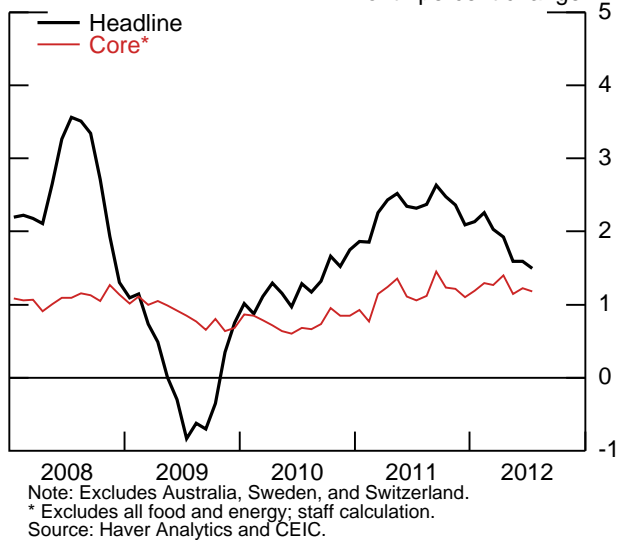
### Retail Sales



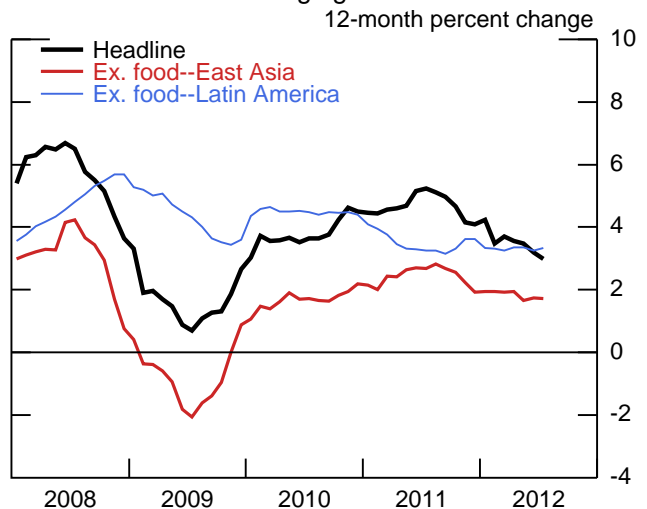
### Employment



### Consumer Prices: Advanced Foreign Economies



### Consumer Prices: Emerging Market Economies



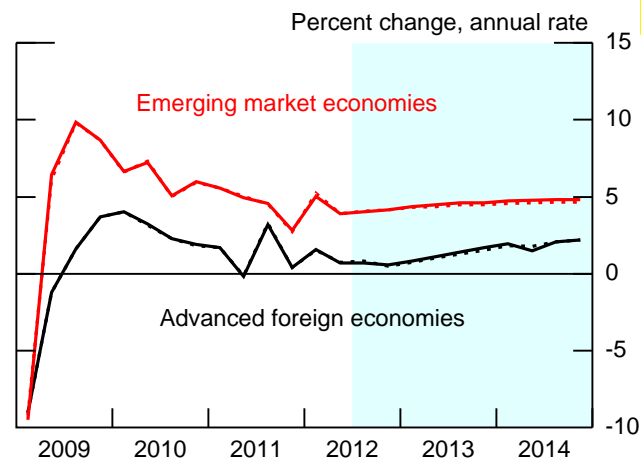
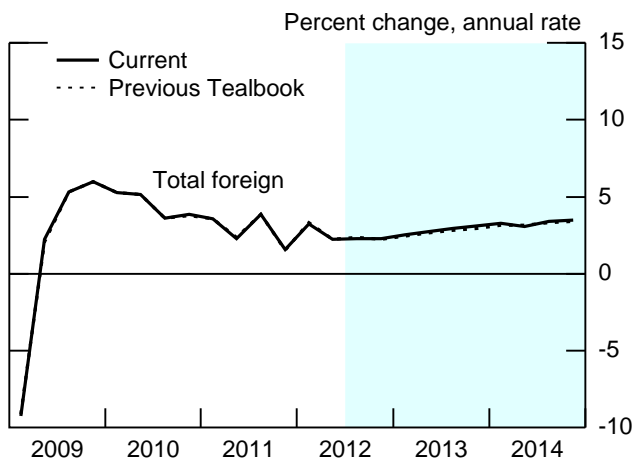
## The Foreign Outlook

(Percent change, annual rate)

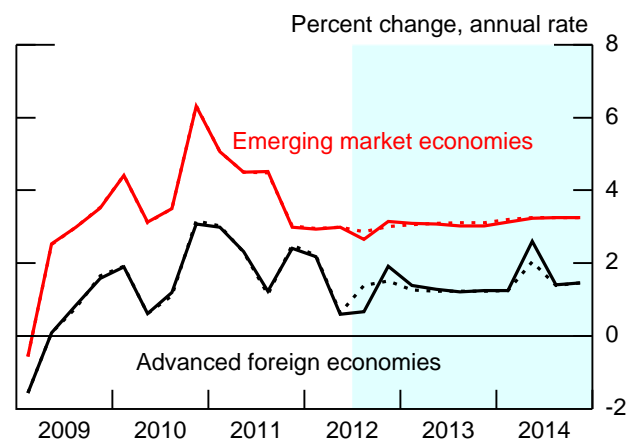
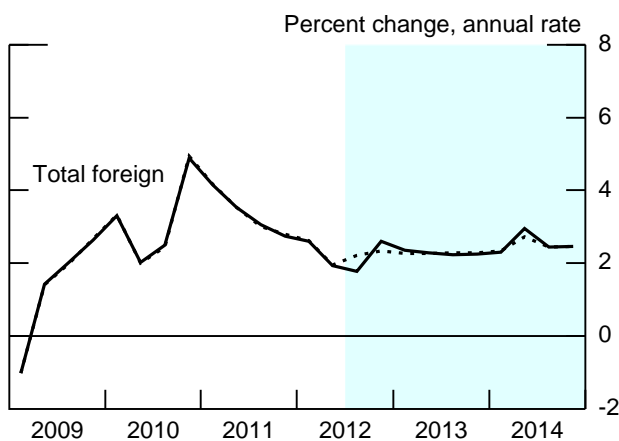
|                            | 2011 | 2012 |     |     |     | 2013 |     |     | 2014 |
|----------------------------|------|------|-----|-----|-----|------|-----|-----|------|
|                            |      | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  | H2  |      |
| <b>Real GDP</b>            |      |      |     |     |     |      |     |     |      |
| Total foreign              | 2.8  | 3.2  | 2.3 | 2.3 | 2.3 | 2.5  | 2.7 | 3.0 | 3.3  |
| Previous Tealbook          | 2.8  | 3.3  | 2.3 | 2.4 | 2.2 | 2.5  | 2.6 | 2.9 | 3.2  |
| Advanced foreign economies | 1.3  | 1.6  | .7  | .7  | .6  | .8   | 1.1 | 1.5 | 1.9  |
| Previous Tealbook          | 1.3  | 1.5  | .7  | .8  | .5  | .7   | 1.0 | 1.4 | 2.0  |
| Emerging market economies  | 4.5  | 5.0  | 3.9 | 4.0 | 4.1 | 4.4  | 4.5 | 4.6 | 4.8  |
| Previous Tealbook          | 4.5  | 5.2  | 3.9 | 4.1 | 4.2 | 4.3  | 4.4 | 4.5 | 4.6  |
| <b>Consumer Prices</b>     |      |      |     |     |     |      |     |     |      |
| Total foreign              | 3.4  | 2.6  | 1.9 | 1.8 | 2.6 | 2.3  | 2.3 | 2.2 | 2.5  |
| Previous Tealbook          | 3.4  | 2.6  | 2.0 | 2.2 | 2.3 | 2.3  | 2.3 | 2.3 | 2.5  |
| Advanced foreign economies | 2.2  | 2.2  | .6  | .7  | 1.9 | 1.4  | 1.3 | 1.2 | 1.7  |
| Previous Tealbook          | 2.2  | 2.2  | .6  | 1.4 | 1.5 | 1.3  | 1.2 | 1.2 | 1.5  |
| Emerging market economies  | 4.3  | 2.9  | 3.0 | 2.7 | 3.2 | 3.1  | 3.1 | 3.0 | 3.2  |
| Previous Tealbook          | 4.3  | 3.0  | 3.0 | 2.9 | 3.0 | 3.1  | 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



expect, posing some upside risk. Outside of Europe, both a resurgence in oil prices and a sharp deceleration in Chinese activity pose downside risks to global growth.<sup>1</sup>

Amid subdued economic growth and declines in crude oil prices, foreign headline inflation slowed to just under 2 percent at an annual rate in the second quarter and 1¾ percent in the third. By next quarter, as the recent run-up in crude oil prices shows through to retail energy prices, foreign inflation should pick up to a little above 2½ percent. Thereafter, foreign inflation is expected to average just below this pace, little changed from our previous Tealbook forecast.

Most major foreign central banks left monetary policies unchanged during the intermeeting period. With subdued inflation and weak growth prospects, we expect some central banks, such as the ECB, the People's Bank of China, and the Bank of England (BOE), to ease monetary policy in the coming months.

## ADVANCED FOREIGN ECONOMIES

Real GDP growth in the advanced foreign economies (AFE) slowed from 1.6 percent in the first quarter to 0.7 percent in the second. We expect growth to remain near this subdued pace in the second half of the year, as the euro-area recession deepens and activity decelerates in Japan. Growth in the AFEs should pick up to 1¼ percent in 2013 and nearly 2 percent in 2014, with the euro-area recession abating and global economic conditions slowly improving. This forecast is little changed from the July Tealbook, as some upward revision to the euro-area forecast is offset by downward revisions elsewhere in the advanced economies, where recent data indicate less momentum.

Headline inflation in the AFEs dipped to 0.6 percent in the second quarter from 2.2 percent in the first, with especially large declines in Canada, where retail energy prices fell, and Japan, where domestic food prices plunged. Data suggest that AFE inflation remained subdued at around ¾ percent in the third quarter, but the recent run-up in oil prices is expected to help push up inflation to nearly 2 percent in the fourth quarter, ½ percentage point higher than we previously expected. Thereafter, our projection is

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<sup>1</sup> For further discussions, see the "European Crisis with Severe Spillovers," "Faster European Recovery," and "Higher Oil Prices" scenarios in the Risks and Uncertainty section of this Tealbook, and the "Hard Landing in China" scenario in the July Tealbook.

little changed from that in the July Tealbook, with AFE inflation at 1¼ percent in 2013 and rising to a still-modest 1¾ percent in 2014 as economic conditions improve and Japan hikes its consumption tax.

## **Euro Area**

Euro-area GDP declined 0.7 percent at an annual rate in the second quarter, and recent data suggest further weakening in the current quarter. PMIs remained firmly in contractionary territory in July and August, and business and consumer confidence worsened. In addition, the unemployment rate was at a record 11.3 percent in June and July. Accordingly, we expect the euro-area recession to deepen, with real GDP contracting at a pace of almost 1¼ percent in the second half of this year. In 2013, the recession ends, but output stagnates, as continued financial stresses, fiscal consolidation, and other headwinds weigh on the recovery. By 2014, these headwinds diminish, and, with monetary policy remaining accommodative, growth for the year picks up to 1¼ percent.

As bleak as this forecast is, it is about ¼ percentage point stronger than in the July Tealbook over the next year and a half. This upward revision primarily reflects policy developments since the July Tealbook, which have reduced financial tensions and suggest that European policymakers could act somewhat earlier and more proactively to resolve the crisis than we had previously anticipated. (See the box “Recent Developments in the Euro Area.”) Most importantly, ECB President Mario Draghi has indicated that the ECB is prepared to resume secondary-market purchases of peripheral sovereign debt, provided the governments first agree to policy conditionality sufficient to allow the European financial rescue facilities to join in the support. In addition, leaders in Spain and Italy have signaled that they would consider requesting external assistance.

In the coming months, we anticipate that markets will remain volatile and may well give back some of their recent gains as debates on the scope and implementation of the ECB’s bond purchase strategy continue, Spain and Italy struggle to meet fiscal targets, and negotiations heat up between Greece and its official creditors on the country’s adjustment program. However, we now expect European authorities to provide assistance with more limited conditionality and, thus, less stigma than was the case in previous rescue programs. Accordingly, we expect Spain (and perhaps Italy) to more readily request assistance in response to a heightening of financial pressures, thereby

## Recent Developments in the Euro Area

Lately, financial stresses in the euro area have lessened amid expectations of more forceful action by the European Central Bank (ECB), of progress toward a European banking union, and of more constructive negotiations between Greece and its official creditors. However, plans for ECB operations and the banking union have yet to be fleshed out. In addition, the permanent European financial backstop is still not operational, leaving financial markets vulnerable to negative developments.

An important factor contributing to the easing of financial tensions since late July has been the expectation that the ECB will again intervene in sovereign debt markets. ECB President Draghi stated in a speech on July 26 that “within our mandate, the ECB is ready to do whatever it takes to preserve the euro.”<sup>1</sup> In the week following this speech, Italian and Spanish 2-year sovereign yields declined about 120 basis points and 150 basis points, respectively (see figures on the following page).

On August 2, after a meeting of the ECB Governing Council, President Draghi offered the broad outlines of a new intervention framework. The ECB might purchase sovereign debt in secondary markets, but only if the beneficiary government first obtains a financial assistance program from the European Financial Stability Facility (EFSF) or the European Stability Mechanism (ESM), submits to “strict and effective conditionality” and policy monitoring under this program, and adheres to its policy commitments. President Draghi also noted that the ECB’s purchases of sovereign debt will focus on the shorter end of the yield curve. In addition, he suggested that the ECB will divulge the country breakdown as well as the aggregate amount of its bond purchases. Finally, the ECB will address concerns about its seniority vis-à-vis private creditors, which is viewed as damping investor interest in sovereign debt.

However, it remains unclear whether intervention will aim (implicitly if not explicitly) to cap spreads or yields and how much the ECB will be willing to purchase to achieve its aims. The extent of policy conditionality and monitoring required is also unclear. Some ECB officials might prefer stricter conditionality in order to mitigate moral hazard, but that would also increase stigma and thus make the Italian and Spanish governments less likely to request assistance. At present, these governments are awaiting further clarity on the terms and preconditions for EFSF–ESM financial assistance and ECB intervention. Negotiations over these issues are likely to drag on for some time and could be more complicated if the German Constitutional Court determines the law authorizing Germany’s participation in the ESM to be unconstitutional (a provisional ruling is expected on September 12). Were these negotiations to break down so that chances of ECB intervention dwindled, that would likely substantially disrupt financial markets.

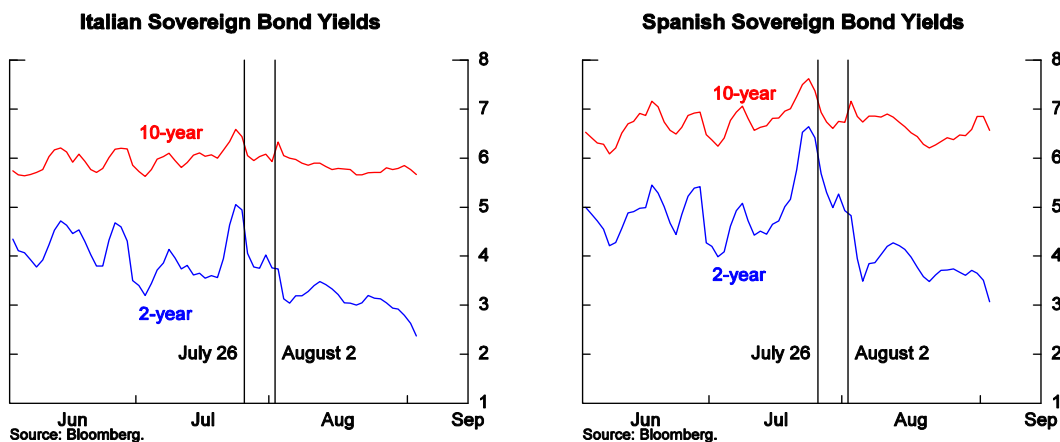
In addition to considering requesting general financial support from the EFSF or ESM, Spain is also implementing its existing EFSF–ESM program to recapitalize its banks. On August 31, Spain approved a new law that strengthens its bank restructuring and resolution framework and establishes a “bad bank” to be a repository of troubled assets. Also, one of Spain’s

<sup>1</sup> Speech by Mario Draghi at the Global Investment Conference in London, July 26, 2012. [www.ecb.int/press/key/date/2012/html/sp120726.en.htm](http://www.ecb.int/press/key/date/2012/html/sp120726.en.htm).

largest banks, BFA-Bankia, revealed larger-than-expected losses, immediately prompting the Spanish government to announce a bridge recapitalization pending a more comprehensive resolution of BFA-Bankia's problems. It remains uncertain how the costs of restructuring BFA-Bankia and other banks will be shared among private shareholders, creditors, and the Spanish government.

With vulnerable euro-area banks in the spotlight, markets are anticipating the European Commission's proposal for a European banking union (expected in mid-September). A single supervisory mechanism for European banks is a prerequisite for the ESM to directly recapitalize euro-area banks (at present, the EFSF and ESM can only recapitalize banks indirectly via loans to governments, which further increase sovereign debt burdens) and is also expected to precede the creation of euro-area-wide deposit insurance and bank resolution funds. European authorities envision a centralized supervisory structure where the ECB will have the necessary powers for supervising euro-area banks but will delegate day-to-day financial supervision to national authorities and relevant agencies. European officials hope that establishment of the supervisory mechanism can begin in January 2013, but there is significant uncertainty regarding the implementation and timing of this initiative.

Finally, investor concerns about Greece have moderated recently as the near-term prospects for Greece's financial assistance program have improved. The new Greek government has been working to reinvigorate the austerity and reform initiatives that stalled before elections this spring, and Greece's official creditors appear willing to provide some time for these efforts to bear fruit. In early August, the ECB increased the amount of Greek Treasury bills the Bank of Greece can accept as collateral in exchange for emergency liquidity assistance loans. This increase enabled the Greek government to sell additional bills to the country's banks and to use the proceeds to redeem €3.2 billion of maturing bonds owned primarily by the ECB. Provided the Greek government continues to make progress, we expect its official creditors to approve another long-delayed disbursement of EFSF and IMF funds in October. More generally, we expect European policymakers to defer for some time the more difficult decisions regarding Greece (such as whether to expand Greece's package of financial assistance). However, the longer-term prospects for Greece's program and euro-area membership remain highly uncertain.



leading any deterioration in financial conditions to be smaller and less persistent than we assumed in the July Tealbook.

By next year, we assume financial stresses will start to ease on a more sustained basis, but this assumption depends on further progress in other areas of Europe's policy agenda. We anticipate that Greece and its official creditors will reach agreement that unlocks the next aid disbursement some time this fall, thereby providing European leaders with some breathing room to strengthen the backstops against a Greek exit. European leaders will likely further advance their plans for fiscal and financial union. Finally, peripheral governments will continue to implement budget cuts and structural reforms. However, progress in all of these areas will be difficult and slow, and so strains will remain elevated for a considerable period.

We expect euro-area inflation to rise to 2¼ percent in the third quarter from about 2 percent in the second quarter, boosted in part by rising energy prices. Against a backdrop of weak growth throughout the forecast horizon, we expect inflation to fall to 1½ percent in 2013 and 2014. This path is roughly unchanged from that in the July Tealbook.

At its August meeting, the ECB left its benchmark policy rate unchanged at 0.75 percent, signaled readiness to use further nonstandard policy measures, and began to define a framework for intervention in secondary bond markets. We still expect the ECB to further enhance its liquidity support to banks and to reduce its main policy rate to 0.5 percent in the near term, possibly as early as at its September 6 meeting.

## United Kingdom

The U.K. economy shrank 1.8 percent at an annual rate in the second quarter, the third consecutive quarterly decline. Temporary factors, including the loss of a working day during the Queen's Diamond Jubilee, contributed to the contraction in the second quarter, but ongoing fiscal consolidation and negative spillovers from the euro-area crisis are also restraining economic activity. Moreover, survey indicators point to further weakness in the near term. Notably, the manufacturing PMI remained in contractionary territory and confidence indicators stood at low levels through August. Accordingly, despite the upward revision to the euro-area outlook, we marked down U.K. GDP growth a bit over the forecast period. We now see the U.K. economy expanding at a modest



1¼ percent average rate in the second half of 2012, partly because of a temporary boost from the Olympics, before picking up to 2¼ percent by 2014.

After having dipped from 2 percent in the first quarter to 1.1 percent in the second, we expect U.K. inflation to rise to slightly above 3 percent in the second half of this year, boosted by the recent rise in oil prices and a planned increase in tuition fees. Thereafter, inflation should settle just below 1¾ percent, restrained by ample resource slack. Given the economy's slower growth prospects, we expect the BOE to increase its quantitative easing program by £50 billion to £425 billion (28 percent of GDP) this fall, £25 billion more than assumed in the July Tealbook. Monetary policy conditions should remain exceptionally accommodative, with no asset sales or hikes in the Bank Rate from its current level of 0.5 percent expected over the forecast period.

## Japan

Japanese real GDP growth slowed from 5.5 percent in the first quarter to 1.4 percent in the second. This slowdown, which reflected softer exports and private consumption, was nearly 1 percentage point sharper than we had anticipated. The effect of the fiscal stimulus that had boosted growth in the first half of the year is rapidly fading, and recent economic indicators have been decidedly weaker than we had expected. In July, retail sales, exports, and industrial production dropped sharply, and in August, the manufacturing PMI fell to its lowest level since the aftermath of the March 2011 earthquake and tsunami. Thus, we revised down our forecast of third-quarter growth to negative ½ percent. Japanese GDP should start growing again beginning next quarter and accelerate to a 1½ percent pace by the end of 2013, supported by the recent depreciation of the yen and a gradual recovery of the global economy. In 2014, we expect growth to slow to ¾ percent in response to the planned consumption tax hike.

Japanese consumer prices declined 1 percent in the second quarter, largely reflecting a drop in retail food prices. Core prices, however, were little changed, suggesting that Japan continued to slowly exit from deflation. We now expect consumer prices to be about flat in 2013 before rising 1¾ percent in 2014, boosted by the 3 percentage point hike in the consumption tax rate. The Bank of Japan (BOJ) kept policy on hold at its August meeting. However, amid persistent output slack and inflation that remains below their 1 percent goal, we continue to assume that the BOJ will expand its asset purchase program by a further ¥20 trillion (about 4 percent of GDP) starting later this year.



## Canada

Canada's real GDP rose 1¾ percent in the second quarter, about the same pace as in the previous two quarters, and in line with our previous forecast. Recent data are a touch weaker than we had expected. Retail sales ebbed in June. In July, the unemployment rate inched up to 7.3 percent, while the manufacturing PMI slipped a bit but remained in expansionary territory. Accordingly, we marked down Canadian GDP growth slightly in the second half of this year, to 1¾ percent. We continue to see GDP expanding at about 2 percent in 2013, with growth picking up to 2½ percent in 2014 as global economic conditions improve.

Canadian consumer prices unexpectedly fell for the third straight month in July, led by declines in the prices of energy, clothing, and footwear, driving our forecast for third-quarter inflation down into negative territory. Next quarter, we project that the pass-through of the recent oil prices increases will push up inflation to 2½ percent, ½ percentage point higher than in the July Tealbook. Thereafter, our inflation forecast is little changed near 2 percent in 2013 and 2014. Given modest inflation prospects, we anticipate, as in the previous Tealbook, that the Bank of Canada will keep its target for the overnight rate at 1 percent until mid-2014.

## EMERGING MARKET ECONOMIES

With nearly all of the real GDP data in hand, we now estimate that growth in the emerging market economies (EMEs) slowed to an annual rate of 4 percent in the second quarter, a little below our estimate of trend growth, and about in line with our July Tealbook forecast. Indicators for the third quarter are generally coming in somewhat weaker than we had expected, including in China, with exports showing particular weakness. Mexico is an important exception, with overall third-quarter indicators, including the PMI and consumer confidence, continuing to show surprising strength. All told, we project economic activity in the EMEs to continue expanding at about a 4 percent pace in the second half of this year, down slightly from the July Tealbook, with somewhat faster-than-anticipated economic growth in Mexico (which has a high weight in our EME aggregate) partially offsetting slower-than-expected growth in most other countries.

Looking further ahead, real GDP growth in the EMEs is expected to pick up to about 4¾ percent by 2014, supported by the end of the recession in Europe and an acceleration of the recovery in the United States. This forecast is a touch higher than in

the July Tealbook, primarily reflecting an upward revision to Mexican growth based on a more upbeat outlook for U.S. manufacturing production. However, as we have highlighted in the past several Tealbooks, there are a number of important downside risks to the outlook for the EMEs, including a significant deterioration of the situation in Europe, a sharp slowing of the U.S. economy, and a hard landing in China.

We project that headline inflation in the EMEs slowed from 3 percent in the second quarter to 2¾ percent in the third quarter, with a decline in inflation in Asia more than offsetting an increase in Latin America. We expect aggregate EME inflation to rise to 3¼ percent in the fourth quarter and remain at about that rate thereafter. This projection is a little higher over the next quarter than in the previous Tealbook, owing mainly to recent increases in oil prices, but is little changed thereafter. Since the previous Tealbook, the central banks of Brazil, Colombia, and the Philippines have lowered monetary policy rates, and we continue to expect some additional policy easing in China, India, and South Korea over the next few months.

## China

Chinese data since the July Tealbook have been a bit weaker than we had anticipated. Retail sales and investment growth held up in July, but exports were quite weak and the August official PMI dipped to 49.2, the first reading below 50 since late last year. Consequently, we now project that real GDP growth in the second half of this year will remain subdued (by Chinese standards) at the second-quarter pace of 7½ percent, about ¼ percentage point slower than in the July Tealbook. Output growth should then strengthen to a rate of 8¼ percent by the end of 2014, supported by monetary and fiscal policy stimulus and a gradual improvement in global demand. Although the elevated level of housing prices, along with substantial vacant floor space, continues to pose the risk of a sharp fall in Chinese growth, there has been little recent evidence that such a bust is in train, and the authorities continue to have the fiscal and monetary scope to support demand in such an event.

Chinese consumer price inflation fell a bit more than expected in July, as domestic food price inflation continued to retrace its increases earlier in the year. Accordingly, we now project a headline inflation rate of just 1¼ percent at an annual rate in the current quarter, ½ percentage point less than in the previous Tealbook. With food price inflation bottoming out and oil prices having risen, inflation will likely increase to 2¾ percent next quarter. We project it to edge up further to 3 percent by 2014 as

economic activity accelerates and wage growth remains strong. Amid relatively subdued inflation and near-term concerns about economic growth, Chinese authorities are expected to announce some additional monetary and fiscal accommodation in the coming quarters.

### **Other Emerging Asia**

Second-quarter GDP data indicate that activity in the rest of emerging Asia decelerated to about 3½ percent at an annual rate, ¼ percentage point below our July Tealbook projection and well below its trend pace. We would have expected a rebound from this low growth in the near term, but indicators for the third quarter have surprised on the downside, particularly exports. Accordingly, we marked down real GDP growth in the region, which is now expected to remain at 3½ percent in the second half of this year. Further out, growth is projected to rise to 4¾ percent in 2014, supported by accommodative policies and the firming of global economic activity.

We project that headline inflation in the region will slow to 2½ percent at an annual rate in the current quarter—about ¾ percentage point below our forecast in the July Tealbook—reflecting mainly a dip in food price inflation. Next quarter, food price inflation is expected to rebound, which, along with the recent increases in oil crude oil prices, should push up overall inflation to 3½ percent. Thereafter, inflation is expected to average about 3¼ percent, little changed from the previous forecast.

### **Latin America**

In Mexico, real GDP growth slowed in the second quarter to an annual rate of 3½ percent from almost 5 percent in the first quarter. The decline was less than we had expected in the July Tealbook, partly reflecting surprising strength in the services sector. The moderation in U.S. manufacturing growth from earlier this year, along with recent Mexican data, point to some further decline in growth this quarter and next. Although manufacturing PMI rose to 55 in August, exports in July picked up only a bit from their weak June level. We project that Mexican economic growth will average 3¼ percent in the second half of this year before edging up to just above 3½ percent in 2014, as the trajectory of U.S. manufacturing output picks up. Relative to the July Tealbook, this projection is up ½ percentage point over the forecast period, largely reflecting an upward revision to the outlook for U.S. manufacturing production.

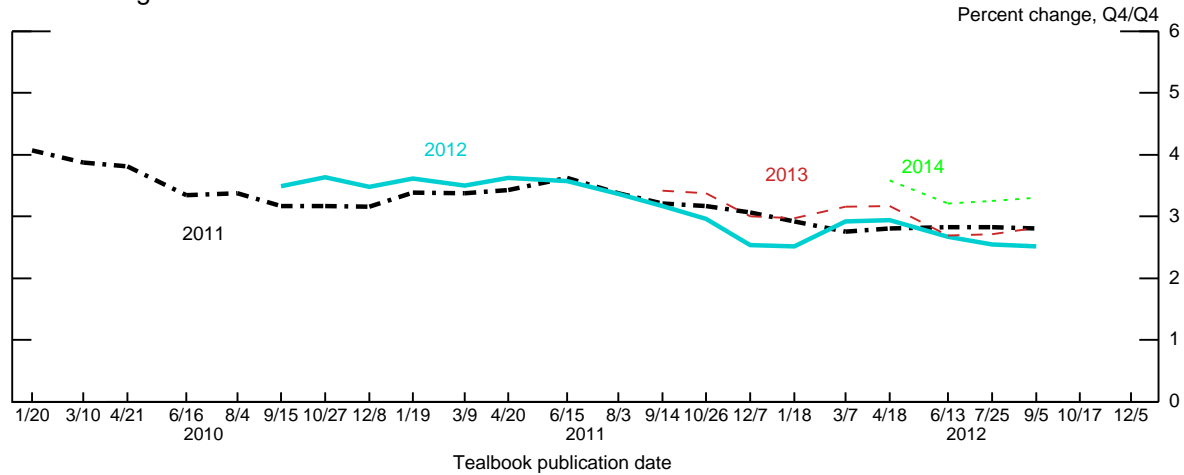
For South America, real GDP growth slowed to 2½ percent in the second quarter from 3 percent in the first, primarily reflecting a sharp decline in Venezuelan growth. In the third quarter, we project the region's output will rise 2¾ percent as Venezuelan growth rebounds and economic activity picks up in Brazil. Going forward, South American real GDP growth should pick up further to about 4 percent by the end of the forecast period.

After a meager performance in the second half of last year and early this year, Brazilian real GDP growth picked up to 1½ percent in the second quarter, a bit below our July Tealbook forecast. Growth was supported by robust domestic demand, notably consumption, which more than offset a sharp contraction in exports. The second-quarter performance suggests that the stimulative policies enacted earlier are finally beginning to have some effect. Going forward, these policies, along with the gradual recovery in the advanced economies, should help lift growth to slightly above 4 percent by the end of the 2014. In mid-August, Brazil's government announced an infrastructure spending program amounting on average to about ¼ percent of GDP over the next five years. In late August, the central bank again cut its policy rate 50 basis points to a new historic low of 7.5 percent.

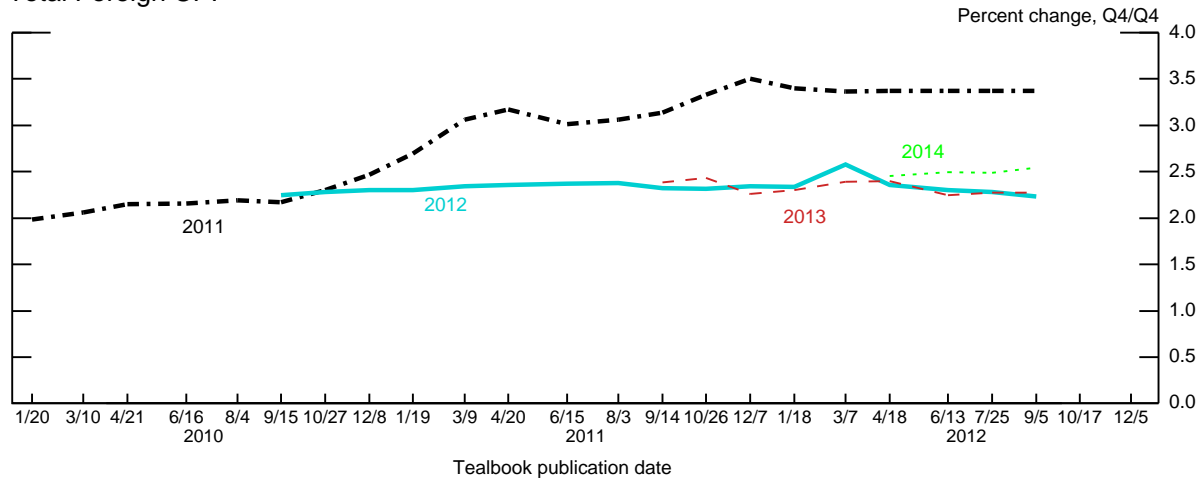
Mexican inflation has been increasing since May, reflecting in part rising food prices related to the drought in North America. We now project that Mexican headline consumer prices in the third quarter will increase at an annual rate of 5¼ percent, up from 2½ percent in the second quarter and about ½ percentage point above our forecast in the July Tealbook. As food price pressures abate, however, we expect Mexican inflation to average about 3¾ percent over the remainder of the forecast period. Rising domestic food prices have also pushed up inflation in Brazil. We project Brazilian inflation will reach 6 percent in the current quarter, dip to 5 percent in the fourth quarter as food price inflation subsides, and then average about 5½ percent over the remainder of the forecast period.

## Evolution of Staff's International Forecast

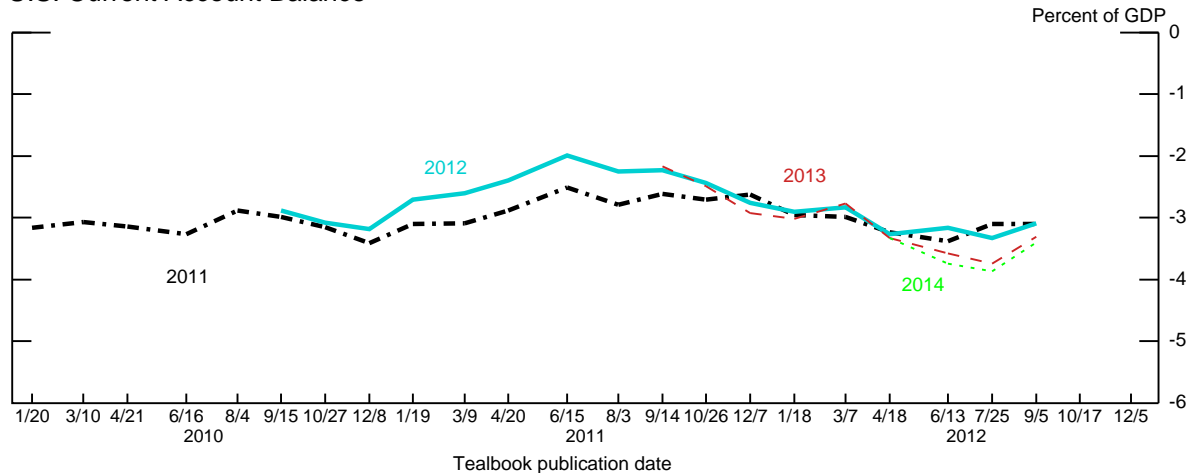
Total Foreign GDP



Total Foreign CPI



U.S. Current Account Balance



## Financial Developments

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Sentiment in domestic financial markets improved a bit, on balance, over the intermeeting period, reflecting generally better-than-expected domestic economic data releases, somewhat-reduced concerns about the situation in Europe, and expectations of more-accommodative monetary policy. Broad indexes of U.S. equity prices rose about 2 percent, near-term option-implied volatility on the S&P 500 index decreased a little, spreads on corporate bonds narrowed slightly, and unsecured short-term dollar funding markets remained stable.

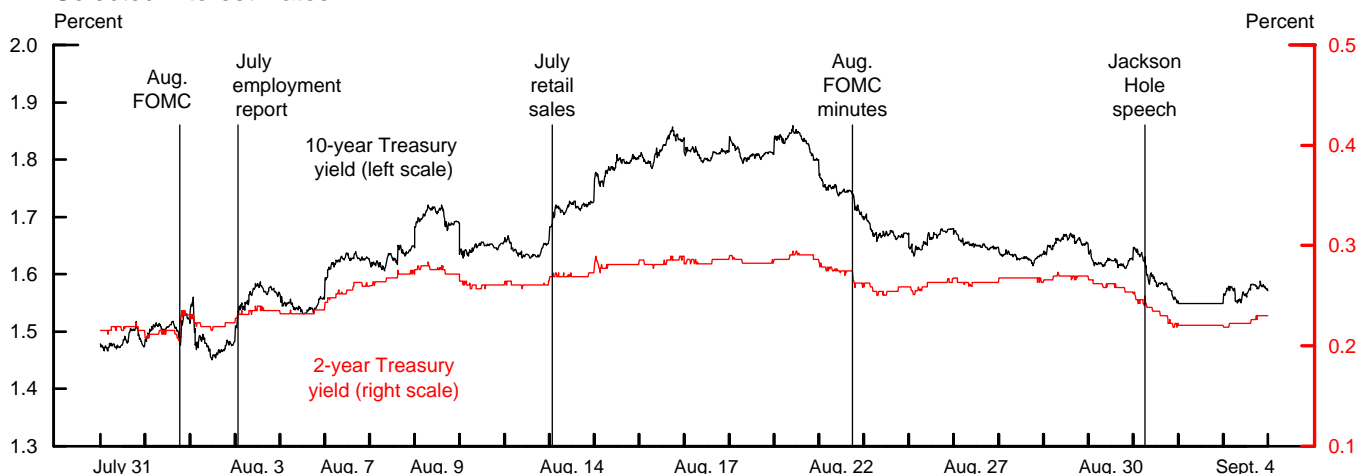
The expected path of the federal funds rate moved up early in the period in response to the August FOMC statement and subsequent economic data releases that came in above market expectations. However, the release of the minutes of the August FOMC meeting and the Chairman's recent speech at the Jackson Hole economic symposium reportedly caused market participants to mark up their expectations of additional monetary policy accommodation. On net over the intermeeting period, the expected path of the federal funds rate edged down. Yields on short-dated nominal Treasury securities were little changed, while longer-dated Treasury yields increased a bit. Measures of inflation compensation over the next five years moved up, consistent with rises in the prices of some key commodities.

Sentiment also improved somewhat in foreign markets, as the ECB discussed the broad outlines of a plan to make additional sovereign-bond purchases in conjunction with the European Financial Stability Facility and the European Stability Mechanism. Spreads of yields on peripheral euro-area sovereign bonds declined over the period compared with those on comparable-maturity German bunds, particularly at shorter maturities. European benchmark equity indexes moved up, and European bank equity prices rose sharply. The broad index of the foreign exchange value of the dollar decreased.

On the whole, financing flows in the United States remained strong in recent months, particularly for the nonfinancial corporate sector. Investment- and speculative-grade corporate bond issuance increased in August from already robust levels, and commercial and industrial (C&I) loans continued to grow briskly. In the household sector, nonrevolving consumer credit again expanded significantly in the second quarter, but the growth of revolving credit remained subdued. Mortgage

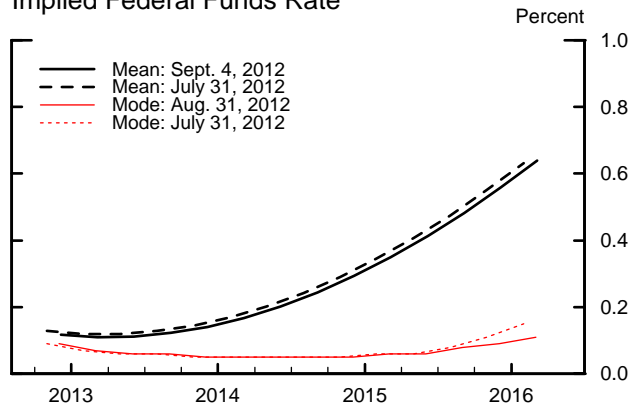
## Policy Expectations and Treasury Yields

### Selected Interest Rates



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

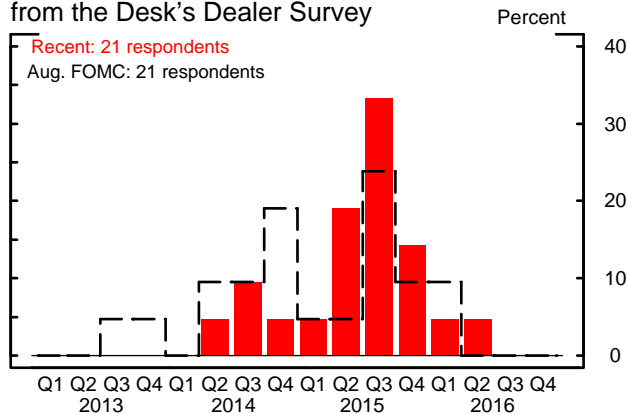
### Implied Federal Funds Rate



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.

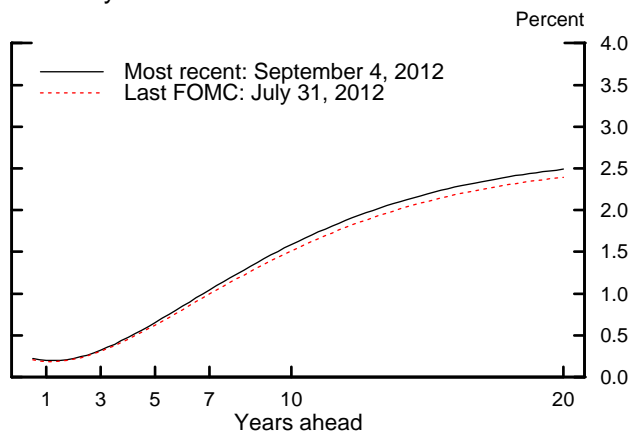
Source: Bloomberg and CME Group.

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



Source: Desk's Dealer Survey from September 3, 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.

refinancing activity edged up in August as interest rates stayed low, but conventional mortgages remained difficult to obtain for households with less-than-pristine credit scores.

## **POLICY EXPECTATIONS AND TREASURY YIELDS**

Rates on money market futures and Treasury yields both moved up notably following the August FOMC statement, reportedly because investors had put some odds on a change in the forward-guidance language that would push back the anticipated date of liftoff for the federal funds rate. Interest rates increased further in the following weeks, reflecting reduced investor concerns about the crisis in Europe and domestic economic data releases that were read by market participants as somewhat better than expected. In contrast, the tone of the August FOMC minutes was viewed as somewhat more accommodative than anticipated and led to some declines in futures rates and Treasury yields. Subsequently, the Chairman's August 31 speech at the economic symposium in Jackson Hole apparently reinforced expectations of additional policy action.

On net over the intermeeting period, the near-term expected path of the federal funds rate derived from OIS rates was little changed, but the path edged down a few basis points beyond mid-2015. The expected policy path now first rises to levels above the current target range between the third and fourth quarters of 2014, slightly later than at the time of the August FOMC meeting. The estimated modal policy path—the most likely values for future federal funds rates as derived from interest rate caps—remained within the current target range until the second quarter of 2016.<sup>1</sup>

Results from the Open Market Desk's latest survey of primary dealers also showed a downward shift in medium-term policy rate expectations, with the median target federal funds rate forecasts for the first half of 2015 declining nearly 40 basis points since the time of the August survey. Dealers now view the third quarter of 2015 as the most likely time of the first increase in the target rate, two quarters later than in the August survey. In addition, dealers revised up the probability that the FOMC will extend the period of its forward rate guidance at the upcoming meeting from 40 percent to 75 percent and the probability that the FOMC will announce additional asset purchases

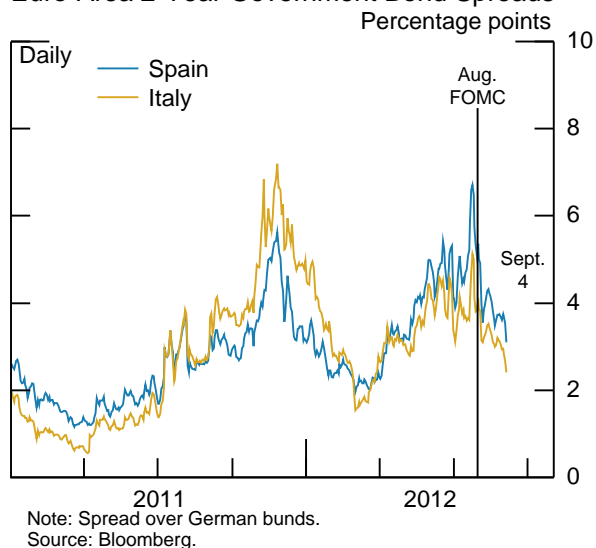
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<sup>1</sup> The effective federal funds rate averaged 13 basis points over the intermeeting period, with the intraday standard deviation averaging about 4 basis points.

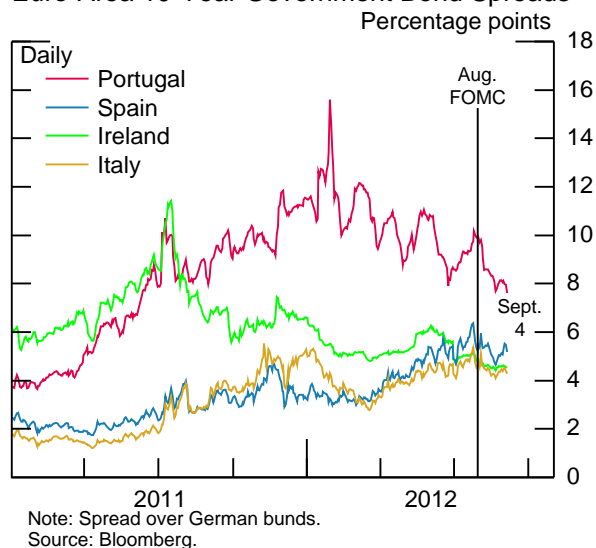


## Foreign Developments

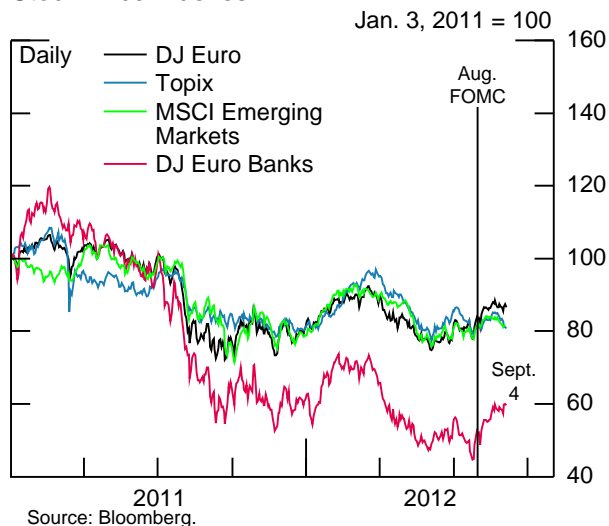
### Euro-Area 2-Year Government Bond Spreads



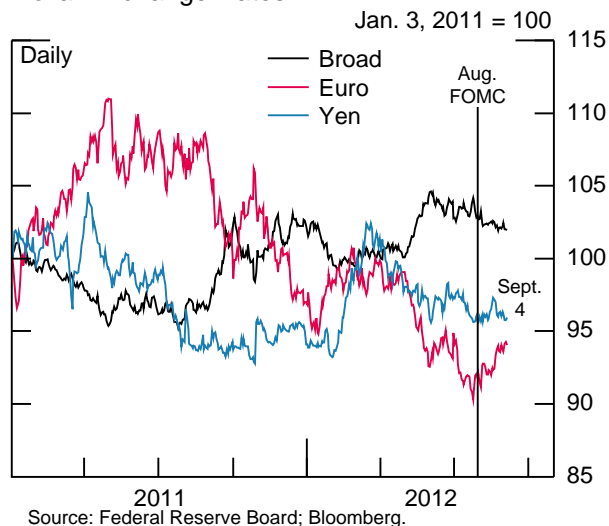
### Euro-Area 10-Year Government Bond Spreads



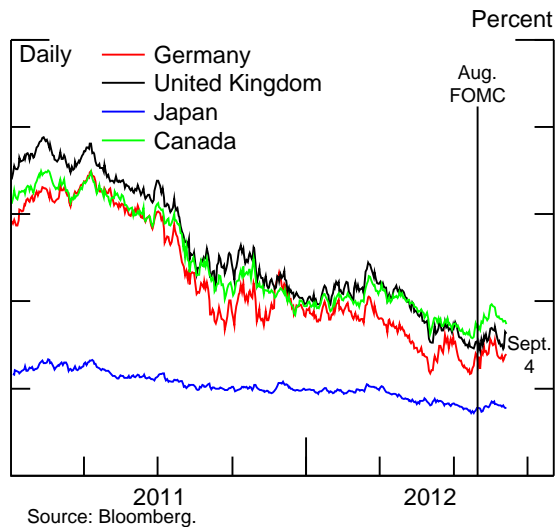
### Stock Price Indexes



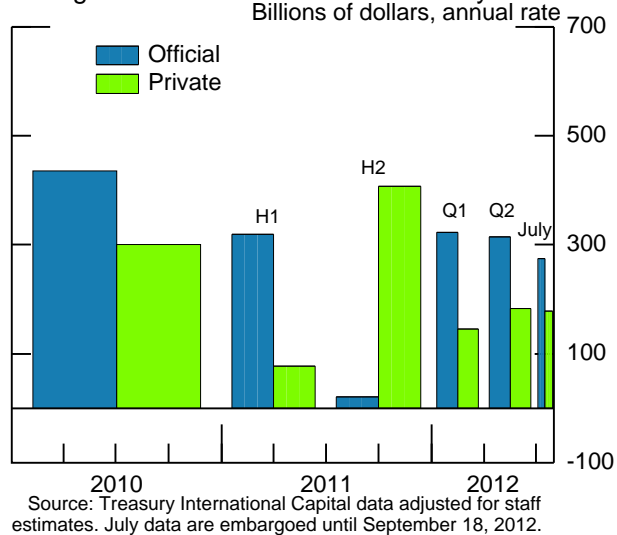
### Dollar Exchange Rates



### 10-Year Nominal Benchmark Yields



### Foreign Net Purchases of U.S. Treasury Securities



from 25 percent to 55 percent compared with the August survey, but continued to attach low odds to a reduction in the rate of interest on excess reserves.

Nominal Treasury yields also increased a little, on net, particularly at longer maturities, and the yield curve steepened a bit, with 2-year yields about unchanged and 10- to 30-year yields increasing about 8 basis points and 10 basis points, respectively. The TIPS-based 5-year measure of inflation compensation increased 10 basis points, on net, over the intermeeting period, while the forward measure of inflation compensation for the next 5 years edged down. The increase in the 5-year measure is consistent with the recent rise in the prices of oil and some other commodities. Swaps- and caps-based measures of inflation compensation showed similar patterns.

The Desk's outright purchases and sales of Treasury securities under the maturity extension program, as well as reinvestment of principal payments from its holdings of agency securities, continued to proceed as planned and did not appear to have any material adverse effect on market functioning.<sup>2</sup> Most measures of liquidity conditions in Treasury and mortgage-backed securities (MBS) markets remained stable over the intermeeting period.<sup>3</sup>

## FOREIGN DEVELOPMENTS

Foreign financial conditions have improved since the August FOMC meeting. Investors were reassured by a statement ECB President Draghi delivered a few days before the August FOMC meeting that the ECB was "ready to do whatever it takes to preserve the euro."<sup>4</sup> Following the ECB policy meeting on August 2, President Draghi

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<sup>2</sup> The Federal Reserve purchased \$50 billion, sold \$39 billion, and redeemed \$12 billion of Treasury securities over the intermeeting period under the maturity extension program; the average maturity of SOMA Treasury holdings has lengthened by about 3½ years since the beginning of the program last September. In addition, the Federal Reserve reinvested \$31 billion in agency mortgage-backed securities from principal payments from its holdings of agency securities.

<sup>3</sup> MBS yields showed little reaction to the announced changes to the Preferred Stock Purchase Agreements ("keepwell" agreements) between the Treasury Department and Fannie Mae and Freddie Mac in mid-August. Under the new terms, the 10 percent dividend payment that the GSEs made to the Treasury each year is replaced with a quarterly sweep of all GSE profits. With the expiration of the unlimited capital support provisions of the keepwell agreements at the end of this year, Fannie Mae has \$125 billion in capital support remaining after 2012, whereas Freddie Mac has \$149 billion in capital support remaining. The elimination of the 10 percent dividend after 2012 makes additional capital injections from the Treasury less likely.

<sup>4</sup> Mario Draghi (2012), "Verbatim of the Remarks Made by Mario Draghi," speech delivered at the Global Investment Conference, London, July 26, [www.ecb.int/press/key/date/2012/html/sp120726.en.html](http://www.ecb.int/press/key/date/2012/html/sp120726.en.html).

reported that the ECB was considering possible measures to ease policy and offered a broad outline of a plan for the ECB to make secondary-market purchases of short-term sovereign debt of countries that had reached an agreement for fiscal support from the European Financial Stability Facility or the European Stability Mechanism. Spreads of yields on two-year Spanish and Italian sovereign debt over German bunds have declined about 230 basis points and 170 basis points, respectively, since the FOMC meeting, while longer-term spreads have declined more modestly. Negotiations over further aid continued between the Greek government and the European Union, the ECB, and the IMF as Greece sought additional time to meet its fiscal goals. Amid mounting expectations that Greece's creditors will postpone difficult decisions for some time, 10-year Greek yields declined about 350 basis points over the period to near 22 percent.

Consistent with the improved risk sentiment, funding conditions for euro-area banks eased, though funding conditions remained fragile. A few of the larger euro-area banks that had been out of the unsecured debt markets were able to return in recent weeks as market conditions improved. The spread between three-month EURIBOR and the OIS rate narrowed roughly 10 basis points, and the three-month euro-dollar implied basis spread also narrowed about 10 basis points to less than 20 basis points, its lowest level since June 2011. Dollar borrowings at the ECB's liquidity swap facility with the Federal Reserve fell about \$12 billion to near \$19 billion. In the United Kingdom, sterling LIBOR-OIS spreads and bank lending rates have also declined, which Bank of England (BOE) officials attribute to the recent introduction of the BOE's Funding for Lending Scheme.

Headline equity indexes are up 4 percent in the euro area, while shares in euro-area banks have risen 15 percent since the August FOMC meeting and about 35 percent from their trough in late July, despite second-quarter earnings reports that continue to come in very weak. This improved sentiment appeared to spill over to stock markets in other advanced foreign economies: Stock prices in Japan and the United Kingdom also rose modestly. However, China's Shanghai composite index declined 3 percent, on net, reaching its lowest level since 2009, as investors continued to worry about a further slowdown of the Chinese economy. Equity prices in other emerging market countries were mixed, but emerging market sovereign CDS spreads decreased modestly, consistent with the global improvement in risk sentiment.

The staff's broad nominal index of the exchange value of the dollar ended the period  $\frac{2}{3}$  percent lower. The dollar depreciated against most major currencies except the yen, as improved market sentiment led to a reversal of some flight-to-safety flows. The dollar also declined against the Mexican peso and Brazilian *real* but was relatively little changed against most currencies in emerging Asian markets. In addition to the reversal of flight-to-safety flows, the release of the FOMC minutes also led to some modest downward pressure on the dollar. Ten-year sovereign yields in Germany and the United Kingdom, which had risen earlier in the period on improved risk sentiment, declined along with U.S. Treasury yields after the release of the FOMC minutes.

Recent TIC data indicate that private foreign investors continued to buy Treasury securities in July, at roughly the same pace as in the second quarter. Foreign private appetite for U.S. corporate securities rebounded somewhat in July as investors returned to net purchases of U.S. equities while selling fewer U.S. corporate bonds. Foreign official investors also continued to acquire Treasury securities in July, 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 official inflows in August.

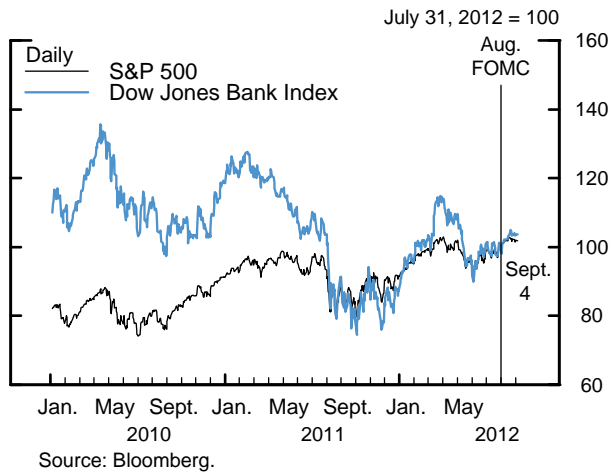
## FINANCIAL INSTITUTIONS AND SHORT-TERM FUNDING MARKETS

Equity prices for large domestic banks rose roughly 5 percent over the intermeeting period, and CDS spreads for the largest bank holding companies continued to move down. Even so, for a number of institutions, these spreads remained in the elevated ranges seen since the summer of 2011. Conditions in unsecured short-term dollar funding markets remained stable. LIBOR–OIS spreads and the spread between the three-month forward rate agreement and the OIS rate three to six months ahead—a forward-looking measure of potential funding pressures—were about unchanged on net. Market participants continued to report tiering among European institutions in unsecured dollar funding markets, and suggested also that higher-quality names have recently been able to obtain funding at somewhat longer terms.

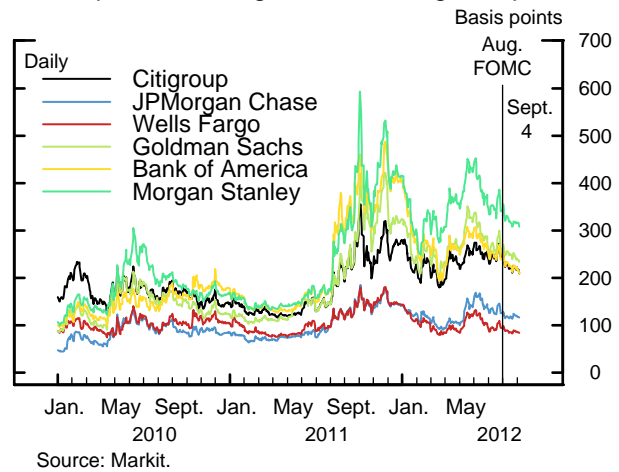
The average maturity of unsecured financial commercial paper (CP) issued by institutions with European parents as well as that issued by institutions with U.S. parents lengthened somewhat over the period. Even so, the average maturity of unsecured financial CP issued by institutions with European parents remained lower than that for institutions with U.S. parents. The spreads of yields on highly rated unsecured CP issued

## Financial Institutions and Short-Term Dollar Funding Markets

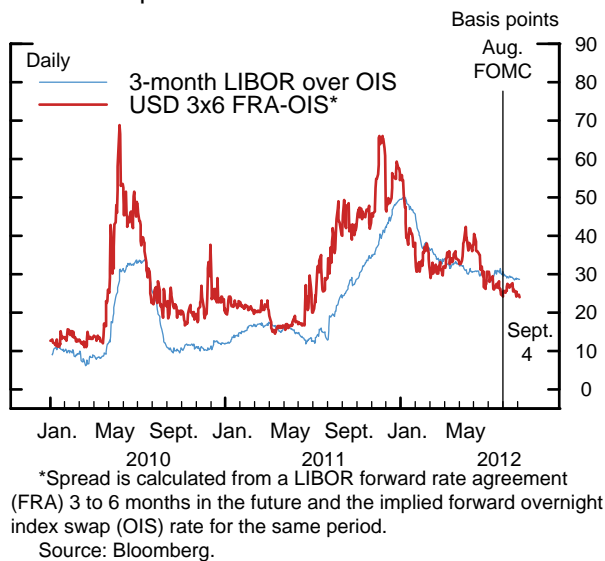
### Stock Prices



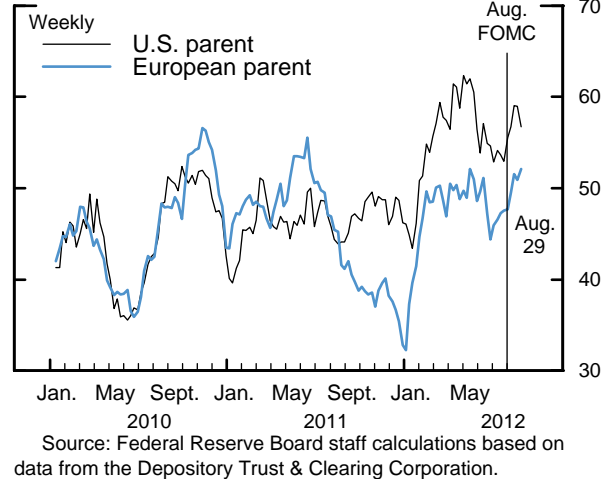
### CDS Spreads of Large Bank Holding Companies



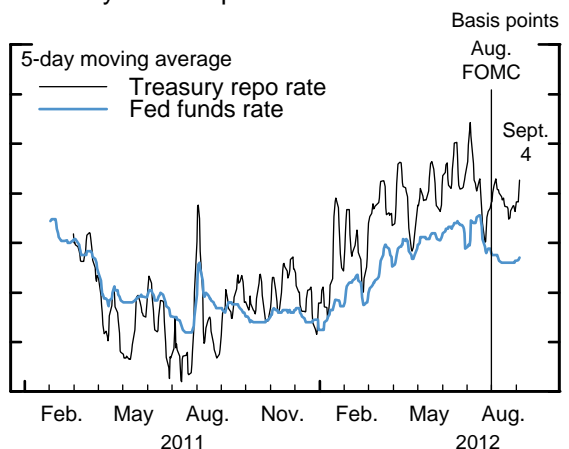
### Selected Spreads



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



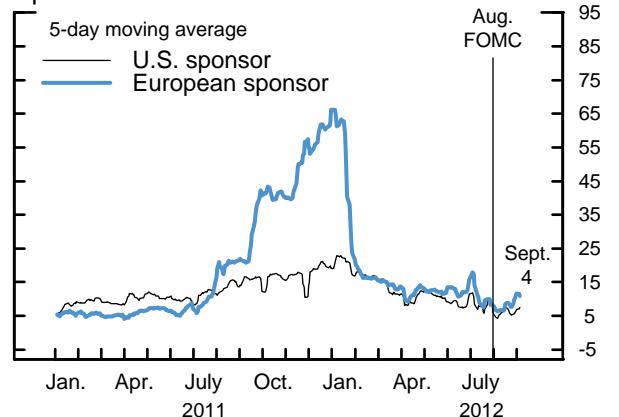
### Treasury GCF Repo Rate



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.

Source: Depository Trust & Clearing Corporation.

by financial firms over yields on highly rated nonfinancial issues were little changed at low levels.

Conditions in secured funding markets were generally little changed over the intermeeting period. In the triparty market, volumes ticked up, reflecting increased activity across a range of collateral types, while Treasury general collateral finance repurchase agreement (GCF repo) rates were roughly unchanged on balance. Data on recently introduced futures contracts tied to the DTCC Treasury GCF Repo Index indicate that market participants expect repo rates to remain in the neighborhood of 20 basis points for the remainder of the year. In the bilateral market, haircuts on non-OMO-eligible collateral reportedly narrowed a bit over the period. In asset-backed commercial paper (ABCP) markets, volumes outstanding remained stable over the intermeeting period for programs with sponsors domiciled in the United States or Europe. However, the spreads of overnight yields on ABCP with European parents over yields on highly rated nonfinancial unsecured CP increased, while those on ABCP with U.S. parents were little changed. Money market funds (MMFs) increased their exposures to European counterparties a bit in July, mostly through government-security repo contracts. The direct exposures of U.S. MMFs to Europe remained sizable at \$756 billion, including \$326 billion in euro-zone holdings, dominated by French, German, and Dutch issuers.

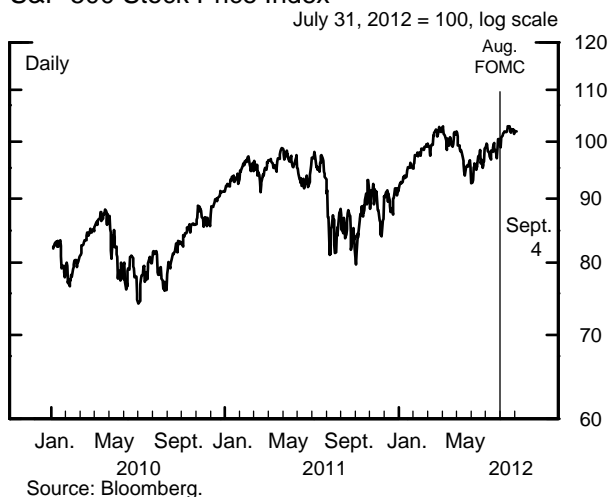
In response to the September 2012 Senior Credit Officer Opinion Survey on Dealer Financing Terms, dealers indicated that they had increased the amount of resources and attention devoted to the management of concentrated exposures to dealers and other financial intermediaries as well as to central counterparties and other financial market utilities over the past three months, as they had in the previous surveys (see appendix). Respondents generally reported that there had been no significant change in the terms applicable to OTC derivatives and securities financing transactions with important classes of counterparty types over the same period. Moreover, they cited no material changes over the past three months in the use of leverage by hedge funds or other important classes of institutional investors, including REITs that invest in securities backed by real estate and insurance companies. Respondents did note, however, greater demand for funding of agency and non-agency residential mortgage-backed securities.

## **OTHER DOMESTIC ASSET MARKET DEVELOPMENTS**

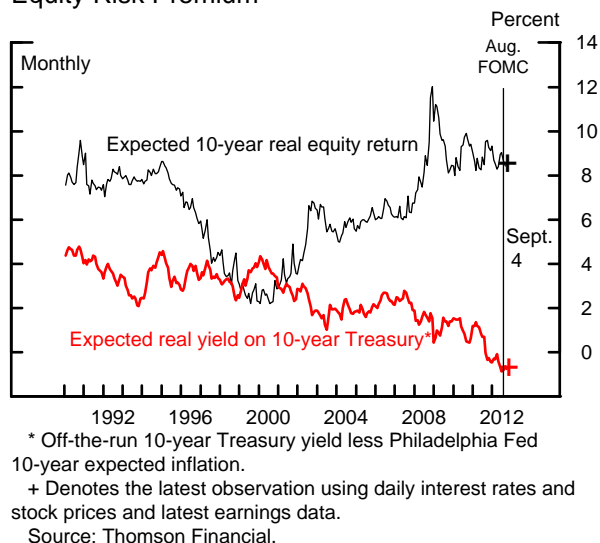
Broad equity price indexes moved up a bit, on net, over the intermeeting period, reflecting generally better-than-expected economic data releases and somewhat-reduced

## Other Domestic Asset Market Developments

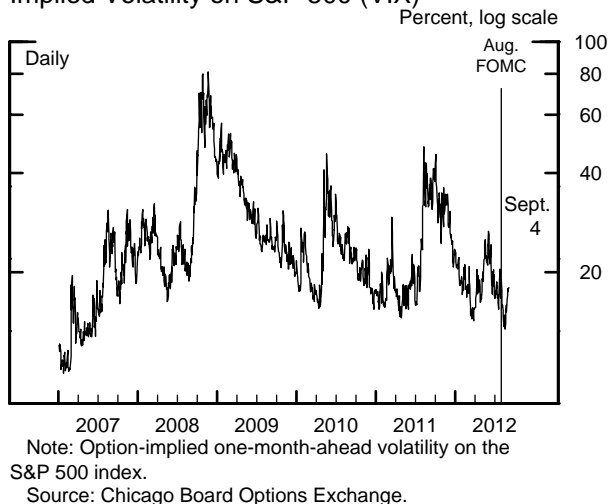
S&P 500 Stock Price Index



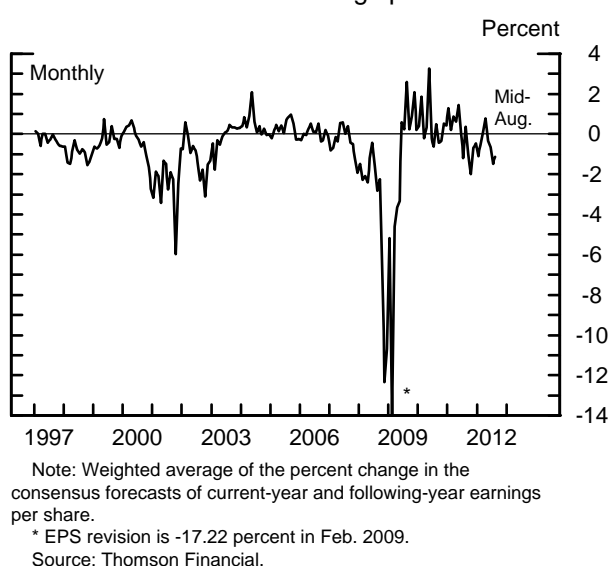
Equity Risk Premium



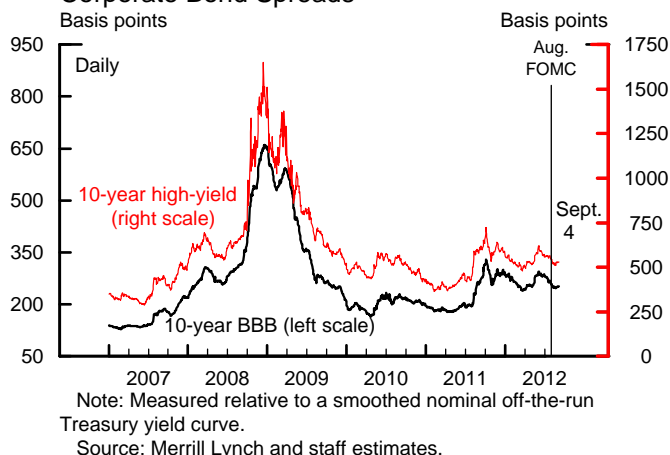
Implied Volatility on S&P 500 (VIX)



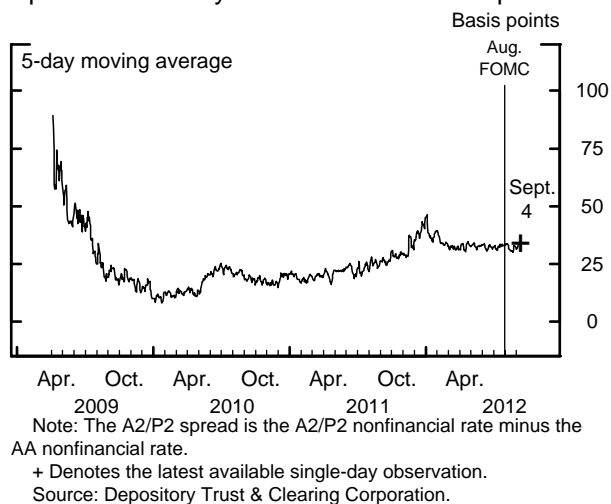
Revisions to S&P 500 Earnings per Share



Corporate Bond Spreads



Spread on 30-Day A2/P2 Commercial Paper





concerns about Europe. The staff's estimate of the spread between the expected real equity return for the S&P 500 index and the real 10-year Treasury yield—a gauge of the equity premium—narrowed slightly but remained very wide by historical standards. An index of option-implied one-month-ahead volatility for the S&P 500 index, the VIX, fell in early August to levels not seen since mid-2007 and ended the period a little lower on net. However, option-implied volatility 12 months ahead moved up slightly and is somewhat more elevated relative to historical norms, suggesting that market participants are less sanguine about risks to equity market performance over the medium term.

The reporting season for second-quarter earnings drew to a close over the intermeeting period but did not leave a visible imprint on aggregate stock market prices. Although the majority of firms in the S&P 500 index reported earnings that were higher than private-sector forecasts, many reported revenues that failed to meet expectations, reportedly prompting some concerns about growth going forward. An index of revisions to analysts' forecasts of year-ahead earnings for S&P 500 firms remained modestly negative through the four-week period ending in mid-August.

Over the intermeeting period, yields on investment- and speculative-grade corporate bonds were little changed at near-record-low levels. The spread of yields on corporate bonds to those on comparable-maturity Treasury securities edged down but remained elevated relative to historical norms. The spreads of yields on A2/P2 unsecured CP issued by nonfinancial firms over yields on A1/P1-rated issues were about flat on net.

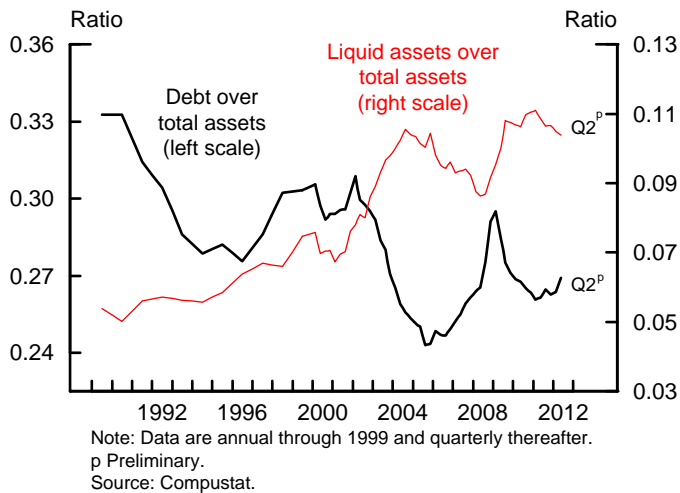
## **BUSINESS FINANCE**

Available indicators suggest that the credit quality of nonfinancial corporations continued to be quite solid. In the second quarter, the aggregate liquid asset ratio remained near its highest level in more than 20 years, while the aggregate ratio of debt to assets edged up but stayed well below its average over the past two decades. Over July and August, the volume of nonfinancial corporate bonds downgraded by Moody's Investors Service exceeded the volume of bonds upgraded, but the overall pace of downgrades was modest. The six-month trailing bond default rate for nonfinancial firms remained low in July, and the C&I loan delinquency rate decreased further in the second quarter. The expected year-ahead default rate for nonfinancial firms from the Moody's KMV model edged down in August from moderately elevated levels.

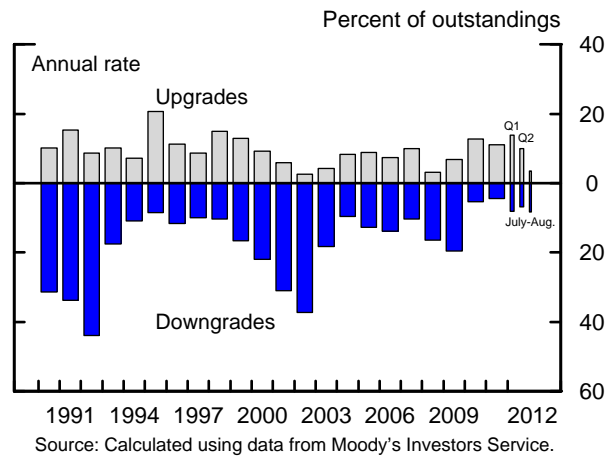


## Business Finance

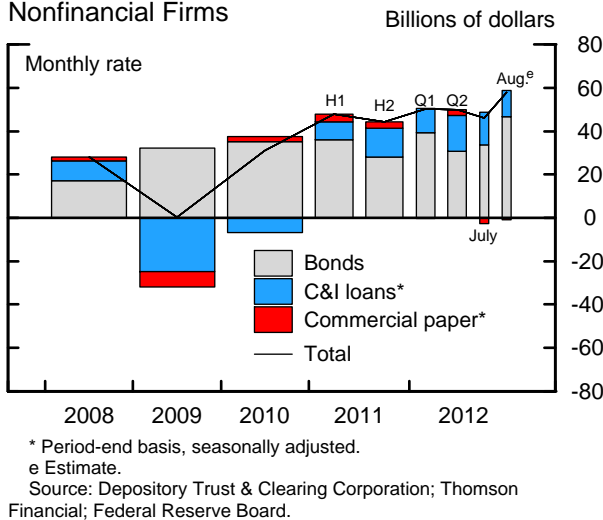
### Financial Ratios for Nonfinancial Corporations



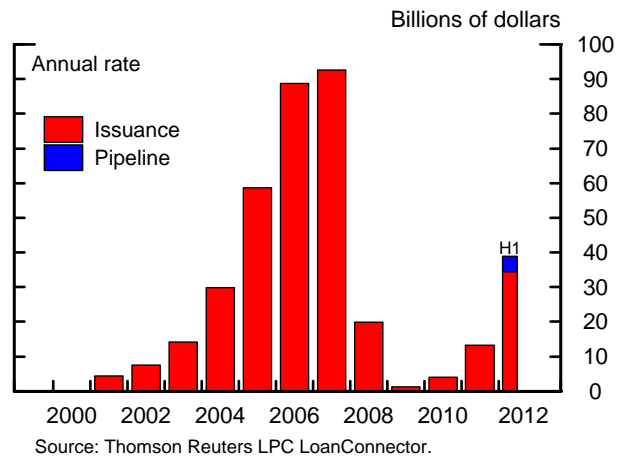
### Bond Ratings Changes of Nonfinancial Firms



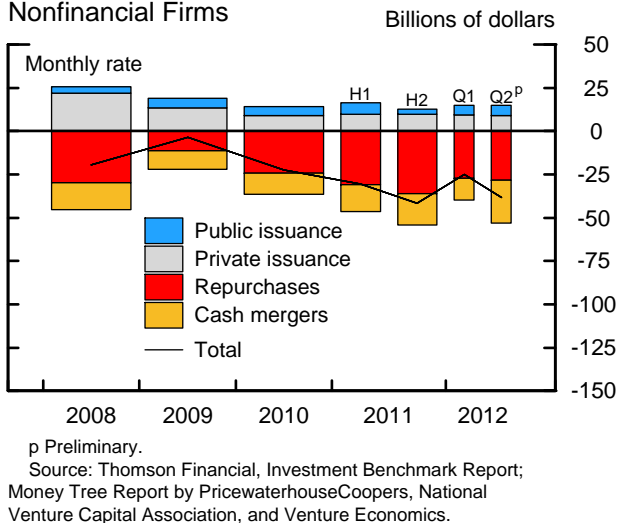
### Selected Components of Net Debt Financing, Nonfinancial Firms



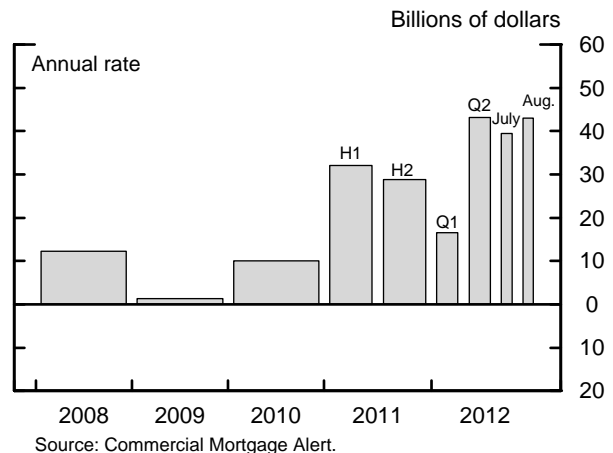
### U.S. CLO Issuance



### Selected Components of Net Equity Issuance, Nonfinancial Firms



### CMBS Issuance



Net debt issuance by nonfinancial firms remained strong over the intermeeting period. The pace of investment- and speculative-grade bond issuance picked up notably in August from an already robust pace in July. Many nonfinancial issuers reported that they intended to use the proceeds to pay down other debt. The volume of C&I loans outstanding increased further in August, while the volume of nonfinancial CP outstanding was little changed on net.

In the syndicated leveraged loan market, gross issuance of institutional loans reportedly remained solid in July and August following its strong pace in the first half of the year—and contrary to expectations for a significant summer slowdown. In addition, issuance of collateralized loan obligations continued apace and remained on track to post its strongest year since 2007, reportedly supported by interest on the part of a wide range of institutional investors. Secondary-market prices for leveraged loans were up a touch over the intermeeting period.

The pace of gross public equity issuance by nonfinancial firms increased slightly but remained subdued in August. The pace of equity retirements through cash-financed mergers by nonfinancial firms picked up some in the second quarter, boosted by a handful of very large deals, and share repurchases continued to be robust, leaving net equity issuance deeply negative through the second quarter. However, announcements of new mergers and share repurchase programs suggest that the pace of equity retirements will likely moderate over the rest of the year.

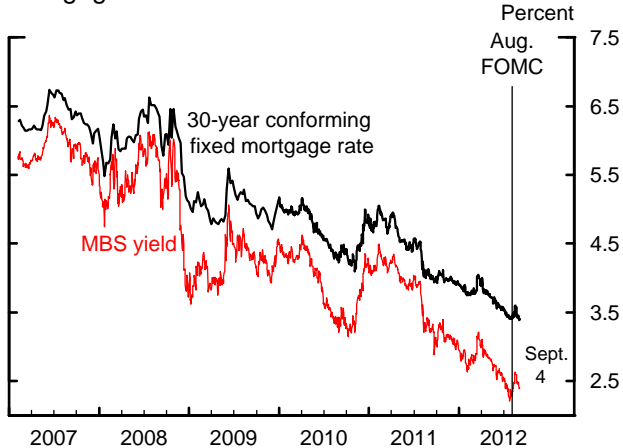
Financial conditions in the commercial real estate (CRE) market remained somewhat strained against a backdrop of weak fundamentals and tight underwriting standards. Prices for CRE properties continued to fluctuate at low levels through June amid elevated vacancy and delinquency rates. Issuance of commercial mortgage-backed securities remained solid in July and August, albeit well below levels in the few years prior to the financial crisis.

## **HOUSEHOLD FINANCE**

While current-coupon MBS yields rose moderately over the intermeeting period, mortgage rates were little changed, on net, at very low levels, with the interest rate on 30-year fixed-rate conforming mortgages hovering around 3½ percent. Even so, mortgage originations for home purchase have been about flat. Refinance originations increased in August but remained muted relative to the prediction of staff models,

## Household Finance

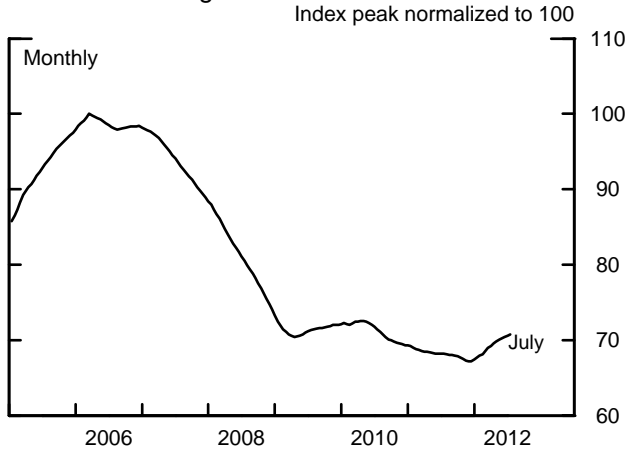
### Mortgage Rate and MBS Yield



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.

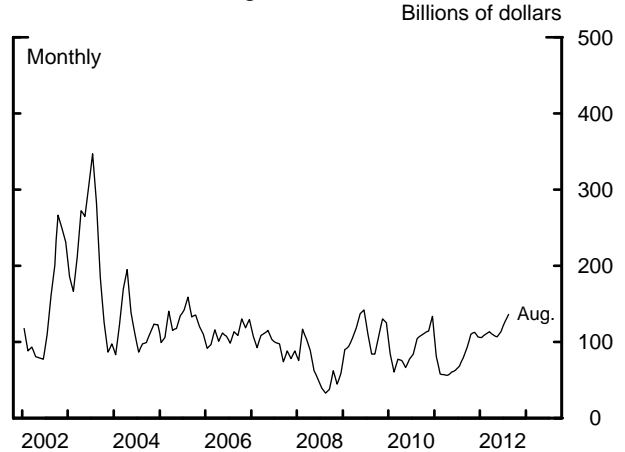
Source: For MBS yield, Barclays; for mortgage rate, Freddie Mac (before 2010) and Loansifter (from 2010).

### Prices of Existing Homes



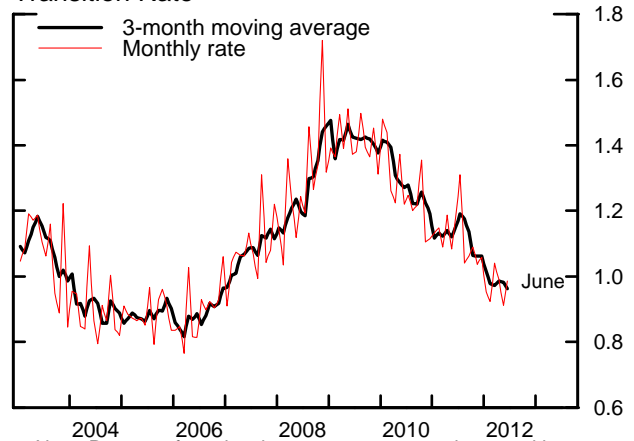
Source: CoreLogic.

### Refinance Loan Originations



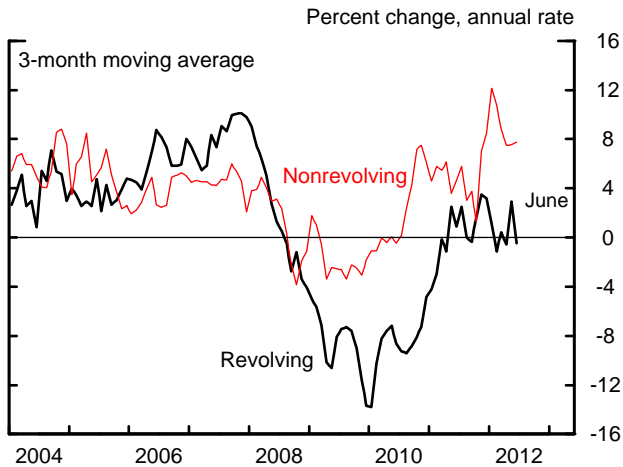
Note: Seasonally adjusted by FRB staff.  
Source: Staff estimates.

### Delinquencies on Prime Mortgages, Transition Rate



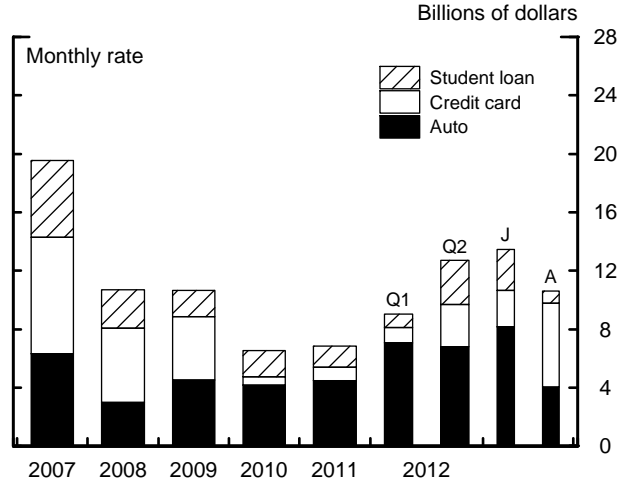
Note: Percent of previously current mortgages that transition to being at least 30 days delinquent each month.  
Source: LPS Applied Analytics.

### Consumer Credit



Source: Federal Reserve Board.

### Gross Consumer ABS Issuance



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

reflecting tight underwriting conditions, consolidation in the mortgage origination sector, and low levels of home equity.

Aggregate indexes of house prices continued to increase, with the CoreLogic index increasing for the seventh consecutive month in July. This index is now roughly 4 percent higher than its year-earlier value and almost 5½ percent higher than its low at the end of last year. Although the rate at which mortgages are entering delinquency has been trending down, likely reflecting the tight underwriting conditions that have prevailed for the past few years, the fraction of existing mortgages that are seriously delinquent remains very elevated.

Nonrevolving credit continued to grow briskly in June, owing to robust growth in student loans originated by the federal government and, to a lesser extent, solid growth in auto loans made by private lenders. In contrast, the surge in revolving credit in May was partly reversed in June, leaving growth in the second quarter overall near zero. Data on mail solicitations suggest that growth in revolving credit will remain subdued in the near term. Delinquency rates for consumer credit stayed low, especially for revolving credit, largely due to a compositional shift of credit supply toward higher-credit-quality borrowers. Issuance of consumer ABS in July exceeded the elevated rate observed in the second quarter but declined somewhat in August, partly reflecting seasonal patterns.

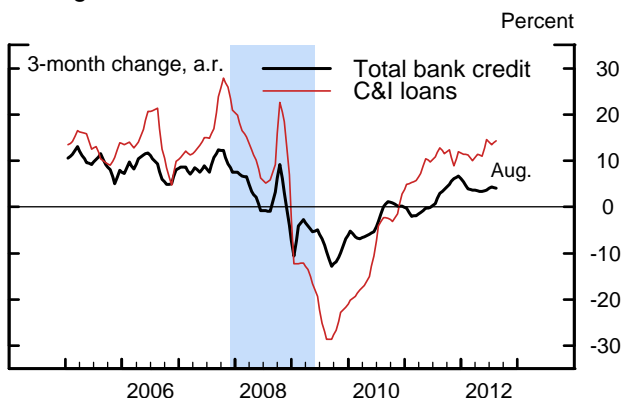
## GOVERNMENT FINANCE

Since the August FOMC meeting, the Treasury has auctioned \$171 billion in nominal securities and \$14 billion in 5-year TIPS. The auctions were generally well received, with bid-to-cover ratios close to their recent averages and indirect bidding ratios, with the exception of the 30-year bond, slightly below their recent averages.

Gross issuance of long-term municipal bonds picked up in August from its somewhat subdued pace in July, but net issuance of long-term bonds remained negative, reflecting outsized bond retirements by state and local governments. The number of municipal bonds downgraded by Moody's increased in the second quarter to its highest quarterly reading in over 10 years, partly reflecting downgrades of a large number of bonds from the recently dissolved redevelopment authorities in California; the number of upgrades was relatively modest. However, default rates on municipal bonds remained very low. In addition, CDS spreads for states moved lower over the intermeeting period,

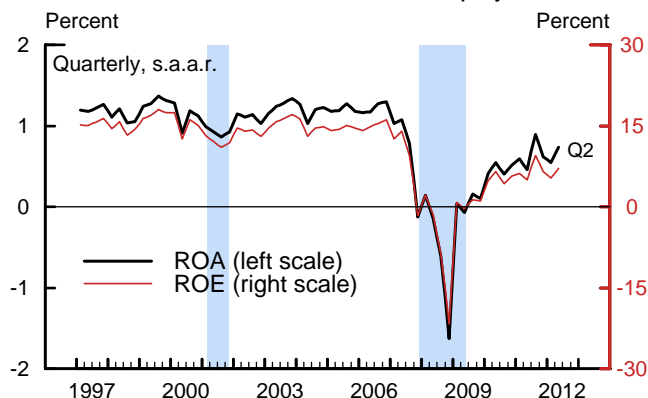
## Commercial Banking and Money

Changes in Bank Credit



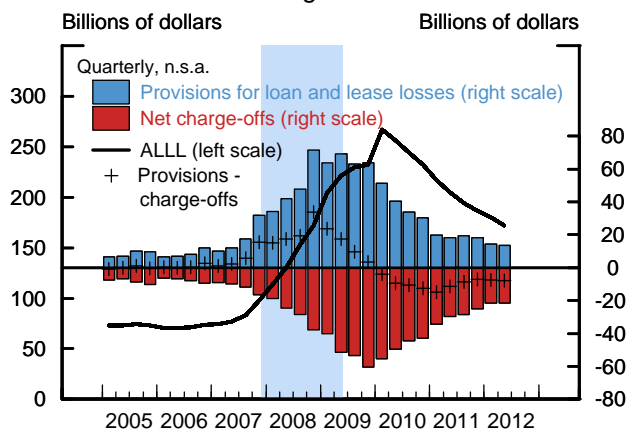
Note: The data have been adjusted to remove the estimated effects of certain changes to accounting standards and nonbank structure activity of \$5 billion or more.  
Source: Federal Reserve Board.

Return on Assets and Return on Equity



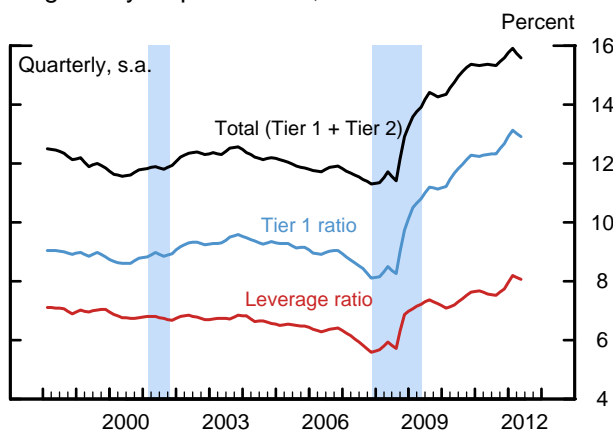
Source: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Bank Holding Companies.

Provisions and Charge-Offs



Note: ALLL is allowance for loan and lease losses.  
Source: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Bank Holding Companies.

Regulatory Capital Ratios, All BHCs



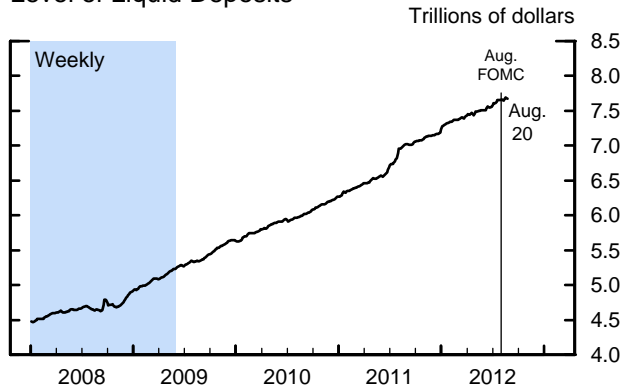
Source: Federal Reserve Board, FR Y-9C, Consolidated Financial Statements for Bank Holding Companies.

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   |
| June              | 5.7 | 8.3             | -16.9               | -.9         | 6.8   |
| July              | 9.2 | 13.3            | -19.4               | -4.5        | 7.1   |
| Aug.(e)           | 3.0 | 5.0             | -18.8               | -5.6        | 8.2   |

Note: Retail MMFs are retail money market funds.  
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.

and the ratio of yields on long-term general obligation municipal bonds to yields on comparable-maturity Treasury securities decreased on net.

## COMMERCIAL BANKING AND MONEY

Bank credit grew at about the same moderate pace over July and August as it had over the first half of the year. Growth in total loans remained sluggish, reflecting offsetting developments within major loan categories. C&I loans continued to increase briskly, but CRE and home equity loans remained on a downtrend. Closed-end residential mortgages grew only modestly, despite historically low mortgage rates, held down in part by robust sales to the GSEs. Consumer loans were about flat as credit card loans declined and other consumer loans continued to increase. Noncore loans have slowed of late, mainly reflecting reduced repo activity with nonbanks. Banks' holdings of securities expanded rapidly in July and August, mainly because of one large bank's acquisition of a sizable amount of Treasury securities in early July. On the funding side, domestic banks generally continued to experience inflows of core deposits while they reduced their managed liabilities. (See the box "Bank Funding Consultations.")

According to the Survey of Terms of Business Lending that was conducted in August, spreads on C&I loans were little changed, as a further slight reduction in spreads at domestic banks was largely offset by higher spreads on loans originated by U.S. branches and agencies of foreign banks. In addition, the average maturity of C&I loans originated during the survey week remained at a level that is considerably higher than its pre-recession peak.

Call Report data and bank holding company filings indicated that profitability measures at domestic banking institutions were little changed in the second quarter. The industry-wide return on assets ticked up but remained below its average in the decade prior to the financial crisis. Low net interest margins and stagnant noninterest income again depressed aggregate net income. The rate of loan loss provisioning continued to decline from its 2009 peak but appears to have stabilized in recent quarters at a level that is a bit above its pre-crisis average. Measures of credit quality generally improved further in the second quarter, as delinquency and charge-off rates declined for all loan categories except for residential real estate. While loans outstanding grew modestly, unused commitments to fund loans contracted, leaving the sum of the two—banks' aggregate lending capacity—about flat. Aggregate regulatory capital ratios remained near their recent highs.

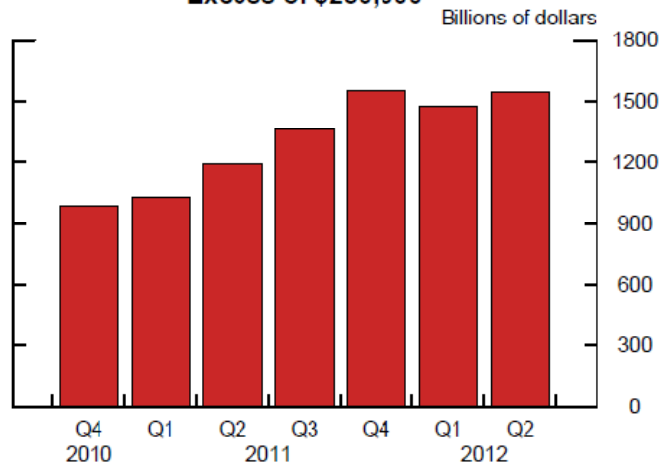
## Bank Funding Consultations

In mid-August, the Federal Reserve System conducted an informal survey on special topics regarding bank funding conditions with nine banks, mostly very large institutions. The survey asked banks about their likely reaction to the expiration at the end of 2012 of unlimited insurance on noninterest-bearing transaction deposits under the Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd–Frank Act) and the maturation of long-term debt issued under the FDIC’s Temporary Liquidity Guarantee Program (TLGP).<sup>1</sup> Overall, the respondents were not notably concerned about the expiration of either program at year-end, generally citing sufficient access to low-cost funding to meet anticipated loan demand.

Noninterest-bearing transaction accounts have been insured in unlimited amounts at all banks by the FDIC during 2011 and 2012, as provided for in the Dodd–Frank Act. Prior to that, the same insurance was available to banks participating in the Transaction Account Guarantee Program (a component of the TLGP), but many banks opted out of that coverage during 2010. Since the Dodd–Frank insurance came into effect on December 31, 2010, commercial banks’ holdings of deposits covered by this insurance have increased 56 percent (see the figure below), and as of the end of the second quarter of 2012, they accounted for nearly 19½ percent of the industry’s total domestic deposits, up from about 14½ percent at the end of the fourth quarter of 2010.

The survey results suggest that the temporary insurance has not been the only factor behind the rise in noninterest-bearing transaction deposits over the past two years. The respondents unanimously cited the importance of depositors’ increased preferences for safe and liquid assets, while two-thirds cited the temporary insurance. Four banks also volunteered that their customers have large amounts of cash and low opportunity costs of

**Noninterest-Bearing Transaction Deposits in  
Excess of \$250,000**



<sup>1</sup> The consultations also included a third set of questions regarding the Bank of England’s Funding for Lending Scheme; see the memo to be sent to the members of the Board of Governors and the presidents of the Reserve Banks, “Discount Window Options to Encourage Bank Lending.”



holding liquid assets of this sort. Consistent with the importance of these non-insurance factors, the respondents generally did not expect to lose large amounts of these deposits after the insurance expires at the end of this year.<sup>2</sup> As a result, only about half of the respondents plan to take any steps to retain insurance-related deposits, mostly by marketing other banking services rather than by raising deposit interest rates or reducing fees on deposit accounts.

Of the six respondents that viewed insurance coverage as an important factor behind the inflows of these deposits, five cited state and local governments as responsible for an important share of the insurance-related inflows. Respondents also indicated that the insurance-related inflows came from large corporations and to a lesser extent from customers that must invest exclusively in government-guaranteed investments.

Finally, the respondents widely indicated that the insurance-related inflows of additional noninterest-bearing transaction deposits have not changed their willingness to originate new loans. Consequently, there is little to reason to believe that the expiration of this insurance will cause these banks to tighten their lending standards or terms.

An important caveat is that these results may not be representative of the funding situation at smaller banks. In particular, community bank trade groups have argued that the unlimited insurance on noninterest-bearing transaction accounts has been important for those institutions' ability to compete with larger banks for deposits, and as a result these groups have been lobbying for extending the coverage past year-end, though the chances for such an extension remain uncertain.

With respect to long-term debt, financial institutions issued debt guaranteed by the FDIC between October 14, 2008, and October 31, 2009, through the Debt Guarantee Program, a part of the TLGP. Much of this debt has matured, mostly in the past year, and only a small amount is still outstanding, all of which will mature before the FDIC's guarantee expires on December 31, 2012. Of the nine survey respondents, six used the TLGP to issue long-term debt (defined here as debt with a duration of at least one year). Despite the maturation of the debt issued under the TLGP, these respondents reported no plans to issue new long-term debt over the remainder of the year. Two have already replaced their maturing long-term TLGP debt, and the others have decided not to replace it. In deciding to not issue new long-term debt, three of these four respondents cited strategic goals to reduce the size of their balance sheets. In addition, they also indicated they had decided to replace the maturing debt, in part, with capital or with other liabilities—largely deposits, particularly in the form of wholesale noninterest-bearing transaction accounts.

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<sup>2</sup> A May 2012 survey of corporate treasurers by the Association of Financial Professionals suggests a somewhat larger scope for outflows of these deposits, as about two-fifths of those surveyed reported plans to make significant reductions in their noninterest-bearing transaction deposits.

In addition, two of the largest banks expect to shed about half of their insurance-related deposit inflows, consistent with an overall strategy to shrink their balance sheets. Both of these banks also reported that they do not plan to issue new long-term debt to replace their long-term TLGP debt.



M2 growth was rapid in July but slowed to a moderate pace in August. Even so, the levels of M2 balances and of liquid deposits, the largest component of M2, remained elevated relative to what would be expected based on historical relationships with nominal income and opportunity costs. Liquid deposits increased at an annual rate of 13¼ percent in July, likely reflecting investors' desire to hold safe and liquid assets amid concerns about the situation in Europe. In August, as these concerns eased somewhat, the growth in liquid deposits fell to a bit less than half its July pace. Currency grew at about its historical average pace in July and August, while retail MMF balances 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 largely by a decrease in the Treasury's General Account. (See the box "Balance Sheet Developments over the Intermeeting Period.")

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## Balance Sheet Developments over the Intermeeting Period

Assets of the Federal Reserve totaled \$2,816 billion at the end of the intermeeting period, down \$32 billion from the time of the previous meeting (see table on next page).

Since the August FOMC meeting, the Open Market Desk at the Federal Reserve Bank of New York (FRBNY) conducted 22 operations as part of the maturity extension program: The Desk purchased \$50 billion in Treasury securities with remaining maturities of 6 to 30 years and sold or allowed to mature without reinvestment \$51 billion in Treasury securities with maturities of 3 years or less.<sup>1</sup> Since the maturity extension program was announced in September 2011, the average maturity of the Federal Reserve's Treasury holdings has risen from 6.1 years to 9.5 years. In addition, the Desk reinvested \$30 billion of agency debt and agency MBS principal payments in agency MBS securities.<sup>2</sup>

Foreign central bank liquidity swaps declined moderately to \$23 billion. The net portfolio holdings of Maiden Lane III LLC decreased \$6 billion, as all remaining securities in the Maiden Lane III portfolio were sold on August 23. The net portfolio holdings of Maiden Lane LLC and Maiden Lane II LLC were unchanged. As part of the closeout procedures for Maiden Lane II, eight residual securities, which had already been marked down to zero and dropped from the Maiden Lane II portfolio holdings report, were sold. Loans outstanding under the Term Asset-Backed Securities Loan Facility continued to decline.

On the liability side of the Federal Reserve's balance sheet, Federal Reserve notes in circulation increased \$14 billion, while reverse repurchase agreements with foreign official and international accounts rose slightly. On August 16, as part of its operational readiness program, the FRBNY announced updated eligibility requirements for reverse repurchase agreement counterparties.<sup>3</sup> The FRBNY plans to conduct small-value reverse repurchase agreement tests in the near future. The U.S. Treasury's General Account, which is highly volatile from month to month, decreased \$60 billion, and other deposits, which include GSE balances, were unchanged.<sup>4</sup> Meanwhile, reserve balances of depository institutions increased \$17 billion.<sup>5</sup> Term deposits held by depository institutions fell to zero, as a \$3 billion small-value operation of the Term Deposit Facility matured on August 16, 2012.

<sup>1</sup> Purchases of \$6 billion conducted on September 4, 2012, are reflected in the text but not in the table.

<sup>2</sup> Because of agency MBS market conventions, settlements of these transactions can occur well after the trade is executed.

<sup>3</sup> For more on the eligibility criteria for reverse repurchase agreement counterparties, see [www.newyorkfed.org/markets/rrp\\_eligibility\\_criteria.html](http://www.newyorkfed.org/markets/rrp_eligibility_criteria.html).

<sup>4</sup> During the intermeeting period, GSEs held relatively high balances at the Federal Reserve ahead of monthly principal and interest payments.

<sup>5</sup> This box discusses all items in terms of net changes over the intermeeting period, while the main text calculates growth rates of reserves on a month-average basis for July and August.

**Federal Reserve Balance Sheet**

Billions of dollars

|   | <b>Change<br/>since last<br/>FOMC</b> | <b>Current<br/>(08/31/12)</b> |
|---|---------------------------------------|-------------------------------|
| <b>Total assets</b>                               | <b>-32</b>                            | <b>2,816</b>                  |
| Selected assets:                                  |                                       |                               |
| Liquidity programs for financial firms            | -7                                    | 24                            |
| Primary, secondary, and seasonal credit           | +0                                    | +0                            |
| Foreign central bank liquidity swaps              | -8                                    | 23                            |
| Term Asset-Backed Securities Loan Facility (TALF) | -1                                    | 2                             |
| Net portfolio holdings of Maiden Lane LLCs        | -6                                    | 4                             |
| Maiden Lane                                       | -0                                    | 2                             |
| Maiden Lane II                                    | -0                                    | +0                            |
| Maiden Lane III                                   | -6                                    | 2                             |
| Securities held outright*                         | -16                                   | 2,573                         |
| U.S. Treasury securities                          | -2                                    | 1,642                         |
| Agency debt securities                            | -4                                    | 87                            |
| Agency mortgage-backed securities                 | -10                                   | 844                           |
| <b>Total liabilities</b>                          | <b>-32</b>                            | <b>2,761</b>                  |
| Selected liabilities:                             |                                       |                               |
| Federal Reserve notes in circulation              | 14                                    | 1,086                         |
| Reverse repurchase agreements                     | 3                                     | 94                            |
| Foreign official and international accounts       | 3                                     | 94                            |
| Others  | 0                                     | 0                             |
| Reserve balances of depository institutions**     | 17                                    | 1,515                         |
| Term deposits held by depository institutions     | -3                                    | 0                             |
| U.S. Treasury, General Account                    | -60                                   | 30                            |
| U.S. Treasury, Supplementary Financing Account    | 0                                     | 0                             |
| Other deposits                                    | -0                                    | 19                            |
| <b>Total capital</b>                              | <b>-0</b>                             | <b>55</b>                     |

Note: +0 (-0) denotes positive (negative) value rounded to zero.

\* Par value.

\*\* Includes overdrafts.

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## Appendix

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### Senior Credit Officer Opinion Survey on Dealer Financing Terms

For the most part, responses to the September 2012 Senior Credit Officer Opinion Survey on Dealer Financing Terms pointed to no significant changes in the credit terms applicable to important classes of counterparties over the past three months, but a few dealers noted a slight easing for some counterparties.<sup>1</sup> Continuing a pattern observed in previous surveys, large net fractions of respondents indicated an increase in the amount of resources and attention devoted to the management of concentrated exposures to dealers and other financial intermediaries as well as to central counterparties and other financial market utilities. Dealers reported that the use of financial leverage by hedge funds had remained basically unchanged over the past three months. Sizable net fractions of respondents also noted that the provision of differential terms to most-favored hedge funds and to trading real estate investment trusts (REITs) had increased over the past three months.<sup>2</sup> For several types of counterparties, modest net fractions of dealers reported an increase in the intensity of efforts by those counterparties to negotiate more-favorable price and nonprice terms.

As in previous surveys, respondents indicated that most nonprice terms incorporated in new or renegotiated over-the-counter (OTC) derivatives master agreements were broadly unchanged, on balance, during the past three months. Dealers also reported that initial margin requirements, which fall outside the scope of the master agreements, were generally little changed over the same period. About one-fifth of respondents indicated that the posting of nonstandard collateral (that is, other than cash and U.S. Treasury securities) permitted under relevant agreements had increased somewhat.

With regard to securities financing, survey respondents indicated that the terms applicable to the funding of types of securities included in the survey were generally little changed, on balance, over the past three months. About two-fifths of dealers noted that demand for funding of non-agency residential mortgage-backed securities (RMBS) had increased, while about one-fourth of respondents reported an increase in demand for funding of agency RMBS. Dealers also pointed to an increase in demand for term funding (that is, funding with a maturity of

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<sup>1</sup> The September survey collected qualitative information on changes over the previous three months in credit terms and conditions in securities financing and over-the-counter (OTC) derivatives markets. In addition to the core set of questions, this survey included a set of special questions about trends in the types of assets posted as collateral against OTC derivatives transactions. A discussion of the responses to the set of special questions will be provided in a separate memorandum. The 22 institutions participating in the survey account for almost all of the dealer financing of dollar-denominated securities to nondealers and are the most active intermediaries in OTC derivatives markets. The survey was conducted during the period from August 14, 2012, to August 27, 2012. The core questions ask about changes between June 2012 and August 2012.

<sup>2</sup> Trading REITs invest in assets backed by real estate rather than directly in real estate.

30 days or more) for these collateral types. In contrast to the June survey, nearly two-fifths of survey respondents indicated that liquidity and functioning in the underlying markets for non-agency RMBS and commercial mortgage-backed securities (CMBS) had improved somewhat over the past three months.

## **COUNTERPARTY TYPES**

### **Dealers and Other Financial Intermediaries**

In the September survey, about one-third of respondents indicated that they had increased the amount of resources and attention devoted to management of concentrated exposures to dealers and other financial intermediaries over the past three months. Among the nine “broad-scope” dealers, which have a significant presence in essentially all of the business areas covered in the survey, a similar share reported increasing resources and attention to management of these concentrated exposures. In the June survey, about one-half of respondents had reported such an increase. These responses point to continued elevated concerns about the condition of financial institutions, while the reduction in share since June also appears to reflect in part the recent apparent easing of anxiety about the crisis in Europe.

### **Central Counterparties and Other Financial Utilities**

Nearly two-thirds of dealers indicated that they had increased the amount of resources and attention each of their firms devoted to management of concentrated credit exposure to central counterparties and other financial utilities over the past three months, roughly the same share as in the previous survey. All but two of the nine broad-scope dealers reported an increase. Of note, about one-fourth of all of the respondents indicated that changes in the practices of central counterparties, including changes in margin requirements and haircuts, had influenced to more than a minimal extent the credit terms the dealer applied to clients on bilateral transactions that are not cleared.

### **Hedge Funds**

Respondents to the September survey indicated that both price terms (such as financing rates) and nonprice terms (including haircuts, maximum maturity, covenants, cure periods, cross-default provisions, or other documentation features) offered to hedge funds for securities financing and OTC derivative transactions had remained basically unchanged over the past three months. About one-fourth of dealers noted that there had been an increase in the intensity of efforts by hedge funds to negotiate more-favorable price and nonprice terms over the same period—the same fraction as in the June survey. Nearly all dealers indicated that the use of leverage by hedge funds had remained basically unchanged over the past three months, a different pattern of responses from surveys earlier in the year when modest fractions of respondents had pointed to a reduction in financial leverage. Respondents also noted that there had been little change, on net, in the availability of additional financial leverage under agreements currently in place with hedge funds, which gives those funds the ability to rapidly increase their use of leverage should they choose to do so. About one-fourth of dealers indicated that the provision of

differential terms to most-favored (as a function of breadth, duration, and extent of relationship) hedge funds had increased over the past three months.

### **Trading Real Estate Investment Trusts**

About one-fifth of dealers indicated in the September survey that they had eased nonprice terms offered to trading REITs over the past three months, while price terms had remained basically unchanged. More-aggressive competition from other institutions was cited as the most important reason cited for doing so. Four of the nine broad-scope dealers reported an easing in nonprice terms. Respondents indicated that use of financial leverage by trading REITs was little changed, on balance, over the past three months. About one-fifth of respondents noted an increase in the intensity of efforts by trading REITs to negotiate more-favorable price and nonprice terms over the past three months, and two-fifths of dealers reported an increase in the provision of differential terms to most-favored clients.

### **Mutual Funds, Exchange-Traded Funds, Pension Plans, and Endowments**

A few dealers indicated that they had eased nonprice terms offered to mutual funds, exchange-traded funds (ETFs), pension plans, and endowments over the past three months, while price terms were said to have remained basically unchanged. About one-fifth of dealers noted an increase in the intensity of efforts by clients in this category to negotiate more-favorable price and nonprice terms over the same period. Respondents to the September survey reported that use of financial leverage by mutual funds, ETFs, pension plans, and endowments was basically unchanged over the past three months.

### **Insurance Companies**

While a few survey respondents indicated that they had eased price and nonprice terms to insurance companies over the past three months, the vast majority of dealers noted that credit terms had remained basically unchanged. Nearly one-third of firms reported an increase in the intensity of efforts by insurance companies to negotiate more-favorable price and nonprice terms. The use of financial leverage by insurance companies was also said to have remained basically unchanged.

### **Separately Managed Accounts Established with Investment Advisers**

Nearly all of the dealers reported that price and nonprice terms negotiated by investment advisers on behalf of separately managed accounts were basically unchanged over the past three months. Efforts by investment advisers to negotiate more-favorable price and nonprice terms on behalf of separately managed accounts and the use of financial leverage by these clients were also reported to be little changed.

### **Nonfinancial Corporations**

A few dealers reported that they had eased price and nonprice terms offered to nonfinancial corporations over the past three months. Only a very small net fraction of dealers



indicated that there had been an increase in the intensity of efforts by these clients to negotiate more-favorable price and nonprice terms over the past three months.

### **Mark and Collateral Disputes**

As in the previous survey, most respondents indicated that the volume, persistence, and duration of mark and collateral disputes with each counterparty type included in the survey were little changed over the past three months.

## **OVER-THE-COUNTER DERIVATIVES**

As in previous surveys, dealers indicated that nonprice terms incorporated in new or renegotiated OTC derivatives master agreements were broadly unchanged, on net, over the past three months.<sup>3</sup> A few respondents, on net, reported that they had tightened somewhat requirements, timelines, and thresholds for posting additional margin, and a few noted that they had eased somewhat with respect to other documentation features including cure periods and cross-default provisions. Nearly all of the dealers indicated that initial margins (which fall outside the scope of master agreements) on contracts referencing most underlying collateral types were little changed over the past three months. About one-fifth of respondents noted that the posting of nonstandard collateral (that is, other than cash and U.S. Treasury securities) had increased somewhat over the past three months. For most contract types included in the survey, almost all of the dealers indicated that the volume, duration, and persistence of mark and collateral disputes remained basically unchanged over the past three months. However, a few dealers reported, on net, that the volume of mark and collateral disputes had increased for contracts referencing foreign exchange and commodities and decreased for contracts referencing equities and corporate credit instruments.

## **SECURITIES FINANCING**

As in the previous survey, dealers reported that the credit terms under which most types of securities included in the survey are financed were little changed on balance. The only notable exceptions were agency and non-agency RMBS, for which a few respondents, on net, indicated that they had increased the maximum amount of funding and extended the maximum maturity for their most-favored clients.

Dealers noted that, on balance, demand for funding of RMBS had increased over the past three months. About two-fifths of respondents reported an increase in demand for funding of non-agency RMBS, with many dealers noting that demand for term funding of such securities—funding with a maturity of 30 days or more—had also increased. Meanwhile, about one-fourth of dealers reported that demand for funding of agency RMBS had also increased, with the same share pointing to somewhat stronger demand for term funding. In contrast, demand for funding

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<sup>3</sup> The survey asks specifically about requirements for posting additional margin, acceptable collateral, recognition of portfolio or diversification benefits, triggers and covenants, and other documentation features, including cure periods and cross-default provisions.

of corporate bonds, equities, CMBS, and asset-backed securities was said to have been generally little changed on balance.

Nearly two-fifths of respondents indicated that the liquidity and functioning of the underlying markets for non-agency RMBS and CMBS had improved somewhat during the previous three months.<sup>4</sup> For other collateral types covered in the survey, liquidity and functioning of the underlying markets were generally characterized as little changed on net. As in the previous survey, nearly all of the respondents indicated that the volume, duration, and persistence of market and collateral disputes were basically unchanged for all of the collateral types.

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<sup>4</sup> Note that survey respondents are instructed to report changes in liquidity and functioning in the market for the underlying collateral to be funded through repurchase agreements and similar secured financing transactions, not changes in the funding market itself. This question is not asked with respect to equity markets in the core questions.

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## Risks and Uncertainty

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### ASSESSMENT OF FORECAST UNCERTAINTY

We continue to view the risks around the staff's forecast for economic activity as elevated relative to the average experience of the past 20 years (the benchmark used by the FOMC). This assessment partly reflects the U.S. financial crisis and the unusual depth and persistence of the recession, which have uncertain implications for the magnitude of slack in labor and product markets, the pace at which the recovery is likely to proceed, and the resilience of the financial system. We also see elevated risks related to the effects of the fiscal and financial situation in Europe. The staff's baseline forecast assumes that the European situation will eventually improve as their policymakers take additional steps to contain the crisis. Of course, euro-area policymakers could move more quickly and decisively to diffuse the crisis than we anticipate. However, we see a greater risk that the European situation could deteriorate by more than assumed. In the extreme, such a deterioration could result in a severe economic downturn in Europe with substantial spillover effects to the domestic economy—effects that U.S. fiscal and monetary policymakers may have limited capacities to counteract. The downside risks to the economic outlook are also exacerbated by the “fiscal cliff” looming at the turn of the year; fiscal policymakers, by choice or by gridlock, could impose more restraint on the recovery than we have assumed in the baseline. Overall, we view the risks to economic activity as skewed to the downside.

Although we continue to see substantial uncertainty around our outlook for inflation, we do not view the risks as unusually high. Long-run inflation expectations and the trend in actual inflation have remained relatively stable in recent years despite large fluctuations in oil and other commodity prices and persistently wide margins of slack in labor and product markets. Moreover, we still view the risks to our inflation forecast as balanced. On the upside, an increase in inflation expectations, possibly related to concerns about the size of the Federal Reserve's balance sheet and the ability to execute a timely exit from the current stance of policy, could cause inflation to rise, as could a larger amount of damage to the supply side of the economy than assumed in the baseline. A stronger recovery than expected might also lead to somewhat higher inflation. On the downside, there is the possibility that weaker-than-anticipated economic conditions,

**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   |      |      |      |         |
| <i>Real GDP</i>                        |      |      |      |      |      |         |
| Extended Tealbook baseline             | 1.8  | 1.5  | 2.4  | 3.2  | 3.6  | 3.0     |
| Fiscal cliff                           | 1.8  | 1.5  | 1.1  | 2.4  | 4.1  | 3.8     |
| European crisis with severe spillovers | 1.8  | -1.2 | -3.1 | 2.0  | 4.4  | 4.0     |
| Faster European recovery               | 1.8  | 1.6  | 3.1  | 3.9  | 3.7  | 2.7     |
| Faster domestic recovery               | 1.8  | 2.4  | 4.4  | 3.2  | 2.8  | 2.4     |
| Higher oil prices                      | 1.8  | 1.3  | 1.8  | 3.0  | 3.6  | 3.3     |
| Damaged labor market                   | 1.8  | 1.3  | 2.2  | 2.4  | 2.7  | 2.0     |
| Protracted headwinds                   | 1.8  | 1.5  | 1.9  | 2.1  | 2.4  | 2.6     |
| <i>Unemployment rate<sup>1</sup></i>   |      |      |      |      |      |         |
| Extended Tealbook baseline             | 8.2  | 8.3  | 8.0  | 7.6  | 6.7  | 5.7     |
| Fiscal cliff                           | 8.2  | 8.3  | 8.5  | 8.6  | 7.7  | 5.8     |
| European crisis with severe spillovers | 8.2  | 8.6  | 10.4 | 10.8 | 9.6  | 7.7     |
| Faster European recovery               | 8.2  | 8.3  | 7.8  | 7.0  | 6.0  | 5.2     |
| Faster domestic recovery               | 8.2  | 8.2  | 7.0  | 6.3  | 5.8  | 5.6     |
| Higher oil prices                      | 8.2  | 8.3  | 8.3  | 8.0  | 7.1  | 5.9     |
| Damaged labor market                   | 8.2  | 8.3  | 8.2  | 8.0  | 7.5  | 7.4     |
| Protracted headwinds                   | 8.2  | 8.3  | 8.2  | 8.2  | 7.9  | 7.4     |
| <i>Total PCE prices</i>                |      |      |      |      |      |         |
| Extended Tealbook baseline             | 1.6  | 1.8  | 1.4  | 1.4  | 1.5  | 1.8     |
| Fiscal cliff                           | 1.6  | 1.8  | 1.4  | 1.2  | 1.1  | 1.4     |
| European crisis with severe spillovers | 1.6  | .3   | -.8  | .7   | 1.7  | 2.1     |
| Faster European recovery               | 1.6  | 2.0  | 2.2  | 2.0  | 1.8  | 1.9     |
| Faster domestic recovery               | 1.6  | 1.8  | 1.4  | 1.6  | 1.9  | 2.2     |
| Higher oil prices                      | 1.6  | 3.5  | 1.8  | 1.5  | 1.6  | 1.9     |
| Damaged labor market                   | 1.6  | 1.9  | 1.6  | 1.9  | 2.2  | 2.4     |
| Protracted headwinds                   | 1.6  | 1.8  | 1.2  | .8   | .7   | .8      |
| <i>Core PCE prices</i>                 |      |      |      |      |      |         |
| Extended Tealbook baseline             | 2.0  | 1.4  | 1.6  | 1.6  | 1.7  | 1.9     |
| Fiscal cliff                           | 2.0  | 1.4  | 1.6  | 1.4  | 1.3  | 1.5     |
| European crisis with severe spillovers | 2.0  | .9   | .3   | .9   | 1.5  | 2.0     |
| Faster European recovery               | 2.0  | 1.5  | 2.0  | 2.1  | 2.0  | 2.1     |
| Faster domestic recovery               | 2.0  | 1.4  | 1.6  | 1.8  | 2.1  | 2.3     |
| Higher oil prices                      | 2.0  | 1.4  | 1.8  | 1.8  | 1.8  | 1.9     |
| Damaged labor market                   | 2.0  | 1.5  | 1.8  | 2.1  | 2.4  | 2.5     |
| Protracted headwinds                   | 2.0  | 1.4  | 1.4  | 1.0  | .9   | .9      |
| <i>Federal funds rate<sup>1</sup></i>  |      |      |      |      |      |         |
| Extended Tealbook baseline             | .2   | .1   | .1   | .6   | 2.1  | 3.5     |
| Fiscal cliff                           | .2   | .1   | .1   | .1   | .7   | 3.3     |
| European crisis with severe spillovers | .2   | .1   | .1   | .1   | .1   | 1.6     |
| Faster European recovery               | .2   | .1   | .1   | 1.1  | 2.7  | 4.3     |
| Faster domestic recovery               | .2   | .2   | 1.9  | 3.0  | 3.5  | 4.0     |
| Higher oil prices                      | .2   | .1   | .1   | .4   | 1.5  | 3.1     |
| Damaged labor market                   | .2   | .1   | .6   | 1.9  | 3.4  | 4.5     |
| Protracted headwinds                   | .2   | .1   | .1   | .1   | .1   | .1      |

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

further subdued increases in unit labor costs, and low levels of resource utilization could cause inflation expectations, and thus actual inflation, to decline over time.

## ALTERNATIVE SCENARIOS

To illustrate some of the risks to the outlook, we construct a number of alternatives to the baseline projection using simulations of the staff's models. We start with two downside risks to aggregate demand—first, that an even sharper fiscal contraction than envisioned in the baseline could occur at the beginning of next year and, second, that the European crisis intensifies with severe spillovers to the U.S. economy. The next scenario considers the possibility of a faster improvement in the European situation; the fourth scenario addresses the chance that the underlying pace of the U.S. recovery may be more robust than assumed in the baseline. The last three scenarios focus on inflation risks—in particular, that oil prices surge; that we have underestimated the amount of labor market damage that has occurred and thus the potential for higher future inflation; and that the headwinds slowing the recovery could prove to be more protracted than we anticipate, causing inflation to decline to a very low level.

We generate the scenarios focused on domestic economic risks using the FRB/US model and the scenarios initiated by risks centered on foreign events using the multicountry SIGMA model. For the FRB/US simulations, we use the same estimated monetary policy rule that governs the path of the federal funds rate in the baseline. For the SIGMA simulations, we use a broadly similar policy rule that employs an alternative concept of resource utilization.<sup>1</sup> In all of the scenarios, the size and composition of the SOMA portfolio are assumed to follow their baseline paths.

### Fiscal Cliff

Our baseline projection assumes that the Congress will avert the fiscal cliff in its most severe form, by extending the tax cuts initially enacted in 2001 and 2003, continuing to shield most taxpayers from the alternative minimum tax, and extending a number of other non-stimulus-related tax reductions. In contrast, this scenario assumes that none of these actions are taken, thereby increasing total tax payments by households and businesses next year by about 2½ percent of GDP relative to baseline. Moreover, in

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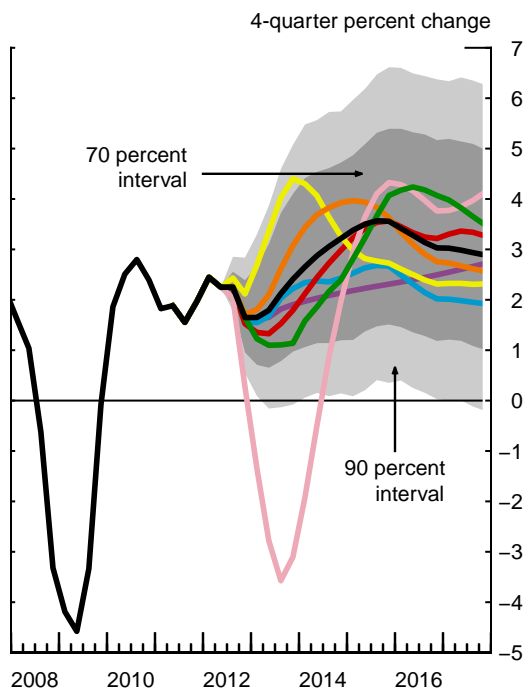
<sup>1</sup> In the FRB/US simulations, the federal funds rate follows the estimated outcome-based rule described in the appendix on policy rules in Book B. In the SIGMA simulations, the policy rule is broadly similar but uses a measure of slack equal to the difference between actual output and the model's estimate of the level of output that would occur in the absence of slow adjustment of wages and prices.

## Forecast Confidence Intervals and Alternative Scenarios

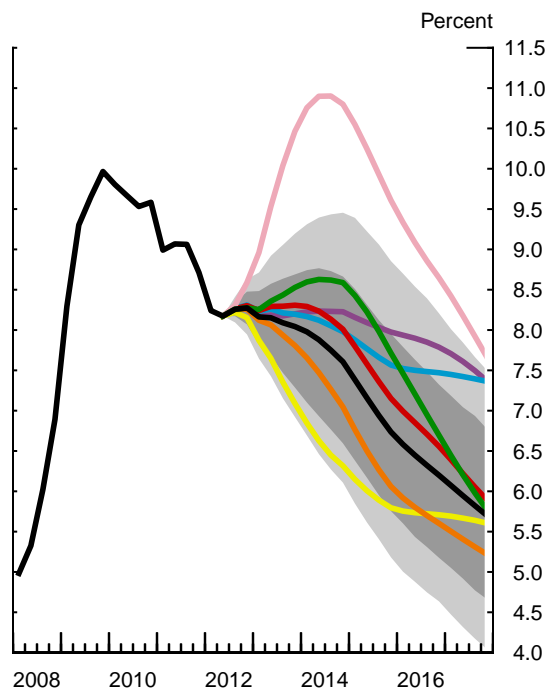
Confidence Intervals Based on FRB/US Stochastic Simulations

- Extended Tealbook baseline
- Faster European recovery
- Damaged labor market
- Fiscal cliff
- Faster domestic recovery
- Protracted headwinds
- European crisis with severe spillovers
- Higher oil prices

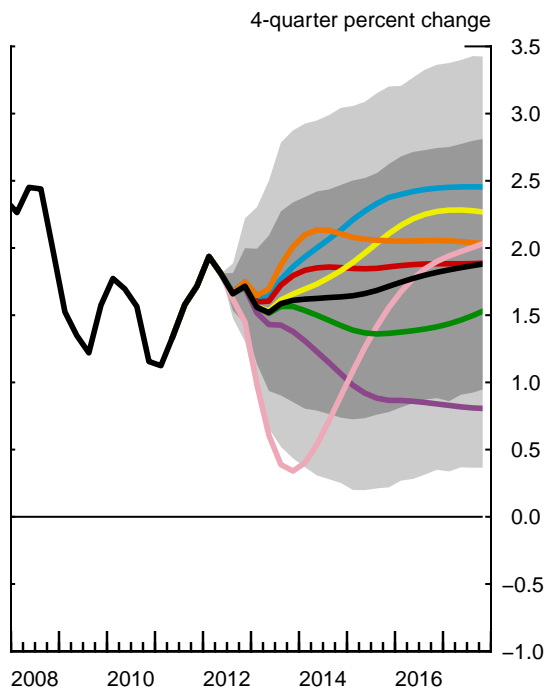
Real GDP



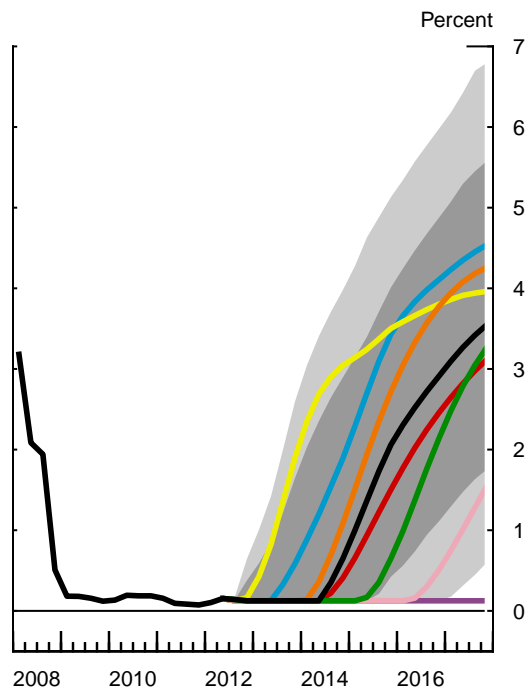
Unemployment Rate



PCE Prices excluding Food and Energy



Federal Funds Rate



the alternative, the automatic spending cuts required by the Budget Control Act's sequestration provisions take full effect in 2013, further restraining federal purchases by about  $\frac{1}{4}$  percent of GDP relative to baseline.<sup>2</sup> 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  $2\frac{1}{2}$  percent in 2014, on average 1 percentage point per year slower than in the baseline.<sup>3</sup> The unemployment rate rises above  $8\frac{1}{2}$  percent in 2014. With a wider margin of resource slack, inflation declines slightly to 1 percent in 2015, and the federal funds rate does not begin to increase from its effective lower bound until mid-2015.

### European Crisis with Severe Spillovers

In this scenario, the current economic and financial stress in Europe intensifies sharply and causes Europe to plunge into a severe financial crisis and a deep recession. 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  $8\frac{1}{2}$  percent relative to baseline by the end of 2013, despite a 25 percent depreciation in the real effective 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, equity prices plunge, 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. In all, U.S. real GDP declines at an annual rate of more than 1 percent in the second half of this year and 3 percent next year. The unemployment rate rises to  $10\frac{3}{4}$  percent in 2014 before beginning to gradually decline. With substantially greater resource slack and lower import prices, overall U.S. consumer prices decrease in 2013; prices begin to rise

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<sup>2</sup> After 2014, both tax revenues 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.

<sup>3</sup> Although taxes increase by more than 2 percent of GDP in 2013 in this scenario, the 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 in 2014 is also restrained.



**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    |
|---|---------|---------|---------|---------|---------|---------|
| <i>Real GDP</i><br>(percent change, Q4 to Q4)                                 |         |         |         |         |         |         |
| Projection  | 1.6     | 2.4     | 3.2     | 3.6     | 3.0     | 2.9     |
| Confidence interval   |         |         |         |         |         |         |
| Tealbook forecast errors  | .8–2.5  | .6–4.3  | 1.2–5.3 | ...     | ...     | ...     |
| FRB/US stochastic simulations   | 1.0–2.4 | 1.0–4.1 | 1.2–4.7 | 1.5–5.4 | 1.2–5.2 | 1.0–5.0 |
| <i>Civilian unemployment rate</i><br>(percent, Q4)                            |         |         |         |         |         |         |
| Projection  | 8.3     | 8.0     | 7.6     | 6.7     | 6.2     | 5.7     |
| Confidence interval   |         |         |         |         |         |         |
| Tealbook forecast errors  | 7.9–8.6 | 7.2–8.8 | 6.3–9.0 | ...     | ...     | ...     |
| FRB/US stochastic simulations   | 8.1–8.5 | 7.3–8.7 | 6.6–8.7 | 5.8–8.0 | 5.2–7.3 | 4.7–6.8 |
| <i>PCE prices, total</i><br>(percent change, Q4 to Q4)                        |         |         |         |         |         |         |
| Projection  | 1.7     | 1.4     | 1.4     | 1.5     | 1.8     | 1.9     |
| Confidence interval   |         |         |         |         |         |         |
| Tealbook forecast errors  | 1.2–2.2 | .3–2.5  | .1–2.6  | ...     | ...     | ...     |
| FRB/US stochastic simulations   | 1.2–2.2 | .4–2.4  | .2–2.5  | .3–2.7  | .5–2.9  | .7–3.1  |
| <i>PCE prices excluding<br/>food and energy</i><br>(percent change, Q4 to Q4) |         |         |         |         |         |         |
| Projection  | 1.7     | 1.6     | 1.6     | 1.7     | 1.8     | 1.9     |
| Confidence interval   |         |         |         |         |         |         |
| Tealbook forecast errors  | 1.4–2.0 | .9–2.3  | .6–2.7  | ...     | ...     | ...     |
| FRB/US stochastic simulations   | 1.4–2.0 | .9–2.3  | .7–2.5  | .8–2.6  | .9–2.7  | 1.0–2.8 |
| <i>Federal funds rate</i><br>(percent, Q4)                                    |         |         |         |         |         |         |
| Projection  | .1      | .1      | .6      | 2.1     | 2.9     | 3.5     |
| Confidence interval   |         |         |         |         |         |         |
| FRB/US stochastic simulations   | .1–.4   | .1–1.6  | .1–2.9  | .4–4.0  | 1.1–4.9 | 1.8–5.6 |

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.

in 2014 as economic activity starts to recover.<sup>4</sup> Under these conditions, the federal funds rate remains at its effective lower bound until mid-2016.

### **Faster European Recovery**

This scenario assumes that the European authorities progress more rapidly than expected in addressing their fiscal and financial stresses and market participants react quickly and positively. As a result, financial conditions improve more quickly than anticipated, causing European corporate bond spreads to fall roughly 100 basis points relative to baseline by mid-2013. In addition, household and business sentiment improves markedly. Reflecting these developments, real GDP in Europe expands about 2 percent in 2013, rather than remaining nearly flat as in the baseline. U.S. net exports are boosted by stronger economic activity in Europe and in other U.S. trading partners, as well as by a depreciation in the exchange value of the dollar as safe-haven flows unwind; more tightening of monetary policy in Europe than in the United States (relative to baseline) also pushes down the dollar. All told, U.S. real GDP rises at a 3½ percent rate on average over the next two years, the unemployment rate falls to about 7 percent by the end of 2014, and core PCE inflation increases to 2 percent in 2013 and 2014. Under these conditions, the federal funds rate begins to rise one quarter earlier than in the baseline.

### **Faster Domestic Recovery**

The recent stronger-than-expected gains in employment and retail sales, along with continued increases in house prices, may point to a faster underlying pace of the recovery than we anticipate. This scenario takes on board this possibility by assuming that uncertainty about the durability of the recovery lifts more quickly than expected. In addition, house values rise faster, reaching a level 10 percent above the baseline by late 2014, with favorable implications for construction, household wealth, and the willingness of financial institutions to extend credit. These various factors, in turn, fuel a more robust cycle of increased household and business confidence, employment, credit availability, and spending that boosts the pace of the recovery. Real GDP accelerates to an average

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<sup>4</sup> 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 initial appreciation in the exchange value of the dollar 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.

growth rate of  $3\frac{3}{4}$  percent in 2013 and 2014, and the unemployment rate declines to  $6\frac{1}{4}$  percent by the end of 2014. Upward pressure on inflation is initially tempered by the effects of increased capital investment on labor productivity and unit labor costs. Over time, however, greater resource utilization causes inflation to move up, to  $2\frac{1}{4}$  percent in 2016 and 2017. In response to the higher inflation and stronger pace of real activity, the federal funds rate lifts off earlier and stays higher than in the baseline; accordingly, inflation will eventually settle back at the Committee's longer-run objective.

### Higher Oil Prices

The recent escalation of tensions with Iran over its nuclear program highlights the significant upside risks to our outlook for oil prices. In this scenario, we assume that greater geopolitical stresses and supply disruptions temporarily increase oil prices \$35 per barrel above baseline at the end of this year, but that prices then partially recede and level out at \$20 per barrel above baseline. U.S. domestic demand falls because higher oil prices reduce households' real incomes and lower the return on firms' investments, while real exports also decline due to weaker foreign economic activity. U.S. real GDP rises at an annual rate of about  $1\frac{1}{2}$  percent, on average, in the second half of this year and next year, and the unemployment rate is 8 percent at the end of 2014, nearly  $\frac{1}{2}$  percentage point higher than in the baseline. Reflecting the rise in energy costs, overall PCE inflation jumps to nearly  $3\frac{1}{2}$  percent in the second half of this year. However, because the public recognizes that the direct impetus of higher oil prices to inflation is only temporary, and because they anticipate that the Federal Reserve will maintain stable inflation over time, inflation expectations remain well anchored and actual inflation subsequently moves back to baseline. In response to the offsetting implications for policy of higher inflation and weaker real activity, the federal funds rate lifts off from its effective lower bound at the same time as in the baseline but rises more gradually thereafter.

### Damaged Labor Market

The unusual depth and breadth of the downturn may have impaired the efficiency of labor markets by more than we judge. In this scenario, we assume that the natural rate of unemployment reached 7 percent in early 2011 (1 percentage point above baseline) and that it will remain at that level for the indefinite future. Furthermore, the trend labor force participation rate is assumed to decline more quickly, ending 2015 more than 1 percentage point below the baseline. 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, a higher natural rate of unemployment implies that labor market slack remains persistently narrower than in the baseline, leading to higher unit labor costs and greater upward pressure on consumer prices. These price pressures are magnified by the assumption that policymakers initially fail to recognize the weaker supply-side conditions, which leads them to maintain a more accommodative stance of monetary policy through late 2014 than they would have chosen with a more accurate assessment of the supply side. In response, the public's long-run inflation expectations are assumed to move up (in contrast to the previous scenario), and thus consumer price inflation eventually rises to 2½ percent. Largely reflecting these more inflationary conditions, the federal funds rate begins to rise earlier than in the baseline.

### **Protracted Headwinds**

Given the constraints on monetary policy, persistently weak aggregate demand could eventually give rise to a self-reinforcing downward spiral in inflation. In this scenario, concerns about the durability of the recovery fade more slowly than in the baseline, leading firms to remain reluctant to hire and invest, and households to remain cautious about their spending. In addition, the resolution of ongoing problems in the housing market proves to be even more gradual than anticipated. Reflecting these protracted headwinds, real GDP grows only 2 percent, on average, in 2013 and 2014, and gains in real GDP remain below baseline into the second half of the decade. The unemployment rate stays around its current elevated level for several years. In turn, the sustained wide margins of slack in labor and product markets exert more-persistent downward pressure on inflation than in the baseline, which eventually convinces households and firms that they are in a new inflation environment. As a result, inflation expectations begin to fall, giving rise to a steady decline in consumer inflation to a rate of only ¾ percent starting in 2014. With inflation well below and the unemployment rate far above the FOMC's longer-run objectives, the federal funds rate is still at its effective lower bound at the end of 2017.

**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 |
| <i>Real GDP</i>                       |                   |                  |                   |                  |                   |                  |
| Staff                                 | 1.5               | 1.6              | 2.1               | 2.4              | 3.2               | 3.2              |
| FRB/US                                | 1.4               | 1.5              | 2.2               | 1.7              | 3.6               | 2.9              |
| EDO                                   | 2.3               | 1.9              | 3.3               | 3.1              | 3.1               | 3.1              |
| Blue Chip                             | 2.0               | 1.8              | 2.5               | 2.4              | ...               | ...              |
| <i>Unemployment rate<sup>1</sup></i>  |                   |                  |                   |                  |                   |                  |
| Staff                                 | 8.3               | 8.3              | 8.1               | 8.0              | 7.8               | 7.6              |
| FRB/US                                | 8.4               | 8.4              | 8.8               | 8.8              | 8.2               | 8.5              |
| EDO                                   | 8.0               | 8.2              | 7.6               | 7.8              | 7.3               | 7.4              |
| Blue Chip                             | 8.1               | 8.1              | 7.7               | 7.7              | ...               | ...              |
| <i>Total PCE prices</i>               |                   |                  |                   |                  |                   |                  |
| Staff                                 | 1.4               | 1.7              | 1.5               | 1.4              | 1.4               | 1.4              |
| FRB/US                                | 1.2               | 1.7              | 1.1               | 1.2              | 1.0               | 1.0              |
| EDO                                   | 1.6               | 1.6              | 1.6               | 1.6              | 1.6               | 1.6              |
| Blue Chip <sup>2</sup>                | 1.8               | 1.9              | 2.2               | 2.2              | ...               | ...              |
| <i>Core PCE prices</i>                |                   |                  |                   |                  |                   |                  |
| Staff                                 | 1.8               | 1.7              | 1.6               | 1.6              | 1.6               | 1.6              |
| FRB/US                                | 1.6               | 1.7              | 1.2               | 1.5              | 1.2               | 1.2              |
| EDO                                   | 1.8               | 1.7              | 1.6               | 1.6              | 1.6               | 1.6              |
| Blue Chip                             | ...               | ...              | ...               | ...              | ...               | ...              |
| <i>Federal funds rate<sup>1</sup></i> |                   |                  |                   |                  |                   |                  |
| Staff                                 | .1                | .1               | .1                | .1               | .4                | .6               |
| FRB/US                                | .0                | .2               | .1                | .2               | 1.3               | .9               |
| EDO                                   | .6                | .4               | 1.5               | 1.2              | 2.1               | 1.9              |
| Blue Chip <sup>3</sup>                | .1                | .1               | .3                | .2               | ...               | ...              |

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

1. Percent, average for Q4.

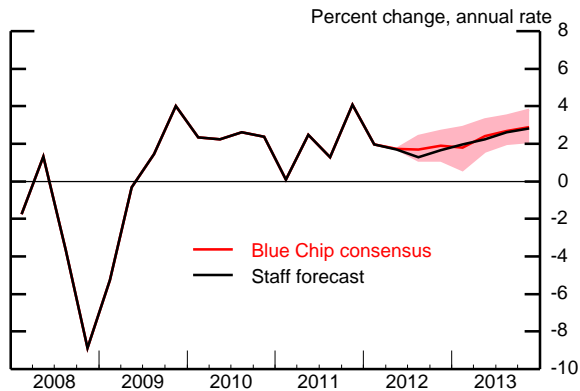
2. Consumer price index.

3. Treasury bill rate.

... Not applicable. The Blue Chip forecast typically extends about 2 years.

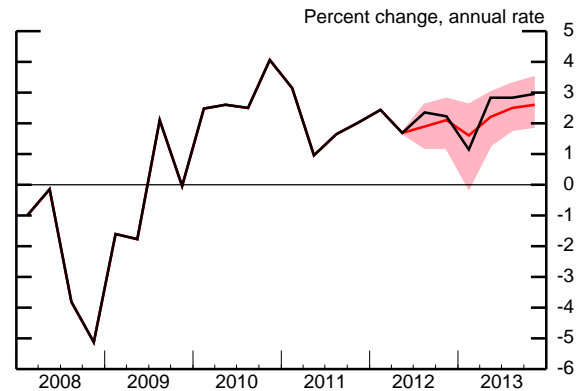
# **Tealbook Forecast Compared with Blue Chip** (Blue Chip survey released August 10, 2012)

Real GDP

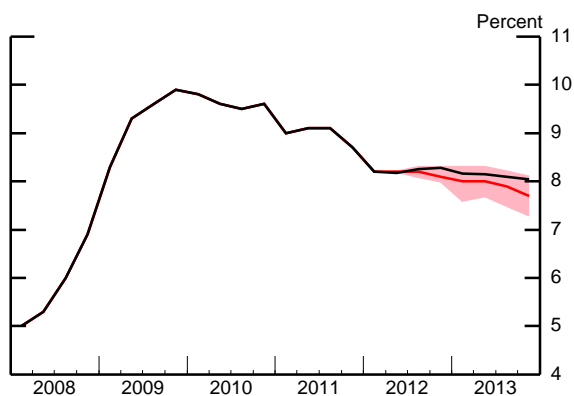


Note: The shaded area represents the area between the Blue Chip top 10 and bottom 10 averages.

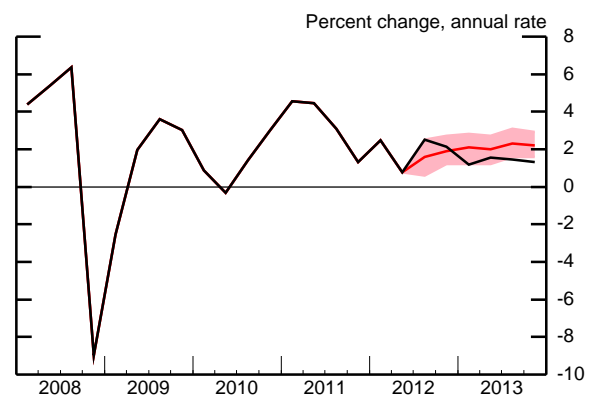
Real PCE



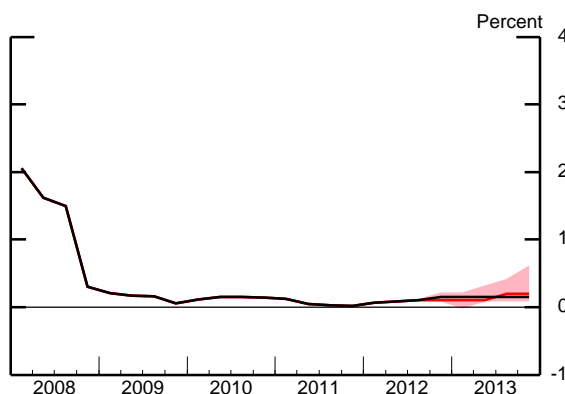
Unemployment Rate



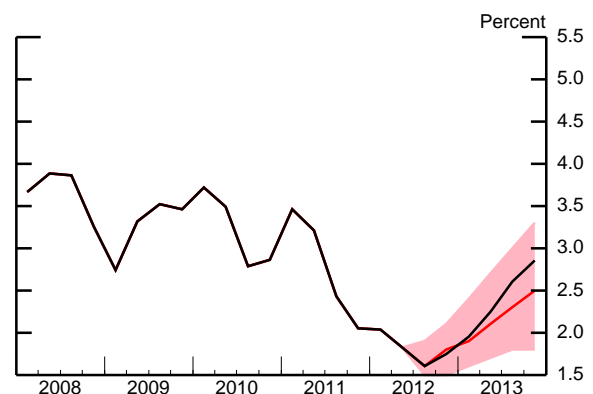
Consumer Price Index



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.

## Assessment of Key Macroeconomic Risks (1)

### Probability of Inflation Events

(4 quarters ahead—2013:Q3 )

| Probability that the 4-quarter change in total PCE prices will be ... | Staff | FRB/US | EDO | BVAR |
|---|-------|--------|-----|------|
| <i>Greater than 3 percent</i>   |       |        |     |      |
| Current Tealbook  | .07   | .06    | .11 | .14  |
| Previous Tealbook   | .05   | .03    | .10 | .04  |
| <i>Less than 1 percent</i>  |       |        |     |      |
| Current Tealbook  | .27   | .31    | .32 | .10  |
| Previous Tealbook   | .33   | .49    | .31 | .23  |

### Probability of Unemployment Events

(4 quarters ahead—2013:Q3)

| Probability that the unemployment rate will ... | Staff | FRB/US | EDO | BVAR |
|---|-------|--------|-----|------|
| <i>Increase by 1 percentage point</i>           |       |        |     |      |
| Current Tealbook                                | .02   | .16    | .16 | .02  |
| Previous Tealbook                               | .04   | .17    | .17 | .02  |
| <i>Decrease by 1 percentage point</i>           |       |        |     |      |
| Current Tealbook                                | .06   | .00    | .32 | .14  |
| Previous Tealbook                               | .02   | .00    | .32 | .19  |

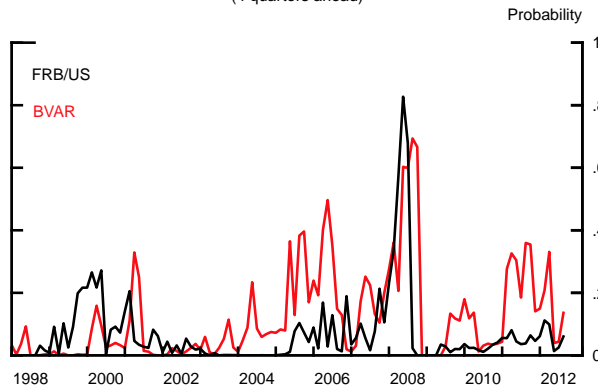
### Probability of Near-Term Recession

| Probability that real GDP declines in each of 2012:Q4 and 2013:Q1 | Staff | FRB/US | EDO | BVAR | Factor Model |
|---|-------|--------|-----|------|--------------|
| Current Tealbook  | .03   | .07    | .05 | .03  | .20          |
| Previous Tealbook   | .07   | .10    | .05 | .07  | .21          |

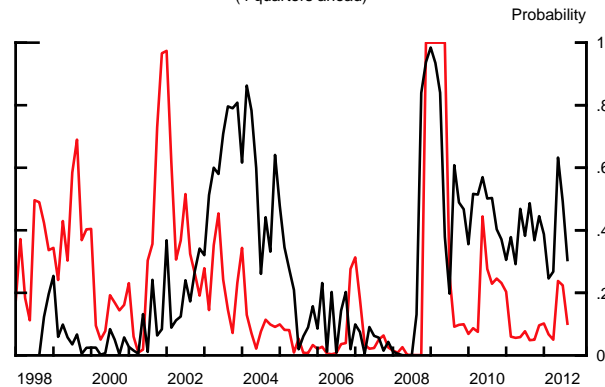
Note: "Staff" represents Tealbook forecast errors applied to the Tealbook baseline; baselines for FRB/US, BVAR, EDO, and the factor model are generated by those models themselves, up to the current-quarter estimate. The current quarter is taken as data from the staff estimate for the second Tealbook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

## Assessment of Key Macroeconomic Risks (2)

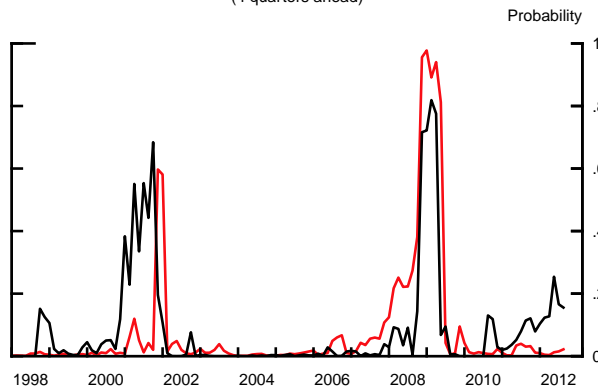
Probability that Total PCE Inflation Is above 3 Percent  
(4 quarters ahead)



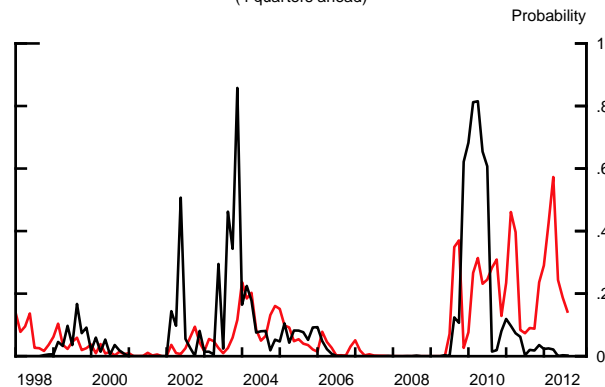
Probability that Total PCE Inflation Is below 1 Percent  
(4 quarters ahead)



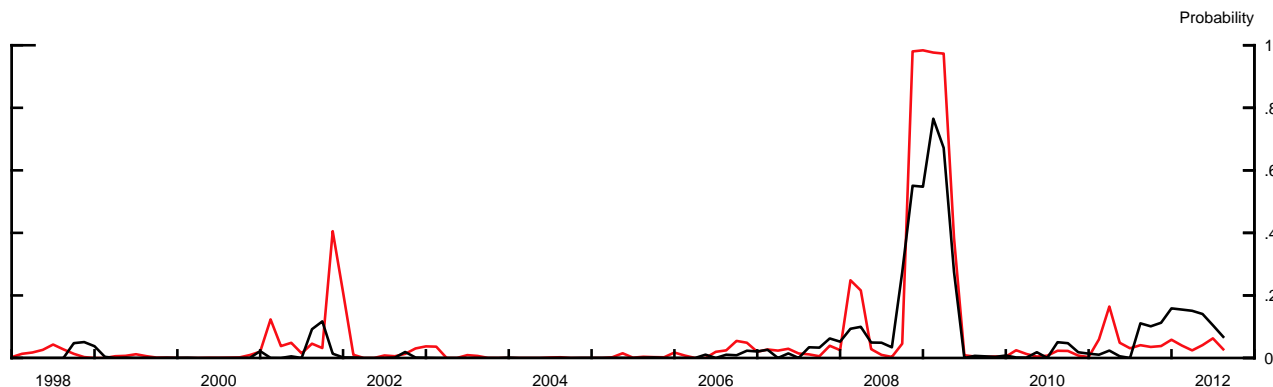
Probability that the Unemployment Rate Increases 1 ppt  
(4 quarters ahead)



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.



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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 <sup>1</sup> |          |
|---------------------------------|-------------|----------|----------|----------|-----------------|----------|----------------------|----------|--------------------------------|----------|
|                                 | 07/25/12    | 09/05/12 | 07/25/12 | 09/05/12 | 07/25/12        | 09/05/12 | 07/25/12             | 09/05/12 | 07/25/12                       | 09/05/12 |
| <i>Quarterly</i>                |             |          |          |          |                 |          |                      |          |                                |          |
| 2011:Q1                         | 3.1         | 2.2      | .4       | .1       | 3.9             | 3.2      | 1.6                  | 1.3      | 9.0                            | 9.0      |
| Q2                              | 4.0         | 5.2      | 1.3      | 2.5      | 3.3             | 3.6      | 2.3                  | 2.3      | 9.1                            | 9.1      |
| Q3                              | 4.4         | 4.3      | 1.8      | 1.3      | 2.3             | 2.3      | 2.1                  | 1.9      | 9.1                            | 9.1      |
| Q4                              | 3.8         | 4.2      | 3.0      | 4.1      | 1.2             | 1.1      | 1.3                  | 1.3      | 8.7                            | 8.7      |
| 2012:Q1                         | 3.9         | 4.2      | 1.9      | 2.0      | 2.6             | 2.5      | 2.3                  | 2.2      | 8.2                            | 8.2      |
| Q2                              | 1.8         | 3.3      | 1.0      | 1.7      | .8              | .7       | 1.8                  | 1.8      | 8.2                            | 8.2      |
| Q3                              | 3.8         | 4.3      | 1.5      | 1.3      | .8              | 1.9      | 1.6                  | 1.3      | 8.3                            | 8.3      |
| Q4                              | 3.7         | 3.1      | 1.8      | 1.7      | 1.5             | 1.7      | 1.5                  | 1.5      | 8.3                            | 8.3      |
| 2013:Q1                         | 3.2         | 3.4      | 1.6      | 2.0      | 1.6             | 1.2      | 1.6                  | 1.6      | 8.2                            | 8.2      |
| Q2                              | 3.6         | 3.8      | 2.0      | 2.3      | 1.6             | 1.5      | 1.6                  | 1.6      | 8.2                            | 8.2      |
| Q3                              | 3.7         | 4.1      | 2.2      | 2.6      | 1.5             | 1.4      | 1.6                  | 1.6      | 8.1                            | 8.1      |
| Q4                              | 4.0         | 4.3      | 2.5      | 2.8      | 1.4             | 1.3      | 1.6                  | 1.6      | 8.1                            | 8.0      |
| <i>Two-quarter<sup>2</sup></i>  |             |          |          |          |                 |          |                      |          |                                |          |
| 2011:Q2                         | 3.5         | 3.7      | .8       | 1.3      | 3.6             | 3.4      | 1.9                  | 1.8      | -.5                            | -.5      |
| Q4                              | 4.1         | 4.3      | 2.4      | 2.7      | 1.8             | 1.7      | 1.7                  | 1.6      | -.4                            | -.4      |
| 2012:Q2                         | 2.8         | 3.7      | 1.4      | 1.8      | 1.7             | 1.6      | 2.1                  | 2.0      | -.5                            | -.5      |
| Q4                              | 3.7         | 3.7      | 1.6      | 1.5      | 1.1             | 1.8      | 1.5                  | 1.4      | .1                             | .1       |
| 2013:Q2                         | 3.4         | 3.6      | 1.8      | 2.1      | 1.6             | 1.4      | 1.6                  | 1.6      | -.1                            | -.1      |
| Q4                              | 3.9         | 4.2      | 2.4      | 2.7      | 1.4             | 1.4      | 1.6                  | 1.6      | -.1                            | -.2      |
| <i>Four-quarter<sup>3</sup></i> |             |          |          |          |                 |          |                      |          |                                |          |
| 2010:Q4                         | 4.7         | 4.3      | 3.1      | 2.4      | 1.3             | 1.5      | 1.0                  | 1.2      | -.3                            | -.3      |
| 2011:Q4                         | 3.8         | 4.0      | 1.6      | 2.0      | 2.7             | 2.5      | 1.8                  | 1.7      | -.9                            | -.9      |
| 2012:Q4                         | 3.3         | 3.7      | 1.5      | 1.6      | 1.4             | 1.7      | 1.8                  | 1.7      | -.4                            | -.4      |
| 2013:Q4                         | 3.6         | 3.9      | 2.1      | 2.4      | 1.5             | 1.4      | 1.6                  | 1.6      | -.2                            | -.3      |
| 2014:Q4                         | 4.7         | 4.7      | 3.2      | 3.2      | 1.4             | 1.4      | 1.6                  | 1.6      | -.3                            | -.4      |
| <i>Annual</i>                   |             |          |          |          |                 |          |                      |          |                                |          |
| 2010                            | 4.2         | 3.8      | 3.0      | 2.4      | 1.8             | 1.9      | 1.4                  | 1.5      | 9.6                            | 9.6      |
| 2011                            | 3.9         | 4.0      | 1.7      | 1.8      | 2.5             | 2.4      | 1.4                  | 1.4      | 8.9                            | 8.9      |
| 2012                            | 3.5         | 4.0      | 1.8      | 2.1      | 1.7             | 1.8      | 1.9                  | 1.8      | 8.2                            | 8.2      |
| 2013                            | 3.5         | 3.7      | 1.8      | 2.0      | 1.4             | 1.5      | 1.6                  | 1.6      | 8.2                            | 8.1      |
| 2014                            | 4.3         | 4.5      | 2.8      | 3.0      | 1.4             | 1.4      | 1.6                  | 1.6      | 8.0                            | 7.8      |

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 |      |      |      | 2011 <sup>1</sup> | 2012 <sup>1</sup> | 2013 <sup>1</sup> | 2014 <sup>1</sup> |
|---|------|-------|-------|------|------|------|------|------|------|------|------|-------------------|-------------------|-------------------|-------------------|
|   | Q2   | Q3    | Q4    | Q1   | Q2   | Q3   | Q4   | Q1   | Q2   | Q3   | Q4   |                   |                   |                   |                   |
| Real GDP                                | 2.5  | 1.3   | 4.1   | 2.0  | 1.7  | 1.3  | 1.7  | 2.0  | 2.3  | 2.6  | 2.8  | 2.0               | 1.6               | 2.4               | 3.2               |
| <i>Previous Tealbook</i>                | 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               |
| Final sales                             | 2.4  | 2.3   | 1.5   | 2.4  | 1.9  | 1.4  | 1.4  | .8   | 2.4  | 2.7  | 2.5  | 1.7               | 1.8               | 2.1               | 3.1               |
| <i>Previous Tealbook</i>                | 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               |
| Priv. dom. final purch.                 | 2.5  | 3.6   | 3.2   | 3.5  | 2.0  | 2.1  | 2.2  | 1.3  | 3.3  | 3.5  | 3.6  | 2.9               | 2.5               | 2.9               | 4.0               |
| <i>Previous Tealbook</i>                | 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               |
| Personal cons. expend.                  | 1.0  | 1.7   | 2.0   | 2.4  | 1.7  | 2.3  | 2.2  | 1.1  | 2.8  | 2.8  | 3.0  | 1.9               | 2.2               | 2.4               | 3.4               |
| <i>Previous Tealbook</i>                | .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               |
| Durables                                | -2.3 | 5.4   | 13.9  | 11.5 | .0   | 7.5  | 6.6  | 2.0  | 9.1  | 8.7  | 9.0  | 5.9               | 6.3               | 7.2               | 8.1               |
| Nondurables                             | -.3  | -.4   | 1.8   | 1.6  | .5   | .9   | 1.9  | 1.0  | 1.8  | 1.9  | 2.0  | 1.4               | 1.2               | 1.7               | 2.7               |
| Services                                | 1.9  | 1.8   | .3    | 1.3  | 2.4  | 2.0  | 1.6  | 1.0  | 2.2  | 2.2  | 2.3  | 1.5               | 1.8               | 2.0               | 2.9               |
| Residential investment                  | 4.1  | 1.4   | 12.1  | 20.5 | 8.4  | 9.7  | 5.5  | 10.5 | 12.0 | 12.4 | 12.6 | 3.9               | 10.9              | 11.9              | 12.4              |
| <i>Previous Tealbook</i>                | 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              |
| Business fixed invest.                  | 14.5 | 19.0  | 9.5   | 7.5  | 3.1  | -1.0 | 1.5  | .6   | 4.5  | 6.1  | 5.9  | 10.2              | 2.7               | 4.2               | 5.7               |
| <i>Previous Tealbook</i>                | 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               |
| Equipment & software                    | 7.8  | 18.3  | 8.8   | 5.4  | 4.1  | .7   | 2.0  | .2   | 5.4  | 7.5  | 7.3  | 11.4              | 3.0               | 5.1               | 7.2               |
| <i>Previous Tealbook</i>                | 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               |
| Nonres. structures                      | 35.2 | 20.7  | 11.5  | 12.9 | .5   | -5.0 | .5   | 1.4  | 2.3  | 2.6  | 2.6  | 6.9               | 2.0               | 2.2               | 2.2               |
| <i>Previous Tealbook</i>                | 22.6 | 14.4  | -.9   | 1.9  | .5   | -1.8 | .7   | 1.0  | .8   | .8   | .7   | 4.4               | .3                | .8                | 1.6               |
| Net exports <sup>2</sup>                | -400 | -398  | -418  | -416 | -405 | -405 | -411 | -412 | -414 | -414 | -423 | -408              | -409              | -416              | -430              |
| <i>Previous Tealbook<sup>2</sup></i>    | -416 | -403  | -411  | -407 | -405 | -417 | -429 | -434 | -442 | -444 | -453 | -414              | -414              | -443              | -462              |
| Exports                                 | 4.1  | 6.1   | 1.4   | 4.4  | 6.0  | 3.3  | 3.4  | 4.3  | 4.7  | 4.3  | 4.5  | 4.3               | 4.3               | 4.5               | 5.7               |
| Imports                                 | .1   | 4.7   | 4.9   | 3.1  | 2.9  | 2.8  | 3.9  | 3.7  | 4.2  | 3.4  | 5.3  | 3.5               | 3.2               | 4.2               | 4.8               |
| Gov't. cons. & invest.                  | -.8  | -2.9  | -2.2  | -3.0 | -.7  | -1.7 | -1.1 | -1.5 | -1.5 | -1.4 | -1.4 | -3.3              | -1.6              | -1.5              | -1.1              |
| <i>Previous Tealbook</i>                | -.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               |
| Federal                                 | 2.8  | -4.3  | -4.4  | -4.2 | -.1  | -3.2 | -2.5 | -3.9 | -4.3 | -4.1 | -4.4 | -4.2              | -2.5              | -4.2              | -4.3              |
| Defense                                 | 8.3  | 2.6   | -10.6 | -7.1 | -.1  | -3.5 | -2.4 | -4.6 | -5.1 | -4.8 | -5.1 | -4.0              | -3.3              | -4.9              | -5.0              |
| Nondefense                              | -7.5 | -17.4 | 10.2  | 1.8  | -.3  | -2.4 | -2.7 | -2.7 | -2.7 | -2.8 | -2.8 | -4.6              | -.9               | -2.7              | -2.9              |
| State & local                           | -3.2 | -2.0  | -.7   | -2.2 | -1.0 | -.7  | -.2  | .1   | .3   | .3   | .4   | -2.7              | -1.0              | .3                | .9                |
| Change in bus. inventories <sup>2</sup> | 28   | -4    | 71    | 57   | 53   | 47   | 54   | 94   | 90   | 87   | 97   | 31                | 53                | 92                | 107               |
| <i>Previous Tealbook<sup>2</sup></i>    | 39   | -2    | 52    | 54   | 59   | 69   | 79   | 84   | 93   | 100  | 120  | 35                | 65                | 99                | 140               |
| Nonfarm <sup>2</sup>                    | 36   | -1    | 74    | 62   | 55   | 68   | 76   | 91   | 87   | 84   | 94   | 36                | 65                | 89                | 106               |
| Farm <sup>2</sup>                       | -6   | -3    | -2    | -3   | -2   | -21  | -21  | 3    | 3    | 3    | 3    | -4                | -12               | 3                 | 1                 |

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

2. Billions of chained (2005) dollars.

Class II FOMC - Restricted (FR)

Authorized for Public Release

September 5, 2012

**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  | -.1   | 2.4  | 2.0  | 1.6  | 2.4  | 3.2  |
| <i>Previous Tealbook</i>                | 2.8  | 2.4   | 2.2   | -3.3  | -.5   | 3.1  | 1.6  | 1.5  | 2.1  | 3.2  |
| Final sales                             | 2.7  | 2.8   | 2.4   | -2.6  | -.5   | 1.7  | 1.7  | 1.8  | 2.1  | 3.1  |
| <i>Previous Tealbook</i>                | 2.7  | 2.8   | 2.4   | -2.6  | -.8   | 2.4  | 1.5  | 1.4  | 1.8  | 3.0  |
| Priv. dom. final purch.                 | 3.2  | 2.4   | 1.2   | -4.5  | -2.8  | 3.2  | 2.9  | 2.5  | 2.9  | 4.0  |
| <i>Previous Tealbook</i>                | 3.2  | 2.4   | 1.2   | -4.5  | -2.5  | 3.6  | 2.5  | 2.4  | 2.6  | 3.8  |
| Personal cons. expend.                  | 2.8  | 3.2   | 1.7   | -2.5  | -.3   | 2.9  | 1.9  | 2.2  | 2.4  | 3.4  |
| <i>Previous Tealbook</i>                | 2.8  | 3.2   | 1.7   | -2.5  | -.2   | 3.0  | 1.6  | 2.0  | 2.2  | 3.3  |
| Durables                                | 2.8  | 7.0   | 4.6   | -13.0 | 3.0   | 9.5  | 5.9  | 6.3  | 7.2  | 8.1  |
| Nondurables                             | 3.1  | 2.9   | .8    | -3.1  | .4    | 3.0  | 1.4  | 1.2  | 1.7  | 2.7  |
| Services                                | 2.7  | 2.6   | 1.4   | -.5   | -1.1  | 1.9  | 1.5  | 1.8  | 2.0  | 2.9  |
| Residential investment                  | 5.3  | -15.7 | -20.7 | -24.4 | -13.3 | -5.7 | 3.9  | 10.9 | 11.9 | 12.4 |
| <i>Previous Tealbook</i>                | 5.3  | -15.7 | -20.7 | -24.4 | -12.9 | -6.3 | 3.5  | 11.0 | 10.0 | 11.2 |
| Business fixed invest.                  | 4.5  | 7.8   | 7.9   | -9.4  | -15.7 | 7.7  | 10.2 | 2.7  | 4.2  | 5.7  |
| <i>Previous Tealbook</i>                | 4.5  | 7.8   | 7.9   | -9.4  | -14.4 | 11.1 | 8.2  | 2.9  | 3.6  | 5.3  |
| Equipment & software                    | 6.2  | 6.0   | 3.9   | -13.6 | -7.8  | 11.9 | 11.4 | 3.0  | 5.1  | 7.2  |
| <i>Previous Tealbook</i>                | 6.2  | 6.0   | 3.9   | -13.6 | -5.8  | 16.6 | 9.6  | 3.9  | 4.6  | 6.7  |
| Nonres. structures                      | -.1  | 13.0  | 17.3  | -1.2  | -29.4 | -1.8 | 6.9  | 2.0  | 2.2  | 2.2  |
| <i>Previous Tealbook</i>                | -.1  | 13.0  | 17.3  | -1.2  | -29.3 | -1.8 | 4.4  | .3   | .8   | 1.6  |
| Net exports <sup>1</sup>                | -723 | -729  | -649  | -495  | -355  | -420 | -408 | -409 | -416 | -430 |
| <i>Previous Tealbook<sup>1</sup></i>    | -723 | -729  | -649  | -495  | -359  | -422 | -414 | -414 | -443 | -462 |
| Exports                                 | 6.7  | 10.2  | 10.1  | -2.5  | .3    | 8.8  | 4.3  | 4.3  | 4.5  | 5.7  |
| Imports                                 | 5.2  | 4.1   | .8    | -5.9  | -6.1  | 10.9 | 3.5  | 3.2  | 4.2  | 4.8  |
| Gov't. cons. & invest.                  | .7   | 1.5   | 1.9   | 2.7   | 4.0   | -1.3 | -3.3 | -1.6 | -1.5 | -1.1 |
| <i>Previous Tealbook</i>                | .7   | 1.5   | 1.9   | 2.7   | 1.1   | .1   | -2.8 | -2.4 | -1.4 | -.8  |
| Federal                                 | 1.2  | 2.2   | 3.1   | 8.8   | 5.1   | 2.3  | -4.2 | -2.5 | -4.2 | -4.3 |
| Defense                                 | .4   | 4.4   | 2.6   | 9.8   | 4.1   | 1.0  | -4.0 | -3.3 | -4.9 | -5.0 |
| Nondefense                              | 2.6  | -2.3  | 4.2   | 6.8   | 7.2   | 5.2  | -4.6 | -.9  | -2.7 | -2.9 |
| State & local                           | .4   | 1.2   | 1.2   | -.9   | 3.3   | -3.6 | -2.7 | -1.0 | .3   | .9   |
| Change in bus. inventories <sup>1</sup> | 50   | 59    | 28    | -36   | -139  | 51   | 31   | 53   | 92   | 107  |
| <i>Previous Tealbook<sup>1</sup></i>    | 50   | 59    | 28    | -36   | -145  | 59   | 35   | 65   | 99   | 140  |
| Nonfarm <sup>1</sup>                    | 50   | 63    | 29    | -38   | -138  | 58   | 36   | 65   | 89   | 106  |
| Farm <sup>1</sup>                       | 0    | -4    | -1    | 1     | -1    | -6   | -4   | -12  | 3    | 1    |

1. Billions of chained (2005) dollars.

# Greensheets

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

| Item                       | 2011 |      |     | 2012 |     |     |     | 2013 |     |     |     | 2011 <sup>1</sup> | 2012 <sup>1</sup> | 2013 <sup>1</sup> | 2014 <sup>1</sup> |
|----------------------------|------|------|-----|------|-----|-----|-----|------|-----|-----|-----|-------------------|-------------------|-------------------|-------------------|
|                            | Q2   | Q3   | Q4  | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  | Q3  | Q4  |                   |                   |                   |                   |
| Real GDP                   | 2.5  | 1.3  | 4.1 | 2.0  | 1.7 | 1.3 | 1.7 | 2.0  | 2.3 | 2.6 | 2.8 | 2.0               | 1.6               | 2.4               | 3.2               |
| <i>Previous Tealbook</i>   | 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               |
| Final sales                | 2.5  | 2.3  | 1.6 | 2.4  | 1.9 | 1.4 | 1.4 | .8   | 2.4 | 2.7 | 2.5 | 1.7               | 1.8               | 2.1               | 3.1               |
| <i>Previous Tealbook</i>   | 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               |
| Priv. dom. final purch.    | 2.1  | 2.9  | 2.7 | 2.9  | 1.7 | 1.8 | 1.9 | 1.1  | 2.7 | 2.9 | 3.0 | 2.4               | 2.1               | 2.5               | 3.3               |
| <i>Previous Tealbook</i>   | 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               |
| Personal cons. expend.     | .7   | 1.2  | 1.5 | 1.7  | 1.2 | 1.7 | 1.6 | .8   | 2.0 | 2.0 | 2.1 | 1.4               | 1.5               | 1.7               | 2.4               |
| <i>Previous Tealbook</i>   | .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               |
| Durables                   | -.2  | .4   | 1.0 | .9   | .0  | .6  | .5  | .2   | .7  | .7  | .7  | .4                | .5                | .5                | .6                |
| Nondurables                | -.1  | -.1  | .3  | .3   | .1  | .1  | .3  | .2   | .3  | .3  | .3  | .2                | .2                | .3                | .4                |
| Services                   | .9   | .9   | .2  | .6   | 1.1 | 1.0 | .8  | .5   | 1.0 | 1.1 | 1.1 | .7                | .9                | .9                | 1.4               |
| Residential investment     | .1   | .0   | .3  | .4   | .2  | .2  | .1  | .2   | .3  | .3  | .3  | .1                | .2                | .3                | .3                |
| <i>Previous Tealbook</i>   | .1   | .0   | .3  | .4   | .2  | .3  | .1  | .2   | .3  | .3  | .3  | .1                | .2                | .2                | .3                |
| Business fixed invest.     | 1.3  | 1.7  | .9  | .7   | .3  | -.1 | .2  | .1   | .5  | .6  | .6  | 1.0               | .3                | .4                | .6                |
| <i>Previous Tealbook</i>   | 1.0  | 1.5  | .5  | .3   | .5  | .1  | .3  | .2   | .4  | .5  | .5  | .8                | .3                | .4                | .6                |
| Equipment & software       | .5   | 1.2  | .6  | .4   | .3  | .0  | .1  | .0   | .4  | .5  | .5  | .8                | .2                | .4                | .5                |
| <i>Previous Tealbook</i>   | .4   | 1.1  | .6  | .3   | .5  | .1  | .3  | .2   | .3  | .4  | .4  | .7                | .3                | .4                | .5                |
| Nonres. structures         | .8   | .5   | .3  | .4   | .0  | -.1 | .0  | .0   | .1  | .1  | .1  | .2                | .1                | .1                | .1                |
| <i>Previous Tealbook</i>   | .5   | .4   | .0  | .1   | .0  | -.1 | .0  | .0   | .0  | .0  | .0  | .1                | .0                | .0                | .0                |
| Net exports                | .5   | .0   | -.6 | .1   | .3  | .0  | -.2 | .0   | -.1 | .0  | -.3 | .0                | .0                | -.1               | .0                |
| <i>Previous Tealbook</i>   | .2   | .4   | -.3 | .1   | .0  | -.4 | -.4 | -.2  | -.2 | -.1 | -.3 | .0                | -.2               | -.2               | -.1               |
| Exports                    | .6   | .8   | .2  | .6   | .8  | .5  | .5  | .6   | .6  | .6  | .6  | .6                | .6                | .6                | .8                |
| Imports                    | .0   | -.8  | -.9 | -.5  | -.5 | -.5 | -.7 | -.6  | -.7 | -.6 | -.9 | -.6               | -.6               | -.7               | -.8               |
| Gov't. cons. & invest.     | -.2  | -.6  | -.4 | -.6  | -.1 | -.3 | -.2 | -.3  | -.3 | -.3 | -.3 | -.7               | -.3               | -.3               | -.2               |
| <i>Previous Tealbook</i>   | -.2  | .0   | -.8 | -.8  | -.6 | -.3 | -.3 | -.2  | -.2 | -.3 | -.3 | -.6               | -.5               | -.3               | -.2               |
| Federal                    | .2   | -.4  | -.4 | -.3  | .0  | -.2 | -.2 | -.3  | -.3 | -.3 | -.3 | -.4               | -.2               | -.3               | -.3               |
| Defense                    | .5   | .2   | -.6 | -.4  | .0  | -.2 | -.1 | -.2  | -.3 | -.2 | -.2 | -.2               | -.2               | -.2               | -.2               |
| Nondefense                 | -.2  | -.5  | .3  | .1   | .0  | -.1 | -.1 | -.1  | -.1 | -.1 | -.1 | -.1               | .0                | -.1               | -.1               |
| State & local              | -.4  | -.2  | -.1 | -.3  | -.1 | -.1 | .0  | .0   | .0  | .0  | .1  | -.3               | -.1               | .0                | .1                |
| Change in bus. inventories | .0   | -1.1 | 2.5 | -.4  | -.2 | -.1 | .2  | 1.2  | -.1 | -.1 | .3  | .3                | -.1               | .3                | .1                |
| <i>Previous Tealbook</i>   | -.3  | -1.4 | 1.8 | .1   | .0  | .3  | .3  | .2   | .3  | .2  | .6  | .1                | .2                | .3                | .2                |
| Nonfarm                    | .0   | -1.2 | 2.5 | -.4  | -.2 | .4  | .2  | .5   | -.1 | -.1 | .3  | .1                | .0                | .1                | .1                |
| Farm                       | .0   | .1   | .1  | .0   | .0  | -.5 | .0  | .7   | .0  | .0  | .0  | .1                | -.1               | .2                | .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 |     |      | 2012 |       |       |     | 2013 |      |      |      | 2011 <sup>1</sup> | 2012 <sup>1</sup> | 2013 <sup>1</sup> | 2014 <sup>1</sup> |
|---|------|-----|------|------|-------|-------|-----|------|------|------|------|-------------------|-------------------|-------------------|-------------------|
|   | Q2   | Q3  | Q4   | Q1   | Q2    | Q3    | Q4  | Q1   | Q2   | Q3   | Q4   |                   |                   |                   |                   |
| GDP chain-wt. price index                             | 2.6  | 3.0 | .4   | 2.0  | 1.6   | 2.9   | 1.4 | 1.4  | 1.5  | 1.5  | 1.4  | 2.0               | 2.0               | 1.5               | 1.5               |
| <i>Previous Tealbook</i>                              | 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               |
| PCE chain-wt. price index                             | 3.6  | 2.3 | 1.1  | 2.5  | .7    | 1.9   | 1.7 | 1.2  | 1.5  | 1.4  | 1.3  | 2.5               | 1.7               | 1.4               | 1.4               |
| <i>Previous Tealbook</i>                              | 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               |
| Energy  | 20.5 | 4.7 | -5.0 | 8.1  | -13.5 | 10.3  | 2.5 | -6.5 | -2.4 | -2.5 | -2.2 | 11.9              | 1.4               | -3.4              | -2.2              |
| <i>Previous Tealbook</i>                              | 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              |
| Food  | 6.0  | 5.1 | 3.3  | 1.3  | .7    | 1.4   | 3.4 | 3.6  | 3.4  | 2.5  | .8   | 5.1               | 1.7               | 2.6               | .9                |
| <i>Previous Tealbook</i>                              | 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                |
| Ex. food & energy                                     | 2.3  | 1.9 | 1.3  | 2.2  | 1.8   | 1.3   | 1.5 | 1.6  | 1.6  | 1.6  | 1.6  | 1.7               | 1.7               | 1.6               | 1.6               |
| <i>Previous Tealbook</i>                              | 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               |
| Ex. food & energy, market based                       | 2.3  | 2.1 | 1.5  | 2.2  | 1.7   | 1.4   | 1.4 | 1.5  | 1.5  | 1.5  | 1.5  | 1.9               | 1.7               | 1.5               | 1.5               |
| <i>Previous Tealbook</i>                              | 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               |
| CPI   | 4.4  | 3.1 | 1.3  | 2.5  | .8    | 2.5   | 2.1 | 1.2  | 1.6  | 1.4  | 1.3  | 3.3               | 2.0               | 1.4               | 1.3               |
| <i>Previous Tealbook</i>                              | 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               |
| Ex. food & energy                                     | 2.4  | 2.5 | 1.9  | 2.1  | 2.6   | 1.8   | 1.8 | 1.7  | 1.7  | 1.7  | 1.7  | 2.2               | 2.1               | 1.7               | 1.7               |
| <i>Previous Tealbook</i>                              | 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               |
| ECI, hourly compensation <sup>2</sup>                 | 3.2  | 1.4 | 2.1  | 1.7  | 2.1   | 2.3   | 2.4 | 2.5  | 2.6  | 2.6  | 2.7  | 2.2               | 2.1               | 2.6               | 2.9               |
| <i>Previous Tealbook</i> <sup>2</sup>                 | 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                                       | 1.2  | .6  | 2.8  | -.5  | 2.2   | 1.0   | .8  | .9   | 1.8  | 1.3  | 1.2  | .6                | .8                | 1.3               | 1.6               |
| <i>Previous Tealbook</i>                              | -.3  | 1.8 | 1.2  | -.8  | -.1   | 1.2   | 1.5 | .9   | 1.7  | 1.7  | 1.7  | .4                | .4                | 1.5               | 1.8               |
| Compensation per hour                                 | -.2  | .0  | -.7  | 5.8  | 3.7   | 2.3   | 2.3 | 2.5  | 2.6  | 2.7  | 2.8  | 2.0               | 3.5               | 2.7               | 3.0               |
| <i>Previous Tealbook</i>                              | -.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               |
| Unit labor costs                                      | -1.3 | -.6 | -3.3 | 6.4  | 1.5   | 1.3   | 1.5 | 1.6  | .8   | 1.5  | 1.6  | 1.4               | 2.6               | 1.4               | 1.4               |
| <i>Previous Tealbook</i>                              | -.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               |
| Core goods imports chain-wt. price index <sup>3</sup> | 7.2  | 2.3 | -.6  | -.2  | 1.2   | -2.6  | .4  | .9   | 1.0  | 1.2  | 1.3  | 4.3               | -.3               | 1.1               | 1.4               |
| <i>Previous Tealbook</i> <sup>3</sup>                 | 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               |

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.

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## 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  | .5   | 1.8  | 2.0  | 2.0  | 1.5  | 1.5  |
| <i>Previous Tealbook</i>                              | 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  | 1.4  | 1.5  | 2.5  | 1.7  | 1.4  | 1.4  |
| <i>Previous Tealbook</i>                              | 3.2  | 1.9  | 3.5  | 1.7  | 1.5  | 1.3  | 2.7  | 1.4  | 1.5  | 1.4  |
| Energy  | 21.5 | -3.7 | 19.3 | -8.8 | 2.7  | 6.5  | 11.9 | 1.4  | -3.4 | -2.2 |
| <i>Previous Tealbook</i>                              | 21.5 | -3.7 | 19.3 | -8.8 | 2.6  | 6.2  | 12.8 | -5.1 | -1.2 | -1.7 |
| Food  | 1.5  | 1.7  | 4.7  | 7.0  | -1.7 | 1.3  | 5.1  | 1.7  | 2.6  | .9   |
| <i>Previous Tealbook</i>                              | 1.5  | 1.7  | 4.7  | 7.0  | -1.7 | 1.3  | 5.2  | 1.8  | 2.4  | .9   |
| Ex. food & energy                                     | 2.3  | 2.3  | 2.4  | 2.0  | 1.6  | 1.2  | 1.7  | 1.7  | 1.6  | 1.6  |
| <i>Previous Tealbook</i>                              | 2.3  | 2.3  | 2.4  | 2.0  | 1.7  | 1.0  | 1.8  | 1.8  | 1.6  | 1.6  |
| Ex. food & energy, market based                       | 2.0  | 2.2  | 2.1  | 2.2  | 1.7  | .7   | 1.9  | 1.7  | 1.5  | 1.5  |
| <i>Previous Tealbook</i>                              | 2.0  | 2.2  | 2.1  | 2.2  | 1.7  | .7   | 1.8  | 1.7  | 1.5  | 1.5  |
| CPI   | 3.7  | 2.0  | 4.0  | 1.6  | 1.5  | 1.2  | 3.3  | 2.0  | 1.4  | 1.3  |
| <i>Previous Tealbook</i>                              | 3.7  | 2.0  | 4.0  | 1.6  | 1.5  | 1.2  | 3.3  | 1.4  | 1.6  | 1.4  |
| Ex. food & energy                                     | 2.1  | 2.7  | 2.3  | 2.0  | 1.7  | .6   | 2.2  | 2.1  | 1.7  | 1.7  |
| <i>Previous Tealbook</i>                              | 2.1  | 2.7  | 2.3  | 2.0  | 1.7  | .6   | 2.2  | 2.0  | 1.7  | 1.7  |
| ECI, hourly compensation <sup>1</sup>                 | 2.9  | 3.2  | 3.0  | 2.4  | 1.2  | 2.1  | 2.2  | 2.1  | 2.6  | 2.9  |
| <i>Previous Tealbook</i> <sup>1</sup>                 | 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 | 5.6  | 1.8  | .6   | .8   | 1.3  | 1.6  |
| <i>Previous Tealbook</i>                              | 1.6  | .8   | 2.5  | -1.1 | 5.3  | 2.3  | .4   | .4   | 1.5  | 1.8  |
| Compensation per hour                                 | 3.5  | 4.5  | 3.6  | 2.5  | 1.5  | 1.6  | 2.0  | 3.5  | 2.7  | 3.0  |
| <i>Previous Tealbook</i>                              | 3.5  | 4.5  | 3.6  | 2.5  | 1.8  | 1.4  | 2.5  | 1.9  | 2.6  | 2.9  |
| Unit labor costs                                      | 1.9  | 3.6  | 1.1  | 3.7  | -3.9 | -.2  | 1.4  | 2.6  | 1.4  | 1.4  |
| <i>Previous Tealbook</i>                              | 1.9  | 3.6  | 1.1  | 3.7  | -3.3 | -.9  | 2.1  | 1.4  | 1.1  | 1.0  |
| Core goods imports chain-wt. price index <sup>2</sup> | 2.2  | 2.5  | 2.9  | 3.7  | -1.7 | 2.7  | 4.3  | -.3  | 1.1  | 1.4  |
| <i>Previous Tealbook</i> <sup>2</sup>                 | 2.2  | 2.5  | 2.9  | 3.7  | -1.7 | 2.6  | 4.3  | .3   | 1.1  | 1.4  |

1. Private-industry workers.

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

# Other Macroeconomic Indicators

| Item  | 2011   |        |        | 2012   |        |        |        | 2013 |      |      |      | 2011 <sup>1</sup> | 2012 <sup>1</sup> | 2013 <sup>1</sup> | 2014 <sup>1</sup> |
|---|--------|--------|--------|--------|--------|--------|--------|------|------|------|------|-------------------|-------------------|-------------------|-------------------|
|   | Q2     | Q3     | Q4     | Q1     | Q2     | Q3     | Q4     | Q1   | Q2   | Q3   | Q4   |                   |                   |                   |                   |
| <i>Employment and production</i>              |        |        |        |        |        |        |        |      |      |      |      |                   |                   |                   |                   |
| Nonfarm payroll employment <sup>2</sup>       | .6     | .3     | .5     | .7     | .3     | .3     | .4     | .4   | .4   | .5   | .5   | 1.8               | 1.8               | 1.8               | 2.6               |
| Unemployment rate <sup>3</sup>                | 9.1    | 9.1    | 8.7    | 8.2    | 8.2    | 8.3    | 8.3    | 8.2  | 8.2  | 8.1  | 8.0  | 8.7               | 8.3               | 8.0               | 7.6               |
| <i>Previous Tealbook<sup>3</sup></i>          | 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               |
| NAIRU <sup>3</sup>                            | 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               |
| <i>Previous Tealbook<sup>3</sup></i>          | 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 <sup>4</sup>                          | -4.9   | -5.0   | -4.4   | -4.4   | -4.4   | -4.5   | -4.6   | -4.6 | -4.5 | -4.3 | -4.1 | -4.4              | -4.6              | -4.1              | -3.1              |
| <i>Previous Tealbook<sup>4</sup></i>          | -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              |
| Industrial production <sup>5</sup>            | 1.2    | 5.6    | 5.1    | 5.8    | 2.5    | 1.2    | 4.8    | 4.1  | 2.9  | 3.0  | 3.1  | 4.1               | 3.5               | 3.3               | 3.5               |
| <i>Previous Tealbook<sup>5</sup></i>          | 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               |
| Manufacturing industr. prod. <sup>5</sup>     | .2     | 5.1    | 5.6    | 9.7    | 1.0    | 1.9    | 2.8    | 2.6  | 2.7  | 3.1  | 3.5  | 4.2               | 3.8               | 3.0               | 3.9               |
| <i>Previous Tealbook<sup>5</sup></i>          | .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               |
| Capacity utilization rate - mfg. <sup>3</sup> | 74.4   | 75.2   | 76.1   | 77.6   | 77.5   | 77.6   | 77.8   | 78.0 | 78.2 | 78.4 | 78.7 | 76.1              | 77.8              | 78.7              | 79.9              |
| <i>Previous Tealbook<sup>3</sup></i>          | 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              |
| Housing starts <sup>6</sup>                   | .6     | .6     | .7     | .7     | .7     | .8     | .8     | .9   | .9   | 1.0  | 1.0  | .6                | .8                | .9                | 1.1               |
| Light motor vehicle sales <sup>6</sup>        | 12.2   | 12.6   | 13.4   | 14.2   | 14.1   | 14.3   | 14.4   | 14.6 | 14.9 | 15.1 | 15.3 | 12.7              | 14.2              | 15.0              | 15.8              |
| <i>Income and saving</i>                      |        |        |        |        |        |        |        |      |      |      |      |                   |                   |                   |                   |
| Nominal GDP <sup>5</sup>                      | 5.2    | 4.3    | 4.2    | 4.2    | 3.3    | 4.3    | 3.1    | 3.4  | 3.8  | 4.1  | 4.3  | 4.0               | 3.7               | 3.9               | 4.7               |
| Real disposable pers. income <sup>5</sup>     | -1.5   | -1.3   | -.2    | 3.7    | 3.1    | 1.9    | 2.8    | -1.3 | 2.9  | 3.6  | 3.5  | .3                | 2.9               | 2.2               | 3.5               |
| <i>Previous Tealbook<sup>5</sup></i>          | -.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               |
| Personal saving rate <sup>3</sup>             | 4.6    | 3.9    | 3.4    | 3.6    | 4.0    | 3.9    | 4.1    | 3.5  | 3.5  | 3.6  | 3.7  | 3.4               | 4.1               | 3.7               | 3.8               |
| <i>Previous Tealbook<sup>3</sup></i>          | 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               |
| Corporate profits <sup>7</sup>                | 19.3   | 6.7    | 29.6   | -10.4  | 2.2    | .3     | -3.9   | -6.0 | -1.9 | -2.4 | -1.1 | 9.2               | -3.1              | -2.9              | .5                |
| Profit share of GNP <sup>3</sup>              | 11.8   | 11.9   | 12.5   | 12.1   | 12.1   | 12.0   | 11.7   | 11.5 | 11.3 | 11.1 | 11.0 | 12.5              | 11.7              | 11.0              | 10.6              |
| Net federal saving <sup>8</sup>               | -1,308 | -1,232 | -1,183 | -1,059 | -1,095 | -1,035 | -1,057 | -801 | -781 | -765 | -753 | -1,237            | -1,061            | -775              | -715              |
| Net state & local saving <sup>8</sup>         | -75    | -118   | -117   | -128   | -113   | -110   | -108   | -103 | -84  | -78  | -70  | -102              | -115              | -84               | -46               |
| Gross national saving rate <sup>3</sup>       | 11.8   | 11.8   | 12.4   | 12.4   | 12.5   | 12.7   | 12.3   | 12.6 | 12.6 | 12.6 | 12.7 | 12.4              | 12.3              | 12.7              | 13.2              |
| Net national saving rate <sup>3</sup>         | -1.0   | -1.0   | -.3    | -.3    | .0     | .2     | -.2    | .1   | .1   | .2   | .3   | -.3               | -.2               | .3                | .8                |

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.

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## 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 |
|---|------|------|------|-------|-------|-------|-------|-------|------|------|
| <i>Employment and production</i>              |      |      |      |       |       |       |       |       |      |      |
| Nonfarm payroll employment <sup>1</sup>       | 2.4  | 2.1  | 1.2  | -2.8  | -5.6  | .8    | 1.8   | 1.8   | 1.8  | 2.6  |
| Unemployment rate <sup>2</sup>                | 5.0  | 4.5  | 4.8  | 6.9   | 9.9   | 9.6   | 8.7   | 8.3   | 8.0  | 7.6  |
| <i>Previous Tealbook<sup>2</sup></i>          | 5.0  | 4.5  | 4.8  | 6.9   | 9.9   | 9.6   | 8.7   | 8.3   | 8.1  | 7.8  |
| NAIRU <sup>2</sup>                            | 5.0  | 5.0  | 5.0  | 5.3   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0  | 6.0  |
| <i>Previous Tealbook<sup>2</sup></i>          | 5.0  | 5.0  | 5.0  | 5.3   | 6.0   | 6.0   | 6.0   | 6.0   | 6.0  | 6.0  |
| GDP gap <sup>3</sup>                          | .6   | .8   | .8   | -4.5  | -5.7  | -4.7  | -4.4  | -4.6  | -4.1 | -3.1 |
| <i>Previous Tealbook<sup>3</sup></i>          | .6   | .8   | .9   | -4.5  | -6.1  | -4.4  | -4.5  | -4.8  | -4.6 | -3.6 |
| Industrial production <sup>4</sup>            | 2.3  | 2.1  | 2.5  | -9.0  | -5.7  | 6.3   | 4.1   | 3.5   | 3.3  | 3.5  |
| <i>Previous Tealbook<sup>4</sup></i>          | 2.3  | 2.1  | 2.5  | -9.0  | -5.7  | 6.3   | 4.1   | 3.5   | 2.5  | 3.1  |
| Manufacturing industr. prod. <sup>4</sup>     | 3.4  | 1.8  | 2.8  | -11.8 | -6.5  | 6.5   | 4.2   | 3.8   | 3.0  | 3.9  |
| <i>Previous Tealbook<sup>4</sup></i>          | 3.4  | 1.8  | 2.8  | -11.8 | -6.5  | 6.5   | 4.2   | 3.6   | 2.5  | 3.4  |
| Capacity utilization rate - mfg. <sup>2</sup> | 78.4 | 78.2 | 78.2 | 69.7  | 67.0  | 73.1  | 76.1  | 77.8  | 78.7 | 79.9 |
| <i>Previous Tealbook<sup>2</sup></i>          | 78.4 | 78.2 | 78.2 | 69.7  | 67.0  | 73.1  | 76.1  | 77.7  | 78.2 | 79.0 |
| Housing starts <sup>5</sup>                   | 2.1  | 1.8  | 1.4  | .9    | .6    | .6    | .6    | .8    | .9   | 1.1  |
| Light motor vehicle sales <sup>5</sup>        | 16.9 | 16.5 | 16.1 | 13.1  | 10.4  | 11.5  | 12.7  | 14.2  | 15.0 | 15.8 |
| <i>Income and saving</i>                      |      |      |      |       |       |       |       |       |      |      |
| Nominal GDP <sup>4</sup>                      | 6.4  | 5.3  | 4.9  | -1.2  | .4    | 4.3   | 4.0   | 3.7   | 3.9  | 4.7  |
| Real disposable pers. income <sup>4</sup>     | .6   | 4.6  | 1.6  | 1.0   | -3.0  | 3.5   | .3    | 2.9   | 2.2  | 3.5  |
| <i>Previous Tealbook<sup>4</sup></i>          | .6   | 4.6  | 1.6  | 1.0   | -2.4  | 3.5   | .4    | 2.5   | 1.7  | 3.3  |
| Personal saving rate <sup>2</sup>             | 1.6  | 2.8  | 2.5  | 6.2   | 3.8   | 4.8   | 3.4   | 4.1   | 3.7  | 3.8  |
| <i>Previous Tealbook<sup>2</sup></i>          | 1.6  | 2.8  | 2.5  | 6.2   | 4.3   | 5.2   | 4.2   | 4.6   | 4.0  | 4.1  |
| Corporate profits <sup>6</sup>                | 19.6 | 3.7  | -8.1 | -33.5 | 57.0  | 17.3  | 9.2   | -3.1  | -2.9 | .5   |
| Profit share of GNP <sup>2</sup>              | 11.8 | 11.6 | 10.1 | 6.8   | 10.7  | 12.0  | 12.5  | 11.7  | 11.0 | 10.6 |
| Net federal saving <sup>7</sup>               | -283 | -204 | -245 | -613  | -1229 | -1308 | -1237 | -1061 | -775 | -715 |
| Net state & local saving <sup>7</sup>         | 26   | 51   | 12   | -72   | -113  | -90   | -102  | -115  | -84  | -46  |
| Gross national saving rate <sup>2</sup>       | 15.6 | 16.5 | 13.9 | 12.6  | 11.0  | 12.1  | 12.4  | 12.3  | 12.7 | 13.2 |
| Net national saving rate <sup>2</sup>         | 3.6  | 4.4  | 1.7  | -.6   | -2.3  | -.6   | -.3   | -.2   | .3   | .8   |

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 <sup>a</sup> | 2012  | 2013 | 2014 | Q1 <sup>a</sup> | Q2 <sup>a</sup> | Q3 <sup>a</sup> | Q4 <sup>a</sup> | Q1 <sup>a</sup> | Q2 <sup>a</sup> | Q3    | Q4    | Q1   | Q2   | Q3   | Q4   |
| <b>Unified budget</b>                              |                   |       |      |      |                 |                 |                 |                 |                 |                 |       |       |      |      |      |      |
| Receipts <sup>1</sup>                              | 2302              | 2440  | 2680 | 2927 | 488             | 714             | 568             | 555             | 509             | 760             | 616   | 578   | 568  | 833  | 701  | 669  |
| Outlays <sup>1</sup>                               | 3599              | 3547  | 3517 | 3564 | 949             | 855             | 895             | 877             | 966             | 885             | 818   | 909   | 896  | 867  | 845  | 901  |
| Surplus/deficit <sup>1</sup>                       | -1297             | -1106 | -837 | -638 | -460            | -141            | -326            | -322            | -457            | -125            | -202  | -331  | -328 | -34  | -144 | -232 |
| <i>Previous Tealbook</i>                           | -1297             | -1132 | -831 | -683 | -460            | -141            | -326            | -322            | -457            | -125            | -227  | -318  | -332 | -34  | -146 | -236 |
| On-budget  | -1364             | -1154 | -835 | -640 | -451            | -202            | -311            | -346            | -458            | -187            | -163  | -336  | -308 | -80  | -110 | -253 |
| Off-budget   | 67                | 48    | -2   | 2    | -10             | 61              | -15             | 24              | 1               | 62              | -39   | 6     | -20  | 46   | -34  | 21   |
| <b>Means of financing</b>                          |                   |       |      |      |                 |                 |                 |                 |                 |                 |       |       |      |      |      |      |
| Borrowing  | 1110              | 1210  | 879  | 718  | 260             | 93              | 389             | 326             | 398             | 198             | 287   | 298   | 313  | 104  | 164  | 252  |
| Cash decrease                                      | 252               | -7    | -5   | 0    | 225             | -19             | 79              | -28             | 42              | -48             | 26    | 20    | 25   | -50  | 0    | 0    |
| Other <sup>2</sup>                                 | -65               | -96   | -37  | -80  | -24             | 67              | -142            | 23              | 17              | -25             | -111  | 12    | -10  | -20  | -20  | -20  |
| Cash operating balance,<br>end of period           | 58                | 65    | 70   | 70   | 118             | 137             | 58              | 86              | 43              | 91              | 65    | 45    | 20   | 70   | 70   | 70   |
| <b>NIPA federal sector</b>                         |                   |       |      |      |                 |                 |                 |                 |                 |                 |       |       |      |      |      |      |
| Receipts   | 2501              | 2644  | 2930 | 3147 | 2510            | 2523            | 2511            | 2534            | 2665            | 2681            | 2695  | 2730  | 2963 | 2996 | 3031 | 3067 |
| Expenditures                                       | 3767              | 3736  | 3781 | 3872 | 3737            | 3831            | 3743            | 3717            | 3724            | 3775            | 3730  | 3787  | 3764 | 3776 | 3796 | 3820 |
| Consumption expenditures                           | 1064              | 1053  | 1040 | 1014 | 1054            | 1071            | 1069            | 1052            | 1056            | 1055            | 1049  | 1046  | 1044 | 1037 | 1031 | 1024 |
| Defense  | 713               | 701   | 689  | 668  | 697             | 717             | 731             | 704             | 703             | 701             | 696   | 694   | 693  | 687  | 682  | 676  |
| Nondefense   | 352               | 352   | 351  | 346  | 357             | 354             | 338             | 348             | 352             | 354             | 353   | 352   | 352  | 350  | 349  | 348  |
| Other spending                                     | 2702              | 2683  | 2741 | 2858 | 2683            | 2760            | 2674            | 2665            | 2668            | 2720            | 2681  | 2741  | 2719 | 2739 | 2765 | 2796 |
| Current account surplus                            | -1265             | -1093 | -851 | -725 | -1227           | -1308           | -1232           | -1183           | -1059           | -1094           | -1035 | -1057 | -801 | -781 | -765 | -753 |
| Gross investment                                   | 163               | 155   | 150  | 141  | 161             | 163             | 159             | 159             | 152             | 156             | 154   | 153   | 151  | 148  | 146  | 144  |
| Gross saving less gross<br>investment <sup>3</sup> | -1293             | -1107 | -855 | -716 | -1254           | -1335           | -1252           | -1203           | -1071           | -1109           | -1047 | -1067 | -807 | -783 | -765 | -749 |
| <b>Fiscal indicators<sup>4</sup></b>               |                   |       |      |      |                 |                 |                 |                 |                 |                 |       |       |      |      |      |      |
| High-employment (HEB)                              |                   |       |      |      |                 |                 |                 |                 |                 |                 |       |       |      |      |      |      |
| surplus/deficit                                    | -1018             | -863  | -587 | -491 | -974            | -1062           | -981            | -947            | -830            | -870            | -805  | -814  | -531 | -508 | -494 | -486 |
| Change in HEB, percent<br>of potential GDP         | -.4               | -1.2  | -1.8 | -.7  | -.6             | .5              | -.6             | -.2             | -.8             | .2              | -.5   | .0    | -1.7 | -.2  | -.1  | -.1  |
| Fiscal impetus (FI),<br>percent of GDP             | -0.5              | -0.6  | -1.2 | -0.5 | -0.8            | 0.3             | -0.6            | -0.7            | -0.7            | -0.7            | -0.6  | -0.5  | -2.0 | -1.1 | -0.9 | -0.8 |
| <i>Previous Tealbook</i>                           | -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 |

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

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

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

4. HEB is gross saving less gross investment (NIPA) of the federal government in current dollars, with cyclically sensitive receipts and outlays adjusted to the staff's measure of potential output and the natural rate of unemployment. The sign on Change in HEB, as a percent of nominal potential GDP, is reversed. FI is the weighted difference of discretionary changes in federal spending and taxes in chained (2005) dollars, scaled by real GDP. The FI estimates are calendar year contributions to Q4/Q4 real GDP growth. Also, for FI and the change in HEB, positive values indicate aggregate demand stimulus. Quarterly figures for change in HEB and FI are not at annual rates.

a Actual.

**Change in Debt of the Domestic Nonfinancial Sectors**  
(Percent)

| Period <sup>1</sup> | Total | Households |                |                 | Business | State and local governments | Federal government | Memo: Nominal GDP |
|---------------------|-------|------------|----------------|-----------------|----------|-----------------------------|--------------------|-------------------|
|                     |       | Total      | Home mortgages | Consumer credit |          |                             |                    |                   |
| <i>Year</i>         |       |            |                |                 |          |                             |                    |                   |
| 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               | .4                |
| 2010                | 4.1   | -2.2       | -2.9           | -1.3            | .8       | 2.2                         | 20.2               | 4.3               |
| 2011                | 3.6   | -1.5       | -2.3           | 4.0             | 4.5      | -1.9                        | 11.4               | 4.0               |
| 2012                | 4.8   | .3         | -1.3           | 5.4             | 5.3      | -.1                         | 11.3               | 3.7               |
| 2013                | 4.1   | 1.9        | .6             | 6.6             | 4.3      | .6                          | 7.2                | 3.9               |
| 2014                | 3.9   | 2.4        | .9             | 7.4             | 4.5      | .9                          | 5.8                | 4.7               |
| <i>Quarter</i>      |       |            |                |                 |          |                             |                    |                   |
| 2010:1              | 3.7   | -2.8       | -4.4           | -3.1            | .1       | 2.4                         | 20.6               | 3.9               |
| 2                   | 3.7   | -2.2       | -2.6           | -3.5            | -2.0     | -.5                         | 22.5               | 4.1               |
| 3                   | 4.0   | -2.2       | -3.0           | -.6             | 2.7      | 2.1                         | 16.0               | 4.6               |
| 4                   | 4.6   | -1.5       | -1.7           | 2.2             | 2.3      | 4.8                         | 16.4               | 4.5               |
| 2011:1              | 2.4   | -1.6       | -2.2           | 3.5             | 4.1      | -3.3                        | 7.9                | 2.2               |
| 2                   | 2.4   | -3.0       | -3.1           | 3.3             | 5.0      | -3.5                        | 8.6                | 5.2               |
| 3                   | 4.5   | -1.1       | -2.3           | 2.3             | 3.8      | .0                          | 14.1               | 4.3               |
| 4                   | 4.8   | -.2        | -1.7           | 6.7             | 4.8      | -1.0                        | 13.1               | 4.2               |
| 2012:1              | 4.8   | -.4        | -2.9           | 5.9             | 5.3      | -1.8                        | 12.4               | 4.2               |
| 2                   | 5.1   | .0         | -1.4           | 5.0             | 5.7      | 1.0                         | 11.6               | 3.3               |
| 3                   | 4.2   | .4         | -.8            | 4.5             | 5.0      | -.1                         | 8.8                | 4.3               |
| 4                   | 4.9   | 1.3        | .0             | 5.6             | 4.6      | .3                          | 10.7               | 3.1               |
| 2013:1              | 4.3   | 1.7        | .6             | 5.3             | 4.3      | .6                          | 8.2                | 3.4               |
| 2                   | 4.1   | 1.9        | .6             | 6.5             | 4.2      | .6                          | 7.3                | 3.8               |
| 3                   | 3.2   | 2.0        | .6             | 6.9             | 4.2      | .6                          | 4.0                | 4.1               |
| 4                   | 4.5   | 2.1        | .6             | 7.1             | 4.2      | .6                          | 8.4                | 4.3               |

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   |        | 2012   |        |        |        | 2013   |        |        |        |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                                      |        |        |        |        | Q3     | Q4     | Q1     | Q2     | Q3     | Q4     | Q1     | Q2     | Q3     | Q4     |
| <i>Domestic nonfinancial sectors</i> |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Net funds raised                     |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Total                                | 854.7  | 1456.8 | 1293.1 | 1280.0 | 1068.7 | 1391.5 | 1479.7 | 1498.1 | 1259.4 | 1589.8 | 1380.6 | 1319.9 | 951.0  | 1521.0 |
| Net equity issuance                  | -472.7 | -387.2 | -340.0 | -360.0 | -617.5 | -438.2 | -344.9 | -463.9 | -380.0 | -360.0 | -340.0 | -340.0 | -340.0 | -340.0 |
| Net debt issuance                    | 1327.3 | 1844.0 | 1633.1 | 1640.0 | 1686.3 | 1829.7 | 1824.6 | 1962.0 | 1639.4 | 1949.8 | 1720.6 | 1659.9 | 1291.0 | 1861.0 |
| Borrowing indicators                 |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Debt (percent of GDP) <sup>1</sup>   | 248.9  | 249.4  | 251.3  | 250.2  | 247.5  | 247.8  | 248.2  | 249.3  | 249.5  | 250.4  | 251.2  | 251.5  | 251.2  | 251.0  |
| Borrowing (percent of GDP)           | 8.8    | 11.8   | 10.0   | 9.7    | 11.1   | 11.9   | 11.8   | 12.6   | 10.4   | 12.3   | 10.7   | 10.3   | 7.9    | 11.3   |
| Households                           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Net borrowing <sup>2</sup>           | -191.0 | 42.8   | 250.6  | 311.7  | -136.4 | -26.6  | -51.7  | 5.0    | 54.5   | 163.4  | 216.4  | 249.0  | 263.7  | 273.4  |
| Home mortgages                       | -232.6 | -124.9 | 58.3   | 83.2   | -230.0 | -168.0 | -285.3 | -136.5 | -77.7  | 0.0    | 58.2   | 58.3   | 58.3   | 58.4   |
| Consumer credit                      | 96.6   | 134.8  | 174.0  | 207.3  | 56.5   | 164.8  | 149.0  | 126.6  | 116.6  | 147.0  | 141.0  | 172.8  | 186.7  | 195.5  |
| Debt/DPI (percent) <sup>3</sup>      | 112.8  | 108.4  | 106.1  | 103.3  | 111.9  | 111.5  | 109.8  | 108.7  | 107.7  | 106.8  | 107.2  | 106.5  | 105.7  | 105.0  |
| Business                             |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Financing gap <sup>4</sup>           | -171.2 | -79.7  | 157.8  | 286.6  | -209.4 | -140.0 | -72.5  | -93.6  | -107.1 | -45.5  | 108.1  | 136.7  | 171.9  | 214.6  |
| Net equity issuance                  | -472.7 | -387.2 | -340.0 | -360.0 | -617.5 | -438.2 | -344.9 | -463.9 | -380.0 | -360.0 | -340.0 | -340.0 | -340.0 | -340.0 |
| Credit market borrowing              | 509.0  | 621.3  | 531.7  | 577.5  | 439.0  | 564.3  | 629.9  | 677.7  | 610.8  | 566.7  | 534.3  | 521.1  | 527.2  | 544.1  |
| State and local governments          |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Net borrowing                        | -58.6  | -3.7   | 17.8   | 25.8   | 1.0    | -29.1  | -53.5  | 31.0   | -2.2   | 9.8    | 17.8   | 17.8   | 17.8   | 17.8   |
| Current surplus <sup>5</sup>         | 182.9  | 138.3  | 163.8  | 209.9  | 168.8  | 174.4  | 160.1  | 126.8  | 131.0  | 135.1  | 141.7  | 162.8  | 170.3  | 180.3  |
| Federal government                   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Net borrowing                        | 1067.9 | 1182.1 | 833.0  | 724.9  | 1382.6 | 1321.2 | 1300.0 | 1248.4 | 976.3  | 1209.9 | 952.1  | 871.9  | 482.2  | 1025.7 |
| Net borrowing (n.s.a.)               | 1067.9 | 1182.1 | 833.0  | 724.9  | 389.1  | 326.0  | 398.3  | 198.2  | 287.5  | 298.2  | 312.9  | 104.1  | 164.0  | 252.1  |
| Unified deficit (n.s.a.)             | 1249.6 | 1115.4 | 738.3  | 644.9  | 326.3  | 321.7  | 457.3  | 125.3  | 202.1  | 330.8  | 328.1  | 34.2   | 144.0  | 232.1  |
| <i>Depository institutions</i>       |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Funds supplied                       | 195.0  | 390.8  | 499.9  | 613.9  | 499.1  | 575.1  | 286.2  | 351.6  | 463.5  | 462.0  | 481.1  | 478.7  | 501.6  | 538.3  |

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.

Class II FOMC - Restricted (FR)

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# Greensheets

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

| Measure and country                 | -----Projected----- |      |     |      |      |      |      |      |      |     |     |     |
|-------------------------------------|---------------------|------|-----|------|------|------|------|------|------|-----|-----|-----|
|                                     | 2011                |      |     |      | 2012 |      |      |      | 2013 |     |     |     |
|                                     | Q1                  | Q2   | Q3  | Q4   | Q1   | Q2   | Q3   | Q4   | Q1   | Q2  | Q3  | Q4  |
| <b>Real GDP</b> <sup>1</sup>        |                     |      |     |      |      |      |      |      |      |     |     |     |
| Total foreign                       | 3.5                 | 2.3  | 3.9 | 1.6  | 3.2  | 2.3  | 2.3  | 2.3  | 2.5  | 2.7 | 2.9 | 3.1 |
| <i>Previous Tealbook</i>            | 3.6                 | 2.3  | 3.9 | 1.5  | 3.3  | 2.3  | 2.4  | 2.2  | 2.5  | 2.6 | 2.8 | 3.0 |
| Advanced foreign economies          | 1.7                 | -.2  | 3.2 | .4   | 1.6  | .7   | .7   | .6   | .8   | 1.1 | 1.4 | 1.7 |
| Canada                              | 3.6                 | -1.0 | 4.5 | 1.9  | 1.8  | 1.8  | 1.8  | 1.7  | 1.7  | 1.9 | 2.1 | 2.4 |
| Japan                               | -7.7                | -1.9 | 7.4 | .3   | 5.5  | 1.4  | -.5  | .5   | .9   | 1.1 | 1.2 | 1.5 |
| United Kingdom                      | 1.9                 | -.4  | 2.4 | -1.4 | -1.3 | -1.8 | 2.5  | .1   | 1.1  | 1.4 | 1.9 | 2.1 |
| Euro area                           | 2.9                 | .7   | .4  | -1.3 | .1   | -.7  | -1.1 | -1.2 | -.7  | -.2 | .2  | .6  |
| Germany                             | 5.0                 | 1.8  | 1.5 | -.6  | 2.0  | 1.1  | -.2  | -.4  | -.1  | .4  | .7  | 1.3 |
| Emerging market economies           | 5.6                 | 4.9  | 4.6 | 2.8  | 5.0  | 3.9  | 4.0  | 4.1  | 4.4  | 4.5 | 4.6 | 4.6 |
| Asia                                | 7.6                 | 5.1  | 5.0 | 2.5  | 5.8  | 4.7  | 4.9  | 4.9  | 5.3  | 5.5 | 5.6 | 5.7 |
| Korea                               | 5.3                 | 3.4  | 3.4 | 1.3  | 3.5  | 1.5  | 2.6  | 3.0  | 3.3  | 3.5 | 3.7 | 3.9 |
| China                               | 9.1                 | 10.0 | 9.5 | 7.8  | 6.6  | 7.4  | 7.4  | 7.5  | 7.8  | 7.9 | 8.0 | 8.0 |
| Latin America                       | 3.3                 | 4.9  | 4.0 | 3.0  | 4.3  | 3.2  | 3.1  | 3.3  | 3.4  | 3.4 | 3.5 | 3.6 |
| Mexico                              | 2.1                 | 5.5  | 4.9 | 3.0  | 4.9  | 3.5  | 3.2  | 3.4  | 3.4  | 3.4 | 3.5 | 3.5 |
| Brazil                              | 3.3                 | 2.3  | -.6 | .5   | .5   | 1.6  | 2.5  | 3.1  | 3.3  | 3.4 | 3.7 | 3.7 |
| <b>Consumer prices</b> <sup>2</sup> |                     |      |     |      |      |      |      |      |      |     |     |     |
| Total foreign                       | 4.1                 | 3.5  | 3.1 | 2.7  | 2.6  | 1.9  | 1.8  | 2.6  | 2.3  | 2.3 | 2.2 | 2.2 |
| <i>Previous Tealbook</i>            | 4.2                 | 3.5  | 3.0 | 2.8  | 2.6  | 2.0  | 2.2  | 2.3  | 2.3  | 2.3 | 2.3 | 2.3 |
| Advanced foreign economies          | 3.0                 | 2.3  | 1.2 | 2.4  | 2.2  | .6   | .7   | 1.9  | 1.4  | 1.3 | 1.2 | 1.3 |
| Canada                              | 3.3                 | 3.4  | 1.0 | 2.9  | 2.1  | .1   | -.5  | 2.4  | 1.7  | 1.6 | 1.7 | 1.8 |
| Japan                               | .0                  | -.7  | .1  | -.7  | 2.3  | -.9  | -1.0 | .6   | .1   | -.1 | -.1 | -.1 |
| United Kingdom                      | 6.8                 | 4.0  | 3.8 | 4.1  | 2.0  | 1.1  | 2.7  | 3.6  | 2.0  | 1.5 | 1.5 | 1.9 |
| Euro Area                           | 3.5                 | 2.8  | 1.7 | 3.7  | 2.5  | 1.9  | 2.2  | 2.0  | 1.7  | 1.7 | 1.4 | 1.3 |
| Germany                             | 3.3                 | 2.5  | 1.9 | 2.8  | 2.4  | 1.4  | 2.6  | 2.5  | 2.2  | 2.1 | 1.7 | 1.6 |
| Emerging market economies           | 5.1                 | 4.5  | 4.5 | 3.0  | 2.9  | 3.0  | 2.7  | 3.2  | 3.1  | 3.1 | 3.0 | 3.0 |
| Asia                                | 5.5                 | 5.2  | 4.9 | 2.1  | 2.3  | 3.2  | 1.6  | 3.0  | 2.8  | 2.9 | 2.9 | 2.9 |
| Korea                               | 5.5                 | 3.4  | 4.4 | 2.6  | 1.6  | 1.2  | 1.7  | 2.4  | 2.7  | 2.8 | 2.8 | 2.8 |
| China                               | 5.1                 | 6.1  | 5.7 | 1.4  | 2.0  | 2.5  | 1.2  | 2.7  | 2.7  | 2.8 | 2.8 | 2.8 |
| Latin America                       | 3.7                 | 2.9  | 3.9 | 5.2  | 4.6  | 2.6  | 5.1  | 3.5  | 3.8  | 3.6 | 3.4 | 3.3 |
| Mexico                              | 3.2                 | 2.4  | 3.5 | 4.9  | 4.5  | 2.5  | 5.2  | 3.4  | 3.6  | 3.4 | 3.1 | 3.0 |
| Brazil                              | 7.8                 | 6.8  | 6.2 | 6.0  | 4.0  | 3.8  | 6.0  | 4.9  | 5.2  | 5.4 | 5.6 | 5.6 |

<sup>1</sup>Foreign GDP aggregates calculated using shares of U.S. exports.

<sup>2</sup>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 | -----Projected----- |      |      |
|-------------------------------------|------|------|------|------|------|------|---------------------|------|------|
|                                     |      |      |      |      |      |      | 2012                | 2013 | 2014 |
| <b>Real GDP <sup>1</sup></b>        |      |      |      |      |      |      |                     |      |      |
| Total foreign                       | 4.2  | 4.3  | -.9  | .9   | 4.5  | 2.8  | 2.5                 | 2.8  | 3.3  |
| <i>Previous Tealbook</i>            | 4.2  | 4.3  | -.9  | .9   | 4.4  | 2.8  | 2.5                 | 2.7  | 3.2  |
| Advanced foreign economies          | 2.6  | 2.6  | -1.9 | -1.4 | 2.9  | 1.3  | .9                  | 1.2  | 1.9  |
| Canada                              | 1.9  | 2.5  | -.7  | -1.4 | 3.3  | 2.2  | 1.8                 | 2.0  | 2.6  |
| Japan                               | 2.1  | 1.7  | -4.8 | -.6  | 3.4  | -.6  | 1.7                 | 1.2  | .7   |
| United Kingdom                      | 2.0  | 3.8  | -4.6 | -.9  | 1.5  | .6   | -.1                 | 1.6  | 2.3  |
| Euro area                           | 3.8  | 2.3  | -2.2 | -2.3 | 2.2  | .7   | -.7                 | .0   | 1.2  |
| Germany                             | 4.9  | 2.4  | -1.9 | -2.2 | 4.2  | 1.9  | .6                  | .6   | 1.8  |
| Emerging market economies           | 6.3  | 6.7  | .4   | 3.6  | 6.2  | 4.5  | 4.3                 | 4.5  | 4.8  |
| Asia                                | 7.8  | 8.8  | .8   | 8.0  | 7.7  | 5.0  | 5.1                 | 5.5  | 5.8  |
| Korea                               | 4.6  | 5.8  | -3.2 | 6.3  | 5.0  | 3.4  | 2.6                 | 3.6  | 4.2  |
| China                               | 12.8 | 13.7 | 7.7  | 11.3 | 9.7  | 9.1  | 7.2                 | 7.9  | 8.1  |
| Latin America                       | 4.8  | 4.4  | -.2  | -.7  | 4.6  | 3.8  | 3.5                 | 3.5  | 3.7  |
| Mexico                              | 4.1  | 3.5  | -1.1 | -2.1 | 4.3  | 3.9  | 3.7                 | 3.4  | 3.6  |
| Brazil                              | 4.9  | 6.6  | .9   | 5.3  | 5.3  | 1.4  | 1.9                 | 3.5  | 4.0  |
| <b>Consumer prices <sup>2</sup></b> |      |      |      |      |      |      |                     |      |      |
| Total foreign                       | 2.2  | 3.7  | 3.3  | 1.3  | 3.2  | 3.4  | 2.2                 | 2.3  | 2.5  |
| <i>Previous Tealbook</i>            | 2.2  | 3.7  | 3.3  | 1.3  | 3.2  | 3.4  | 2.3                 | 2.3  | 2.5  |
| Advanced foreign economies          | 1.4  | 2.2  | 2.0  | .2   | 1.7  | 2.2  | 1.3                 | 1.3  | 1.7  |
| Canada                              | 1.4  | 2.5  | 1.8  | .8   | 2.2  | 2.7  | 1.0                 | 1.7  | 2.0  |
| Japan                               | .3   | .5   | 1.1  | -2.0 | -.3  | -.3  | .2                  | -.1  | 1.7  |
| United Kingdom                      | 2.7  | 2.1  | 3.9  | 2.2  | 3.4  | 4.7  | 2.3                 | 1.7  | 1.6  |
| Euro Area                           | 1.8  | 2.9  | 2.3  | .4   | 2.0  | 2.9  | 2.2                 | 1.5  | 1.5  |
| Germany                             | 1.3  | 3.1  | 1.7  | .3   | 1.6  | 2.6  | 2.2                 | 1.9  | 1.7  |
| Emerging market economies           | 2.9  | 5.1  | 4.6  | 2.1  | 4.3  | 4.3  | 2.9                 | 3.1  | 3.2  |
| Asia                                | 2.4  | 5.5  | 3.6  | 1.3  | 4.3  | 4.4  | 2.5                 | 2.9  | 3.1  |
| Korea                               | 2.1  | 3.4  | 4.5  | 2.4  | 3.2  | 4.0  | 1.7                 | 2.8  | 3.0  |
| China                               | 2.1  | 6.7  | 2.5  | .6   | 4.6  | 4.6  | 2.1                 | 2.8  | 3.0  |
| Latin America                       | 4.1  | 4.2  | 6.7  | 3.9  | 4.4  | 3.9  | 4.0                 | 3.5  | 3.6  |
| Mexico                              | 4.1  | 3.8  | 6.2  | 4.0  | 4.3  | 3.5  | 3.9                 | 3.3  | 3.3  |
| Brazil                              | 3.1  | 4.3  | 6.3  | 4.3  | 5.6  | 6.7  | 4.6                 | 5.4  | 5.6  |

<sup>1</sup> Foreign GDP aggregates calculated using shares of U.S. exports.

<sup>2</sup> Foreign CPI aggregates calculated using shares of U.S. non-oil imports.

## U.S. Current Account

## Quarterly Data

|                                      | 2011          |               |               |               | 2012          |               |               |               | Projected     |               |               |               |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                      | Q1            | Q2            | Q3            | Q4            | Q1            | Q2            | Q3            | Q4            | Q1            | Q2            | Q3            | Q4            |
| <i>Billions of dollars, s.a.a.r.</i> |               |               |               |               |               |               |               |               |               |               |               |               |
| <b>U.S. current account balance</b>  | <b>-480.0</b> | <b>-476.5</b> | <b>-432.6</b> | <b>-474.6</b> | <b>-549.3</b> | <b>-493.3</b> | <b>-455.5</b> | <b>-491.7</b> | <b>-514.4</b> | <b>-496.7</b> | <b>-509.4</b> | <b>-547.0</b> |
| <i>Previous Tealbook</i>             | <i>-480.0</i> | <i>-476.5</i> | <i>-432.6</i> | <i>-474.6</i> | <i>-549.3</i> | <i>-523.4</i> | <i>-505.9</i> | <i>-527.2</i> | <i>-557.4</i> | <i>-554.9</i> | <i>-575.5</i> | <i>-613.8</i> |
| Current account as percent of GDP    | -3.2          | -3.2          | -2.9          | -3.1          | -3.5          | -3.2          | -2.9          | -3.1          | -3.2          | -3.1          | -3.1          | -3.3          |
| <i>Previous Tealbook</i>             | <i>-3.2</i>   | <i>-3.2</i>   | <i>-2.9</i>   | <i>-3.1</i>   | <i>-3.6</i>   | <i>-3.4</i>   | <i>-3.2</i>   | <i>-3.3</i>   | <i>-3.5</i>   | <i>-3.4</i>   | <i>-3.5</i>   | <i>-3.7</i>   |
| Net goods & services                 | -548.9        | -566.2        | -539.3        | -585.1        | -604.0        | -566.3        | -528.0        | -563.9        | -582.3        | -558.3        | -558.1        | -582.9        |
| Investment income, net               | 217.9         | 232.8         | 241.9         | 247.4         | 197.8         | 220.0         | 214.6         | 216.5         | 210.6         | 200.5         | 190.8         | 180.1         |
| Direct, net                          | 314.9         | 318.2         | 323.4         | 330.2         | 283.9         | 294.3         | 276.4         | 270.5         | 267.2         | 260.7         | 259.9         | 260.9         |
| Portfolio, net                       | -97.1         | -85.4         | -81.4         | -82.8         | -86.0         | -74.3         | -61.8         | -53.9         | -56.6         | -60.2         | -69.0         | -80.7         |
| Other income and transfers, net      | -148.9        | -143.1        | -135.3        | -136.9        | -143.1        | -147.1        | -142.2        | -144.3        | -142.8        | -138.9        | -142.2        | -144.3        |

## Annual Data

|                                     | 2006          | 2007          | 2008          | 2009          | 2010          | 2011          | Projected     |               |               |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                     |               |               |               |               |               |               | 2012          | 2013          | 2014          |
| <i>Billions of dollars</i>          |               |               |               |               |               |               |               |               |               |
| <b>U.S. current account balance</b> | <b>-800.6</b> | <b>-710.3</b> | <b>-677.1</b> | <b>-381.9</b> | <b>-442.0</b> | <b>-465.9</b> | <b>-497.4</b> | <b>-516.9</b> | <b>-572.1</b> |
| <i>Previous Tealbook</i>            | <i>-800.6</i> | <i>-710.3</i> | <i>-677.1</i> | <i>-381.9</i> | <i>-442.0</i> | <i>-465.9</i> | <i>-526.4</i> | <i>-575.4</i> | <i>-646.6</i> |
| Current account as percent of GDP   | -6.0          | -5.1          | -4.7          | -2.7          | -3.0          | -3.1          | -3.2          | -3.2          | -3.4          |
| <i>Previous Tealbook</i>            | <i>-6.0</i>   | <i>-5.1</i>   | <i>-4.7</i>   | <i>-2.7</i>   | <i>-3.0</i>   | <i>-3.1</i>   | <i>-3.4</i>   | <i>-3.6</i>   | <i>-3.8</i>   |
| Net goods & services                | -753.3        | -696.7        | -698.3        | -379.2        | -494.7        | -559.9        | -565.5        | -570.4        | -586.6        |
| Investment income, net              | 54.7          | 111.1         | 157.8         | 127.6         | 191.0         | 235.0         | 212.2         | 195.5         | 156.5         |
| Direct, net                         | 174.0         | 244.6         | 284.3         | 253.0         | 297.9         | 321.7         | 281.2         | 262.1         | 268.9         |
| Portfolio, net                      | -119.4        | -133.5        | -126.5        | -125.4        | -106.9        | -86.7         | -69.0         | -66.6         | -112.5        |
| Other income and transfers, net     | -102.0        | -124.7        | -136.6        | -130.3        | -138.2        | -141.1        | -144.2        | -142.0        | -142.0        |

## Abbreviations

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|       |  |
|-------|--|
| ABCP  | asset-backed commercial paper                      |
| ABS   | asset-backed securities                            |
| AFE   | advanced foreign economy                           |
| ASEAN | Association of Southeast Asian Nations             |
| BOE   | Bank of England                                    |
| CDS   | credit default swap                                |
| C&I   | commercial and industrial                          |
| CLO   | collateralized loan obligation                     |
| CMBS  | commercial mortgage-backed securities              |
| CP    | commercial paper                                   |
| CPH   | compensation per hour                              |
| CPI   | consumer price index                               |
| CRE   | commercial real estate                             |
| DTCC  | Depository Trust & Clearing Corporation            |
| ECB   | European Central Bank                              |
| EFSF  | European Financial Stability Facility              |
| EME   | emerging market economy                            |
| E&S   | equipment and software                             |
| ESM   | European Stability Mechanism                       |
| ETF   | exchange-traded fund                               |
| EU    | European Union                                     |
| EUC   | Emergency Unemployment Compensation                |
| FOMC  | Federal Open Market Committee; also, the Committee |
| GCF   | general collateral finance                         |
| GDP   | gross domestic product                             |
| GSE   | government-sponsored enterprise                    |
| IMF   | International Monetary Fund                        |



|                    |  |
|--------------------|--|
| IP                 | industrial production  |
| ISM                | Institute for Supply Management                                |
| LIBOR              | London interbank offered rate                                  |
| LSAP               | large-scale asset purchase                                     |
| MBS                | mortgage-backed securities                                     |
| MEP                | maturity extension program                                     |
| Michigan<br>survey | Thomson Reuters/University of Michigan Surveys of Consumers    |
| MMF                | money market fund  |
| NIPA               | national income and product accounts                           |
| OIS                | overnight index swap   |
| OMO                | open market operations   |
| OTC                | over-the-counter   |
| PBOC               | People's Bank of China   |
| PCE                | personal consumption expenditures                              |
| PMI                | purchasing managers index                                      |
| REIT               | real estate investment trust                                   |
| repo               | repurchase agreement   |
| RMBS               | residential mortgage-backed securities                         |
| SCOOS              | Senior Credit Officer Opinion Survey on Dealer Financing Terms |
| SOMA               | System Open Market Account                                     |
| S&P                | Standard & Poor's  |
| TIC                | Treasury International Capital                                 |
| TIPS               | Treasury inflation-protected securities                        |
| VIX                | Chicago Board Options Exchange Market Volatility Index         |