

## **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.

# Report to the FOMC on Economic Conditions and Monetary Policy



## Book A

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

June 16, 2010

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## Domestic Economic Developments and Outlook

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The information we have received on economic activity since the time of the April projection—information that largely pertains to a period too early to reflect the influence of the recent turmoil in Europe—suggests that the economic recovery has been proceeding at a moderate pace, about as we had anticipated.<sup>1</sup> Businesses have been adding jobs and raising hours across a range of industries, and manufacturing output has been registering solid and widespread gains. Consumer spending continues to move higher, and business investment in equipment and software has been rising rapidly. On the less-favorable side, commercial construction continues to decline, the underlying pace of economic activity in the housing sector remains anemic, and spending by state and local governments is still being weighed down by ongoing fiscal pressures. On net, we are projecting that real GDP will rise at an annual rate of 3½ percent in the current quarter after having risen at a 3 percent rate in the first quarter—rates of growth just a touch faster than we projected in April.

However, because of intensifying concerns about the implications of the fiscal difficulties faced by some European countries, and the accompanying reaction in financial markets, some key factors influencing our forecast are now less expansionary than in our previous projection. Most importantly, the appreciation of the dollar and the drop in equity prices imply noticeably less demand for domestic production. These influences are only partially offset by the associated drop in oil prices and the declines in some interest rates. As a result, we now project real GDP to increase at an annual rate of 3 percent in the second half of this year and 3¾ percent in 2011, about ¾ percentage point slower during both periods than in the April forecast. With this reduced pace of output growth, we project the unemployment rate to come down more slowly, only to 9½ percent at the end of this year and to 8½ percent at the end of 2011.

The additional economic slack in this projection, as well as the stronger dollar and lower level of oil and other commodity prices, all work in the direction of lowering the inflation projection relative to the April forecast. However, with inflation expectations remaining well anchored, we have reduced our inflation forecast only slightly in response to these influences. Thus, we now project that core PCE prices will rise about ¾ percent

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<sup>1</sup> In the exhibits that accompany this first edition of the Tealbook, we transition immediately to using the term “previous Tealbook” to refer to the staff forecast in April.

both this year and next, versus a projection of a bit below 1 percent in April. Meanwhile, we expect oil prices to start to turn back up later this year following their recent drop, and on net, energy prices are not expected to push headline inflation very far from core over the forecast period.

## **KEY BACKGROUND FACTORS**

### **Monetary Policy**

We continue to assume that the FOMC will hold the target federal funds rate in the current range of 0 to  $\frac{1}{4}$  percent through the end of next year. Indeed, given the weaker economic outlook and lower inflation in this projection, we have pushed back the date at which the FOMC begins to raise the target for short-term interest rates until the summer of 2012, about one-half year later than in the April forecast. In terms of nontraditional policy actions, we now assume that the Federal Reserve will begin selling agency debt and MBS at a gradual pace at the beginning of 2013. Thus, compared with the April forecast, the Federal Reserve's balance sheet is projected to be somewhat smaller and more concentrated in holdings of Treasury securities, with the most notable revisions occurring over the longer term. This change in nontraditional policy led us to make a small upward adjustment to the projected path of longer-term interest rates next year as market participants are assumed to anticipate some of the effects of future sales.

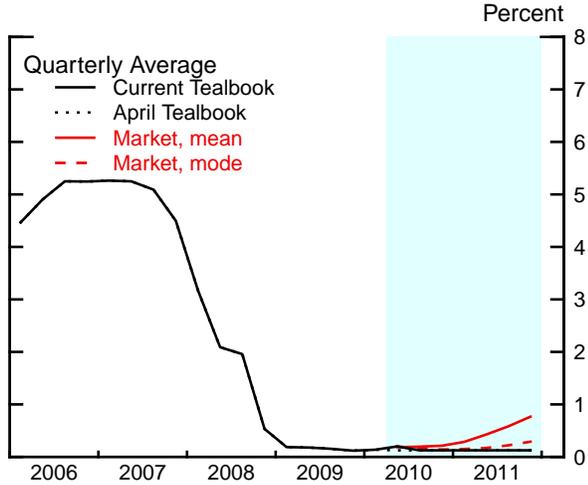
The 10-year Treasury yield has decreased about 45 basis points since the April projection was closed. The decline likely reflects both a flight to quality in response to the European situation and some downward revision to market participants' expectations for short-term interest rates. Going forward, we anticipate that the 10-year Treasury yield will increase about  $\frac{3}{4}$  percentage point to  $4\frac{1}{4}$  percent by the end of 2011. While this projected path is noticeably lower than in the April forecast, it is also a bit steeper. As before, the upward tilt reflects the gradual movement of the 10-year valuation window through the period of near-zero short-term rates and the expectation of further large increases in Treasury debt in coming years. Moreover, as mentioned, the new balance sheet projections are expected to result in slightly more upward pressure on Treasury yields over the medium term.

### **Financial Conditions**

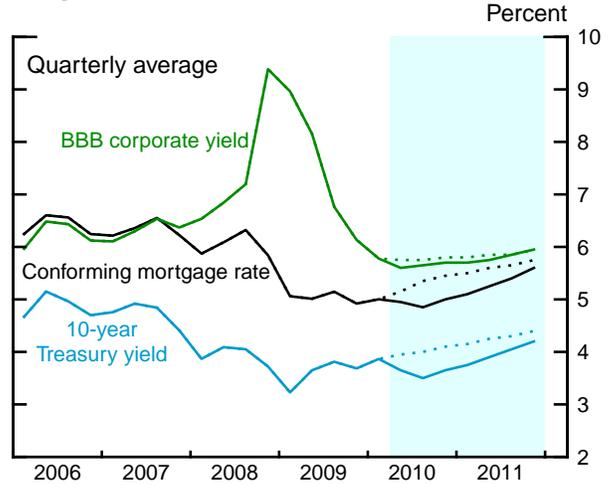
In recent weeks, conforming 30-year mortgage rates have decreased to  $4\frac{3}{4}$  percent, well below our forecast in April. We have lowered the path of mortgage

## Key Background Factors Underlying the Baseline Staff Projection

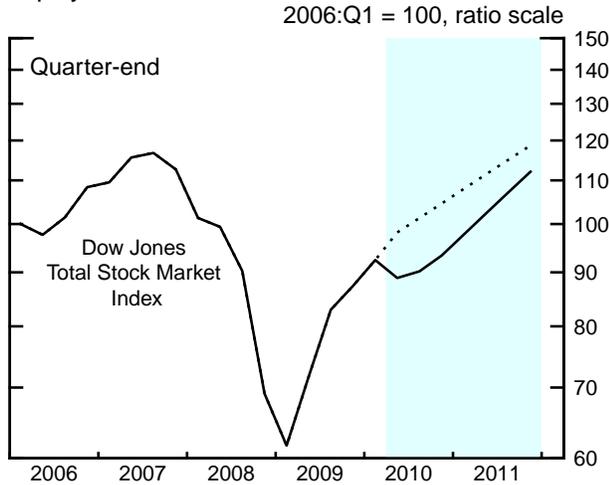
Federal Funds Rate



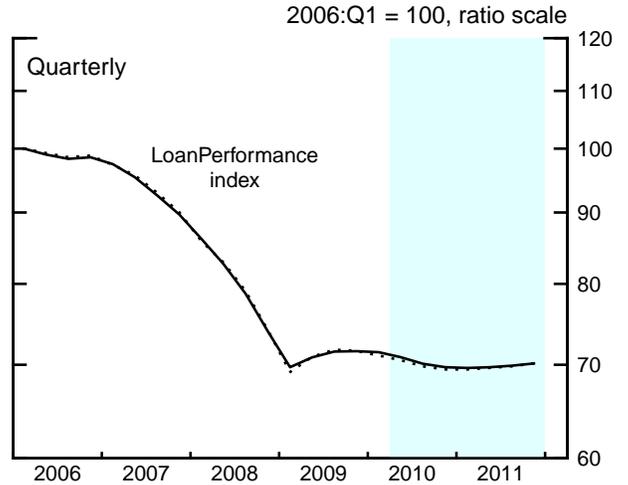
Long-Term Interest Rates



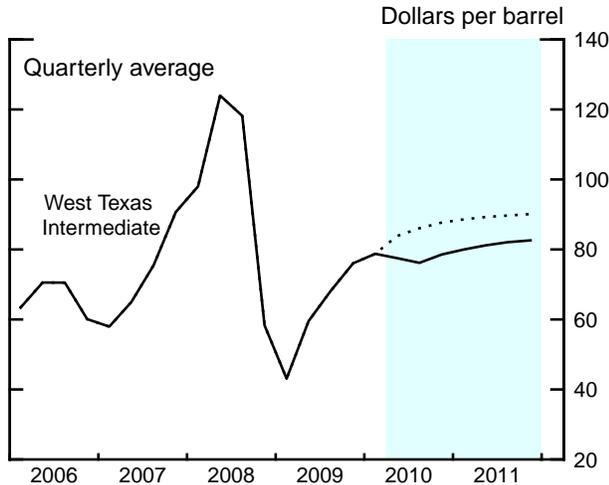
Equity Prices



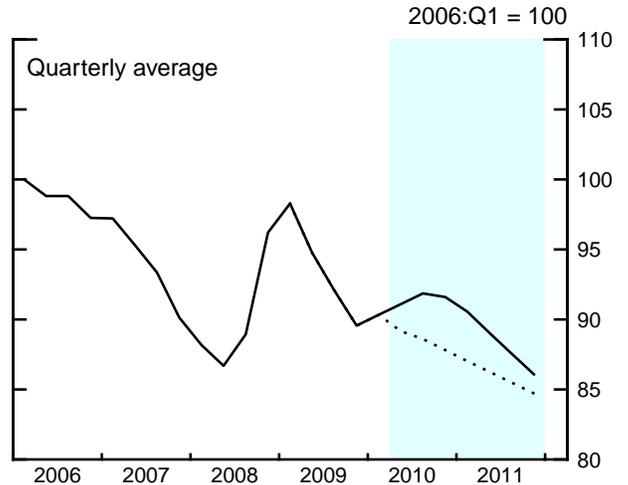
House Prices



Crude Oil Prices



Broad Real Dollar



Note: In each panel, shading represents the projection period, which begins in 2010:Q2.

rates over the projection period, but we expect them to rise to about 5½ percent by the end of 2011. By contrast, yields on BBB-rated corporate bonds have not changed much since mid-April, nor has our forecast for a slight increase through the end of next year.

The Dow Jones Total U.S. Stock Market Index is nearly 10 percent lower than we had expected in the April projection. We estimate that the equity premium has moved even further above longer-run norms, and we therefore project that stock prices will rise a bit faster than in the April forecast—at an average annual rate of 17 percent—to help bring the equity premium toward a more typical level. Even with this steeper trajectory for stock prices, the market value of corporate equities averages about \$2 trillion lower over the projection period than we assumed in April.

The recent readings on house prices have been about in line with our expectations that prices would soften this spring. We continue to assume that house prices, as measured by the LoanPerformance index, will remain relatively flat on balance, slipping 2½ percent over the course of this year and edging up in 2011. (See the box on house prices for further discussion of our projection.)

## **Fiscal Policy**

Because recent congressional actions indicate heightened concerns about the deficit and less appetite for additional stimulus measures, we have made two small changes to our fiscal policy assumptions. We scaled back the package of additional grants-in-aid to state and local governments from \$35 billion to \$25 billion, and we removed the \$12 billion extension of health-insurance subsidies for recently unemployed individuals (COBRA) that we had assumed previously. Our assumptions regarding other policies, such as the extension of emergency unemployment benefits, are the same as in the April forecast. With these two changes, we estimate that federal fiscal policy will add about ¾ percentage point to real GDP growth (on an annual-average basis) in 2010 and then will be essentially neutral for GDP growth in 2011. These numbers show only a touch more restraint than in April.

Our forecast for the unified budget deficit is roughly the same as in April, as the effect on revenues of the weaker GDP projection is largely offset by small downward revisions to our path for expenditures. Thus, the deficit still is expected to be about \$1.4 trillion (9¼ percent of GDP) in fiscal 2010 and \$1.3 trillion (8½ percent of GDP) in

### Staff Forecast of Residential House Prices

House prices have declined somewhat in recent months, reversing some of the modest increases that occurred in the spring of 2009. These declines have been widespread, with more than 40 percent of metro areas reporting that prices in April were lower than a year earlier. The recent weakness in house prices has been in line with our expectations.

As can be seen in the lower left figure, we expect house prices to fall a bit further over the rest of the year, as the support to demand provided by improving economic conditions and housing market stimulus packages is outweighed by the effects of high unemployment, large inventories of foreclosed properties, tight credit, and expectations by prospective buyers of only modest capital gains over the longer run. In all, we expect house prices to fall 2.6 percent during 2010 before holding about flat during 2011 (see table). These anticipated house price movements are small compared with the 30 percent drop seen from 2006:Q1 to 2009:Q1.

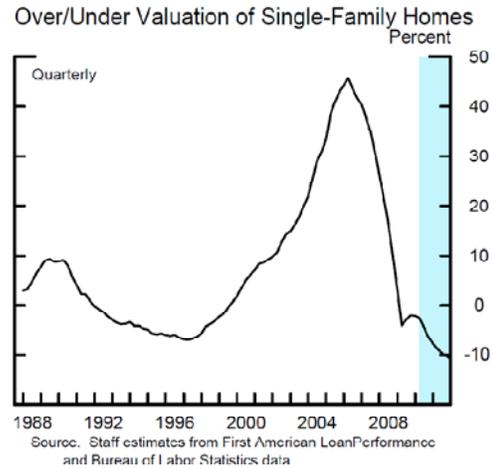
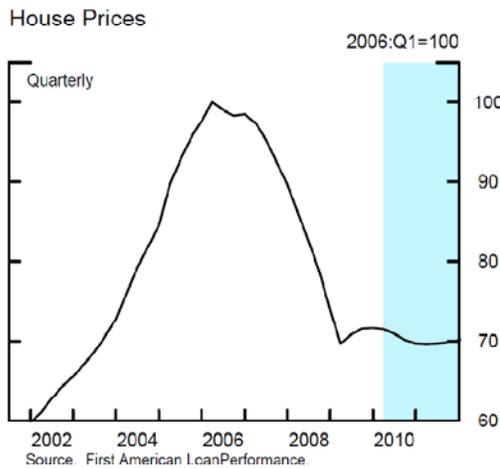
An important factor affecting our outlook is whether housing is expensive or cheap relative to historical norms. As a rough gauge of this relationship, we use the detrended ratio of prices

House Prices				
(Percent change, Q4/Q4)				
	2008	2009	2010	2011
Current	-17.6	-3.2	-2.6	.6
Previous	-17.7	-3.3	-3.0	1.0

Source: First American LoanPerformance.

to rents (see lower right figure). As of the first quarter of 2010, prices were about in line with historical norms according to this measure, compared with an estimate of a greater than 40 percent overvaluation in early 2006. By this metric, house prices in our projection will be undervalued relative to rents by about 10 percent at the end of 2011, reflecting the factors mentioned previously that are weighing on house prices.

Regarding foreclosures, we continue to expect that foreclosure mitigation efforts will have successfully prevented around 1 million foreclosures through the end of 2011. In the absence of these programs, our forecast for the level of house prices at the end of the next year would be about 4 percent below our baseline projection.



fiscal 2011. The slight narrowing of the deficit next year reflects the budgetary effects of the economic recovery along with the winding down of some stimulus-related spending.

### **The Foreign Outlook and the Dollar**

The incoming data on economic activity abroad have generally surprised to the upside, prompting us to revise up our estimates of aggregate foreign economic growth for the first half of this year. However, we are not carrying this strength forward, as we anticipate that stresses in financial markets and associated negative confidence effects resulting from the troubles in Europe will weigh on foreign activity. In the euro area in particular, we have marked down domestic demand substantially, although the effect of this markdown on euro-area GDP has been offset in part by an upward revision to net exports, which are boosted as a result of the weaker path of the euro. We now have foreign growth stepping down from a 4½ percent pace in the first half of this year to a 3¼ percent pace in the second half and next year.

The intensification of concerns about Europe and the potential ramifications for the rest of the world prompted a widespread retreat from risk that lifted the foreign exchange value of the dollar is against the euro and most other currencies. Since the April forecast, the dollar is up about 3½ percent on a trade-weighted basis against a broad set of currencies. Our outlook is predicated on the working assumption that financial conditions in Europe and elsewhere will remain strained through most of this year and will normalize only gradually starting early next year. By then, we expect that vulnerable European countries will be making some progress implementing their fiscal consolidation plans and the financial stop-gap measures announced by European leaders will be put in place. Given these assumptions, the dollar is now projected to remain around current levels through the end of this year. We anticipate that, as more time passes without adverse market events, investors will become more comfortable taking on greater risk, and thus we project that the broad real dollar will begin to give back some of its gains next year, depreciating at an annual rate of 6 percent. This projection leaves the path for the dollar above that in the previous forecast by 4½ percent at the end of this year and by 1½ percent at the end of next year.

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

Since the April forecast, oil prices have declined. The spot price of West Texas Intermediate (WTI) crude oil closed on June 15 at about \$77 per barrel, about \$6.50 lower than at the time of the previous forecast. Prices of futures contracts dated for

delivery through the end of next year have declined, on average, by a similar magnitude. In contrast, the far-dated futures price has moved down by less, settling at about \$95 per barrel as of June 15 and down just \$1.50 since the previous forecast. Market commentary has largely attributed the recent decline in oil prices to the sovereign debt problems in Europe and associated concerns that the global recovery may lose some of its momentum. Consistent with futures prices, we now project that the spot price of WTI will rise to nearly \$83 per barrel by the end of 2011, about \$7 lower than in the previous forecast.

Likely for the same reasons that generated the fall in oil prices, prices for metals and agricultural raw materials, especially lumber, have dropped sharply in recent weeks, leading us to revise down our forecast for nonfuel commodity prices in the third quarter. By contrast, food prices have registered only modest declines since the previous forecast. Consistent with quotes from futures markets, we project nonfuel commodity prices to increase at only a 2 percent pace, on average, for the remainder of the forecast period.

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

Much as we had expected in the April forecast, economic activity appears to have continued to increase moderately and inflation has remained low. Real GDP rose at an annual rate of about 3 percent in the first quarter, as final sales rose modestly and firms began to rebuild inventories. In the current quarter, real GDP growth is projected to step up to a 3½ percent pace as final sales rise more sharply.<sup>2</sup> The faster pace of growth this quarter reflects, in part, some factors that are likely to prove transitory, most notably an expected rebound in federal defense spending and a jump in residential investment associated with the expiration of the homebuyer tax credit.

### **Labor Markets**

We have received both the April and May labor market reports since the time of the April forecast, and the news on labor demand has been reasonably encouraging on the whole. Although private nonfarm payroll employment rose only 41,000 in May, that disappointing reading followed sizable increases in March and April.<sup>3</sup> Moreover,

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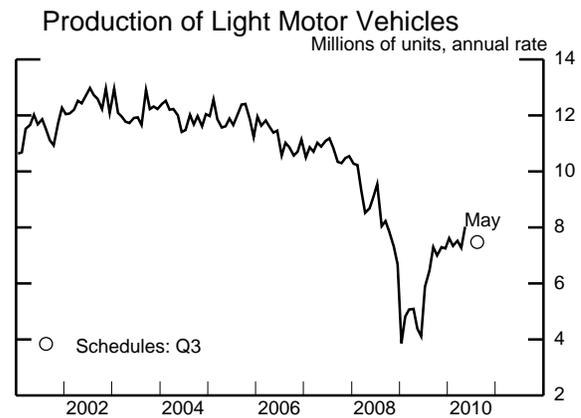
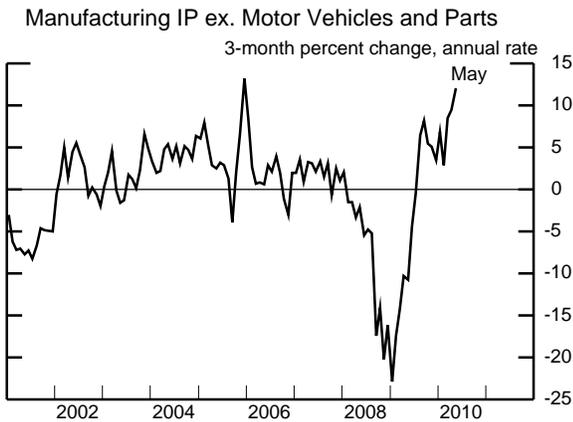
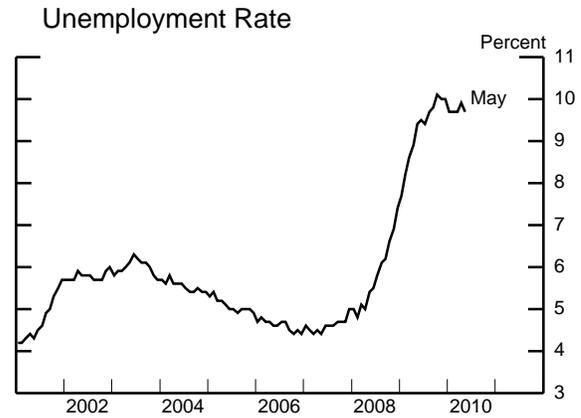
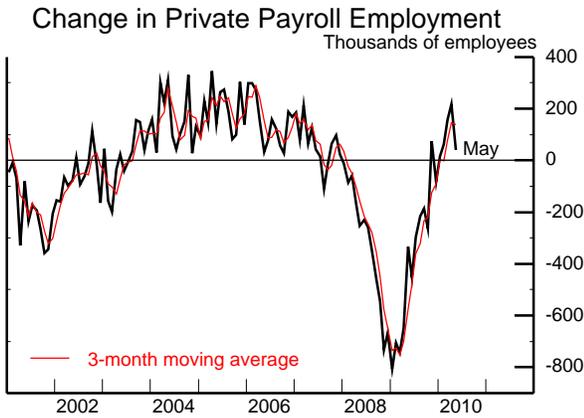
<sup>2</sup> The oil spill in the Gulf of Mexico is likely to have serious consequences for important industries (for example, fishing and tourism) in the affected localities. However, on its current dimensions, the disaster does not appear likely to register sizable effects at the national level.

<sup>3</sup> The hiring of 411,000 temporary workers in May for the decennial census brought the cumulative level of census hires to about 560,000—close to our previous assumption. We expect the winding down of the census to subtract about 250,000 workers from government payrolls in June, with the effect on the level of employment reaching essentially zero by September.

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

Measure	2010:Q1		2010:Q2	
	Previous Tealbook	Current Tealbook	Previous Tealbook	Current Tealbook
<b>Real GDP</b>	<b>2.9</b>	<b>3.1</b>	<b>3.5</b>	<b>3.6</b>
Private domestic final purchases	3.4	3.0	3.6	4.5
Personal consumption expenditures	3.6	3.4	2.1	2.9
Residential investment	-15.7	-10.6	22.3	18.7
Nonres. structures	-10.6	-15.2	.4	-.8
Equipment and software	17.0	13.5	15.8	20.3
Federal purchases	.9	1.2	8.4	6.9
State and local purchases	-4.2	-3.9	-.5	-.6
<b>Contribution to change in real GDP (percentage points)</b>				
Inventory investment	.7	1.9	-.2	-.3
Net exports	-.2	-.9	.1	-.2

### Recent Nonfinancial Developments (1)



Note: Schedules data are from Ward's Communications.

employment gains in the private sector have been increasingly widespread across industries over the past few months. In addition, employers have continued to increase workweeks—particularly in manufacturing, where the workweek of production and nonsupervisory workers reached its highest level since July 2000, and where overtime hours per worker now stand at pre-recession levels.

Relative to the April projection, the level of private employment in May was close to what we had expected. However, we did not anticipate the expansion of the workweek, and thus aggregate hours appear on track to post a somewhat larger gain than we had projected. In response to these developments, we have shifted some of our projected growth in total hours in the months ahead from employment to the workweek on the expectation that the ongoing uncertainty about the outlook will lead some employers to lengthen hours of their existing workers rather than to hire new employees. Moreover, initial claims for unemployment insurance are still elevated. All told, we now expect private payrolls to rise 150,000 in June, 75,000 less than in our April projection.

The unemployment rate in both April and May was  $\frac{1}{4}$  percentage point higher than we projected in the April forecast, stemming in part from higher-than-expected labor force participation. Given the downward revision we made to the projected pace of employment growth and the higher level of participation, we now expect the unemployment rate to hold at  $9\frac{3}{4}$  percent in June, the same as its first-quarter average.

### **The Industrial Sector**

Industrial production has continued to expand solidly, and we expect significant gains to continue in the near term. With sizable increases in April and May, IP looks on track to rise at an annual rate of  $7\frac{1}{2}$  percent in the second quarter—the fourth consecutive increase of about this size since its mid-2009 trough.<sup>4</sup> In recent months, increases have been widespread across industries; indeed, the May reading of the diffusion index of three-month changes in IP reached its highest level since 1987. The available near-term production indicators, such as the diffusion indexes for new orders from the national ISM survey and the regional manufacturing surveys, also point to further gains for overall IP in the coming months.

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<sup>4</sup> In reaction to the oil spill in the Gulf of Mexico, the Administration has announced a six-month moratorium on exploratory deepwater offshore drilling. The reduction in drilling activity is expected to subtract 0.05 percentage point from the change in total IP in June, and we expect a similarly sized boost when the moratorium expires. Looking ahead, moratorium-induced delays in bringing new wells online are expected to reduce crude oil production slightly in late 2010 and in 2011.

## Household Spending

Growth in consumer spending appears to have moderated this quarter from the sizable gains posted earlier this year. Real PCE was unchanged in April after having increased  $\frac{1}{2}$  percent in both February and March, and based on incoming data for retail sales and light motor vehicles, we project a gain of  $\frac{1}{4}$  percent in May. We expect real PCE to rise at an annual rate of a little less than 3 percent this quarter following last quarter's  $3\frac{1}{2}$  percent rate of increase.

The incoming information on various determinants of spending has been mixed. Disposable income has strengthened noticeably so far this year aided by the recovering labor market, and there have been indications that credit conditions have become somewhat less restrictive in recent months. However, the stock market has been falling, and consumer sentiment, though edging higher, still remains at relatively low levels.

Home sales in recent months surged in advance of the expiration of the scheduled homebuyer tax credit. However, sales by large homebuilders fell back sharply in May, and the underlying pace of housing demand does not appear to have firmed much since mid-2009.<sup>5</sup> And as for construction activity, single-family starts trended up through April but fell off considerably in May; permit issuance was low in May as well. On balance, we still expect real residential investment to show a bounce in the current quarter, but we have scaled back our near-term assumptions for both starts and sales reflecting our view that the recent data have indicated a stronger pull-forward from the tax credit than we had anticipated.

## Business Investment

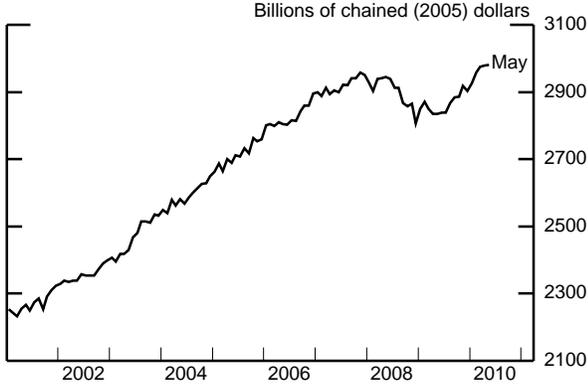
Real investment in equipment and software (E&S) has continued to rise briskly. We expect real E&S spending to increase at an annual rate of 20 percent this quarter, a little faster than the average pace seen over the previous two quarters. Shipments of nondefense capital goods excluding aircraft rose at an average monthly rate of about  $1\frac{1}{2}$  percent over the three months ending in April, with those increases broad based. Moreover, orders have outpaced shipments recently, suggesting that shipments will continue to move up in coming months. In particular, outlays for purchases of high-tech equipment appear to be rising rapidly this quarter. Finally, surveys of business

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<sup>5</sup> In order to qualify for the homebuyer tax credit, purchasers must have signed a sales agreement by the end of April and must close by the end of June.

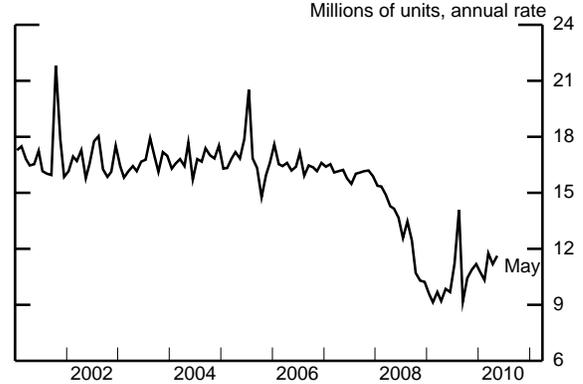
## Recent Nonfinancial Developments (2)

Real PCE Goods ex. Motor Vehicles

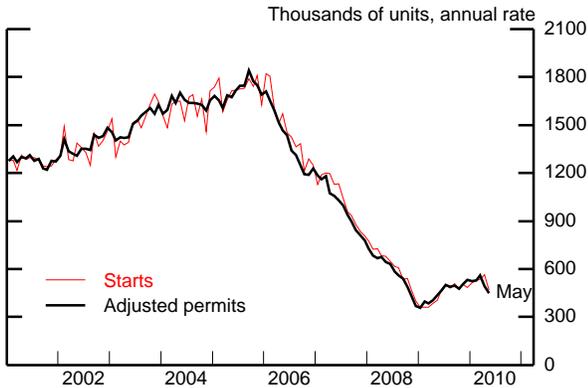


Note: Figures for March, April, and May are staff estimates based on available source data.

Sales of Light Motor Vehicles

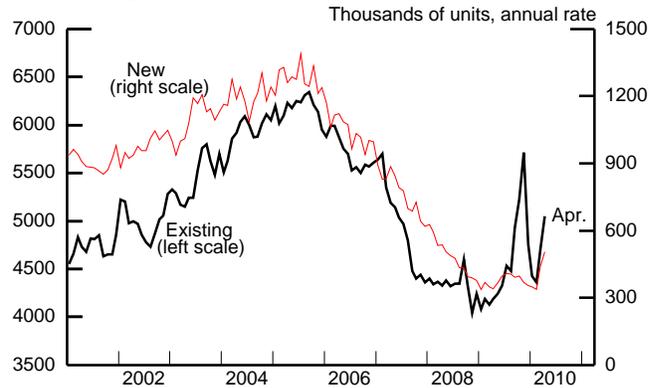


Single-Family Housing Starts

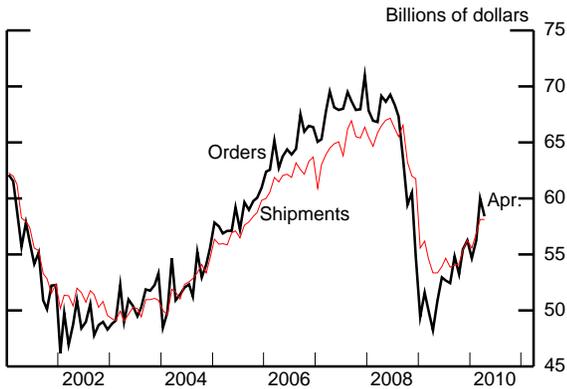


Note: Adjusted permits equal permits plus starts outside of permit-issuing areas.

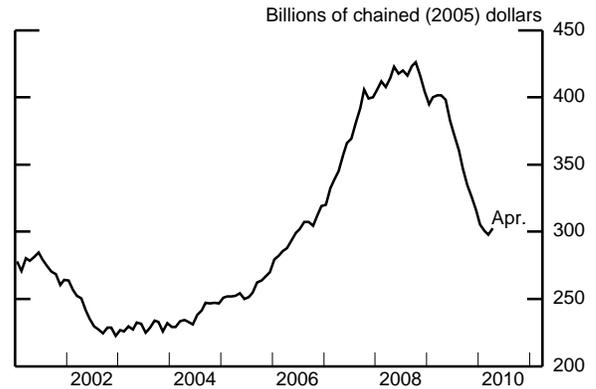
Single-Family Home Sales



Nondefense Capital Goods Excluding Aircraft



Nonresidential Construction Put in Place



conditions and sentiment remained strong through May, and earnings forecasts for producers of capital goods have been upbeat.

Meanwhile, there are hints that the decline in business spending on nonresidential buildings may be ebbing. Although spending on office and commercial structures was still falling steeply through April, with the weakness likely related to high vacancy rates, falling property prices, and the light volume of sales, outlays for new power plants and for manufacturing facilities have firmed in recent months. In addition, forward-looking indicators such as the diffusion index for architectural billings—which tends to lead spending growth by roughly two quarters—have improved to levels consistent with much smaller declines in spending than has occurred in recent quarters. In all, our projection now calls for only a small decline in building construction this quarter. At the same time, energy prices remain high enough to sustain solid gains in real spending on drilling and mining, and data through early June show that drilling activity has continued to climb, on balance, in recent weeks.<sup>6</sup>

Incoming data indicate that firms have begun to restock their inventories. Real nonfarm inventory investment turned positive in the first quarter, and data for April point to continued modest accumulations in the current quarter. None of this accumulation is expected to occur in the motor vehicles sector, however, where producers appear to be holding production steady despite actual and expected increases in sales. Excluding motor vehicles, we project that inventories will increase at an annual rate of \$28 billion in the second quarter, a bit more than as in the first quarter. Consistent with a return to stockbuilding, both the Census book-value data and the staff's flow-of-goods system indicate that inventory-sales ratios for most industries appear to have moved into a comfortable range.

## Government

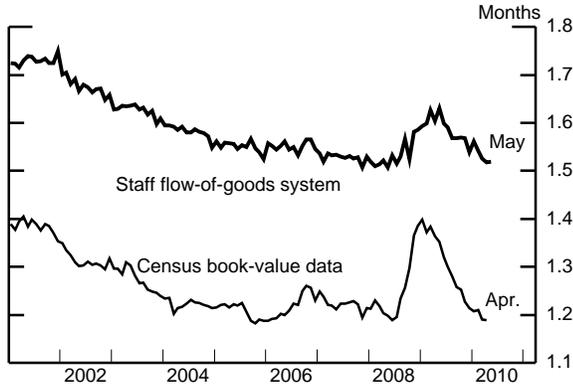
In the government sector, we expect total real federal purchases to rise at an annual rate of 7 percent in the second quarter after remaining about flat in the previous two quarters. Information from releases of the *Monthly Treasury Statement* through May suggests that defense spending is rebounding toward a level more consistent with appropriations; in addition, we estimate that nondefense spending is being boosted by

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<sup>6</sup> Offshore exploration represented only a small proportion (3 percent) of total drilling rigs in operation prior to the moratorium on new deepwater energy exploration. Thus, we expect the moratorium to have only a modest negative effect on drilling activity over the next six months—a reduction that is partially recovered over the remainder of the projection period after the moratorium expires.

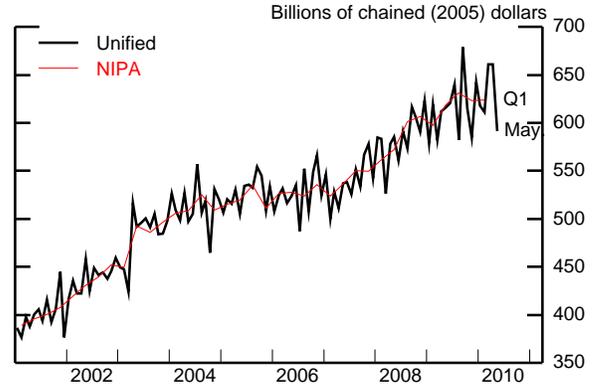
### Recent Nonfinancial Developments (3)

Inventory Ratios ex. Motor Vehicles



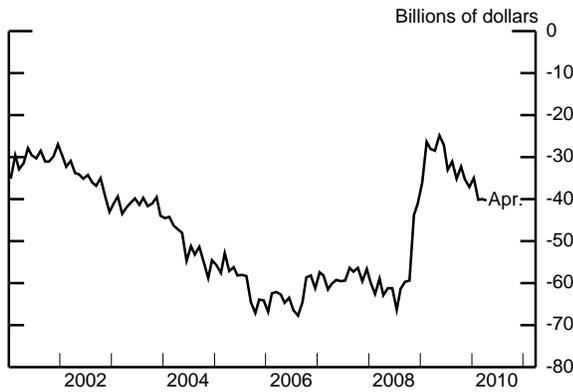
Note: Flow-of-goods system covers total industry ex. motor vehicles and parts, and inventories are relative to consumption. Census data cover manufacturing and trade ex. motor vehicles and parts, and inventories are relative to sales.

Defense Spending

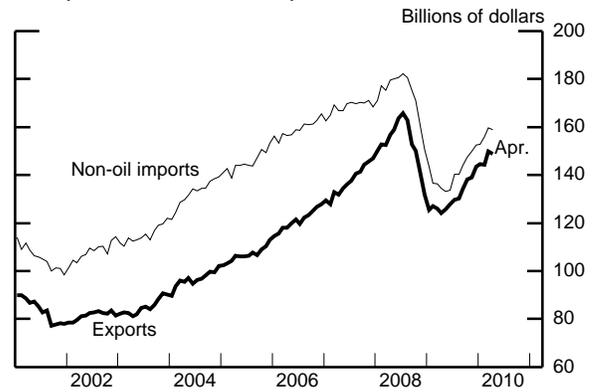


Note: The unified series is seasonally adjusted and deflated by BEA prices. The NIPA series excludes the consumption of fixed capital.

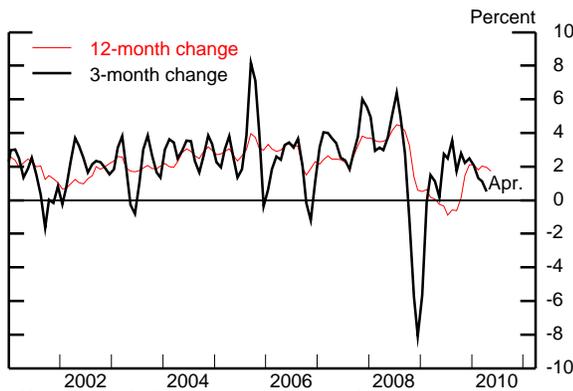
Trade Balance



Exports and Non-Oil Imports

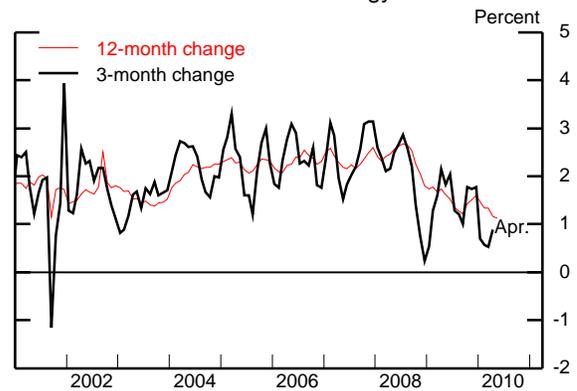


Total PCE Prices



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

PCE Prices ex. Food and Energy



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

stimulus funds and by the surge in hiring for the decennial census. Meanwhile, incoming data for state and local governments suggest that real outlays will just edge lower this quarter after marked declines in the preceding two quarters, as the sector still faces considerable fiscal strains. Employment in the state and local sector fell 11,000 per month, on average, in April and May, a slower pace of job loss than the 20,000 per month declines reported for the first quarter. And, after falling fairly steadily since mid-2009, state and local construction spending posted small increases in March and April.

### **Foreign Trade**

After subtracting almost 1 percentage point from real GDP growth in the first quarter, real net exports are expected to take  $\frac{1}{4}$  percentage point off GDP growth in the second quarter. We expect some moderation in the cyclical rebound of import and export growth this quarter, with imports expanding at about the same pace as exports but from a larger base. We estimate that real exports rose at an annual rate of  $8\frac{1}{4}$  percent in the second quarter, driven by continued robust GDP growth in foreign economies and the lagged effects of the dollar depreciation in 2009; this projection is a little lower than in our April forecast, mainly reflecting weaker-than-expected April trade data. We estimate that real imports rose at an annual rate of 8 percent in the second quarter, an upward revision from the April forecast. Given the downward revision to export growth and the upward revision to import growth, the projected contribution of net exports to GDP growth in the second quarter is  $\frac{1}{4}$  percentage point lower than in our previous forecast.

### **Prices and Wages**

Inflation has remained subdued. Core PCE prices rose at an annual rate of about  $\frac{1}{2}$  percent in the first quarter, and while we think that figure reflects a bit of transitory softness, our projection for the second quarter, at a little less than 1 percent, remains quite low. Indeed, core PCE prices posted another small increase of 0.1 percent in April, in line with our expectations in the April projection. Core goods prices have been declining so far this year, with particularly large declines in prices of apparel and of durable goods other than motor vehicles. Core services prices were also exceptionally soft in the first quarter, held down by declines in prices for housing services and by very low price increases for other market-based services around the turn of the year; in both cases, the data for April were a bit firmer.

Headline PCE prices were unchanged in April as energy prices moved lower. Consumer energy prices are projected to fall further in May and June in response to the

drop in crude oil prices since late April. As a result, on a quarterly average basis, total PCE prices are now expected to edge down this quarter, whereas in April, we had expected them to increase at an annual rate of  $\frac{3}{4}$  percent.

The incoming data on labor compensation continue to be quite weak. Reflecting new estimates of wage and salary payments from unemployment insurance tax records, the Productivity and Costs measure of compensation per hour now shows a decline of roughly 2 percent at an annual rate in the fourth quarter of last year. The increase in compensation per hour in the first quarter has also been revised down since the April projection, and this measure now appears to be increasing at only a 1 percent pace in the first half of this year. By contrast, the ECI measure of hourly compensation costs rose at an annual rate of  $2\frac{1}{2}$  percent in the first quarter, a bit more than we were expecting, reflecting outsized increases in health insurance costs and in employer contributions to retirement and savings plans. We do not expect that jump in benefits costs to be repeated this quarter and thus expect the change in the ECI to step down to about  $1\frac{3}{4}$  percent.

## **THE MEDIUM-TERM OUTLOOK**

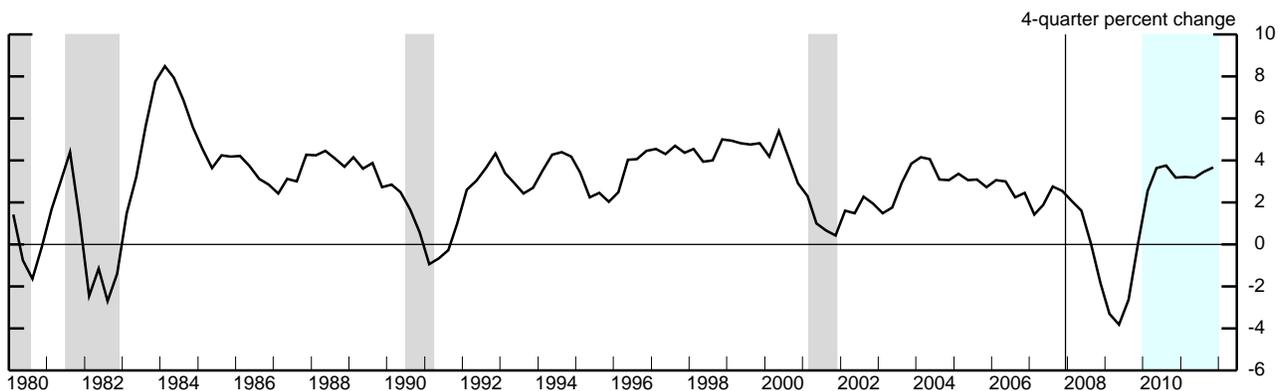
Our forecast has the economy continuing to expand at a moderate pace, with real GDP growth projected to be 3 percent at an annual rate in the second half of this year and  $3\frac{3}{4}$  percent in 2011. This rate of growth is noticeably slower than we projected in April, reflecting the lower level of equity prices and the stronger exchange value of the dollar. These forces are only partially offset by the lower oil prices and the lower path of Treasury yields and mortgage interest rates. Despite these downward revisions to real GDP growth, the basic story of our projection remains similar to that in previous forecasts. The accommodative stance of monetary policy, an attenuation of financial stress, the waning of adverse effects of earlier declines in wealth, and improving household and business confidence, all lead to a moderate recovery in economic activity over the projection period.

The swing from sharp inventory drawdowns in mid-2009 to modest stockbuilding in the first half of this year has contributed importantly to the upturn in real GDP thus far in the recovery. And in the period ahead, we expect some further modest impetus to production from a rising pace of inventory investment, as businesses attempt to keep stocks in line with the expansion of business sales. But we expect the contribution to GDP growth from inventories to be considerably smaller going forward than it has been

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

Measure	2008	2009	2010		2011
			H1	H2	
<b>Real GDP</b>	<b>-1.9</b>	<b>.1</b>	<b>3.4</b>	<b>3.0</b>	<b>3.7</b>
Previous Tealbook	-1.9	.1	3.2	3.7	4.4
Final sales	-1.4	-.1	2.6	2.6	3.4
Previous Tealbook	-1.4	-.1	3.0	3.1	4.1
Personal consumption expenditures	-1.8	1.0	3.1	2.3	3.1
Previous Tealbook	-1.8	1.0	2.8	2.8	3.5
Residential investment	-21.0	-12.5	3.0	4.9	17.1
Previous Tealbook	-21.0	-12.5	1.5	3.1	19.8
Nonresidential structures	3.2	-25.3	-8.3	-1.2	-.2
Previous Tealbook	3.2	-25.3	-5.3	.3	1.1
Equipment and software	-10.7	-7.5	16.8	11.3	10.8
Previous Tealbook	-10.7	-7.5	16.4	13.9	13.2
Federal purchases	8.9	3.6	4.0	3.0	1.4
Previous Tealbook	8.9	3.6	4.6	2.7	.8
State and local purchases	-.3	-.1	-2.3	.2	.5
Previous Tealbook	-.3	-.1	-2.4	.4	.7
Exports	-3.4	-.7	9.7	7.7	7.4
Previous Tealbook	-3.4	-.7	8.7	9.4	9.1
Imports	-6.8	-6.6	11.5	6.9	6.9
Previous Tealbook	-6.8	-6.6	7.0	8.5	7.4
	Contributions to change in real GDP (percentage points)				
Inventory change	-.5	.1	.8	.4	.3
Previous Tealbook	-.5	.1	.3	.7	.3
Net exports	.7	1.0	-.5	-.1	-.2
Previous Tealbook	.7	1.0	.0	-.2	.0

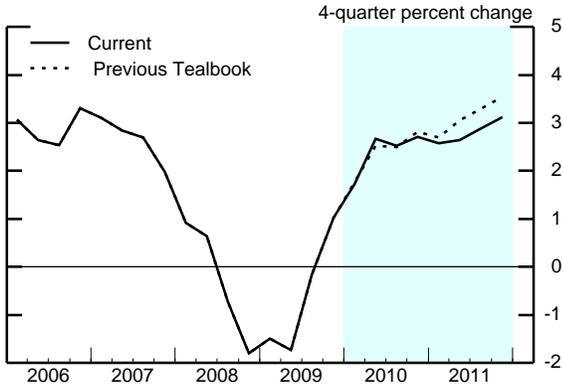
Real GDP



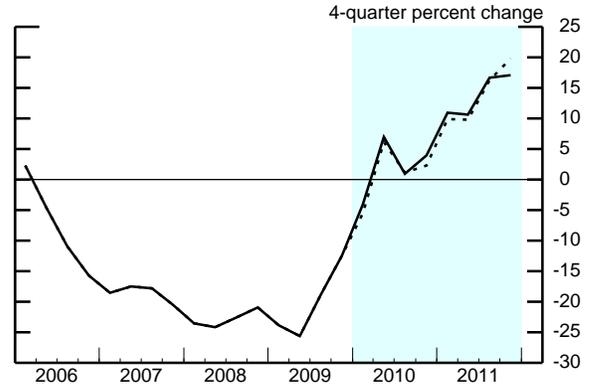
Note: The shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research (NBER). The vertical line represents the last business cycle peak as defined by the NBER.

### Components of Final Demand

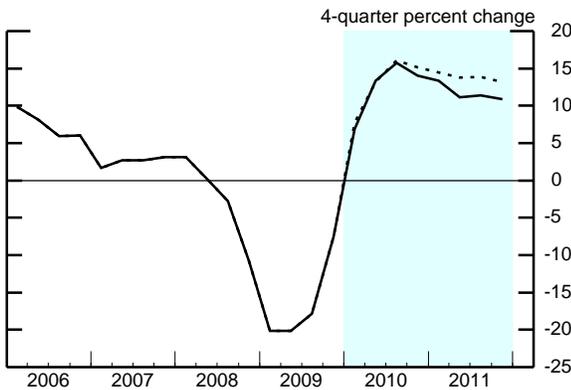
#### Personal Consumption Expenditures



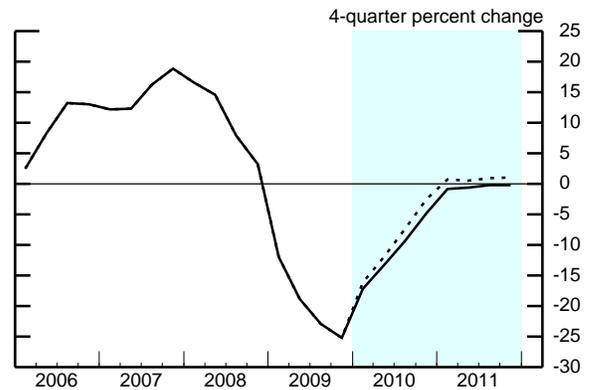
#### Residential Investment



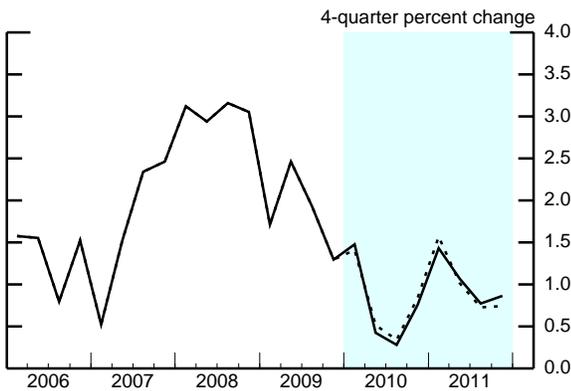
#### Equipment and Software



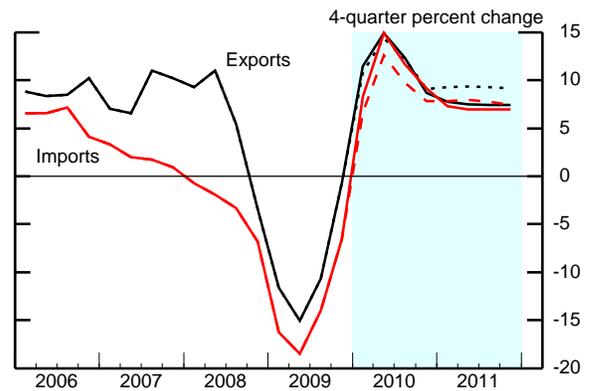
#### Nonresidential Structures



#### Government Consumption & Investment



#### Exports and Imports



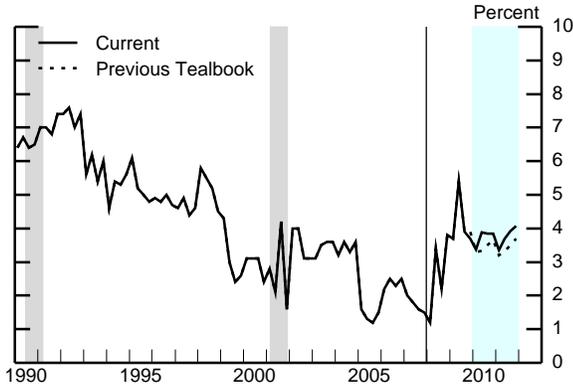
over the past few quarters. Rather, the expansion in real GDP is projected to be more heavily dependent upon a further strengthening of final demand.

The financial repair process remains an important driver of the anticipated firming of demand; accompanied by accommodative monetary policy, this process supports the availability of credit and helps set the stage for further improvements in household and business sentiment and spending. Over the past year, a marked improvement in broad financial conditions is evident in higher equity prices and lower interest rate spreads for corporate bonds and consumer loans. Nonetheless, some sectors of the economy remain noticeably hampered by tight credit conditions. This circumstance has been especially evident for bank-dependent borrowers such as small businesses, and in the construction sector, where lending for development of nonresidential buildings and multifamily housing has been very tight; many builders of single-family homes have also reportedly faced difficulty in obtaining loans for land acquisition, development, and construction. The spillover of recent events in Europe to U.S. financial markets has presented a setback to the improvement in financial conditions that we had anticipated, providing one reason why the rate of increase in real GDP in this projection, while still faster than the rise in potential, is relatively tepid for an economic recovery.

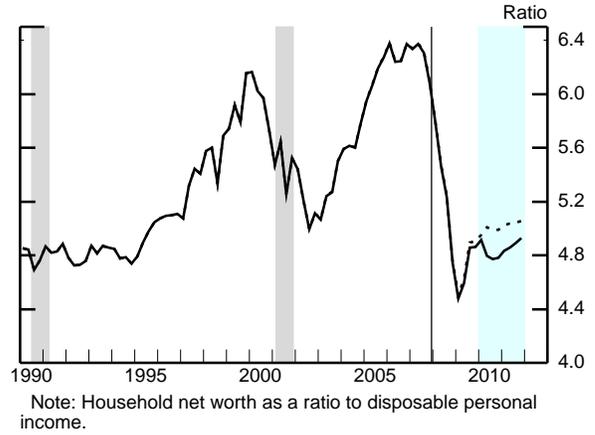
The housing sector also helps to explain the relatively modest pace of overall economic recovery in our projection. Limited credit availability to both homebuyers and builders, as discussed above, is part of the reason for our expectation that the housing sector will improve only slowly from the recent low levels of activity. The substantial overhang of existing homes on the market, associated with the high level of foreclosure activity, provides another reason for the slow pace of improvement, as this overhang lessens the need for construction of new homes. Nevertheless, we look for housing demand to continue to firm gradually in response to favorable affordability, further confirmation that house prices are no longer declining appreciably, and the ongoing improvement in job prospects. And, because the level of *new* home inventories is exceptionally low, and given the imperfect substitutability between new and existing homes stemming in part from location differences, stronger housing demand is likely to show through to new single-family construction to some extent. In all, our forecast calls for single-family starts to step up from their recent pace of about 500,000 units at an annual rate to a pace of a little less than 900,000 units by the end of next year—a level of construction that is still very modest by historical standards.

## Aspects of the Medium-Term Projection

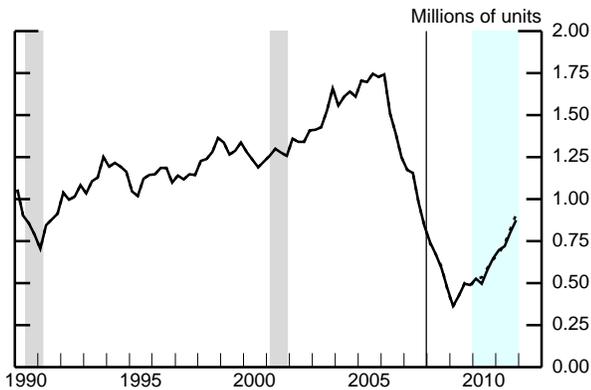
Personal Saving Rate



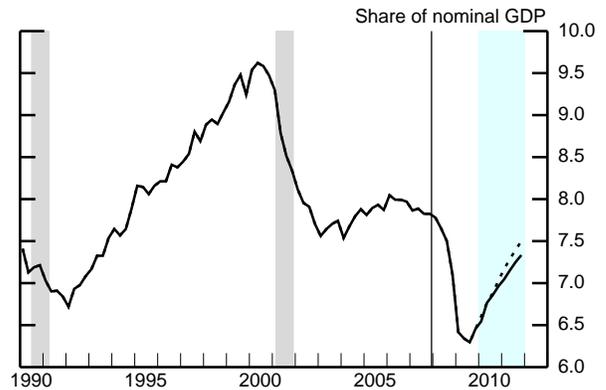
Wealth-to-Income Ratio



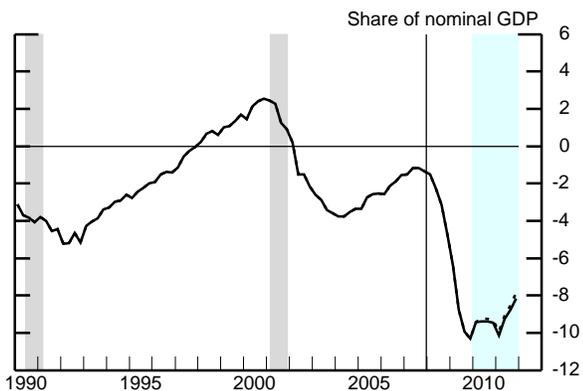
Single-Family Housing Starts



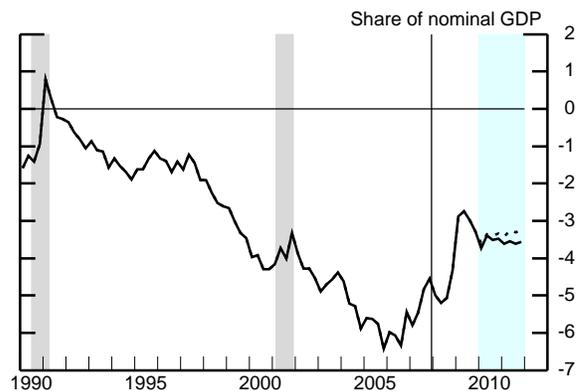
Equipment and Software Spending



Federal Surplus/Deficit



Current Account Surplus/Deficit



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

Note: The shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research (NBER). The vertical lines represent the last business cycle peak as defined by the NBER.

Although the downward revisions to wealth and income in this projection are expected to restrain the growth of consumer spending noticeably relative to the April forecast, we continue to expect that improving labor markets, increasing confidence in the durability of the recovery, greater access to credit, and a fading drag from earlier declines in household wealth will support the growth of consumer outlays over the forecast period. Real PCE is projected to rise at an annual rate of 2¼ percent in the second half of this year and to rise 3 percent in 2011. Given the downward revisions to wealth, the personal saving rate in this projection is almost ½ percentage point higher than we projected in April. (The box on the saving rate provides more detail about the rationale for our projection.)

The outlook for business investment is also revised down in this projection, as the weaker pace of activity implies a reduced demand for new capital. Still, the overall outlook for business purchases of equipment and software remains favorable, supported by the replacement of aging capital, the resumption of investment projects deferred during the financial crisis, and some expansion of capacity along with rising sales. The same cannot be said for investment in structures, which, although expected to cease its sharp rate of decline, is projected to do no better than level off through next year. The recovery of nonresidential construction following a downturn tends to lag the recoveries in other areas, likely because businesses require a greater degree of confidence in the durability of recovery to commit to the purchase of such large-scale, long-lived assets. Given the current weakness in demand fundamentals and tight credit conditions for this sector, we do not expect a meaningful recovery for some time.

The change in our assumptions for federal grants to state and local governments is small enough that it has only a slight effect on our projection for state and local spending. We now project these expenditures to edge up ½ percent in 2011 after declining 1 percent this year. Meanwhile, the rise in real federal expenditures is expected to slow from 3½ percent this year to 1½ percent in 2011, with a leveling off of defense purchases fully accounting for the slowdown.

On average, net exports are expected to subtract ¼ percentage point from real GDP growth in the second half of 2010 and in 2011, as imports increase at a slightly slower pace than exports but from a larger base. The growth rates of both imports and exports are projected to moderate from their robust recent pace as the cyclical bounceback in trade continues to fade. Relative to the previous forecast, exports have

been revised down reflecting both the stronger dollar and the downward revision to foreign growth, whereas imports are little revised, as the influence of the stronger dollar and weaker U.S. activity are about offsetting. Thus, our projected contribution of net exports to GDP growth in the medium term has been revised down, by about  $\frac{1}{4}$  percentage point. With this projection, the current account deficit remains at about  $3\frac{1}{4}$  percent of GDP.

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

### **Potential GDP and the NAIRU**

We have made no material change to our estimates of potential GDP in this projection. We assume that potential GDP will increase  $2\frac{1}{4}$  percent this year and  $2\frac{1}{2}$  percent in 2011, smaller than the  $2\frac{3}{4}$  percent gain in 2009. Last year, actual labor productivity rose  $5\frac{1}{2}$  percent, and we interpret some of that impressive increase as reflecting one-time efficiency gains that firms were able to achieve in a very difficult business environment. We see such gains as persistent—and so have built them into the level of structural multifactor productivity—but we do not believe them likely to be repeated going forward. Partially offsetting the projected slowdown in structural multifactor productivity growth is our anticipation of a larger contribution from capital deepening: We estimate that capital deepening contributed little to structural productivity growth in 2009, reflecting the lagged effect of the contraction in business investment since late 2007, but we expect the contribution from capital deepening to start to pick up this year and next as the projected recovery in business investment strengthens.

Also partially offsetting the projected slower pace of structural multifactor productivity growth is our assumption that the NAIRU will remain at  $5\frac{1}{4}$  percent through 2011, rather than rising as we believe occurred during 2009.<sup>7</sup> This assumption, in conjunction with anticipated population growth and a small downward trend in labor force participation associated with the aging of the workforce, leads us to project

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<sup>7</sup> The  $5\frac{1}{4}$  percent figure for the NAIRU does not include the effects of extended and emergency unemployment benefits (EEB). EEB programs add to the unemployment rate by inducing individuals who would otherwise have dropped out of the labor force to report themselves as unemployed in order to receive these benefits, and by enabling jobseekers to be more deliberate in their search. We estimate that these programs are currently boosting the unemployment rate by close to 1 percentage point, and we anticipate that this effect will only diminish a bit through next year. As a result, the amount of unemployment not representative of slack in resource utilization—which could be thought of as an “effective” NAIRU—is currently around  $6\frac{1}{4}$  percent and will edge down to about  $5\frac{3}{4}$  percent by the end of next year.

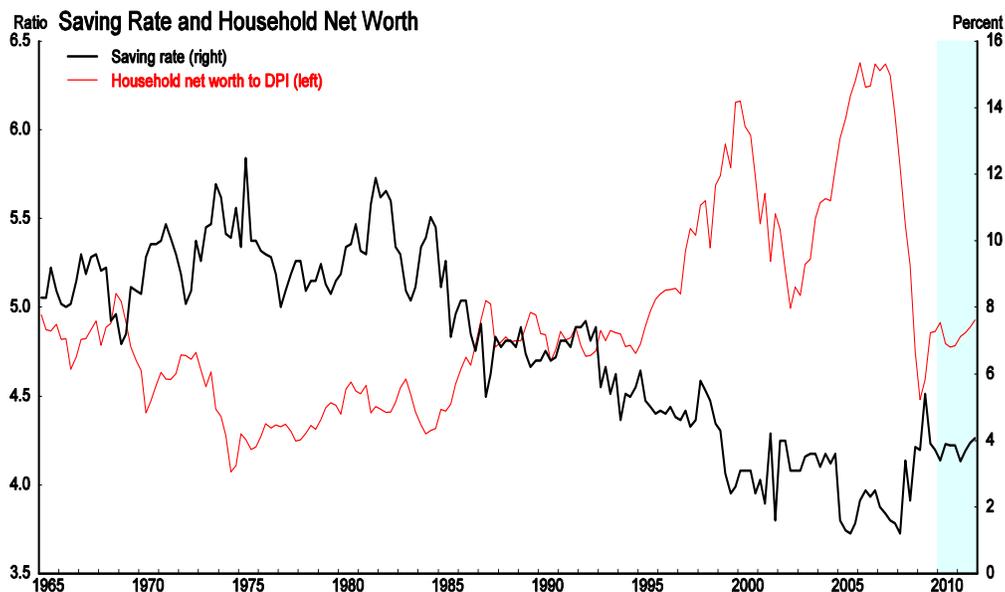
### The Saving Rate in the Staff Projection

In our medium-term projection we expect the personal saving rate to edge up from 3½ percent in the first quarter of this year to 4 percent by the end of 2011. Several factors contribute to this relatively flat contour for the personal saving rate.

As shown in the figure below, the personal saving rate has been negatively correlated with the ratio of household wealth to disposable income over the past several decades. Because wealth provides resources to fund household consumption, increases in wealth—holding income constant—tend to increase consumption and decrease the saving rate. The recent financial crisis and recession have drastically reduced household wealth, pushing the wealth-income ratio down from a post-WWII peak in 2007 to a reading that is currently close to its post war average, a level that we expect to be maintained throughout the medium term. All else being

equal, the adjustment of household spending to this lower wealth-income ratio would be consistent with a considerable rise in the saving rate from here forward.

However, other important factors have also changed. In particular, as shown in the bottom left figure on the following page, transfer income as a share of disposable income is now well above levels prevailing prior to the financial crisis, and the staff projects the transfer share to remain near this higher level throughout the medium term. Because transfer income is often provided as a guaranteed annuity—such as Social Security benefits to retired or disabled persons—or is contingent on a household’s income being temporarily low—such as unemployment benefits—households are likely to consume a relatively high fraction of this type of income. Indeed, historically, the ratio of



Source: U.S. Bureau of Economic Analysis for saving rate and DPI; Federal Reserve Board for household net worth.

transfer income to total disposable income is negatively correlated with the saving rate after conditioning on the wealth-income ratio. Therefore, we expect the higher transfer share to restrain the rise in the saving rate over the medium term.

Other factors are also likely to push down the saving rate over the projection period. Specifically, as the economic recovery proceeds, uncertainty about the economic outlook should diminish and reduce households' desire to save for precautionary reasons. Indeed, the stabilization in economic activity in the middle of last year led to a noticeable move up in consumer sentiment—shown in the figure in the bottom right—that coincided with a reduction in the

saving rate. As the recovery proceeds, we expect household confidence to increase further. In addition, we expect consumer credit conditions to ease over the projection period, which should also put some downward pressure on household saving.

Although there is considerable uncertainty about the magnitude of each of these influences on household saving, in our judgment the downward pull from larger transfer income, reduced precautionary saving and greater credit availability should largely offset the upward impetus from lower wealth. As a result, the projected rise in the saving rate over the medium term is small and gradual.



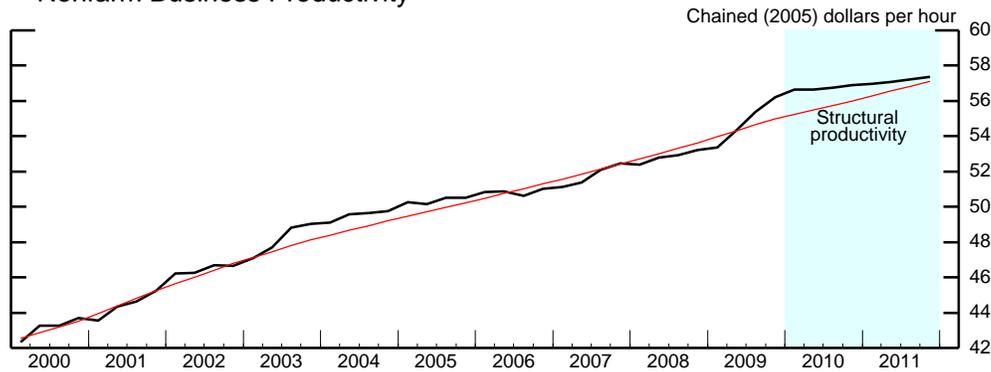
**Decomposition of Potential GDP**  
(Percent change, Q4 to Q4, except as noted)

Measure	1974-1995	1996-2000	2001-2007	2008	2009	2010	2011
Potential GDP	3.0	3.4	2.7	2.7	2.7	2.3	2.4
Previous Tealbook	3.0	3.4	2.7	2.7	2.7	2.3	2.5
<i>Selected contributions<sup>1</sup></i>							
Structural labor productivity	1.5	2.5	2.6	2.3	2.6	1.8	2.0
Previous Tealbook	1.5	2.5	2.6	2.3	2.6	1.8	2.1
Capital deepening	.7	1.5	.7	.5	.0	.2	.5
Previous Tealbook	.7	1.5	.7	.5	.0	.2	.6
Multifactor productivity	.5	.7	1.6	1.6	2.4	1.5	1.4
Previous Tealbook	.5	.7	1.6	1.6	2.4	1.5	1.4
Trend hours	1.7	1.1	.9	.8	.5	.8	.8
Previous Tealbook	1.7	1.1	.9	.8	.5	.8	.8
Labor force participation	.5	.0	-.2	-.2	-.2	-.2	-.2
Previous Tealbook	.5	.0	-.2	-.2	-.2	-.2	-.2

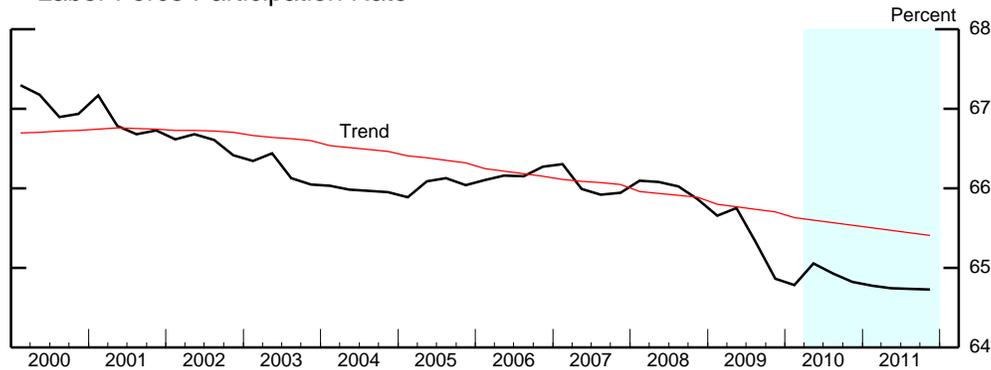
Note: Components may not sum to totals because of rounding. For multiyear periods, the percent change is the annual average from Q4 of the year preceding the first year shown to Q4 of the last year shown.

1. Percentage points.

**Nonfarm Business Productivity**



**Labor Force Participation Rate**



increases in trend hours of  $\frac{3}{4}$  percent this year and next, a little faster than last year's growth.

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

As just noted, we interpret some of last year's outsized rise in labor productivity as reflecting efficiency gains that will be persistent even if not repeated. But we also judge that firms have placed strains on workers that will not prove sustainable. Firms aggressively cut their staffing during the first half of last year and continued to reduce payrolls in the second half despite a rise in real GDP of nearly 4 percent at an annual rate. As a result, we judge the level of productivity to have moved well above its structural level by the end of last year.

As firms continue to become more confident about the durability of the recovery, we anticipate that they will further expand hiring to ease the strains on their existing workforces, holding productivity growth below its structural rate. Indeed, we estimate that labor productivity rose at an annual rate of about  $1\frac{1}{2}$  percent over the first half of this year—a little less than its structural rate—and we project productivity growth to slow to an average annual pace of less than 1 percent over the second half of this year and in 2011. Accordingly, we expect the pace of hours growth—and employment gains—to pick up in coming quarters. However, given the weaker GDP path in this forecast, we now expect the pickup in job growth to come more slowly than in our April projection, with increases in private payroll employment projected to average about 200,000 per month over the remainder of this year and 275,000 per month in 2011. This pace of job gains results in a gradual reduction in the unemployment rate from  $9\frac{3}{4}$  percent in the second quarter to about  $8\frac{1}{2}$  percent by the end of next year; that end point is almost  $\frac{1}{2}$  percentage point higher than in the April projection.

### **Resource Utilization**

The unemployment rate that we project for the end of 2011 remains some  $2\frac{3}{4}$  percentage points above the level consistent with the NAIRU adjusted for our estimate of the influence of extended and emergency unemployment benefits (EEB) on structural unemployment. This considerable degree of slack is expected to be accompanied by a number of other conditions consistent with a still-weak labor market, including a below-trend level of labor force participation and, in all likelihood, an unusually large concentration of workers experiencing unemployment spells of long duration.

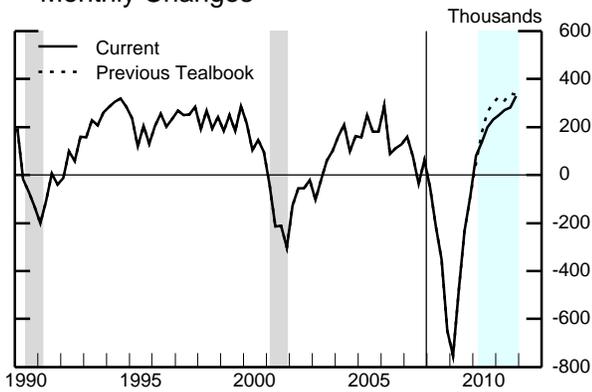
## The Outlook for the Labor Market

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

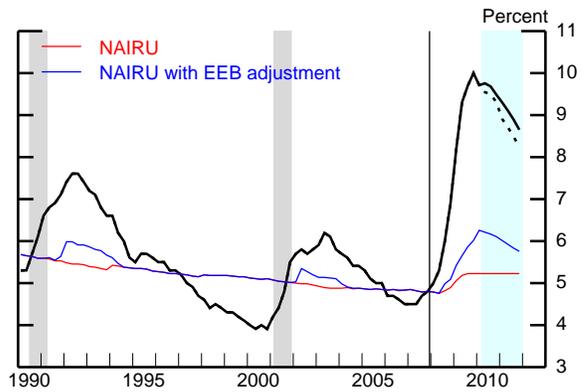
Measure	2008	2009	2010	2011
Output per hour, nonfarm business	1.4	5.6	1.2	.9
Previous Tealbook	1.4	5.6	1.3	.8
Nonfarm private employment	-2.7	-4.7	1.6	3.0
Previous Tealbook	-2.7	-4.7	1.9	3.6
Labor force participation rate <sup>1</sup>	65.9	64.9	64.8	64.7
Previous Tealbook	65.9	64.9	64.7	64.7
Civilian unemployment rate <sup>1</sup>	6.9	10.0	9.5	8.6
Previous Tealbook	6.9	10.0	9.3	8.2
<b>MEMO</b>				
GDP gap <sup>2</sup>	-4.8	-7.3	-6.5	-5.4
Previous Tealbook	-4.9	-7.3	-6.3	-4.5

1. Percent, average for the fourth quarter.
2. Percent difference between actual and potential GDP in the fourth quarter of the year indicated. A negative number indicates that the economy is operating below potential.

**Private Payroll Employment, Average Monthly Changes**

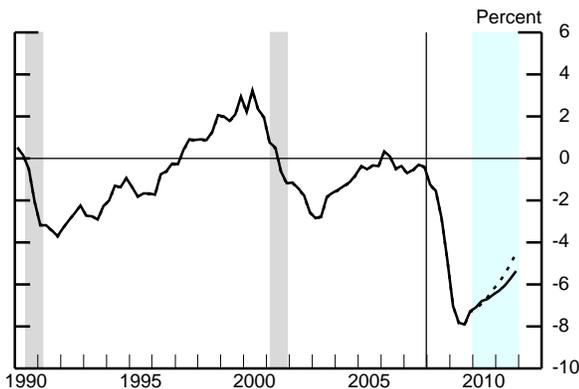


**Unemployment Rate**



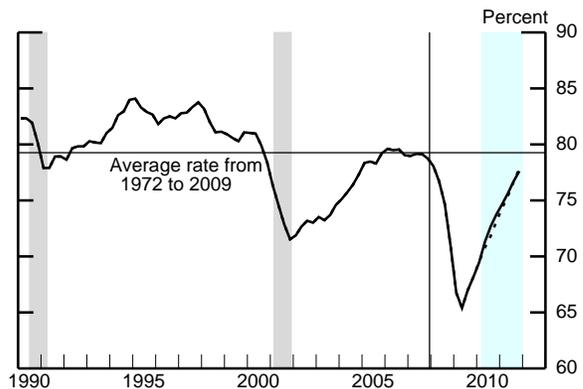
Note: The EEB adjustment is the staff estimate of the effect of extended and emergency unemployment compensation programs on the NAIRU.

**GDP Gap**



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

**Manufacturing Capacity Utilization Rate**



Our projection for the GDP gap also indicates that the amount of slack in the economy is expected to diminish but remain substantial through 2011. Given our downward revision for real GDP growth, we project the GDP gap to shrink from 7¼ percent at the end of 2009 to 5½ percent at the end of 2011; the gap at the end of next year is about 1 percentage point wider than in the April projection. We expect slack in the industrial sector to be taken up more quickly than in the economy as a whole, in part because manufacturing capacity is estimated to have declined in 2009 and to fall further in 2010. Even so, the factory operating rate at the end of the projection period is about 1¼ percentage points below its recent peak in the third quarter of 2007.

### **Compensation and Prices**

We continue to project that the wide margin of unused resources, along with the deceleration in price inflation, will restrain labor costs over the medium term. The Productivity and Cost measure of compensation per hour in the nonfarm business sector is projected to rise 1¾ percent this year and 2¼ percent next year; both figures are a little lower than in the April projection. Similarly, we expect the employment cost index to rise at an annual rate of about 2 percent over the forecast period. These modest increases in hourly compensation, in conjunction with the moderate projected increase in labor productivity, imply increases in unit labor costs of only about 1 percent, on average, this year and next.

The higher path of the dollar in this projection, together with the downward revision to the path for non-oil commodity prices, has led us to reduce our projection for core goods import prices (that is, goods excluding fuels, computers, and semiconductors). We now expect core import prices to edge lower over the second half of this year, down from a 2 percent projected rate of increase in the April forecast. We project that core import prices will increase a modest 1½ percent in 2011, as the dollar begins to depreciate and commodity prices remain flat. In all, we now anticipate that import prices will be about a neutral influence on core PCE prices over the projection period, rather than a small positive influence as was the case in April.

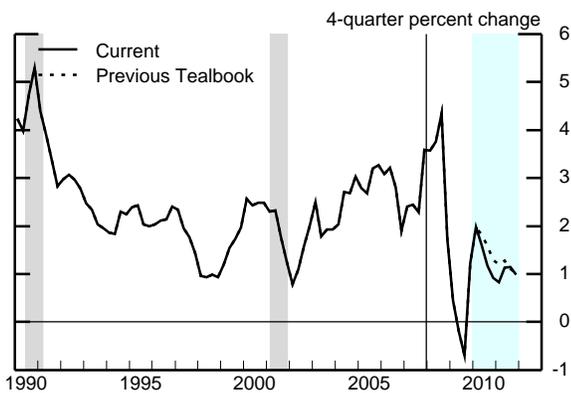
As noted earlier, the weaker paths of core import prices and oil prices, and the increase in resource slack, all augment the downward pressures on inflation in this forecast relative to those in the April projection; however, with inflation expectations anticipated to remain stable, we have made only a small downward revision to our core inflation projection. In particular, we project that core PCE prices will rise ¾ percent in

### Inflation Projections (Percent change, Q4 to Q4)

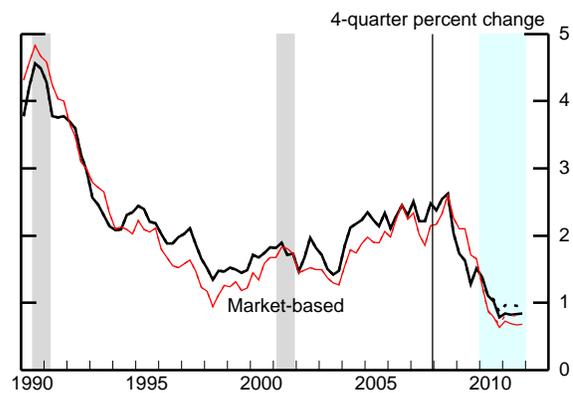
Measure	2008	2009	2010	2011
PCE chain-weighted price index	1.7	1.2	.9	1.0
Previous Tealbook	1.7	1.2	1.3	1.0
Food and beverages	6.8	-1.7	1.5	.7
Previous Tealbook	6.8	-1.7	1.7	.7
Energy	-9.1	1.1	2.3	3.9
Previous Tealbook	-9.1	1.1	7.6	2.4
Excluding food and energy	2.0	1.5	.8	.8
Previous Tealbook	2.0	1.5	.9	.9
Prices of core goods imports <sup>1</sup>	3.8	-1.6	1.7	1.5
Previous Tealbook	3.8	-1.6	2.7	1.2

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

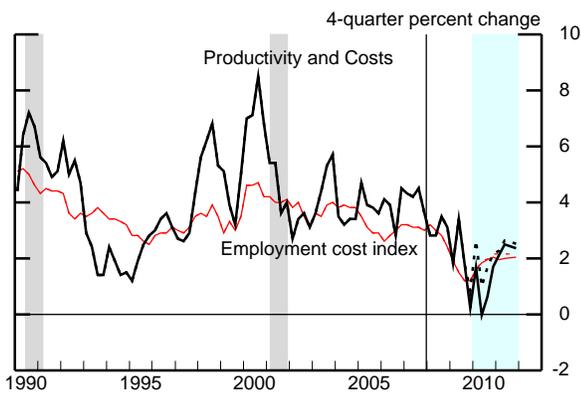
Total PCE Prices



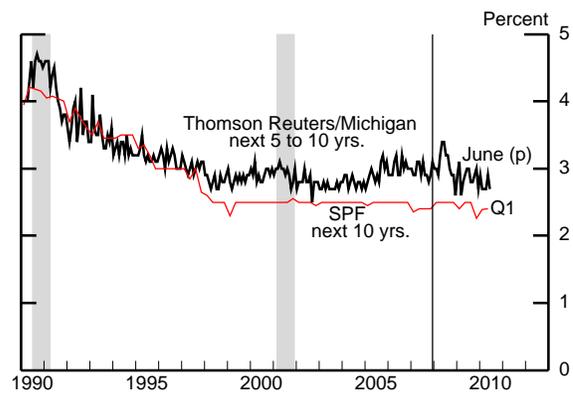
PCE Prices ex. Food and Energy



Compensation per Hour



Long-Term Inflation Expectations



Note: The SPF projection is for the CPI.  
p Preliminary.

Note: The shaded bars indicate a period of business recession as defined by the National Bureau of Economic Research (NBER). The vertical lines represent the last business cycle peak as defined by the NBER.

both 2010 and 2011, just a touch below the April projections. The lower path of oil prices in this forecast has led us to revise down our projection for headline inflation this year by more than core, and we now look for headline inflation and core inflation to be about the same this year. Next year, we project overall PCE prices to rise 1 percent, just a bit above core.

## THE LONG-TERM OUTLOOK

We have extended the staff forecast to 2014 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 April meeting.
- Redemptions, prepayments, and sales of agency debt and MBS are assumed to significantly reduce holdings of longer-term securities in the Federal Reserve's portfolio by the end of 2014. This decrease in the Fed's holdings is assumed to contribute about 25 basis points to the rise in the 10-year Treasury yield from 2012 through 2014.
- Risk premiums on corporate bonds and equity, which have widened in this projection, decline gradually. This assumption is consistent with the view that the threat of systemic disruptions to global financial markets gradually abates. Banks ease their lending standards somewhat further beyond 2011.
- Fiscal stimulus policies continue to boost the level of government spending through 2012. The federal government budget deficit narrows to about 5 percent of GDP by the end of 2014. This improvement reflects the effects of the economic recovery on tax receipts and transfer payments, as well as further policy actions after 2011 aimed at reducing the deficit.
- From 2012 to 2014, the foreign exchange value of the dollar is assumed to depreciate 1¼ percent per year in real terms. The price of WTI crude oil rises gradually to nearly \$90 per barrel by the end of 2014, consistent with futures prices. Under these assumptions, movements in the prices of energy and imports have only minor implications for domestic inflation in the extension.

Foreign real GDP expands, on average, about 3½ percent per year from 2012 through 2014, with foreign output gaps continuing to narrow.

- With emergency and extended unemployment benefit programs assumed to continue winding down over 2012, the “effective” NAIRU falls from 5¾ percent at the end of 2011 to 5¼ percent by the end of 2012 and then remains at that level through 2014. Potential GDP is assumed to expand just above 2½ percent per year, on average, from 2012 to 2014.

The unemployment rate enters 2012 at a very high level, and inflation is well below the assumed long-run target. Under the assumptions used to construct the extension, the federal funds rate remains at its effective lower bound through the middle of 2012. From that point on, the federal funds rate climbs steadily, reaching 2½ percent by the end of 2013 and 3½ percent in 2014.<sup>8</sup> Real GDP continues to increase faster than potential, decelerating gradually after 2012 as pent-up demand is satisfied and interest rates rise. The unemployment rate falls to the NAIRU by late 2014. Core PCE inflation moves up modestly after 2011 as economic activity recovers and long-run inflation expectations are assumed to remain well anchored.

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<sup>8</sup> In the long-run outlook, the federal funds rate ( $R$ ) follows the prescriptions of a Taylor-type rule of the form  $R = 2.5 + \pi - 1.1(u - u^*) + 0.5(\pi - 2)$ , subject to the zero lower bound constraint. In this expression,  $\pi$  denotes the four-quarter rate of core PCE inflation,  $u$  is the civilian unemployment rate, and  $u^*$  is the staff estimate of the NAIRU (with an adjustment for the temporary effects on unemployment of the extended and emergency unemployment benefit programs). In essence, this is just the traditional Taylor rule, rewritten in terms of the unemployment gap, with the coefficient on resource utilization appropriately rescaled.

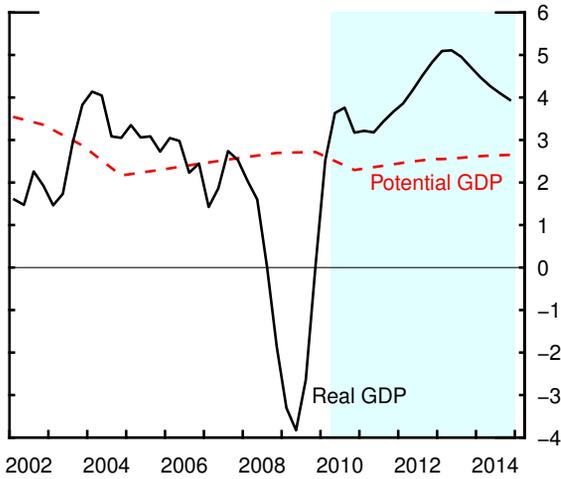
### The Long-Term Outlook

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

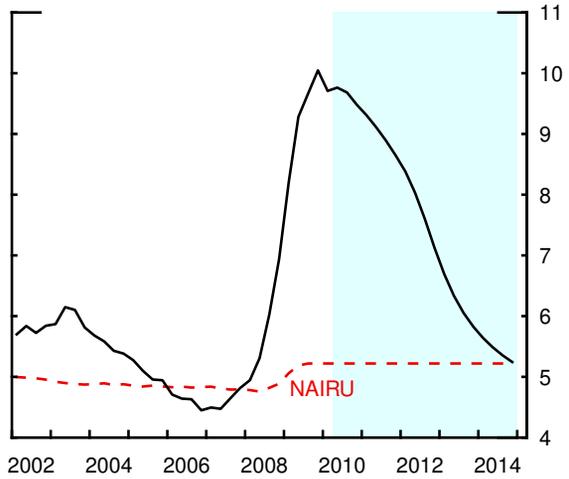
	2010	2011	2012	2013	2014
Real GDP	3.2	3.7	4.8	4.7	3.9
Civilian unemployment rate <sup>1</sup>	9.5	8.6	7.1	5.8	5.2
PCE prices, total	.9	1.0	1.0	1.2	1.5
Core PCE prices	.8	.8	1.0	1.2	1.4
Federal funds rate <sup>1</sup>	.1	.1	.8	2.5	3.5

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

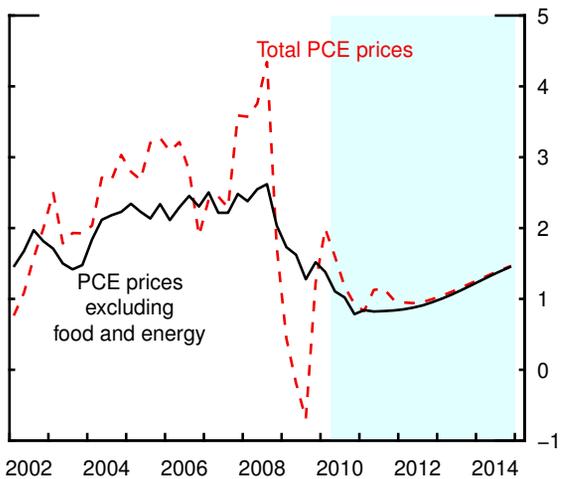
Real GDP  
4-quarter percent change



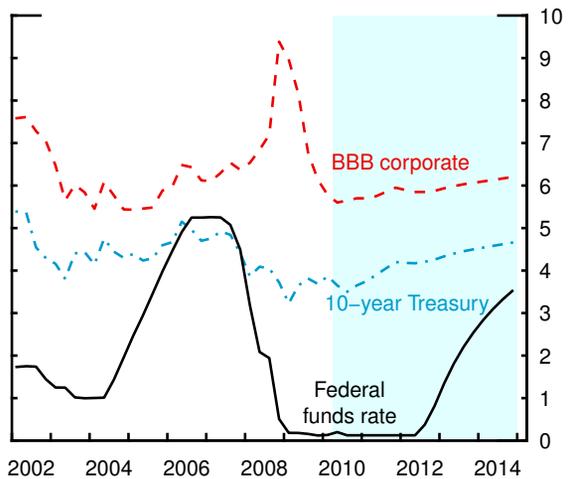
Unemployment Rate  
Percent



PCE Prices  
4-quarter percent change



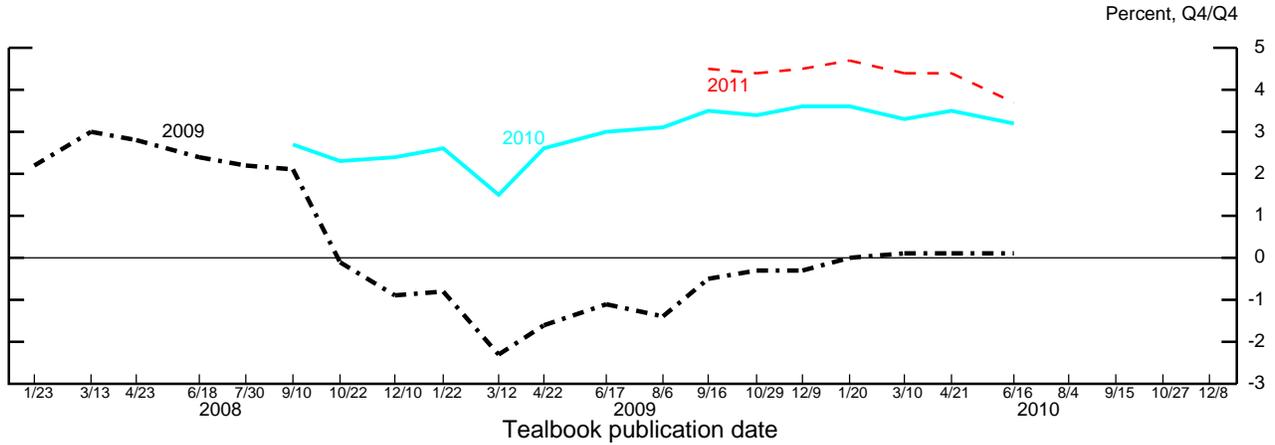
Interest Rates  
Percent



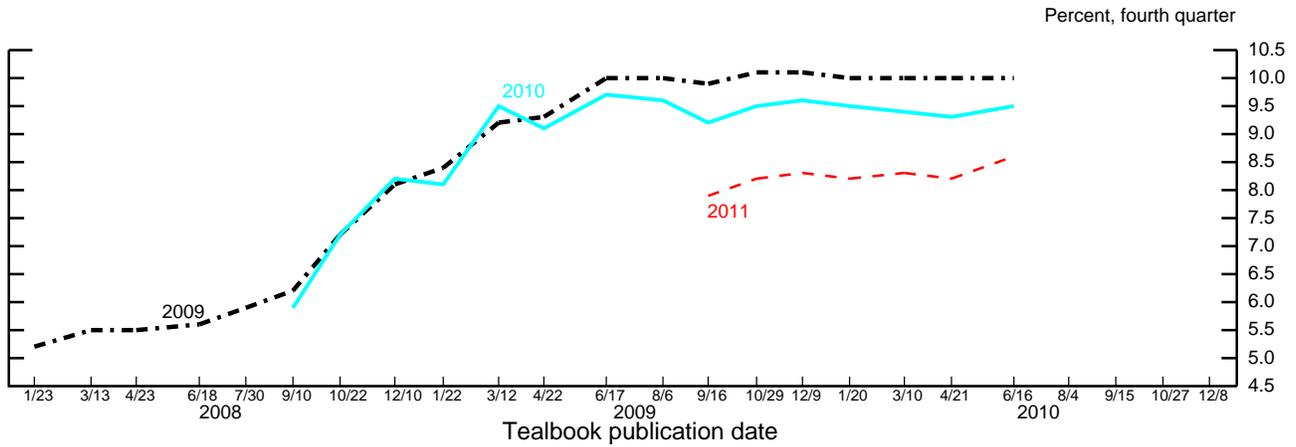
Note: In each panel, shading represents the projection period.

### Evolution of the Staff Forecast

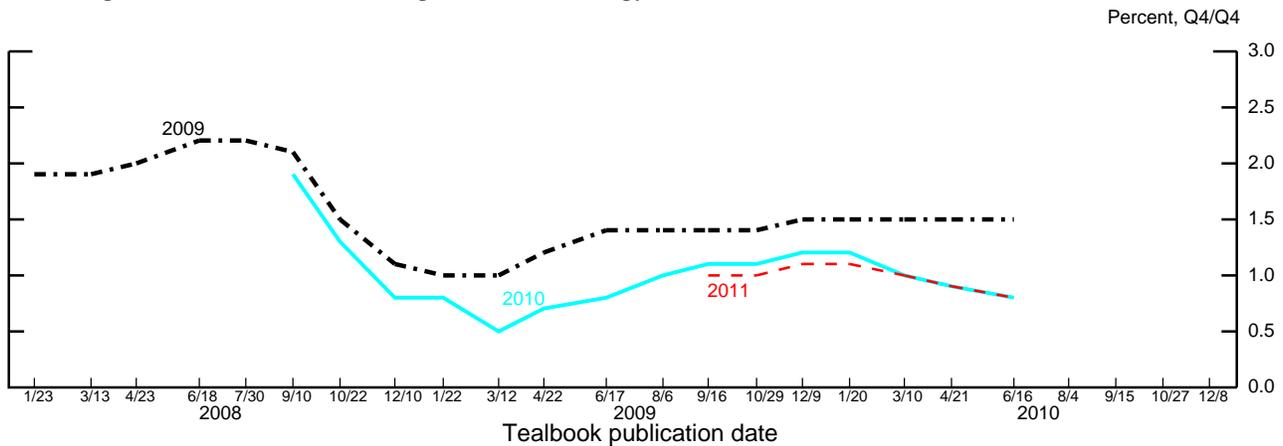
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy\*



\*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

Although incoming data on economic activity abroad have generally surprised on the upside, we expect the recent deepening of global financial stresses associated with the debt crisis in Europe to hold down activity in Europe and in much of the rest of the world as well. Accordingly, we have marked down our forecast for growth abroad starting in the second half of this year.

Growth in the first quarter turned out to be significantly higher than we were anticipating at the time of the April forecast in Canada, Japan, Brazil, and a number of emerging Asian economies. Although Mexican GDP reportedly contracted, we are inclined to discount that outcome as other Mexican data were more upbeat. Foreign indicators for the second quarter—such as industrial production, retail sales, and exports—point to continued momentum for the global economy. All told, we have marked up our estimate for aggregate foreign growth by ½ percentage point for the first half of this year, to 4½ percent.

### Summary of Staff Projections

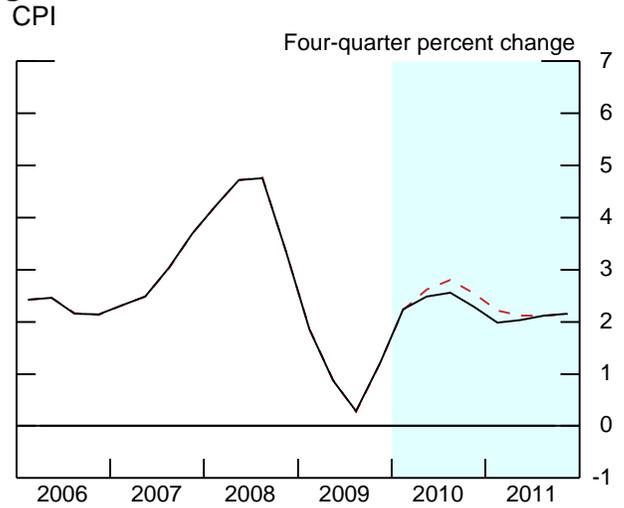
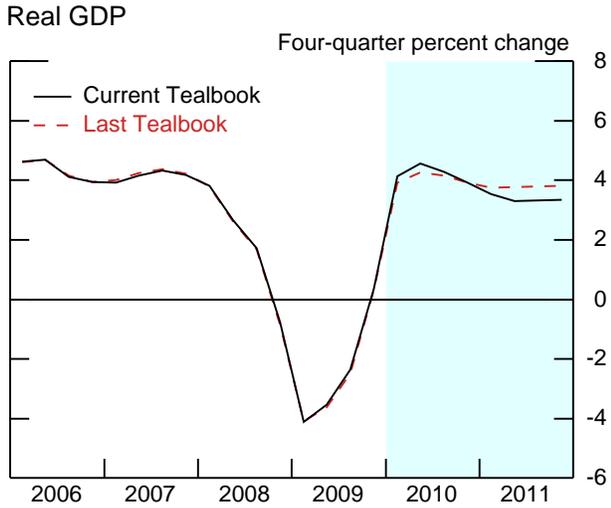
(Percent change from end of previous period, annual rate)

Indicator	2009	2010	Projection		
		Q1	2010		2011
			Q2	H2	
Foreign output	0.4	4.9	4.3	3.3	3.3
April TB	0.3	4.5	3.7	3.8	3.8
Foreign CPI	1.2	3.4	2.0	1.9	2.2
April TB	1.2	3.4	2.5	2.1	2.1

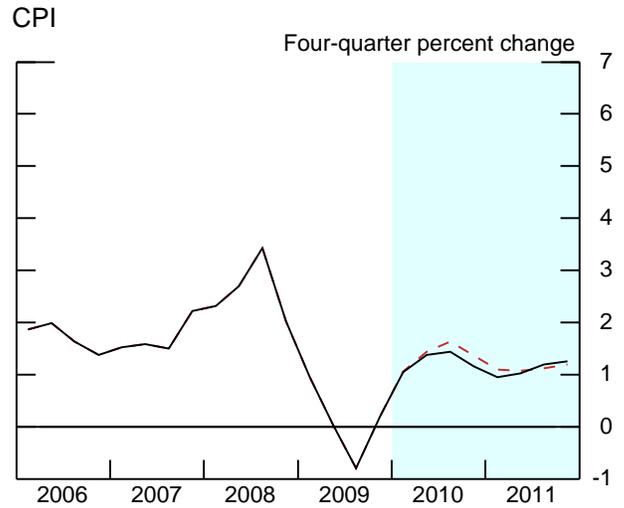
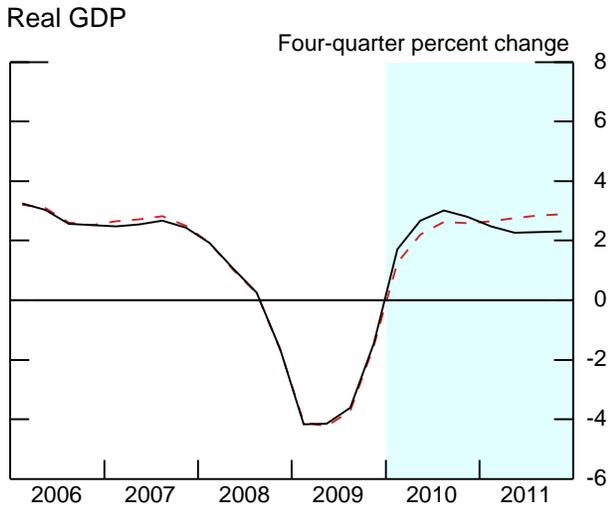
Going forward, our outlook for activity abroad is shaped by our sense of how the sovereign debt crisis in Europe is likely to evolve. Obviously, the future trajectory of this crisis is clouded by considerable uncertainty, but we believe the following working assumptions are plausible. First, official support should prove sufficient for Greece to avoid restructuring of its sovereign debt through 2011, although fiscal sustainability concerns will remain. Second, some progress toward fiscal consolidation will be made in Greece and other vulnerable European economies, although this progress may well fall short of announced plans. Third, markets should increasingly differentiate countries

# The Foreign Outlook

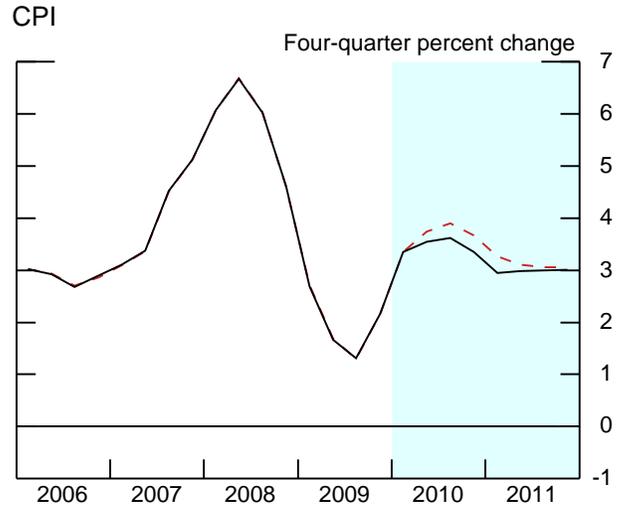
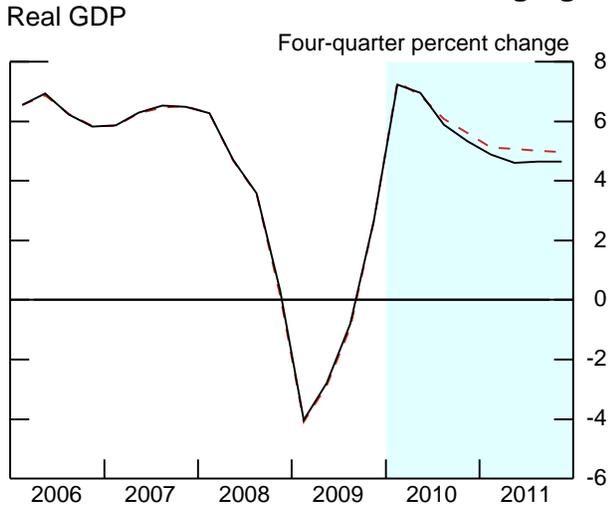
## Total Foreign



## Advanced Foreign Economies

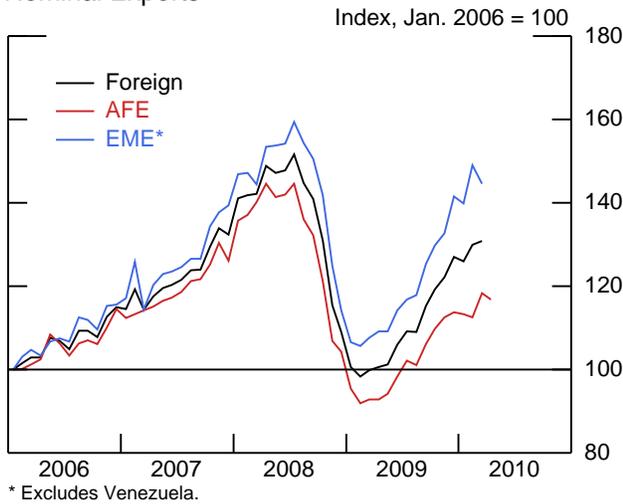


## Emerging Market Economies

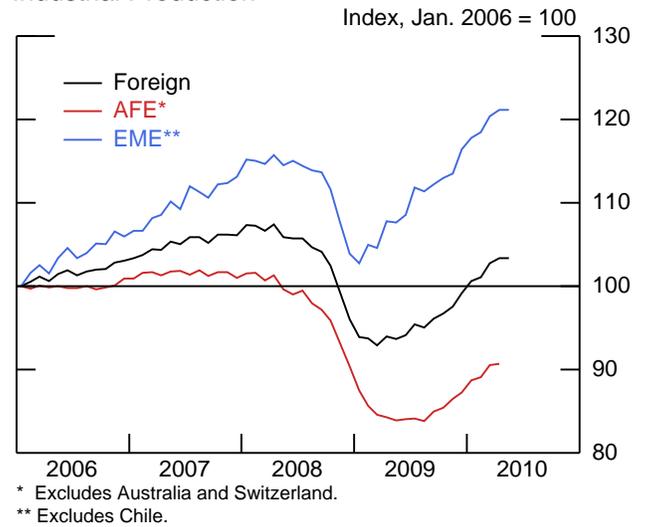


### Recent Foreign Indicators

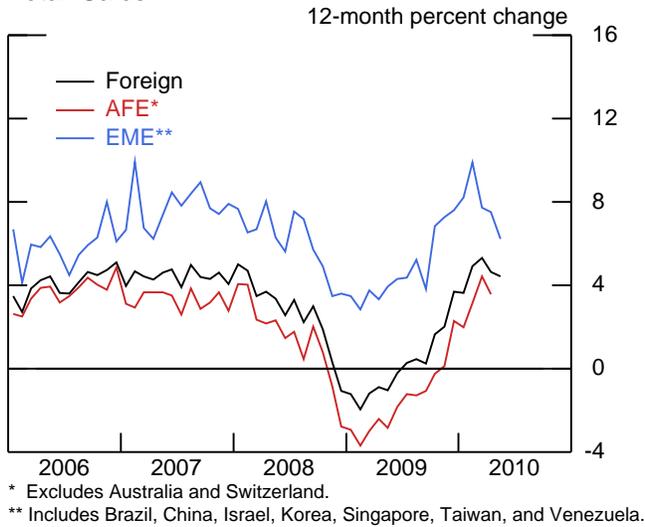
Nominal Exports



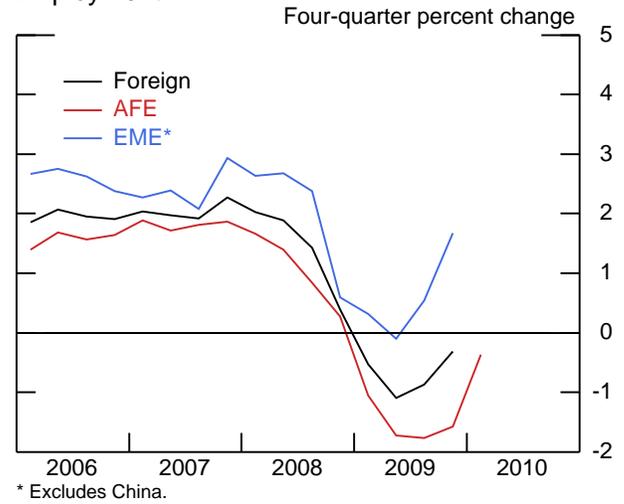
Industrial Production



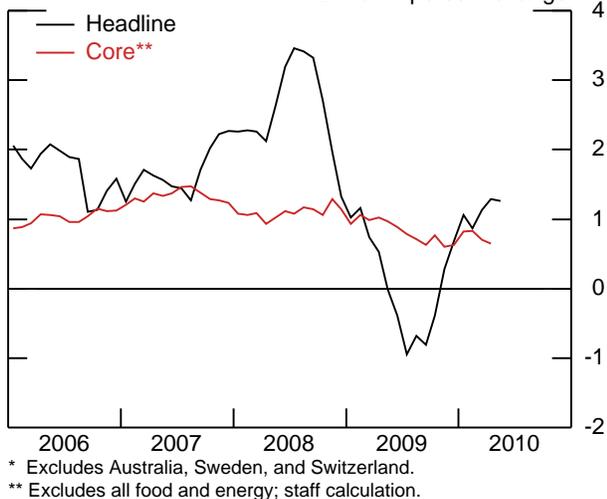
Retail Sales



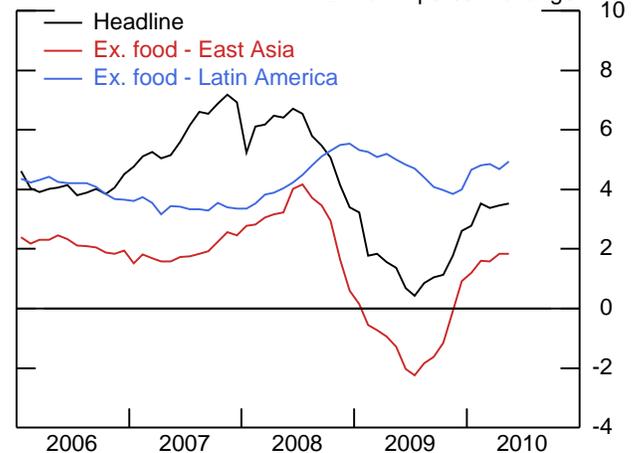
Employment



Consumer Prices - Advanced Foreign Economies\*  
12-month percent change



Consumer Prices - Emerging Market Economies  
12-month percent change



Int'l Econ Devel & Outlook

such as Spain from Greece, thereby reducing the likelihood that heightened concerns about Greece will spill over onto its neighbors. In addition, meaningful action taken to enhance confidence in European banks should allow markets, over time, to differentiate between stronger and weaker institutions, which should increase the resiliency of the financial system. Finally, we assume that the European Central Bank (ECB) will maintain its stimulative stance.

Given these assumptions, we expect that financial markets will remain agitated into the early part of next year, but tensions in these markets should then begin to recede as European countries make progress toward fiscal consolidation and strengthening their financial systems. Even so, the extended period of financial strain is likely to lead to adverse effects on consumer and business confidence and to tighter credit conditions, and these factors will weigh on foreign activity, both within and outside of Europe. Accordingly, we expect that growth abroad will move down to about 3¼ percent in the second half of this year and stay at around that rate in 2011.

This projection for global growth is ½ percentage point weaker over the forecast period than we anticipated in April. We would have cut our foreign growth forecast further, were it not for the fact that the substantial markdown to final domestic demand in the euro area is partly offset by a boost to net exports resulting from the much weaker euro. By the same token, although many U.S. trading partners will be adversely affected by the markdown in U.S. activity, this is partially offset by the decline in their currencies against the dollar. Finally, we continue to see robust growth in the emerging market economies, which have the space for further monetary and fiscal stimulus, if necessary.

Although in our outlook, Europe's sovereign debt problems lead to a material slowing of the global economic recovery, we underscore that this baseline forecast assumes an eventual easing of financial stresses. Much worse outcomes are possible, as illustrated in the box in the Risks and Uncertainty section titled "Consequences of a Severe European Sovereign Debt Crisis."

Consumer price inflation in the foreign economies appears to have moderated to a greater extent in the second quarter than we were anticipating at the time of the April forecast, partly reflecting the fall in oil and commodity prices. Inflation abroad should remain subdued at about 2 percent over the forecast period, given the presence of significant resource slack in a number of foreign economies.

## ADVANCED FOREIGN ECONOMIES

We now estimate that real GDP in the advanced foreign economies (AFEs) grew 3½ percent in the first quarter, 1 percentage point higher than estimated in the last forecast, largely driven by upward surprises in Canadian private demand and Japanese exports. Monthly indicators point to still solid growth of over 3 percent in the second quarter. However, we project that growth will move down to 2¼ percent in the second half of this year and remain at that pace in 2011, as the fiscal crisis in Europe and attendant global financial spillovers weigh on these economies. Core inflation rates in the AFEs are projected to remain subdued, as substantial economic slack persists over the forecast period.

**Staff Projections for Advanced Foreign Economies**  
(Percent change from end of previous period, annual rate)

Indicator	2009	2010	Projection		
		Q1	2010		2011
			Q2	H2	
Real GDP	-1.5	3.6	3.1	2.3	2.3
April TB	-1.5	2.6	2.5	2.7	2.9
CPI	0.2	2.1	1.1	0.8	1.3
April TB	0.2	2.1	1.3	1.1	1.2

### Euro Area

In spite of the ongoing stresses related to Greece, indicators of euro-area economic activity have come in fairly strong in recent months, and we estimate that real GDP growth in the second quarter picked up to nearly 2 percent. In April, industrial production expanded 0.8 percent, and German manufacturing orders rose almost 3 percent from the previous month. After reaching its highest level since August 2007, the composite PMI edged down in May but remained solidly in the range indicating expansion. Going forward, however, we expect that the financial stresses in Europe will finally show through to economic activity as consumer and business confidence decline, equity prices remain depressed, bank lending conditions tighten, and governments implement their fiscal consolidation plans. (We expect fiscal policy to subtract about ¼ percentage point from euro-area GDP growth in 2010 and a more substantial 1¼ percentage points in 2011.) In consequence, real GDP growth is projected to slow to

only 1 percent in the second half of this year before edging up to 1¼ percent next year, as financial conditions begin to normalize and business and consumer sentiment improves.

All told, our projection for euro-area growth over the next six quarters has been revised down ¾ percentage point since the April forecast. The intensification of financial stresses since the April forecast led us to revise down our forecast for the growth of final domestic demand 1 percentage point. However, because we are also penciling in higher net exports resulting from the recent depreciation of the euro, our forecast for total GDP growth is revised down less.

We see the fiscal crisis as affecting different economies in the euro area to different degrees. Our forecast for growth in Germany is down only ½ percentage point, as it greatly benefits from the weaker euro, but the peripheral countries will be hit hard as they attempt to slash their fiscal deficits in a fragile environment. We do not anticipate a debt restructuring or other severely adverse financial event in any peripheral euro-area economy during the forecast period, given the significant official support measures announced since the April forecast. (See the box on “Recent Policy Announcements by European Authorities.”)

Persistent resource slack in the euro area should continue to restrain inflation, and we project headline consumer price inflation to come in at 1 percent this year and 1½ percent next year. Core inflation is expected to hold steady at rates below 1 percent until the end of 2011. Amid weaker output growth and subdued inflationary pressures, we expect the ECB to maintain easy monetary and liquidity conditions and keep its benchmark policy rate unchanged at 1 percent through the end of the forecast period.

## **United Kingdom**

After being held back in the first quarter by the January value-added tax hike, real GDP is set to expand 2 percent in the current quarter. Although PMIs, business confidence, and manufacturing orders are consistent with more robust growth, measures of real spending and production have yet to confirm that the recovery has gained a solid footing. Going forward, GDP growth should drift up, reaching 2½ percent by the end of the forecast period. We project that final domestic demand will strengthen, as households repair their balance sheets and financial stresses ease. Diminishing support from inventories and increasing drag from fiscal retrenchment will exert only a partial offset.

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## Recent Policy Announcements by European Authorities

In early May, European authorities announced a number of policy measures to contain the rapid intensification of market concerns about the fiscal sustainability of several euro-area countries. To calm tensions surrounding Greece, which had effectively lost access to market financing, the details of a €10 billion IMF and European Union (EU) assistance package were announced on May 2. The package, which is contingent on the Greek government implementing drastic fiscal consolidation, provides full funding of government debt service for 18 months and the fiscal deficit for three years. The package also includes a €10 billion stabilization fund for the banking sector. Under the plan, Greece is expected to reduce its headline deficit from almost 14 percent of GDP in 2009 to 2.6 percent in 2014. At the same time, the ECB suspended the application of the minimum credit rating threshold on Greek government securities posted as collateral at its liquidity operations.

Despite the announcement of the Greek package, investors' concerns about European fiscal prospects continued to mount, and government bond spreads for Greece and other euro-area peripheral countries shot up further.

In response, a broader set of stabilization measures were announced on May 10. The EU established a financial assistance program which provides up to €500 billion in funding, in addition to the funds already set aside for Greece. If activated, funding would originate from two sources: The European Commission (EC), which

would provide up to €60 billion of lending by issuing debt guaranteed by all EU member states, and a special purpose vehicle, which would issue up to €40 billion in debt guaranteed by euro-area countries. In addition, bilateral IMF programs could raise the total support to €750 billion.

The ECB also announced further measures to improve liquidity conditions in impaired markets. First, the ECB instituted a program to purchase European sovereign and private debt. So far, euro-area national central banks have purchased an estimated €47 billion of peripheral European sovereign debt over the past several weeks. These debt purchases have been sterilized through variable-rate auctions of term deposits. In addition, on May 12 the ECB conducted an unscheduled six-month operation at a rate indexed to its benchmark policy rate with full allotment. The operation resulted in €36 billion being allotted, about twice market expectations. Finally, the ECB reverted to a full allotment at a fixed-rate mechanism for its monthly long-term refinancing operations with three-month duration until the end of September. At the May 26 liquidity operation, the ECB allotted slightly more than €12 billion. These euro liquidity measures were complemented by the temporary dollar swaps reinstated by the Federal Reserve with the ECB and several other major central banks. (See the box in the Financial Developments section on “U.S. Dollar Funding Pressures and Dollar Liquidity Swap Lines.”)

Relative to the April projection, our growth forecast is down ½ percentage point over the forecast period. This revision reflects not only the lower confidence and tighter financial conditions spilling over from the sovereign debt crisis in the euro area, but also faster fiscal consolidation than we assumed in the April forecast. The coalition of Conservatives and Liberal Democrats, which recently gained control of the U.K. government, is moving quickly to adopt ambitious fiscal targets.

Headline 12-month inflation, at 3.4 percent in May, is expected to remain elevated this year, boosted by the hike in the value-added tax and the depreciation of the pound, before retreating rapidly to below the 2-percent target in early 2011, as substantial slack in the economy becomes the predominant force on prices. We have pushed back the Bank of England's first policy rate hike to the middle of 2011 due to the weaker GDP outlook.

## Canada

We expect Canadian real GDP to grow 4 percent in the second quarter, a still-solid rate of expansion but a step down from the blazing 6 percent pace recorded in the first quarter. Indicators for the second quarter remain quite strong, including robust job growth through May and ongoing expansion of real trade. Beginning in the third quarter, we expect the financial stresses spilling over from Europe's sovereign debt crisis and the associated substantial projected slowdown in U.S. GDP growth to weigh on the Canadian outlook, leading growth to decline further to 3¼ percent during the forecast period. Compared with our April forecast, this forecast is down slightly in the second half of this year and more substantially in 2011.

In response to a closing output gap and with inflation squarely within its target band of 1 to 3 percent, the Bank of Canada (BOC) raised its target for the overnight rate to 50 basis points at its June meeting, a slightly earlier start to policy tightening than we had anticipated. We assume that the BOC will continue to raise rates 25 basis points per quarter over the forecast period.

## Japan

Japanese real GDP continued to recover in the first quarter, rising at a robust 5 percent pace, led by an ongoing surge in exports. Export growth picked up further in April, and other indicators—including industrial production, machinery orders, and consumer confidence—have continued to gradually improve. As such, we project that

real GDP will rise 3¾ percent in the second quarter, 2 percentage points faster than in the last forecast. Going forward, we anticipate that growth will decline to 1¾ percent for the remainder of the forecast period, as the fiscal impetus and the rebound in external demand begin to taper off, and as private domestic spending picks up only slowly. This projection is only a bit slower than in the April forecast, as demand from emerging Asia continues to support exports.

Notwithstanding the faster-than-expected recovery, considerable resource slack remains, and core prices (excluding food and energy) declined a record 1.7 percent in April from their year-earlier level, although part of the downtick reflected a one-off cut in public school fees. With the output gap continuing to narrow going forward, we project headline deflation to moderate to 1 percent in the second half of 2010 and to ¾ percent in 2011. A new Bank of Japan facility will offer one-year funds at the target for the overnight call rate, currently 10 basis points. This facility is anticipated to have a very small impact on the Japanese economy since its size is very limited (0.6 percent of GDP), and Japanese banks already have low-cost funding options available to them.

## **EMERGING MARKET ECONOMIES**

First-quarter GDP data for many emerging market economies (EMEs) surprised on the upside. However, real GDP contracted in Mexico and, given its high weight, led to a markdown in aggregate growth in the EMEs, albeit to a still-solid 6½ percent. Incoming data point to only a small moderation of growth in the second quarter. We expect EME growth to fall to 4½ percent in the second half of this year and stay at that pace next year, as the double-digit rates recorded in several economies step down to more-sustainable rates. This projection is about ½ percentage point lower than in the April forecast, reflecting the tightening of financial market conditions and the markdown in U.S. and European growth.

After climbing to 4½ percent at an annual rate in the first quarter, consumer price inflation in the EMEs is estimated to have declined to 3 percent in the current quarter, in large part because of an unwinding of the effects of increases in food prices, administered prices, and taxes. Consumer prices so far in the second quarter have generally surprised on the downside, and, going forward, our projection for EME inflation at 3 percent is slightly lower compared with the April forecast.

**Staff Projections for Emerging Market Economies**  
(Percent change from end of previous period, annual rate)

Indicator	2009	2010	Projection		
		Q1	2010		2011
			Q2	H2	
Real GDP	2.7	6.5	5.7	4.6	4.6
April TB	2.6	6.9	5.1	5.3	5.0
CPI	2.2	4.6	2.9	3.0	3.0
April TB	2.2	4.7	3.7	3.2	3.1

## China

In China, economic activity remained robust in the second quarter. China's recovery has been broad based, with industrial production, fixed asset investment, exports, and domestic demand all posting sizable gains. In addition, with imports growing faster than exports, the trade surplus narrowed significantly in the first quarter, but an especially strong export reading in May points to a wider trade surplus in the current quarter.

We expect Chinese real GDP growth to average around 9 percent through the remainder of the forecast period, down from the double-digit pace of the past four quarters, as fiscal stimulus wanes and monetary tightening continues, in part to address rising property prices. We have marked down Chinese growth only a touch, as Chinese authorities have the scope to reintroduce stimulus measures should activity slow more than is consistent with their objectives.

Chinese authorities raised banks' reserve requirement 50 basis points in May, bringing the cumulative increase for the year to 150 basis points. Concerns about global growth stemming from the European fiscal crisis may restrain the extent of policy tightening going forward. We continue to assume that the Chinese authorities will allow the renminbi to start appreciating against the U.S. dollar later this year. However, the unsettled global outlook, along with the recent appreciation of the renminbi on a trade-weighted basis as it has followed the dollar upward, have led us to scale back the projected pace of renminbi appreciation against the dollar this year.

Inflation pressures in China appear to be waning as food prices have retreated, although there was an uptick in monthly inflation in May. Recent labor unrest at some

factories in China, including a strike at Honda Motor Company, has resulted in some large wage increases, which poses a risk of more widespread increases and heightened inflationary pressures.

### **Other Emerging Asia**

Real GDP in the emerging Asia region outside of China has grown at a double-digit rate on average over the past year on the back of Chinese growth, which has boosted the region's exports, and policy stimulus. This has pushed the level of GDP well above its pre-crisis peak. Real GDP in emerging Asia excluding China rose more than 14 percent in the first quarter, in part reflecting a nearly 40 percent rise (annual rate) in Singapore's notoriously volatile output. A further hike in Singapore's industrial production in April points to strong second-quarter GDP as well, but we project a big payback in the third quarter. In South Korea, a reduced boost from government spending and inventories should push second-quarter growth down to a more sustainable 4½ percent pace, from 8¾ percent in the first quarter, but consumer and business confidence has remained firm in the face of heightened tensions with North Korea. Indian growth is also expected to taper off, to a still-robust 8 percent pace in the current quarter, while growth in the ASEAN-4 region should dip to about 3 percent, in part as the recent political turmoil in Thailand likely weighed on activity.

All told, smoothing through the third-quarter payback in Singapore, we project growth in emerging Asia excluding China to settle to a more-sustainable pace of 4½ percent in the fourth quarter and through next year, as the crisis-related fiscal and monetary stimulus measures are withdrawn. Nevertheless, the turmoil in Europe and greater uncertainty about the pace of global recovery may prompt policymakers in the region to delay their exits from stimulus.

### **Latin America**

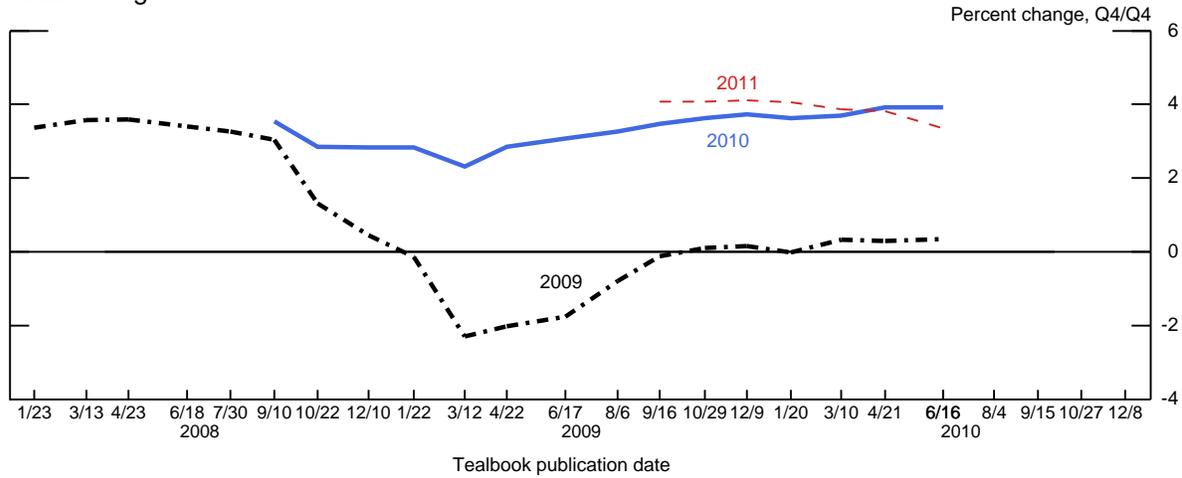
We project that real GDP in Latin America grew just ½ percent in the first quarter but bounced back to 5 percent in the second quarter. The anemic growth in the first quarter is driven largely by a reported 1½ percent contraction of real GDP in Mexico. However, we put little stock in that decline, as it is inconsistent with monthly indicators: The Mexican activity indicator (a monthly proxy for GDP) rose 2 percent in the first quarter at an annual rate; and recently Mexican industrial production, exports, and retail sales have all been showing strength. Brazilian GDP, which has a much lower weight in

our aggregate for Latin America, soared 1 1/2 percent in the first quarter, although waning fiscal stimulus appears to be restraining growth there in the current quarter.

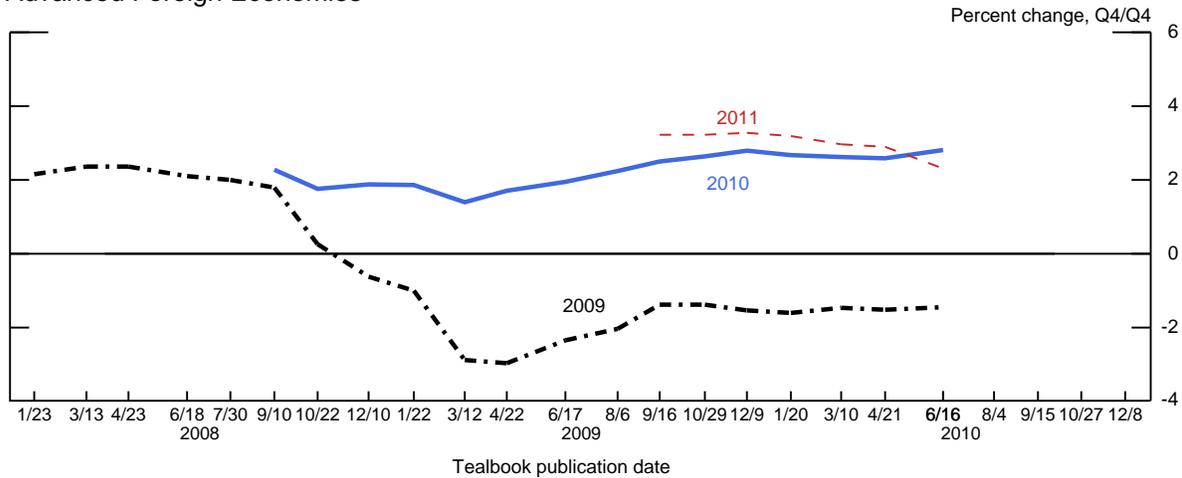
We expect that growth in Latin America will slow over the second half of this year, largely reflecting a deceleration in activity in Mexico and Brazil, and come in at about 3 1/2 percent next year. Mexico's step-down in growth is in line with the moderation in the expansion of U.S. manufacturing output. A significant degree of resource slack in Mexico is likely to be unwound only slowly, pushing inflation down to 3 3/4 percent by 2011, within the Bank of Mexico's (BOM) 2 to 4 percent target range. Accordingly, we do not expect the BOM to start raising its policy rate until next year. In Brazil, by contrast, the projected slowing of economic growth reflects the unwinding of fiscal stimulus measures and a cumulative rise in the policy rate since April of 150 basis points. The passing of some special factors boosting prices earlier this year is expected to allow Brazilian inflation to decline to 4 1/4 percent in 2011, but with the economy continuing to overheat, we expect further monetary tightening over the forecast period.

### Evolution of Staff Forecast for Foreign Real GDP

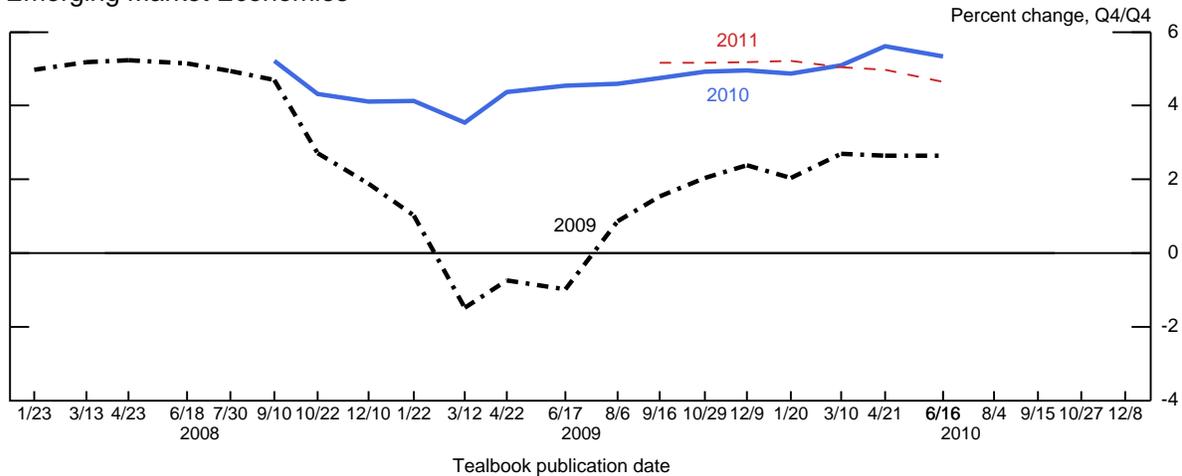
Total Foreign



Advanced Foreign Economies



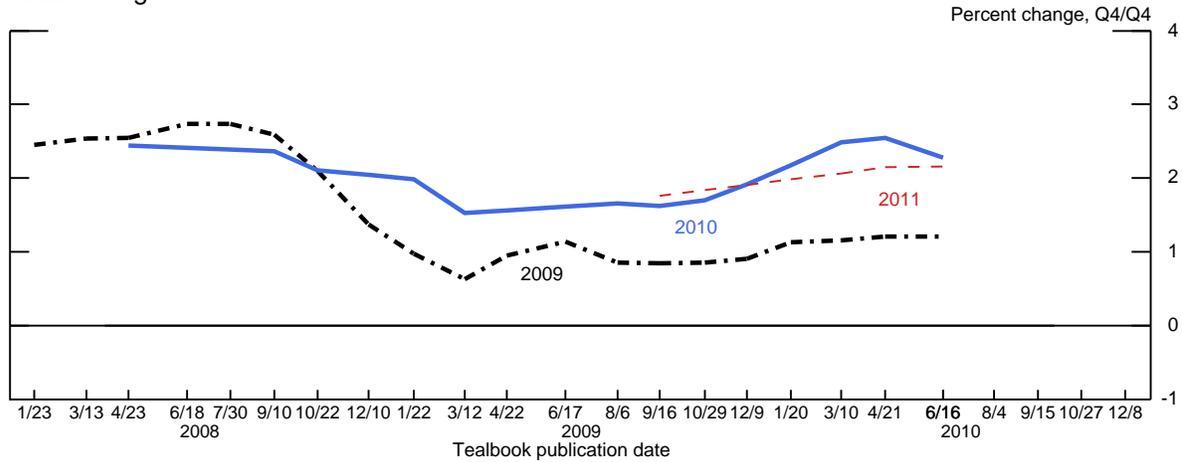
Emerging Market Economies



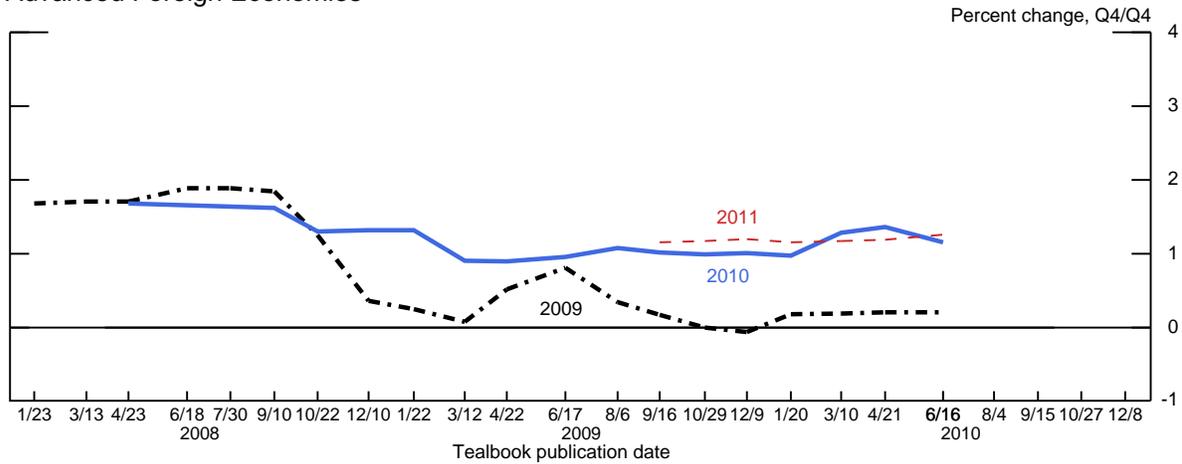
Int'l Econ Devel & Outlook

### Evolution of Staff Forecast for Foreign CPI Inflation

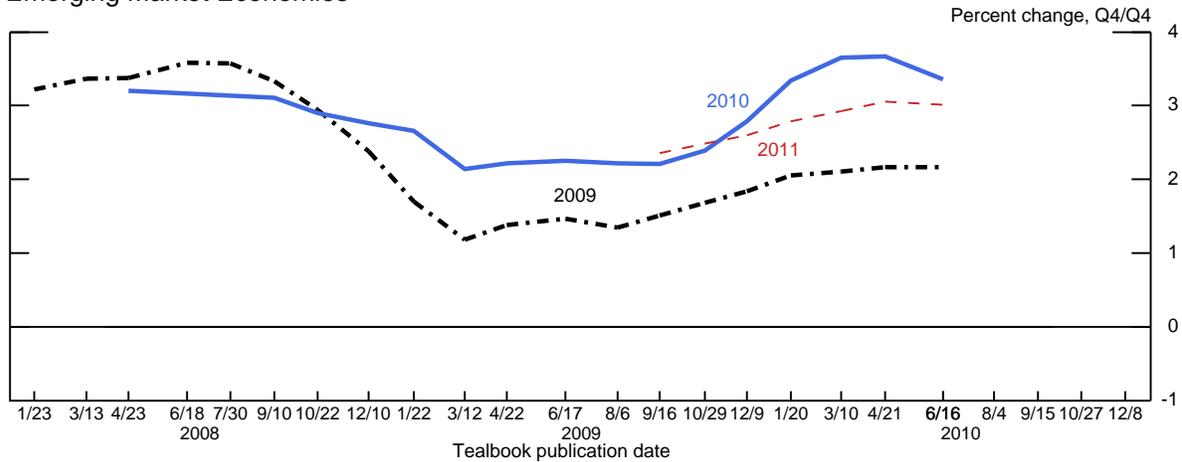
Total Foreign



Advanced Foreign Economies



Emerging Market Economies



## Financial Developments

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Over the intermeeting period, investor demand for risky assets declined in response to the evolving European fiscal crisis and concerns about the outlook for the global recovery. In domestic markets, investors significantly tempered their expectations for policy tightening, while broad equity price indexes fell about 6 percent, implied volatilities spiked, and corporate bond spreads widened notably. The demand for safer securities contributed to a fall in nominal Treasury yields of as much as 35 basis points and a 2¾ percent increase in the broad trade-weighted foreign exchange value of the dollar. Investors also priced in lower compensation for future inflation over the period. In most advanced foreign economies, benchmark sovereign yields declined substantially, and headline equity indexes dropped, with bank shares in the euro area losing almost 10 percent of their value. In response to the reemergence of strains in U.S. dollar funding markets, the Federal Reserve and several foreign central banks reestablished dollar liquidity swap arrangements in early May.

Overall borrowing by nonfinancial businesses was well maintained over the period, despite a slowdown in speculative-grade bond issuance in May. Indicators of credit quality in the business sector remained strong, and analysts' revisions to corporate earnings forecasts were positive this quarter. In contrast, conditions in the commercial real estate market stayed bleak. In the household sector, mortgage debt fell further in the first quarter, and measures of refinancing activity remained subdued despite historically low mortgage interest rates. Consumer credit was about unchanged in April, and measures of consumer delinquencies edged down further.

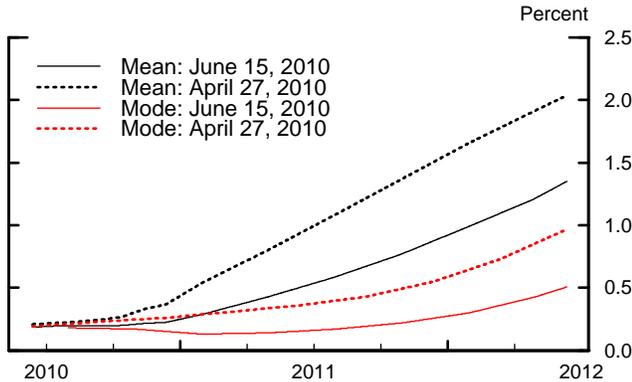
Bank credit continued to decline in April and May, although the contraction in C&I and residential real estate loans slowed somewhat. Bank profitability improved in the first quarter, boosted by higher net interest margins and a reduction in loan loss provisions. M2 increased moderately, on balance, over April and May, as sizable net declines in small time deposits and retail money market mutual funds were more than offset by strong net gains in liquid deposits.

### **POLICY EXPECTATIONS AND TREASURY YIELDS**

Over the intermeeting period, money market futures rates moved down significantly. The FOMC's decision at its April meeting to maintain the 0 to ¼ percent target range for

### Policy Expectations and Treasury Yields

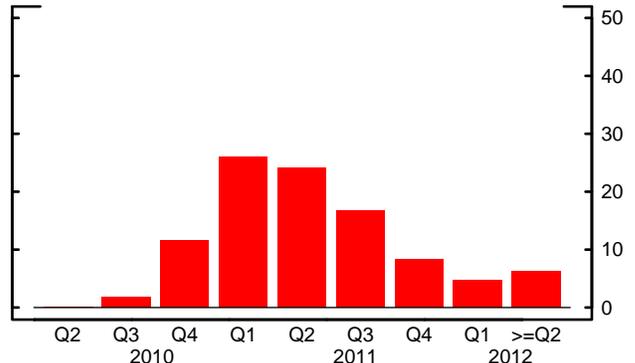
Implied Federal Funds Rate



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.

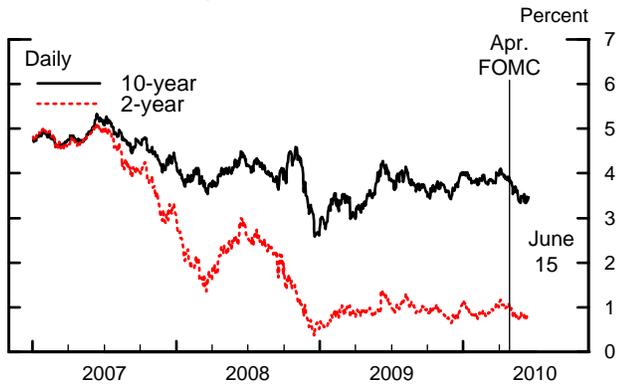
Distribution of Expected Quarter of First Rate Increase from the Desk's Dealer Survey



Note: Distribution is derived from the responses of 18 primary dealers to the Desk's Dealer Survey.

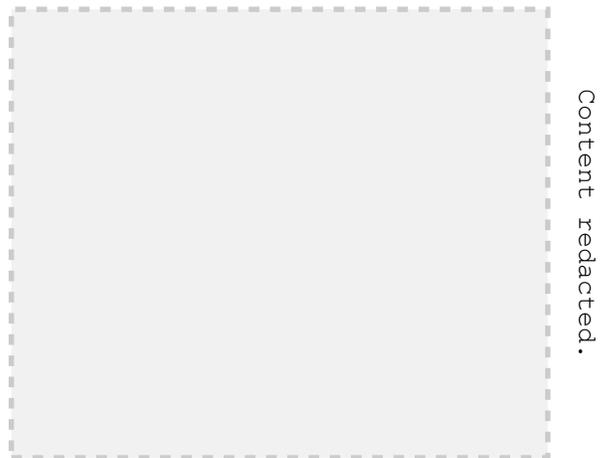
Source: Federal Reserve Bank of New York.

Nominal Treasury Yields



Note: Par yields from a smoothed nominal off-the-run Treasury yield curve.

Source: Staff estimates.



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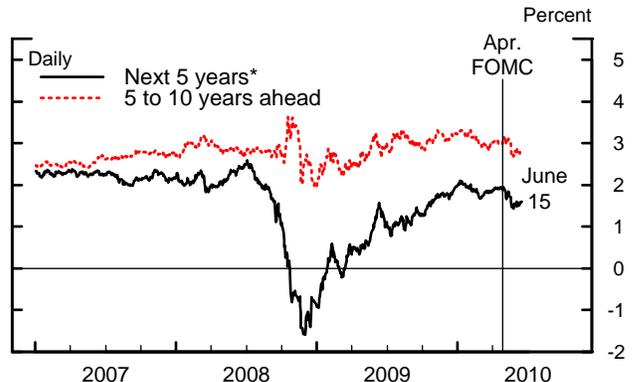
10-year Treasury Implied Volatility



Note: 10-year Treasury note implied volatility derived from options on futures contracts.

Source: Bloomberg.

Inflation Compensation



Note: Estimates based on smoothed nominal and inflation-indexed Treasury yield curves.

\*Adjusted for the indexation-lag (carry) effect.

Source: Barclays PLC and staff estimates.

the federal funds rate and the wording of the accompanying statement were largely in line with expectations and garnered little market reaction. Upon the release of the minutes of the meeting, investors reportedly took note that a majority of participants favored asset sales at some point, although the release did not result in any notable change in market interest rates. Economic data releases were mixed on balance over the intermeeting period, but market participants were especially attentive to incoming information on the labor market—most notably, the private payroll figures in the employment report for May, which were considerably weaker than investors had expected. These data, combined with heightened concerns about the global economic outlook stemming from the European sovereign debt crisis, contributed to a downward revision in the expected path of policy.

Indeed, combined with the staff's usual assumption regarding term premiums, futures quotes indicate that investors pushed back their expectation for the first increase in the federal funds rate target to the first quarter of 2011 and scaled down the expected subsequent pace of policy firming. Quotes on interest rate caps suggest that investors' perceived modal path of the federal funds rate also moved lower over the intermeeting period and that they now see late 2011 as the most likely time for the commencement of tightening. Results from the June survey of primary dealers also suggest that market participants lowered their expectations for the path of the federal funds rate; respondents reported an average probability of just 14 percent that the first policy tightening would occur sometime this year, compared with 41 percent in the April survey.

In the market for Treasury coupon securities, 2- and 10-year nominal yields fell 19 and 33 basis points, respectively, over the intermeeting period. Market participants pointed to flight-to-quality flows as a factor boosting Treasury demand, and the drop in Treasury yields was accompanied by a widening of swap spreads and signs of increased demand for Treasury collateral in the repo market. Implied volatility of longer-term Treasury yields climbed to its highest level in several months.

TIPS-based inflation compensation decreased about 25 basis points at the five-year horizon, pushed down by low readings for inflation and falling oil prices, while five-year inflation compensation five years ahead fell about 15 basis points. Survey measures of both short- and long-term inflation expectations have changed little since April.

## ASSET MARKET DEVELOPMENTS

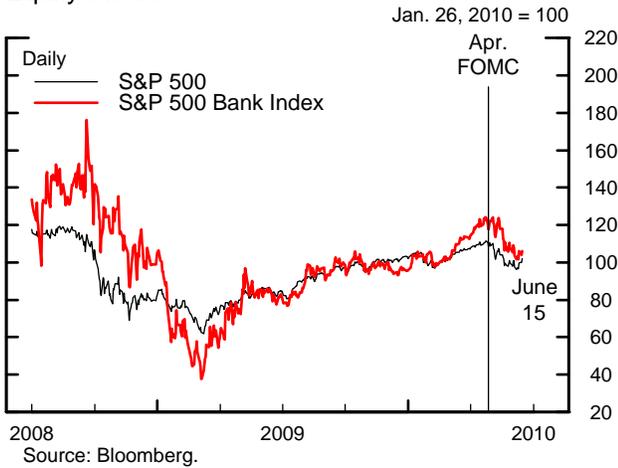
Broad U.S. stock price indexes fell about 6 percent, on net, over the intermeeting period, reflecting the deepening of concerns about the European fiscal crisis and the potential for adverse spillovers to global economic growth. Option-implied volatility on the S&P 500 index, as measured by the VIX, spiked in mid-May to more than double its value at the time of the April FOMC meeting, reaching levels last recorded in early 2009; implied stock market volatility fell back somewhat toward the end of the intermeeting period. The spread between the staff's estimate of the expected real return on equities over the next 10 years and an estimate of the expected real return on a 10-year Treasury note—a measure of the equity risk premium—jumped about 1½ percentage points from its already elevated level. Equity mutual funds experienced sizable net outflows in May, contributing to the first monthly net redemption of long-term mutual funds since March 2009.

Investors' attitudes toward financial institutions deteriorated somewhat more than for the broader market this intermeeting period, with bank equity indexes falling 10 percent and bank CDS spreads widening a bit more than those on investment-grade nonfinancial firms. Allegations of past malfeasance at some large former investment banks and the resulting perception of higher legal risk continued to weigh on market sentiment. Market participants also remained attuned to the potential effects of financial regulatory reform, and both S&P and Moody's issued statements indicating that they would take more time than had been anticipated to analyze the implications of the pending legislation for the ratings of financial institutions.

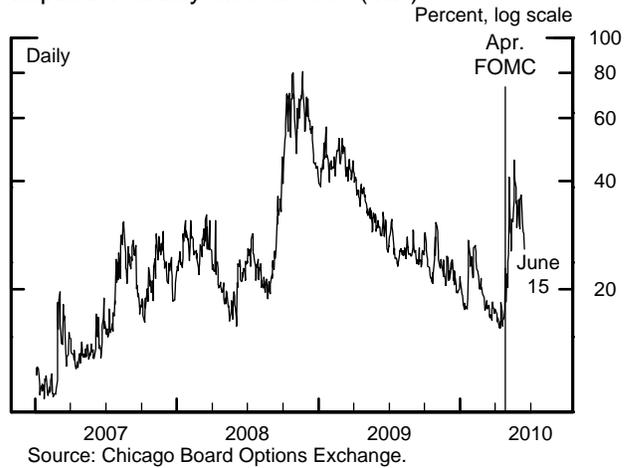
Yields on BBB-rated corporate bonds rose slightly over the intermeeting period, and yields on speculative-grade corporate bonds climbed about 80 basis points amid substantial net outflows from high-yield bond mutual funds. Given the declines in yields on comparable-maturity Treasury securities, spreads on both speculative-grade and investment-grade corporate bonds widened significantly, although they remained within the range prevailing since last summer. Secondary-market bid prices on syndicated leveraged loans fell about 2 percentage points, while bid-asked spreads in that market climbed.

### Asset Market Developments

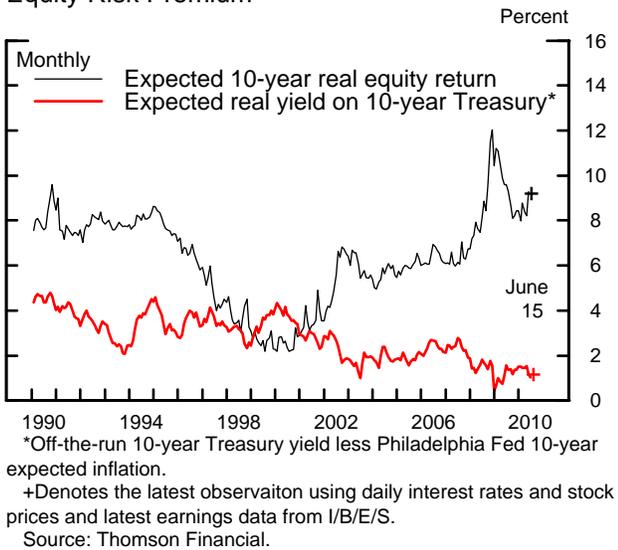
#### Equity Prices



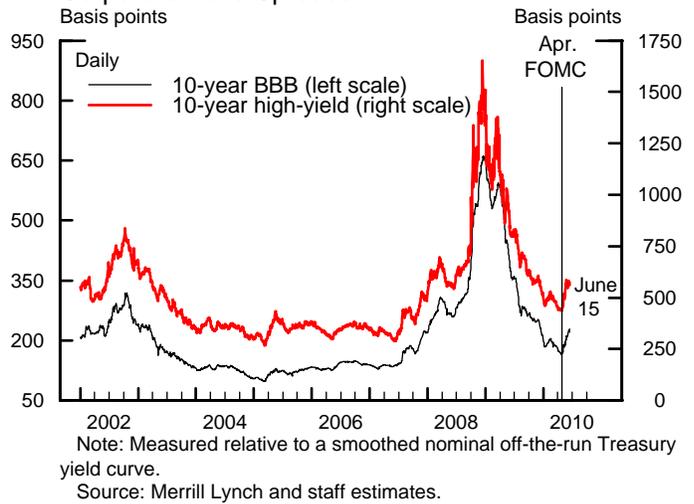
#### Implied Volatility on S&P 500 (VIX)



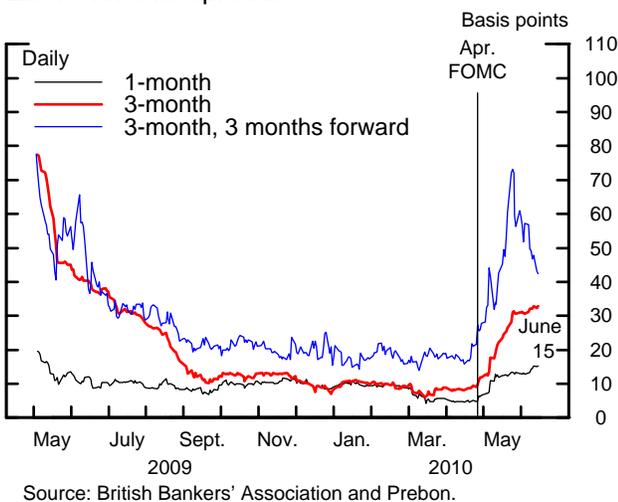
#### Equity Risk Premium



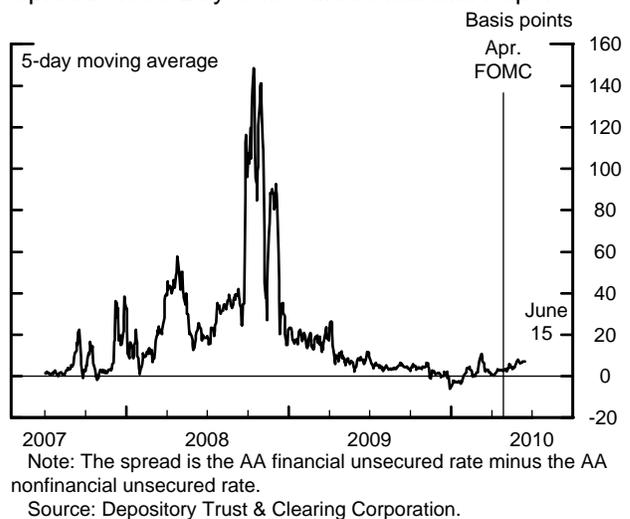
#### Corporate Bond Spreads



#### Libor over OIS Spreads



#### Spread on 30-Day Unsecured Financial Paper



Financial Developments

Conditions in short-term funding markets deteriorated somewhat, particularly for European borrowers. Spreads of term Libor over rates on overnight index swaps (OIS) widened notably, with trading volumes in maturities longer than one week reportedly quite thin. Market participants also reduced holdings of commercial paper sponsored by entities thought to have exposures to peripheral European financial institutions and governments. (See the box on U.S. dollar funding pressures.) Even so, spreads of high-grade unsecured financial commercial paper to nonfinancial commercial paper widened only about 5 basis points, on net, over the intermeeting period. Thus far, quarter-end pressures in domestic bank funding markets appear to have been relatively muted.<sup>1</sup>

In secured funding markets, spreads on asset-backed commercial paper also widened modestly, while rates on repurchase agreements (repos) involving Treasury and agency collateral were little changed.<sup>2</sup> In the inaugural Senior Credit Officer Opinion Survey, which was conducted by the Federal Reserve at the end of May, dealers generally reported that the terms at which they provided credit remained tight relative to 2006, although they noted some loosening of terms, on net, over the previous three months for certain classes of clients—including hedge funds, institutional investors, and nonfinancial corporations—and intensified pressures by those clients to negotiate more-favorable terms. At the same time, they reported a pick-up in demand for financing across several collateral types. Over the intermeeting period, haircuts and bid-asked spreads in the repo market reported by primary dealers to the Federal Reserve Bank of New York held steady.

## HOUSEHOLD FINANCE

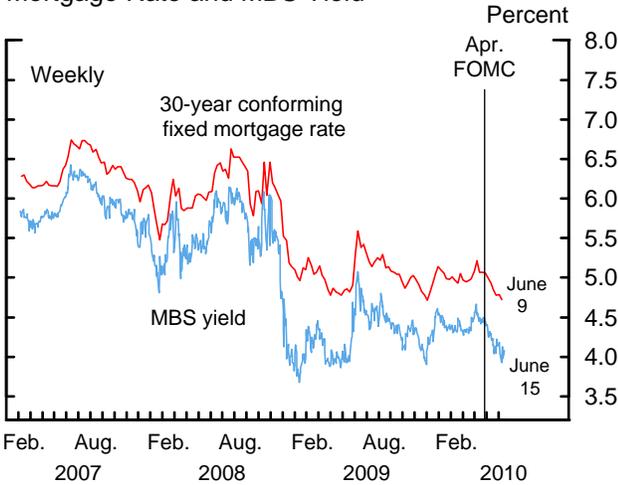
The average interest rate on 30-year conforming fixed-rate mortgages fell about 35 basis points over the intermeeting period, reaching  $4\frac{3}{4}$  percent, and yields on Fannie Mae current coupon MBS dropped a similar amount; the spreads on both mortgages and

<sup>1</sup> The effective federal funds rate averaged 20 basis points over the intermeeting period, with the intraday standard deviation averaging 4 basis points. Trading volumes were about unchanged since the last intermeeting period.

<sup>2</sup> Gross fails to deliver in the agency MBS market moved to record levels in recent weeks. The fails were concentrated in Fannie Mae and Freddie Mac 5.5 percent coupons and apparently reflected the lack of new issuance in that market and the relatively low cost of failing to deliver. Nonetheless, traders report that liquidity and market depth have not otherwise deteriorated of late.

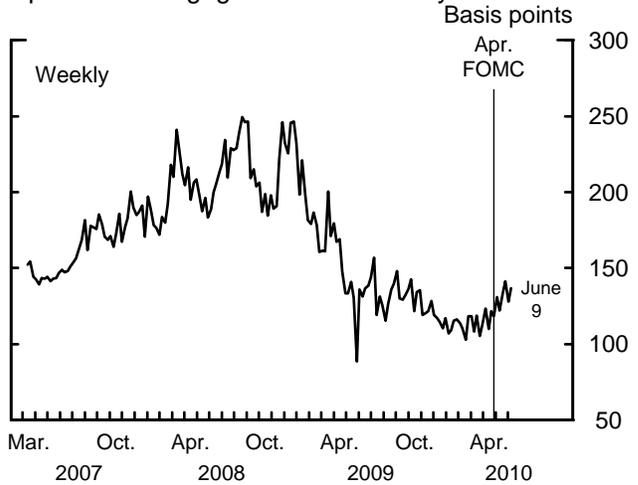
### Household Finance

Mortgage Rate and MBS Yield



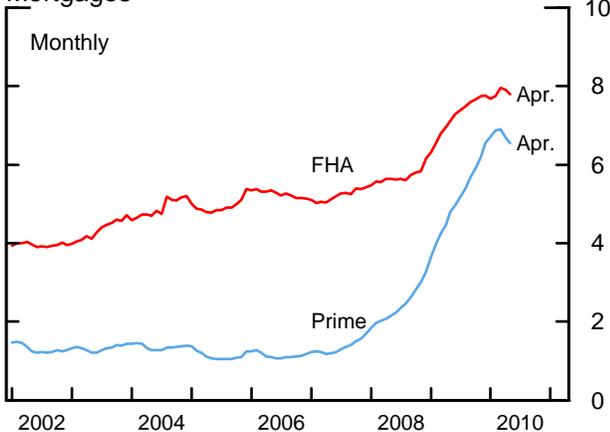
Note: For MBS yield, Fannie Mae 30-year current coupon rate. Source: For mortgage rate, Freddie Mac; for MBS yield, Bloomberg.

Spread of Mortgage Rate to Treasury Yield



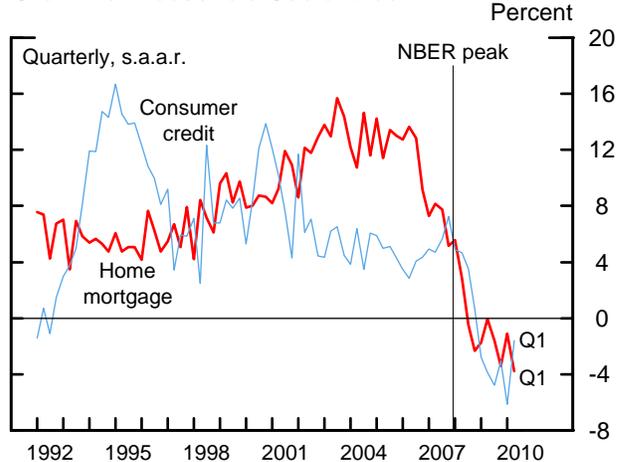
Note: Spread of 30-year conforming fixed mortgage rate relative to 10-year off-the-run Treasury yield. Source: Bloomberg; Freddie Mac.

Delinquencies on Prime and FHA-Backed Mortgages



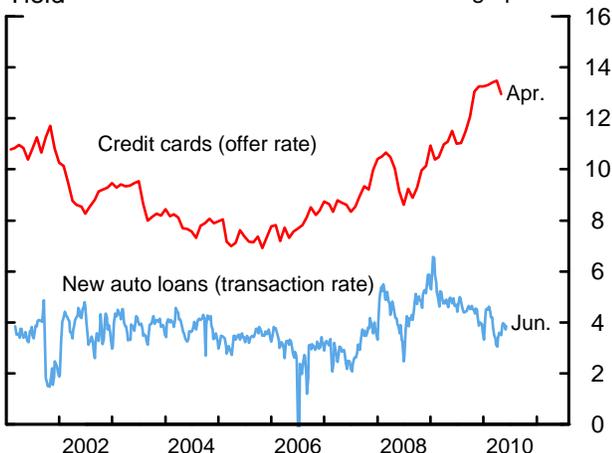
Note: Percent of loans 90 or more days past due or in foreclosure. Prime includes near-prime mortgages. Source: McDash.

Growth of Household Sector Debt



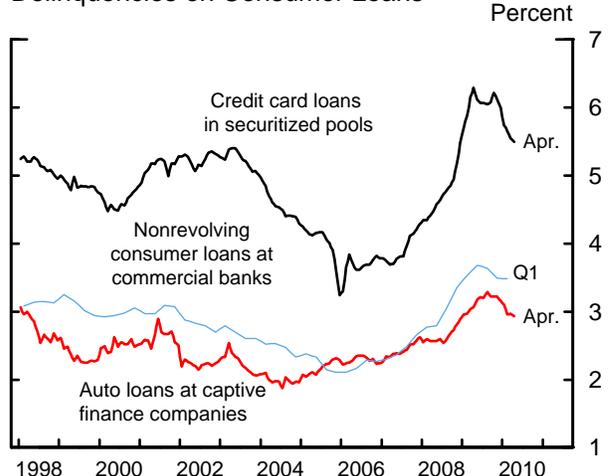
Source: Federal Reserve.

Spread of Consumer Interest Rates to Treasury Yield



Note: Spreads are relative to 2-year Treasury yield. For credit cards, monthly; for auto loans, weekly. Source: For credit cards, Intel; for auto loans, PIN.

Delinquencies on Consumer Loans



Source: For auto loans, Federal Reserve Board; for credit cards, Moody's Investors Service; for nonrevolving consumer loans, Call Report.

Financial Developments

agency MBS widened somewhat relative to Treasury securities. Despite the low level of mortgage rates, refinancing volume has been relatively light because many homeowners refinanced when rates reached similar lows in 2009, while others may be unable to refinance due to low credit scores or insufficient home equity. Home mortgage debt declined at an annual rate of about 4 percent in the first quarter, as the volume of originations is estimated to have remained low and as elevated charge-offs pushed down existing loan balances; the available data point to some additional decline in the current quarter. Delinquency rates for prime, subprime, and FHA-backed mortgages edged down in March and April, although some of the decline likely reflected seasonal patterns. House price indexes have changed little of late.

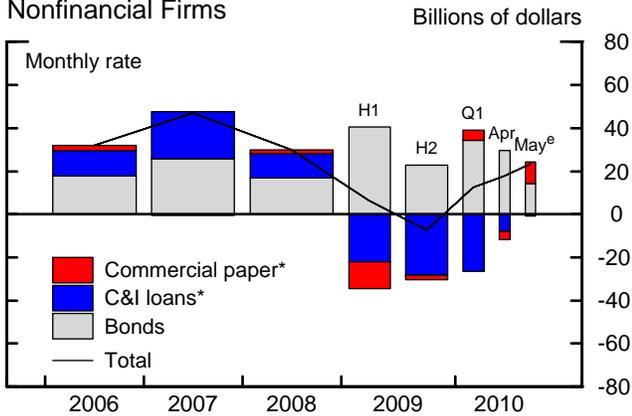
The contraction in consumer credit is estimated to have moderated in the first quarter, as an upturn in non revolving credit offset much of the continued steep decline in revolving credit. Issuance of consumer credit ABS increased in May—though the level was still well below that observed before the onset of the financial crisis—and spreads have ticked up in recent weeks. Credit card ABS issuance remains subdued, as regulatory changes have made financing credit card receivables via securitization less desirable. In primary markets, spreads of credit card interest rates over those on Treasury securities remained extremely high in April, while interest-rate spreads on auto loans remained near their average level over the past decade. Consumer credit quality continued to improve, with delinquency rates on credit cards and auto loans moving down a bit further in April.

## **BUSINESS FINANCE**

Overall, net debt financing by nonfinancial corporations has continued to expand in the second quarter. Gross bond issuance by investment-grade nonfinancial corporations in the U.S. remained solid, on average, in April and May, and nonfinancial commercial paper increased as well over the two months. High-yield corporate bond issuance in the U.S. briefly paused in May amid the market's pullback from risky assets, although speculative-grade U.S. firms continued to sell bonds abroad and a few placed issues domestically in the first half of June. Meanwhile, the contraction in C&I loans outstanding slowed significantly in May from the pace registered over the past year and a half, with some indications that loan originations have begun to pick up.

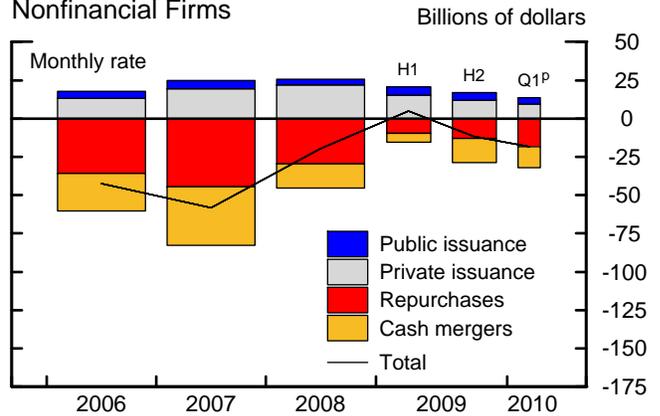
### Business Finance

Selected Components of Net Debt Financing, Nonfinancial Firms



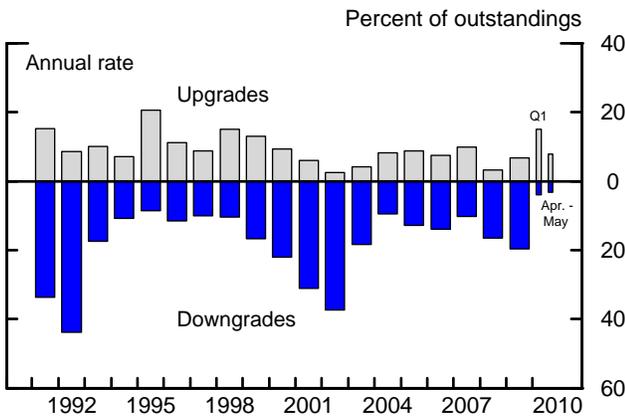
\* Seasonally adjusted, period-end basis.  
 e Estimate.  
 Source: Depository Trust & Clearing Corporation; Thomson Financial; Federal Reserve Board.

Selected Components of Net Equity Issuance, Nonfinancial Firms



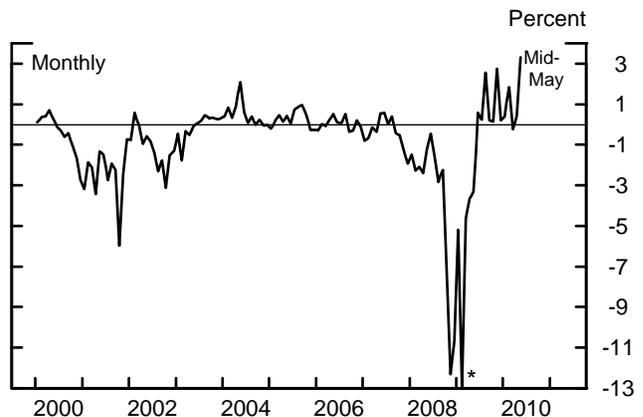
p Preliminary.  
 Source: Thomson Financial, Investment Benchmark Report; Money Tree Report by PricewaterhouseCoopers, National Venture Capital Association, and Venture Economics.

Bond Ratings Changes of Nonfinancial Firms



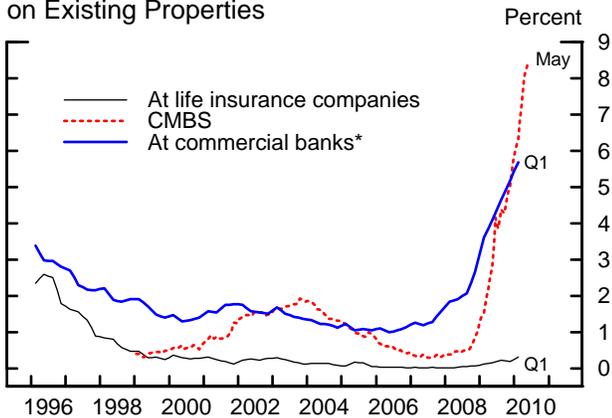
Source: Calculated using data from Moody's Investors Service.

Revisions to Expected S&P 500 Earnings



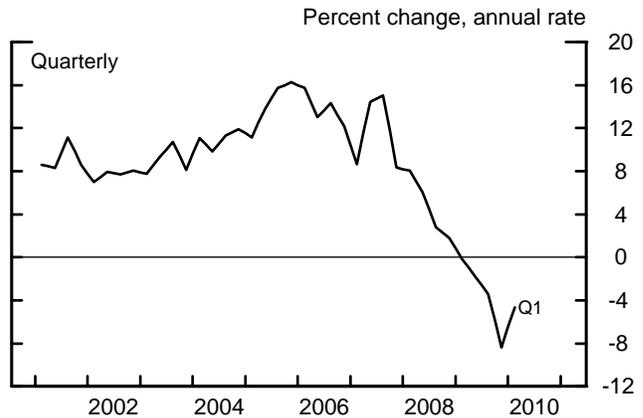
Note: Index is a weighted average of the percent change in the consensus forecasts of current-year and following-year earnings per share for a fixed sample.  
 \* Revision in Feb. 2009 was -17.2%.  
 Source: Thomson Financial.

Delinquency Rates on Commercial Mortgages on Existing Properties



Note: CMBS are commercial mortgage-backed securities.  
 \* Excluding farmland.  
 Source: Citigroup; Call Report data; ACLI.

Commercial Mortgage Debt



Source: Federal Reserve.

Financial Developments

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## U.S. Dollar Funding Pressures and Dollar Liquidity Swap Lines

In March, dollar funding pressures reemerged in the euro area as ongoing uncertainties about the condition of euro-area financial institutions were amplified by concerns about their exposure to Greece and other peripheral euro-area economies. On net over the intermeeting period, U.S. dollar Libor has increased notably, with one-month and three-month tenors (see top left figure on the next page) up about 10 basis points and 20 basis points, respectively. Moreover, anecdotal evidence suggests that trading activity is low beyond the one-week tenor and tiering has intensified in the bank funding market. In particular, euro-area banks typically report paying higher rates than non-European banks, and peripheral euro-area banks report paying higher rates than major core euro-area banks. That said, over the past couple of weeks, some measures of dollar funding conditions seem to have stabilized.

Some euro-area financial institutions cannot readily access unsecured dollar funding in the wholesale market even in normal times and instead borrow euros and swap them into dollars via the private FX swap market. The implied cost of dollar funding (see top right figure), under the assumption that euros are borrowed at euro Libor and swapped into dollars, has risen more than U.S. dollar Libor-based costs, with rates paid for one-month and three-month funds up 30 basis points and 35 basis points, respectively.

Data on commercial paper outstanding in the United States and on international capital flows provide further evidence of U.S. dollar funding pressures for euro-area institutions. Since April 26, U.S. commercial paper outstanding issued by euro-area financial institutions fell

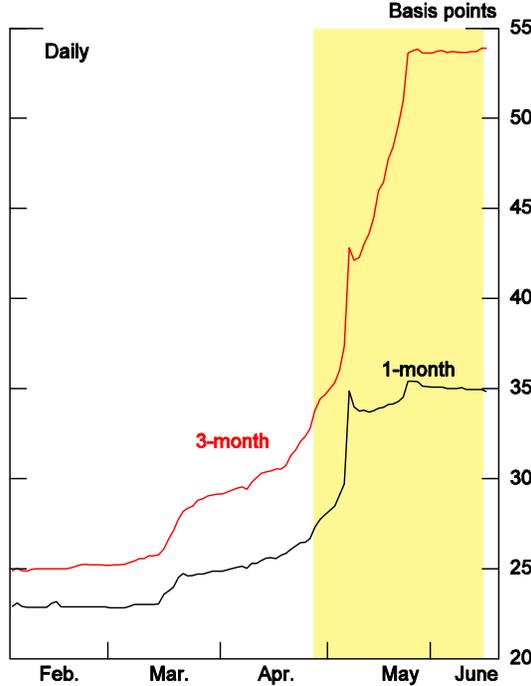
\$56 billion (see bottom left figure), while outstandings for other issuers were little changed. The Treasury International Capital (TIC) data show that, in March and April, U.S. branches of European banks increased their net lending to affiliates. The most common explanation banks gave for this increase was that their affiliates faced U.S. dollar funding pressures.

In response to the reemergence of these dollar funding strains, the FOMC reestablished dollar liquidity swap lines on May 9 and 10 with the European Central Bank (ECB), Bank of England, Bank of Canada, Bank of Japan, and Swiss National Bank. So far, drawings on the lines have been limited, with only the ECB and the Bank of Japan attracting any bidders in their dollar tender operations. The ECB's first one-week tender drew \$9.2 billion in bids from seven participants (see bottom right figure); its most recent one-week auctions drew no bids. Only the ECB and the Bank of Japan have offered three-month dollar funding. The ECB's first offering at this term drew only \$1 billion in bids from six participants; the Bank of Japan's offering elicited only \$210 million in bids.

Demand has been limited because the central banks are offering dollar liquidity in their markets at rates equal to the overnight index swap (OIS) rate plus 100 basis points—rates that have exceeded the cost of dollar funding available to most institutions through alternative sources. However, these facilities were designed to provide a backstop, and as such, even with very limited demand, they seem to be helping to forestall the severe dollar hoarding that drove funding costs so high in the previous crisis.

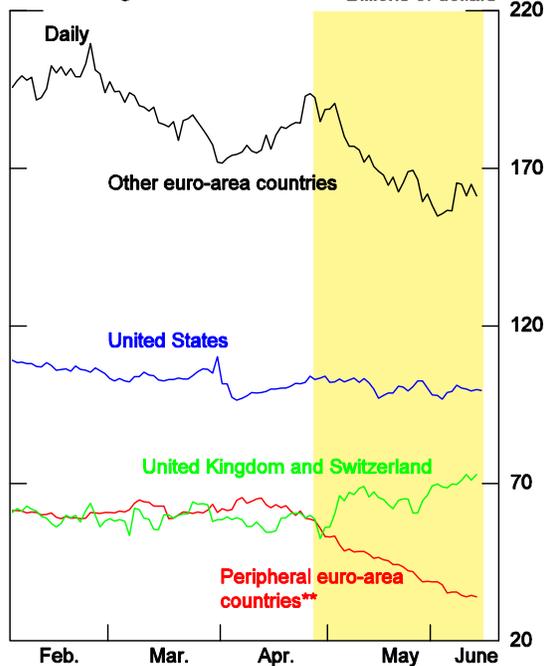
## U.S. Dollar Funding Pressures

**U.S. Dollar Libor**



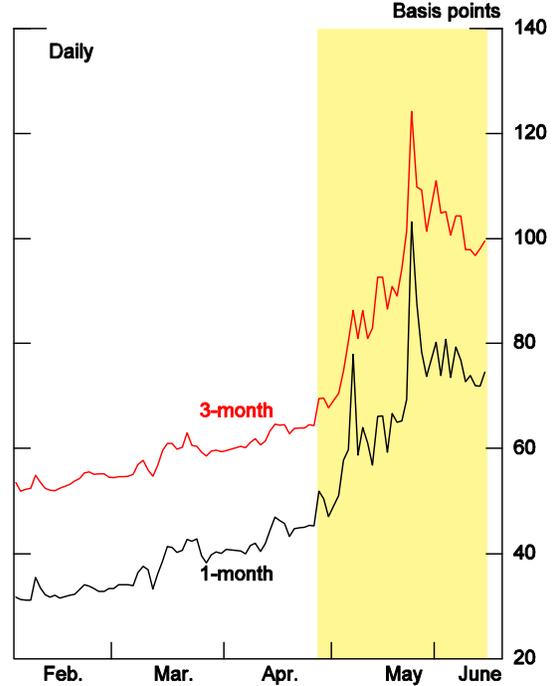
Source: Bloomberg.

**Unsecured Financial Commercial Paper Outstanding in the U.S. Market\***



\*By nationality of issuer.  
 \*\*Portugal, Ireland, Greece, Italy and Spain.  
 Source: DTCC.

**Cost of Dollar Funding from Euro-Dollar Swaps\***



\*Cost of funding implied from euro-dollar FX swaps assuming banks pay euro Libor to obtain funding.  
 Source: Bloomberg, FRBNY.

**U.S. Dollar Liquidity Provided under Reestablished Swap Facilities**

Central Bank	Date Liquidity Provided	Interest Rate (Percent)	Amount (\$ billions)
<b>One-Week Operations:</b>			
ECB	May 12	1.22	9.2
	May 20	1.22	0
	May 27	1.23	5.4
	June 3	1.21	0
	June 10	1.20	0
<b>Three-Month Operations:</b>			
ECB	May 20	1.24	1.0
BOJ	May 20	1.24	.2
<b>Memo:</b>			
Amount outstanding as of June 16:			1.2

Source: ECB, BOJ.

Gross equity issuance fell a bit, on net, in April and May, likely owing in part to recent equity price declines and market volatility. Through the first quarter, equity retirements due to cash-financed M&A deals and share repurchases remained strong, leaving net equity issuance negative. Announcements of both repurchases and M&A deals continued apace in April and May.

Measures of the credit quality of nonfinancial firms have generally shown continued improvement. Based on preliminary data, the ratio of aggregate liquid assets to total assets for nonfinancial corporations remained in record-high territory in the first quarter, and the aggregate debt-to-asset ratio declined a bit further. Although the expected default rate for nonfinancial firms from Moody's KMV stayed at a somewhat elevated level, the dollar value of Moody's upgrades of nonfinancial corporate bonds significantly outpaced that of downgrades during April and May, and the six-month trailing default rate for bonds issued by nonfinancial firms fell further in May to only a bit above zero. First-quarter profits for firms in the S&P 500 appear to have jumped about 20 percent at a quarterly rate. This fourth consecutive quarter of solid earnings gains primarily reflected an upturn in financial sector profits from quite depressed levels. Revisions to year-ahead expected earnings jumped in mid-May to a record-high reading for the 30-year history of the series. However, analysts generally have yet to react to recent weeks' developments, such as the potential effects of dollar appreciation on earnings of domestic firms with substantial overseas sales.

The overall picture in commercial real estate markets remained grim. Prices of commercial properties fell a bit further in the first quarter, and the volume of commercial property sales has remained light in recent months. The delinquency rate for securitized commercial mortgages continued to climb in May, and indexes of commercial mortgage CDS prices declined, on net, over the intermeeting period. With charge-offs mounting and new lending stalled, outstanding commercial mortgage debt decreased at an annual rate of 4½ percent in the first quarter.

## **GOVERNMENT FINANCE**

During the intermeeting period, the Treasury auctioned about \$335 billion of nominal coupon securities across the maturity spectrum. As it had previously announced, the Treasury has reduced the sizes of its coupon auctions a bit in recent weeks, reflecting

some easing of its borrowing needs. This period's auctions were well received, with bid-to-cover ratios generally above historical averages.

The municipal bond market also remained receptive to issuers over the intermeeting period, despite continued concerns about the financial health of state and local governments. In the first quarter, downgrades of municipal bonds outpaced upgrades, but gross issuance of long-term municipal bonds remained solid in recent months, helped by continued strength in issuance for capital projects under the Build America Bond program. Yields on long-term municipal bonds fell less than those on comparable-maturity Treasury securities, leaving their yield ratios significantly higher over the period. Although some of this increase reflects the effect of investors' safe-haven demand for Treasury securities, the ratio of municipal bond yields to yields on comparable-maturity AAA-rated corporate bonds also moved noticeably higher.

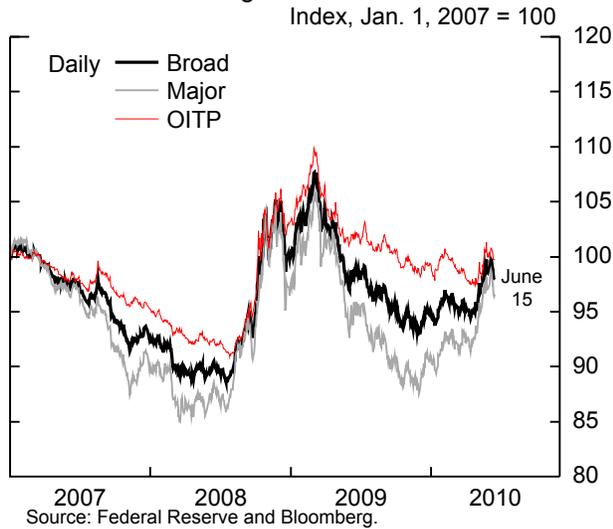
## **FOREIGN DEVELOPMENTS**

The threat to global growth and European financial stability posed by the fiscal crisis in Greece and by the potential for similar troubles in some other European countries has sparked widespread flight-to-quality flows. Concerns that Chinese policy tightening to damp property speculation might derail China's economic growth may also have contributed to the retreat from risky assets. This retreat led to a broad appreciation of the dollar and declines in both equities and yields on benchmark sovereign bonds. Investor sentiment has improved over the past week, leading to a partial reversal in these movements, despite Moody's downgrade of Greece to junk status in mid-June. On net, the dollar has appreciated more than 7 percent against the euro since April 27 and has risen 3 percent against sterling. Of note, the dollar has increased 1 percent or more against the currencies of Canada, Australia, Brazil, and Malaysia even as the strong pace of growth in these economies led their central banks to tighten monetary policy.

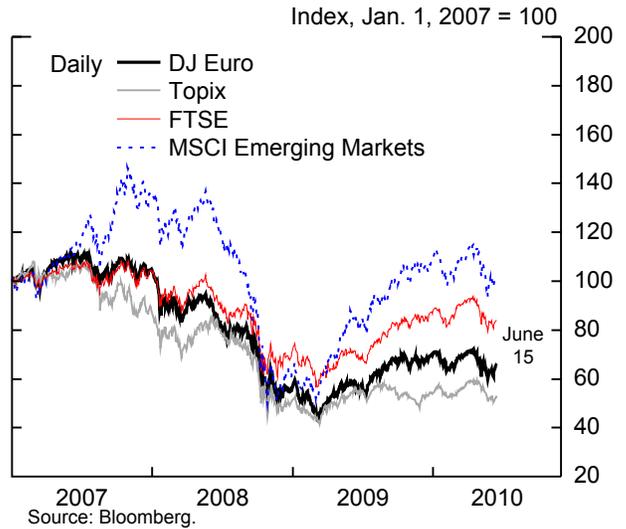
Headline equity indexes are down 4 to 12 percent in advanced foreign economies over the period and are also lower in most emerging market economies. Consistent with flight-to-quality flows, emerging market equity inflows turned negative over the period. Bank shares in the euro area have been particularly hard hit by the ongoing fiscal crisis and the reemergence of pressures on bank funding. The strains in euro money markets led the ECB to reinstitute a six-month lending operation and switch its three-month

### Foreign Developments

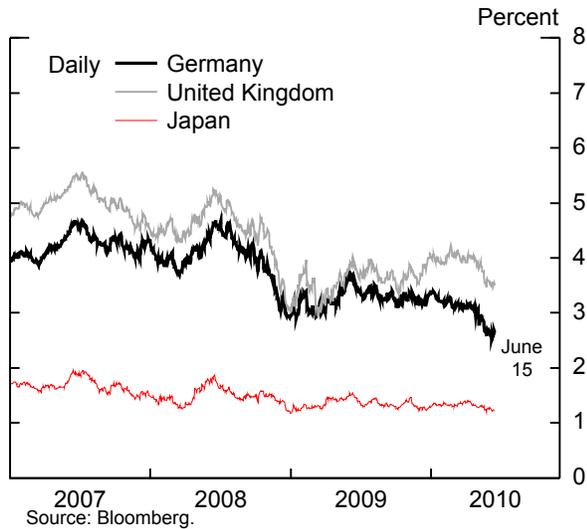
Nominal Trade-Weighted Dollar Indexes



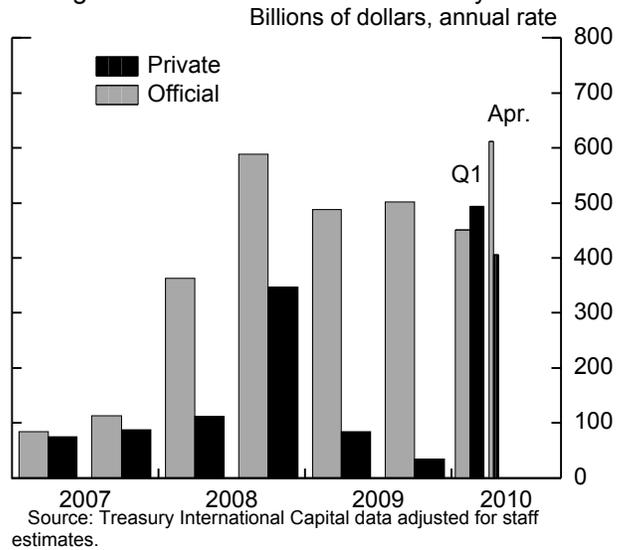
Stock Price Indexes



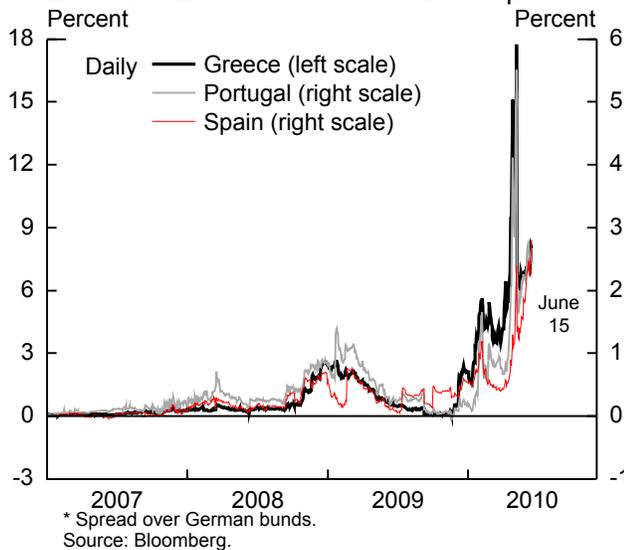
Nominal 10-Year Government Bond Yields



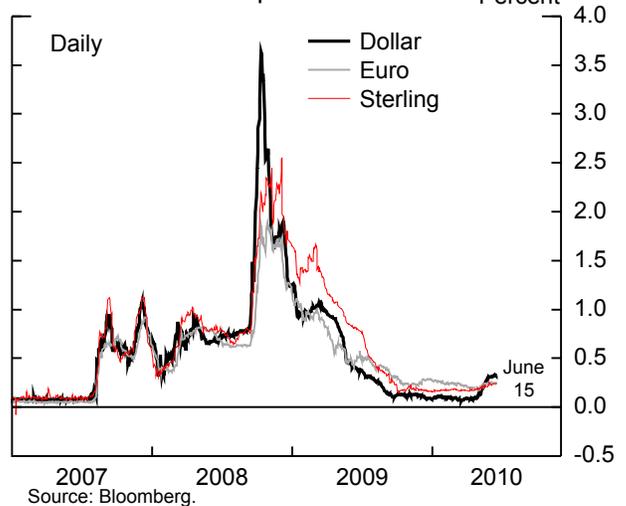
Foreign Net Purchases of U.S. Treasury Securities



Euro-Area 2-Year Government Bond Spreads\*



3-Month Libor-OIS Spreads



Financial Developments

lending operations from a fixed-quantity auction to a full-allotment offering at a fixed rate of 1 percent. Strains also appeared in corporate debt markets as both nonfinancial and financial corporate debt issuance dropped substantially in the second quarter. In addition, pressures in dollar funding markets reappeared for foreign financial institutions, especially those thought to have significant exposure to Greece and other peripheral euro-area countries. To help contain these pressures and to prevent their spread to other institutions and regions, the Federal Reserve reestablished dollar liquidity swap arrangements with the ECB, the Bank of England, the Bank of Japan, the Bank of Canada, and the Swiss National Bank.

Benchmark sovereign yields in the major advanced foreign economies, with the exception of Japan, have declined 20 to 45 basis points on net. The decreases were due in part to investors shifting out of risky assets and into the safety of sovereign securities in the major economies. In addition, concerns that Europe's fiscal problems were clouding the outlook for global growth may have prompted sovereign yields to move lower. Consistent with a flight into safe assets, foreign private net purchases of U.S. Treasury securities remained elevated in April, the latest month for which data are available, after increasing substantially in the first quarter of this year relative to the average rate recorded in 2009.

Sovereign yields of peripheral European countries declined noticeably following the May 10 announcement of the EU framework for providing financial aid to euro-area governments and of the ECB's intention to purchase euro-area sovereign debt. However, yields remained high even after these announcements and have moved up since, notwithstanding the ECB's purchases of government debt, which have totaled €47 billion so far. In fact, spreads on 10-year Spanish sovereign debt are now higher than their May peak, reflecting Fitch's one-notch downgrade of Spain's credit rating to AA+ and the country's continuing problems with regional savings banks.

Some signs of strain have also been evident in emerging Europe. Hungarian officials' warnings that the previous government may have underestimated the extent of the country's fiscal problems prompted a sharp selloff of the forint. Market participants have come to believe that those comments exaggerated the difficulties for domestic political purposes, but substantial uncertainty remains. Amid a weakening outlook for

growth in the region, central banks in several emerging European economies—Russia, the Czech Republic, Romania, and Hungary—have begun to decrease policy rates.

Foreign official purchases of U.S. Treasury securities remained strong through April. More-timely data on custody holdings at the Federal Reserve Bank of New York show a decline in foreign official holdings of U.S. Treasury securities in May, only partly offset by higher holdings of agency securities. Official inflows from emerging market countries likely slowed, as emerging markets have had to purchase fewer dollars to resist their currencies' appreciation now that the dollar has been strengthening.

## COMMERCIAL BANKING AND MONEY

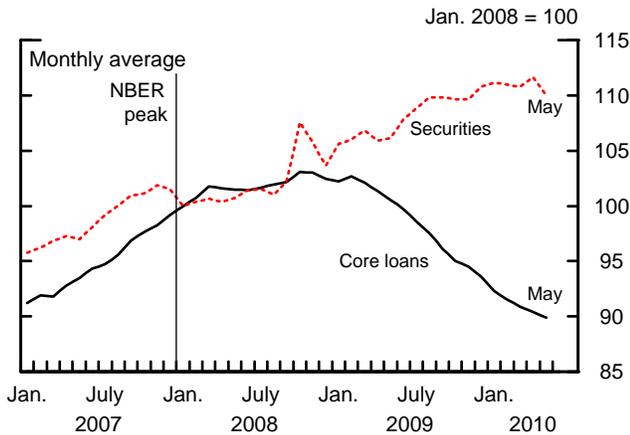
Bank credit fell in April and May at about the same pace as in the first quarter on average, and it has now declined for 15 consecutive months. The contraction in core loans (C&I, real estate, and consumer loans) continued to be the primary cause of the decline, on balance, but the runoff of core loans slowed somewhat relative to the past several quarters. C&I loans, after falling at a 17 percent annual rate in April, decreased at only an 8 percent pace in May, the smallest drop in 18 months. While commercial real estate and home equity loans fell at a slightly faster rate than in recent quarters, the contraction in closed-end residential loans abated, partly because of a reduced pace of sales to the GSEs. Consumer loans declined again, on average, in April and May. Sales of Treasury securities at several large domestic banks and foreign-related institutions contributed to a sizable drop in banks' securities holdings in May.

According to the first-quarter Call Reports, bank profitability improved moderately, although it remained at the low end of its historical range. The better earnings stemmed primarily from an increase in banks' net interest margins and a fairly widespread decline in loan loss provisions. The consolidation of previously securitized loans under FAS 166/167 contributed to some of the improvement in measured net interest margins, but the accounting rule changes also generated a decline in noninterest income from securitizations and an increase in loan loss provisioning at the affected banks.<sup>3</sup> After

<sup>3</sup> On January 21, 2010, Federal bank regulatory agencies announced that banks would be allowed to phase in the effects of FAS 166/167 on risk-weighted assets. Fifty percent of affected assets must be included in risk-weighted assets at the end of the second quarter of this year and the remainder at the end of

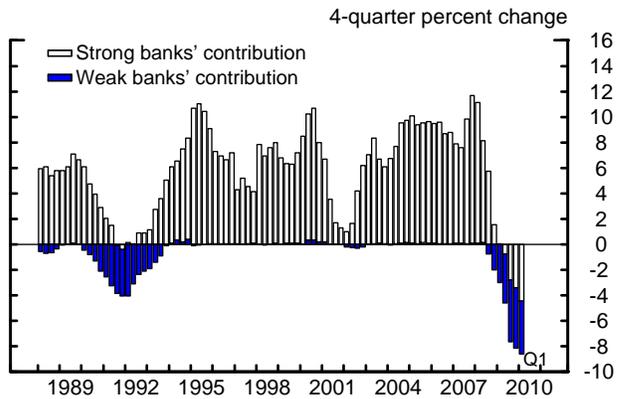
### Commercial Banking and Money

#### Bank Credit



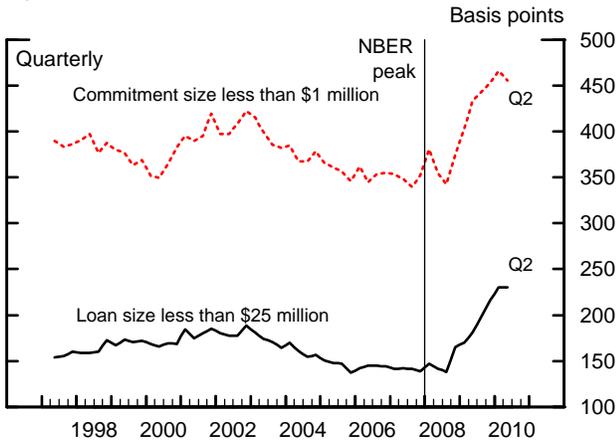
Note: The data have been adjusted to remove the effects of consolidations of assets under FAS 166 and FAS 167. Core loans consist of commercial and industrial, real estate, and consumer loans. Source: Federal Reserve.

#### Growth in Loans at Domestic Banks



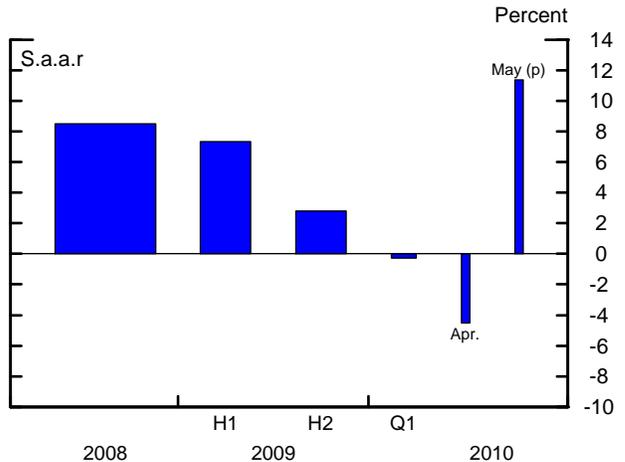
Note: Strong banks are banks that have CAMELS ratings of 1 or 2. Weak banks are banks that have CAMELS ratings of 3, 4, or 5. Source: For growth in loans, Call Report; for CAMELS ratings, FFIEC.

#### Spread on C&I Loans



Note: The spread on C&I loans over a market interest rate on an instrument of comparable maturity, adjusted for changes in nonprice loan characteristics. Source: Survey of Terms of Business Lending.

#### Growth of M2



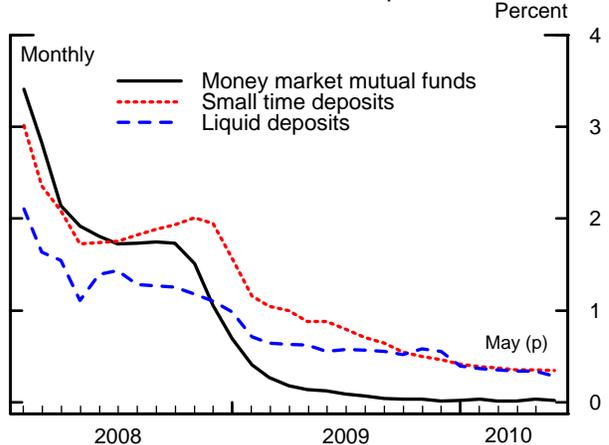
p Preliminary. Source: Federal Reserve.

#### Growth of M2 and Its Components

Percent, s.a.a.r.	M2	Liquid deposits	Small time deposits	RMMF	Curr.
2008	8.5	6.9	12.3	13.4	5.8
2009					
H1	7.4	16.0	-6.0	-15.7	10.8
H2	2.8	17.0	-26.5	-29.9	2.9
2010					
Q1	-.2	9.1	-25.3	-29.2	2.1
Apr.	-4.5	.7	-20.0	-36.0	7.4
May (p)	11.3	19.0	-18.8	3.1	5.3

p Preliminary. Source: Federal Reserve.

#### Interest Rates on Selected Components of M2



p Preliminary. Source: Federal Reserve; Call Report; Bank Rate Monitor.

Financial Developments

adjusting for the effects of the accounting rule changes, outstanding loan balances fell further in the first quarter at both weak banks—those with CAMELS ratings of 3, 4, or 5—and strong banks—those with CAMELS ratings of 1 or 2. In addition, unused commitments to fund loans declined again in the first quarter. Meanwhile, a reduction in risk-weighted assets and capital infusions from parent holding companies further boosted risk-based capital ratios from already high levels.

The Survey of Terms of Business Lending showed that the weighted-average interest rate spread on C&I loans of less than \$25 million was about unchanged in May, after adjusting for non-price loan characteristics. The share of originations by branches and agencies of foreign banks declined compared with that from three months ago, while the share of loans in riskier loan categories rose slightly. The weighted-average adjusted spread on loans made under commitment with a credit line of less than \$1 million—a proxy for lending to smaller firms—ticked down slightly but remained very elevated.

On a seasonally adjusted basis, M2 contracted in April but surged in May. A significant portion of this swing was likely attributable to tax payments by households that were unusually low this year. The lower payments likely tempered both the usual buildup in liquid deposits in April in advance of the tax date and the runoff of those deposits in May. Averaging across the two months, M2 grew at a 3½ percent annual rate after having been about unchanged in the first quarter, with liquid deposits increasing at an average annual rate of 10 percent. Currency growth continued to exceed its subdued pace of late 2009 and early 2010, probably due to a further expansion of foreign demand. Retail money market mutual funds, which experienced rapid outflows in the first four months of this year, attracted inflows in May, likely reflecting in part investors' pullback from riskier asset classes and the tax-related effect noted above. Small time deposits continued to contract rapidly in April and May, as short-term interest rates remained extremely low.

the year. Moreover, many banks had been required to include securitized credit card receivables in risk-weighted assets in advance of the implementation of FAS 166/167 because they had provided material support to the securitization structures. Banks were not allowed to phase in the effects of FAS 166/167 on average tangible assets in calculating their leverage ratios.

Over April and May, the monetary base contracted at an average annual rate of 20 percent, driven by a decline in reserve balances that primarily resulted from a drop in usage of the Federal Reserve's credit and lending facilities and an increase in the Treasury's accounts with the Federal Reserve. Over the intermeeting period, primary credit outstanding declined about \$6 billion, but total reserves increased \$45 billion, owing to the settlement of previously purchased MBS and a reduction in the Treasury's general account (see the box on the Federal Reserve's balance sheet). In preparation for possible future reserve draining operations, the Federal Reserve conducted its first small-scale auction to test the Term Deposit Facility in June (see the box on the Term Deposit Facility).

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## Balance Sheet Developments over the Intermeeting Period

The Federal Reserve's total assets edged up modestly over the intermeeting period to \$2.4 trillion, as securities held outright increased a bit and lending through liquidity and credit facilities fell slightly.

During the intermeeting period, securities held outright rose \$31 billion, reflecting the net settlement of \$33 billion of agency mortgage-backed securities (MBS), which was partially offset by the maturing of \$2 billion in agency debt securities. Although the Desk completed purchases of agency MBS under the large-scale asset purchase (LSAP) program in March, some agency MBS purchase transactions and dollar roll transactions conducted by the Desk continued to settle.<sup>1</sup>

Liquidity provided to financial institutions declined, on balance. Primary credit outstanding dropped \$6 billion to about \$140 million, its lowest level since March 2008. Most of the decline represented a loan repayment by a single institution. In response to the reemergence of strains in global U.S. dollar short-term funding markets, in early May the FOMC authorized a resumption of the temporary dollar liquidity swap lines with several major central banks, but use has been limited.<sup>2</sup> Swaps outstanding under the reestablished arrangements peaked at

\$9 billion in mid-May and now stand at \$1.2 billion.

Most of the assets that remained in the Commercial Paper Funding Facility LLC (CPFF) at the time of the April FOMC meeting—which represented investments of the fees paid by issuers that sold commercial paper to the facility—have been liquidated and the LLC is expected to be dissolved in the near future.<sup>3</sup>

Prepayments reduced loans extended through the Term Asset-Backed Securities Loan Facility by about \$2 billion. No loans secured by newly issued commercial mortgage-backed securities were requested at the May 19 subscription, and it is virtually certain that there will be no loan requests before the facility closes on June 30.

On the liability side of the Federal Reserve's balance sheet, the U.S. Treasury's supplementary financing account remained steady at \$200 billion, while the Treasury's general account fell \$56 billion over the period, on net. This decline was roughly offset by an increase in Federal Reserve notes in circulation and a rise in reserve balances of depository institutions of \$45 billion to about \$1.1 trillion.

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<sup>1</sup> To avoid fails to deliver of relatively scarce securities, the Desk has used dollar rolls to effectively postpone the settlement of certain transactions. These dollar rolls are projected to continue to settle through the fall. Also see, when available, the forthcoming memorandum to the FOMC "Conducting Coupon Swaps to Facilitate Settlement of Agency MBS Purchases," by Brian Sack.

<sup>2</sup> The central banks are the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank.

<sup>3</sup> The last remaining commercial paper held by the facility matured on April 26, and the facility is anticipated to be dissolved in several months after the completion of the audit of the final CPFF financial statements.

**Federal Reserve Balance Sheet**  
Billions of dollars

	Change since last FOMC	Current (06/14/2010)	Maximum level	Date of maximum level
<b>Total assets</b>	<b>20</b>	<b>2,351</b>	<b>2,364</b>	<b>05/13/10</b>
Selected assets:				
Liquidity programs for financial firms	-4	2	1,247	11/06/08
Primary, secondary, and seasonal credit	-6	+0	114	10/28/08
Term auction credit (TAF)	0	0	493	03/11/09
Foreign central bank liquidity swaps	1	1	586	12/04/08
Primary dealer credit facility (PDCF)	0	0	156	09/29/08
Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF)	0	0	152	10/01/08
Lending through other credit facilities	-7	43	351	01/23/09
Net portfolio holdings of Commercial Paper Funding Facility LLC (CPFF)	-5	+0	351	01/23/09
Term Asset-Backed Securities Loan Facility (TALF)	-2	43	49	03/11/10
Support for specific institutions	2	119	121	05/05/10
Credit extended to AIG, net	-1	26	91	10/27/08
Preferred interests in AIA Aurora LLC and ALICO Holdings LLC	0	25	25	06/14/10
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC	2	67	75	12/30/08
Securities held outright*	31	2,073	2,073	06/14/10
U.S. Treasury securities	+0	777	791	08/14/07
Agency debt securities	-2	167	169	03/11/10
Agency mortgage-backed securities**	33	1,129	1,129	06/14/10
Memo: Term securities lending facility (TSLF)	0	0	236	10/01/08
<b>Total liabilities</b>	<b>18</b>	<b>2,294</b>	<b>2,309</b>	<b>05/13/10</b>
Selected liabilities:				
Federal Reserve notes in circulation	5	899	904	06/02/10
Reserve balances of depository institutions	45	1,081	1,249	02/24/10
U.S. Treasury, general account	-56	13	187	12/31/09
U.S. Treasury, supplementary financing account	+0	200	559	10/22/08
Other deposits	15	16	81	03/12/10
<b>Total capital</b>	<b>2</b>	<b>57</b>	<b>57</b>	<b>06/14/10</b>

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

\* Par value.

\*\*Includes only mortgage-backed securities that have already settled. Although agency MBS purchases were completed at the end of March 2010, settlements will continue for the next couple of months. Total MBS purchases are about \$1.25 trillion.

## The First Small-Value Term Deposit Facility Auction

On May 28, 2010, the Federal Reserve announced a series of small-value auctions of term deposits under the new Term Deposit Facility (TDF). The small-value offerings are designed to ensure the effectiveness of TDF operations and to provide eligible institutions with an opportunity to gain familiarity with term deposit procedures. The first auction, which offered \$1 billion of 14-day term deposits, was conducted on June 14 and will settle on June 17. This auction allowed relatively small noncompetitive bids that were awarded in full at the stop-out rate determined in the competitive auction.

By the time of the first auction, 357 depository institutions (DIs) had registered to participate in the TDF. As noted in table 1, these DIs recently held about \$560 billion in reserve balances, representing about 52 percent of total reserve balances. By number, most of the registered DIs are small institutions that, in aggregate, hold about \$45 billion in reserve balances. The 31 large and foreign DIs that have registered recently held about \$520 billion in reserve balances.

**Table 1: DIs Registered for TDF Participation as of June 14, 2010**

Entity type	Reserve	
	Number of DIs	Number of balances held by registered DIs* (\$ in billions)
Large banks**	16	425
Foreign institutions	15	94
Small institutions***	326	45
Total	357	563

\*Average balances held during maintenance period ended June 2, 2010. Total average reserve balances for the same period were \$1,079 billion.

\*\*Includes large money center banks and other large commercial banks.

\*\*\*Includes small commercial banks and thrifts.

As shown in table 2, the first auction was well-subscribed, with competitive bids of a little above \$6 billion and a bid-cover ratio of 6.14. Noncompetitive bids amounted to about \$152 million, resulting in total awarded term deposits of \$1.152 billion. There were 194 bids, including 156 competitive bids from 71 DIs. In general, the automated processes supporting the auction worked well, and DIs successfully placed their bids.

In the competitive portion of the auction, bids were submitted by and awards made to a range of DIs including large banks, foreign institutions, small banks, and thrifts. Bids ranged from 20 basis points to the allowed maximum of 75 basis points, with most bids at or below 40 basis points. The stop-out rate was 27 basis points, 2 basis points above the interest rate on excess reserves. In all, of 156 bids, 18 bids from 13 DIs were accepted in this portion of the auction.<sup>1</sup>

In the noncompetitive portion of the auction, 38 bids were submitted, nearly all from smaller DIs (small commercial banks and thrifts). Each bid was accepted at its tendered amount, which was the \$5 million maximum for about two-thirds of the bids.

**Table 2: Bids and Awards for June 14, 2010, TDF Auction**

	Submitted	Awarded
<b>Competitive</b>		
Volume (\$ in millions)	6,138	1,000
Number of bids	156	18
Number of institutions	71	13
<b>Noncompetitive</b>		
Volume (\$ in millions)	152	152
Number of bids	38	38
<b>Total</b>		
Volume (\$ in millions)	6,291	1,152
Number of bids	194	56
Number of institutions	109	51

<sup>1</sup>Some of these numbers have been revised from numbers presented in the June 15, 2010, memo to the Board.

## Risks and Uncertainty

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### ASSESSMENT OF FORECAST UNCERTAINTY

We continue to see the risks around our projection for economic activity as elevated relative to the average experience of the past 20 years (the benchmark used by the Committee). On the domestic front, the depth and length of the recession have been unmatched in recent history, and the fact that the downturn originated in a severe financial crisis makes it qualitatively different from other postwar contractions. Because of these differences, gauging the likely strength of recovery is particularly difficult, and we see sizable risks on both sides of our projection. In addition to these domestic risks, several European countries face considerable fiscal and financial stress, leading to substantial uncertainties about the effects of these strains on European economic activity, world financial markets, and real activity in the United States. While outcomes in Europe could be more or less favorable than we have assumed in the baseline, we place non-negligible odds on an adverse tail event in which developments in Europe trigger a systemic financial and economic crisis that spills over to the United States; one possible scenario along these lines is described in the box titled “Consequences of a Severe European Sovereign Debt Crisis.” Taking account of this possibility and other factors, we judge the risks to our projection of real activity as skewed to the downside.

We also see the risks around our inflation projection as elevated relative to the experience of the past 20 years. In many dimensions relevant for the inflation outlook, we are in uncharted territory. Recent readings on actual inflation have been exceptionally low. The size and nature of the adverse shocks to activity were extraordinary, and identifying the supply and demand components of these shocks is particularly difficult, making estimation of the output gap especially difficult. Moreover, a number of other factors are outside the range of historical experience. The federal funds rate is effectively at the zero lower bound, the Federal Reserve’s balance sheet has expanded dramatically, and fiscal policy is deemed by many to be on an unsustainable path. Weighing these risks to both the upside and downside, we continue to see the risks around our inflation projection as roughly balanced.

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## Consequences of a Severe European Sovereign Debt Crisis

A number of European countries are facing significant fiscal strains, the outlook for European economic activity has weakened, and many banks in the region are vulnerable to potential credit losses. The baseline projection does not envision the current situation escalating into a systemic problem. But further adverse events could exacerbate the situation and intensify investor concerns, thereby triggering a severe financial and economic crisis. In this box, we use a simulation of the staff's multicountry DSGE model, SIGMA, to consider a severe "tail-risk" scenario in which concerns about the solvency of European governments intensify sharply and generate adverse spillovers to the United States.<sup>1</sup>

A European debt crisis could play out in many ways. In this scenario, we assume that solvency concerns cause sovereign debt yields in Europe to jump 150 basis points on average this summer. To forestall further erosion in confidence, European governments cut spending by an average of 2 percent of GDP, restraining aggregate demand appreciably. Higher interest rates and slower economic activity are in turn assumed to lead to large credit losses at European banks, with the result that financial stress increases markedly and prompts a flight to safety. All told, European corporate bond yields jump 275 basis points, and corporate equity prices decline 35 percent relative to baseline—a deterioration in credit conditions somewhat less extreme than that experienced by the United States in the fall of 2008. Moreover, the euro depreciates a further 30 percent against the dollar. This constellation of financial shocks, coupled with fiscal restraint, pushes Europe back into a recession. Real GDP contracts at an average annual rate of around 4 percent over the

second half of this year and 2011, and inflation falls below zero for a time.

A protracted European recession, coupled with a major depreciation of the euro and other currencies against the dollar, would restrict real activity noticeably in the United States through standard trade linkages. But a bigger threat to the U.S. economy would be the financial spillovers that would likely accompany such a crisis. To account for these effects, we assume that the European crisis triggers financial shocks in the United States and the rest of the world broadly similar to those that Europe experienced during the U.S.-centered financial crisis in late 2008. Specifically, we assume that risk premiums outside of Europe jump at the onset of the crisis; as a result, yields on U.S. BBB-rated corporate bonds increase more than 1 percentage point and equity prices fall about 20 percent relative to baseline. In addition, U.S. banks tighten lending standards, and consumer and business confidence falls. Finally, U.S. Treasury yields decline modestly relative to baseline, in part because of safe-haven effects.

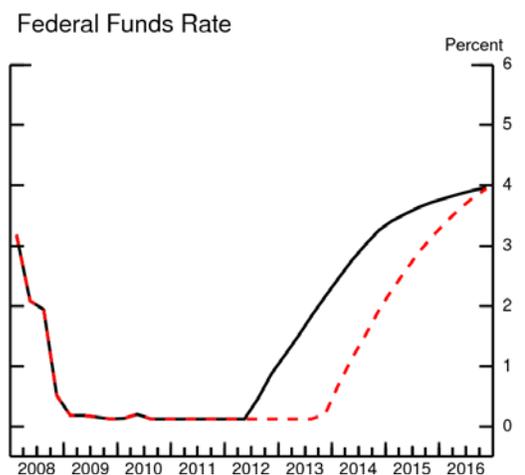
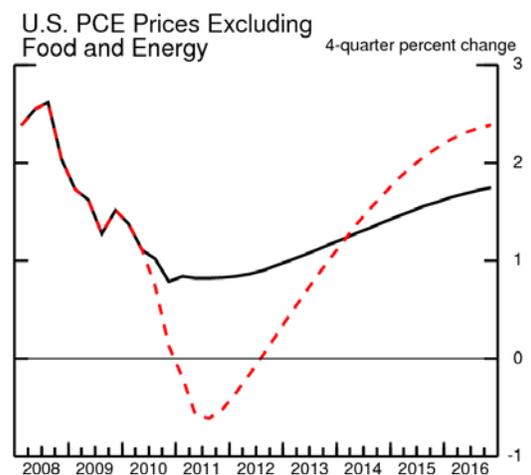
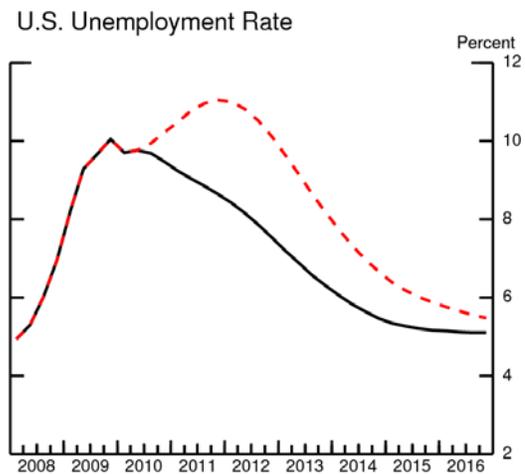
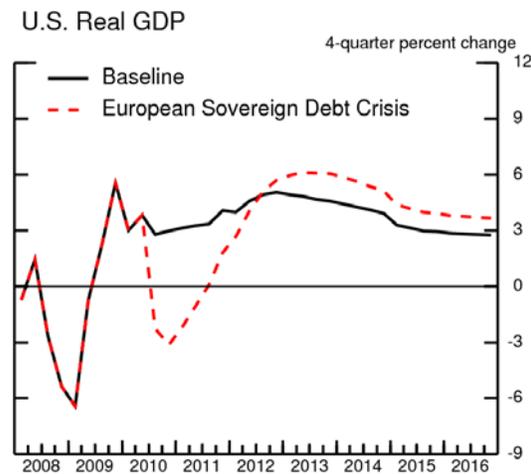
With financial conditions becoming significantly more restrictive, the U.S. economy falls back into recession in the second half of this year and real GDP does not start expanding again until late 2011, as shown in the figures on the next page. As a result, the unemployment rate peaks at just over 11 percent late next year. Some of this rise in unemployment is associated with adverse supply-side effects that temporarily raise the effective NAIRU, and thus does not put downward pressure on prices. Nevertheless, the crisis appreciably and persistently reduces

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<sup>1</sup> More details of this scenario, along with alternative versions of the scenario, are discussed in the memo to the Committee, "Macroeconomic Consequences of a European Debt Crisis," by Christopher Erceg, Jesper Linde, and David Reifschneider (June 11, 2009).

resource utilization, and the expectation of this greater slack, when coupled with the effects of dollar appreciation and lower import prices, temporarily leads to deflation. Beyond 2011, the U.S. economy recovers as the crisis abates and as the federal funds rate, following the prescriptions of a simple policy rule, remains at extremely low levels relative to baseline until the middle of the decade. This sluggish, accommodative policy response implies that output will be above its potential over the second half of the decade. As a result, near-term inflation expectations are temporarily elevated in the middle of the decade, pushing actual inflation above 2 percent for a time.

Outside of Europe and the United States, the consequences of a debt crisis would likely be less severe due to greater scope for monetary policy action. Thus, policy rates in the rest of the world are assumed to fall sharply on average for several years, making the decline in real output in those countries only half as great as it is in the United States. Much of this monetary buffering of real activity occurs through exchange rate effects—the currencies of these countries depreciate 10 percent against the dollar—that are partially at the expense of real activity in the United States and Europe.



## ALTERNATIVE SCENARIOS

To illustrate some of these risks, we consider a number of alternatives to the baseline projection using simulations of staff models. In these scenarios, the federal funds rate is assumed to respond to movements in real activity and inflation as prescribed by a simple policy rule. We generate most of the scenarios using the FRB/US model and the same policy rule for the federal funds rate as that detailed in the long-run outlook section of the domestic outlook discussion, with nontraditional policy assumed to follow the baseline path. The first scenario, however, is generated using the multicountry SIGMA model, which uses a somewhat different policy rule that employs an alternative concept of resource utilization.<sup>1</sup>

### Normalization in Europe

In our baseline forecast, Europe's unsettled financial conditions will persist through the remainder of this year before gradually improving. In this scenario, we instead assume a more rapid normalization of European financial conditions that restores confidence in global economic prospects and triggers a decline of the dollar as safe haven flows unwind. Specifically, the broad real dollar depreciates immediately 8 percent relative to baseline, with the decline heavily concentrated against the euro, and European economic activity increases about 1 percentage point per year faster than in the baseline through the end of next year. The effects on U.S. real GDP are amplified by an assumed 10 percent rise in equity prices and a fall in BBB-rated corporate bond spreads of 60 basis points. All told, U.S. real GDP increases about 1 percentage point faster, on average, through next year. U.S. core PCE inflation rises about ½ percentage point above baseline through the first half of 2011 in response to higher import prices and a narrower output gap. The nominal trade balance as a percent of GDP improves about 1 percentage point in 2011.

### Stronger Recovery

In the baseline projection, we have marked down the outlook for real activity noticeably, putting important weight on negative signals coming from abroad and from financial markets. However, incoming data suggest that the economic recovery has become more firmly established, and in this scenario we assume that the U.S. economy

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<sup>1</sup>In the SIGMA policy rule, the measure of slack is the difference between actual output and the model's estimate of the level of output that would occur in the absence of slow adjustment in wages and prices. The interest rate paths implied by this rule are roughly similar to those implied by FRB/US in the simulations considered here.

**Alternative Scenarios**

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

Measure and scenario	2010		2011	2012	2013-14
	H1	H2			
<i>Real GDP</i>					
Extended Tealbook baseline	3.4	3.0	3.7	4.8	4.3
Normalization in Europe	3.4	3.9	4.7	5.0	4.1
Stronger recovery	3.4	5.1	5.6	4.8	3.4
Weaker consumption	3.4	1.7	2.3	4.9	5.1
Jobless recovery	3.4	3.0	3.7	5.9	5.6
Lower potential	3.4	2.6	2.8	3.1	3.2
Greater disinflation	3.4	3.0	3.8	4.8	5.1
Higher inflation	3.4	3.0	3.6	4.3	4.1
<i>Unemployment rate<sup>1</sup></i>					
Extended Tealbook baseline	9.8	9.5	8.6	7.1	5.2
Normalization in Europe	9.8	9.4	8.1	6.4	4.7
Stronger recovery	9.8	9.2	7.6	6.1	5.1
Weaker consumption	9.8	9.7	9.3	7.9	5.2
Jobless recovery	9.8	10.0	9.7	8.2	4.8
Lower potential	9.8	9.6	9.1	8.4	7.3
Greater disinflation	9.8	9.5	8.6	7.1	4.7
Higher inflation	9.8	9.5	8.6	7.3	5.6
<i>Core PCE inflation</i>					
Extended Tealbook baseline	.8	.8	.8	1.0	1.3
Normalization in Europe	.8	1.3	1.2	1.2	1.3
Stronger recovery	.8	.8	.9	1.1	1.5
Weaker consumption	.8	.8	.7	.7	1.1
Jobless recovery	.8	.7	.4	.3	.8
Lower potential	.8	1.0	1.2	1.5	1.8
Greater disinflation	.8	.4	.0	-.4	-.3
Higher inflation	.8	1.2	1.5	1.9	1.9
<i>Federal funds rate<sup>1</sup></i>					
Extended Tealbook baseline	.2	.1	.1	.8	3.5
Normalization in Europe	.2	.1	.1	1.5	4.0
Stronger recovery	.2	.1	.8	2.1	3.9
Weaker consumption	.2	.1	.1	.1	3.3
Jobless recovery	.2	.1	.1	.1	3.2
Lower potential	.2	.1	1.2	2.3	4.0
Greater disinflation	.2	.1	.1	.1	1.8
Higher inflation	.2	.1	.6	1.9	3.9

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

has more underlying momentum than we have assumed in the baseline. Accordingly, the recovery in spending on household durables and business equipment, as well as outlays for construction—both residential and nonresidential—occurs one to two years sooner than in the baseline. In addition, financial conditions improve more quickly, with the result that corporate equity prices are 30 percent above baseline by the end of next year, further boosting aggregate spending. All told, real GDP expands at an average annual rate of about 5¼ percent through the end of 2011, causing the unemployment rate to drop to 7½ percent by late next year and to the NAIRU by the end of 2013. With less slack, inflation is higher. Under these conditions, the federal funds rate begins to rise in mid-2011 and remains above baseline thereafter.

### **Weaker Consumption**

Alternatively, the recent increases in consumer spending may reflect a bounce from unusually depressed levels. In this scenario, consumer uncertainty and further household deleveraging push the household saving rate higher. The slower recovery in spending, in turn, feeds back adversely on financial markets, further restraining real activity. All told, the personal saving rate rises to 6 percent by the end of 2011—2 percentage points above baseline; equity prices climb more modestly and, by late 2011, are nearly 15 percent below baseline. As a consequence, the improvement in the labor market is delayed, and the unemployment rate only declines to 9¼ percent at the end of 2011; the additional slack reduces inflation 1¼ percentage point below baseline by 2012. Lower inflation and weaker real activity call for a longer period of accommodative monetary policy, and the federal funds rate remains near zero until the first half of 2013. This additional monetary stimulus, together with an assumed gradual return of spending to long-run fundamentals, causes real GDP to expand more rapidly than in the baseline starting in mid-2012.

### **Jobless Recovery**

As the economic recovery continues and confidence improves, we anticipate that firms will boost payroll employment noticeably, relieving some of the pressure on their existing workforces and causing labor productivity to increase for a time more slowly than its trend pace. In this scenario, we instead assume that labor productivity expands through the end of next year at its trend rate of about 2½ percent per year—1½ percentage points faster than in the baseline. These larger productivity gains are driven by a combination of permanent shocks to structural productivity and more transitory factors, where the latter reflect firms' reluctance to hire in the face of continued

uncertainty about the outlook. We assume that the same caution leads firms to rely more on increases in the workweek to boost labor input than in the baseline. Finally, the slower pace of hiring is assumed to erode household confidence. Under these assumptions, real GDP follows its baseline path through the end of next year and the unemployment rate remains close to 10 percent during that period. Over time, households and firms eventually become more confident about the future and recognize the more favorable long-run conditions implied by higher structural productivity. As that occurs, aggregate demand picks up, and real GDP accelerates noticeably relative to baseline after 2011. Lower unit labor costs and lower levels of resource utilization combine to push inflation below  $\frac{1}{2}$  percent from mid-2011 to mid-2013. In this environment, the federal funds rate lifts off from the effective lower bound in mid-2013, a year later than in the baseline.

### **Lower Potential**

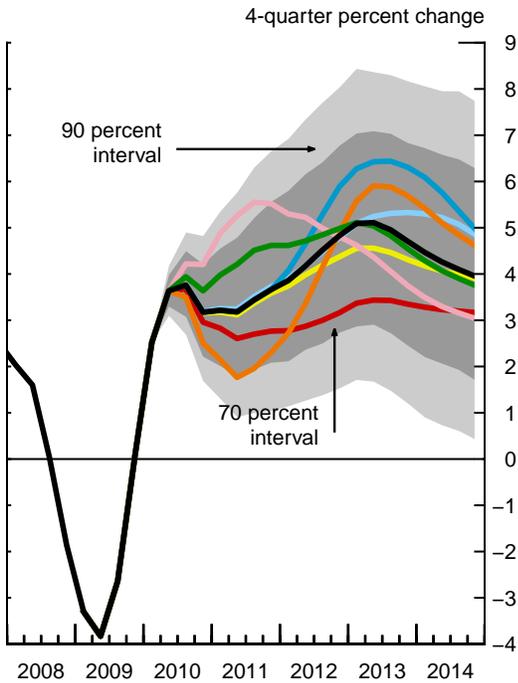
The NAIRU and potential output are difficult to measure, and we could be misjudging the degree of slack in the economy. In particular, the long-run implications for the labor market of the sharp increases in unemployment in general, and in long-term unemployment in particular, could be more adverse than in the baseline. Moreover, the impairment of the financial system and its repercussions for the broader economy have been both larger in magnitude and different in nature from what has typically occurred in previous downturns. Reflecting these risks, in this scenario we assume that the current level of potential output is lower than the staff assumes due to both a higher NAIRU and a lower level of structural productivity, so that output is currently  $3\frac{1}{4}$  percent below potential, instead of 7 percent as in the baseline. These more pessimistic assumptions for potential output imply lower long-run levels of household income and corporate earnings, and thus less consumption and investment over time. Accordingly, real GDP expands  $1\frac{1}{4}$  percentage point less per year on average through 2014 than in the baseline, and the unemployment rate declines more slowly. Prices accelerate more noticeably than in the baseline: Core PCE inflation rises to  $1\frac{1}{4}$  percent in 2011 and moves up to  $1\frac{3}{4}$  percent in 2014; this acceleration reflects both the direct effects on marginal cost of lower productivity as well as a smaller margin of slack. Policymakers gradually take on board the evidence of less-favorable supply-side conditions, and in response to less slack and higher inflation, monetary policy begins tightening early next year.

## Forecast Confidence Intervals and Alternative Scenarios

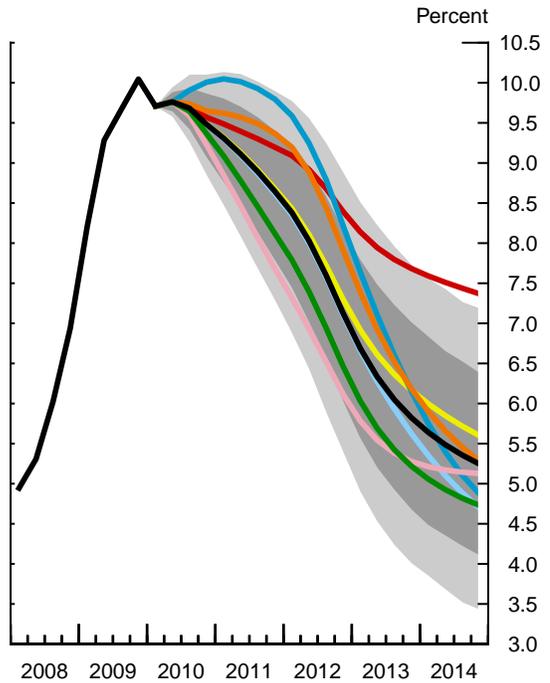
Confidence Intervals Based on FRB/US Stochastic Simulations

- Extended Tealbook baseline
- Weaker consumption
- Greater disinflation
- Normalization in Europe
- Jobless recovery
- Higher inflation
- Stronger recovery
- Lower potential

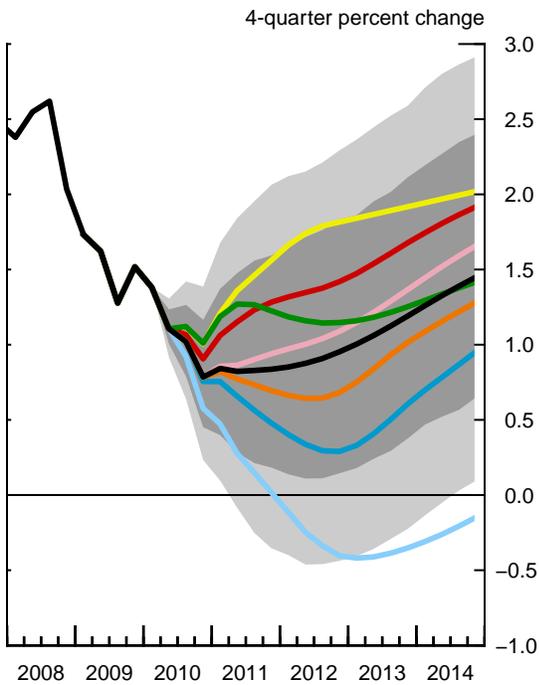
Real GDP



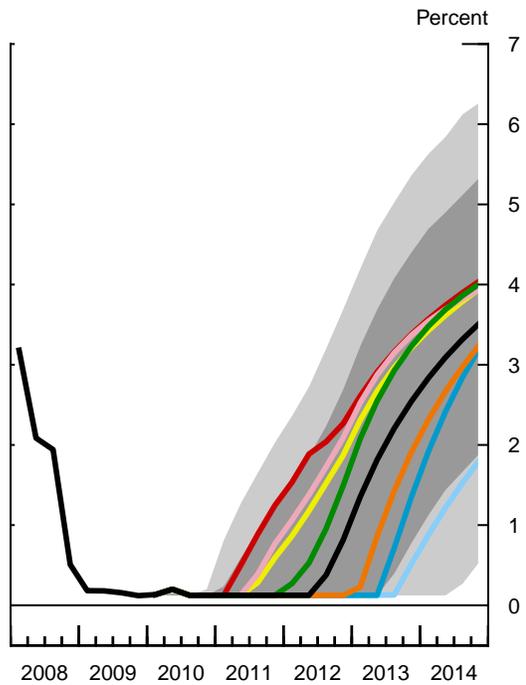
Unemployment Rate



PCE Prices excluding Food and Energy



Federal Funds Rate



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

Measure	2010	2011	2012	2013	2014
<i>Real GDP</i>					
<i>(percent change, Q4 to Q4)</i>					
Projection	3.2	3.7	4.8	4.7	3.9
Confidence interval					
Tealbook forecast errors	1.9–4.5	1.8–5.5	...	...	...
FRB/US stochastic simulations	2.2–4.2	2.1–5.6	2.7–6.8	2.5–6.8	1.7–6.3
<i>Civilian unemployment rate</i>					
<i>(percent, Q4)</i>					
Projection	9.5	8.6	7.1	5.8	5.2
Confidence interval					
Tealbook forecast errors	9.0–10.0	7.9–9.4	...	...	...
FRB/US stochastic simulations	9.1–9.9	7.8–9.4	6.0–8.2	4.7–7.0	4.1–6.4
<i>PCE prices, total</i>					
<i>(percent change, Q4 to Q4)</i>					
Projection	.9	1.0	1.0	1.2	1.5
Confidence interval					
Tealbook forecast errors	.2–1.7	-.2–2.2	...	...	...
FRB/US stochastic simulations	.4–1.6	.1–2.1	-.1–2.1	.2–2.4	.4–2.6
<i>PCE prices excluding food and energy</i>					
<i>(percent change, Q4 to Q4)</i>					
Projection	.8	.8	1.0	1.2	1.4
Confidence interval					
Tealbook forecast errors	.3–1.3	.1–1.6	...	...	...
FRB/US stochastic simulations	.5–1.2	.2–1.6	.1–1.8	.4–2.1	.7–2.4
<i>Federal funds rate</i>					
<i>(percent, Q4)</i>					
Projection	.1	.1	.8	2.5	3.5
Confidence interval					
FRB/US stochastic simulations	.1–.1	.1–1.2	.1–2.7	.8–4.4	1.9–5.3

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

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

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

## Greater Disinflation

In the baseline, inflation remains relatively stable through next year and then begins to rise as unemployment declines in an environment of well-anchored inflation expectations. But inflation expectations could prove to be less stable than we expect given persistent weakness in labor and product markets. In this scenario, both expected and actual inflation fall significantly, by magnitudes that are roughly in line with the predictions of many reduced-form forecasting equations. As a result, inflation runs below zero from 2012 on, causing the federal funds rate to remain near zero until late 2013. The more accommodative monetary policy stimulates aggregate spending, and real GDP expands faster than in the baseline during 2013 and 2014.

## Higher Inflation

Many outside forecasters anticipate higher inflation than in the staff outlook despite similar or more pessimistic outlooks for the real economy. The “Lower Potential” scenario described one set of factors that could lead to higher inflation than in the staff’s projection; here we consider other possibilities. One risk is that we may be reading too much into the recent soft inflation numbers, with the consequence that the deceleration in underlying inflation could be more modest than we have implicitly assumed. Another possibility is that the shift to above-trend growth will place more upward pressure on inflation than we expect through “speed effects,” with commodity and other prices reacting to the rate of change of activity. In this scenario, inflation follows a path consistent with outside forecasters’ consensus, which we read as anticipating core PCE inflation of about 1½ percent next year. In the face of this higher inflation, the policy rule prescribes raising the federal funds rate starting in mid-2011, a year earlier than in the baseline and closer to the interest rate outlook of some outside forecasters. The tighter monetary policy tempers aggregate demand, so real GDP expands somewhat more slowly than in the baseline.

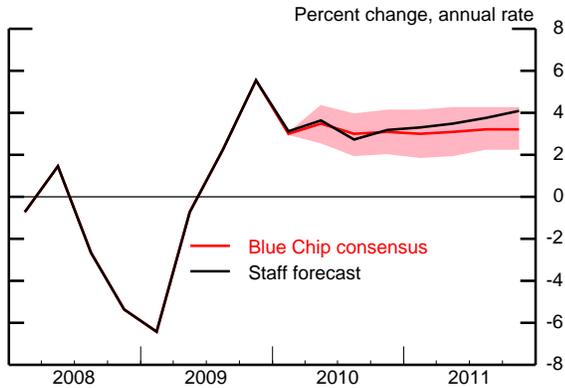
## OUTSIDE FORECASTS

Compared with the Blue Chip consensus forecast released in early June, the staff forecast of real GDP growth is about the same this year but is higher next year; indeed, by the end of 2011, our forecast for real GDP growth is similar to that of the 10 Blue Chip respondents with the highest forecasts of real activity. Regarding inflation, private forecasters expect CPI inflation to move up to 1.9 percent in 2011, as compared with the staff forecast of 1.1 percent; by the end of 2011, our inflation outlook is similar to that

held by the 10 respondents with the lowest forecasts for inflation. The staff assumptions about interest rates are below those of the Blue Chip consensus. As for revisions to the consensus forecasts since early May, the real activity outlook is about the same, the inflation projection has revised down a bit, and the interest rate forecasts are somewhat lower.

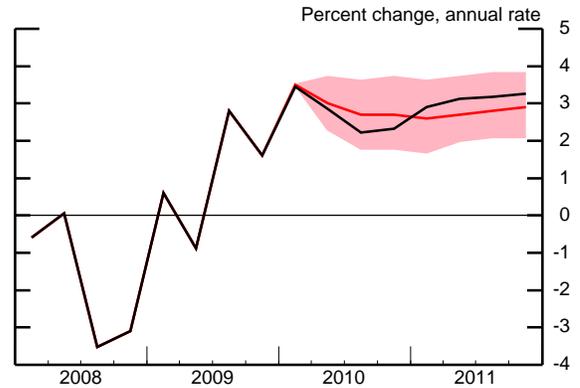
### Tealbook Forecast Compared with Blue Chip (Blue Chip survey released June 10, 2010)

Real GDP

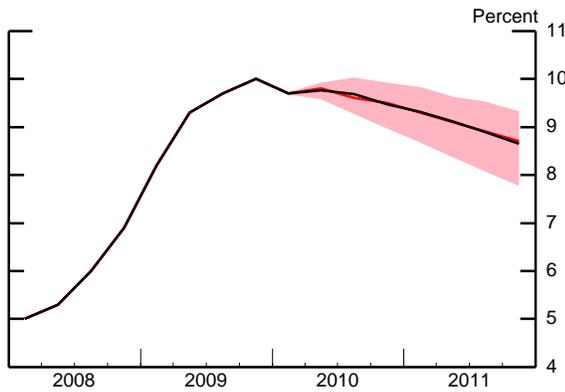


Note: The shaded area represents the area between the Blue Chip top ten and bottom ten averages.

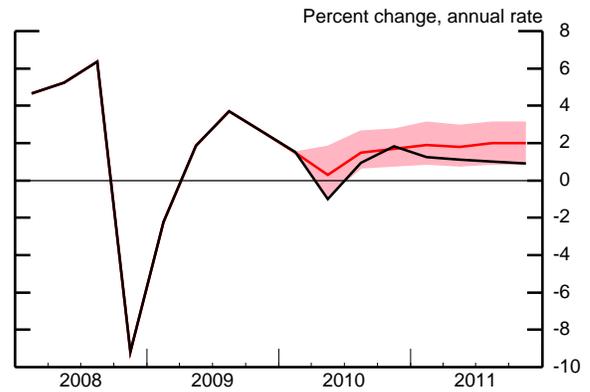
Real PCE



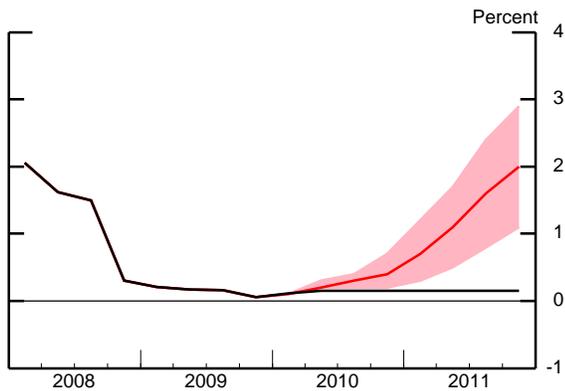
Unemployment Rate



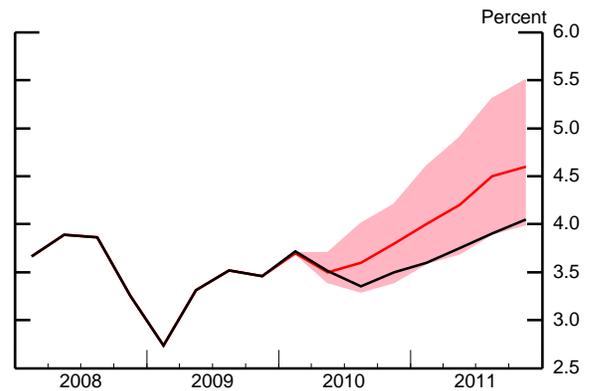
Consumer Price Index



Treasury Bill Rate



10-Year Treasury Yield



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

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

Interval	Nominal GDP		Real GDP		PCE price index		Core PCE price index		Unemployment rate <sup>1</sup>	
	04/21/10	06/16/10	04/21/10	06/16/10	04/21/10	06/16/10	04/21/10	06/16/10	04/21/10	06/16/10
<i>Quarterly</i>										
2009:Q1	-4.6	-4.6	-6.4	-6.4	-1.5	-1.5	1.1	1.1	8.2	8.2
Q2	-8	-7	-7	-7	1.4	1.4	2.0	2.0	9.3	9.3
Q3	2.6	2.6	2.2	2.2	2.6	2.6	1.2	1.2	9.7	9.7
Q4	6.1	6.1	5.6	5.6	2.5	2.5	1.8	1.8	10.0	10.0
2010:Q1	4.0	4.2	2.9	3.1	1.5	1.5	.5	.6	9.7	9.7
Q2	4.6	4.8	3.5	3.6	.7	-2	.9	.9	9.5	9.8
Q3	5.0	3.4	3.6	2.7	1.7	.9	1.0	.8	9.5	9.7
Q4	4.9	4.3	3.8	3.2	1.3	1.5	1.0	.8	9.3	9.5
2011:Q1	5.1	4.2	4.0	3.3	1.1	1.1	1.0	.8	8.9	9.3
Q2	5.2	4.3	4.3	3.5	1.0	1.0	.9	.8	8.7	9.1
Q3	5.5	4.6	4.6	3.8	1.0	1.0	.9	.8	8.5	8.9
Q4	5.6	4.8	4.7	4.1	1.0	.9	.9	.8	8.2	8.6
<i>Two-quarter<sup>2</sup></i>										
2009:Q2	-2.7	-2.7	-3.6	-3.6	-1	-1	1.6	1.6	2.4	2.4
Q4	4.3	4.3	3.9	3.9	2.5	2.5	1.5	1.5	.7	.7
2010:Q2	4.3	4.5	3.2	3.4	1.1	.7	.7	.8	-5	-2
Q4	4.9	3.8	3.7	3.0	1.5	1.2	1.0	.8	-2	-3
2011:Q2	5.1	4.3	4.1	3.4	1.1	1.1	1.0	.8	-6	-4
Q4	5.6	4.7	4.7	3.9	1.0	.9	.9	.8	-5	-5
<i>Four-quarter<sup>3</sup></i>										
2008:Q4	.1	.1	-1.9	-1.9	1.7	1.7	2.0	2.0	2.1	2.1
2009:Q4	.7	.7	.1	.1	1.2	1.2	1.5	1.5	3.1	3.1
2010:Q4	4.6	4.2	3.5	3.2	1.3	.9	.9	.8	-7	-5
2011:Q4	5.3	4.5	4.4	3.7	1.0	1.0	.9	.8	-1.1	-9
<i>Annual</i>										
2008	2.6	2.6	.4	.4	3.3	3.3	2.4	2.4	5.8	5.8
2009	-1.3	-1.3	-2.4	-2.4	.2	.2	1.5	1.5	9.3	9.3
2010	4.2	4.1	3.3	3.3	1.7	1.4	1.1	1.1	9.5	9.7
2011	5.1	4.3	4.1	3.4	1.1	1.0	1.0	.8	8.6	9.0

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

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

Item	2009				2010				2011				2009 <sup>1</sup>	2010 <sup>1</sup>	2011 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	Real GDP <i>Previous Tealbook</i>	-6.4	-7	2.2	5.6	3.1	3.6	2.7	3.2	3.3	3.5	3.8			
Final sales <i>Previous Tealbook</i>	-4.1	.7	1.5	1.7	1.2	3.9	2.2	3.0	3.1	3.4	3.3	3.7	-1	2.6	3.4
Priv. dom. final purch. <i>Previous Tealbook</i>	-4.1	.7	1.5	1.7	2.2	3.7	2.8	3.4	3.6	4.1	4.1	4.5	-1	3.0	4.1
Personal cons. expend. <i>Previous Tealbook</i>	-7.2	-2.7	2.2	2.1	3.0	4.5	2.5	3.4	3.8	4.1	4.2	4.2	-1.5	3.3	4.1
Durables	-7.2	-2.7	2.2	2.1	3.4	3.6	3.2	3.9	4.3	4.7	4.9	5.1	-1.5	3.5	4.8
Nondurables	.6	-9	2.8	1.6	3.4	2.9	2.2	2.3	2.9	3.1	3.2	3.3	1.0	2.7	3.1
Services	.6	-9	2.8	1.6	3.6	2.1	2.7	2.8	3.2	3.5	3.7	3.9	1.0	2.8	3.5
Residential investment <i>Previous Tealbook</i>	3.9	-5.6	20.4	4	12.1	15.4	6.8	7.1	8.7	11.1	11.2	11.8	4.4	10.3	10.7
Business fixed invest. <i>Previous Tealbook</i>	1.9	-1.9	1.5	4.0	3.9	1.7	1.6	2.1	3.1	3.2	3.3	3.5	1.3	2.3	3.3
Equipment & software <i>Previous Tealbook</i>	-3	.2	.8	1.0	2.0	1.4	1.7	1.7	1.9	1.9	1.9	1.9	.4	1.7	1.9
Nonres. structures <i>Previous Tealbook</i>	-38.2	-23.3	18.9	3.8	-10.6	18.7	-5.5	16.4	15.9	17.3	17.3	17.8	-12.5	3.9	17.1
Net exports <sup>2</sup> <i>Previous Tealbook</i> <sup>2</sup>	-38.2	-23.3	18.9	3.8	-15.7	22.3	-2.1	8.6	12.3	21.6	23.3	22.5	-12.5	2.3	19.8
Exports	-39.2	-9.6	-5.9	5.3	3.7	13.5	6.5	8.5	7.6	8.0	7.9	7.3	-14.1	8.0	7.7
Imports	-39.2	-9.6	-5.9	5.3	7.6	10.9	8.6	10.9	10.5	9.3	9.6	9.4	-14.1	9.5	9.7
Gov't cons. & invest. <i>Previous Tealbook</i>	-36.4	-4.9	1.5	19.0	13.5	20.3	10.4	12.2	10.7	11.3	11.1	10.1	-7.5	14.0	10.8
Federal	-36.4	-4.9	1.5	19.0	17.0	15.8	12.5	15.3	14.2	13.3	12.8	12.5	-7.5	15.2	13.2
Defense	-43.6	-17.3	-18.4	-18.0	-15.2	-8	-2.2	-2	-1	-2	-3	-2	-25.3	-4.8	-2
Nondefense	-43.6	-17.3	-18.4	-18.0	-10.6	.4	-2	.8	1.8	-5	1.5	1.4	-25.3	-2.5	1.1
State & local	-386	-330	-357	-348	-374	-380	-390	-387	-393	-399	-409	-407	-356	-383	-402
Change in bus. inventories <sup>2</sup> <i>Previous Tealbook</i> <sup>2</sup>	-386	-330	-357	-348	-352	-348	-356	-355	-356	-353	-357	-353	-356	-353	-355
Nonfarm <sup>2</sup>	-29.9	-4.1	17.8	22.8	11.2	8.2	7.6	7.7	7.3	7.2	7.4	7.6	-7	8.7	7.4
Farm <sup>2</sup>	-36.4	-14.7	21.3	15.8	15.0	8.1	8.1	5.7	7.2	6.9	8.1	5.7	-6.6	9.2	6.9
Gov't cons. & invest. <i>Previous Tealbook</i>	-2.6	6.7	2.6	-1.3	-1.9	2.4	2.1	.6	.7	.9	.9	.9	1.3	.8	.9
Federal	-2.6	6.7	2.6	-1.3	-2.2	3.0	1.9	.7	.7	.8	.8	.7	1.3	.8	.7
Defense	-4.3	11.4	8.0	.0	1.2	6.9	5.2	.8	1.2	1.5	1.3	1.5	3.6	3.5	1.4
Nondefense	-5.1	14.0	8.4	-3.6	.2	5.6	7.7	1.1	.2	.5	.4	.7	3.1	3.8	.4
State & local	-2.5	6.1	7.0	8.3	1.5	9.8	1	1	3.3	3.6	3.5	3.4	4.6	2.8	3.4
Change in bus. inventories <sup>2</sup> <i>Previous Tealbook</i> <sup>2</sup>	-1.5	3.9	-6	-2.2	-3.9	-6	.0	.4	.4	.5	.5	.5	-1	-1.0	.5
Nonfarm <sup>2</sup>	-114	-160	-139	-20	41	31	48	54	61	65	81	94	-108	43	75
Farm <sup>2</sup>	-114	-160	-139	-20	2	-4	22	37	50	55	74	82	-108	14	65
Change in bus. inventories <sup>2</sup> <i>Previous Tealbook</i> <sup>2</sup>	-115	-163	-141	-14	44	30	45	51	58	62	78	91	-108	43	72
Nonfarm <sup>2</sup>	0	2	2	-6	-3	1	3	3	3	3	3	3	-0	1	3
Farm <sup>2</sup>	0	2	2	-6	-3	1	3	3	3	3	3	3	-0	1	3

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

2. Billions of chained (2005) dollars.

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

Item	2003	2004	2005	2006	2007	2008	2009	2010	2011
Real GDP	3.8	3.1	2.7	2.4	2.5	-1.9	.1	3.2	3.7
<i>Previous Tealbook</i>	3.8	3.1	2.7	2.4	2.5	-1.9	.1	3.5	4.4
Final sales	3.8	2.8	2.7	2.8	2.7	-1.4	-1	2.6	3.4
<i>Previous Tealbook</i>	3.8	2.8	2.7	2.8	2.7	-1.4	-1	3.0	4.1
Priv. dom. final purch.	4.2	4.2	3.1	2.5	1.4	-3.2	-1.5	3.3	4.1
<i>Previous Tealbook</i>	4.2	4.2	3.1	2.5	1.4	-3.2	-1.5	3.5	4.8
Personal cons. expend.	3.4	3.5	2.7	3.3	2.0	-1.8	1.0	2.7	3.1
<i>Previous Tealbook</i>	3.4	3.5	2.7	3.3	2.0	-1.8	1.0	2.8	3.5
Durables	8.9	5.5	2.1	6.3	4.6	-11.8	4.4	10.3	10.7
Nondurables	3.9	3.0	3.3	3.2	1.5	-2.9	1.3	2.3	3.3
Services	2.2	3.4	2.6	2.8	1.7	.3	.4	1.7	1.9
Residential investment	11.5	6.6	5.3	-15.7	-20.5	-21.0	-12.5	3.9	17.1
<i>Previous Tealbook</i>	11.5	6.6	5.3	-15.7	-20.5	-21.0	-12.5	2.3	19.8
Business fixed invest.	5.9	7.0	4.4	7.8	7.9	-6.0	-14.1	8.0	7.7
<i>Previous Tealbook</i>	5.9	7.0	4.4	7.8	7.9	-6.0	-14.1	9.5	9.7
Equipment & software	7.5	8.8	6.1	6.0	3.2	-10.7	-7.5	14.0	10.8
<i>Previous Tealbook</i>	7.5	8.8	6.1	6.0	3.2	-10.7	-7.5	15.2	13.2
Nonres. structures	1.3	1.7	-1	13.0	18.9	3.2	-25.3	-4.8	-2
<i>Previous Tealbook</i>	1.3	1.7	-1	13.0	18.9	3.2	-25.3	-2.5	1.1
Net exports <sup>1</sup>	-604	-688	-723	-729	-648	-494	-356	-383	-402
<i>Previous Tealbook<sup>1</sup></i>	-604	-688	-723	-729	-648	-494	-356	-353	-355
Exports	6.2	7.1	6.7	10.2	10.2	-3.4	-7	8.7	7.4
Imports	5.1	10.9	5.2	4.1	.9	-6.8	-6.6	9.2	6.9
Gov't. cons. & invest.	1.6	.6	.7	1.5	2.5	3.0	1.3	.8	.9
<i>Previous Tealbook</i>	1.6	.6	.7	1.5	2.5	3.0	1.3	.8	.7
Federal	5.7	2.3	1.2	2.2	3.4	8.9	3.6	3.5	1.4
Defense	8.4	2.4	.4	4.4	2.6	9.5	3.1	3.8	.4
Nondefense	.7	2.3	2.6	-2.3	5.2	7.5	4.6	2.8	3.4
State & local	-5	-4	.4	1.2	1.9	-3	-1	-1.0	.5
Change in bus. inventories <sup>1</sup>	17	66	50	59	19	-26	-108	43	75
<i>Previous Tealbook<sup>1</sup></i>	17	66	50	59	19	-26	-108	14	65
Nonfarm <sup>1</sup>	17	58	50	63	20	-20	-108	43	72
Farm <sup>1</sup>	0	8	0	-4	-1	-5	-0	1	3

1. Billions of chained (2005) dollars.

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

Item	2009				2010				2011				2009 <sup>1</sup>	2010 <sup>1</sup>	2011 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	Real GDP	-6.4	-7	2.2	5.6	3.1	3.6	2.7	3.2	3.3	3.5	3.8			
<i>Previous Tealbook</i>	-6.4	-7	2.2	5.6	2.9	3.5	3.6	3.8	4.0	4.3	4.6	4.7	.1	3.5	4.4
Final sales	-4.1	.7	1.5	1.8	1.2	3.9	2.2	3.0	3.1	3.4	3.3	3.7	-.1	2.6	3.4
<i>Previous Tealbook</i>	-4.1	.7	1.5	1.8	2.2	3.7	2.8	3.4	3.6	4.1	4.1	4.5	-.1	3.0	4.1
Priv. dom. final purch.	-6.1	-2.3	1.8	1.8	2.5	3.7	2.1	2.8	3.1	3.4	3.4	3.5	-1.3	2.8	3.4
<i>Previous Tealbook</i>	-6.1	-2.3	1.8	1.8	2.8	3.0	2.7	3.2	3.5	3.9	4.1	4.2	-1.3	2.9	3.9
Personal cons. expend.	.4	-6	2.0	1.2	2.4	2.0	1.6	1.6	2.1	2.2	2.2	2.3	.7	1.9	2.2
<i>Previous Tealbook</i>	.4	-6	2.0	1.2	2.5	1.5	1.9	2.0	2.2	2.5	2.6	2.7	.7	2.0	2.5
Durables	.3	-4	1.4	.0	.8	1.1	.5	.5	.6	.8	.8	.9	.3	.7	.8
Nondurables	.3	-3	.2	.6	.6	.3	.3	.3	.5	.5	.5	.5	.2	.4	.5
Services	-.1	.1	.4	.5	1.0	.7	.8	.8	.9	.9	.9	.9	.2	.8	.9
Residential investment	-1.3	-7	.4	.1	-.3	.4	-.1	.4	.4	.4	.4	.5	-.4	.1	.4
<i>Previous Tealbook</i>	-1.3	-7	.4	.1	-.4	.5	-.1	.2	.3	.5	.6	.6	-.4	.1	.5
Business fixed invest.	-5.3	-1.0	-.6	.5	.3	1.2	.6	.8	.7	.8	.8	.7	-1.6	.7	.7
<i>Previous Tealbook</i>	-5.3	-1.0	-.6	.5	.7	1.0	.8	1.0	1.0	.9	.9	.9	-1.6	.9	.9
Equipment & software	-3.0	-.3	.1	1.1	.8	1.2	.7	.8	.7	.8	.8	.7	-.5	.9	.7
<i>Previous Tealbook</i>	-3.0	-.3	.1	1.1	1.0	1.0	.8	1.0	1.0	.9	.9	.9	-.5	1.0	.9
Nonres. structures	-2.3	-7	-.7	-.6	-.5	.0	-.1	.0	.0	.0	.0	.0	-1.1	-.1	.0
<i>Previous Tealbook</i>	-2.3	-7	-.7	-.6	-.3	.0	.0	.0	.1	.0	.0	.0	-1.1	-.1	.0
Net exports	2.6	1.7	-.8	.3	-.9	-.2	-.3	.1	-.2	-.2	-.3	.1	1.0	-.3	-.2
<i>Previous Tealbook</i>	2.6	1.7	-.8	.3	-.2	.1	-.3	.0	-.1	.1	-.2	.1	1.0	-.1	.0
Exports	-4.0	-.5	1.8	2.4	1.3	1.0	.9	.9	.9	.9	.9	.9	-.1	1.0	.9
Imports	6.6	2.1	-2.6	-2.1	-2.1	-1.2	-1.2	-.9	-1.1	-1.1	-1.3	-.9	1.0	-1.3	-1.1
Gov't cons. & invest.	-.5	1.3	.6	-.3	-.4	.5	.4	.1	.2	.2	.2	.2	.3	.2	.2
<i>Previous Tealbook</i>	-.5	1.3	.6	-.3	-.4	.6	.4	.1	.1	.2	.2	.2	.3	.2	.1
Federal	-.3	.9	.6	.0	.1	.6	.4	.1	.1	.1	.1	.1	.3	.3	.1
Defense	-.3	.7	.5	-.2	.1	.3	.4	.1	.0	.0	.0	.0	.2	.2	.0
Nondefense	-.1	.2	.2	.2	.0	.2	.0	.0	.1	.1	.1	.1	.1	.1	.1
State & local	-.2	.5	-.1	-.3	-.5	-.1	.0	.1	.1	.1	.1	.1	.0	-.1	.1
Change in bus. inventories	-2.4	-1.4	.7	3.8	1.9	-.3	.6	.2	.2	.1	.5	.4	.1	.6	.3
<i>Previous Tealbook</i>	-2.4	-1.4	.7	3.8	.7	-.2	.8	.5	.4	.2	.6	.3	.1	.5	.3
Nonfarm	-2.4	-1.5	.7	4.0	1.8	-.5	.5	.2	.2	.1	.5	.4	.2	.5	.3
Farm	.1	.1	.0	-.2	.1	.2	.1	.0	.0	.0	.0	.0	.0	.1	.0

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

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

Item	2009				2010				2011				2009 <sup>1</sup>	2010 <sup>1</sup>	2011 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	GDP chain-wt. price index <i>Previous Tealbook</i>	1.9	.0	.4	.5	1.0	1.1	.6	1.0	.9	.8	.8			
PCE chain-wt. price index <i>Previous Tealbook</i>	-1.5	1.4	2.6	2.5	1.5	-2	.9	1.5	1.1	1.0	1.0	.9	1.2	.9	1.0
Energy <i>Previous Tealbook</i>	-36.7	-2.0	40.6	19.9	16.1	-18.6	1.2	14.6	6.3	4.3	3.2	2.1	1.1	2.3	3.9
Food <i>Previous Tealbook</i>	-36.7	-2.0	40.6	19.9	15.9	-3.7	12.5	6.8	3.5	2.7	1.8	1.7	1.1	7.6	2.4
Ex. food & energy <i>Previous Tealbook</i>	-1.1	-3.6	-2.1	-1	1.9	1.9	1.3	1.1	.7	.7	.7	.7	-1.7	1.5	.7
CPI <i>Previous Tealbook</i>	-1.1	-3.6	-2.1	-1	1.9	2.0	1.7	1.1	.7	.7	.7	.7	-1.7	1.7	.7
Ex. food & energy <i>Previous Tealbook</i>	1.1	2.0	1.2	1.8	.6	.9	.8	.8	.8	.8	.8	.8	1.5	.8	.8
ECI, hourly compensation <sup>2</sup> <i>Previous Tealbook</i> <sup>2</sup>	1.1	2.0	1.2	1.8	.5	.9	1.0	1.0	1.0	.9	.9	.9	1.5	.9	.9
Nonfarm business sector Output per hour <i>Previous Tealbook</i>	-2.2	1.9	3.7	2.6	1.5	-1.0	.9	1.8	1.2	1.1	1.0	.9	1.5	.8	1.1
Compensation per hour <i>Previous Tealbook</i>	-2.2	1.9	3.7	2.6	1.5	.4	1.9	1.4	1.2	1.1	1.0	1.0	1.5	1.3	1.1
Unit labor costs <i>Previous Tealbook</i>	1.6	2.3	1.5	1.5	.0	.6	.7	.7	.8	.8	.8	.8	1.7	.5	.8
Core goods imports chain-wt. price index <sup>3</sup> <i>Previous Tealbook</i> <sup>3</sup>	1.6	2.3	1.5	1.5	.0	.6	.9	.9	.9	.9	.9	.9	1.7	.6	.9
	.7	1.1	1.5	1.5	2.6	1.8	1.9	1.9	2.2	2.0	2.0	2.0	1.2	2.0	2.0
	.7	.7	1.8	1.5	2.2	2.1	2.1	2.1	2.2	2.1	2.1	2.1	1.2	2.1	2.1
	.9	7.6	7.8	6.3	2.9	.1	.7	.9	.7	.7	1.0	1.0	5.6	1.2	.9
	.9	7.6	7.8	6.3	2.7	1.1	.8	.4	.4	.6	1.1	1.2	5.6	1.3	.8
	-4.2	7.7	-4	-1.9	1.5	.7	2.3	2.3	3.1	2.2	2.0	2.0	.2	1.7	2.3
	-4.2	7.7	-4	.5	2.9	.9	2.4	2.4	3.3	2.4	2.2	2.2	.8	2.2	2.5
	-5.0	.1	-7.6	-7.7	-1.4	.6	1.5	1.4	2.4	1.5	1.0	1.0	-5.1	.5	1.5
	-5.0	.1	-7.6	-5.5	.2	-2	1.6	2.0	2.9	1.7	1.1	1.0	-4.6	.9	1.7
	-9.4	-2.3	1.3	4.7	4.1	3.0	-1	.0	1.1	1.4	1.8	1.8	-1.6	1.7	1.5
	-9.4	-2.3	1.3	4.7	4.0	2.9	2.3	1.6	1.4	1.2	1.1	1.1	-1.6	2.7	1.2

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

2. Private-industry workers.

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

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

Item	2003	2004	2005	2006	2007	2008	2009	2010	2011
GDP chain-wt. price index <i>Previous Tealbook</i>	2.1 2.1	3.2 3.2	3.5 3.5	2.9 2.9	2.7 2.7	1.9 1.9	.7 .7	1.0 1.1	.8 .9
PCE chain-wt. price index <i>Previous Tealbook</i>	1.9 1.9	3.0 3.0	3.3 3.3	1.9 1.9	3.6 3.6	1.7 1.7	1.2 1.2	.9 1.3	1.0 1.0
Energy <i>Previous Tealbook</i>	8.6 8.6	18.6 18.6	21.5 21.5	-3.7 -3.7	19.7 19.7	-9.1 -9.1	1.1 1.1	2.3 7.6	3.9 2.4
Food <i>Previous Tealbook</i>	3.2 3.2	2.7 2.7	1.5 1.5	1.7 1.7	4.7 4.7	6.8 6.8	-1.7 -1.7	1.5 1.7	.7 .7
Ex. food & energy <i>Previous Tealbook</i>	1.5 1.5	2.2 2.2	2.3 2.3	2.3 2.3	2.5 2.5	2.0 2.0	1.5 1.5	.8 .9	.8 .9
CPI <i>Previous Tealbook</i>	2.0 2.0	3.4 3.4	3.7 3.7	1.9 1.9	4.0 4.0	1.6 1.6	1.5 1.5	.8 1.3	1.1 1.1
Ex. food & energy <i>Previous Tealbook</i>	1.2 1.2	2.2 2.2	2.1 2.1	2.7 2.7	2.3 2.3	2.0 2.0	1.7 1.7	.5 .6	.8 .9
ECL, hourly compensation <sup>1</sup> <i>Previous Tealbook<sup>1</sup></i>	4.0 4.0	3.8 3.8	2.9 2.9	3.2 3.2	3.0 3.0	2.4 2.4	1.2 1.2	2.0 2.1	2.0 2.1
Nonfarm business sector Output per hour <i>Previous Tealbook</i>	5.0 5.0	1.5 1.5	1.5 1.5	1.0 1.0	2.9 2.9	1.4 1.4	5.6 5.6	1.2 1.3	.9 .8
Compensation per hour <i>Previous Tealbook</i>	5.7 5.7	3.4 3.4	3.6 3.6	4.5 4.5	3.6 3.6	3.1 3.1	.2 .8	1.7 2.2	2.3 2.5
Unit labor costs <i>Previous Tealbook</i>	.6 .6	1.9 1.9	2.0 2.0	3.5 3.5	.7 .7	1.7 1.7	-5.1 -4.6	.5 .9	1.5 1.7
Core goods imports chain-wt. price index <sup>2</sup> <i>Previous Tealbook<sup>2</sup></i>	1.6 1.6	3.6 3.6	2.2 2.2	2.5 2.5	3.5 3.5	3.8 3.8	-1.6 -1.6	1.7 2.7	1.5 1.2

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

## Other Macroeconomic Indicators

Item	2009				2010				2011				2009 <sup>1</sup>	2010 <sup>1</sup>	2011 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	<i>Employment and production</i>														
Nonfarm payroll employment <sup>2</sup>	-2.2	-1.7	-1.0	-4	.1	.7	.3	.6	.8	.8	.9	1.0	-5.4	1.6	3.4
Unemployment rate <sup>3</sup>	8.2	9.3	9.7	10.0	9.7	9.8	9.7	9.5	9.3	9.1	8.9	8.6	10.0	9.5	8.6
<i>Previous Tealbook<sup>3</sup></i>	8.2	9.3	9.7	10.0	9.7	9.5	9.5	9.3	8.9	8.7	8.5	8.2	10.0	9.3	8.2
NAIRU <sup>3</sup>	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
<i>Previous Tealbook<sup>3</sup></i>	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
GDP gap <sup>4</sup>	-7.0	-7.8	-7.9	-7.3	-7.1	-6.8	-6.7	-6.5	-6.3	-6.1	-5.8	-5.4	-7.3	-6.5	-5.4
<i>Previous Tealbook<sup>4</sup></i>	-7.1	-7.8	-8.0	-7.3	-7.2	-6.9	-6.6	-6.3	-5.9	-5.5	-5.0	-4.5	-7.3	-6.3	-4.5
Industrial production <sup>5</sup>	-19.0	-10.4	6.4	6.9	7.6	7.5	6.0	4.6	4.8	4.7	5.2	4.4	-4.7	6.4	4.8
<i>Previous Tealbook<sup>5</sup></i>	-19.0	-10.4	6.4	6.9	7.8	4.6	5.3	5.9	6.1	5.0	5.9	5.7	-4.7	5.9	5.7
Manufacturing industr. prod. <sup>5</sup>	-22.0	-8.8	8.4	5.6	6.3	9.9	6.8	5.3	4.9	5.5	5.8	4.9	-5.0	7.1	5.3
<i>Previous Tealbook<sup>5</sup></i>	-22.0	-8.8	8.4	5.6	6.6	6.4	4.9	6.6	7.1	6.0	6.8	6.5	-5.0	6.1	6.6
Capacity utilization rate - mfg. <sup>3</sup>	66.7	65.4	67.0	68.2	69.5	71.3	72.6	73.7	74.6	75.6	76.7	77.6	68.2	73.7	77.6
<i>Previous Tealbook<sup>3</sup></i>	66.7	65.4	67.0	68.2	69.5	70.8	71.8	73.1	74.3	75.4	76.6	77.8	68.2	73.1	77.8
Housing starts <sup>6</sup>	.5	.5	.6	.6	.6	.6	.7	.8	.9	.9	1.0	1.1	.6	.7	1.0
Light motor vehicle sales <sup>6</sup>	9.5	9.6	11.5	10.8	11.0	11.5	11.9	12.3	12.7	13.4	13.9	14.5	10.3	11.7	13.6
<i>Income and saving</i>															
Nominal GDP <sup>5</sup>	-4.6	-8	2.6	6.1	4.2	4.8	3.4	4.3	4.2	4.3	4.6	4.8	.7	4.2	4.5
Real disposable pers. income <sup>5</sup>	.2	6.2	-3.6	.0	1.9	4.8	1.9	2.2	.8	4.5	4.1	3.9	.7	2.7	3.3
<i>Previous Tealbook<sup>5</sup></i>	.2	6.2	-3.6	1.0	.5	2.3	3.3	3.4	1.2	3.9	4.4	4.7	.9	2.4	3.6
Personal saving rate <sup>3</sup>	3.7	5.4	3.9	3.7	3.4	3.9	3.8	3.8	3.4	3.7	3.9	4.1	3.7	3.8	4.1
<i>Previous Tealbook<sup>3</sup></i>	3.7	5.4	3.9	3.9	3.3	3.3	3.5	3.7	3.2	3.3	3.5	3.7	3.9	3.7	3.7
Corporate profits <sup>7</sup>	22.8	15.6	50.7	36.0	17.5	9.6	.2	3.1	4	2.7	3.7	4.0	30.6	7.4	2.7
Profit share of GNP <sup>3</sup>	8.3	8.6	9.5	10.1	10.4	10.5	10.4	10.4	10.3	10.3	10.2	10.2	10.1	10.4	10.2
Net federal saving <sup>8</sup>	-969	-1,269	-1,354	-1,314	-1,362	-1,358	-1,393	-1,399	-1,337	-1,323	-1,291	-1,283	-1,226	-1,378	-1,309
Net state & local saving <sup>8</sup>	-37	-25	-15	-1	15	16	59	67	83	58	14	18	-19	39	43
Gross national saving rate <sup>3</sup>	11.2	10.7	9.8	10.1	9.8	10.5	10.5	10.7	10.9	11.2	11.5	11.8	10.1	10.7	11.8
Net national saving rate <sup>3</sup>	-2.5	-2.7	-3.6	-3.0	-3.0	-2.3	-2.3	-2.1	-2.0	-1.7	-1.5	-1.2	-3.0	-2.1	-1.2

1. Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise indicated.

2. Change, millions.

3. Percent, annual values are for the fourth quarter of the year indicated.

4. Percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential.

Annual values are for the fourth quarter of the year indicated.

5. Percent change, annual rate.

6. Level, millions, annual values are annual averages.

7. Percent change, annual rate, with inventory valuation and capital consumption adjustments.

8. Billions of dollars, annual values are annual averages.

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

Item	2003	2004	2005	2006	2007	2008	2009	2010	2011
<i>Employment and production</i>									
Nonfarm payroll employment <sup>1</sup>	-1	2.0	2.4	2.1	1.2	-2.8	-5.4	1.6	3.4
Unemployment rate <sup>2</sup>	5.8	5.4	5.0	4.5	4.8	6.9	10.0	9.5	8.6
<i>Previous Tealbook<sup>2</sup></i>	5.8	5.4	5.0	4.5	4.8	6.9	10.0	9.3	8.2
NAIRU <sup>2</sup>	4.9	4.9	4.8	4.8	4.8	4.9	5.2	5.2	5.2
<i>Previous Tealbook<sup>2</sup></i>	4.9	4.9	4.8	4.8	4.8	4.9	5.2	5.2	5.2
GDP gap <sup>3</sup>	-1.6	-8	-4	-4	-4	-4.8	-7.3	-6.5	-5.4
<i>Previous Tealbook<sup>3</sup></i>	-1.7	-8	-4	-4	-4	-4.9	-7.3	-6.3	-4.5
Industrial production <sup>4</sup>	1.6	3.0	2.6	1.8	1.8	-6.7	-4.7	6.4	4.8
<i>Previous Tealbook<sup>4</sup></i>	1.6	3.0	2.6	1.8	1.8	-6.7	-4.7	5.9	5.7
Manufacturing industr. prod. <sup>4</sup>	1.8	3.6	3.8	1.2	1.9	-8.7	-5.0	7.1	5.3
<i>Previous Tealbook<sup>4</sup></i>	1.8	3.6	3.8	1.2	1.9	-8.7	-5.0	6.1	6.6
Capacity utilization rate - mfg. <sup>2</sup>	74.6	77.3	79.2	79.0	78.7	70.9	68.2	73.7	77.6
<i>Previous Tealbook<sup>2</sup></i>	74.6	77.3	79.2	79.0	78.7	70.9	68.2	73.1	77.8
Housing starts <sup>5</sup>	1.8	2.0	2.1	1.8	1.4	.9	.6	.7	1.0
Light motor vehicle sales <sup>5</sup>	16.6	16.8	16.9	16.5	16.1	13.1	10.3	11.7	13.6
<i>Income and saving</i>									
Nominal GDP <sup>4</sup>	6.0	6.4	6.3	5.4	5.3	.1	.7	4.2	4.5
Real disposable pers. income <sup>4</sup>	3.9	3.5	.6	4.6	1.0	.3	.7	2.7	3.3
<i>Previous Tealbook<sup>4</sup></i>	3.9	3.5	.6	4.6	1.0	.3	.9	2.4	3.6
Personal saving rate <sup>2</sup>	3.6	3.6	1.5	2.5	1.5	3.8	3.7	3.8	4.1
<i>Previous Tealbook<sup>2</sup></i>	3.6	3.6	1.5	2.5	1.5	3.8	3.9	3.7	3.7
Corporate profits <sup>6</sup>	12.2	21.9	19.6	3.7	-5.7	-25.1	30.6	7.4	2.7
Profit share of GNP <sup>2</sup>	9.1	10.5	11.8	11.6	10.3	7.8	10.1	10.4	10.2
Net federal saving <sup>7</sup>	-376	-379	-283	-204	-236	-643	-1226	-1378	-1309
Net state & local saving <sup>7</sup>	-39	-8	26	51	22	-40	-19	39	43
Gross national saving rate <sup>2</sup>	14.3	14.3	15.5	16.3	13.8	12.2	10.1	10.7	11.8
Net national saving rate <sup>2</sup>	2.5	2.7	3.5	4.2	1.6	-.7	-3.0	-2.1	-1.2

1. Change, millions.

2. Percent, values are for the fourth quarter of the year indicated.

3. Percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential. Values are for the fourth quarter of the year indicated.

4. Percent change.

5. Level, millions, values are annual averages.

6. Percent change, with inventory valuation and capital consumption adjustments.

7. Billions of dollars, values are annual averages.

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

Item	Fiscal year				2009				2010				2011			
	2008 <sup>a</sup>	2009 <sup>a</sup>	2010	2011	Q1 <sup>a</sup>	Q2 <sup>a</sup>	Q3 <sup>a</sup>	Q4 <sup>a</sup>	Q1 <sup>a</sup>	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Not seasonally adjusted															
<b>Unified budget</b>																
Receipts <sup>1</sup>	2524	2104	2114	2389	442	599	516	488	466	612	548	523	508	730	627	595
Outlays <sup>1</sup>	2983	3520	3495	3730	891	904	845	876	795	931	893	933	954	928	915	924
Surplus/deficit <sup>1</sup>	-458	-1416	-1381	-1341	-449	-305	-329	-388	-329	-318	-346	-410	-446	-198	-287	-329
<i>Previous Tealbook</i>	-458	-1416	-1359	-1314	-449	-305	-329	-388	-329	-292	-349	-412	-439	-182	-280	-323
On-budget	-642	-1553	-1465	-1431	-468	-382	-318	-394	-359	-382	-330	-450	-441	-265	-275	-375
Off-budget	183	137	84	91	19	77	-11	6	30	64	-16	40	-5	67	-12	46
Means of financing																
Borrowing	768	1743	1475	1399	465	338	379	261	478	346	389	482	391	223	302	319
Cash decrease	-296	96	5	20	98	-49	43	82	-25	-61	10	-10	60	-20	-10	15
Other <sup>2</sup>	-13	-424	-100	-78	-114	16	-92	45	-124	33	-54	-63	-5	-5	-5	-5
Cash operating balance, end of period	372	275	270	250	269	318	275	194	219	280	270	280	220	240	250	235
<b>NIPA federal sector</b>																
Receipts	2534	2281	2303	2495	2251	2237	2189	2223	2291	2338	2359	2383	2500	2532	2568	2604
Expenditures	3074	3348	3660	3833	3220	3506	3542	3537	3654	3696	3752	3782	3837	3855	3859	3887
Consumption expenditures	914	972	1036	1085	954	979	1001	1011	1027	1045	1061	1066	1082	1091	1099	1108
Defense	620	658	699	731	643	663	679	682	692	703	717	722	730	734	737	741
Nondefense	294	314	337	354	311	316	322	329	334	342	345	345	352	357	362	366
Other spending	2160	2375	2624	2748	2266	2527	2541	2526	2627	2650	2692	2716	2754	2764	2760	2779
Current account surplus	-540	-1066	-1357	-1338	-969	-1269	-1354	-1314	-1362	-1358	-1393	-1399	-1337	-1323	-1291	-1283
Gross investment	141	158	162	166	152	159	163	159	160	162	166	167	166	166	166	166
Gross saving less gross investment <sup>3</sup>	-563	-1101	-1385	-1359	-999	-1304	-1391	-1343	-1390	-1385	-1422	-1426	-1360	-1344	-1308	-1296
<b>Fiscal indicators<sup>4</sup></b>																
High-employment (HEB) surplus/deficit	-497	-763	-975	-992	-683	-912	-968	-916	-976	-982	-1027	-1039	-985	-980	-962	-970
Change in HEB, percent of potential GDP	1.9	1.6	1.2	-0.1	1.2	1.5	0.3	-0.4	0.3	-0.0	0.2	0.0	-0.4	-0.1	-0.2	0.0
Fiscal impetus (FI), percent of GDP	0.8	1.0	0.8	-0.1	0.0	0.7	0.3	0.1	0.1	0.2	0.2	0.1	-0.2	-0.0	-0.1	-0.2
<i>Previous Tealbook</i>	0.8	1.0	0.9	-0.0	0.0	0.7	0.3	0.1	0.1	0.3	0.2	0.1	-0.2	-0.0	-0.1	-0.2

1. Budget receipts, outlays, and surplus/deficit include corresponding social security (OASDI) categories. The OASDI surplus and the Postal Service surplus are excluded from the on-budget surplus and shown separately as off-budget, as classified under current law.  
 2. Other means of financing are checks issued less checks paid, accrued items, and changes in other financial assets and liabilities.  
 3. Gross saving is the current account surplus plus consumption of fixed capital of the general government as well as government enterprises.  
 4. HEB is gross saving less gross investment (NIPA) of the federal government in current dollars, with cyclically sensitive receipts and outlays adjusted to the staff's measure of potential output and the NAIRU. Quarterly figures for change in HEB and FI are not at annual rates. The sign on Change in HEB, as a percent of nominal potential GDP, is reversed. FI is the weighted difference of discretionary changes in federal spending and taxes in chained (2005) dollars, scaled by real GDP. The annual FI estimates are on a calendar year basis. Also, for FI and the change in HEB, positive values indicate aggregate demand stimulus.  
 a--Actual

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

Period <sup>1</sup>	Total	Households			Business	State and local governments	Federal government	Memo: Nominal GDP
		Total	Home mortgages	Consumer credit				
<i>Year</i>								
2004	8.8	11.0	13.4	5.6	6.2	7.3	9.0	6.4
2005	9.5	11.1	13.3	4.5	8.7	10.2	7.0	6.3
2006	9.0	10.1	11.2	4.1	10.6	8.3	3.9	5.4
2007	8.7	6.7	6.8	5.8	13.1	9.5	4.9	5.3
2008	6.0	.3	-.4	1.5	5.4	2.1	24.2	.1
2009	3.1	-1.7	-1.5	-4.4	-2.5	4.8	22.7	.7
2010	5.3	-1.0	-1.8	-.4	1.4	4.7	21.7	4.2
2011	5.1	1.8	.3	6.2	2.7	4.2	13.0	4.5
<i>Quarter</i>								
2008:1	5.7	3.3	2.8	4.6	8.0	3.8	8.1	1.0
2	3.3	.1	-.5	3.5	6.7	1.3	5.9	3.5
3	8.3	-.5	-2.4	.7	5.6	3.4	39.2	1.4
4	6.1	-1.8	-1.8	-2.7	1.1	.0	37.0	-5.4
2009:1	3.8	-1.2	-.1	-3.9	-.7	4.7	22.6	-4.6
2	4.3	-1.6	-1.6	-4.8	-2.9	4.0	28.2	-.8
3	2.7	-2.5	-3.4	-3.1	-3.0	5.6	20.6	2.6
4	1.3	-1.6	-1.1	-6.2	-3.5	4.6	12.6	6.1
2010:1	3.5	-2.4	-3.8	-1.6	-.0	4.3	18.5	4.2
2	5.7	-1.6	-2.0	-2.4	1.3	4.1	24.1	4.8
3	5.1	-.3	-1.0	.4	1.8	5.1	17.6	3.4
4	6.3	.4	-.5	2.0	2.3	5.0	20.4	4.3
2011:1	4.4	1.0	-.3	4.0	2.3	4.3	11.6	4.2
2	5.6	1.4	.0	5.4	2.5	4.2	15.1	4.3
3	5.0	2.1	.5	6.8	2.8	4.2	11.6	4.6
4	5.2	2.7	1.0	7.8	3.0	3.7	11.4	4.8

Note. Quarterly data are at seasonally adjusted annual rates.

1. Data after 2009:Q4 are staff projections. Changes are measured from end of the preceding period to end of period indicated except for annual nominal GDP growth, which is calculated from Q4 to Q4.

2.6.3 FOF

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

Category	2008	2009	2010	2011	2009				2010				2011				
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
<i>Domestic nonfinancial sectors</i>																	
Net funds raised																	
Total	1562.5	966.1	1638.7	1697.4	992.4	141.3	1006.6	1822.6	1629.3	2096.3	1418.3	1872.2	1698.6	1800.7			
Net equity issuance	-336.0	-63.3	-186.9	-180.0	65.7	-312.2	-207.6	-180.0	-180.0	-180.0	-180.0	-180.0	-180.0	-180.0			
Net debt issuance	1898.5	1029.4	1825.6	1877.4	926.7	453.6	1214.2	2002.6	1809.3	2276.3	1598.3	2052.2	1878.6	1980.7			
<i>Borrowing indicators</i>																	
Debt (percent of GDP) <sup>1</sup>	226.2	239.4	239.9	242.3	241.7	239.4	238.5	238.6	239.8	240.8	241.4	241.9	242.4	242.6			
Borrowing (percent of GDP)	13.1	7.2	12.3	12.1	6.5	3.1	8.3	13.6	12.1	15.1	10.5	13.3	12.1	12.6			
<i>Households</i>																	
Net borrowing <sup>2</sup>	35.9	-240.9	-130.6	243.6	-349.1	-220.4	-330.0	-210.6	-36.5	54.9	132.0	195.0	282.7	364.6			
Home mortgages	-46.6	-162.6	-186.8	31.7	-359.6	-113.5	-389.8	-204.8	-101.9	-50.8	-25.4	0.0	50.7	101.5			
Consumer credit	38.8	-115.3	-10.0	151.8	-79.5	-155.4	-39.3	-60.1	10.2	49.1	99.3	135.4	171.0	201.6			
Debt/DPI (percent) <sup>3</sup>	127.9	125.7	120.4	116.5	125.3	123.9	122.3	120.5	119.4	118.3	117.9	116.7	115.8	115.1			
<i>Business</i>																	
Financing gap <sup>4</sup>	232.4	-114.4	-50.0	10.0	-205.3	-59.6	-72.4	-65.6	-33.8	-28.3	-13.4	-3.8	19.8	37.6			
Net equity issuance	-336.0	-63.3	-186.9	-180.0	65.7	-312.2	-207.6	-180.0	-180.0	-180.0	-180.0	-180.0	-180.0	-180.0			
Credit market borrowing	576.1	-281.9	149.9	295.9	-336.7	-389.3	-2.5	146.2	198.2	257.7	260.2	274.8	313.6	334.8			
<i>State and local governments</i>																	
Net borrowing	47.3	108.2	110.5	102.7	127.6	107.5	100.7	97.7	121.7	121.7	105.7	105.7	105.7	93.7			
Current surplus <sup>5</sup>	212.7	243.8	255.7	264.6	258.0	261.2	223.2	234.5	278.0	287.3	303.7	278.6	235.3	240.7			
<i>Federal government</i>																	
Net borrowing	1239.2	1443.9	1696.0	1235.3	1484.9	955.8	1446.1	1969.3	1525.9	1841.9	1100.4	1476.7	1176.5	1187.5			
Net borrowing (n.s.a.)	1239.2	1443.9	1696.0	1235.3	378.7	261.4	477.7	346.3	389.5	482.5	391.1	223.2	302.1	318.9			
Unified deficit (n.s.a.)	680.5	1471.3	1402.6	1259.8	329.4	388.1	328.9	318.3	345.6	409.8	445.6	198.2	287.1	328.9			
<i>Depository institutions</i>																	
Funds supplied	407.6	-639.9	40.5	234.6	-1001.3	-536.7	-583.1	457.2	133.1	154.7	237.8	196.7	261.1	242.8			

Note. Data after 2009:Q4 are staff projections.

1. Average debt levels in the period (computed as the average of period-end debt positions) divided by nominal GDP.

2. Includes change in liabilities not shown in home mortgages and consumer credit.

3. Average debt levels in the period (computed as the average of period-end debt positions) divided by disposable personal income.

4. For corporations, excess of capital expenditures over U.S. internal funds.

5. NIPA state and local government saving plus consumption of fixed capital and net capital transfers.

n.s.a. Not seasonally adjusted.

2.6.4 FOF

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

Measure and Country	2009				2010				Projected				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
<b>Real GDP</b> <sup>1</sup>													
Total Foreign	-9.6	2.6	4.4	4.8	4.9	4.3	3.3	3.3	3.3	3.3	3.4	3.4	3.4
<i>Previous Yearbook</i>	-9.3	2.4	4.2	4.7	4.5	3.7	3.7	3.7	3.8	3.8	3.8	3.8	3.8
Advanced Foreign Economies	-8.7	-0.7	0.9	3.1	3.6	3.1	2.3	2.3	2.2	2.3	2.3	2.3	2.4
Canada	-7.0	-2.8	0.9	4.9	6.1	4.1	3.3	3.3	3.3	3.3	3.2	3.2	3.2
Japan	-15.8	6.9	0.4	4.6	5.0	3.8	1.9	1.9	1.9	1.8	1.7	1.7	1.7
United Kingdom	-10.0	-2.7	-1.1	1.8	1.2	2.1	2.0	2.0	2.0	2.2	2.3	2.4	2.4
Euro Area	-9.6	-0.4	1.6	0.5	0.8	1.9	1.1	1.1	0.9	1.0	1.2	1.4	1.4
Germany	-13.4	1.8	2.9	0.7	0.6	2.9	1.7	1.7	1.4	1.5	1.9	2.0	2.0
Emerging Market Economies	-10.6	6.9	8.8	6.9	6.5	5.7	4.5	4.5	4.7	4.6	4.7	4.7	4.7
Asia	-2.7	13.7	10.2	7.2	13.5	6.5	4.7	4.7	5.8	5.7	5.8	5.8	5.8
Korea	1.0	9.8	13.4	0.7	8.8	4.5	4.1	4.1	4.0	4.0	4.1	4.1	4.2
China	7.1	15.5	10.8	10.1	11.3	9.5	9.1	9.1	8.8	8.5	8.5	8.5	8.5
Latin America	-18.3	1.6	7.9	7.1	0.4	5.1	4.3	4.3	3.7	3.6	3.6	3.6	3.6
Mexico	-24.5	1.2	10.1	7.9	-1.4	5.3	4.2	4.2	3.6	3.5	3.5	3.5	3.5
Brazil	-5.9	6.0	9.0	9.3	11.4	6.0	4.8	4.8	4.2	4.0	4.0	4.0	4.0
<b>Consumer Prices</b> <sup>2</sup>													
Total Foreign	-0.7	1.0	1.5	3.1	3.4	2.0	1.8	1.8	2.0	2.1	2.1	2.1	2.1
<i>Previous Yearbook</i>	-0.6	1.0	1.5	3.1	3.4	2.5	2.2	2.2	2.1	2.1	2.2	2.2	2.2
Advanced Foreign Economies	-1.3	-0.2	0.2	2.1	2.1	1.1	0.5	0.5	1.0	1.3	1.2	1.2	1.2
Canada	-1.0	0.1	0.6	3.7	2.3	1.9	1.4	1.4	1.6	1.8	2.0	2.0	2.0
Japan	-3.0	-1.7	-2.1	-1.3	0.7	-1.4	-1.2	-1.2	-0.9	-0.7	-0.6	-0.6	-0.6
United Kingdom	0.9	1.7	2.9	3.1	5.5	2.6	1.4	1.4	1.7	1.7	1.6	1.7	1.7
Euro Area	-1.0	-0.1	0.5	2.3	1.8	1.3	0.1	0.1	1.2	1.6	1.1	1.2	1.2
Germany	-0.5	-0.1	0.2	1.8	1.3	1.2	0.5	0.5	1.3	1.6	1.2	1.2	1.2
Emerging Market Economies	-0.1	2.1	2.7	4.0	4.6	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Asia	-2.3	0.6	2.3	4.6	3.4	2.5	2.7	2.7	2.5	2.5	2.6	2.6	2.6
Korea	2.1	2.3	2.1	3.1	3.3	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4
China	-3.4	-0.0	1.3	4.6	3.0	3.0	2.6	2.6	2.3	2.3	2.4	2.5	2.5
Latin America	4.7	5.5	3.3	2.6	7.8	3.9	3.8	3.8	4.0	4.0	4.1	4.1	4.1
Mexico	4.7	5.8	3.3	2.0	7.9	2.9	3.4	3.4	3.7	3.7	3.7	3.7	3.7
Brazil	4.9	5.0	3.2	3.6	7.4	6.4	4.2	4.2	3.9	4.2	4.3	4.3	4.3

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

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

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

Measure and Country	-----Projected-----									
	2003	2004	2005	2006	2007	2008	2009	2010	2011	
<b>Real GDP</b> <sup>1</sup>										
Total Foreign	2.9	3.8	4.1	3.9	4.2	-0.8	0.4	3.9	3.3	
<i>Previous Tealbook</i>	2.8	3.8	4.1	3.9	4.2	-0.9	0.3	3.9	3.8	
Advanced Foreign Economies	1.8	2.6	2.8	2.5	2.4	-1.7	-1.5	2.8	2.3	
Canada	1.5	3.7	3.1	1.9	2.5	-0.9	-1.1	4.2	3.2	
Japan	2.4	1.1	2.9	2.1	1.8	-4.2	-1.4	3.2	1.7	
United Kingdom	3.2	2.4	2.4	2.8	2.4	-2.1	-3.1	1.8	2.2	
Euro Area	1.2	1.8	2.1	3.4	2.2	-2.0	-2.1	1.2	1.2	
Germany	0.1	0.2	1.6	4.3	1.6	-1.8	-2.2	1.7	1.8	
Emerging Market Economies	4.5	5.6	5.9	5.8	6.5	0.3	2.7	5.3	4.6	
Asia	7.0	6.0	7.7	7.2	8.3	0.8	6.9	7.6	5.7	
Korea	3.6	2.7	5.2	4.6	5.7	-3.2	6.1	5.3	4.1	
China	10.3	9.9	10.3	10.9	12.4	7.0	10.8	9.7	8.5	
Latin America	1.7	5.1	4.0	4.5	4.6	-0.4	-1.0	3.3	3.6	
Mexico	1.2	4.6	3.5	3.8	3.8	-1.2	-2.4	2.9	3.5	
Brazil	0.8	5.1	3.5	4.8	6.8	0.9	4.4	6.6	4.0	
<b>Consumer Prices</b> <sup>2</sup>										
Total Foreign	2.1	2.8	2.3	2.1	3.7	3.4	1.2	2.3	2.2	
<i>Previous Tealbook</i>	2.1	2.8	2.3	2.1	3.7	3.4	1.2	2.5	2.1	
Advanced Foreign Economies	1.3	1.8	1.6	1.4	2.2	2.0	0.2	1.2	1.3	
Canada	1.7	2.3	2.3	1.4	2.5	1.9	0.8	1.8	2.0	
Japan	-0.3	0.5	-1.0	0.3	0.6	1.0	-2.0	-0.7	-0.6	
United Kingdom	1.3	1.4	2.1	2.7	2.1	3.9	2.1	2.8	1.7	
Euro Area	2.0	2.3	2.3	1.8	2.9	2.3	0.4	1.1	1.4	
Germany	1.1	2.1	2.2	1.3	3.1	1.7	0.3	1.1	1.4	
Emerging Market Economies	3.1	3.9	3.0	2.9	5.1	4.6	2.2	3.4	3.0	
Asia	2.3	3.1	2.6	2.4	5.5	3.7	1.3	2.8	2.6	
Korea	3.5	3.4	2.5	2.1	3.4	4.5	2.4	2.5	2.4	
China	2.7	3.2	1.4	2.1	6.6	2.6	0.6	2.7	2.4	
Latin America	4.9	5.6	3.7	4.1	4.2	6.6	4.0	4.9	4.0	
Mexico	3.9	5.3	3.1	4.1	3.8	6.2	4.0	4.4	3.7	
Brazil	11.5	7.2	6.1	3.2	4.3	6.2	4.2	5.5	4.3	

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

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

## U.S. Current Account

## Quarterly Data

	2009				2010				Projected			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>U.S. Current Account Balance</b>	<b>-409.6</b>	<b>-388.4</b>	<b>-421.1</b>	<b>-445.4</b>	<b>-496.7</b>	<b>-457.0</b>	<b>-476.0</b>	<b>-476.1</b>	<b>-502.4</b>	<b>-497.6</b>	<b>-516.5</b>	<b>-513.8</b>
<i>Previous Tealbook</i>	-416.7	-391.0	-409.4	-462.4	-503.6	-476.5	-488.9	-487.3	-505.4	-486.5	-499.5	-500.8
Current Account as Percent of GDP	-2.9	-2.7	-3.0	-3.1	-3.4	-3.1	-3.2	-3.2	-3.3	-3.2	-3.3	-3.3
<i>Previous Tealbook</i>	-2.9	-2.8	-2.9	-3.2	-3.5	-3.2	-3.3	-3.2	-3.3	-3.1	-3.2	-3.1
Net Goods & Services	-361.8	-321.8	-397.3	-418.8	-461.0	-426.2	-437.5	-440.4	-455.7	-466.6	-484.4	-487.2
Investment Income, Net	80.1	73.4	123.3	107.6	113.7	100.2	95.1	93.4	95.3	95.9	97.5	98.5
Direct, Net	204.5	190.6	227.1	205.1	212.2	203.0	199.8	200.6	205.0	211.4	218.2	225.5
Portfolio, Net	-124.3	-117.2	-103.8	-97.5	-98.5	-102.8	-104.7	-107.2	-109.7	-115.4	-120.7	-127.0
Other Income and Transfers, Net	-128.0	-140.0	-147.2	-134.2	-149.4	-131.0	-133.6	-129.2	-142.1	-127.0	-129.6	-125.2

Billions of Dollars, s.a.a.r.

## Annual Data

	Projected										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2010	2011
<b>U.S. Current Account Balance</b>	<b>-520.7</b>	<b>-630.5</b>	<b>-747.6</b>	<b>-802.4</b>	<b>-727.3</b>	<b>-708.9</b>	<b>-416.1</b>	<b>-476.4</b>	<b>-507.6</b>	<b>-498.1</b>	<b>-507.6</b>
<i>Previous Tealbook</i>	-521.5	-631.1	-748.7	-803.5	-726.6	-706.1	-419.9	-489.1	-498.1	-498.1	-507.6
Current Account as Percent of GDP	-4.7	-5.3	-5.9	-6.0	-5.2	-4.9	-2.9	-3.2	-3.3	-3.2	-3.3
<i>Previous Tealbook</i>	-4.7	-5.3	-5.9	-6.0	-5.2	-4.9	-2.9	-3.3	-3.3	-3.3	-3.2
Net Goods & Services	-494.2	-609.3	-714.2	-759.2	-702.1	-698.8	-374.9	-441.3	-473.5	-473.5	-473.5
Investment Income, Net	51.0	73.4	78.8	54.7	97.9	125.5	96.1	100.6	96.8	96.8	96.8
Direct, Net	112.7	150.9	173.2	174.0	236.7	249.9	206.8	203.9	215.0	203.9	215.0
Portfolio, Net	-61.7	-77.5	-94.4	-119.4	-138.8	-124.3	-110.7	-103.3	-118.2	-103.3	-118.2
Other Income and Transfers, Net	-77.5	-94.5	-112.2	-97.9	-123.1	-135.7	-137.3	-135.8	-130.9	-135.8	-130.9

Billions of Dollars

## Abbreviations

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ABS	asset-backed securities
AFE	advanced foreign economy
BOC	Bank of Canada
BOE	Bank of England
BOM	Bank of Mexico
CDS	credit default swap
C&I	commercial and industrial
CPI	consumer price index
EC	European Commission
ECB	European Central Bank
ECI	Employment Cost Index
EEB	emergency unemployment benefits
EME	emerging market economy
E&S	equipment and software
EU	European Union
FAS	Financial Accounting Standards
FHA	Federal Housing Administration, Department of Housing and Urban Development
FOMC	Federal Open Market Committee; also, the Committee
GDP	gross domestic product
GSE	government-sponsored enterprise
IMF	International Monetary Fund
IP	industrial production
ISM	Institute for Supply Management

Libor	London interbank offered rate
M&A	merger and acquisition
MBS	mortgage-backed securities
NAIRU	non-accelerating inflation rate of unemployment
OIS	overnight index swaps
PCE	personal consumption expenditures
PMI	purchasing managers index
repo	repurchase agreement
TIPS	Treasury inflation-protected securities
WTI	West Texas Intermediate