### **Prefatory Note**

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

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

Authorized for Public Release

Class II FOMC - Restricted (FR)

# Report to the FOMC on Economic Conditions and Monetary Policy



## Book A

Economic and Financial Conditions: Current Situation and Outlook

March 9, 2011

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**

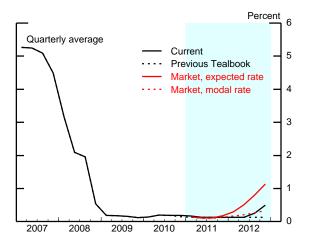
The information we have received since the time of the January Tealbook suggests that the economic recovery has continued to proceed at a moderate pace. Although the rise in real GDP in the fourth quarter was about ½ percentage point less than the previous Tealbook forecast and consumer spending in January came in below our expectations, the limited information that we have for February has thus far been more encouraging. Moreover, forward-looking signals of activity in coming months point to solid growth, much along the lines of what we anticipated in the January Tealbook. In particular, the latest indicators of factory output and business equipment spending have remained upbeat, motor vehicle sales picked up noticeably in February, and readings from the labor market have been stronger, on net, than we had anticipated. In all, the incoming data appear consistent with real GDP increasing at an annual rate averaging 3½ percent in the first half of this year, just slightly below our forecast in the January Tealbook.

The trajectory of our medium-term forecast is also quite similar to that in the previous Tealbook. While equity prices are somewhat higher in this projection and the exchange value of the dollar a little lower, these positive influences on activity are essentially offset by higher oil prices and slightly more-restrictive fiscal policy assumptions. As a result, we continue to project that the pace of real GDP growth will step up to 3<sup>3</sup>/<sub>4</sub> percent in 2011 and to 4<sup>1</sup>/<sub>2</sub> percent in 2012. As has been true in previous projections, economic activity this year and next should be supported by accommodative monetary policy, increasing credit availability, and rising household and business confidence. Meanwhile, we have taken on board the appreciable decline in the unemployment rate in recent months, putting the projected jobless rate at 8<sup>1</sup>/<sub>2</sub> percent at the end of this year and 7<sup>1</sup>/<sub>2</sub> percent at the end of 2012, several tenths below our forecast in the January Tealbook.

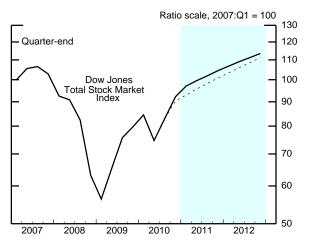
In response to the narrower margin of resource slack in this projection and a higher path of energy and import prices, we have marked up our projection for inflation relative to the January Tealbook. In particular, we have boosted our forecast for core PCE inflation by <sup>1</sup>/<sub>4</sub> percentage point to 1<sup>1</sup>/<sub>4</sub> percent in both 2011 and 2012. Given our projections for the continued pass-through of near-term commodity price increases into

### Key Background Factors underlying the Baseline Staff Projection

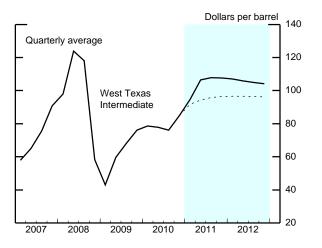
Federal Funds Rate



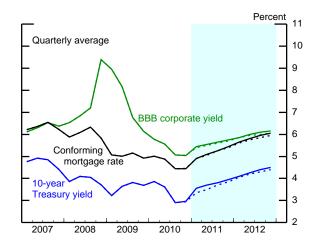
Equity Prices



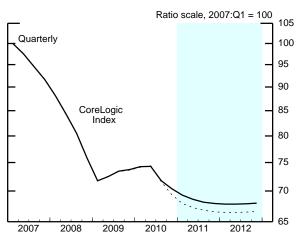
**Crude Oil Prices** 

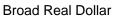


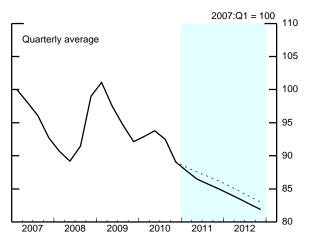
Long-Term Interest Rates











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consumer food and energy prices this year, overall PCE prices are projected to rise almost 2 percent in 2011 but to then decelerate to a roughly 1 percent increase in 2012.

### **KEY BACKGROUND FACTORS**

### **Monetary Policy**

We now assume that the FOMC will raise the target federal funds rate above the current range of 0 to <sup>1</sup>/<sub>4</sub> percent in the third quarter of 2012—two quarters earlier than we assumed in the January Tealbook—and that the rate will average <sup>1</sup>/<sub>2</sub> percent in the fourth quarter of 2012. This revision in the liftoff date keeps our policy assumption broadly in line with the prescriptions of the outcome-based policy rule that is used to set monetary policy in the long-run economic outlook. Regarding nonconventional monetary policy, we have retained our assumption that the Federal Reserve will expand its holdings of longer-term Treasury securities through the second quarter of 2011, thus completing the \$600 billion increment to the size of the portfolio that was announced last fall. We continue to assume that when the FOMC first raises its target for the federal funds rate, it will stop reinvesting principal payments from its securities holdings.

### **Financial Conditions**

The yield on 10-year Treasury securities has increased about 15 basis points since mid-January, and we have slightly raised the projected level of this yield in the near and medium term. As in recent projections, we anticipate that the 10-year Treasury yield will increase nearly 1 percentage point by the end of 2012. The movement of the valuation window through the projected period of near-zero short-term interest rates continues to be the primary factor contributing to the rise in yields. Since the January Tealbook, yields on investment-grade corporate bonds and interest rates on conforming fixed-rate mortgages have increased about in line with Treasury yields. With current spreads little changed, we have not altered our path of projected spreads.

The Dow Jones U.S. Stock Market Index is almost 2 percent above the level anticipated in the January Tealbook. Through mid-February, stock prices registered an even larger gain, but share prices have moved down recently because of mounting concerns about the economic consequences of political unrest in the Middle East and North Africa. The equity premium has remained well above longer-run norms, and, over the projection period, we expect it to decline gradually toward a more typical level. Thus, we expect stock prices to increase at an annual rate of about 10 percent through the end of 2012.

According to the latest readings from CoreLogic, home prices continued to decrease through January. However, the data now show a somewhat smaller drop in recent months than we had anticipated, and we have marked up the level of home prices in the first quarter of this year by 2 percent relative to the January Tealbook. Nonetheless, the incoming data continue to suggest that the housing market remains weak, and we did not materially revise our outlook for changes in home prices over the medium term. We expect the CoreLogic repeat sales index to decline 3½ percent in 2011 and to be unchanged in 2012.

### **Fiscal Policy**

Our fiscal policy assumptions are slightly more restrictive in this projection. In particular, we now assume that nominal appropriations for federal discretionary spending will turn down in fiscal years 2011 and 2012, whereas we previously assumed that they would be about flat.<sup>1</sup> We continue to expect that federal fiscal policy actions will be a roughly neutral influence on aggregate demand in 2011 as the impetus from the one-year cut in payroll taxes and from the full expensing allowance for business investment is essentially offset by some reduction in stimulus-related grants to state and local governments. In 2012, however, federal fiscal actions are expected to impose a drag of about 1 percent of GDP as real purchases decline, the payroll tax cuts lapse, the Emergency Unemployment Compensation program is phased out, the stimulus grants for states and localities are essentially exhausted, and the expensing provision for business investment is never the scaled back.

As in the January projection, we expect the budget deficit to reach \$1.4 trillion (about 9 percent of GDP) in fiscal 2011 and then narrow to \$1.1 trillion in fiscal 2012 (around 7 percent of GDP), primarily reflecting the further tapering off of stimulus-related policies and the higher revenues associated with a faster pace of economic

<sup>&</sup>lt;sup>1</sup> The Administration's budget proposal for fiscal 2011 would raise discretionary budget authority by \$30 billion above the fiscal 2010 level, but a recently passed House bill would cut it by about \$60 billion. We are now assuming a cut in total discretionary appropriations of \$15 billion for fiscal 2011, about halfway between the two proposals, and a cut in funding of about \$30 billion in 2012, both relative to the fiscal 2010 level. It is worth noting that budget proposals are often portrayed under a variety of baselines, making them hard to compare.

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activity. Correspondingly, federal debt is projected to rise to over 70 percent of GDP at the end of fiscal 2012.

### Foreign Activity and the Dollar

Incoming data on economic activity in the foreign economies have been somewhat more upbeat than we anticipated in January. Foreign real GDP expanded at a 3¼ percent pace in the fourth quarter and will likely exceed that pace in the current quarter. Going forward, we see foreign GDP increasing about 3½ percent this year and next, propelled by continuing robust growth in the emerging market economies and some firming of activity in the advanced foreign economies. This outlook, however, is slightly weaker than in the January forecast because of the greater headwinds arising from the sharp rise in world oil prices.

The foreign exchange value of the dollar in real terms is currently about 1<sup>1</sup>/<sub>4</sub> percent lower than we had projected at the time of the January forecast. From this lower starting point, we assume that the dollar will depreciate at an annual rate of about 3<sup>1</sup>/<sub>2</sub> percent over the forecast period, a pace about unchanged from what we had written down in January.

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

Recent developments in the Middle East and North Africa have pushed oil prices sharply higher. At present, the main disruption to oil production has been in Libya, where an estimated 1.2 million barrels per day of productive capacity have been shut in. Saudi Arabia has reportedly increased its oil output, though it is not clear how much of the Libyan shortfall it is currently replacing. (For details, see the box "Economic Risks from the Middle East and North Africa" in the International Economic Developments and Outlook section.) In response to these developments, the spot price of West Texas Intermediate (WTI) crude oil has climbed more than \$13 per barrel since the time of the January Tealbook, closing on March 8 at \$105 per barrel. Prices for delivery later in the projection period have also moved up, but not as much as spot and very near-term futures prices. Consistent with futures prices, we now project that the spot price of WTI will end 2012 at about \$104 per barrel, roughly \$8 higher than at the time of the previous Tealbook.

Nonfuel commodity prices have continued to move up sharply, increasing about 6 percent on average since the January Tealbook. Prices of a range of food commodities

have increased, reflecting continued strong demand combined with tight supply conditions. (For additional detail, see the box "Food Prices and Foreign Inflation" in the International Economic Developments and Outlook section.) Metals prices have also increased on the strength of global demand, especially from the manufacturing sector. We project that commodity prices for both food and metals will flatten out near their current elevated levels, consistent with quotes in futures markets.

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

We expect real GDP to rise at an annual rate of 3<sup>1</sup>/<sub>4</sub> percent in the current quarter, the same pace as in the fourth quarter. Although consumer spending appears to have decelerated this quarter and construction spending remains weak, business outlays for equipment and software (E&S) look to be on track for a robust gain. In the second quarter, we expect real GDP to accelerate to a 3<sup>3</sup>/<sub>4</sub> percent pace as increases in consumer spending pick back up and business fixed investment continues to rise briskly.

### Labor Markets

The labor market recovery seems to be gaining strength. Private nonfarm payrolls jumped 222,000 in February after having increased an estimated 68,000 in January. The swing from January to February was likely exaggerated by widespread snowstorms that held down employment during the January survey reference week, but, on the whole, the employment data received since the previous Tealbook have been a bit stronger than expected, with the cumulative gains in private payroll employment since November about 50,000 higher than in the January forecast.

Readings from the household survey have also been encouraging. In January, the unemployment rate fell 0.4 percentage point for a second month, and it ticked down an additional 0.1 percentage point, to 8.9 percent, in February. The sharp drop in the unemployment rate since November has been surprising, but we are nonetheless viewing it as further evidence of a strengthening labor market.<sup>2</sup> In addition, the share of workers employed part time for economic reasons declined by ½ percentage point over this period, to 6 percent. That said, not all of the news has been good: The labor force participation rate has held steady in recent months at a level that we judge to be well

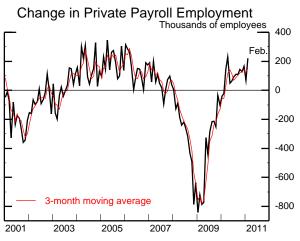
<sup>&</sup>lt;sup>2</sup> As described later in this document, we have interpreted some of the movements in the unemployment and labor force participation rates as suggesting that the rate of potential output growth has been somewhat lower than we had assumed previously.

### Summary of the Near-Term Outlook

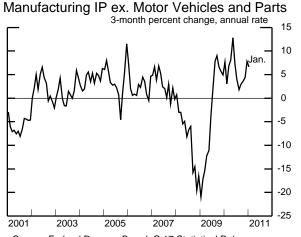
(Percent change at annual rate except as noted)

|                                     | 2010:Q4 2011:Q1   |                     | 2011:Q2              |                     |                      |                     |
|-------------------------------------|---|---------------------|----------------------|---------------------|----------------------|---------------------|
| Measure                             | Previous<br>Tealbook                                      | Current<br>Tealbook | Previous<br>Tealbook | Current<br>Tealbook | Previous<br>Tealbook | Current<br>Tealbook |
| Real GDP                            | 3.8   | 3.2                 | 3.6                  | 3.2                 | 3.7                  | 3.8                 |
| Private domestic final purchases    | 4.0   | 4.4                 | 3.9                  | 3.0                 | 4.3                  | 4.2                 |
| Personal consumption expenditures   | 4.1   | 4.1                 | 3.1                  | 2.5                 | 3.5                  | 3.5                 |
| Residential investment              | .7  | 2.8                 | 3.2                  | 3.7                 | 9.2                  | 7.3                 |
| Nonres. structures                  | 3.7   | 6.7                 | 8                    | -10.4               | .0                   | 9                   |
| Equipment and software              | 3.7   | 6.6                 | 13.3                 | 12.7                | 13.0                 | 12.5                |
| Federal purchases                   | 1.1   | 2                   | 2.1                  | -4.7                | .9                   | 4.6                 |
| State and local purchases           | 9   | -2.6                | 1                    | -2.1                | .2                   | 7                   |
|                                     | Contribution to change in real GDP<br>(percentage points) |                     |                      |                     |                      |                     |
| Inventory investment<br>Net exports | -3.0<br>3.5   | -3.5<br>3.3         | .5<br>2              | 1.1<br>.2           | .3<br>3              | .1<br>1             |

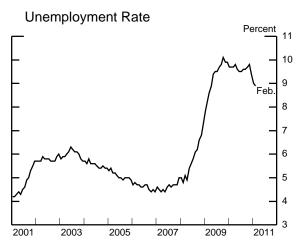
### **Recent Nonfinancial Developments (1)**



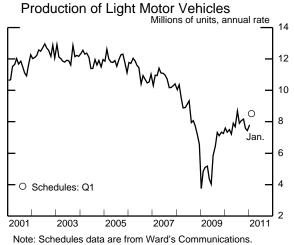
Source: U.S. Dept. of Labor, Bureau of Labor Statistics.







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



Note: Schedules data are from Ward's Communications Source: Ward's Auto Infobank.

below even its declining trend, and long-term unemployment remains extremely high. (See the box "The Labor Force Participation Rate" for further discussion.)

Other labor market indicators point to a continued pickup in payrolls. Weekly initial claims for unemployment insurance have moved below the 400,000 mark, and hiring measures—such as the help wanted index and the NFIB index of hiring plans—have improved noticeably in recent months. Moreover, individuals' outlooks on labor market conditions have become more favorable, as is evident from the greater optimism about future labor market conditions expressed by respondents to the Thomson Reuters/Michigan survey.

In light of these improvements, we have strengthened slightly our near-term projection for the labor market. We now look for private payrolls to rise 200,000 in March, and about 220,000 per month, on average, in the second quarter, both about 10,000 above the January Tealbook forecast. In addition, we expect the unemployment rate to remain at 8.9 percent over the next several months, about 0.5 percentage point below the level we had expected as of the time of the January forecast.

### **The Industrial Sector**

Following a strong rise in December, industrial production (IP) edged down in January, as the output of mines and utilities declined and the rate of increase in manufacturing output was limited somewhat by heavy snowfalls. In the motor vehicle sector, production rose in January but was restrained, in part, by some temporary bottlenecks in the supply chain. Nonetheless, with assembly schedules calling for production to rise sharply this quarter and next, we expect the production of motor vehicles and parts to increase more than 20 percent at an annual rate over the first half of this year. Outside of motor vehicles, last month's reading on production-worker hours and the available weekly physical product data suggest that output in the factory sector expanded at a robust pace in February, and the positive readings from the new orders diffusion indexes in the national and regional manufacturing surveys imply further solid production gains in coming months. In total, we now expect industrial production to rise at an annual rate of 6 percent over the first half of the year—a bit faster than projected in the January Tealbook.

### **Household Spending**

The recovery in consumer spending appears to be proceeding at a moderate pace. Although retail sales in January were considerably weaker than we were expecting, it seems likely that unseasonably poor weather across much of the country was an important factor holding down spending that month, and we expect to see a bounceback in February. In this regard, sales of new autos and light trucks jumped to an annual rate of 13.4 million units last month, an increase of 800,000 units from January's reading. We continue to expect the pace of other (non-auto) real spending to pick up in the next few months, as ongoing improvements in the labor market and the boost to disposable incomes arising from the temporary reductions in payroll taxes this year more than offset the drag from higher energy prices. In addition, the latest readings on consumer sentiment have improved a bit further in recent months. All told, we expect real PCE to rise at an annual rate of 3 percent in the first half of this year, about <sup>1</sup>/<sub>4</sub> percentage point below our projection in the January Tealbook.

Restrained by weak demand and a considerable overhang of vacant homes for sale, residential construction remains depressed. Single-family housing starts and permits have changed little since last summer, and single-family new home sales have been moribund over this period. However, with job growth gradually strengthening and housing quite affordable, we expect demand for new homes to creep up over the near term and for starts to rise slowly. Increases in activity should be more noticeable in the multifamily sector, where starts moved higher in January and where vacancy rates have been trending down. In all, our forecast calls for residential investment to rise at annual rates of about 4 percent in the first quarter and 7 percent in the second.

### **Business Investment**

After increasing at an estimated annual rate of about 7 percent in the fourth quarter, real business investment in E&S is projected to resume double-digit growth in the first half of this year. Outlays in the fourth quarter were held down by a large drop in business purchases of transportation equipment, but we expect spending in this volatile category to rebound this quarter. Meanwhile, outside the transportation sector, the orders backlog for nondefense capital goods excluding aircraft has continued to rise in recent months, pointing to additional solid increases in shipments in coming months. The latest readings on business sentiment are also consistent with robust near-term gains in E&S outlays, and credit conditions have generally continued to improve. As a result, we

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### **The Labor Force Participation Rate**

The labor force participation rate (the black line in the figure on the facing page) has fallen sharply since the onset of the recent recession. In part, the nearly 2 percentage point decline over this period reflects cyclical factors. The decline also reflects the influence of a downward underlying trend in participation, an estimate of which is shown as the solid red line in the figure.

For the past 10 years, the dominant force behind the downward trend in participation has been the aging of the population, a process that we expect will continue to push the trend lower for the next two decades. To illustrate this effect, the dashed red line in the figure holds the participation rate of each age group constant at its 1996 level, while allowing the share of each age group in the population to evolve as it has in the data. This line has fallen substantially since 2001, reflecting the increasing share in the population of persons aged 55 and over, who are less likely to participate in the labor market than their younger counterparts. Of course, secular changes in participation rates within age groups—which cause the solid red trend line to differ from the dashed red line that isolates the aging effects—can be significant as well; notably, the influx of women into the workforce was the primary development accounting for the steep increase in participation during the 1970s and 1980s. However, these types of movements have not been large, on balance, over the past two decades.

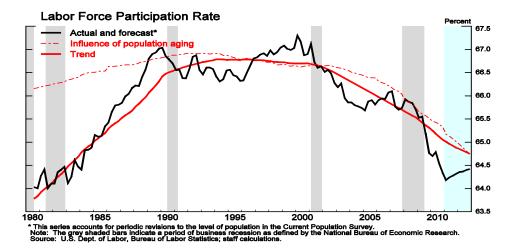
Cyclical factors also have influenced the participation rate substantially over the past few years. Probably the most important of these factors has been the deterioration in job prospects, which has likely caused many individuals to leave or refrain from entering the labor force. This influence was likely offset in part by the availability since mid-2008 of extended and emergency unemployment insurance benefits and by the drop in household wealth, both of which have raised the value or necessity of participation.

As noted previously, we expect the participation rate to move up toward its declining trend in the coming years as improving job prospects draw more people into the labor force—a development only partially offset by

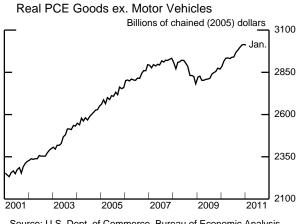
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the anticipated winding down of the emergency unemployment compensation program next year. However, consistent with our forecast for a moderate recovery in economic activity more broadly, we expect that a considerable amount of time will pass before the participation rate returns to its trend. All told, we project the participation rate to end 2012 at about 64½ percent, still roughly ¼ percentage point below our estimate of the trend and only ¼ percentage point above its current level.

Our projection for labor force participation has both upside and downside risks. Nonetheless, given the profound changes in the age distribution of the population currently under way, we consider it very unlikely that the participation rate will return to its pre-recession levels.



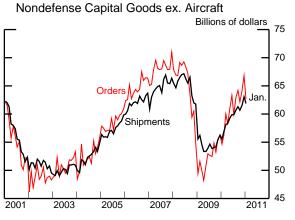
### **Recent Nonfinancial Developments (2)**



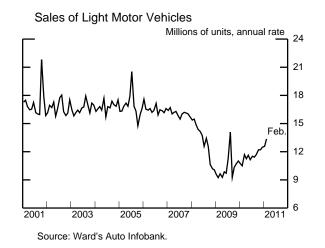
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

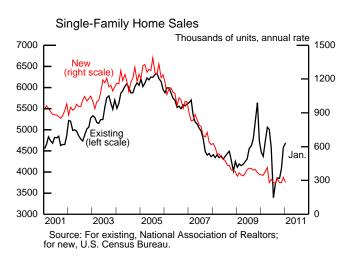
Single-Family Housing Starts Thousands of units, annual rate 2100 1800 1500 1200 900 600 Starts Adjusted permits 300 0 2001 2003 2005 2007 2009 2011

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



Source: U.S. Census Bureau.







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expect real E&S spending to post annualized increases of almost 13 percent over the first two quarters of this year, not much different from our January Tealbook forecast.

Despite some quarterly fluctuations in spending, business outlays on nonresidential structures continue to trend downward. Spending rose in the fourth quarter, but this rise was largely the result of a temporary ramp-up in outlays for powergenerating structures in anticipation of the year-end expiration of a renewable-energy tax incentive; data through January suggest that such spending is dropping off sharply this quarter, while investment in other types of buildings has continued to decline. Looking forward, recent readings on architectural billings, which are a useful indicator of spending several months out, suggest that spending will flatten around the middle of the year. Meanwhile, elevated energy prices should sustain sizable increases in expenditures on drilling and mining structures in coming months. Altogether, we expect investment in nonresidential structures to fall at an annual rate of 10 percent in the first quarter but to be about flat in the second.

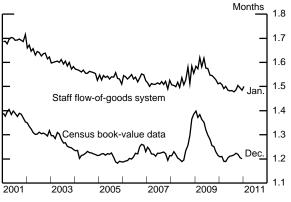
The limited data we have on hand suggest that real nonfarm inventory investment turned up again in the first quarter following an abrupt fourth-quarter pause that subtracted 3½ percentage points from real GDP growth. After a sizable drawdown in the fourth quarter, stocks of light motor vehicles edged up, on net, in January and February, and manufacturers' assembly plans are consistent with further increases in coming months. Outside of motor vehicles, the available book-value data and indicators of manufacturing activity also suggest that the pace of stockbuilding has stepped back up. Overall, inventories appear fairly well aligned with sales: The staff's flow of goods system shows only a handful of sectors where inventories appear elevated (construction materials, chemicals, and primary metals), and motor vehicle stocks appear quite lean. All told, we expect nonfarm inventory investment to boost real GDP growth in the current quarter by about 1 percentage point at an annual rate and to be close to neutral in the second quarter.

### Government

Real federal purchases were about unchanged in the fourth quarter of 2010, as a decline in defense purchases was offset by an increase in nondefense purchases. Available information on defense spending suggests a moderate decline in real federal purchases this quarter. However, we expect real purchases to rebound in the second quarter, as defense spending returns to a level more consistent with past appropriations.

### **Recent Nonfinancial Developments (3)**

Inventory Ratios ex. Motor Vehicles

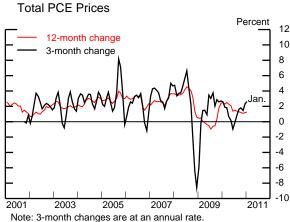


Note: Flow-of-goods system covers total industry ex. motor vehicles and parts, and inventories are relative to consumption. Census data cover manufacturing and trade ex. motor vehicles and parts, and inventories are relative to sales. Source: U.S. Census Bureau; staff calculation.

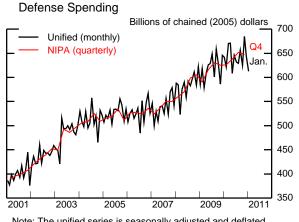
**Trade Balance** 



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

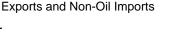


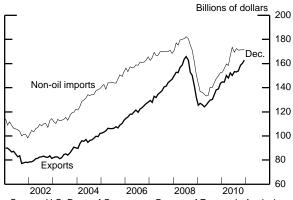
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.



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

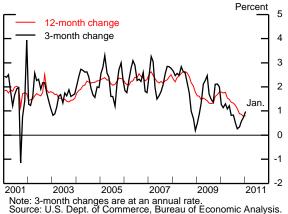
Bureau of Economic Analysis.





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

PCE Prices ex. Food and Energy



News from the state and local sector has been more downbeat than expected. Real state and local purchases fell at an annual rate of 2½ percent in the fourth quarter of last year, a significantly steeper decline than projected in the January Tealbook. The decline primarily reflected a 10 percent reduction in real construction expenditures, although a further trimming of payrolls in this sector was also a factor. The available information on construction spending and employment points to another sizable drop in expenditures in the current quarter, and, in response, we have also marked down our forecast for the second quarter. As a result, we now project real state and local spending to decline at an annual rate of about 1½ percent over the first half of 2011; in the January Tealbook, we had expected spending to be about flat over this period.

### **Foreign Trade**

Supported by solid foreign economic growth, real exports of goods and services are projected to increase at an annual rate of about 11 percent in the first half of 2011. This projection for exports is above that in the January Tealbook, reflecting the lower level of the dollar and recent indicators that suggest stronger foreign real activity.

We expect imports to bounce back after their sharp decline in the fourth quarter and to expand at an 8 percent rate in the first half of the year, in line with the continuing recovery of economic activity in the United States. This projection is a touch softer than in our previous forecast, owing largely to the lower near-term pace of U.S. real GDP growth and to our reaction to the trade data for December.

All told, we expect net exports to add about <sup>1</sup>/<sub>4</sub> percentage point to U.S. GDP growth in the first quarter and to turn neutral in the second quarter. These projections have been revised up a little over <sup>1</sup>/<sub>4</sub> percentage point on average, reflecting the upward revisions to exports and downward revisions to imports.

### **Prices and Wages**

After increasing at an annual rate of 1<sup>3</sup>/<sub>4</sub> percent in the fourth quarter of 2010, total PCE prices are projected to increase 3<sup>1</sup>/<sub>4</sub> percent in the first quarter of this year before stepping back down to a 2<sup>1</sup>/<sub>4</sub> percent pace in the second. Sharp increases in consumer energy prices boosted inflation last quarter, and we project even larger increases in energy prices this quarter. In addition, we expect the recent rise in farm commodity prices to show through more noticeably at the retail level, so that food prices accelerate as well. In the second quarter, food price inflation is projected to remain elevated while

consumer energy prices are projected to decelerate somewhat, leading to the step-down in overall inflation. Since the January Tealbook, we have revised up our forecast for total PCE price inflation 1<sup>1</sup>/<sub>4</sub> percentage points in the first quarter and about 1 percentage point in the second quarter.

We have made much smaller revisions to our forecast of core inflation. We had seen the increase in core prices of just ½ percent at an annual rate in the fourth quarter as transitorily low and had therefore been looking for a rebound in core inflation this quarter, and indeed that rebound appears to have taken place. We now expect core PCE prices to rise about 1 percent this quarter and 1¼ percent in the second—in both periods, ¼ percentage point higher than in the January Tealbook. The upward revisions reflect a somewhat higher-than-anticipated reading on core PCE inflation in January as well as larger-than-expected increases in import and commodity prices.

Measures of long-term inflation expectations have changed little since the January Tealbook. Median 5-to-10-year-ahead inflation expectations from the Thomson Reuters/Michigan survey edged up to 2.9 percent in the final January survey and remained at that level in February. Expectations for PCE price inflation over the next 10 years, as measured by the Survey of Professional Forecasters, reversed a small downtick in the fourth quarter of last year and are back to 2.1 percent in the current quarter. Since the time of the January Tealbook, the TIPS-based measure of five-year inflation compensation is up ¼ percentage point while the five-year forward rate of inflation compensation is little changed.

The P&C measure of hourly compensation increased at an annual rate of 2 percent in the fourth quarter, in line with our expectations in the January Tealbook. The employment cost index (ECI) rose at a 1.8 percent annual rate—also close to our expectations. However, average hourly earnings in January and February were higher than anticipated, on average, and we raised our projection for the increase in compensation per hour in the current quarter to an annual rate of 3 percent, about ½ percentage point above the January Tealbook projection. As in previous Tealbook forecasts, we expect that the first-quarter increase in hourly compensation, as well as the ECI, will be temporarily boosted by an increase in employer contributions to state unemployment insurance funds, and we project smaller increases in the second quarter.

### **THE MEDIUM-TERM OUTLOOK**

Our medium term outlook has changed little since the January Tealbook, with real GDP still projected to increase 3<sup>3</sup>/<sub>4</sub> percent in 2011 and 4<sup>1</sup>/<sub>2</sub> percent in 2012. Although the similarities in top-line GDP growth mask some small differences in its composition, the basic story of the projection remains the same: Private demand accelerates this year and next as the drag from earlier declines in wealth diminishes, lending standards ease further, the labor market gradually recovers, and household and business confidence continue to recuperate. However, a number of factors still weigh on the outlook, including a large overhang of vacant residential and commercial properties, the waning of federal fiscal stimulus, and budgetary pressures on state and local governments. As a result, the projected recovery is less robust than those that have typically followed deep U.S. recessions, and we expect the unemployment rate at the end of 2012 to remain elevated at 7<sup>1</sup>/<sub>2</sub> percent.

As in previous Tealbooks, we expect consumer spending to gradually accelerate over the forecast period in response to the same factors that drive the broader recovery. In addition, the one-year reduction in payroll taxes boosts PCE growth in 2011, although some of that boost is reversed in 2012 when the tax cut expires. Relative to the January Tealbook, our projection for real PCE growth in 2011—at 3<sup>1</sup>/<sub>4</sub> percent—is somewhat lower, reflecting the weaker-than-expected incoming data and higher oil prices; in 2012, we project real PCE to rise almost 4 percent, close to the January projection. Largely because spending is projected to respond gradually to the extra disposable income generated by the payroll tax cut, the personal saving rate is expected to move up to 5<sup>3</sup>/<sub>4</sub> percent this year but then to drop back down to 5<sup>1</sup>/<sub>4</sub> percent in 2012 when the tax cut expires, a shade below our current estimate for the fourth quarter of 2010.

Similarly, business outlays on E&S are projected to post solid gains of more than 11 percent, on average, over the next two years, as rising sales, improved business confidence, and expanded availability of bank credit induce firms to replace aging capital and expand their capacity. In addition, investment demand should continue to be supported by projects that were postponed during the recession. Finally, we expect that the expensing provisions of the stimulus package will slightly raise the rate of growth of equipment investment in 2011 and reduce it in 2012.

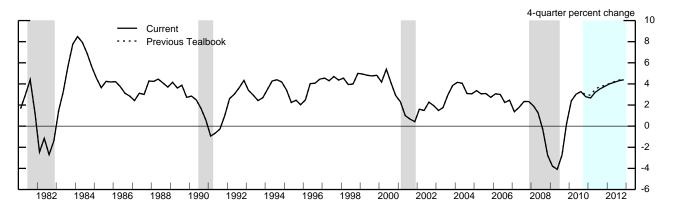
We also expect net exports to make a positive contribution to GDP growth, amounting to about <sup>1</sup>/<sub>4</sub> percentage point per year on average over the forecast period.

| preceding period except as noted) |  |            |            |            |  |  |  |
|-----------------------------------|--|------------|------------|------------|--|--|--|
| Measure                           | 2009   | 2010       | 2011       | 2012       |  |  |  |
| <b>Real GDP</b>                   | <b>.2</b>  | <b>2.8</b> | <b>3.7</b> | <b>4.4</b> |  |  |  |
| Previous Tealbook                 | .2   | 2.9        | 3.8        | 4.4        |  |  |  |
| Final sales                       | 3  | 2.4        | 3.6        | 4.1        |  |  |  |
| Previous Tealbook                 | 3  | 2.4        | 3.8        | 4.1        |  |  |  |
| Personal consumption expenditures | .2   | 2.6        | 3.2        | 3.9        |  |  |  |
| Previous Tealbook                 | .2   | 2.6        | 3.5        | 3.8        |  |  |  |
| Residential investment            | -13.4  | -4.7       | 8.4        | 13.4       |  |  |  |
| Previous Tealbook                 | -13.4  | -5.2       | 9.1        | 13.5       |  |  |  |
| Nonresidential structures         | -26.5  | -4.2       | -3.0       | 1          |  |  |  |
| Previous Tealbook                 | -26.5  | -4.9       | 4          | .0         |  |  |  |
| Equipment and software            | -4.9   | 16.6       | 13.0       | 9.6        |  |  |  |
| Previous Tealbook                 | -4.9   | 15.8       | 13.6       | 10.6       |  |  |  |
| Federal purchases                 | 3.6  | 4.8        | .3         | 8          |  |  |  |
| Previous Tealbook                 | 3.6  | 5.2        | 1.0        | .0         |  |  |  |
| State and local purchases         | -1.0   | -1.3       | 7          | .5         |  |  |  |
| Previous Tealbook                 | -1.0   | 8          | .3         | 1.2        |  |  |  |
| Exports                           | 1  | 9.2        | 10.0       | 9.0        |  |  |  |
| Previous Tealbook                 | 1  | 9.0        | 9.2        | 8.6        |  |  |  |
| Imports                           | -7.2   | 11.0       | 5.9        | 5.5        |  |  |  |
| Previous Tealbook                 | -7.2   | 10.6       | 6.7        | 6.0        |  |  |  |
|                                   | Contributions to change in real GDP<br>(percentage points) |            |            |            |  |  |  |
| Inventory change                  | .5   | .4         | .2         | .3         |  |  |  |
| Previous Tealbook                 | .5   | .5         | .0         | .3         |  |  |  |
| Net exports                       | 1.2  | 5          | .3         | .3         |  |  |  |
| Previous Tealbook                 | 1.2  | 5          | .1         | .2         |  |  |  |

### Projections of Real GDP and Related Components (Percent change at annual rate from end of

preceding period except as noted)

### 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.

Continued modest dollar depreciation and robust foreign activity should bolster real exports of goods and services; in our forecast, exports expand at an annual rate of nearly 10 percent this year and next. Real imports are projected to rise almost 6 percent on average in 2011 and 2012, as the boost from U.S. demand growth is only partly offset by the drag from the depreciating dollar. In all, the contribution from net exports is expected to be slightly stronger than in our previous forecast on account of the lower value of the dollar.

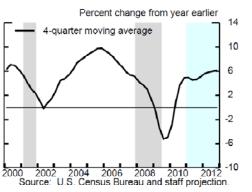
In contrast, the outlook for the construction sector remains bleak. Although we still expect housing demand to strengthen a bit in coming quarters as the declines in house prices taper off and prospects for jobs and incomes improve, homebuilding will continue to be held down by a large and persistent overhang of vacant homes. As a result, we project only a gradual firming in new construction, with single-family housing starts reaching an annual rate of 660,000 units by the end of 2012—more than 200,000 units higher than in the current quarter but still well below the pace we believe is consistent with the longer-run demand for housing. In the nonresidential sector, we anticipate the declines in spending to taper off. But high vacancy rates, low commercial property prices, and persistent tight borrowing conditions for construction loans for construction over the medium term. Although high energy prices will likely continue to provide some support for investment in drilling and mining structures, we expect investment in nonresidential structures as a whole to be about flat through 2012.

Government purchases are projected to be a slight drag on real GDP growth throughout the forecast period. In the federal sector, reductions in spending related to overseas military operations, the phasing out of stimulus-related nondefense spending, and the tightened environment for discretionary appropriations are projected to lead to a marked deceleration in real federal purchases, from a 5 percent rise in 2010 to negligible growth in 2011 and a decline of <sup>3</sup>/<sub>4</sub> percent in 2012. In the state and local sector, budgets are expected to be bolstered by a continued rise in tax receipts over the forecast period. However, the phase-out of the federal stimulus funds will partially offset this revenue increase, and we expect real spending to be quite restrained—falling <sup>3</sup>/<sub>4</sub> percent in 2011 and rising only <sup>1</sup>/<sub>2</sub> percent in 2012. (See the box "The Fiscal Condition of State and Local Governments" for further discussion.)

### The Fiscal Condition of State and Local Governments

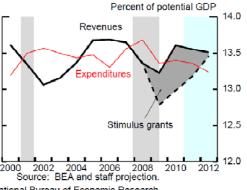
State and local governments have faced significant fiscal strains since the onset of the recession, primarily because of a drop in their tax revenues. Tax receipts, shown in the left-hand figure below, plunged in 2009, reflecting the adverse effects of the economic downturn on income and sales taxes, most of which are collected by state governments. In contrast, property tax collections—primarily accruing at the local level—continued to rise despite the fall in house prices. It appears that property tax collections have been held up by the substantial lag from market values to assessed values and by the willingness of some jurisdictions to raise property tax rates. Nevertheless, local governments have had substantial budget difficulties due to cuts in grants-in-aid from state governments.

The non-infrastructure stimulus grants provided by the federal government, the dark gray area in the right-hand figure below, have helped offset much of the shortfall in tax revenues seen by states and localities. Even so, these governments have reduced operating expenditures other than transfers in order to satisfy requirements that operating budgets be balanced and to meet an increased demand for Medicaid (which reflects, in part, a cyclical pickup).<sup>1</sup> Notably, as shown in the left-hand figure on the facing page, the sector trimmed payrolls by roughly 400,000 workers over the past two years with the decline mostly at the local level. Turning to capital budgets, construction expenditures (not shown) have fallen about 8 percent from their peak in mid 2009.<sup>2</sup> As a result of the cuts in total purchases, the sector subtracted about 0.15 percentage point from the rate of change in real GDP in both 2009 and 2010.



State & Local Tax Receipts

### Operating Budget: State & Local Revenues and Expenditures Excluding Infrastructure



Note: Shaded bars indicate recessions defined by the National Bureau of Economic Research.

<sup>&</sup>lt;sup>1</sup>Operating budgets, as presented in the national income and product accounts, consist of operating revenues (tax receipts plus non-infrastructure grants)—the black line in the right-hand figure above—and operating expenditures (expenditures excluding outlays for infrastructure)—the red line in the figure. Revenues (including grants) and expenditures associated with infrastructure projects are part of separate capital budgets.

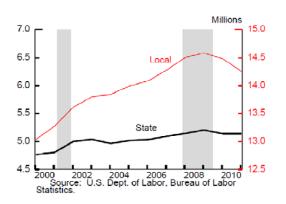
<sup>&</sup>lt;sup>2</sup>The reduction in construction outlays is heavily concentrated in the local education category. In contrast, highway construction, which is receiving considerable support from the infrastructure stimulus grants provided by the federal government, has increased over this period.

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Balanced-budget requirements typically restrict states and localities from issuing bonds to finance operating deficits. These governments do, however, issue debt to finance their capital expenditures, and the sector's overall debt burden has climbed somewhat in recent years; at 16 percent of GDP, though, it is no higher than it was in the early 1990s. Moreover, interest payments on debt are a small share—roughly 5 percent—of the total outlays of state and local governments.

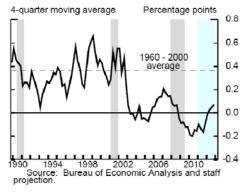
We expect aggregate state and local revenue collections to improve gradually as the economic recovery progresses. However, because the unwinding of the federal stimulus funds is expected to offset a large part of the cyclical pickup in tax receipts, state and local government spending is likely to remain quite subdued this year and next. We project that the purchases of state and local governments, the right-hand figure below, will subtract roughly 0.1 percentage point from the growth rate of real GDP in 2011 and add only a bit in 2012—a contribution to economic activity substantially below the sector's long-run historical average. Fiscal conditions vary considerably among jurisdictions and undoubtedly those states and localities experiencing the most severe strains will find it necessary to reduce outlays or raise taxes materially. However, viewed from the perspective of the sector as a whole, the spending restraint in our forecast is sufficient to keep operating budgets in surplus through 2012—the difference between the black and red solid lines in the right-hand figure on the facing page.

Looking beyond the medium-term recovery in state and local government finances, the sector faces several daunting long-term challenges. Perhaps most important, these governments have an estimated \$2 trillion to \$3 trillion in unfunded accrued pension liabilities. Accrued pension benefits are generally protected by constitutional or tough statutory provisions and, therefore, are likely ultimately to be funded. Although unfunded pensions are a significant long-term challenge, these governments typically have ample assets on hand to cover current payments, and most will have many years in which to address this issue. Governments will also confront the rising expense of providing health care to their retired employees. These obligations are almost completely unfunded and, in present value terms, are estimated by some analysts to be in the neighborhood of \$600 billion. Unlike pensions, though, these obligations are generally not afforded the same level of legal protection and so could be adjusted more easily. Finally, states will continue to confront budget pressures as Medicaid outlays are pushed higher by continued fast-rising health-care costs.



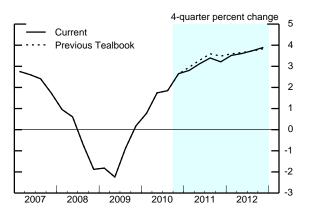
### State & Local Government Employment

### Contribution of Real State & Local Purchases to Real GDP Growth

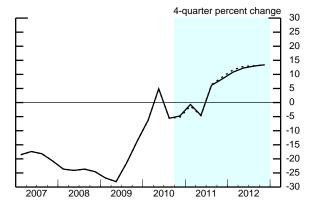


### **Components of Final Demand**

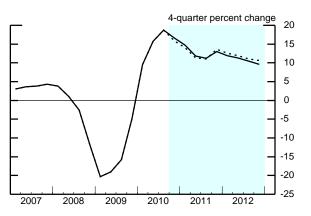
### Personal Consumption Expenditures



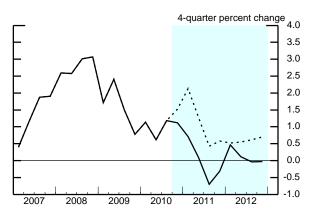
Residential Investment



Equipment and Software

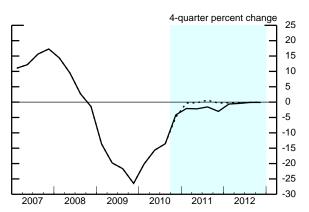


Government Consumption & Investment

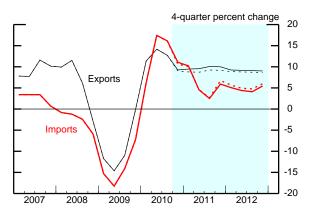


Source: U.S. Department of Commerce, Bureau of Economic Analysis.

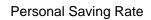
Nonresidential Structures

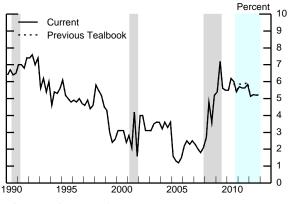






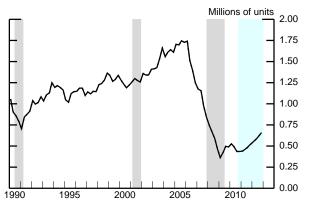
### Aspects of the Medium-Term Projection





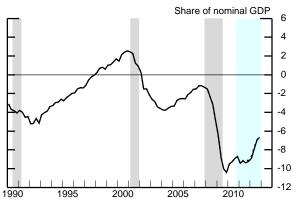
Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

Single-Family Housing Starts



Source: U.S. Census Bureau.

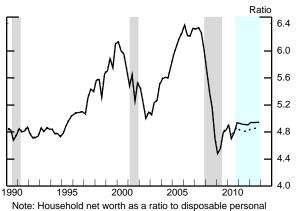
### Federal Surplus/Deficit



Note: Share of federal government surplus/deficit is shown as a 4-quarter moving average. Source: Monthly Treasury Statement.

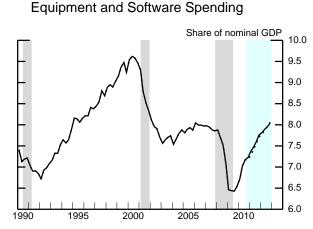
Note: The gray shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research.

Wealth-to-Income Ratio



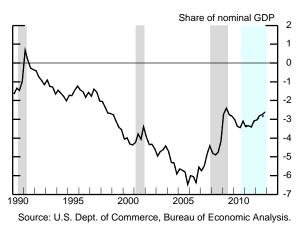
income. Source: For net worth, Federal Reserve Board, flow of funds

data; for income, Dept. of Commerce, Bureau of Economic Analysis.



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

Current Account Surplus/Deficit



Domestic Econ Devel & Outlook

### AGGREGATE SUPPLY, THE LABOR MARKET, AND INFLATION

### Potential GDP and the NAIRU

The sharp decline in the unemployment rate over recent months despite only modest growth of real activity suggests that the growth of potential output has been lower than we had previously estimated. In this forecast, we have reduced our estimate of potential GDP growth by an average of about 0.2 percentage point per year from 2009 to 2011. We implemented this change by making a downward adjustment to potential hours growth, partly on the view that the recent low readings on labor force participation suggest that the participation rate has been on a steeper downtrend than we had been assuming. In contrast, we have made no changes to our estimate of structural labor productivity, which is still assumed to rise about 2 percent per year over the projection period, with a step-up in capital deepening largely offset by a deceleration in structural multifactor productivity. We have also retained our assumption that the NAIRU will remain at 6 percent though 2012.<sup>3</sup>

### **Productivity and the Labor Market**

As with our projection for real activity, the forecast for the labor market is similar to that in the January Tealbook. Although labor productivity has risen somewhat faster than its structural rate in recent quarters, we continue to expect the gap between the levels of actual and structural productivity to narrow over the medium term as firms add workers both to meet rising production needs and to relieve pressures on their existing workforces. Our forecast therefore calls for employment growth to pick up steadily over the projection period and for actual labor productivity growth to slow to about 1½ percent on average in 2011 and 2012, appreciably less than our estimate of its structural growth rate of about 2 percent.

In particular, we continue to project that private employment gains will step up from an average pace of 190,000 per month in the first half of this year to 270,000 per month in the second half of 2011 and 300,000 per month in 2012. Given the sharp decline in the unemployment rate since the previous Tealbook and the similar pace of job growth in this projection, the unemployment rate in this forecast is lower than in the

<sup>&</sup>lt;sup>3</sup> Our estimate of the "effective" NAIRU, which includes the effect of extended and emergency unemployment benefits and is the level of the unemployment rate that we view as being consistent with no slack in resource utilization, is unrevised from the January projection and is now about 6½ percent. As before, we expect the effective NAIRU to decline to around 6 percent by the end of 2012 as the extended and emergency unemployment benefit programs expire.

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### Authorized for Public Release

### Decomposition of Potential GDP

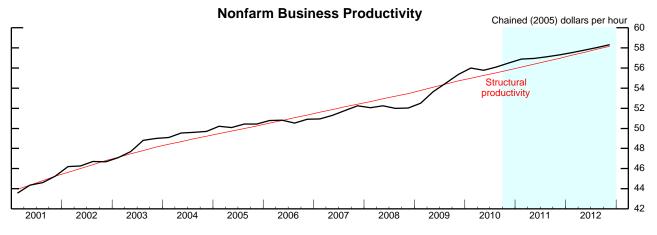
(Percent change, Q4 to Q4, except as noted)

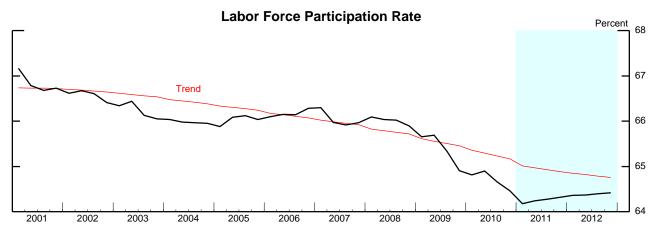
| Measure   | 1974-<br>1995 | 1996-<br>2000                             | 2001-<br>2008 | 2009       | 2010       | 2011       | 2012       |
|---|---------------|---|---------------|------------|------------|------------|------------|
| Potential GDP   | 3.0           | 3.5                                       | 2.7           | 2.0        | 2.1        | 2.4        | 2.6        |
| Previous Tealbook   | 3.0           | 3.5                                       | 2.7           | 2.2        | 2.5        | 2.5        | 2.6        |
| Selected contributions <sup>1</sup><br>Structural labor productivity<br>Previous Tealbook | 1.5<br>1.5    | 2.7<br>2.7                                | 2.5<br>2.5    | 2.3<br>2.3 | 2.0<br>2.0 | 2.0<br>2.0 | 2.1<br>2.1 |
| Capital deepening   | .7            | 1.5                                       | .7            | .4         | .5         | .7         | .9         |
| Previous Tealbook   | .7            | 1.5                                       | .7            | .3         | .4         | .7         | .9         |
| Multifactor productivity  | .5            | .9  | 1.6           | 1.8        | 1.3        | 1.2        | 1.2        |
| Previous Tealbook   | .5            | .9  | 1.6           | 1.9        | 1.5        | 1.3        | 1.2        |
| Trend hours   | 1.5           | $\begin{array}{c} 1.1 \\ 1.1 \end{array}$ | .8            | 1          | .5         | .6         | .7         |
| Previous Tealbook   | 1.5           |   | .8            | .0         | .7         | .7         | .7         |
| Labor force participation   | .4            | .0  | 2             | 3          | 4          | 3          | 2          |
| Previous Tealbook   | .4            | .0  | 2             | 2          | 2          | 2          | 2          |

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.

Source: Staff assumptions.





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

# **Domestic Econ Devel & Outlook**

| The Outlook for the Labor Market            |
|---|
| (Percent change, Q4 to Q4, except as noted) |

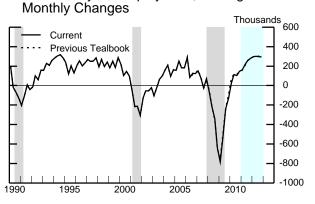
|  |              | I            | ,            |              |
|--|--------------|--------------|--------------|--------------|
| Measure  | 2009         | 2010         | 2011         | 2012         |
| Output per hour, nonfarm business                  | 6.5          | 2.0          | 1.4          | 1.7          |
| Previous Tealbook                                  | 6.2          | 1.7          | 1.5          | 1.9          |
| Nonfarm private employment                         | -5.0         | .9           | 2.4          | 3.2          |
| Previous Tealbook                                  | -4.7         | 1.1          | 2.3          | 3.2          |
| Labor force participation rate <sup>1</sup>        | 64.9         | 64.5         | 64.3         | 64.4         |
| Previous Tealbook                                  | 64.9         | 64.5         | 64.6         | 64.6         |
| Civilian unemployment rate <sup>1</sup>            | 10.0         | 9.6          | 8.6          | 7.5          |
| Previous Tealbook                                  | 10.0         | 9.6          | 8.9          | 7.8          |
| Memo:<br>GDP gap <sup>2</sup><br>Previous Tealbook | -6.6<br>-6.7 | -5.9<br>-6.3 | -4.7<br>-5.1 | -3.0<br>-3.3 |

Note: A negative number indicates that the economy is operating below potential.

1. Percent, average for the fourth quarter.

2. Percent difference between actual and potential GDP in the fourth quarter of the year indicated. Source: U.S. Department of Labor, Bureau of Labor Statistics; staff assumptions.

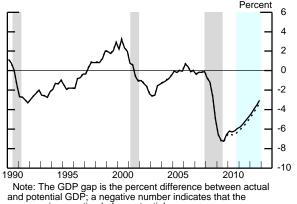
Private Payroll Employment, Average



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

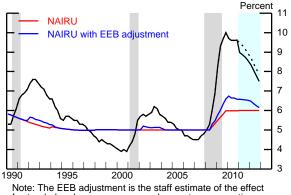
GDP Gap

staff assumptions



economy is operating below potential. Source: U.S. Dept. of Commerce, Bureau of Economic Analysis;

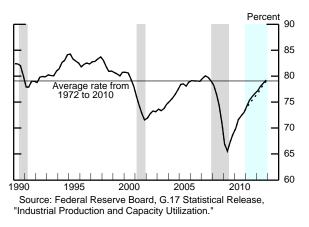
### **Unemployment Rate**



of extended and emergency unemployment compensation programs on the NAIRU. Source: U.S. Dept. of Labor, Bureau of Labor Statistics;

staff assumptions.

Manufacturing Capacity Utilization Rate



January Tealbook: By the last quarter of 2012, the unemployment rate is projected to be 7<sup>1</sup>/<sub>2</sub> percent, <sup>1</sup>/<sub>4</sub> percentage point below the level projected in the January Tealbook.

### **Resource Utilization**

The sharp decline in the unemployment rate and the reduction in potential GDP mean that the economy has a bit less slack in this projection than in the January Tealbook. Nonetheless, the amount of current and projected slack remains large. By our estimate, the unemployment rate in the current quarter is about 2½ percentage points above the "effective" NAIRU, and at the end of next year, the unemployment gap is still 1½ percentage points. This extended period of labor market slack is likely to be associated with other features of a weak labor market, including below-trend labor force participation, a high percentage of workers who are involuntarily on part-time schedules, and an unusually large concentration of workers experiencing long-duration unemployment spells.

We continue to expect slack in the industrial sector to be taken up sooner than in the economy as a whole, in part because manufacturing capacity, after a cumulative decline of 1<sup>1</sup>/<sub>2</sub> percent in 2009 and 2010, is projected to increase only <sup>3</sup>/<sub>4</sub> percent this year and 1<sup>1</sup>/<sub>2</sub> percent in 2012. As a result, by the end of 2012, our projection calls for the factory operating rate to be close to its long-run average, despite the still-sizable gap that exists at that time for aggregate resource utilization.

### **Compensation and Prices**

In light of the reduced amount of labor market slack and higher headline inflation in this projection, we have boosted our forecast for labor costs. In particular, we now project that the P&C measure of nonfarm hourly compensation will increase about 2 percent in 2011 and 2½ percent in 2012, about ¼ percentage point faster in both years than in the January Tealbook; we have made a similar upward adjustment to our forecast for the ECI. Despite these upward revisions, the projected increases in compensation, combined with the moderate gains in productivity in our forecast, imply only a small increase in unit labor costs over the medium term.

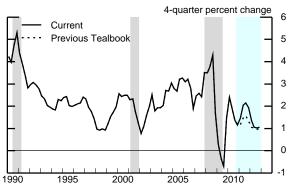
After increasing at an annual rate of 4<sup>1</sup>/<sub>4</sub> percent in the last quarter of 2010, prices of imported core goods (all goods excluding fuels, computers, and semiconductors) are projected to rise 7<sup>1</sup>/<sub>2</sub> percent in the current quarter, the fastest pace of increase since the first half of 2008. This jump in core import prices is driven by rising commodity prices,

| Inflation Projections     |   |
|---------------------------|---|
| (Percent change, Q4 to Q4 | ) |

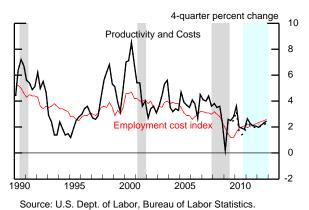
| Measure                                   | 2009 | 2010 | 2011 | 2012 |
|---|------|------|------|------|
| PCE chain-weighted price index            | 1.5  | 1.2  | 1.9  | 1.1  |
| Previous Tealbook                         | 1.5  | 1.2  | 1.3  | 1.0  |
| Food and beverages                        | -1.6 | 1.3  | 3.4  | 1.3  |
| Previous Tealbook                         | -1.6 | 1.3  | 1.7  | 1.1  |
| Energy                                    | 2.7  | 5.9  | 11.0 | -1.3 |
| Previous Tealbook                         | 2.7  | 6.3  | 6.2  | .1   |
| Excluding food and energy                 | 1.7  | .8   | 1.2  | 1.2  |
| Previous Tealbook                         | 1.7  | .8   | 1.0  | 1.0  |
| Prices of core goods imports <sup>1</sup> | -1.9 | 2.7  | 4.6  | 1.4  |
| Previous Tealbook                         | -1.9 | 3.1  | 3.2  | 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**

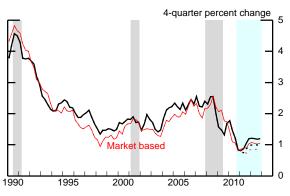


Source: U.S. Dept. of Commerce, Bureau of Economic Analysis.

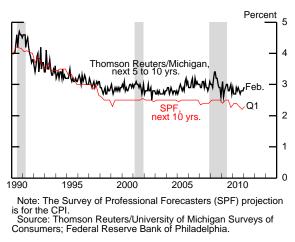


Compensation per Hour





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



### Long-Term Inflation Expectations

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

dollar depreciation, and increased foreign inflation. With more-modest changes in commodity prices projected for the second quarter of this year, we expect core import price inflation to move down to 5½ percent. This forecast for the first half of the year is 2 percentage points higher than we had written down in January, mainly because of the recent rise in commodity prices. We expect core import price inflation to fall back to 1½ percent next year, unchanged from our projection in January.

As in previous Tealbooks, we anticipate that low levels of resource utilization will put downward pressure on core PCE inflation over the projection period, but that further disinflation will be checked by continued stability in inflation expectations. However, given the diminished amount of slack in this forecast and the higher prices of energy and imports, we have raised our estimate of core PCE inflation to 1¼ percent in both 2011 and 2012, up ¼ percentage point in each year from the January Tealbook. We project that headline PCE price inflation will step down from almost 2 percent in 2011 to just over 1 percent in 2012, reflecting an anticipated deceleration in energy and food prices.

### **THE LONG-TERM OUTLOOK**

We have extended the staff forecast to 2015 using the FRB/US model and staff assessments of long-run supply-side conditions, fiscal policy, and other factors. The contour of the long-run outlook depends on the following key assumptions:

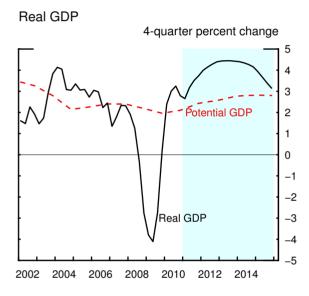
- Monetary policy aims to stabilize PCE inflation at 2 percent in the long run, consistent with the majority of longer-term inflation projections provided by FOMC participants at the January meeting.
- The Federal Reserve's holdings of securities follow the baseline portfolio projections reported in Book B. The projected decline in the System's holdings beginning in the second half of 2012 is forecast to contribute about 25 basis points to the rise in the 10-year Treasury yield over the 2013–15 period.
- Beyond 2012, risk premiums on corporate equities decline gradually to normal levels, and banks ease their lending standards somewhat further.
- The federal government budget deficit narrows to 4<sup>3</sup>/<sub>4</sub> percent of GDP by the end of 2015. This improvement reflects the effects of the economic

### The Long-Term Outlook

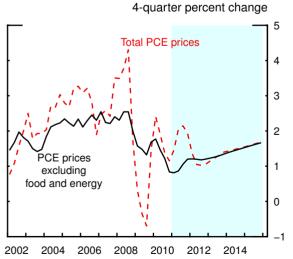
### (Percent change, Q4 to Q4, except as noted)

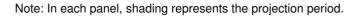
| Item                                    | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|------|------|------|------|------|------|
| Real GDP                                | 2.8  | 3.7  | 4.4  | 4.4  | 4.2  | 3.2  |
| Civilian unemployment rate <sup>1</sup> | 9.6  | 8.6  | 7.5  | 6.7  | 5.9  | 5.3  |
| PCE prices, total                       | 1.2  | 1.9  | 1.1  | 1.4  | 1.5  | 1.7  |
| Core PCE prices                         | .8   | 1.2  | 1.2  | 1.3  | 1.5  | 1.7  |
| Federal funds rate <sup>1</sup>         | .2   | .1   | .5   | 2.1  | 3.7  | 4.2  |
| 10-year Treasury yield <sup>1</sup>     | 3.0  | 4.0  | 4.5  | 4.8  | 5.0  | 5.1  |

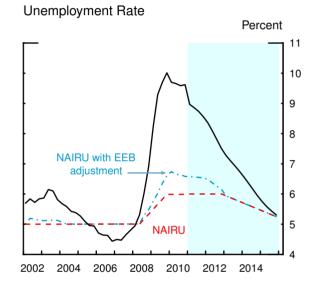
1. Percent, average for the final quarter of the period.

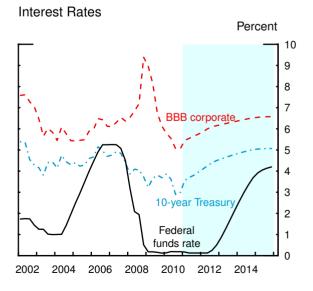


PCE Prices









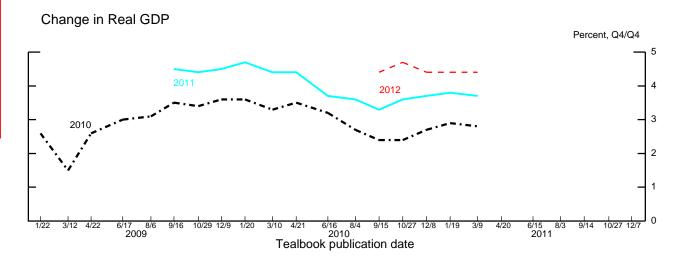
recovery on tax receipts and transfer payments as well as further policy actions after 2012 aimed at reducing the deficit.

- The real foreign exchange value of the dollar is assumed to depreciate <sup>1</sup>/<sub>2</sub> percent per year in the 2013–15 period. The price of WTI crude oil edges up further after 2012 and reaches \$105 per barrel by 2015, consistent with futures prices. Foreign real GDP expands, on average, 3<sup>1</sup>/<sub>4</sub> percent per year from 2013 through 2015, a bit above its trend rate.
- Over the 2013–15 period, the NAIRU declines from 6 percent to 5¼ percent, as the functioning of the labor market improves. Potential GDP expands 2¾ percent per year.

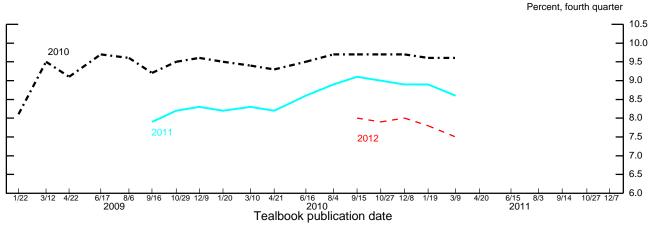
The economy enters 2013 with the staff's estimate of the output gap still wide by historical standards, the unemployment rate well above the projected NAIRU, and inflation very low. In the long-run projection, improving confidence, diminishing uncertainty, and supportive financial conditions eventually enable the level of aggregate demand to catch up with aggregate supply, helping inflation move closer to 2 percent. Specifically, real GDP rises at an average annual rate of 4<sup>1</sup>/<sub>4</sub> percent in 2013 and 2014, considerably faster than its potential pace; as a result, unemployment declines appreciably and inflation rises slowly. In response, the federal funds rate gradually increases to 3<sup>3</sup>/<sub>4</sub> percent by late 2014.<sup>4</sup> By 2015, with improvements in confidence and financial conditions largely complete, and with the federal funds rate climbing further to 4<sup>1</sup>/<sub>4</sub> percent, gains in real GDP moderate. Nevertheless, overall economic growth remains robust enough relative to potential to reduce the unemployment rate to the NAIRU by late 2015 while inflation rises to 1<sup>3</sup>/<sub>4</sub> percent.

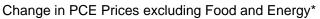
<sup>&</sup>lt;sup>4</sup> In the long-run outlook, the federal funds rate follows the prescriptions of the outcome-based rule, which is described in the appendix on policy rules in Book B.

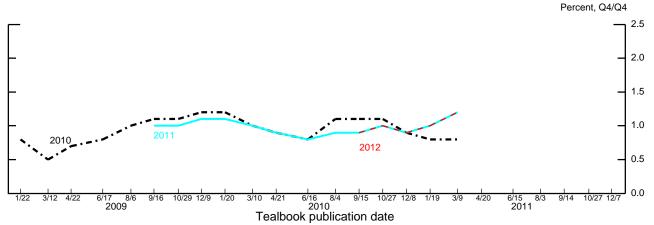




**Unemployment Rate** 







\*Because the core PCE price index was redefined as part of the comprehensive revisions to the NIPA, projections prior to the August 2009 Tealbook are not strictly comparable with more recent projections.

### **International Economic Developments and Outlook**

Incoming data on economic activity abroad have been more upbeat than we were anticipating at the time of the January Tealbook, especially in the euro area, China, and Mexico. Nevertheless, we see the foreign economies facing greater headwinds as a result of the turmoil in the Middle East and North Africa, which has driven up world oil prices and increased uncertainty about the global recovery. The higher oil prices have also highlighted concerns about rising inflation, and we now expect a number of central banks to tighten monetary policy sooner than we previously assumed. Based on these factors, our overall outlook for foreign growth is slightly softer beyond the current quarter than in the January Tealbook. We see foreign GDP increasing about 3½ percent this year and next, propelled by continuing robust growth in the emerging market economies (EMEs) and some firming of activity in the advanced foreign economies (AFEs). The possibility that political upheaval will spread further in the Middle East and North Africa poses a significant downside risk to the global outlook.<sup>1</sup> Moreover, vulnerabilities in the euro-area periphery stemming from ongoing fiscal and banking stresses continue to be an important risk to the outlook.

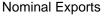
Foreign consumer price inflation, which increased sharply in both AFEs and EMEs in the fourth quarter, is estimated to remain elevated in the current quarter, at 4<sup>1</sup>/<sub>4</sub> percent, reflecting accelerating energy prices and continued food price increases.<sup>2</sup> With upward pressures on oil and other commodity prices projected to subside, foreign inflation should ease to about 2<sup>1</sup>/<sub>2</sub> percent late this year. Relative to the January Tealbook, our outlook for foreign inflation has been revised up somewhat this year because of the higher path of oil and other commodity prices.

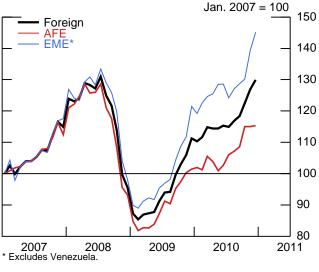
We continue to expect that AFE central banks will keep policy accommodative over the forecast period but have brought forward their policy rate hikes, as several central banks have expressed heightened concerns about inflation risks. Although EME authorities will likely remain cautious about monetary tightening for fear of boosting capital inflows, we nonetheless anticipate additional rate hikes in these economies as a response to recent increases in headline inflation and to mitigate the risk of overheating.

<sup>&</sup>lt;sup>1</sup> See the box "Economic Risks from the Middle East and North Africa" in this section as well as the simulations in the Risks and Uncertainty section.

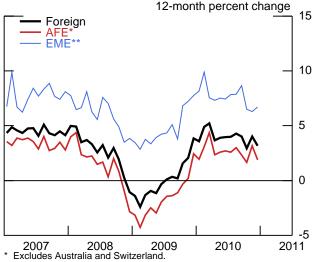
<sup>&</sup>lt;sup>2</sup> See the box "Food Prices and Foreign Inflation."

# **Recent Foreign Indicators**

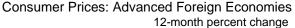


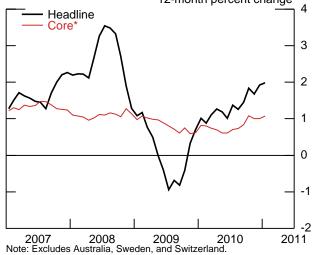


Retail Sales

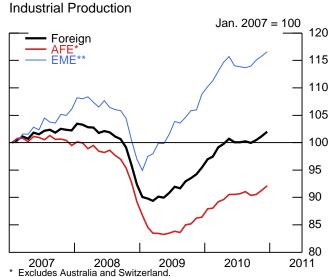


\*\* Includes Brazil, China, Israel, Korea, Singapore, and Taiwan.



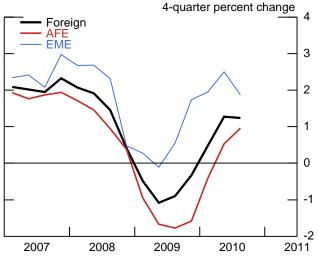


Note: Excludes Australia, Sweden, and Switzerland. \* Excludes all food and energy; staff calculation. Source: Haver Analytics and CEIC.

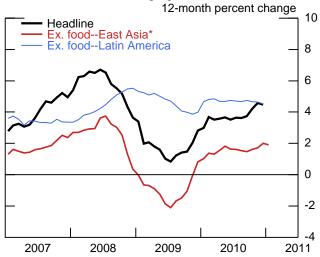


\* Excludes Australia and Switzerland.
 \*\* Excludes Hong Kong and Venezuela.

#### Employment



Consumer Prices: Emerging Market Economies



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# **The Foreign Outlook**

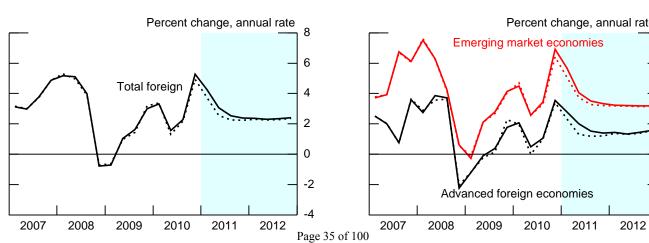
(Percent change, annual rate)

|                            | 2010 |   |                 | 2011            |                 |                 |                   |
|----------------------------|------|---|-----------------|-----------------|-----------------|-----------------|-------------------|
|                            | H1   | Q3  | Q4 <sup>e</sup> | Q1 <sup>p</sup> | Q2 <sup>p</sup> | H2 <sup>p</sup> | 2012 <sup>p</sup> |
| Real GDP                   |      |   |                 |                 |                 |                 |                   |
| Total foreign              | 5.5  | 2.3                                       | 3.3             | 3.6             | 3.3             | 3.3             | 3.5               |
| Previous Tealbook          | 5.5  | 2.1                                       | 3.1             | 3.2             | 3.4             | 3.5             | 3.6               |
| Advanced foreign economies | 3.5  | 1.9                                       | 1.7             | 2.3             | 2.0             | 2.0             | 2.3               |
| Previous Tealbook          | 3.6  | 1.7                                       | 1.7             | 2.0             | 2.1             | 2.2             | 2.4               |
| Emerging market economies  | 8.1  | 2.8                                       | 5.4             | 5.2             | 4.9             | 4.9             | 4.9               |
| Previous Tealbook          | 7.9  | 2.5                                       | 4.9             | 4.8             | 5.0             | 5.1             | 5.1               |
| Consumer Prices            |      |   |                 |                 |                 |                 |                   |
| Total foreign              | 2.4  | 2.3                                       | 5.3             | 4.3             | 3.1             | 2.5             | 2.3               |
| Previous Tealbook          | 2.3  | 2.2                                       | 4.9             | 3.7             | 2.6             | 2.2             | 2.3               |
| Advanced foreign economies | 1.3  | $\begin{array}{c} 1.1 \\ 1.0 \end{array}$ | 3.6             | 2.8             | 2.0             | 1.5             | 1.4               |
| Previous Tealbook          | 1.0  |   | 3.4             | 2.3             | 1.3             | 1.2             | 1.4               |
| Emerging market economies  | 3.5  | 3.4                                       | 6.9             | 5.7             | 4.0             | 3.4             | 3.2               |
| Previous Tealbook          | 3.6  | 3.3                                       | 6.4             | 5.1             | 3.7             | 3.2             | 3.2               |

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

Percent change, annual rate Percent change, annual rate 15 15 Current ··· Previous Tealbook Emerging market economies 10 10 5 5 0 0 Advanced foreign economies Total foreign -5 -5 -10 -10 -15 -15 2012 2008 2009 2008 2009 2010 2012 2007 2010 2011 2007 2011 **Consumer Prices** Percent change, annual rate Percent change, annual rate 8 8 Emerging market economies 6

**Real GDP** 



4

2

0

-2

-4

### **ADVANCED FOREIGN ECONOMIES**

Real GDP in the AFEs expanded at a lackluster pace of 1<sup>3</sup>/<sub>4</sub> percent in the fourth quarter, with activity restrained by adverse weather in Europe and the expiration of incentives for automobile purchases in Japan. Indicators for the first quarter, such as industrial production, purchasing managers indexes (PMIs), and retail sales, have been more upbeat. The greater momentum in the recent data has led us to raise our forecast for AFE growth in the near term, but further out we have trimmed growth slightly as a result of higher oil prices. We now expect growth to average only 2 percent over the remainder of this year and rise to 2<sup>1</sup>/<sub>2</sub> percent by the end of next year, as the drag from financial stresses and fiscal consolidation lessens.

Rising commodity prices pushed up consumer price inflation in the AFEs to an annual rate of  $3\frac{1}{2}$  percent in the fourth quarter, a bit more than we had anticipated in the January Tealbook. With commodity prices even higher now, we revised up our inflation forecast for the first half of 2011 about  $\frac{1}{2}$  percentage point, to  $2\frac{1}{2}$  percent. Inflation should gradually subside to about  $1\frac{1}{2}$  percent by the end of the year, reflecting our projection that commodity prices will stabilize and that resource slack will diminish only slowly.

#### **Euro** Area

Euro-area GDP grew at an annual rate of 1 percent in the fourth quarter, slightly less than anticipated in the January Tealbook, reflecting inventory destocking and adverse effects of severe weather across northern Europe. Recent indicators suggest a pickup in activity in the current quarter. Retail sales surged in January after contracting for five consecutive months. In February, the euro-area PMI for manufacturing rose to its highest level since 2000, and the services PMI climbed further into expansionary territory. The divergence in economic performance within the euro area remains large, however, with indicators pointing to relatively vigorous growth in Germany, moderate growth in France and Italy, weak growth in Ireland and Spain, and contractions of activity in Greece and Portugal.

We project euro-area GDP growth to rise to 2 percent in the current quarter, reflecting in part a rebound from weather-related softness. Growth falls to  $1\frac{1}{4}$  percent for the remainder of this year, held down by higher oil prices, a stronger euro, and monetary and fiscal policy tightening, before rising to  $2\frac{1}{2}$  percent by the end of 2012. In particular, we expect a subdued recovery of private consumption this year, with higher energy prices

draining disposable income and with employment and consumer confidence improving only slowly. In addition, aggressive fiscal consolidation and persistent financial stresses should continue to weigh on activity in peripheral euro-area countries.

Euro-area consumer prices rose nearly 2<sup>1</sup>/<sub>2</sub> percent in February from their yearearlier level, the third consecutive monthly figure above the European Central Bank's (ECB) definition of price stability. We revised up our projection for inflation in the region somewhat, to 2<sup>1</sup>/<sub>2</sub> percent this year and 1<sup>3</sup>/<sub>4</sub> percent next year, because largely of recent increases in commodity prices. At its March 3 policy meeting, the ECB kept its benchmark policy rate unchanged at 1 percent and reaffirmed its commitment to provide ample liquidity to banks until, at least, this summer. However, the ECB statement noted that risks to the outlook for inflation are now distinctly on the upside, and President Trichet suggested that the ECB may tighten policy as early as April. Accordingly, we now expect the ECB to begin to raise policy rates in the second quarter of this year, three quarters earlier than assumed in the January Tealbook, with gradual further increases to a rate of 2 percent by the end of 2012.

European Union (EU) leaders have committed to announce a "comprehensive" policy response to the sovereign debt crisis at their upcoming summit on March 24 and 25. Reportedly, discussions include the possibility of strengthening the existing facility for emergency lending to distressed governments and easing terms for existing loans to Ireland and Greece. However, EU leaders currently appear to be far from an agreement on substantive measures, posing the risk that markets will be disappointed in the summit's outcome.

#### Japan

Japanese real GDP declined at a 1 percent pace in the fourth quarter, as the end of a government subsidy for automobile purchases in September shifted overall consumption into reverse. However, readings on industrial production and retail sales in January suggest that GDP growth has resumed this quarter. Going forward, we anticipate growth to rise to 2 percent by next year, as improving labor market conditions stimulate household spending and Japanese exporters benefit from robust demand out of emerging Asia. This outlook is little changed from the January Tealbook.

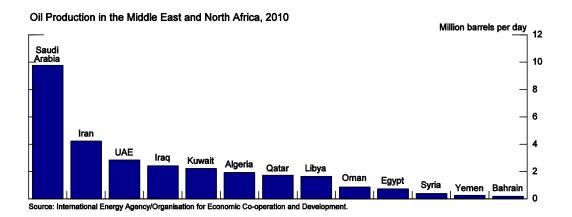
Consumer price inflation on a 12-month basis remained zero in January, supported by higher food and energy prices. However, the end of deflation is likely to be

#### **Economic Risks from the Middle East and North Africa**

The global economy faces new risks from the spread of political unrest in the Middle East and North Africa. Following the relatively peaceful ouster of the leaders of Tunisia and Egypt in late January and early February, violent clashes erupted in Libya, where fighting between government forces and the opposition continues. Unrest has also spread—to varying degrees—to Algeria, Bahrain, Iran, Iraq, Jordan, Oman, Morocco, and Yemen.

The turmoil has increased global risk concerns, sending equity markets lower and triggering further capital outflows from emerging market economies. The key economic risk from unrest in the Middle East and North Africa stems from the region's importance in the world oil market. Other trade and financial linkages to the United States and to the world economy are less worrisome.<sup>1</sup>

At present, the only significant disruption to oil production has been in Libya, following the violent civil unrest that began in the latter half of February. The size of this disruption is estimated to be around 1.2 million barrels per day out of Libya's total productive capacity of 1.8 million barrels per day. Although Saudi Arabia has reportedly increased its oil output to help make up for this shortfall, spot oil prices are about \$15 per barrel above mid-February levels, in part reflecting fears that additional supply disruptions could occur in the region. Taken together, countries in the Middle East and North Africa (many of which are experiencing protests of some type) produce nearly 30 million barrels of oil per day (see figure below), equivalent to more than one-third of world production.



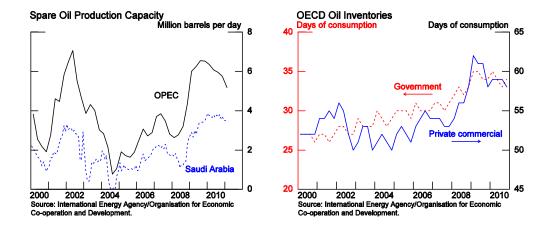
<sup>&</sup>lt;sup>1</sup> The share of the Middle East and North Africa in non-oil U.S. trade is less than 2 percent, and the region accounts for about 2 percent of world GDP. As of the end of September 2010, U.S. bank exposure to the region was only \$27 billion, about 3 percent of Tier 1 capital. Bank exposure of Western Europe was \$203 billion, about 9 percent of Tier 1 capital. Large sovereign wealth funds in the region could pose risks to global financial markets if their holdings were liquidated rapidly, but the probability of such an outcome seems remote.

Spare oil production capacity among the Organization of the Petroleum Exporting Countries (OPEC), which stood at about 5 million barrels per day as of January (lower-left figure), can provide a significant offset to global supply disruptions.<sup>2</sup> However, if oil production is disrupted in other countries as well, this spare production capacity could be rapidly exhausted.

As Saudi Arabia is the main oil producer in the region—and as it holds the majority of spare production capacity—a key risk going forward is whether the kingdom will itself experience political turmoil. In an attempt to preempt unrest, the Saudi monarch recently announced new social spending programs amounting to \$36 billion (8 percent of GDP). At present, significant unrest in Saudi Arabia appears unlikely. But with an aging leadership, limited political freedoms, and sectarian tensions, the possibility of upheaval in Saudi Arabia should not be discounted completely. In such a scenario, oil prices could soar to unprecedented levels.

Temporary oil supply disruptions can also be buffered to some degree by drawing down oil inventories. Private commercial oil inventories in countries belonging to the Organisation for Economic Co-operation and Development (OECD) were equivalent to 58 days of oil consumption at the end of 2010, down somewhat from the very high levels in mid-2009 but still above historical norms (lower-right figure). In addition, strategic stocks held by governments, including the U.S. Strategic Petroleum Reserve, could also be released to manage supply outages.

Since the January Tealbook, near-term futures prices for crude oil have moved up by more than prices for delivery further in the future, suggesting that market participants expect the current supply dislocations to ease somewhat over time. That said, futures prices have risen considerably at all maturities, likely reflecting some combination of diminished expectations for supply, higher expectations for demand, and a larger risk premium embedded in futures prices.



<sup>2</sup> There is essentially no spare production capacity outside of OPEC.

short lived, given the projected flattening of the path of commodity prices; we project Japanese consumer prices to decline at an annual rate of about ½ percent for the remainder of the forecast period.

#### Canada

Real GDP expanded at a robust pace of  $3\frac{1}{4}$  percent in the fourth quarter, led by a rebound in commodity exports and strong consumer spending on durables. We look for GDP growth to step down to about  $2\frac{1}{2}$  percent over the remainder of the forecast period, as the strength of the Canadian dollar provides some drag on net exports and the rise in oil prices squeezes households' disposable income. However, the rise in commodity prices should support investment in commodity-producing industries.

Headline inflation stood at 2.3 percent in January on a 12-month basis, pushed up by rising energy prices and hikes in sales taxes. Energy price increases are likely to continue to exert upward pressure on headline inflation in the first half of 2011, and, with growth projected to remain solid, we brought forward the next policy rate hike to the third quarter of this year. That said, we believe that the softness of core inflation and the strength of the currency will bring headline inflation back down and keep the Bank of Canada from tightening monetary policy rapidly, even as the output gap continues to close.

#### **United Kingdom**

Real GDP in the United Kingdom declined at a surprising 2<sup>1</sup>/<sub>4</sub> percent pace in the fourth quarter. Exceptionally bad weather accounted for most of the decline, and a payback from that factor should help boost growth to 2<sup>3</sup>/<sub>4</sub> percent in the current quarter. Thereafter, our growth forecast averages about 2<sup>1</sup>/<sub>2</sub> percent, which is slightly softer than in the January Tealbook in light of higher oil prices and, as noted below, somewhat tighter monetary policy. Rising commodity prices, higher taxes, and continued pass-through from the earlier depreciation of sterling pushed 12-month inflation to 4 percent in January. Inflation should remain elevated in 2011 before falling back to the 2 percent target in early 2012 as the aforementioned effects dissipate. We brought forward our first rate hike by the Bank of England to the third quarter of this year, as members of the Monetary Policy Committee have shown heightened concerns about the risk that inflation.

## **EMERGING MARKET ECONOMIES**

Real GDP growth in the EMEs rebounded to 5½ percent in the fourth quarter, ½ percentage point higher than estimated in the January Tealbook. The upward revision primarily reflects stronger-than-expected growth in China and Mexico. For the EMEs as a whole, incoming data on industrial production, exports, and PMIs continue to be upbeat. As with the AFEs, however, stronger near-term momentum is likely to be offset in part by the global effects of turmoil in the Middle East and North Africa, including deteriorating investor sentiment and rising oil prices (despite the benefit to some EMEs that export oil). All told, we still see EME growth proceeding at a solid 5 percent pace on average over the forecast period but a bit weaker than in the previous Tealbook.

Headline inflation has picked up sharply in the EMEs in recent months. Although this rise has largely been driven by the recent run-up in food prices, in some countries, such as Brazil and China, nonfood inflation has also increased. Moreover, the recent sharp increase in oil prices should add to inflation pressures. As a result, we revised up our inflation forecast for the EMEs in the current quarter to 5<sup>3</sup>/<sub>4</sub> percent. Thereafter, with commodity prices projected to flatten out, we see inflation settling down to about 3<sup>1</sup>/<sub>4</sub> percent, as in the January Tealbook. This decline in inflation assumes that EME authorities will continue to tighten monetary policy and allow some moderate exchange rate appreciation.

#### China

Revised data show that Chinese real GDP rose  $10\frac{1}{2}$  percent in the second half of last year, nearly 1 percentage point stronger than previously reported. For the current quarter, we see growth slowing to 9 percent, in line with somewhat lower PMI readings in January and February. Exports and imports increased sharply in January, with the trade balance turning to a small deficit. Going forward, we have revised the forecast down a touch, to a still robust pace of  $8\frac{1}{2}$  percent on average over the next two years.

Headline inflation in China edged higher in January, to around 5 percent on a 12-month basis. Moreover, nonfood inflation moved up to about 2½ percent. We see headline inflation coming down later this year as commodity prices stabilize and credit growth is reined in. Since late January, Chinese authorities have continued their gradual tightening of monetary policy, raising both the one-year lending and deposit rates ¼ percentage point and banks' reserve requirement ratios ½ percentage point. The renminbi has been flat against the dollar since the previous Tealbook and has appreciated

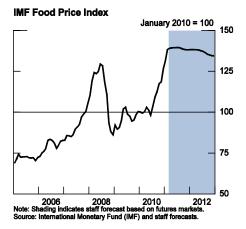
## Food Prices and Foreign Inflation

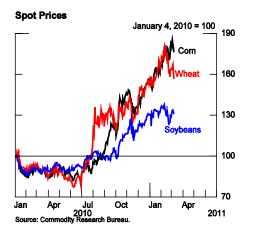
Food commodity prices have jumped dramatically since mid-2010, regaining their 2008 peaks, as prices for corn, soybeans, and wheat, among other products, have surged (see the figures below). These increases are raising headline inflation, particularly in emerging market economies (EMEs), and are placing an increased burden on the poor.

Both demand and supply factors are contributing to the food price run-up. The global recovery, with especially robust growth in EMEs, has boosted world demand for food. At the same time, the supply of wheat has been reduced by droughts in Russia and Ukraine this past summer and in Argentina, East Africa, and China more recently, as well as excessive and untimely rains last summer in Canada, Europe, and Australia. Likewise, high temperatures in the United States led to disappointing corn yields in the fall. Prices for soybeans have also been boosted by poor weather. (Unlike prices for other staple crops, rice prices have increased only modestly amid record production.) Policy decisions are also raising prices: A few food-importing countries have made large precautionary purchases, and some major producing countries have curtailed food exports.

Barring further supply shocks, there is good reason to expect that food price increases will be more moderate going forward. For corn and soybeans, the futures markets predict that prices will begin to ease later this year, consistent with the return of more normal weather conditions and an expansion of the acreage devoted to these crops. Futures markets currently show wheat prices increasing but at a more subdued pace over the next year.

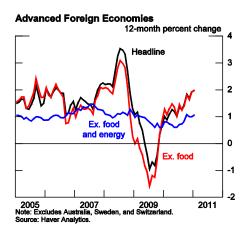
For the advanced foreign economies, as for the United States, the jump in food commodity prices has increased headline inflation only minimally: Consumer prices for food have risen at about the same pace as overall inflation during the past year (lower-left figure on the facing page), although larger increases may yet come.

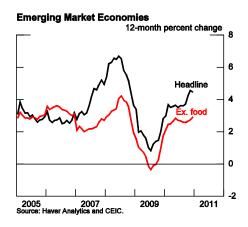




In contrast, surging crop prices have had a significant effect on consumer prices for food in the EMEs. These prices jumped nearly 7 percent over the 12 months ending in January, accounting for most of the increase in EME headline inflation over the past year (lower-right figure). The relatively larger effect of food commodity prices on EME inflation in part reflects the fact that food products consumed in the EMEs are more heavily weighted toward less processed foods, the prices of which are influenced more directly by raw commodity prices. In addition, food products comprise one-fourth to one-third of the weight in the typical EME consumer price index compared with a less than 10 percent weight for the advanced economies.

The surge in food commodity prices poses challenges for monetary policymakers, especially in the EMEs. As output gaps in the EMEs have narrowed, central banks have struggled to calibrate a pace of monetary tightening that would keep inflation in check without attracting substantial capital inflows and inducing unwelcome currency appreciation. Rising food prices further complicate the policymaker's task: Should the commodity boom lose steam, as indicated by futures markets, monetary policy would have increased room for maneuver. Conversely, further shocks to food prices, especially in an environment of dwindling resource slack, could spill over into inflation expectations, wages, and core inflation, requiring a step-up in the pace of monetary tightening.





about 4 percent since Chinese authorities announced greater flexibility of the exchange rate in late June. However, on a real trade-weighted basis, the renminbi has depreciated about 1<sup>3</sup>/<sub>4</sub> percent since June.

#### **Other Emerging Asia**

Elsewhere in emerging Asia, economic activity in the fourth quarter generally rebounded from its soft third quarter. This bounceback was particularly evident in the ASEAN-4 countries. In the current quarter, we expect growth in emerging Asia excluding China to pick up further. Exports rose significantly in a number of these economies in January, and industrial production growth was generally positive. Beyond the current quarter, growth holds steady at about 4<sup>3</sup>/<sub>4</sub> percent. This outlook is a touch weaker than in the January Tealbook, as the recent rise in commodity prices is likely to exert some drag on economic activity.

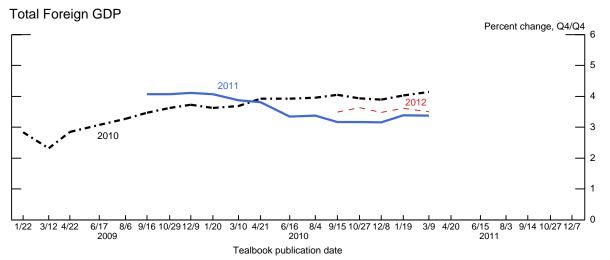
Sharp increases in food prices in December and January boosted overall consumer prices more rapidly than we had anticipated, and we expect further upward pressure in the near term after the recent jump in oil prices. Barring additional increases in commodity prices, spillovers to nonfood inflation should generally remain contained, and we expect inflation to moderate later this year. We assume that central banks will continue to withdraw monetary stimulus, albeit at a restrained pace, while allowing some moderate further currency appreciation, in line with projected movements in the renminbi.

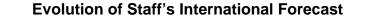
#### Latin America

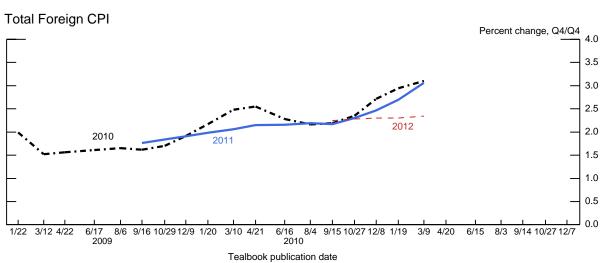
We now estimate that real GDP in Latin America rose at an annual rate of 4<sup>1</sup>/<sub>4</sub> percent in the fourth quarter, about 1<sup>1</sup>/<sub>4</sub> percentage points faster than we projected in the January Tealbook. This upward revision reflects stronger-than-expected growth of 5 percent in Mexico, where both industrial output and the services sector grew solidly, as labor market conditions improved. Brazilian growth in the fourth quarter, at 3 percent, was a bit lower than we had anticipated; consumption was strong, but investment spending slowed significantly. We have boosted our forecast for Latin American growth this quarter and next, to about 4<sup>1</sup>/<sub>4</sub> percent, reflecting strong incoming data for Mexico. In the remainder of the forecast period, growth holds steady at about 4 percent, a little lower than in the previous outlook on account of the weaker outlook for U.S. manufacturing production. With Latin America being a net exporter of commodities, the recent

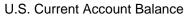
increases in the price of oil and other commodities should not restrain activity for the region as a whole.

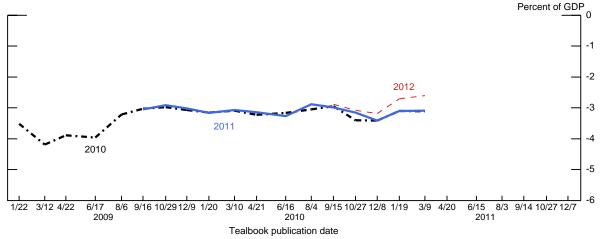
Headline inflation has eased a bit in Mexico recently, with the 12-month rate edging below the upper end of the central bank's 2 to 4 percent target range in January. But this decline entirely reflects the passing out of last year's rise in sales taxes and administered prices from the 12-month inflation calculation; in recent quarters, inflation has picked up. In Brazil, 12-month inflation rose to 6 percent in February. In addition to commodity price increases, higher inflation in Brazil is being driven by continued lax fiscal policy and rapid consumer credit growth, pointing to possible overheating of the economy. In response, the Brazilian central bank raised its target policy rate 50 basis points to 11.75 percent in early March. The policy rate has been raised a cumulative 300 basis points since early last year.











# **Financial Developments**

Market participants appeared to read the incoming economic data over the intermeeting period as somewhat better than expected, but the escalation of unrest in the Middle East and North Africa (MENA) and the consequent rise in oil prices have weighed on market sentiment since mid-February. Over the period as a whole, the expected policy path shifted up beyond the one-year horizon, yields on nominal Treasury securities increased about 10 to 30 basis points, broad stock price indexes posted modest gains, and risk spreads on corporate bonds narrowed moderately. TIPS-based inflation compensation at the five-year horizon increased notably amid rising oil prices, while measures of forward inflation compensation beyond the five-year horizon increased considerably less. Conditions in short-term funding markets were little changed over the intermeeting period. The broad index of the foreign exchange value of the U.S. dollar declined about 1 percent, as relatively good incoming macroeconomic data for Europe, combined with prospective tightening of monetary policy by several foreign central banks, appeared to outweigh the effects of flight-to-safety flows related to concerns about the MENA region.

Borrowing by nonfinancial corporations moderated a bit but stayed robust in the first two months of 2011. Indicators of business and consumer credit quality continued to improve. However, financing conditions for commercial real estate generally remained tight. In addition, house prices continued to decline, reflecting the large inventory of unsold homes, still-tight financing conditions, and perhaps households' concern that house prices might fall further.

Bank credit declined, on average, in January and February because of a contraction in core loans, while holdings of securities were about flat. Bank profitability improved somewhat further in the fourth quarter of 2010, but the increase was attributable to reduced loan loss provisioning rather than higher revenues. Responses to the March 2011 Senior Credit Officer Opinion Survey on Dealer Financing Terms (SCOOS) indicated an easing of price and nonprice credit terms for a wide range of counterparties over the past three months (see appendix). M2 expanded moderately in the first two months of 2011, mainly because of continued robust growth in liquid deposits.

#### POLICY EXPECTATIONS AND TREASURY YIELDS

The January FOMC statement was largely in line with market expectations and elicited only a modest market reaction, although the characterization of the economic outlook was reportedly marginally less optimistic than some investors had anticipated.<sup>1</sup> Over the weeks following the FOMC meeting, policy expectations moved higher, as market participants read the incoming economic data as somewhat better than expected, on balance, and viewed the minutes of the January FOMC meeting as slightly more upbeat about the strength of the economic expansion than the FOMC statement. However, since mid-February, policy expectations have retraced a portion of their earlier rise amid concerns about the possible economic fallout from the escalation of unrest in the MENA region. The flatter policy path may have been reinforced by Chairman Bernanke's semiannual monetary policy testimony, which market participants reportedly interpreted as emphasizing that the current stance of monetary policy would likely be maintained for some time.

On net, both the mean and modal paths of the expected federal funds rate shifted higher beyond the one-year horizon. Futures quotes, combined with the staff's usual assumption about term premiums, suggest that market participants' mean expected path for the federal funds rate rises above the current target range during the first quarter of 2012 and reaches about 1.5 percent two years from now. The modal policy path derived from quotes on interest rate caps moves above the current target range in the second quarter of 2012, one quarter earlier than at the time of the most recent FOMC meeting.

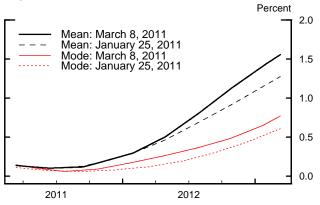
Results from the Open Market Desk's latest survey of primary dealers also suggest that investors' expectations regarding the outlook for policy have changed little since January. The median expectation for the total size of the asset purchase program was unchanged at \$600 billion, although the range of estimates across dealers narrowed considerably. Dealers revised up slightly their forecasts for economic growth and inflation in the current and next two years, and they revised down their outlook for the unemployment rate over the same period.

Intermediate- and longer-term Treasury yields generally followed a pattern similar to those of policy expectations. Yields rose strongly early in the period but subsequently retraced those gains, with 2-, 5-, and 10-year yields ending the period up 13,

<sup>&</sup>lt;sup>1</sup> The effective federal funds rate averaged 16 basis points over the intermeeting period, with the intraday standard deviation averaging about 3 basis points.

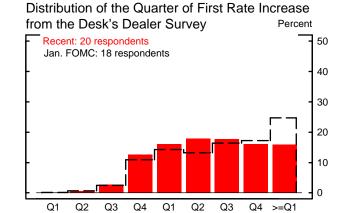
#### **Policy Expectations and Treasury Yields**

#### Implied Federal Funds Rate



Note: Mean is estimated from federal funds and Eurodollar futures. Mode is estimated from distribution of federal funds rate implied by interest rate caps. Both include an allowance for term premiums and other adjustments.

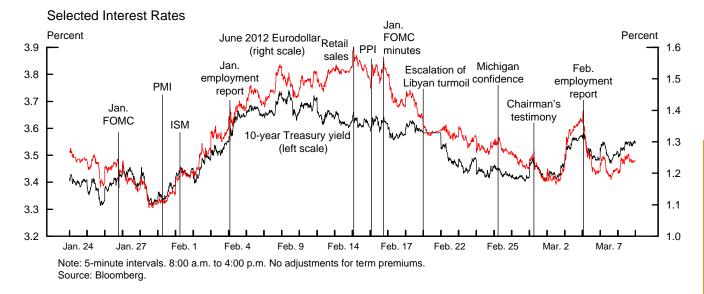
Source: Bloomberg and CME Group.

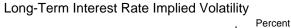


Source: Desk's Dealer Survey from March 8, 2011.

2012

2013



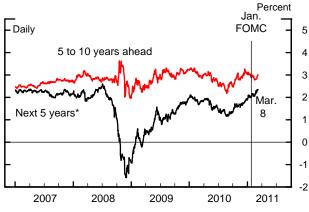




Note: Derived from options on 10-year Treasury note futures. Source: Bloomberg.

#### Inflation Compensation

2011



Note: Estimates based on smoothed nominal and inflationindexed Treasury yield curves.

\*Adjusted for the indexation-lag (carry) effect. Source: Barclays PLC and staff estimates. 27, and 20 basis points, respectively. The decline in yields since mid-February seemed to reflect, in part, flight-to-safety flows; yields dropped appreciably on days when stock prices fell, and staff term premium estimates declined as well. Market-based measures of uncertainty about long-term Treasury yields ended the period slightly lower on net.

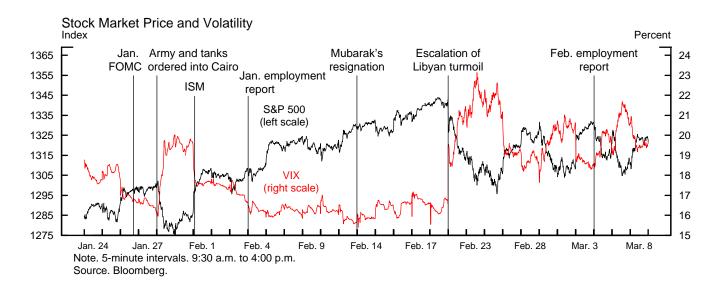
TIPS-based inflation compensation over the next 5 years rose 32 basis points, on net, over the intermeeting period. Most of the increase was concentrated at the front end of the curve, mainly reflecting the jump in oil prices resulting from the political unrest in the MENA region, as well as slightly stronger-than-expected January PPI and CPI data. Inflation compensation 5 to 10 years ahead was up only 14 basis points over the intermeeting period. Staff models attribute about one-half of this increase to a rise in expected inflation. Forward inflation compensation derived from inflation swaps also increased 14 basis points. Measures of short- and long-term inflation expectations from the Thomson Reuters/Michigan survey rose a bit, while those from the Survey of Professional Forecasters were unchanged.

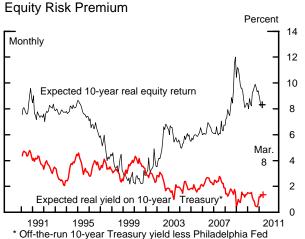
#### ASSET MARKET DEVELOPMENTS

Broad stock price indexes rose about 2½ percent, on net, over the intermeeting period. Stock prices trended up through mid-February, reportedly as investors read the incoming economic data as somewhat better than expected, on balance, and as corporate earnings reports continued to come in above analysts' forecasts. However, the escalation of political turmoil in the MENA region weighed on stock prices over the past few weeks. Option-implied volatility on the S&P 500 index rose sharply in mid-February from about 16 percent to about 23 percent and has since remained somewhat elevated at around 20 percent. The staff's estimate of the spread between the expected real equity return for S&P 500 firms and the real 10-year Treasury yield—a measure of the equity risk premium—narrowed a touch more over the period but continued to be quite elevated by historical standards.

Spreads of yields on BBB-rated and speculative-grade corporate bonds relative to those on comparable-maturity Treasury securities declined 10 basis points and 33 basis points, respectively, over the intermeeting period. The modest narrowing of corporate bond spreads reflected substantial declines in near-term forward spreads, consistent with a more upbeat assessment of the near-term outlook for corporate credit quality. Far-term forward spreads for speculative-grade bonds remained near the bottom of their range over

#### **Asset Market Developments**

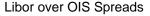


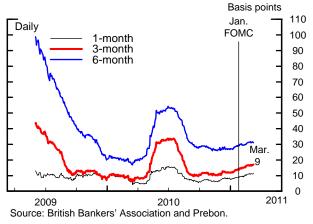


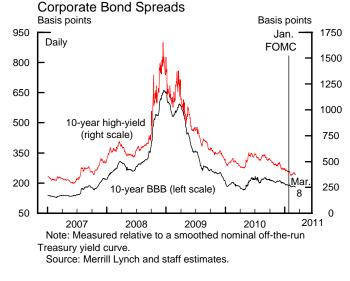
10-year expected inflation.

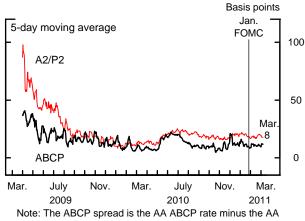
+ Denotes the latest observation using daily interest rates and stock prices and latest earnings data from I/B/E/S. Source: Thomson Financial.

Source. momson Financial









Note: The ABCP spread is the AA ABCP rate minus the AA nonfinancial rate. The A2/P2 spread is the A2/P2 nonfinancial rate minus the AA nonfinancial rate.

Source: Depository Trust & Clearing Corporation.

Spread on 30-Day Commercial Paper

the past two decades. In the secondary market for syndicated leveraged loans, the average bid price continued to increase.

Conditions in short-term funding markets were little changed over the intermeeting period. Overnight rates on federal funds, general collateral repos, and Eurodollars moved slightly lower, on balance, while rates at other tenors were roughly flat (see box "Recent Developments in Overnight Money Market Rates"). Near-term spreads of dollar Libor over comparable-maturity OIS rates continued to edge higher, but forward measures of dollar funding pressures were little changed. Thirty-day spreads of yields on both A2/P2-rated nonfinancial commercial paper and AA-rated ABCP over rates on AA-rated nonfinancial paper remained low. In addition, haircuts in the repo market edged down, on balance, across most collateral types.

In the March 2011 SCOOS, dealers reported a further easing in price and nonprice terms across different counterparty types over the past three months for all transaction categories covered in the survey (see appendix). Dealers also noted that demand for funding had increased for a broad range of securities over the same period. Despite these changes, measures of activity in a number of funding markets (for example, the triparty repo market) remained well below levels seen prior to the financial crisis. In response to special questions, dealers reported an increase in the use of leverage over the past six months by traditionally unlevered investors—in particular, asset managers, insurance companies, and pension funds. Dealers also noted that increased leverage was widespread across hedge funds over the same reference period.

#### **BUSINESS FINANCE**

Net debt financing by nonfinancial corporations was solid in January and February, although it did not match the sizable figure posted in the fourth quarter. Net issuance of investment- and speculative-grade bonds was robust in each of the first two months of this year. The outstanding amount of commercial and industrial (C&I) loans increased, on balance, while outstanding nonfinancial commercial paper was little changed. Institutional investors' gross purchases of newly issued leveraged syndicated loans have remained robust, as borrowers have refinanced a substantial volume of loans originally issued in 2010. Demand for this asset class by retail investors has shown no signs of abating since the beginning of the year, contributing to a further narrowing of credit spreads, an erosion of traditional maintenance covenants, and a gradual rise in the leverage embedded in buyout transactions.

#### **Business Finance**

#### Selected Components of Net Debt Financing, Nonfinancial Firms Billions of dollars 80 Monthly rate 60 Q3 Q4 Feb.<sup>e</sup> H1 40 20 0 -20 Bonds C&I loans\* -40 Commercial paper\* -60 Total -80 2007 2010 2008 2009 2011

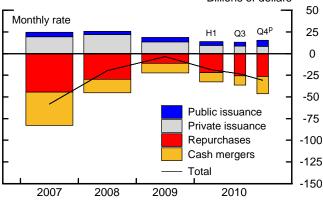
\* Period-end basis, seasonally adjusted.

e Estimate.

Source: Depository Trust & Clearing Corporation; Thomson

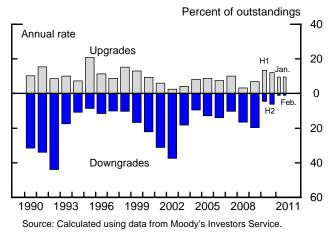
Financial; Federal Reserve Board.

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



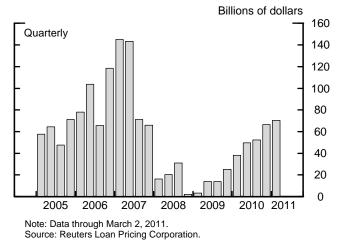
p Preliminary.

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

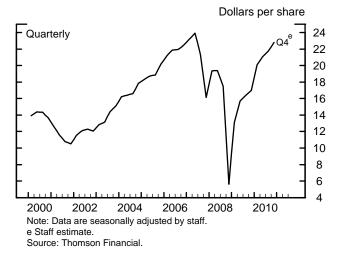


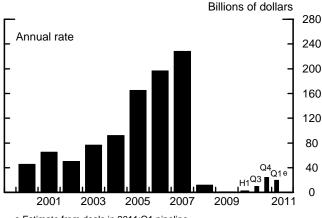
Bond Ratings Changes of Nonfinancial Firms

#### Institutional Loan Issuance



#### S&P 500 Earnings Per Share





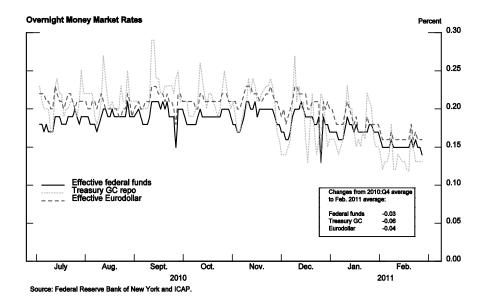
e Estimate from deals in 2011:Q1 pipeline. Source: Commercial Mortgage Alert.

**CMBS** Issuance

### **Recent Developments in Overnight Money Market Rates**

Since the beginning of the year, some key overnight money market rates have declined somewhat relative to the interest rate paid on excess reserves (the IOER rate). As shown in the figure below, the February averages for the overnight federal funds, Treasury general collateral (GC) repo, and Eurodollar rates were 3 to 6 basis points lower than their average values in the fourth quarter of last year. This recent softening in rates likely reflects in part the ongoing large-scale asset purchases (LSAPs) and the decline of balances in the Treasury's Supplementary Financing Account (SFA), both of which have boosted the quantity of reserves in the banking system and reduced the available supply of collateral in the repo market. These factors are expected to continue to put downward pressure on overnight rates in coming months. A forthcoming change to Federal Deposit Insurance Corporation (FDIC) insurance assessments is expected to further depress overnight rates relative to the rate paid on excess reserves, although the size of the effect is uncertain.

The ongoing LSAPs by the Federal Reserve and the decline in the Treasury's SFA would tend to affect money markets in the same way, so separating the effects



of the two changes is difficult. Since the beginning of 2011, the Federal Reserve has purchased about \$230 billion of Treasury securities, of which about \$50 billion have been reinvestments of payments of principal on agency debt and agency mortgage-backed securities; in addition, over recent weeks, Treasury bills issued to fund the SFA have declined by \$125 billion. These factors have contributed to an increase in reserve balances of about \$340 billion. Although estimates are subject to considerable uncertainty, the declines in overnight rates this year are consistent with results from econometric models of the relationship between money market rates, reserve balances, and the amounts of repo collateral outstanding.

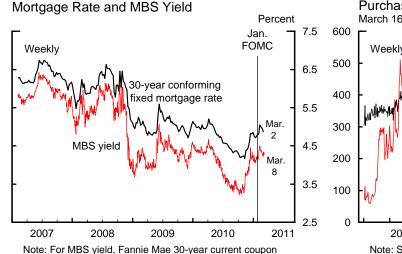
The upcoming modification of the FDIC premium assessment base could put further downward pressure on overnight rates relative to the IOER rate.<sup>1</sup> While the FDIC previously assessed premiums only on domestic deposits, the new rule, effective April 1, 2011, effectively expands the assessment base to banks' total liabilities, raising the dollar amount of the assessment base by over 50 percent.<sup>2</sup> Notably, the new regulation does not exempt federal funds purchased from the assessment base, increasing the implicit cost of borrowing in the federal funds market. Given the substantial amount of reserve balances in the banking system, it seems that most borrowing in the federal funds market likely is motivated by the ability to earn the IOER rate at a spread above the market federal funds rate. The new regulation would, all else being equal, make this arbitrage more costly, pushing down the rate at which banks would be willing to borrow funds in order to earn the IOER rate. The effect of the modified FDIC premium assessment base on the federal funds rate is uncertain, but some industry estimates suggest a decline in the federal funds rate in the range of 2 to 5 basis points.

<sup>2</sup> The assessment continues to be applied only to FDIC-insured institutions. As the assessment is meant to be revenue-neutral, the FDIC is lowering average marginal premiums.

<sup>&</sup>lt;sup>1</sup> The new Basel liquidity coverage ratio (LCR), which is slated to become effective in 2015, could be another factor introducing a wedge between money market rates and the IOER rate. To the extent that banks respond to the LCR by lengthening the term of their funding, demand for overnight funding may decline, pushing down overnight rates. Although market contacts have not suggested that the current softness in overnight money market rates is related to the LCR given the substantial time until the implementation date of the new requirement, banks could begin to shift their funding patterns in advance of the actual implementation date. This adjustment could be incremental, so discerning a specific effect on market rates may be difficult even if the ultimate effect is significant.

#### Authorized for Public Release

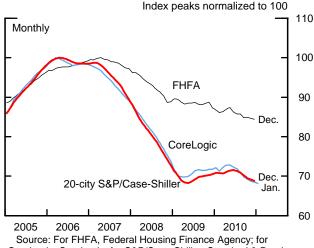
#### **Household Finance**



rate

Source: For mortgage rate, Freddie Mac; for MBS yield, Bloomberg.

#### Prices of Existing Homes

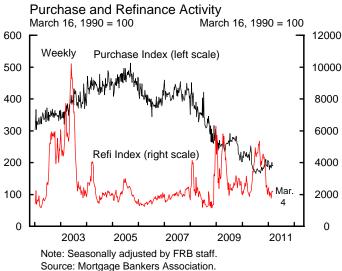


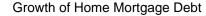
CoreLogic, CoreLogic; for S&P/Case-Shiller, Standard & Poor's.

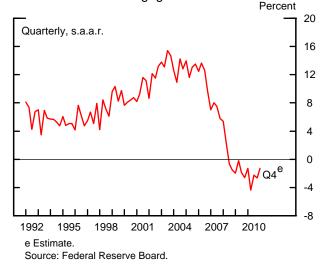
**Delinguency Rates** Percent of loans 8 Monthly Jan. 6 Credit card loans in securitized pools 4 Jan. ↑ Jan. 2 Auto loans at captive finance companies Prime mortgages 0 2003 2005 2007 2009 2011 Note: For mortgage delinquency rate, percent of loans 90 or

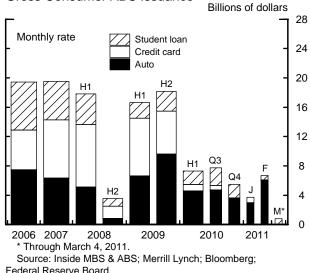
more days past due or in foreclosure.

Source: For mortgage rate, LPS Applied Analytics; for credit card, Moody's; for auto loans, Federal Reserve Board.









#### **Gross Consumer ABS Issuance**

# Financial Developments

Gross public equity issuance by nonfinancial firms was relatively subdued in January and February. In the fourth quarter, gross equity issuance had increased, but equity retirements from share repurchases and cash-financed mergers had risen more strongly, pushing net equity issuance a bit further into negative territory. Recent announcements of cash-financed mergers and new share repurchase programs suggest that the pace of net equity retirements will increase further in the current quarter.

The majority of fourth-quarter earnings reports came in over the intermeeting period. For the earnings season as a whole, the ratio of positive earnings surprises to negative surprises was nearly 3 to 1, comparable to the average ratio in the past few quarters. Operating earnings per share for S&P 500 firms appear to have grown about 5 percent in the fourth quarter. Despite the generally favorable news, over the four weeks ending in mid-February, analysts' forecasts of year-ahead earnings for S&P 500 firms were little changed on balance.

The credit quality of nonfinancial firms continued to improve. In the fourth quarter, the ratio of aggregate liquid assets to total assets for nonfinancial corporations remained near its record high, while the aggregate debt-to-asset ratio declined a bit. In January and February, upgrades of nonfinancial corporate bonds by Moody's Investors Service again outpaced downgrades, and the six-month trailing bond default rate for nonfinancial firms remained close to zero. Meanwhile, the C&I loan delinquency rate fell to 3 percent in the fourth quarter, its lowest level in two years. The expected default rate for nonfinancial firms from Moody's KMV declined a little in January and February, in part reflecting higher estimated asset valuations.

Commercial mortgage debt is estimated to have declined further in the fourth quarter, and financing conditions for commercial real estate have generally remained tight in 2011. Delinquency rates on loans in pools of commercial mortgage-backed securities (CMBS) edged up to a record high in February. However, in the fourth quarter, delinquency rates on commercial mortgages at life insurance companies and at banks ticked down from elevated levels. Moreover, in the first quarter of 2011, issuance of CMBS, which are often used to finance large existing properties in strong markets, is estimated to have about maintained its modest fourth-quarter pace. Data through the end of 2010 suggest that prices of investment-grade commercial real estate have stabilized at low levels, while those of other types of commercial real estate have continued to decline.

#### HOUSEHOLD FINANCE

Mortgage rates rose about in line with yields on longer-term Treasury securities over the intermeeting period, leaving their spreads roughly unchanged. Nonetheless, with conforming mortgage rates remaining close to 5 percent—about 70 basis points above their lows last fall—refinancing activity was tepid.

House prices continued to decrease, reflecting the large inventory of unsold homes, still-tight financing conditions, and perhaps households' concern that house prices might fall further. According to the repeat-sales index from CoreLogic, house prices fell at an annual rate of about 6 percent in January—the eighth consecutive monthly decline. Mortgage debt is estimated to have fallen again in the fourth quarter, while rates of serious delinquency—defined as the percentage of mortgage loans that are in the foreclosure process or at least 90 days delinquent—for subprime and prime mortgages were little changed in December and January, respectively, at levels a little below their prior peaks.

Consumer credit increased at an annual rate of 2.5 percent in January. As was the case in the prior quarter, nonrevolving credit increased while revolving credit ran off. Delinquency rates on credit card loans in securitized pools and on auto loans at finance companies continued to decline through January and have nearly returned to their longer-run averages. The number of credit card offers mailed to households fell slightly in January after having posted significant increases over 2010. Consumer ABS issuance, which weakened around the end of the year, posted a moderate gain in February.

#### **FOREIGN DEVELOPMENTS**

Over the intermeeting period, the spread of political unrest across the MENA region and the subsequent spike in oil prices dominated the news in global financial markets, raising concerns about global growth prospects and causing some flight-to-safety flows. However, better-than-expected foreign macroeconomic data provided some offset to the negative news.

Advanced economy equity prices, which had been rising for most of the intermeeting period, nearly reversed their earlier gains, as oil prices rose with the escalation of political turmoil in Libya and the associated disruptions to oil production. Emerging market equity indexes, which had been underperforming in recent months,

ended the period little changed. Emerging market equity funds continued to experience outflows.

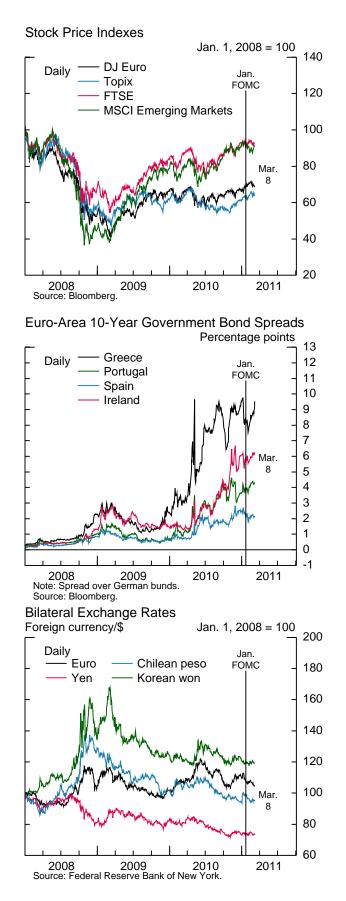
Ten-year sovereign bond yields in Europe and Canada climbed early in the intermeeting period but reversed most of those increases as tensions in the MENA region mounted. Inflation compensation rose in these economies, with most of the increase concentrated in the near term and likely reflecting the spike in oil prices. The European Central Bank (ECB) left its benchmark policy rate unchanged at its March meeting. However, during the press conference following the meeting, ECB president Trichet noted that "strong vigilance" would be needed in light of upside risks to inflation, leading market participants to expect a policy rate hike at the April meeting. Market expectations of overnight policy rates at the end of 2011 in the euro area and the United Kingdom increased 35 basis points and 25 basis points, respectively, over the intermeeting period, while expectations for policy rates in Canada and Japan were little changed.

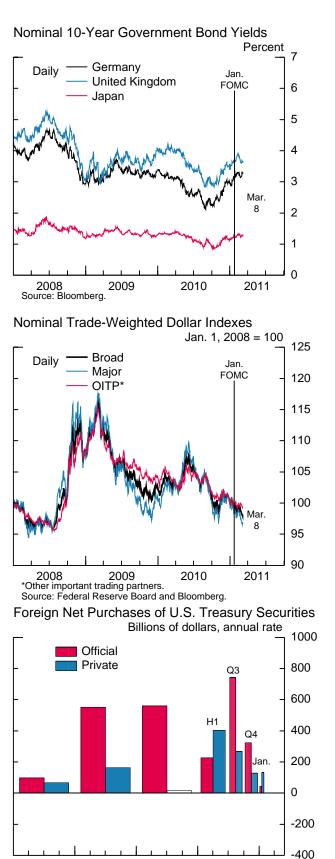
Facing more immediate inflation pressures, authorities in several emerging market economies (EMEs) acted to tighten policy over the period. Policymakers in China again raised reserve requirements and announced several new measures to cool domestic property markets. Russia and Turkey also raised their reserve requirements, and the central banks of Brazil, Chile, Colombia, and Indonesia increased their policy rates.

Yield spreads on the 10-year sovereign bonds of Greece relative to German bunds increased 135 basis points, while those of Ireland and Portugal moved up about 50 basis points over the period. Moody's reduced Greece's credit rating three notches to B1, and S&P downgraded several Portuguese government-linked enterprises. The increases in spreads may also have reflected concerns that European leaders will fail to agree on an expansion of the European Union's financial assistance facilities sufficient to backstop peripheral Europe. Even so, spreads on Spanish and Italian bonds were little changed.

Despite the flight-to-safety flows related to concerns about the MENA region, the broad nominal index of the U.S. dollar declined about 1 percent over the period. The dollar fell only modestly against most EME currencies but depreciated 1<sup>1</sup>/<sub>2</sub> percent against the euro, likely owing to relatively good incoming macro news from Europe and market perceptions that the ECB will begin raising policy rates sooner than had been previously expected.

### **Foreign Developments**





<sup>2007 2008 2009 2010 2011</sup> Source: Treasury International Capital data adjusted for staff estimates.

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Foreign official purchases of U.S. securities were weak in December and January, but data on custody holdings at the Federal Reserve Bank of New York indicate that they picked up notably in February. In particular, foreign official acquisitions of Treasury securities resumed in February, likely reflecting in part investments of proceeds from foreign exchange intervention. In addition, official investors acquired moderate amounts of agency securities in both January and February, reversing the trend of net sales of these securities over the second half of last year.

Official published estimates on foreign holdings of U.S. debt, released at the beginning of this month, showed that China held \$1.16 trillion in Treasury securities at the end of December 2010, substantially more than the previous official estimate of \$892 billion. The revised figures were in line with internal estimates.

## **GOVERNMENT FINANCE**

During the intermeeting period, the Treasury auctioned \$267 billion of nominal coupon securities across the maturity spectrum as well as \$9 billion of 30-year TIPS; its auction sizes were unchanged. Overall, the auctions were well received, with bid-to-cover ratios close to recent averages. The 10-year note and 30-year TIPS auctions registered very high shares awarded to indirect bidders, suggesting robust demand from foreign official institutions. As previously announced, to provide flexibility in debt management, the Treasury began to allow Treasury bills that fund balances in the Supplementary Financing Account (SFA) held at the Federal Reserve to run off as total federal debt outstanding approaches the statutory debt limit (see box "Balance Sheet Developments over the Intermeeting Period").

Conditions in the municipal bond market improved over the intermeeting period, as heightened concerns over the financial health of state and local governments diminished somewhat (see box "The Municipal Bond Market"). Yields on long-term general obligation bonds fell notably, leaving their ratios to yields on comparablematurity Treasury securities and to those on AAA-rated corporate bonds narrower but still elevated by historical standards. Issuance of long-term municipal bonds was modest in January and February following extremely robust issuance in the fourth quarter as the end of the Build America Bond program neared. Issuance of short-term municipal securities has been muted so far this year, consistent with typical seasonal patterns.

#### **Balance Sheet Developments over the Intermeeting Period**

Total assets of the Federal Reserve increased by \$128 billion over the intermeeting period to reach a level of about \$2.6 trillion (see table on facing page). The Federal Reserve's ongoing asset purchase program boosted outright securities holdings by \$128 billion.

The Open Market Desk at the Federal Reserve Bank of New York conducted 26 operations to purchase longer-term Treasury securities since the January meeting. The operations, which covered a range of maturities for nominal securities as well as 3 operations in TIPS, totaled \$143 billion.<sup>1</sup> To provide flexibility in conducting the asset purchase program, the Desk temporarily relaxed its per issue limit on System Open Market Account (SOMA) holdings of individual Treasury issues late last year; SOMA holdings of 40 individual issues now exceed 35 percent of the total outstanding for each issue, and SOMA holdings of 5 issues exceed 50 percent. Cases in which SOMA holdings exceed 50 percent of the total outstanding are all high-coupon 30-year bonds with a remaining maturity between 4 and 10 years.

Loans outstanding under the Term Asset-Backed Securities Loan Facility (TALF) fell about \$3 billion over the intermeeting period, reflecting additional prepayments of TALF loans. The net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC were little changed. Finally, foreign central bank liquidity swaps fell to zero from an already very low level.

On the liability side of the Federal Reserve's balance sheet, Federal Reserve notes in circulation expanded by a substantial \$23 billion over the period, likely boosted by strong international demand for U.S. banknotes. The Treasury's general account, which is volatile from month to month, decreased \$59 billion, on net, and balances in the Treasury's supplementary financing account fell by \$125 billion to about \$75 billion. The Treasury has allowed bills that fund balances in the supplementary financing account to roll off in order to provide greater flexibility in debt management as total Federal debt outstanding approaches the statutory debt limit. Term deposits increased to \$5 billion as another small-value Term Deposit Facility offering settled on February 10; it will mature on March 10. Reflecting these factors and the effects of the asset purchase program, reserve balances of depository institutions rose \$284 billion over the intermeeting period.

<sup>&</sup>lt;sup>1</sup> These operations include purchases conducted between January 27, 2011, and March 7, 2011. During this period total settlements were \$137 billion.

| Federal Reserve Balance Sheet |  |  |  |  |
|-------------------------------|--|--|--|--|
| Billions of dollars           |  |  |  |  |

|   | Change<br>since last<br>FOMC | Current<br>(03/07/11) | Maximum<br>level | Date of<br>maximum<br>level |
|---|------------------------------|-----------------------|------------------|-----------------------------|
| Total assets  | 128                          | 2,566                 | 2,566            | 03/07/11                    |
| Selected assets:  |                              |                       |                  |                             |
| Liquidity programs for financial firms  | -0                           | +0                    | 677              | 11/06/08                    |
| Primary, secondary, and seasonal credit   | -0                           | +0                    | 114              | 10/28/08                    |
| Foreign central bank liquidity swaps  | -0                           | 0                     | 586              | 12/04/08                    |
| Term Asset-Backed Securities Loan Facility (TALF)   | -3                           | 20                    | 49               | 03/11/10                    |
| Net portfolio holdings of Maiden Lane LLC, Maiden<br>Lane II LLC, and Maiden Lane III LLC | +0                           | 65                    | 75               | 12/30/08                    |
| Securities held outright*   | 128                          | 2,344                 | 2,344            | 03/07/11                    |
| U.S. Treasury securities  | 145                          | 1,252                 | 1,252            | 03/07/11                    |
| Agency debt securities  | -1                           | 143                   | 169              | 03/11/10                    |
| Agency mortgage-backed securities   | -16                          | 949                   | 1,129            | 06/14/10                    |
| Total liabilities   | 128                          | 2,513                 | 2,513            | 03/07/11                    |
| Selected liabilities:   |                              |                       |                  |                             |
| Federal Reserve notes in circulation  | 23                           | 958                   | 958              | 03/07/11                    |
| Reverse repurchase agreements   | 4                            | 56                    | 110              | 10/14/08                    |
| Foreign official and international accounts   | 4                            | 56                    | 92               | 12/22/08                    |
| Others  | 0                            | 0                     | 26               | 09/26/08                    |
| Reserve balances of depository institutions**   | 284                          | 1,359                 | 1,364            | 03/04/11                    |
| Term deposits held by depository institutions   | 5                            | 5                     | 5                | 11/03/10                    |
| U.S. Treasury, general account  | -59                          | 37                    | 187              | 12/31/09                    |
| U.S. Treasury, supplementary financing account  | -125                         | 75                    | 559              | 10/22/08                    |
| Funds from AIG asset dispositions, held as agent  | 0                            | 0                     | 27               | 01/13/11                    |
| Other deposits  | +0                           | 1                     | 81               | 03/12/10                    |
| Total capital   | +0                           | 53                    | 60               | 08/03/10                    |

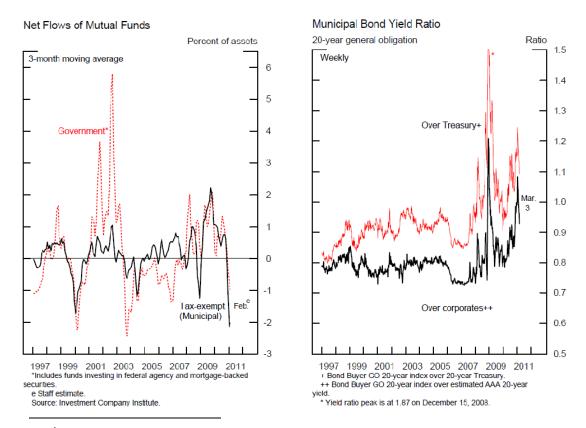
Note: +0 (-0) denotes positive (negative) value rounded to zero.

\* Par value.
\*\* Includes required clearing balances and overdrafts. Excludes as-of adjustments.

## **The Municipal Bond Market**

The municipal bond market is used by state and local governments and their authorities to raise money for schools, highways, utilities, hospitals, and other public infrastructure. About \$3 trillion of municipal bonds are outstanding, with over 50,000 borrowers; and the median deal size at issuance over the past decade was only \$6 million.<sup>1</sup> This vastly diverse composition creates a rather illiquid market, where disclosure is limited and trading is decentralized. Moreover, relatively unsophisticated retail investors hold a dominate share of outstanding securities in this market, either through direct holdings or ownership of shares in tax-exempt mutual funds.<sup>2</sup>

Over the past few months, tax-exempt mutual funds have experienced unusually large net outflows, on balance, as persistent concerns about the credit risk of municipal bonds were exacerbated by negative publicity. However, some of the outflows probably were induced by rising interest rates, which drove down returns in such funds. Indeed, net outflows from federal government bond mutual funds, returns in which tend to move inversely with interest rates, have also been heavy.



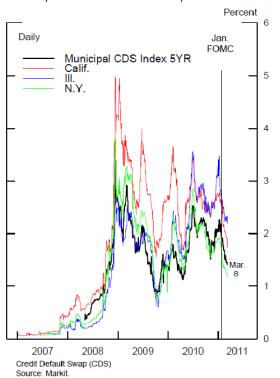
<sup>1</sup> Of the roughly \$3 trillion in outstanding municipal securities, about \$2.5 trillion represents debt of state and local governments. The remainder represents industrial revenue bonds and the debt of some nonprofits.

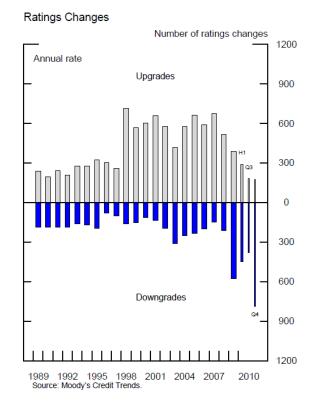
<sup>2</sup> About one-third of municipal securities are held directly by households and one-sixth by mutual funds. The secondary market of municipal bonds is also opaque due to its over-the-counter nature, despite significant improvements in trading transparency in recent years. In addition, tax and contract laws governing municipal bonds vary significantly across states, contributing to the market inefficiency.

Conditions in the municipal bond market appear to have improved significantly over the past several weeks. The pace of net outflows from municipal funds has slowed in recent weeks (see the lower-left figure on the facing page). The ratios of yields on long-term general obligation municipal bonds to those on comparable-maturity Treasury securities and to those on AAA-rated corporate bonds spiked toward the end of 2010 amid surging issuance of Build America Bonds before the program expired by year end (see the lowerright figure on the facing page). However, yield ratios have fallen sharply since Illinois substantially raised the state's personal and corporate income tax rates in mid-January, an event that apparently made investors more confident that most issuers would take necessary measures to address their fiscal imbalances.

The recent improvements have been broad based. On net, credit default swap spreads for most of the major municipal bond issuers have more than retraced the spikes that occurred late last year (see the lower-left figure below). For most issuers, the municipal bond market appears to have remained receptive.

Despite these improvements, substantial concerns remain over the credit quality of municipal bonds. Yield ratios continue to be high by historical standards. Also, downgrades of municipal bonds by Moody's again outpaced upgrades during the fourth quarter of 2010 (see the lower-right figure below). Municipal bond defaults are expected to pick up somewhat in the next few years after having come down from their recent peak in 2008. Even so, the rate of defaults is expected to remain fairly low.





# State-Specific Muni CDS 5-Year Spreads

Class II FOMC - Restricted (FR)

## COMMERCIAL BANKING AND MONEY

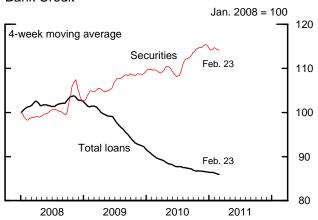
Bank credit declined at an annual rate of about 2½ percent, on average, over January and February, reflecting a contraction in core loans, while holdings of securities were about flat. C&I loans increased about 3 percent, on average, over the two months. In contrast, commercial real estate loans decreased, although the rate of the decline was somewhat below the pace of contraction in the second half of 2010. Closed-end residential mortgage loans, which had grown for five consecutive months at the end of last year, fell a bit in January and more substantially in February, reportedly owing mostly to a significant slowing in the pace of originations. Banks indicated that loan sales to the GSEs continued at about the heavy pace of the previous few months. Home equity loans and consumer loans also declined in the first two months of 2011.<sup>2</sup>

The Survey of Terms of Business Lending conducted in the first week of February showed that, at domestic banks, the weighted-average spread of the rate on C&I loans of less than \$25 million over Eurodollar and swap rates of comparable maturity decreased noticeably in the first quarter but remained elevated. Spreads declined most notably at small domestic banks, which were responsible for about 10 percent of the gross loan originations in the most recent survey.

The fourth-quarter Call Report data, on a seasonally adjusted basis, showed a further rise in bank profitability, although aggregate profits remained somewhat below pre-crisis levels. Profitability was again supported by reduced loan loss provisioning rather than improved revenues, as pre-tax, pre-provision net revenue decreased. The decline in loss provisioning was consistent with improvements in broad measures of credit quality, but net charge-offs nonetheless continued to exceed provisioning. Regulatory capital ratios generally increased further, although the pace of increase appears to have ebbed somewhat at larger banks. Unused home equity lines of credit and credit card lines continued to shrink in the fourth quarter, but unused commitments to fund C&I loans rose somewhat for the second consecutive quarter.

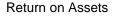
<sup>&</sup>lt;sup>2</sup> The large decline in consumer loans other than credit cards has mostly reflected two changes in the seasonal pattern of loan disbursements relative to recent years. First, rulings by the IRS and the OCC stifled banks' issuance of refund anticipation loans this year, which would normally have fueled other consumer loans. Second, student loans had usually been disbursed by banks in January, but the federal government is now making a substantial share of these loans. Not seasonally adjusted, this category decreased only slightly over the past two months.

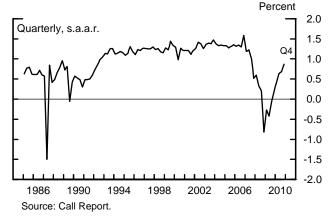
**Commercial Banking and Money** 



#### Bank Credit

Note: The data have been adjusted to remove the estimated effects of marking certain securities to market (FAS 115); the initial consolidations of assets under FIN 46. FAS 166, and FAS 167; and nonbank structure activity of \$5 billion or more. Source: Federal Reserve Board.





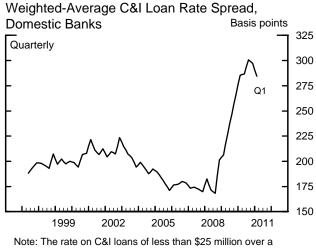
#### Growth of M2 and Its Components

| Percent, s.a.a.r. |  |   |   |   |  |  |  |  |
|-------------------|--|---|---|---|--|--|--|--|
| М2                | Liquid<br>deposits   | Small time<br>deposits  | RMMMF   | Currency  |  |  |  |  |
| 8.5               | 6.9  | 12.3  | 13.6  | 5.8   |  |  |  |  |
| 5.0               | 17.1   | -15.7   | -22.0   | 6.9   |  |  |  |  |
|                   |  |   |   |   |  |  |  |  |
| 1.3               | 9.6  | -22.4   | -22.9   | 4.5   |  |  |  |  |
| 4.5               | 10.6   | -21.3   | -7.5  | 5.9   |  |  |  |  |
| 5.6               | 12.9   | -26.0   | -13.0   | 8.0   |  |  |  |  |
|                   |  |   |   |   |  |  |  |  |
| 2.9               | 6.7  | -22.3   | -1.5  | 5.8   |  |  |  |  |
| 7.1               | 12.5   | -16.9   | -16.0   | 11.2  |  |  |  |  |
|                   | <ul> <li>M2</li> <li>8.5</li> <li>5.0</li> <li>1.3</li> <li>4.5</li> <li>5.6</li> <li>2.9</li> </ul> | M2         Liquid deposits           8.5         6.9           5.0         17.1           1.3         9.6           4.5         10.6           5.6         12.9           2.9         6.7 | Liquid<br>deposits         Small time<br>deposits           8.5         6.9         12.3           5.0         17.1         -15.7           1.3         9.6         -22.4           4.5         10.6         -21.3           5.6         12.9         -26.0 | M2         Liquid deposits         Small time deposits         RMMMF           8.5         6.9         12.3         13.6           5.0         17.1         -15.7         -22.0           1.3         9.6         -22.4         -22.9           4.5         10.6         -21.3         -7.5           5.6         12.9         -26.0         -13.0           2.9         6.7         -22.3         -1.5 |  |  |  |  |

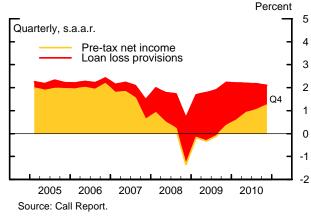
RMMMF Retail money market mutual funds.

p Preliminary.

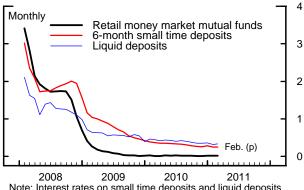
Source: Federal Reserve Board.



market interest rate on an instrument of comparable maturity, adjusted for changes in nonprice loan characteristics. Source: Survey of Terms of Business Lending.



# Pre-Tax Net Income and Loan Loss Provisions



Interest Rates on Selected Components of M2

Note: Interest rates on small time deposits and liquid deposits reflect the deposit-weighted average interest rate paid at banks and thrifts for each component. p Preliminary.

Source: Federal Reserve Board.

Percent

M2 grew at a moderate annual rate of 5 percent, on average, over January and February. Liquid deposits, the largest component of M2, expanded at about a 9½ percent annual rate over the same period, down from the 13 percent pace posted in the fourth quarter of 2010. Small time deposits and retail money market mutual funds contracted further over the first two months of the year. As has been the case for some time, the compositional shift within M2 toward liquid deposits likely reflects their higher yields relative to other M2 components. Currency advanced at a notable 8½ percent annual rate over January and February, likely boosted by strong growth in foreign holdings of U.S. bank notes as weather-related transportation difficulties, which delayed previous shipments, abated and as several regions experiencing political unrest turned to the safety of U.S. dollars. The monetary base expanded at a 60 percent annual rate in the first two months of the year as both the Desk's ongoing purchases of Treasury securities and the Treasury's reduction of the SFA balance in February boosted reserve balances.

# Appendix

## Senior Credit Officer Opinion Survey on Dealer Financing Terms

Overall, respondents to the March 2011 Senior Credit Officer Opinion Survey on Dealer Financing Terms indicated a further easing in credit terms across different counterparty types and securities financing transactions over the previous three months.<sup>1</sup> Dealers also noted an increase in demand for funding for all types of securities considered in the survey over the same period. By contrast, respondents generally reported little change in the terms and conditions prevailing in over-the-counter (OTC) derivatives markets.<sup>2</sup>

- Dealers reported that they had eased credit terms, on net, for each counterparty type covered in the survey. The most important reason cited for easing terms was more-aggressive competition from other institutions. Other factors cited included an improvement in the current or expected financial strength of counterparties and an improvement in general market liquidity and functioning. Respondents again reported an increase in the intensity of efforts by clients in each major class to negotiate more-favorable terms.
- Similar to the December survey, the majority of respondents indicated that the amount of resources and attention devoted to management of concentrated exposures to dealers and other financial intermediaries had remained basically unchanged over the past three months. One-fourth of respondents, however, did point to an increase.
- Responses to questions about OTC derivatives transactions suggest that nonprice terms on both plain and customized derivatives were again generally little changed across different types of underlying asset classes (underlyings). However, moderate net

<sup>&</sup>lt;sup>1</sup> The March survey collected qualitative information on changes over the previous three months in credit terms and conditions in securities financing and OTC derivatives markets. In addition to the core set of questions, this survey included a set of special questions about the use of leverage by traditionally unlevered investors during the past six months; a special question on the use of leverage by hedge funds pursuing specific investment strategies during the past six months; another set of special questions regarding third-party custody of independent amounts (initial margin) and collateral; and a final set of special questions about dealers' exposure to states, localities, and other issuers of tax-exempt debt. The 20 institutions participating in the survey provide almost all 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 February 14, 2011, to February 25, 2011. The core questions ask about changes between December 2010 and February 2010.

<sup>&</sup>lt;sup>2</sup> For questions that ask about credit terms, reported net percentages equal the percentage of institutions that reported tightening terms ("tightened considerably" or "tightened somewhat") minus the percentage of institutions that reported easing terms ("eased considerably" or "eased somewhat"). For questions that ask about demand, reported net fractions equal the percentage of institutions that reported increased demand ("increased considerably" or "increased somewhat") minus the percentage of institutions that reported that reported as somewhat") minus the percentage of institutions that reported the percentage of institutions that percentage of

fractions of dealers noted that they had eased certain nonprice terms with regard to total return swaps (TRS) with nonsecurities (such as bank loans) as the underlying.<sup>3</sup>

- Dealers reported that they had eased some terms on securities financing transactions on each type of collateral considered in the survey, with the most pronounced easing being for asset-backed securities (ABS) other than agency residential mortgage-backed securities (RMBS).
- Dealers noted that demand for funding of all types of securities covered in the survey had increased over the past three months.
- In response to a set of special questions, a number of dealers indicated that traditionally unlevered investors (asset managers, insurance companies, and pension funds) increased somewhat their use of leverage over the past six months. Respondents reported that the preferred products used to generate leverage were OTC derivatives and repurchase agreements (repos).
- In response to a special question about changes in the use of leverage by hedge funds pursuing different investment strategies, dealers indicated that the increase in leverage was widespread across funds pursuing the strategies listed in the survey. The increase in leverage was reported to be the greatest among funds focused on fixed-income arbitrage, followed by those pursuing credit-trading strategies and global-macro.
- In response to special questions about whether institutions' clients have sought to arrange for third-party custody of independent amounts (initial margin) and other collateral postings, only a small number of dealers indicated that this issue is a significant and widespread component of discussions with clients; however, 40 percent of respondents indicated that the issue has arisen in some discussions.
- In response to special questions regarding counterparty exposures to states, localities, and other issuers of tax-exempt debt, three-fourths of dealers reported that they have tightened price and nonprice terms over the past three months for such counterparties. Respondents indicated that the sources of exposure to these counterparties that have necessitated the greatest allocation of resources and attention were OTC derivative contracts entered into in the context of debt issuance and underwriting commitments.

### **RESULTS BY COUNTERPARTY TYPE**

Class II FOMC - Restricted (FR)

### Dealers and other financial intermediaries

As in the December survey, the majority of respondents reported that the amount of resources and attention devoted to management of concentrated exposures to dealers and other

<sup>&</sup>lt;sup>3</sup> The term "nonsecurities" is used in this document to refer to financial assets such as bank loans and other obligations that are not securities as defined under the Securities Act of 1933.

financial intermediaries had remained basically unchanged over the past three months, although one-fourth of respondents pointed to an increase. The majority of respondents also noted that the volume of mark and collateral disputes with dealers and other financial intermediaries had remained basically unchanged over the previous three months, with one-fifth of dealers reporting a decrease.<sup>4</sup>

### Hedge funds, private equity firms, and other similar private pools of capital

As has been true for the past three surveys, the responses indicated that, across all types of transactions covered in the survey, dealers had eased somewhat the credit terms they provide to hedge funds, private equity firms, and other similar private pools of capital (private pools of capital) over the past three months. About one-third of respondents, on net, eased somewhat their price terms such as financing rates. A similar net fraction of institutions reported having eased nonprice terms such as haircuts, maximum maturities, covenants, cure periods, and cross-default provisions or other documentation features. The institutions that reported having eased terms pointed to more-aggressive competition from other institutions, an improvement in the current or expected financial strength of counterparties, and an improvement in general market liquidity and functioning as the main reasons for the changes.<sup>5</sup> Nearly two-thirds of dealers noted an increase in the intensity of efforts by private pools of capital to negotiate more-favorable price and nonprice terms over the past three months. Looking forward over the next three months, one-half of the respondents to the March survey, on balance, indicated that they anticipated a further easing of terms for such counterparties.

### Insurance companies, pension funds, and other institutional investors

The survey responses indicated that dealers also provided more-favorable credit terms for insurance companies, pension funds, and other institutional investors (institutional investors). A small net fraction of respondents reported having eased price terms over the past three months, while one-fourth of dealers noted an easing of nonprice terms over the same period. As was the case for private pools of capital, the most important reason indicated for easing terms was more-aggressive competition from other institutions. Improvements in the current or expected financial strength of counterparties and improvement in general market liquidity and functioning were also cited as important reasons for the change. About one-third of dealers reported an increase in the intensity of efforts by institutional investors to negotiate more-favorable price and nonprice terms over the past three months. Looking forward over the next three months, about one-third of respondents, on balance, expected credit terms applicable to institutional investors to ease somewhat.

<sup>&</sup>lt;sup>4</sup> A rise in the volume of mark and collateral disputes is generally viewed as a leading indicator of market stress.

<sup>&</sup>lt;sup>5</sup> An ordinal ranking of reasons for loosening or tightening is produced by adding the number of respondents characterizing each reason as "very important" to the number characterizing the reason as "somewhat important" and then sorting the sums in descending order. For reasons with the same ranking based on the sums, the response that the greater number of dealers characterizes as "very important" takes priority.

### Nonfinancial corporations

The responses to questions about credit terms applicable to nonfinancial corporations also pointed to an easing over the past three months. Nearly one-third of respondents, on balance, indicated that they had eased price terms, while a small net fraction of dealers also noted an easing of nonprice terms. As was the case for private pools of capital and institutional investors, the most important reason cited for easing terms for nonfinancial corporations was moreaggressive competition from other institutions, followed by the improvement in current or expected financial strength of counterparties. About one-third of respondents indicated that there had been an increase in the intensity of efforts by nonfinancial corporations to negotiate morefavorable price and nonprice terms over the past three months. Looking forward over the next three months, one-fifth of dealers, on balance, indicated that they anticipated somewhat looser terms for these counterparties.

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

As in the previous three surveys, responses to questions dealing with OTC derivatives trades generally pointed to little change over the past three months in most of the terms for "plain vanilla" and customized derivatives across the various underlyings—foreign exchange, interest rates, equities, credit, commodities, and TRS referencing nonsecurities. However, about one-fourth of respondents indicated that they had tightened somewhat initial margins (for highly customized derivatives) and requirements, timelines, and thresholds for posting additional margins (for both plain vanilla and highly customized derivatives) on trades with foreign exchange as the underlying. In addition, with regard to TRS with nonsecurities as the underlying, about one-third of dealers active in this market, on net, reported having eased somewhat initial margin requirements, while one-fifth of respondents noted that they had increased somewhat their recognition of portfolio or diversification benefits in establishing collateral requirements for clients' positions.<sup>6</sup>

### SECURITIES FINANCING

As in the previous survey, responses to questions on securities financing pointed to an easing of terms applicable to many different types of securities.<sup>7</sup> While generally evident for both average and most-favored clients, this reported loosening of terms was more pronounced for most-favored clients over the past three months. With regard to terms under which high-grade corporate bonds are funded, net shares of survey respondents ranging between about 15 and 30 percent reported an increase in the maximum amount of funding, an extension in the maximum maturity, a reduction in the financing rate, and a decrease in haircuts. With respect to terms under which equities are funded (including through repo-like stock loan transactions), net fractions of dealers ranging between about 15 and 30 percent indicated that they had increased the

<sup>&</sup>lt;sup>6</sup> In managing their counterparty exposures, dealers may require a lower amount of collateral from clients in recognition of potential risk-reducing correlations among positions.

<sup>&</sup>lt;sup>7</sup> In this survey, securities financing includes lending to clients collateralized by high-grade corporate bonds, equities, agency RMBS, and other ABS.

maximum amount of funding, extended the maximum maturity, and eased covenants and triggers. Regarding terms under which agency RMBS are funded, net portions of respondents ranging between about 20 and 30 percent noted that they had decreased haircuts and financing rates, extended the maximum maturity, and increased the maximum amount of funding. Finally, with respect to terms under which ABS other than agency RMBS are funded, net fractions of dealers ranging between about 20 and 55 percent reported an increase in the maximum amount of funding, a decrease in haircuts, an extension in the maximum maturity, and a decrease in the financing rate.

Survey respondents indicated that demand for funding for all types of securities considered in the survey had increased over the past three months. Notably, demand for funding for ABS other than agency RMBS was reported to have increased by 80 percent of survey participants. More than one-half of dealers noted an increase in demand for funding for agency RMBS, while about one-third of survey respondents that lend against high-grade corporate bonds and equities indicated that demand for such funding had increased.

Respondents indicated that liquidity and functioning in several markets had continued to improve over the past three months.<sup>8</sup> Nearly 60 percent of dealers reported an improvement in markets for ABS other than agency RMBS, while 40 percent of respondents noted an improvement in the high-grade corporate bond market. Nearly one-fifth of dealers, on balance, pointed to an improvement in liquidity and functioning in the agency RMBS market.

Survey respondents generally reported that the volume of collateral and mark disputes with clients related to the funding of collateral of all types had remained unchanged.

# SPECIAL QUESTIONS ON THE USE OF LEVERAGE BY TRADITIONALLY UNLEVERED INVESTORS

The low interest rates that have prevailed in recent quarters have posed particular challenges to investors who, because of their investment goals or liability structure, effectively have nominal return targets. A set of special questions asked dealers about the degree to which their clients who traditionally employ little or no financial leverage and face such challenges have sought to boost returns through the use of leverage over the past six months. The questions also asked about the specific mechanisms employed in such instances. About one-third of respondents indicated that asset managers (acting on behalf of holders of separately managed accounts) have increased somewhat their use of leverage over the reference period, while nearly one-fifth of dealers noted that insurance companies and pension funds have also done so. The most important exposure mechanisms and transaction types used to attain such leverage over the past six months, according to survey respondents, were OTC derivatives (including TRS) and repos. Some dealers also pointed to margin loans and, to a smaller extent, exchange-traded funds (ETFs) as vehicles

<sup>&</sup>lt;sup>8</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 repos and similar secured financing transactions, not changes in the funding market itself.

by which traditionally unlevered investors have attained higher degrees of leverage over the reference period.<sup>9</sup>

### SPECIAL QUESTION ON THE USE OF LEVERAGE BY HEDGE FUNDS

A special question sought information from dealers regarding possible changes during the past six months in the amounts of leverage applied by their hedge fund clients pursuing various investment strategies. Respondents reported that the increase in the use of leverage was widespread across hedge funds pursuing the strategies listed in the survey. In particular, more than one-half of dealers indicated that fixed-income arbitrage hedge funds increased their use of leverage over the past six months, while about 45 percent of respondents noted that credit trading hedge funds and global macro funds had done so.

### SPECIAL QUESTIONS ON THIRD-PARTY CUSTODY OF INDEPENDENT AMOUNTS (INITIAL MARGIN) AND COLLATERAL

Following the financial crisis, market participants have reportedly become more concerned about the possible consequences of financial distress on the part of a dealer with whom they have posted collateral pursuant to OTC derivatives transactions, securities financings, or other activities. A set of special questions explored the intensity with which clients have sought to arrange for third-party custody of such collateral as a risk mitigant. In addition, these questions sought information concerning the classes of clients that have most actively pursued this option in negotiations with dealers. Although 40 percent of respondents indicated that the issue has arisen in some discussions with current and potential new clients and about one-third noted that the issue has occasionally arisen in such discussions, only a small number of dealers indicated that this issue is a significant and widespread component of discussions. Nonetheless, two-thirds of respondents reported efforts by asset managers, including those advising mutual funds and hedge funds, to incorporate provisions in the relevant agreements providing for the third-party custody of collateral have been intense.

### SPECIAL QUESTIONS ON EXPOSURE TO STATES, LOCALITIES, AND OTHER ISSUERS OF TAX-EXEMPT DEBT

In recent months, investor concerns have reportedly risen regarding the fiscal pressures facing states, localities, and other issuers of tax-exempt debt (for example, school systems, sewer and water districts, and hospitals). A final set of special questions explored the degree to which these concerns have led to changes in credit terms applied to such counterparties and the reasons for these changes. The questions also addressed the sources of exposure that have warranted the most attention and the changes in the frequency of mark and collateral disputes with counterparties of these types. Three-fourths of dealers with counterparty exposure to states, localities, and other issuers of tax-exempt debt reported that they had tightened somewhat price

<sup>&</sup>lt;sup>9</sup> Although generally providing long, unlevered exposure to an asset or asset class, some ETFs are structured to replicate short or levered positions.

and nonprice terms offered to these counterparties over the past three months. The institutions that reported a tightening of terms pointed to a deterioration in the current or expected financial strength of counterparties, a worsening in general market liquidity and functioning, a reduced willingness to take on additional risk, and higher internal capital charges for such transactions as the main reasons for the changes.<sup>10</sup> With regard to the sources of exposure to these entities that have warranted the most attention from their risk-management functions over the past three months, dealers pointed to OTC derivative contracts entered into in the context of debt issuance (for example, to swap fixed-rate debt to floating-rate debt), underwriting commitments (for example, of debt instruments or loans). When asked about changes in the volume of mark and collateral disputes with states, localities, and other issuers of tax-exempt debt over the past three months, dealers with exposures to such entities reported no change relative to the prior period.

<sup>&</sup>lt;sup>10</sup> Higher internal capital charges effectively require a trading desk to allocate more economic capital to the specified transaction under the firm's risk-governance procedures, reducing the return on a risk-adjusted basis.

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# **Risks and Uncertainty**

### **ALTERNATIVE SCENARIOS**

To illustrate some of the risks to the outlook, we consider several alternatives to the baseline projection using simulations of staff models. We begin with a trio of simulations involving risks to the inflation projection. In the first scenario, commodity prices rise considerably more than assumed in the staff projection while other aspects of the baseline forecast (including stable inflation expectations) remain largely unchanged. The second scenario examines a more adverse situation, in which supply bottlenecks, lower potential output, and an unmooring of inflation expectations accompany higher commodity prices. In contrast, the third scenario considers the risk that core inflation may continue to decline, along the lines predicted by some of the staff's reduced-form models. We then turn to a pair of scenarios examining the risks to aggregate spending either that confidence and credit availability may not recover as quickly as we anticipate, or that economic activity may rebound more robustly. The final scenario considers the implications for the outlook if geopolitical instability were to intensify, driving up oil prices and disrupting financial conditions in emerging market economies (EMEs) and in financially vulnerable economies in Europe.

In the alternative scenarios, monetary policy responds to movements in real activity and inflation as prescribed by a simple policy rule for the federal funds rate, while nontraditional policy is assumed to follow the baseline path. We generate the first five scenarios using the FRB/US model and an estimated policy rule. The last scenario is generated using the multicountry SIGMA model, which uses a different policy rule for the federal funds rate.<sup>1</sup>

### **Greater Commodity Price Increases**

Although oil and other commodity prices have risen sharply in recent months, we have assumed that these prices will be roughly flat going forward, in line with futures markets. However, world supply and demand balances may well work out differently

<sup>&</sup>lt;sup>1</sup> For FRB/US, the federal funds rate follows the outcome-based rule described in the appendix on policy rules in Book B. The rule in SIGMA 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 a slow adjustment in wages and prices.

| (Percent change, annual rate, from en | d of pred | ceding p | eriod ex | cept as r | noted) |
|---------------------------------------|-----------|----------|----------|-----------|--------|
| Measure and scenario                  | 20        | )11      | 2012     | 2013      | 2014-  |
| Weasure and sechario                  | H1        | H2       |          | 2013      | 15     |
| Real GDP                              |           |          |          |           |        |
| Extended Tealbook baseline            | 3.5       | 4.0      | 4.4      | 4.4       | 3.7    |
| Greater commodity price increases     | 3.2       | 3.5      | 3.9      | 4.2       | 3.6    |
| Persistent rise in inflation          | 3.0       | 3.3      | 3.8      | 3.8       | 3.2    |
| Further disinflation                  | 3.5       | 4.0      | 4.1      | 4.3       | 4.2    |
| Weaker recovery                       | 2.5       | 2.1      | 2.8      | 4.1       | 5.0    |
| Stronger expansion                    | 4.0       | 4.8      | 5.4      | 4.5       | 2.8    |
| Greater geopolitical risk             | 3.0       | 2.4      | 2.9      | 4.2       | 3.9    |
| Unemployment rate <sup>1</sup>        |           |          |          |           |        |
| Extended Tealbook baseline            | 8.9       | 8.6      | 7.5      | 6.7       | 5.3    |
| Greater commodity price increases     | 8.9       | 8.7      | 7.9      | 7.3       | 5.9    |
| Persistent rise in inflation          | 9.1       | 9.0      | 8.4      | 8.1       | 7.4    |
| Further disinflation                  | 8.9       | 8.6      | 7.6      | 6.9       | 5.0    |
| Weaker recovery                       | 9.0       | 9.1      | 8.8      | 8.4       | 5.9    |
| Stronger expansion                    | 8.8       | 8.4      | 6.7      | 5.7       | 5.1    |
| Greater geopolitical risk             | 9.0       | 8.9      | 8.4      | 7.8       | 6.2    |
| Core PCE inflation                    |           |          |          |           |        |
| Extended Tealbook baseline            | 1.2       | 1.2      | 1.2      | 1.3       | 1.6    |
| Greater commodity price increases     | 1.3       | 1.4      | 1.6      | 1.6       | 1.7    |
| Persistent rise in inflation          | 1.5       | 1.8      | 2.7      | 3.7       | 3.6    |
| Further disinflation                  | 1.3       | .9       | .6       | .4        | .4     |
| Weaker recovery                       | 1.2       | 1.1      | 1.0      | .8        | .9     |
| Stronger expansion                    | 1.2       | 1.2      | 1.2      | 1.5       | 2.0    |
| Greater geopolitical risk             | 1.1       | .8       | .8       | 1.0       | 1.4    |
| Federal funds rate <sup>1</sup>       |           |          |          |           |        |
| Extended Tealbook baseline            | .1        | .1       | .5       | 2.1       | 4.2    |
| Greater commodity price increases     | .1        | .1       | .3       | 1.9       | 3.5    |
| Persistent rise in inflation          | .1        | .1       | 1.1      | 4.0       | 5.3    |
| Further disinflation                  | .1        | .1       | .1       | .7        | 2.8    |
| Weaker recovery                       | .1        | .1       | .1       | .1        | 3.1    |
| Stronger expansion                    | .3        | .6       | 1.9      | 3.5       | 4.2    |
| Greater geopolitical risk             | .1        | .1       | .1       | 1.2       | 3.3    |

### **Alternative Scenarios**

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

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

| (Percent change, annual           | rate from end of p | preceding period ex | cept as noted) |         |
|-----------------------------------|--------------------|---------------------|----------------|---------|
| Measure and scenario              | 2011               | 2012                | 2013           | 2014-15 |
| Total PCE Inflation               |                    |                     |                |         |
| Extended Tealbook baseline        | 1.9                | 1.1                 | 1.4            | 1.6     |
| Greater commodity price increases | 2.8                | 2.3                 | 1.8            | 1.7     |
| Persistent rise in inflation      | 3.1                | 3.4                 | 3.7            | 3.5     |
| Core PCE Inflation                |                    |                     |                |         |
| Extended Tealbook baseline        | 1.2                | 1.2                 | 1.3            | 1.6     |
| Greater commodity price increases | 1.4                | 1.6                 | 1.6            | 1.7     |
| Persistent rise in inflation      | 1.6                | 2.7                 | 3.7            | 3.6     |

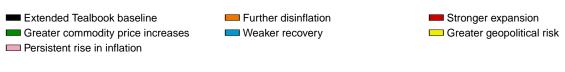
| <b>Measures of PCE Inflation in S</b> | Selected Alternative Scenarios |
|---------------------------------------|--------------------------------|
|---------------------------------------|--------------------------------|

than expected, and in this scenario oil prices unexpectedly continue climbing and are about \$50 per barrel above baseline by the end of 2012 and only thereafter level out. In addition, other commodity prices continue rising and are 20 percent above baseline by the end of this year and 40 percent higher by late 2012.<sup>2</sup> Mostly because of the rapid rise in oil prices, total PCE prices rise 2<sup>3</sup>/<sub>4</sub> percent this year and 2<sup>1</sup>/<sub>4</sub> percent next year, about 1 percentage point each year, on average, above baseline. Nonetheless, the effects of these substantial increases in commodity prices on core consumer prices and nominal wages are relatively modest because we assume that inflation expectations remain wellanchored and because (following the usual predictions of our models) pass-through effects are limited (see text table "Measures of PCE Inflation in Selected Alternative Scenarios"). Core PCE inflation is only about <sup>1</sup>/<sub>4</sub> percentage point higher than in the baseline, on average, over the next two years. Real activity is somewhat weaker over the period of 2011 through 2013 than in the staff forecast, in part because higher prices for commodities that we import, on net, reduce real household incomes. Monetary policy is little changed from baseline over this period as the additional slack is mostly offset by higher inflation. This outcome is reminiscent of the 2007-08 period when some noticeable, but transitory, increases in total inflation coincided with only a modest stepup in core inflation.

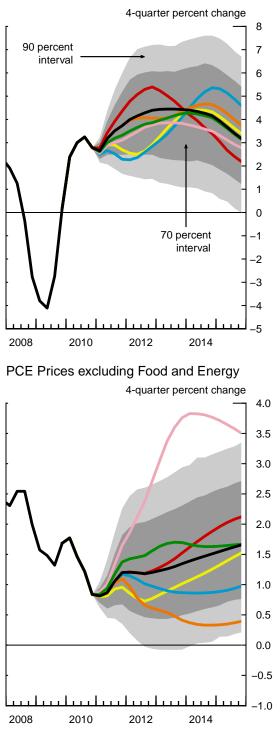
<sup>&</sup>lt;sup>2</sup> As a result of the increase in non-energy commodity prices, nonoil import prices are almost 4 percent above baseline by early 2013.

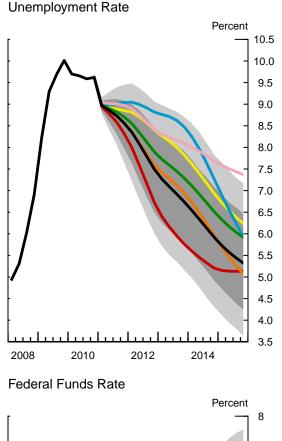
### **Forecast Confidence Intervals and Alternative Scenarios**

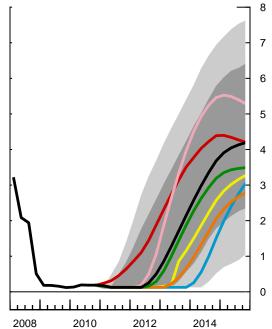
Confidence Intervals Based on FRB/US Stochastic Simulations



Real GDP







Risks & Uncertainty

|                                 | -       |         |         |         |         |
|---------------------------------|---------|---------|---------|---------|---------|
| Measure                         | 2011    | 2012    | 2013    | 2014    | 2015    |
| Real GDP                        |         |         |         |         |         |
| (percent change, Q4 to Q4)      |         |         |         |         |         |
| Projection                      | 3.7     | 4.4     | 4.4     | 4.2     | 3.2     |
| Confidence interval             |         |         |         |         |         |
| Tealbook forecast errors        | 2.1–5.3 | 2.7-6.1 |         |         |         |
| FRB/US stochastic simulations   | 2.5–5.2 | 2.5-6.1 | 2.2-6.2 | 2.0-6.3 | 1.2–5.4 |
| Civilian unemployment rate      |         |         |         |         |         |
| (percent, Q4)                   |         |         |         |         |         |
| Projection                      | 8.6     | 7.5     | 6.7     | 5.9     | 5.3     |
| Confidence interval             |         |         |         |         |         |
| Tealbook forecast errors        | 8.0–9.2 | 6.5-8.5 |         |         |         |
| FRB/US stochastic simulations   | 8.0–9.1 | 6.5-8.5 | 5.7–7.9 | 4.9–7.1 | 4.2–6.4 |
| PCE prices, total               |         |         |         |         |         |
| (percent change, $Q4$ to $Q4$ ) |         |         |         |         |         |
| Projection                      | 1.9     | 1.1     | 1.4     | 1.5     | 1.7     |
| Confidence interval             |         |         |         |         |         |
| Tealbook forecast errors        | .9–2.9  | 1–2.2   |         |         |         |
| FRB/US stochastic simulations   | 1.0–3.0 | .0–2.3  | .2–2.8  | .3–2.9  | .5–3.1  |
| PCE prices excluding            |         |         |         |         |         |
| food and energy                 |         |         |         |         |         |
| (percent change, $Q4$ to $Q4$ ) |         |         |         |         |         |
| Projection                      | 1.2     | 1.2     | 1.3     | 1.5     | 1.7     |
| Confidence interval             |         |         |         |         |         |
| Tealbook forecast errors        | .6–1.8  | .4–2.0  |         |         |         |
| FRB/US stochastic simulations   | .7–1.8  | .4–2.1  | .5–2.3  | .6–2.5  | .8–2.7  |
| Federal funds rate              |         |         |         |         |         |
| (percent, Q4)                   |         |         |         |         |         |
| Projection                      | .1      | .5      | 2.1     | 3.7     | 4.2     |
| Confidence interval             |         |         |         |         |         |
| FRB/US stochastic simulations   | .1–.8   | .1–2.6  | .6–4.2  | 1.8–5.8 | 2.4–6.4 |

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

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.

### **Persistent Rise in Inflation**

Something more than rising commodity prices alone would likely be required to ignite a more serious and persistent rise in inflation. In this scenario, we consider the possibility that the higher commodity prices occur in an environment in which the NAIRU is 1 percentage point above the staff estimate, accelerating real activity creates temporary bottlenecks that intensify price pressures, and long-run inflation expectations are more sensitive to persistent movements in headline inflation. Under these conditions, the restraint on nominal wage gains is less pronounced and firms face greater pressure to pass on cost increases relative to the baseline. All told, total inflation averages nearly 3½ percent over the next five years, and core inflation climbs to 3¾ percent by 2013. In response, the federal funds rate rises more rapidly than in the staff projection and reaches 5½ percent by 2015. The higher NAIRU and the more restrictive monetary policy imply an appreciably slower fall in the unemployment rate—to only 7½ percent at the end of 2015.

### **Further Disinflation**

Of course, the inflation outlook remains subject to downside risks as well. In the baseline, inflation remains relatively stable over the next several years and then edges up as unemployment declines in an environment of well-anchored inflation expectations. But the stability of various measures of expected inflation to date may be misleading us about the potential for further disinflation in a persistently weak economy. In this scenario, core inflation falls a bit below  $\frac{1}{2}$  percent by late 2013 and remains at that level thereafter—a decline that is in line with the predictions of some of our forecasting equations that do not condition on survey measures of expected inflation. In addition, investors become more concerned about the possibility of an outcome in which the economy is mired in a weak deflationary state with monetary policy persistently constrained by the zero lower bound. As a result, bond premiums rise and put upward pressure on real long-term interest rates, thereby modestly damping spending and boosting unemployment relative to baseline over the next few years. In response to lower inflation and greater economic slack, the federal funds rate remains at its effective lower bound until the middle of 2013. In the longer run, monetary policy is sufficiently stimulative to bring the unemployment rate eventually below baseline and to check the deflationary pressure.

### Weaker Recovery

Our baseline forecast of continued recovery depends importantly on steady improvements in credit availability, consumer and business confidence, and the willingness of firms to hire. In this scenario, however, these further improvements are slower to materialize. These developments cause risk aversion to increase, boosting precautionary saving by households and making firms more reluctant to boost capital spending and increase payrolls. As a result, the personal saving rate climbs to 7½ percent by the end of 2012, residential investment is flat, and spending on equipment and software rises less rapidly than in the baseline. In addition, risk premiums increase, putting downward pressure on equity and house prices. By the end of 2012, house prices are 7 percent below baseline while stock prices are about 7 percent below baseline. Under these conditions, real GDP expands at only a 2½ percent annual pace over the next two years and labor market conditions stagnate, so that the unemployment rate is still above 8¾ percent through the end of 2012. Inflation falls in response to more-persistent slack and remains below baseline through 2015. Liftoff of the federal funds rate from its effective lower bound is delayed until early 2014.

### **Stronger Expansion**

Overall, recent indicators appear to be consistent with a moderate strengthening in real activity this year and next. In this scenario, we consider the risk that a more robust expansion is under way, spurred by a mutually reinforcing dynamic of improved optimism, higher spending, greater hiring, and increasing credit availability. The stronger activity and improved optimism buoy financial markets and push equity prices about 11 percent above baseline by the end of this year. This virtuous circle causes real GDP to expand 4½ percent this year and 5½ percent in 2012, bringing the unemployment rate down to 6¾ percent by late 2012. With less slack, inflation is higher; however, the upward pressure on prices is partially checked by more capital deepening, and thus by larger productivity gains, which hold down unit labor costs. Under these conditions, the federal funds rate lifts off this year, rising to almost 2 percent by the end of 2012, and remains above baseline thereafter.

### **Greater Geopolitical Risks**

Unrest in the Middle East and North Africa could intensify in coming months, reducing global oil supplies and prompting further increases in oil prices. With global economic and political prospects more uncertain, investors could become less willing to hold risky assets, potentially leading them to withdraw capital from both the EMEs and the financially vulnerable economies in Europe's periphery. To capture this possibility, this scenario assumes that oil prices rise 30 percent above baseline by the end of this year before gradually receding, corporate bond spreads rise about 100 basis points above baseline in the EMEs and peripheral Europe, and the broad real dollar appreciates 5 percent because of flight-to-safety effects. In response, real activity is weaker than baseline as higher oil prices restrain consumer spending and business investment, and as dollar appreciation and weaker foreign activity dampen real net exports. All told, growth in U.S. real GDP is only 2<sup>3</sup>/<sub>4</sub> percent in 2011, and the unemployment rate remains above 8<sup>1</sup>/<sub>2</sub> percent through most of 2012, about 1 percentage point higher than in our baseline. Core inflation falls to about <sup>3</sup>/<sub>4</sub> percent in 2012, as the positive impact of higher oil prices on core inflation is more than offset by sharply lower U.S. real activity and a stronger dollar.

### **OUTSIDE FORECASTS**

An updated Blue Chip forecast will be released on March 10, and we will circulate a note to the Committee then summarizing its results.

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

|   | Nomin   | nal GDP                         | Real                            | Real GDP  | PCE pr            | PCE price index       | Core PCE                                  | Core PCE price index       | Unemployment rate <sup>1</sup> | ment rate <sup>1</sup>   |
|---|---|---------------------------------|---------------------------------|---|-------------------|-----------------------|---|----------------------------|--------------------------------|--------------------------|
| Interval  | 01/19/11  | 03/09/11                        | 01/19/11                        | 03/09/11  | 01/19/11          | 03/09/11              | 01/19/11                                  | 03/09/11                   | 01/19/11                       | 03/09/11                 |
| Quarterly<br>2010:Q1<br>Q2<br>Q3<br>Q3  | 4 % 4 %   | 4 3 4<br>8.6 7<br>6 6           | 3.2<br>2.6<br>8                 | 3.2.6<br>3.2<br>3.2   | 2.1<br>.0<br>1.9  | 2.1<br>.8<br>.8<br>.8 | 2<br>1<br>1<br>0<br>2<br>1<br>0<br>2<br>9 | 10.<br>10. vi v            | 2.6<br>9.6<br>9.6              | 9.6<br>9.6               |
| 2011:Q1<br>Q2<br>Q3<br>Q4   | 5.4<br>7.4<br>7.7<br>7.1<br>7.1<br>7.2<br>7.1<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2<br>7.2 | 6.2<br>8.9<br>5.0               | .2.8.70<br>.2.8.70              | .0.0.0<br>0.0<br>0.0<br>0<br>0<br>0   | 2.0<br>1.1<br>1.0 | 2.3<br>1.0<br>1.0     | 6.11.0<br>6.12.0                          | ) 1.1<br>1.2<br>1.1<br>1.1 | 9.5<br>9.1<br>8.9              | 0.0<br>8.7<br>8.6        |
| 2012:01<br>02<br>03<br>04   | 5.5<br>5.6<br>5.7   | 5.8<br>5.8<br>8.8<br>8.8<br>8.8 | 4.4<br>4.4<br>7.4<br>8.5        | 4.4<br>4.4<br>7.4<br>7.4<br>7.4   | 1.0<br>1.0<br>1.0 | 1.0<br>1.1<br>1.1     | 1.0<br>1.0<br>1.0                         | 1122<br>1222<br>1222       | 8.7<br>8.4<br>7.8<br>7.8       | 8.4<br>8.1<br>7.8<br>7.5 |
| Two-quarter <sup>2</sup><br>2010:Q2<br>Q4   | 4 4<br>2.4  | 4.3<br>4.1                      | 2.7<br>3.2                      | 2.7<br>2.9  | 1.0<br>1.3        | 1.0<br>1.3            | 1.1<br>.5                                 | 1.1<br>.5                  | 4<br>0.                        | 4<br>0.                  |
| 2011:Q2<br>Q4<br>2012:O2  | 5.2<br>5.6  | 5.5<br>5.0<br>5.7               | 3.7<br>4.0<br>4.4               | 3.5<br>4.0<br>4.3   | 1.6<br>1.1        | 2.8<br>1.1            | 1.0<br>1.0                                | 1.2                        | <br>                           |                          |
|   | 5.7   | 5.8                             | 4.5                             | 4.5   | 1.0               | 1.1                   | 1.0                                       | 1.2                        | 9                              | 9                        |
| Four-quarter <sup>3</sup><br>2009:Q4<br>2010:Q4<br>2011:Q4<br>2012:Q4   | .6<br>5.1<br>5.6  | 5.2<br>5.2<br>8.2               | 2.2<br>3.8<br>4.4               | 2.2<br>.4<br>.4   | 1.5<br>1.3<br>1.0 | 1.5<br>1.9<br>1.1     | 1.7<br>.8<br>1.0<br>1.0                   | 1.7<br>.8<br>1.2<br>1.2    | 3.1<br>4<br>7<br>-1.1          | 3.1<br>4<br>-1.0<br>-1.1 |
| <i>Amual</i><br>2009<br>2011<br>2012<br>2012  | -1.7<br>3.9<br>5.4  | -1.7<br>5.58<br>5.5             | -2.6<br>4.35<br>9.59<br>6.4     | -2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-2-<br>-2-22- | 1.7<br>1.4<br>1.0 | 1.7<br>1.19           | 1.5<br>1.3<br>1.0                         | 1.5<br>11.3<br>11.0        | 9.3<br>9.6<br>8.3              | 9.3<br>8.8<br>7.9        |
| 1. Level, except for two-quarter and four-quarter intervals.<br>2. Percent change from two quarters earlier: for unemployment rate, change is in percentage points. | pt for two-q<br>nge from tw   | uarter and fo                   | ur-quarter in<br>urlier: for un | itervals.<br>emplovment   | rate. change      | is in percen          | itage points.                             |                            |                                |                          |

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Percent change from two quarters earlier; for unemployment rate, change is in percentage points.
 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)

|      | 20121             | 4.4<br>4.4                    | 4.1<br>4.1<br>4.6<br>4.6   | 3.9<br>3.9<br>3.0<br>3.9<br>3.9<br>3.9<br>3.9<br>3.9<br>3.9<br>3.9<br>3.9<br>3.9<br>3.9   | 13.4<br>13.5                                | 7.2<br>7.9<br>10.6<br>.1   |   |   | 57<br>59<br>54<br>4   |
|------|-------------------|-------------------------------|--|---|---|--|---|---|---|
|      | 2011 <sup>1</sup> | 3.7<br>3.8                    | 3.6<br>3.8<br>4.0<br>4.4   | 2.5<br>2.7<br>2.7<br>2.7  | 8.4<br>9.1                                  | 8.7<br>9.8<br>13.0<br>13.6<br>-3.0<br>-3.0   | -378<br>-394<br>10.0<br>5.9   |   | 51<br>47<br>47<br>47  |
|      | 20101             | 2.8<br>2.9                    | 2.2 % %  | 2.6<br>2.6<br>10.9<br>3.4<br>1.2  | -4.7<br>-5.2                                | 10.3<br>9.6<br>15.8<br>-4.2<br>-4.2  | -422<br>-420<br>9.2<br>11.0   | 1.1<br>1.5<br>3.4<br>8.8<br>1.3   | 62<br>65<br>57<br>5   |
|      | Q4                | 4.5<br>4.6                    | 4.3<br>4.6<br>5.0  | 4.1<br>8.1<br>3.2<br>7.2<br>.7  | 13.8<br>13.5                                | 7.8<br>8.9<br>10.1<br>11.8<br>.3   | -301<br>-346<br>8.9<br>5.3  | 1<br>.9<br>.0<br>.6<br>.6   | 71<br>69<br>4   |
| 12   | Q3                | 4.4<br>5.                     | 4.0<br>4.0<br>7.4  | 4.0<br>3.9<br>3.0<br>3.4  | 13.4<br>13.5                                | 7.4<br>8.1<br>9.7<br>10.8<br>.3<br>.0  | -313<br>-355<br>8.8<br>6.8  |   | 65<br>70<br>4   |
| 201  | Q2                | 4.4<br>4.4                    | 4.1<br>4.5<br>5.5  | 3.8<br>3.7<br>2.8<br>3.2<br>3.2   | $13.2 \\ 13.9$                              | 7.5<br>7.9<br>10.0<br>10.5<br>.0<br>.0   | -318<br>-353<br>9.0<br>5.2  | .0<br>7<br>-2.2<br>.5   | 50<br>54<br>47  |
|      | Q1                | 4.2<br>4.3                    | 4.0<br>4.3<br>4.3  | 3.5<br>3.5<br>3.2<br>3.2  | $13.1 \\ 13.0 \\ 13.0 \\$                   | 6.1<br>6.8<br>8.5<br>9.2<br>-1.1<br>-1.1   | -331<br>-360<br>9.3<br>4.6  | <br>  | 41<br>86<br>41<br>41  |
|      | Q4                | 4.0<br>4.2                    | 5.0<br>5.1<br>4.5<br>4.7   | 3.5<br>3.7<br>3.1<br>3.1  | 12.0<br>11.9                                | 10.2<br>10.1<br>13.6<br>13.8<br>- 4  | -348<br>-373<br>9.1<br>1  | 1.<br>  | 34<br>31<br>4   |
| 111  | <b>0</b> 3        | 3.9<br>3.8                    | 3.6<br>3.7<br>4.4  | 3.5<br>3.2<br>2.9<br>2.9<br>2.9   | 10.9<br>12.5                                | 9.5<br>10.4<br>13.2<br>14.3<br>9<br>3  | -390<br>-408<br>9.0<br>7.9  |   | 63<br>57<br>60<br>4   |
| 5(   | Q2                | 3.8<br>3.7                    | 3.7<br>4.2<br>4.2<br>6<br>4.3  | 3.5<br>3.5<br>3.0<br>3.0  | 7.3<br>9.2                                  | 8.9<br>9.5<br>12.5<br>13.0<br>.0   | -387<br>-402<br>9.5<br>7.9  | 1.4<br>.5<br>6.0<br>6.0<br>7  | 55<br>53<br>4   |
|      | 61                | 3.2<br>3.6                    | 2.0<br>3.1<br>3.0<br>3.9   | 2.5<br>3.1<br>6.8<br>3.1<br>1.6   | 3.7<br>3.2                                  | 6.2<br>9.4<br>12.7<br>13.3<br>8  | -386<br>-395<br>12.3<br>8.1   | -3.1<br>.8<br>-4.7<br>-8.8<br>-2.1  | 51<br>42<br>47  |
|      | Q4                | 3.2<br>3.8                    | 6.8<br>7.0<br>4.4  | 4.1<br>4.1<br>21.0<br>4.8<br>1.4  | 2.8<br>.7                                   | 8.7<br>3.7<br>3.7<br>3.7<br>3.7  | -395<br>-389<br>9.6<br>-12.4  | -1.7<br>1<br>2<br>-2.1<br>-2.6  | 15<br>26<br>14<br>1   |
| 2010 | G3                | 2.6<br>2.6                    | 9.<br>2.3<br>2.3   | 2:4<br>2:5<br>1.6   | -27.3<br>-27.3                              | 10.0<br>15.4<br>-3.5<br>-3.5   | -505<br>-505<br>6.8<br>16.8   | 9.8<br>8.8<br>7.7<br>7.7  | 121<br>121<br>117<br>5  |
| 50   | Q2                | 1.7<br>1.7                    | 9.<br>9. 4.4<br>4.4  | 2.2<br>2.2<br>1.9<br>1.6  | 25.7<br>25.7                                | 17.2<br>17.2<br>24.8<br>24.8<br>5<br>5   | -449<br>-449<br>9.1<br>33.5   | 3.9<br>3.9<br>9.1<br>12.8<br>.6   | 69<br>61<br>8   |
|      | Q1                | 3.7<br>3.7                    | 1.1<br>1.1<br>2.1  | 1.9<br>8.8<br>1.2<br>1.2  | -12.3<br>-12.3                              | 7.8<br>7.8<br>20.4<br>20.4<br>-17.8<br>-17.8   | -338<br>-338<br>11.4<br>11.2  | -1.6<br>-1.6<br>-1.8<br>-3.8<br>-3.8  | 44<br>7<br>8<br>8   |
|      | Item              | Real GDP<br>Previous Tealbook | Final sales<br>Previous Tealbook<br>Priv. dom. final purch.<br>Previous Tealbook | Personal cons. expend.<br><i>Previous Tealbook</i><br>Durables<br>Nondurables<br>Services | Residential investment<br>Previous Tealbook | Business fixed invest.<br><i>Previous Tealbook</i><br>Equipment & software<br><i>Previous Tealbook</i><br>Nonres. structures<br><i>Previous Tealbook</i> | Net exports <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup><br>Exports<br>Imports | Gov't. cons. & invest.<br><i>Previous Tealbook</i><br>Federal<br>Defense<br>Nondefense<br>State & local | Change in bus. inventories <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup><br>Nonfarm <sup>2</sup><br>Farm <sup>2</sup> |

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)

|  |  | cnor sold to               |  |                                   |   |   |                                   | (monu)                             |  |
|--|--|----------------------------|--|-----------------------------------|---|---|-----------------------------------|------------------------------------|--|
| Item   | 2004   | 2005                       | 2006   | 2007                              | 2008  | 2009                                    | 2010                              | 2011                               | 2012   |
| Real GDP<br>Previous Tealbook  | 3.1<br>3.1   | 2.7<br>2.7                 | 2.4<br>2.4   | 2.3<br>2.3                        | -2.8<br>-2.8                                  | <i>c</i> i <i>c</i> i                   | 2.8<br>2.9                        | 3.7<br>3.8                         | 4.4<br>4.4   |
| Final sales<br>Previous Tealbook<br>Priv. dom. final purch.<br>Previous Tealbook   | 9.0.44<br>8.0.44   | 2.7<br>3.1<br>3.1          | 2.5<br>2.5<br>2.5<br>2.5   | 2.5<br>2.5<br>1.3                 | -1.9<br>-3.8<br>-3.8                          |   | 4.4<br>4.4                        | 3.6<br>3.8<br>4.0                  | 4.1<br>4.1<br>4.6  |
| Personal cons. expend.<br><i>Previous Tealbook</i><br>Durables<br>Nondurables<br>Services  | 8.8<br>8.5<br>9.0<br>7.5<br>8.5<br>8.5<br>8.5<br>8.5<br>8.5<br>8.5<br>8.5<br>8.5<br>8.5<br>8 | 2.7<br>2.3<br>2.6<br>2.6   |  | 1.7<br>3.9<br>.1.7<br>.1.7        | -1.9<br>-1.9<br>-12.3<br>-2.9<br>.3           | 4 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | 2.6<br>2.6<br>3.4<br>1.2          | 3.5<br>3.4<br>2.4<br>2.7           | 3.3.9<br>3.9.3<br>3.9.3<br>3.9.9<br>3.9.9<br>3.9.9<br>3.9.9<br>3.9.9<br>3.9.9<br>3.9.9<br>3.9<br>3 |
| Residential investment<br>Previous Tealbook  | 6.6<br>6.6   | 5.3<br>5.3                 | -15.7<br>-15.7   | -20.7<br>-20.7                    | -24.6<br>-24.6                                | -13.4<br>-13.4                          | -4.7<br>-5.2                      | 8.4<br>9.1                         | 13.4<br>13.5   |
| Business fixed invest.<br><i>Previous Tealbook</i><br>Equipment & software<br><i>Previous Tealbook</i><br>Nonres. structures<br><i>Previous Tealbook</i> | 7.0<br>7.0<br>8.8<br>8.8<br>1.7  | 4.4<br>6.1<br>6.1<br>1     | 7.8<br>7.8<br>6.0<br>13.0<br>13.0                                  | 8.2<br>8.2<br>4.3<br>17.3<br>17.3 | -8.3<br>-8.3<br>-8.3<br>-11.8<br>-1.5<br>-1.5 | -12.7<br>-12.7<br>-4.9<br>-4.9<br>-26.5 | 10.3<br>9.6<br>15.8<br>4.2<br>4.2 | 8.7<br>9.8<br>13.0<br>-3.0<br>-3.0 | 7.2<br>7.9<br>9.6<br>10.6<br>.1  |
| Net exports <sup>1</sup><br><i>Previous Tealbook</i> <sup>1</sup><br>Exports<br>Imports  | -688<br>-688<br>7.1<br>10.9  | -723<br>-723<br>6.7<br>5.2 | -729<br>-729<br>10.2<br>4.1  | -655<br>-655<br>10.1<br>.7        | -504<br>-504<br>-2.9<br>-6.0                  | -363<br>-363<br>1<br>-7.2               | -422<br>-420<br>9.2<br>11.0       | -378<br>-394<br>5.9                | -316<br>-354<br>9.0<br>5.5   |
| Gov't. cons. & invest.<br><i>Previous Tealbook</i><br>Federal<br>Defense<br>Nondefense<br>State & local  |  | 2.1.2<br>2.6.4             | 115<br>115<br>115<br>115<br>115<br>115<br>115<br>115<br>115<br>115 | 1.9<br>3.1<br>1.2<br>1.2<br>1.2   | 3.1<br>9.2<br>.45<br>.45                      |   | -1.1<br>1.5<br>1.3<br>4.8<br>-1.3 |                                    |  |
| Change in bus. inventories <sup>1</sup><br><i>Previous Tealbook</i> <sup>1</sup><br>Nonfarm <sup>1</sup><br>Farm <sup>1</sup>                            | 66<br>66<br>8<br>8   | 50<br>50<br>0              | 59<br>59<br>-4   | 28<br>28<br>-1                    | -38<br>-38<br>-39<br>1                        | -113<br>-113<br>-117<br>3               | 62<br>65<br>5                     | 51<br>45<br>4                      | 57<br>54<br>4  |

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Class II FOMC - Restricted (FR)

1. Billions of chained (2005) dollars.

<u>Greensheets</u>

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

|  |                          | 2010   | 0   |                           |                          | 201                      |                          |                                |                          | 2012                     | 12                      |                         |  |                                  |                                     |
|--|--------------------------|--|---|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--|----------------------------------|-------------------------------------|
| Item   | Q1                       | Q2   | Q3  | Q4                        | Q1                       | Q2                       | Q3                       | Q4                             | Q1                       | Q2                       | Q3                      | Q4                      | 20101  | 2011                             | 2012                                |
| Real GDP<br>Previous Tealbook  | 3.7<br>3.7               | 1.7<br>1.7                                   | 2.6<br>2.6  | 3.2<br>3.8                | 3.2<br>3.6               | 3.8<br>3.7               | 3.9<br>3.8               | 4.0<br>4.2                     | 4.2<br>.3                | 4.4.<br>4.4.             | 4.4<br>.5               | 4.5<br>4.6              | 2.8<br>2.9   | 3.7<br>3.8                       | 4.4<br>4.4                          |
| Final sales<br><i>Previous Tealbook</i><br>Priv. dom. final purch.<br><i>Previous Tealbook</i>   | 1.1<br>1.1<br>1.7<br>1.7 | 9.<br>9.<br>9.<br>6.<br>9.<br>6.<br>9.<br>6. | 9.<br>9.<br>1.9<br>6.1  | 6.6<br>6.8<br>3.6<br>3.3  | 2.1<br>3.2<br>3.2        | 3.5<br>3.5<br>3.6        | 3.6<br>3.7<br>3.8<br>3.8 | 4.9<br>5.0<br>3.7<br>3.9       | 4.0<br>3.5<br>3.5        | 4.1<br>4.1<br>3.8<br>3.7 | 4.0<br>3.9<br>3.9       | 4.3<br>4.0<br>4.2       | 2.2<br>2.4<br>7.6<br>7.6<br>7.6<br>7.6<br>7.6<br>7.6<br>7.6<br>7.6<br>7.6<br>7.6 |                                  | 4.1<br>3.8<br>3.8<br>8.8            |
| Personal cons. expend.<br><i>Previous Tealbook</i><br>Durables<br>Nondurables<br>Services  | 11.3<br>6.1<br>0.7       | <u>ئ ن</u> ې نه نه نه                        | 1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1.<br>1 | 2.9<br>1.4<br>.7          | 1.8<br>5.2<br>8.5<br>.5  | 2.5<br>2.5<br>1.4        | 2.5<br>2.6<br>1.4        | 2.5<br>2.6<br>1.5              | 2.7<br>2.5<br>1.5        | 2.7<br>2.6<br>1.5<br>1.5 | 2.8<br>2.8<br>.7<br>1.6 | 2.9<br>2.9<br>.6<br>1.7 | 1.9<br>1.9<br>8.<br>5.   | 2.5<br>5.5<br>1.2<br>1.2         | 2.7<br><br>1.6                      |
| Residential investment<br>Previous Tealbook  | ų ų                      | 9.<br>9.                                     | 8. 8.<br>8. 8.  | 1.0.                      |                          | ич                       | цü                       | ui ui                          | ui ui                    | ui ui                    | ui ui                   | u u                     |  | ыч                               | i ni                                |
| Business fixed invest.<br><i>Previous Tealbook</i><br>Equipment & software<br><i>Previous Tealbook</i><br>Nonres. structures<br><i>Previous Tealbook</i> | 112<br>112<br>2.1<br>2.1 | $\frac{1.5}{2.1}$                            | 9.<br>1.0<br>1<br>1   | 94 viu vi-i               | مو و و با و              | و و و و و و و            | 6.11.0<br>0.10<br>0.0    | 1.0<br>1.0<br>1.0<br>0.0<br>.0 | 9 <u>0</u> 9 <u>0</u> 00 | ∞∞∞∞∞.00                 | 8.8. 1.8. 0.0.          | ه و ه و و و             | 0.1<br>9.<br>1.1<br>1.0<br>1   | 9.<br>1.0<br>1<br>0.             | ► <u>8</u> . ► <u>8</u> . 0.0.      |
| Net exports<br><i>Previous Tealbook</i><br>Exports<br>Imports  |                          | -3.5<br>-3.5<br>1.1<br>-4.6                  | -1.7<br>-1.7<br>-2.5  | 3.3<br>3.5<br>2.1<br>2.1  | -12-1-<br>22-1-<br>21-1- | <br><br>-1.2<br>         | 1<br>2<br>-1.3           | $1.3 \\ 1.0 \\ 1.2 \\ .0$      | . 4. 1.<br>8             | 4.0.0.                   | -1:2<br>-1:2<br>-1:2    |                         | 5<br>5<br>-1.1   |                                  | د: د: 1 <u>. 1</u> .<br>د: د: د: د: |
| Gov't. cons. & invest.<br><i>Previous Tealbook</i><br>Federal<br>Defense<br>Nondefense<br>State & local  | ۻۨڹ<br>٥ ١ ٠ ٠ ٠ ٠       | 80 80 1 4 0 H                                | 8; 8; 1- v; n; -:   | ٺ<br>٥ ٥ : ٺ              |                          | <i>ω</i> -: 4 <i>ω</i> 0 | 4400                     | 0.1.0.0.0.0                    | 0. I. I. O. I. O.        | 0 0                      |                         | 0. 2i - 0               | dw 4000  | 1.<br>1.<br>0.<br>0.<br>1.<br>1. | 0                                   |
| Change in bus. inventories<br><i>Previous Tealbook</i><br>Nonfarm<br>Farm  | 2.6<br>2.6<br>2.6<br>.1  | ∞ ∞ ∞ ⊙                                      | 1.6<br>1.7<br>1   | -3.5<br>-3.0<br>-3.2<br>2 | 1.1<br>.5<br>.1.1<br>.1  | v o.                     | ω <u>ι</u> ωο            | 6;-<br>6;-<br>0;               | 014 00                   | w 4 v 0                  | vi vi 4 0               | 40 40                   | 4. v. v. <mark>.</mark> .  | <u> </u>                         | <i>u</i> i ui oi                    |

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

| s in Prices and Costs | , annual rate except as noted) |
|-----------------------|--------------------------------|
| Changes in ]          | (Percent, annu                 |

|   |  | 2010                              | 10                              |                            |                          | 201                            | 11  |                                |                              | 201                       | 12                                     |                                   |                               |                           |                  |
|---|--|-----------------------------------|---------------------------------|----------------------------|--------------------------|--------------------------------|---|--------------------------------|------------------------------|---------------------------|--|-----------------------------------|-------------------------------|---------------------------|------------------|
| Item  | Q1                                     | Q2                                | Q3                              | Q4                         | QI                       | Q2                             | Q3  | Q4                             | QI                           | Q2                        | Q3                                     | Q4                                | $2010^{1}$                    | 2011                      | 20121            |
| GDP chain-wt. price index<br>Previous Tealbook  | 1.0<br>1.0                             | 1.9                               | 2.1                             | 4.0.                       | 1.6                      | 2.4                            | 1.0   | 1.0<br>.9                      | 1.3<br>1.1                   | 1.3                       | 1.3                                    | 1.3<br>1.1                        | 1.4                           | 1.2                       | 1.3              |
| PCE chain-wt. price index<br>Previous Tealbook  | 2.1<br>2.1                             | 0.0.                              | ∞ં ∞ં                           | $1.8 \\ 1.9$               | 3.3                      | 2.3<br>1.1                     | $1.2 \\ 1.2$  | 1.0                            | $1.0 \\ 1.0$                 | $1.0 \\ 1.0$              | $1.1 \\ 1.0$                           | $1.1 \\ 1.0$                      | 1.2<br>1.2                    | $1.9 \\ 1.3$              | $1.1 \\ 1.0$     |
| Energy<br>Previous Tealbook   | 16.4<br>16.4                           | -17.5<br>-17.5                    | 8.8<br>4.4                      | 24.3<br>25.9               | 37.9<br>20.5             | 14.7<br>1.7                    | -2.2<br>2.8   | -1.7<br>1.0                    | -1.4<br>4.                   | -1.6<br>.0                | -1.4<br>1                              | 8<br>1                            | 5.9<br>6.3                    | $11.0 \\ 6.2$             | -1.3<br>.1       |
| Food<br>Previous Tealbook   | 1.8                                    | 1.6<br>1.6                        | uj uj                           | 1.4<br>1.5                 | 4.9<br>2.1               | 4.5<br>2.1                     | 2.5<br>1.6  | 1.5                            | $1.3 \\ 1.0$                 | $1.3 \\ 1.1$              | $1.4 \\ 1.2$                           | 1.4<br>1.2                        | 1.3<br>1.3                    | 3.4<br>1.7                | 1.3<br>1.1       |
| Ex. food & energy<br>Previous Tealbook  | 1.2                                    | $1.0 \\ 1.0$                      | نہ نہ                           | <i>i</i> . 6               | 1.1<br>.9                | $1.2 \\ 1.0$                   | $1.3 \\ 1.0$  | 1.1<br>9.                      | $1.2 \\ 1.0$                 | $1.2 \\ 1.0$              | $1.2 \\ 1.0$                           | $1.2 \\ 1.0$                      | ∞ં ∞ં                         | $1.2 \\ 1.0$              | $1.2 \\ 1.0$     |
| Ex. food & energy, market based<br><i>Previous Tealbook</i>   |  | $1.0 \\ 1.0$                      | 1.1<br>1.1                      | 4 n                        | <i>e</i> <sup>; </sup> 8 | 1.2<br>.9                      | 1.2<br>.9   | 6.<br>L.                       | 1.0                          | 1.1<br>.9                 | 1.1<br>.9                              | 1.1<br>.9                         | ∞ ∞                           | 1.0<br>.8                 | 1.1<br>.9        |
| CPI<br>Previous Tealbook<br>Ex. food & energy<br>Previous Tealbook  | 1.3<br>1.5<br>.0                       | č<br>8: 6:<br>8: 6:               | 1.4<br>1.1<br>1.2               | 2.6<br>2.6<br>.6           | 4.6<br>2.7<br>1.5<br>1.0 | 2.8<br>1.1<br>1.3<br>1.0       |   | .9<br>1.0<br>1.0               | 9.<br>9.<br>1.1              |                           | $1.0 \\ 1.1 \\ 1.1 \\ 1.1$             | $1.1 \\ 1.0 \\ 1.3 \\ 1.1 \\ 1.1$ | 1.2<br>1.2<br>.6              | 2.3<br>1.5<br>1.2         | 1.0<br>.9<br>1.2 |
| ECI, hourly compensation <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup>  | 2.6<br>2.6                             | 1.8<br>1.8                        | 1.8<br>1.8                      | 1.8<br>2.0                 | 2.5<br>2.3               | 2.2<br>2.1                     | 2.2<br>2.1  | 2.2                            | 2.8<br>2.6                   | 2.5<br>2.4                | 2.5<br>2.4                             | 2.5<br>2.4                        | 2.1<br>2.0                    | 2.3<br>2.1                | 2.6<br>2.4       |
| Nonfarm business sector<br>Output per hour<br><i>Previous Tealbook</i><br>Compensation per hour<br><i>Previous Tealbook</i><br>Unit labor costs<br><i>Previous Tealbook</i> | 4.6<br>9.5<br>9.4<br>9.4<br>9.4<br>1.6 | -1.7<br>-1.8<br>3.1<br>2.9<br>4.9 | 233<br>211<br>211<br>211<br>211 | 3.0<br>2.6<br>-1.0<br>-4.0 | 2.1<br>2.1<br>2.2<br>.6  | 1.4<br>1.7<br>1.8<br>1.8<br>.1 | 5.0<br>1.8<br>1.8<br>1.8<br>1.8<br>1.2<br>1.2<br>1.2<br>1.2<br>1.2<br>1.2<br>1.2<br>1.2<br>1.2<br>1.2 | 1.6<br>1.6<br>1.8<br>1.8<br>1. | 1.4<br>1.8<br>1.2<br>7<br>.7 | 22.2<br>2.2<br>2.2<br>2.2 | 1.8<br>2.2<br>3.6<br>2.2<br>2.2<br>2.2 | 2.0<br>2.5<br>3.3<br>2.3          | 2.0<br>1.7<br>1.8<br>1.8<br>2 | 2.1<br>2.1<br>6.1.5<br>4. | 1.7<br>2.5<br>7. |
| Core goods imports chain-wt. price index <sup>3</sup><br><i>Previous Tealbook</i> <sup>3</sup>  | 4.2<br>2.2                             | 3.1<br>3.1                        | × ×                             | 4.3<br>6.2                 | 7.5<br>5.5               | 5.5<br>3.6                     | 3.3<br>2.2  | 2.0<br>1.5                     | 1.4<br>1.3                   | 1.4<br>1.4                | 1.4<br>1.4                             | $1.4 \\ 1.4$                      | 2.7<br>3.1                    | 4.6<br>3.2                | 1.4<br>1.4       |
| 1. Change from fourth quarter of previous year to fourth quarter  | vear to f                              | Sourth au                         | arter of                        | of vear indicated          | cated                    |                                |   |                                |                              |                           |  |                                   |                               |                           |                  |

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

Greensheets

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

| •   |   |                    |   |                    |                      |   |                   | 、<br>、             |                    |
|---|---|--------------------|---|--------------------|----------------------|---|-------------------|--------------------|--------------------|
| Item  | 2004  | 2005               | 2006  | 2007               | 2008                 | 2009                                    | 2010              | 2011               | 2012               |
| GDP chain-wt. price index<br>Previous Tealbook  | 3.2<br>3.2  | 3.5<br>3.5         | 2.9<br>2.9  | 2.6<br>2.6         | 2.1                  | in in                                   | 1.4               | 1.5                | 1.3<br>1.1         |
| PCE chain-wt. price index<br><i>Previous Tealbook</i><br>Energy   | 3.0<br>3.0<br>18.6  | 3.3<br>3.3<br>21.5 | 1.9<br>1.9<br>3.7   | 3.5<br>3.5<br>19.4 | 1.7<br>1.7<br>-9.0   | 1.5<br>1.5<br>2.7                       | 1:2<br>5:9<br>5.9 | 1.9<br>1.3<br>11.0 | 1.1<br>1.0<br>-1.3 |
| Previous Tealbook<br>Food<br>Previous Tealbook  | 18.6<br>2.7<br>2.7  | 21.5<br>1.5<br>1.5 | -3.7<br>1.7<br>1.7  | 19.4<br>4.8<br>4.8 | -9.0<br>6.9<br>6.9   | 2.7<br>-1.6<br>-1.6                     | 6.3<br>1.3<br>1.3 | 6.2<br>3.4<br>1.7  | 1.<br>1.1<br>1.1   |
| Ex. food & energy<br><i>Previous Tealbook</i><br>Ex. food & energy, market based<br><i>Previous Tealbook</i>                | 2.2<br>2.2<br>1.9   | 2.3<br>2.1<br>2.1  | 50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>5 | 2.2.2.2<br>4.4.2.2 | 22.0<br>22.0<br>22.0 | 1.7<br>1.7<br>1.7<br>1.7                | ∞ં ∞ં ∞ં ∞ં       | 1:2<br>1.0<br>.8   | 1.2<br>1.0<br>1.1  |
| CPI<br>Previous Tealbook<br>Ex. food & energy<br>Previous Tealbook  | 8.8<br>8<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2                                  | 3.7<br>3.7<br>2.1  | 2.0<br>1.9<br>2.7   | 4.0<br>2.3<br>2.3  | 1.6<br>1.6<br>2.0    | 1.5<br>1.5<br>1.7                       | 112<br>112<br>.6  | 2.3<br>1.5<br>1.0  | 1.0<br>.9<br>1.2   |
| ECI, hourly compensation <sup>1</sup><br><i>Previous Teatbook</i> <sup>1</sup>  | 3.8<br>3.8  | 2.9<br>2.9         | 3.2<br>3.2  | 3.0<br>3.0         | 2.4<br>2.4           | $\begin{array}{c} 1.2\\ 1.2\end{array}$ | 2.1<br>2.0        | 2.3<br>2.1         | 2.6<br>2.4         |
| Nonfarm business sector<br>Output per hour<br><i>Previous Tealbook</i><br>Compensation per hour<br><i>Previous Tealbook</i> | 11.5<br>2.1<br>2.5<br>2.5<br>2.5<br>2.5<br>2.5<br>2.5<br>2.5<br>2.5<br>2.5<br>2.5 | 1.1<br>4.1<br>5.5  | 0.0<br>0.0<br>0.0<br>0.0<br>0   | 3.6<br>3.6<br>3.6  | 60<br>44 00          | 6.5<br>6.5<br>8.2                       | 2.0<br>1.7<br>1.8 | 1.4<br>1.5<br>1.9  | 1.7<br>2.5<br>2.5  |
| Unit labor costs<br>Previous Tealbook   | 1.9<br>1.9  | 2.0                | 3.5<br>2.5<br>2.5   | 6. 6.<br>6. 6.     | 2.7                  | - <del>.</del> .                        | ,<br>             | 9.4                | , r. 4.            |
| Core goods imports chain-wt. price index <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup>                              | 3.6<br>3.6  | 2.2                | 2.5<br>2.5  | 2.9<br>2.9         | 3.5<br>3.5           | -1.9<br>-1.9                            | 2.7<br>3.1        | 4.6<br>3.2         | 1.4<br>1.4         |
| 1. Private-industry workers.<br>2. Core goods imports exclude computers, semiconductors, oil, and natural                   | emiconduct  | ors, oil, an       | d natural g   | gas.               |                      |   |                   |                    |                    |

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| $\mathbf{\overline{\mathbf{v}}}$ |

Percent change, annual rate.
 Level, millions; annual values are annual averages.
 Percent change, annual rate, with inventory valuation and capital consumption adjustments.
 Billions of dollars; annual values are annual averages.

**Other Macroeconomic Indicators** 

|   |   | 20   | 2010   |   |                                   | 201                                  | 11                                 |  |                                   | 20                                | 2012                                      |  |                                   |                                   |                                   |              |
|---|---|--|--|---|-----------------------------------|--------------------------------------|------------------------------------|--|-----------------------------------|-----------------------------------|---|--|-----------------------------------|-----------------------------------|-----------------------------------|--------------|
| Item  | Q1  | Q2   | Q3   | Q4  | Q1                                | Q2                                   | Q3                                 | Q4   | Q1                                | Q2                                | Q3  | Q4                                       | 2010                              | 2011 <sup>1</sup>                 | 2012 <sup>1</sup>                 | Cla          |
| <i>Employment and production</i><br>Nonfarm payroll employment <sup>2</sup><br>Unemployment rate <sup>3</sup>   | 1<br>9.7  | 9.6<br>9.6   | 1<br>9.6   | 9.6   | 4.<br>9.0                         | 9. <u>8</u>                          |                                    | 8. 8.  | 6. <u>8</u>                       | 6.<br>1.8                         | 9.<br>8.7<br>8.7                          | 9.<br>2.5                                | .7<br>9.6                         | 2.5<br>8.6                        | 3.6<br>7.5                        | ss II FOM    |
| Previous Tealbook <sup>5</sup><br>NAIRU <sup>3</sup><br>Bunnious Tealbook <sup>3</sup>  | 9.7<br>0.9  | 9.6<br>6.0   | 9.6<br>0.0   | 9.6<br>0.9                                      | 6.0<br>0.3                        | 9.3<br>6.0<br>7                      | 9.1<br>6.0                         | 6.9<br>0.9   | 8.7<br>6.0                        | 8.8<br>6.0<br>7                   | 8.1<br>6.0                                | 6.0<br>6.0                               | 9.6<br>6.0                        | 8.9<br>6.0<br>7                   | 6.0<br>6.0                        | C - Re       |
| Frevious Leurook <sup>-</sup><br>GDP gap <sup>4</sup><br>Previous Tealbook <sup>4</sup>   | -6.2<br>-6.4  | -6.3<br>-6.3                                       | -6.2<br>-6.2                                       | -5.9<br>-6.3                                    | -5.8<br>-6.0                      | -5.5<br>-5.8<br>-5.8                 | -5.1<br>-5.4                       | -4.7<br>-5.1   | 0.0<br>4.4<br>7.7                 | 0.0<br>4.5<br>4.2                 | -3.5<br>-3.5<br>-3.8                      | -3.0<br>-3.3                             | -5.9<br>-6.3                      | -4.7<br>-5.1                      | -3.0<br>-3.3<br>-3.3              | stricted     |
| Industrial production <sup>5</sup><br><i>Previous Tealbook<sup>5</sup></i><br>Manufacturing industr. prod. <sup>5</sup><br><i>Previous Tealbook<sup>5</sup></i><br>Capacity utilization rate - mfg. <sup>3</sup><br><i>Previous Tealbook<sup>3</sup></i>  | 7.1<br>7.1<br>6.2<br>6.2<br>70.0<br>70.0                            | 7.2<br>9.4<br>9.4<br>71.6<br>71.6                  | 6.5<br>72,4<br>72,4<br>72,4<br>72,4                | 3.2<br>73.0<br>73.0<br>73.0                     | 4.7<br>6.7<br>6.9<br>74.1<br>74.0 | 75.4<br>75.4<br>75.4<br>75.4<br>75.4 | 4.4<br>4.7<br>76.1<br>75.1<br>75.1 | 3.3<br>3.6<br>3.8<br>3.8<br>4.3<br>76.7<br>76.7        | 3.6<br>4.1<br>5.0<br>76.7<br>76.7 | 4.6<br>5.3<br>6.2<br>77.5<br>77.5 | 4.7<br>5.2<br>5.0<br>78.7<br>78.7<br>78.4 | 3.9<br>4.3<br>5.1<br>79.2<br>79.0        | 5.9<br>5.8<br>6.0<br>73.0<br>73.0 | 4.9<br>5.7<br>5.2<br>76.7<br>76.1 | 4.2<br>4.9<br>5.5<br>79.2<br>79.0 | (FR)         |
| Housing starts <sup>6</sup><br>Light motor vehicle sales <sup>6</sup>   | .6<br>11.0  | .6<br>11.3   | .6<br>11.6   | .5<br>12.3                                      | .6<br>12.9                        | .6<br>13.0                           | .7<br>13.2                         | .7<br>13.4   | .8<br>13.9                        | .8<br>14.6                        | .9<br>15.2                                | $\begin{array}{c} 1.0\\ 15.6\end{array}$ | .6<br>11.5                        | .6<br>13.1                        | .9<br>14.8                        |              |
| Income and saving<br>Nominal GDP <sup>5</sup><br>Real disposable pers. income <sup>5</sup><br><i>Previous Tealbook<sup>5</sup></i><br>Personal saving rate <sup>3</sup><br><i>Previous Tealbook<sup>3</sup></i>   | 4.8<br>11.3<br>5.5<br>5.5   | 3.7<br>5.6<br>6.2<br>6.2                           | 4.6<br>1.0<br>6.0<br>5.9                           | 3.6<br>1.2<br>5.4<br>5.4                        | 4.8<br>5.3<br>5.9<br>7.9          | 6.2<br>3.6<br>5.6<br>5.9             | 4.9<br>3.5<br>5.6<br>5.9           | 5.0<br>4.4<br>5.8<br>6.0                               | 5.6<br>.1<br>5.1<br>5.2           | 5 5 3 9<br>5 5 3 9<br>5 2 2       | 5.8<br>5.2<br>5.2<br>2                    | 5.8<br>5.2<br>2.2<br>2.2                 | 4.2.2.2.2<br>4.2.3.2              | 5.2<br>3.7<br>5.8<br>6.0          | 5.8<br>3.1<br>5.2<br>2.2          |              |
| Corporate profits <sup>7</sup><br>Profit share of GNP <sup>3</sup>  | 48.9<br>10.7  | 12.7<br>10.9                                       | 6.6<br>11.0  | $3.9 \\ 11.0$                                   | 11.1<br>11.2                      | 14.1<br>11.4                         | 11.5<br>11.5                       | 5.7<br>11.6  | 4.0<br>11.5                       | 4.7<br>11.5                       | 5.4<br>11.5                               | 5.4<br>11.5                              | 16.8<br>11.0                      | 10.5<br>11.6                      | 4.9<br>11.5                       | ase          |
| Net federal saving <sup>8</sup><br>Net state & local saving <sup>8</sup>  | -1,314<br>29  | -1,337<br>16                                       | -1,343<br>48                                       | -1,362<br>37                                    | -1,399<br>49                      | -1,380<br>29                         | -1,345<br>25                       | -1,323<br>21   | -1,160<br>30                      | $-1,111 \\ 41$                    | -1,085<br>54                              | -1,055<br>60                             | -1,339<br>32                      | -1,362<br>31                      | -1,103<br>46                      |              |
| Gross national saving rate <sup>3</sup><br>Net national saving rate <sup>3</sup>  | 11.1<br>-1.8  | 11.7<br>-1.1                                       | 11.6<br>-1.1                                       | 11.3<br>-1.3                                    | 11.4<br>-1.1                      | 11.6<br>7                            | 12.1<br>2                          | 12.5<br>.2   | 12.8<br>.6                        | $13.2 \\ 1.1$                     | 13.5<br>1.4                               | $\begin{array}{c} 13.7\\ 1.7\end{array}$ | 11.3<br>-1.3                      | 12.5<br>.2                        | 13.7<br>1.7                       |              |
| <ol> <li>Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise indicated.</li> <li>Change, millions.</li> <li>Percent; annual values are for the fourth quarter of the year indicated.</li> <li>Percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential Annual values are fourth quarter of the year indicated.</li> <li>Percent change, annual rate.</li> </ol> | If previous<br>f previous<br>the fourt<br>that and f<br>rth quarter | s year to 1<br>h quarter<br>otential<br>r of the y | fourth qui<br>of the ye.<br>GDP: a n<br>ear indica | arter of ye<br>ar indicat<br>egative m<br>ited. | ear indica<br>ed.<br>amber inc    | ted, unles                           | ss otherwi                         | of year indicated, unless otherwise indicated dicated. | ted.                              | below po                          | tential.                                  |  |                                   |                                   |                                   | March 9, 201 |

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Greensheets

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

| Item  | 2004  | 2005   | 2006   | 2007                              | 2008   | 2009   | 2010                                      | 2011                                   | 2012  |  |
|---|---|--|--|-----------------------------------|--|--|---|--|---|--|
| Employment and production<br>Nonfarm payroll employment <sup>1</sup><br>Unemployment rate <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup><br>NAIRU <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup><br>GDP gap <sup>3</sup><br><i>Previous Tealbook</i> <sup>3</sup> | 2.0<br>5.5<br>5.0<br>7.5<br>7.5<br>7.5<br>7.5<br>7.5<br>7.5<br>7.5<br>7.5<br>7.5<br>7.5   | 2.2<br>5.0<br>5.0<br>0<br>0<br>0<br>0<br>0<br>0<br>0<br>0                | 2.1<br>5.5<br>0.0<br>0.0<br>0.0  | 5.0<br>5.0<br>0.1<br>0.1          | 2.5<br>6.9<br>6.9<br>6.4<br>7<br>6.4<br>9.4<br>9.4 | -5.6<br>-5.6<br>10.0<br>6.0<br>6.0<br>-6.6             | 9.6<br>9.6<br>6.0<br>6.0<br>6.3<br>6.3    | 2.5<br>8.9<br>6.0<br>6.0<br>7.7<br>5.1 | 3.6<br>7.5<br>6.0<br>6.0<br>5.0<br>5.0<br>5.0 |  |
| Industrial production <sup>4</sup><br><i>Previous Tealbook</i> <sup>4</sup><br>Manufacturing industr. prod. <sup>4</sup><br><i>Previous Tealbook</i> <sup>4</sup><br>Capacity utilization rate - mfg. <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup>                     | 0.02 0.02 0.0<br>0.02 0.00 0.00 | 2.3<br>3.5<br>7885<br>7885<br>7885<br>7885<br>7885<br>7885<br>7885<br>78 | 2.5<br>2.5<br>2.0<br>79.0<br>79.0  | 2.3<br>2.6<br>2.6<br>79.1<br>79.1 | -7.6<br>-7.6<br>-10.0<br>-10.0<br>70.9<br>70.9     | -3.8<br>-3.8<br>-4.1<br>68.8<br>68.8                   | 5.9<br>5.8<br>6.0<br>73.0<br>73.0         | 4.9<br>5.7<br>76.7<br>76.1             | 4.2<br>4.9<br>5.5<br>79.2<br>0.0              |  |
| Housing starts <sup>5</sup><br>Light motor vehicle sales <sup>5</sup>   | 2.0<br>16.8   | $2.1 \\ 16.9$  | $1.8 \\ 16.5$  | $1.4 \\ 16.1$                     | .9<br>13.1   | .6<br>10.3   | .6<br>11.5                                | .6<br>13.1                             | .9<br>14.8                                    |  |
| Income and saving<br>Nominal GDP <sup>4</sup><br>Real disposable pers. income <sup>4</sup><br><i>Previous Tealbook</i> <sup>4</sup><br>Personal saving rate <sup>2</sup><br><i>Previous Tealbook</i> <sup>2</sup>   | 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5   | 6.3<br>.6<br>1.5<br>1.5  | 5 4 4 6<br>7 4 6<br>7 5<br>7 5<br>7 6<br>7 7<br>7 7<br>7 7<br>7 7<br>7 7<br>7 7<br>7 7<br>7 7<br>7 7 | 5.0<br>1.5<br>2.1<br>2.1          | 7<br>1.0<br>5.2<br>5.2                             | 6 4 4 5 5 5<br>6 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 | 4 2 2 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 | 5.2<br>3.7<br>6.0<br>6.0               | 5.8<br>3.1<br>5.2<br>5.2                      |  |
| Corporate profits <sup>6</sup><br>Profit share of GNP <sup>2</sup>  | 21.9<br>10.5  | 19.6<br>11.8   | $\begin{array}{c} 3.7\\11.6\end{array}$  | -8.1<br>10.1                      | -31.9<br>6.9                                       | 42.5<br>9.8  | 16.8<br>11.0                              | 10.5<br>11.6                           | 4.9<br>11.5                                   |  |
| Net federal saving <sup>7</sup><br>Net state & local saving <sup>7</sup>  | -379<br>-8  | -283<br>26   | -204<br>51   | -245<br>12                        | -616<br>-47  | -1252<br>-20   | -1339<br>32                               | -1362<br>31                            | -1103<br>46                                   |  |
| Gross national saving rate <sup>2</sup><br>Net national saving rate <sup>2</sup>  | 14.3<br>2.7   | 15.5<br>3.5  | 16.3<br>4.2  | 13.6<br>1.3                       | 11.8<br>-1.4                                       | 10.8<br>-2.3   | 11.3<br>-1.3                              | 12.5<br>.2                             | $\frac{13.7}{1.7}$                            |  |
| 1. Change, millions.<br>2. Percent: values are for the four   | or the fourth quarter of the vear indicated   | of the vear  | indicated.   |                                   |  |  |   |  |   |  |

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Percent; values are for the fourth quarter of the year indicated. 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. iπ

Percent change.
 Level, millions; values are annual averages.
 Percent change, with inventory valuation and capital consumption adjustments.
 Billions of dollars; values are annual averages.

a Actual.

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

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|  |  |  | Households           |                     |                   |   |                       |                         |
|--|--|--|----------------------|---------------------|-------------------|---|-----------------------|-------------------------|
| Period <sup>1</sup>                        | Total  | Total  | Home<br>mortgages    | Consumer<br>credit  | Business          | State and local governments   | Federal<br>government | Memo:<br>Nominal<br>GDP |
| Vear                                       |  |  |                      |                     |                   |   |                       |                         |
| 2005                                       | 9 5  | 111  | 13 3                 | 45                  | 86                | 10.2  | 0 2                   | 63                      |
| 2006                                       | 0.6  | 10.1   | 11.2                 | 4.1                 | 10.5              | 8.3   | 3.9                   | 5.5                     |
| 2007                                       | 8.6  | 6.8  | 6.8                  | 5.8                 | 13.0              | 9.5   | 4.9                   | 5.0                     |
| 2008                                       | 6.0  | 1  | 5                    | 1.5                 | 5.8               | 2.3   | 24.2                  | <i>L.</i> -             |
| 2009                                       | 3.0  | -1.7   | -1.5                 | -4.4                | -2.7              | 4.8   | 22.7                  | 9.                      |
| 2010                                       | 4.6  | -1.8   | -2.6                 | -1.8                | 1.5               | 4.4   | 20.2                  | 4.2                     |
| 2011                                       | 5.2  | نہ   | -1.2                 | 3.8                 | 2.8               | 3.4   | 15.0                  | 5.2                     |
| 2012                                       | 5.5  | 2.2  | 0.                   | 7.8                 | 4.6               | 4.9   | 10.7                  | 5.8                     |
| Ouarter                                    |  |  |                      |                     |                   |   |                       |                         |
| 2009:1                                     | 4.6  | 8  | 2                    | -3.7                | 2                 | 5.6   | 24.4                  | -3.9                    |
| 7  | 4.5  | -1.9   | -1.9                 | -4.8                | -2.2              | 4.2   | 28.9                  | 4                       |
| ю  | 2.1  | -2.2   | -2.6                 | -3.9                | -4.4              | 5.7   | 19.0                  | 2.3                     |
| 4  | 8.   | -1.9   | -1.3                 | -5.6                | -4.0              | 3.6   | 11.9                  | 4.7                     |
| 2010:1                                     | 4.3  | -2.0   | -4.4                 | -4.0                | εi                | 5.7   | 20.5                  | 4.8                     |
| 2  | 4.6  | -2.5   | -2.2                 | -3.4                | 1                 | -1.4  | 24.4                  | 3.7                     |
| ю  | 4.2  | -2.0   | -2.6                 | -1.8                | 2.2               | 5.4   | 16.0                  | 4.6                     |
| 4  | 5.1  | 6  | -1.3                 | 2.0                 | 3.6               | 7.9   | 14.6                  | 3.6                     |
| 2011:1                                     | 2.5  | 0'-  | -1.5                 | 2.5                 | 2.3               | 9.  | 7.0                   | 4.8                     |
| 2  | 6.1  | ω  | -1.3                 | 3.1                 | 2.6               | 4.1   | 18.7                  | 6.2                     |
| ю  | 6.5  | L:   | -1.1                 | 4.4                 | 2.9               | 4.2   | 18.9                  | 4.9                     |
| 4  | 5.1  | 6.   | -1.0                 | 5.2                 | 3.5               | 4.5   | 12.5                  | 5.0                     |
| 2012:1                                     | 5.7  | 1.7  | 3                    | 6.4                 | 4.1               | 4.9   | 12.6                  | 5.6                     |
| 2  | 5.9  | 2.1  | 1                    | 7.3                 | 4.4               | 4.9   | 12.2                  | 5.8                     |
| ю  | 4.5  | 2.5  | .2                   | 8.2                 | 4.7               | 4.8   | 6.5                   | 5.8                     |
| 4  | 5.6  | 2.7  | ω                    | 8.6                 | 4.9               | 4.8   | 10.0                  | 5.8                     |
| Note: Ou                                   | Note: Onerterly data are at ceasonally adjusted annual rates | aconally adineted a  | nnual ratae          |                     |                   |   |                       |                         |
| 1. Data after 2010:Qc GDP growth, which is | יו ש שום שום שוו שוו שוו שוו שוו שוו שוו                     | t are at seasonary aujusteu a<br>4 are staff projections. Chan,<br>calculated from 04 to 04. | ges are measured fro | om end of the prece | ding period to en | robe: Quarterly data are at seasonarry aujusted annual rates.<br>1. Data after 2010:Q4 are staff projections. Changes are measured from end of the preceding period to end of period indicated except for annual nominal<br>DP growth, which is calculated from Q4 to Q4. | except for annual 1   | nominal                 |
|  |  |  |                      |                     |                   |   |                       |                         |

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

Flow of Funds Projections: Highlights

Average debt levels in the period (computed as the average of period-end debt positions) divided by nominal GDP.
 Includes change in liabilities not shown in home mortgages and consumer credit.
 Average debt levels in the period (computed as the average of period-end debt positions) divided by disposable personal income.
 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.

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

| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  | Q4<br>3.3<br>3.3<br>3.3<br>3.3        | 2   | 2011 | 1   |     |     | 2012  | 17  |     |
|--|---------------------------------------|-----|------|-----|-----|-----|-------|-----|-----|
| sure and country     Q1     Q2 $1$ $1$ $2$ $1$ $2$ $3$ $1$ $2$ $3$ $1$ $2$ $3$ $1$ $2$ $3$ $1$ $2$ $3$ $1$ $2$ $3$ $1$ $2$ $1$ $1$ $2$ $1$ $1$ $2$ $2$ $2$ $2$ $3$ $1$ $2$ $3$ $1$ $2$ | Q4<br>3.3<br>3.3<br>3.3<br>3.3<br>3.3 | ζ   |      |     |     |     | 1     | 11  |     |
| 1         3n       5.3       5.7         Tealbook       5.4       5.5         ed foreign economics       3.8       3.1         ada       5.5       2.2         an       6.0       2.1         ed Kingdom       1.3       4.2         o area       1.6       4.0         fermany       2.6       9.2    | 3.3<br>3.1<br>1.7<br>3.3              | δī  | Q2   | Q3  | Q4  | Q1  | Q2    | Q3  | Q4  |
| adbook       5.3       5.7         foreign economies       5.4       5.5         a       5.5       2.2         6.0       2.1       1.3         4.0       1.3       4.2         rea       1.6       4.0         many       2.6       9.2  | 3.3<br>3.1<br>1.7<br>3.3              |     |      |     |     |     |       |     |     |
| 5.4 5.5<br>5.4 5.5<br>5.5 2.2<br>6.0 2.1<br>0m 1.3 4.2<br>2.6 9.2  | 3.1<br>1.7<br>3.3                     | 3.6 | 3.3  | 3.3 | 3.3 | 3.4 | 3.5   | 3.5 | 3.6 |
| 3.8 3.1<br>5.5 2.2<br>6.0 2.1<br>1.3 4.2<br>1.6 4.0<br>2.6 9.2   | 1.7<br>3.3                            | 3.2 | 3.4  | 3.4 | 3.5 | 3.5 | 3.6   | 3.6 | 3.7 |
| 5.5 2.2<br>6.0 2.1<br>1.3 4.2<br>1.6 4.0<br>2.6 9.2  | 3.3                                   | 2.3 | 2.0  | 2.0 | 2.0 | 2.2 | 2.3   | 2.4 | 2.5 |
| Kingdom         6.0         2.1           1 Kingdom         1.3         4.2           area         1.6         4.0           rmany         2.6         9.2   |                                       | 2.6 | 2.6  | 2.6 | 2.5 | 2.5 | 2.5   | 2.5 | 2.5 |
| 1.3 4.2<br>1.6 4.0<br>2.6 9.2  | -1.1                                  | 1.8 | 1.6  | 1.6 | 1.7 | 1.9 | 2.0   | 2.1 | 2.2 |
| ny 2.6 9.2   | -2.3                                  | 2.7 | 2.0  | 2.2 | 2.3 | 2.5 | 2.4   | 2.5 | 2.5 |
| 2.6 9.2  | 1.1                                   | 2.0 | 1.3  | 1.2 | 1.2 | 1.6 | 1.9   | 2.2 | 2.5 |
|  | 1.5                                   | 2.8 | 2.0  | 1.8 | 1.8 | 2.1 | 2.3   | 2.6 | 2.8 |
|  | 5.4                                   | 5.2 | 4.9  | 5.0 | 4.9 | 4.9 | 4.9   | 4.9 | 5.0 |
| 13.7 9.2   | 5.7                                   | 6.1 | 5.7  | 5.8 | 5.8 | 5.9 | 5.9   | 5.9 | 5.9 |
| 5.8  | 2.2                                   | 3.5 | 4.0  | 4.1 | 4.0 | 4.3 | 4.3   | 4.4 | 4.5 |
| 8.9  | 10.7                                  | 8.9 | 8.5  | 8.4 | 8.4 | 8.4 | 8.4   | 8.4 | 8.4 |
|  | 4.3                                   | 4.4 | 4.2  | 4.2 | 4.1 | 4.0 | 4.0   | 4.0 | 4.0 |
| 9.6  | 5.1                                   | 4.5 | 4.2  | 4.2 | 4.1 | 4.1 | 4.1   | 4.1 | 4.1 |
|  | 3.0                                   | 3.8 | 3.8  | 3.8 | 3.8 | 3.8 | 3.8   | 3.8 | 3.8 |
| C  |                                       |     |      |     |     |     |       |     |     |
|  |                                       |     |      |     |     |     |       |     |     |
| 3.3 1.6  | 5.3                                   | 4.3 | 3.1  | 2.5 | 2.4 | 2.4 | 2.3   | 2.3 | 2.4 |
| 3.4 1.3  | 4.9                                   | 3.7 | 2.6  | 2.3 | 2.2 | 2.3 | 2.3   | 2.3 | 2.4 |
| foreign economies 2.1 .5   | 3.6                                   | 2.8 | 2.0  | 1.5 | 1.4 | 1.4 | 1.3   | 1.4 | 1.6 |
| 1  | 4.4                                   | 2.8 | 2.4  | 2.0 | 1.9 | 2.2 | 1.9   | 2.0 | 2.0 |
| .7 -1.2  | 2.3                                   | 0   | 4.   | 6   | 6   | 6   | <br>S | S   |     |
| 1gdom 5.1 2.7  | 4.5                                   | 7.6 | 3.3  | 2.0 | 1.8 | 1.7 | 1.7   | 1.9 | 3.3 |
| 1.7  | 3.3                                   | 3.5 | 2.7  | 2.0 | 1.8 | 1.6 | 1.6   | 1.7 | 1.8 |
| Germany 1.6 .8 1.0   | 3.1                                   | 3.2 | 2.3  | 1.9 | 1.7 | 1.5 | 1.5   | 1.7 | 1.7 |
|  | 6.9                                   | 5.7 | 4.0  | 3.5 | 3.3 | 3.2 | 3.2   | 3.2 | 3.2 |
| 3.6 2.2  | 7.6                                   | 5.7 | 3.5  | 3.1 | 2.9 | 2.8 | 2.8   | 2.8 | 2.8 |
| 1.9  | 6.0                                   | 6.7 | 3.9  | 3.1 | 2.9 | 2.8 | 2.8   | 2.8 | 2.7 |
| 2.6  | 9.0                                   | 4.9 | 3.5  | 3.0 | 2.8 | 2.7 | 2.7   | 2.7 | 2.7 |
| 3.4  | 5.1                                   | 5.4 | 5.4  | 4.4 | 4.3 | 4.2 | 4.1   | 4.1 | 4.1 |
| 2.5  | 4.8                                   | 4.6 | 4.9  | 3.9 | 3.9 | 3.7 | 3.7   | 3.7 | 3.7 |
| 5.9  | 7.4                                   | 9.3 | 6.9  | 5.3 | 4.9 | 4.9 | 4.9   | 4.9 | 4.9 |

| Measure and country          | 1000 |      |      |      |      |      |      | Projected |         |
|------------------------------|------|------|------|------|------|------|------|-----------|---------|
|                              | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011      | 2012    |
| Real GDP <sup>1</sup>        |      |      |      |      |      |      |      |           |         |
| Total foreign                | 3.9  | 4.0  | 4.1  | 4.3  | 8    | i,   | 4.1  | 3.4       | 3.5     |
| Previous Tealbook            | 3.9  | 4.0  | 4.0  | 4.2  | 8    | .ح   | 4.0  | 3.4       | 3.6     |
| Advanced foreign economies   | 2.6  | 2.8  | 2.6  | 2.4  | -1.8 | -1.5 | 2.6  | 2.1       | 2.3     |
| Canada                       | 3.7  | 3.1  | 1.9  | 2.5  | 6    | -1.1 | 3.2  | 2.6       | 2.5     |
| Japan                        | 1.1  | 2.9  | 2.1  | 1.8  | -4.6 | -1.8 | 2.6  | 1.7       | 2.0     |
| United Kingdom               | 2.4  | 2.4  | 2.7  | 2.4  | -2.7 | -2.8 | 1.5  | 2.3       | 2.5     |
| Euro area                    | 1.7  | 2.1  | 3.6  | 2.2  | -2.1 | -2.0 | 2.0  | 1.4       | 2.1     |
| Germany                      | 2    | 1.6  | 4.5  | 1.8  | -2.0 | -2.0 | 4.0  | 2.1       | 2.4     |
| Emerging market economies    | 5.6  | 5.8  | 6.2  | 6.7  | 4    | 3.0  | 6.0  | 5.0       | 4.9     |
| Asia                         | 6.0  | 7.7  | 7.8  | 8.8  | ×.   | 7.4  | 7.7  | 5.8       | 5.9     |
| Korea                        | 2.7  | 5.2  | 4.6  | 5.7  | -3.2 | 6.1  | 4.9  | 3.9       | 4.4     |
| China                        | 9.6  | 10.3 | 12.8 | 13.7 | 7.7  | 11.4 | 9.7  | 8.5       | 8.4     |
| Latin America                | 5.2  | 3.9  | 4.8  | 4.5  | 2    | 8    | 4.4  | 4.2       | 4.0     |
| Mexico                       | 4.6  | 3.6  | 4.1  | 3.7  | 6    | -2.2 | 4.4  | 4.2       | 4.1     |
| Brazil                       | 6.1  | 2.1  | 4.9  | 6.6  | 8.   | 5.0  | 5.0  | 3.8       | 3.8     |
| Consumer prices <sup>2</sup> |      |      |      |      |      |      |      |           |         |
| Total foreign                | 2.8  | 2.3  | 2.2  | 3.7  | 3.3  | 1.2  | 3.1  | 3.1       | 2.3     |
| Previous Tealbook            | 2.8  | 2.3  | 2.1  | 3.7  | 3.3  | 1.2  | 2.9  | 2.7       | 2.3     |
| Advanced foreign economies   | 1.8  | 1.6  | 1.4  | 2.2  | 2.0  | 5    | 1.8  | 1.9       | 1.4     |
| Canada                       | 2.3  | 2.3  | 1.4  | 2.5  | 1.8  | ×.   | 2.2  | 2.3       | 2.0     |
| Japan                        | ت    | -1.0 | ω    | i,   | 1.0  | -1.9 | .1   | 4         | .ٰ<br>ج |
| United Kingdom               | 1.4  | 2.1  | 2.7  | 2.1  | 3.9  | 2.1  | 3.4  | 3.7       | 2.2     |
| Euro Area                    | 2.3  | 2.3  | 1.8  | 2.9  | 2.3  | 4.   | 2.0  | 2.5       | 1.7     |
| Germany                      | 2.1  | 2.2  | 1.3  | 3.1  | 1.7  | ω    | 1.6  | 2.3       | 1.6     |
| Emerging market economies    | 3.9  | 3.0  | 2.9  | 5.1  | 4.6  | 2.2  | 4.3  | 4.1       | 3.2     |
| Asia                         | 3.1  | 2.6  | 2.4  | 5.5  | 3.7  | 1.3  | 4.2  | 3.8       | 2.8     |
| Korea                        | 3.4  | 2.5  | 2.1  | 3.4  | 4.5  | 2.4  | 3.6  | 4.1       | 2.8     |
| China                        | 3.2  | 1.4  | 2.1  | 6.6  | 2.6  | 9.   | 4.7  | 3.6       | 2.7     |
| Latin America                | 5.6  | 3.8  | 4.2  | 4.2  | 6.7  | 4.0  | 4.6  | 4.9       | 4.1     |
| Mexico                       | 5.3  | 3.1  | 4.1  | 3.8  | 6.2  | 4.0  | 4.3  | 4.3       | 3.7     |
| Brazil                       | 7.2  | 6.1  | 3.2  | 4.3  | 6.2  | 4.2  | 5.4  | 6.6       | 4.9     |

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

Greensheets

|  |                         |                         |                          | U.S. Cui<br>Qua          | U.S. Current Account<br>Quarterly Data | ount<br>a               |                               |                         |                         |                         |                         |                         |
|--|-------------------------|-------------------------|--------------------------|--------------------------|--|-------------------------|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|  |                         | 2                       | 2010                     |                          |  | 2                       | 2011                          | Projected               | be                      | 2                       | 2012                    |                         |
|  | Q1                      | Q2                      | Q3                       | Q4                       | Q1                                     | Q2                      | Q3                            | Q4                      | Q1                      | Q2                      | Q3                      | Q4                      |
|  |                         |                         |                          |                          | Bill                                   | ions of de              | Billions of dollars, s.a.a.r. | .a.r.                   |                         |                         |                         |                         |
| U.S. current account balance<br>Previous Tealbook      | <b>-434.9</b><br>-436.6 | <b>-491.2</b><br>-492.9 | <b>-507.2</b><br>-508.9  | - <b>462.5</b><br>-461.6 | <b>-510.1</b><br>-503.6                | <b>-509.6</b><br>-508.2 | <b>-528.2</b><br>-525.6       | <b>-483.8</b><br>-486.0 | <b>-480.9</b><br>-483.6 | <b>-451.4</b><br>-461.6 | <b>-449.0</b><br>-465.9 | <b>-430.5</b><br>-448.2 |
| Current account as percent of GDP<br>Previous Tealbook | -3.0<br>-3.0            | -3.6-<br>4.6-<br>4.8-   | -3.4<br>-3.5             | -3.1<br>- <i>3</i> .1    | -2.6-<br>4.6-<br>6.9                   | -3.3<br>5.3             | -3.4<br>-3.4                  | -3.1<br>- <i>3</i> .1   | -3.0<br>-3.1            | -2.8<br>-2.9            | -2.8<br>-2.9            | -2.6<br>-2.7            |
| Net goods & services                                   | -456.1                  | -530.6                  | -535.9                   | -468.7                   | -541.4                                 | -550.3                  | -564.4                        | -520.1                  | -500.5                  | -483.0                  | -478.5                  | -465.1                  |
| Investment income, net                                 | 168.8                   | 180.4                   | 172.6                    | 150.9                    | 168.5                                  | 163.9                   | 163.0                         | 159.7                   | 157.0                   | 154.8                   | 156.2                   | 158.0                   |
| Direct, net<br>Portfolio, net                          | e.c/2<br>107.1          | -106.2                  | 2/0.0<br>-103.4          | -116.3                   | -119.0                                 | 290.8<br>-126.9         | -129.9<br>-129.9              | -135.4                  | -140.4                  | -149.1                  | -153.2                  | -158.8                  |
| Other income and transfers, net                        | -147.6                  | -141.0                  | -143.9                   | -144.7                   | -137.3                                 | -123.2                  | -126.8                        | -123.4                  | -137.3                  | -123.2                  | -126.8                  | -123.4                  |
|  |                         |                         |                          | $\boldsymbol{A}$         | Annual Data                            | ta                      |                               |                         |                         |                         |                         |                         |
|  | 2004                    |                         | 2005                     | 2006                     | 2007                                   |                         | 2008                          | 2009                    | 2010                    |                         | Projected<br>2011       | 2012                    |
|  |                         |                         |                          |                          |  |                         | Billions of dollars           |                         |                         |                         |                         |                         |
| U.S. current account balance<br>Previous Tealbook      | -630.5<br>-630.5        |                         | - <b>747.6</b><br>-747.6 | -802.6<br>-802.6         | <b>-718.1</b>                          | ې ې                     | -668.9<br>-668.9              | -378.4<br>-378.4        | <b>-473.9</b>           |                         | -507.9<br>-505.8        | -453.0<br>-464 8        |
| Current account as percent of GDP<br>Previous Tealbook | -5.3<br>-5.3            |                         | -5.9<br>-5.9             | -6.0                     | -5.1<br>-5.1                           |                         | -4.7<br>-4.7                  | -2.7                    | -3.2<br>-3.2            |                         |                         | -2.8                    |
| Net goods & services                                   | -609.3                  |                         | -714.2                   | -759.2                   | -702.1                                 |                         | -698.8                        | -374.9                  | -497.8                  |                         | -544.1                  | -481.8                  |
| Investment income, net                                 | 73.4                    |                         | 78.8                     | 54.7                     | 106.6                                  |                         | 159.3                         | 129.2                   | 168.2                   |                         | 163.8                   | 156.5                   |
| Direct, net<br>Portfolio. net                          | 150.9<br>-77.5          | <b>—</b> ·              | 173.2<br>-94.4           | 174.0<br>-119.4          | 241.6<br>-134.9                        | 1                       | 287.7<br>-128.4               | 252.1<br>-122.8         | 276.4<br>-108.2         |                         | 291.6<br>-127.8         | 306.9<br>-150.4         |
| Other income and transfers, net                        | -94.5                   |                         | -112.2                   | -98.1                    | -122.6                                 |                         | -129.3                        | -132.8                  | -144.3                  |                         | -127.7                  | -127.7                  |

### Class II FOMC - Restricted (FR)

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# Abbreviations

| ABS       | asset-backed securities  |
|-----------|--|
| AFE       | advanced foreign economy   |
| AIG       | American International Group, Inc.   |
| ASEAN-4   | Association of Southeast Asian Nations (Indonesia, Malaysia,<br>the Philippines, and Thailand) |
| CDS       | credit default swap  |
| C&I       | commercial and industrial  |
| CPI       | consumer price index   |
| ECB       | European Central Bank  |
| ECI       | employment cost index  |
| EDO Model | Estimated Dynamic Optimization-Based Model   |
| EME       | emerging market economy  |
| E&S       | equipment and software   |
| ETF       | exchange-traded fund   |
| EU        | European Union   |
| FDIC      | Federal Deposit Insurance Corporation  |
| FOMC      | Federal Open Market Committee; also, the Committee   |
| GC        | General Collateral   |
| GDP       | gross domestic product   |
| GSE       | government-sponsored enterprise  |
| IMF       | International Monetary Fund  |
| IOER      | interest on excess reserves  |
| IP        | industrial production  |
| IRS       | Internal Revenue Service   |
| LCR       | liquidity coverage ratio   |
| Libor     | London interbank offered rate  |
| LLC       | limited liability company  |
| LSAP      | large-scale asset purchase   |
|           |  |

| MBS                                       | mortgage-backed securities   |
|---|--|
| MENA                                      | Middle East and North Africa   |
| NAIRU                                     | non-accelerating inflation rate of unemployment                                |
| NFIB                                      | National Federation of Independent Business                                    |
| NIEs                                      | newly industrialized economies (Hong Kong, Singapore, South Korea, and Taiwan) |
| OCC                                       | Office of the Comptroller of the Currency, Department of the Treasury          |
| OECD                                      | Organisation for Economic Co-operation and Development                         |
| OIS                                       | overnight index swap   |
| OPEC                                      | Organization of the Petroleum Exporting Countries                              |
| OTC                                       | over the counter   |
| P&C                                       | Productivity and Cost  |
| PCE                                       | personal consumption expenditures  |
| PMI                                       | purchasing managers index  |
| PPI                                       | producer price index   |
| repo                                      | repurchase agreement   |
| RMBS                                      | residential mortgage-backed securities   |
| SCOOS                                     | Senior Credit Officer Opinion Survey on Dealer Financing Terms                 |
| SFA                                       | Supplementary Financing Account  |
| SOMA                                      | System Open Market Account   |
| TALF                                      | Term Asset-Backed Securities Loan Facility                                     |
| Thomson<br>Reuters/<br>Michigan<br>survey | Thomson Reuters/University of Michigan Surveys of Consumers                    |
| TIPS                                      | Treasury inflation-protected securities  |
| TRS                                       | total return swap  |
| WTI                                       | West Texas Intermediate  |