## 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.

## Part 1

## CURRENT ECONOMIC AND FINANCIAL CONDITIONS

## Summary and Outlook

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

## Summary and Outlook

## Class II FOMC—Restricted (FR)

## Domestic Developments

The information we have received since the time of the January Greenbook indicates that the contraction in economic activity, both here and abroad, has been much more severe than we had previously projected. We now estimate that real GDP declined at an annual rate of about $63 / 4$ percent last quarter, a downward revision of about $13 / 4$ percentage points from our January forecast. ${ }^{1}$ In the current quarter, employment and industrial production have been contracting sharply, motor vehicle sales have plunged again, and sales and starts of new homes have continued to drop precipitously. In addition, business fixed investment is falling sharply this quarter, with widespread weakness in spending for both equipment and structures. In all, we now project that real GDP will fall at an annual rate of $61 / 2$ percent this quarter, about a percentage point below our January projection. We expect a further decline in real GDP of 2 percent at an annual rate next quarter. Adding to the bleaker picture for near-term real activity, the unemployment rate is anticipated to average $83 / 4$ percent in the second quarter, $1 / 2$ percentage point above our projection in the January Greenbook.

In addition to the significant markdowns to our estimates of spending and production in the near term, many of the key factors affecting our medium-term projection have deteriorated substantially. Most notably, equity prices have tumbled in recent weeks, and we expect the portfolio losses to weigh heavily on economic activity over the projection period. In addition, activity abroad is contracting much more sharply than we had previously anticipated, and the exchange value of the dollar has moved up since the January Greenbook, so that exports are weaker than in our previous projection. Finally, although the overall size of the fiscal stimulus bill passed by the Congress was similar to what we had assumed in the January Greenbook, the composition of the final package implies a slightly smaller boost to aggregate demand.

Given these unfavorable developments, we are now projecting a deeper and more prolonged recession this year and a weaker recovery in 2010. Nevertheless, we still expect activity to stabilize by the end of this year and begin to recover next year as the stresses in financial markets ease (aided by the various initiatives undertaken by the Federal Reserve and other federal entities), as the fiscal stimulus shows through to spending, and as the intensity of the inventory adjustment in housing and other product markets lessens. All told, we now project that real GDP will decrease $21 / 4$ percent this year and rise $11 / 2$ percent in 2010. These figures are down $11 / 2$ percentage points and

[^0]about 1 percentage point, respectively, from our projection in the January Greenbook. The weaker projected trajectory of real output results in the unemployment rate rising more steeply into next year, reaching a peak of $91 / 2$ percent in the second quarter of 2010 and remaining at that level through the end of the year. The projected unemployment rate at the end of next year is about $11 / 2$ percentage points higher than in our January forecast.

With the substantially greater degree of slack in this projection, we have marked down our forecast for inflation in the second half of this year and next year. We continue to think that inflation will be damped by low rates of resource utilization, falling import prices, and easing cost pressures from the sharp declines in oil and other raw materials prices since last summer. In addition, we anticipate that the very low rates of headline inflation will result in a modest downward adjustment of inflation expectations over the next two years. All told, we look for core PCE prices to rise 1 percent this year and then edge up only $1 / 2$ percent in 2010. Relative to the January Greenbook, the forecast is roughly the same in 2009 as a whole and 0.3 percentage point lower in 2010.

## Key Background Factors

As in the January Greenbook, we assume that the FOMC will hold the target federal funds rate in the current range of 0 to $1 / 4$ percent through the end of 2010. We have not assumed any nontraditional policy actions other than those that have already been implemented or announced. In contrast to the staff's assumed path for the federal funds rate, the path implied by futures quotes continues to slope upward beginning late this year. Market participants appear to anticipate an earlier shift to policy tightening than we have incorporated into our baseline projection, although the expected amount of tightening is difficult to gauge due to heightened uncertainty about term premiums. (For further discussion of monetary policy, see the box "Implications of the Zero Bound for Monetary Policy in the Projection. '")

The 10-year Treasury rate has risen about 40 basis points, on net, since we closed the January Greenbook. This rise reflects, at least in part, greater anticipated supply of Treasury securities resulting from federal budget deficits. As in January, we assume that the 10-year Treasury rate will drift up from its starting level as the recovery in economic activity eases demand for safe assets and as the 10-year window for the Treasury rate moves through the period of very low short-term rates that are anticipated for the next few years. In addition, market participants still see significant odds that the Federal Reserve will expand its program to purchase long-term assets beyond the already announced $\$ 600$ billion in agency debt and mortgage-backed securities (MBS).

## Implications of the Zero Bound for Monetary Policy in the Projection

In this projection, we assume that the nominal federal funds rate will remain close to zero through 2013, as shown by the black line in the figure below to the left. However, if not for the zero lower bound, an even lower federal funds rate would be indicated. As shown by the dashed red line, an estimate of the "optimal" path for the federal funds rate shows a decline to negative $61 / 2$ percent by next year, with

Federal Funds Rate

rates remaining below zero through 2013.* As shown in the figure below to the right, such additional monetary stimulus would lead to a lower peak level of unemployment and a noticeably faster return to full employment. Thus, the outlook implies a significant monetary policy "shortfall" that would require additional fiscal or unconventional monetary policy actions to fill.

Unemployment Rate

*The unconstrained "optimal" policy path minimizes a loss function, conditional on the staff outlook and the dynamics of the FRB/US model. This function aims at keeping core PCE inflation near 2 percent, keeping the unemployment rate near the NAIRU, and avoiding changes in the federal funds rate. This unconstrained path is the same as that reported in the Bluebook.

## Class II FOMC - Restricted (FR)

## Key Background Factors Underlying the Baseline Staff Projection

Federal Funds Rate


## Equity Prices



## Crude Oil Prices



Long-Term Interest Rates


House Prices


Broad Real Dollar


Note: In each panel, shading represents the projection period, which begins in 2009:Q1.
In the upper-left panel that reports the federal funds rate, the dashed line is not apparent because the paths of the federal funds rate in the January and current Greenbooks are the same.

Long-term rates likely will rise when such an expansion, which is not incorporated in our baseline projection, fails to materialize. These factors more than offset the downward pressure on long-term rates as market participants gradually learn that the federal funds rate will be kept at the effective zero bound for longer than they currently foresee.

Yields on investment-grade corporate bonds have risen a bit less, on net, than longer-term Treasury yields since the time of the January Greenbook. The associated modest narrowing of the spread on Baa-rated corporate bonds is about in line with what we had anticipated in the last Greenbook. Although we still expect corporate bond yields (and spreads) to decline over the remainder of this year and next year, we have tempered the decline somewhat given the weaker economy. All told, our projected path for the Baa-rated corporate bond yield has been revised up about $1 / 2$ percentage point for the rest of 2009 and nearly $3 / 4$ percentage point in 2010 relative to the January Greenbook.

In household credit markets, the conforming fixed mortgage rate has remained a little above 5 percent since the January Greenbook, but the spread of the 30-year fixed mortgage rate over the 10-year Treasury rate has narrowed about 40 basis points, on net. The narrowing is likely due, in part, to the support from the government's ongoing purchases of agency debt and MBS. We expect the mortgage spread to drift down further over the next two years as economic conditions begin to improve. However, with Treasury yields anticipated to rise, the mortgage rate remains slightly above its current level through 2010 despite the narrowing spread; this path for the mortgage rate averages roughly $1 / 4$ percentage point above that in the January Greenbook.

Equity prices have declined nearly 15 percent since the January Greenbook amid further sharp markdowns of expected corporate earnings. We have lowered our projected path for stock prices by a similar amount throughout the forecast period. We still expect the equity risk premium to moderate gradually, which in turn implies that stock prices will rise at an annual rate of about 15 percent over the remainder of the projection period.

The projected decline in house prices in this Greenbook is similar to that in January, with some key influences having moved in offsetting directions. On the positive side, we expect the foreclosure mitigation policy announced by the Administration to be more
effective than the program we had assumed in the last Greenbook. ${ }^{2}$ However, the effect of this policy change was offset by the effects on house prices of the more negative outlook for the economy. On balance, we assume that the LoanPerformance house price index will decrease 12 percent this year and 3 percent in 2010.

As noted earlier, our forecast incorporates the effects of the recently passed $\$ 787$ billion fiscal stimulus package. We estimate that the bill will add 1.1 percentage points to the change in real GDP in 2009 and 0.8 percentage point in 2010, slightly less than our assumptions in the January Greenbook. (For further detail, see the box "Fiscal Stimulus Package.")

We continue to project large deficits in the federal unified budget over the next two years, reflecting the effects of the fiscal stimulus package, the costs of financial stabilization programs, and the weak economic outlook. In particular, we expect the federal deficit to be $\$ 1.9$ trillion (13½ percent of GDP) in fiscal 2009 and $\$ 1.2$ trillion ( $81 / 2$ percent of GDP) in fiscal 2010.

The incoming data on foreign economies have been extremely weak and point to a broadbased contraction in economic activity in most of the advanced and emerging foreign economies. Although we continue to expect that a modest recovery abroad will begin towards the end of this year, we have written down a much deeper contraction in activity in the first half of the year and slower growth over the remainder of the forecast period. In particular, we now expect foreign real GDP to decline $21 / 4$ percent over 2009 as a whole and then to increase about the same amount in 2010. The foreign exchange value of the dollar has moved about 3 percent above the level we had previously anticipated, and as a result, the path for the dollar going forward is a good bit higher than our January Greenbook assumption. We assume that the broad real dollar will gradually decline over this year and next year, falling about $31 / 4$ percent by the end of 2010.

The spot price of West Texas intermediate (WTI) crude oil currently stands at \$42 per barrel, little changed, on net, from the January Greenbook. Consistent with futures

[^1]prices, we expect crude oil prices to move up slowly as global economic activity recovers, with the price of WTI reaching \$49 per barrel by the end of this year and \$55 per barrel—\$4 lower than in the January Greenbook-by the end of next year.

## Recent Developments and the Near-Term Outlook

In the fourth quarter, we estimate that real GDP fell at an annual rate of about $63 / 4$ percent, a decline $13 / 4$ percentage points larger than we had projected in January. Furthermore, the composition of output last quarter was less favorable than we had anticipated-final demand fell much more steeply than we had projected, while the pace of inventory liquidation was slower than expected. We now project that real GDP will drop at about a $41 / 4$ percent rate over the first half of this year, as final demand weakens further and firms intensify their efforts to reduce inventories.

Indeed, the incoming data on industrial production (IP) indicate that firms are slashing output dramatically in response to the falloff in demand and the buildup of some inventory overhangs. Motor vehicle producers, in particular, have cut their assemblies sharply this quarter, and their production schedules suggest that output will remain extremely low over the next several months. More broadly, manufacturing IP appears on track to decline at an annual rate of about 20 percent in the first quarter, and the factory operating rate has dropped to its lowest level in postwar history. With the purchasing managers indexes, orders for new durable goods, and other forward-looking indicators

| Summary of the Near-Term Outlook (Percent change at annual rate except as noted) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Measure | 2009:Q1 |  | 2009:Q2 |  |
|  | January Greenbook | March Greenbook | January Greenbook | March Greenbook |
| Real GDP | -5.6 | -6.5 | -1.3 | -2.0 |
| Private domestic final purchases | -5.9 | -5.3 | -2.8 | -4.3 |
| Personal consumption expenditures | -1.7 | . 4 | . 6 | . 0 |
| Residential investment | -40.7 | -41.2 | -21.0 | -34.3 |
| Business fixed investment | -19.8 | -27.3 | -19.3 | -23.4 |
| Government outlays for consumption and investment | . 4 | -. 2 | 2.8 | 5.5 |
|  | Contribution to growth (percentage points) |  |  |  |
| Inventory investment | -2.0 | -2.2 | . 6 | . 5 |
| Net exports | 1.2 | . 1 | -. 1 | . 0 |

## Fiscal Stimulus Package

The overall size of the American Recovery and Reinvestment Act of 2009 is similar to the $\$ 800$ billion package that was assumed in our forecast in the January Greenbook. However, one important difference is that the stimulus bill includes $\$ 70$ billion for providing relief to most households from the alternative minimum tax in 2009, which we had already incorporated as part of our baseline fiscal policy assumptions in January. Thus, the effective size of the package is smaller than what we had assumed previously.

The other key components of the stimulus package, summarized in the table below, are:

- A reduction in personal taxes for most individuals, primarily through a \$400 tax credit which is anticipated to show up in lower tax withholding beginning in the second quarter.
- Business tax cuts that in large part reflect the extension through 2009 of the 50 percent bonus depreciation provision for equipment spending that was in place last year.
- Federal grants to state governments to help shore up states’ operating budgets-delivered in large part through higher Medicaid reimbursement rates-and to help

Federal Cost of the 2009 Fiscal Stimulus Package
(Billions of dollars)

| Component | March <br> Greenbook | January <br> Greenbook |
| :--- | :---: | :---: |
| Total cost | $\mathbf{7 8 7}$ | $\mathbf{8 0 0}$ |
| Taxes | $\mathbf{2 8 3}$ | $\mathbf{3 0 0}$ |
| Personal tax cuts | 232 | 180 |
| Business tax cuts | 51 | 120 |
| Spending programs | $\mathbf{5 0 4}$ | $\mathbf{5 0 0}$ |
| Grants for state and local operating budgets | 176 | 200 |
| Grants for state and local infrastructure | 100 | 200 |
| Transfer payments | 116 | 90 |
| Federal purchases | 69 | 10 |
| Subsidies for long-term programs | 45 | 0 |

maintain or increase their infrastructure spending.

- Increases in transfer payments including a boost to unemployment insurance benefits and food stamps, a one-time $\$ 250$ payment to retirees and veterans, and a new program to subsidize health insurance premiums for many individuals that have become unemployed.
- Additional budget authority for federal spending, which most notably includes funding for infrastructure and research programs.
- Subsidies for long-term projects to improve health information, energy, and broadband technology. These subsidies are likely to occur mostly in years beyond our forecast period.

Our estimates of the effects of the package on economic activity are based on a number of assumptions about the direct spend-out of the stimulus funds:

- The additional transfer payments are spent by the recipients soon after they are received, while the increase in disposable income resulting from the reduction in income taxes is spent by households in the same way, in terms of magnitude and timing, as an increase in ordinary income.
- Business spending for equipment and software will get only a small lift from
the business tax cuts, consistent with our judgment about the 2001-2004 experience with a temporary bonus depreciation allowance.
- About 65 percent of the federal grants to shore-up state operating budgets and 35 percent of the federal aid to state governments for funding infrastructure projects will be spent by the end of next year, reflecting the typical spend-out rates for such projects.
- About half of the additional budget authority for federal spending programs is assumed to show up as outlays by the end of 2010, consistent with the usual spend-out lags for these types of programs.

Given these assumptions and incorporating associated indirect multiplier effects, we estimate that the fiscal stimulus package will add 1.1 percentage points to the change in real GDP in 2009 and 0.8 percentage point in 2010, 0.1 percentage point lower in each year than in our previous forecast. Our estimates of the effects of the stimulus package on economic activity are slightly smaller than assumed in the January Greenbook, reflecting both the smaller effective size and the different composition of the final package.
pointing to further broad-based declines in factory output over the next few months, we now project manufacturing IP to decline at a 10 percent rate in the second quarter, a much sharper decline than in the January Greenbook.

The deterioration in labor market conditions has accelerated in recent months, with steep job losses across nearly all sectors. Over the first two months of the year, private payroll employment fell by an average of 670,000 per month, and the unemployment rate jumped to 8.1 percent, its highest level since 1983. Given the elevated level of unemployment insurance claims since the February survey week and poor readings from various hiring surveys, we have marked down our employment forecast in coming months. In particular, we are now looking for private payrolls to drop by 675,000 in March and to decline about 370,000 per month, on average, in the second quarter. We expect these job losses to push the unemployment rate up to 8.8 percent by the end of the second quarter.

Consumer outlays appear to have stabilized at a very low level this quarter. Real outlays for goods outside of motor vehicles recorded sizable gains in January and February, up from the average monthly declines of nearly 1 percent recorded over the previous six months. Retail sales of motor vehicles moved down further, on average, in the first two months of the year after plummeting in the second half of last year. In January, spending on services recorded a modest gain. Looking ahead, we expect that spending will be about flat in the coming months, as the boost to real incomes from the fiscal stimulus package counterbalances the drag from the otherwise bleak demand fundamentals. In all, we project that real PCE will tick up at less than a $1 / 4$ percent rate in the first half of the year, up from the small decline we had projected in January.

The incoming data on housing activity again have been weaker than we were anticipating. Single-family starts fell to a postwar low of 347,000 units at an annual rate in January, well below our expectations, and multifamily starts also sank precipitously. Similarly, new home sales fell by more in January than we were expecting. In view of the downside surprises in demand and construction, and with the outlook for employment and income having worsened as well, we have marked down our forecasts for new home sales and starts in coming months. All told, we now project single-family starts to average about 320,000 units in the current quarter and to fall to a 280,000 unit pace in the second quarter; these figures are about 75,000 units, on average, below our projection in the January Greenbook. Consistent with this trajectory for starts, we expect residential investment to decline at an annual rate of 38 percent over the first half of this year.

Real investment in equipment and software tumbled at an annual rate of nearly 30 percent in the fourth quarter and is projected to fall at a similar pace this quarter. The sharp contraction in business purchases of motor vehicles continued this quarter, and spending on high-tech equipment and software is falling more rapidly than we were projecting in January. Outside of high tech and transportation, the downtrend in new orders suggests a considerable drop in outlays in the near term, as do the poor readings on business sentiment.

The downturn in nonresidential construction that we had been projecting for some time now appears to be under way. Real outlays for nonresidential structures declined at an annual rate of 9 percent in the fourth quarter, as an uptick in the drilling and mining category was more than offset by sizable decreases elsewhere. And more recently, nominal construction expenditures showed a much larger drop in January than we were expecting. Given these latest readings and the more negative tone of the available near-term indicators, we are now projecting that real outlays for nonresidential structures will fall at an annual rate of 30 percent in the first half of this year, a somewhat steeper rate of decline than we had projected in the January Greenbook.

Although businesses liquidated inventories at a robust pace last year, inventory-sales ratios for many sectors appear elevated, as declines in final demand have outpaced the inventory drawdowns. In the first half of this year, we expect total nonfarm inventories to decrease at an annual rate of almost $\$ 100$ billion. In the motor vehicle sector, the reduction in stocks is concentrated in the first quarter, reflecting the protracted shutdowns at many assembly plants. Outside of motor vehicles, the rate of inventory liquidation is projected to intensify in the second quarter as firms continue to cut production to reduce the size of their overhangs.

In the government sector, information through February from the Monthly Treasury Statement suggests that real federal purchases will rise at an annual rate of only about 1114 percent in the first quarter. This sluggish increase is primarily due to defense outlays, which have been weaker than expected. We expect the pace of defense spending to pick up again in the coming quarters. In the state and local sector, we estimate that real outlays fell at an annual rate of 2 percent in the fourth quarter of last year, and the available data for this quarter point to another decline. This trajectory is noticeably weaker than we had projected in January, and it is consistent with widespread reports of significant pressures on state and local budgets. We anticipate that outlays will turn up
again in the second quarter as the grants included in the fiscal stimulus package help cash-strapped states and municipalities avoid further spending cuts.

Both exports and imports retreated sharply in the fourth quarter of last year and appear headed for comparable declines this quarter. Given our forecast for a further deterioration in domestic and foreign demand, we expect the declines in exports and imports to continue in the second quarter, albeit at a much slower pace. With imports and exports anticipated to fall by about the same amount this quarter and next, the expected contribution of net exports will be a neutral influence on the change in GDP in the first half of this year.

Recent readings on consumer price inflation continue to be subdued. Core PCE prices edged up 0.1 percent in January after three consecutive months of no change, and we expect similarly small increases in February and March. As a result, our forecast for core PCE inflation in the first quarter remains at a touch under 1 percent at an annual rate. Core inflation is then expected to pick up to a $1 \frac{1}{2}$ percent rate in the second quarter, largely reflecting an impending increase in federal tobacco taxes in April and a postal rate hike in May. Meanwhile, given our forecast for further declines in consumer energy prices this quarter and next, we project total PCE prices to be about flat, on balance, over the first half of this year.

## The Medium-Term Outlook

We project that real GDP will gradually flatten out over the second half of this year and expand slowly next year, as the stresses in financial markets ease, the effects of fiscal stimulus take hold, and the correction in housing activity comes to an end. Nevertheless, with real GDP expected to increase only about $11 / 2$ percent next year, the output gap remains wide throughout the forecast period and the unemployment rate averages 91⁄2 percent in 2010.

Household sector. We expect consumer spending to turn up gradually toward the end of this year, with real outlays expanding at an annual rate of just $1 / 2$ percent in the second half of 2009 and a little less than 2 percent in 2010. The recently passed tax cuts and transfers will provide an important boost to disposable income in coming quarters. Moreover, as in previous Greenbooks, we expect credit availability to improve and income uncertainty to lessen as financial repair proceeds and the overall economy begins to expand; these factors should gradually put spending on a modest upward trajectory. That said, the projected pace of consumer spending is significantly restrained by the past

## Projections of Real GDP

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

| Measure | 2008: <br> H2 | 2009: <br> H1 | 2009: <br> H2 | 2010 |
| :---: | ---: | ---: | ---: | ---: |
| Real GDP | -3.6 | -4.2 | -.3 | $\mathbf{1 . 5}$ |
| Previous Greenbook | -2.7 | -3.5 | 2.0 | 2.6 |
| Final sales | -4.0 | -3.4 | -1.5 | 1.4 |
| Previous Greenbook | -2.9 | -2.7 | .0 | 2.6 |
| Personal consumption |  |  |  |  |
| expenditures | -4.1 | .2 | .6 | 1.9 |
| Previous Greenbook | -3.9 | -.6 | 1.9 | 2.9 |
| Residential investment | -19.8 | -37.9 | -9.5 | 6.7 |
| Previous Greenbook | -22.3 | -31.6 | -11.1 | 10.0 |
| Business fixed investment | -12.2 | -25.4 | -19.7 | -.9 |
| Previous Greenbook | -7.4 | -19.5 | -13.8 | 3.0 |
| Government purchases | 3.5 | 2.6 | 4.3 | 1.8 |
| Previous Greenbook | 4.6 | 1.6 | 3.3 | 2.5 |
| Exports | -11.3 | -15.1 | -2.3 | 1.0 |
| Previous Greenbook | -9.2 | -3.9 | -.1 | 2.4 |
| Imports | -10.0 | -12.5 | 3.2 | 3.8 |
| Previous Greenbook | -9.6 | -6.9 | 5.8 | 5.4 |
|  | Contribution to growth |  |  |  |
| (percentage points) |  |  |  |  |
| Inventory change | .4 | -.8 | 1.2 | .1 |
| Previous Greenbook | .2 | -.7 | 1.9 | .0 |
| Net exports | .3 | .1 | -.7 | -.4 |
| Previous Greenbook | .5 | .6 | -.8 | -.5 |

... Not applicable.
declines in wealth and our forecast for lackluster growth in real wages and salaries; indeed, those factors are even more pronounced in this forecast than in the previous Greenbook. Reflecting the outsized declines in household wealth, we expect the saving rate to hold at a relatively high level—about $51 / 4$ percent, on average— over the forecast period as households work to repair their balance sheets.

Residential investment. In light of the weaker-than-expected incoming data on new home sales and starts, as well as the downward revisions that we made to our forecasts for employment and stock market wealth, we lowered our projection for housing activity. In particular, we pushed out the trough in single-family starts to the second quarter and reduced the projected level of starts by about 175,000 units, on average, in the second half of this year and next year. Although the level of housing activity is much lower, the overall contour of sales and starts is similar to that in our previous projection. We expect the improvement in affordability from falling house prices, low mortgage rates, and government policies aimed at foreclosure mitigation to help stabilize demand later this year. And we anticipate that the recovery in demand will gradually reduce the overhang of unsold new homes and bring about a modest improvement in building activity. All told, we project real residential investment to fall 25 percent this year-double the decline in our previous forecast-and to rise 7 percent in 2010.

Business investment. We also marked down our projection for business investment this year and next. Outlays for equipment and software (E\&S) in the fourth quarter were much weaker than we had anticipated, and in light of the weaker path for business output and the continued downbeat readings on business sentiment and capital spending plans, we have propagated much of this additional weakness forward. In particular, we now project that real expenditures for E\&S will decline about 20 percent this year, 7 percentage points more than in our previous projection. In 2010, we expect E\&S outlays to rise 5 percent, as the grip of adverse credit conditions begins to loosen and business output growth turns positive.

We project that real investment in nonresidential structures will decline nearly 30 percent this year and about 12 percent in 2010. High vacancy rates and falling prices for commercial real estate suggest that demand has already weakened noticeably, and our forecast for business output and employment suggests that the demand for commercial space will deteriorate further. In addition, tight financing conditions are making it difficult for builders to obtain new commercial real estate loans. New investment in drilling and mining structures also seems likely to fall this year given last year's steep drop in oil and natural gas prices. However, we project investment in this sector to level out in 2010 as oil and gas prices begin to move higher again.

We expect inventory reductions to slow over the second half of 2009 as firms adjust production toward final sales. This projected slowing in the pace of inventory liquidation
contributes importantly to the leveling out in real GDP over the second half of this year. In 2010, inventories are projected to be a relatively neutral influence on GDP growth.

Government spending. Although the weakness in the overall economy and current budget pressures would otherwise imply a contraction in the state and local sector, we continue to assume that state and local governments will use the grants provided in the fiscal stimulus package to smooth their outlays. As a result, we expect state and local spending to increase about 2 percent in 2009 and $1 \frac{1}{4}$ percent in 2010. That said, we have marked down our forecast for growth in this sector both this year and next in light of the weaker outlook for tax revenues in this projection. At the federal level, we expect real purchases to decelerate over the projection period, from $8 \frac{1}{4}$ percent in 2008 to 53/4 percent in 2009 and 2 percent in 2010, as the rise in defense purchases slows.

Net exports. Consistent with the dismal outlook for foreign activity, real exports are projected to decline steadily through the end of this year before flattening out in 2010. Imports are also projected to decline further this year, as slumping domestic income weighs heavily on demand for foreign goods and services. But with domestic demand flattening out toward the end of this year and turning up next year, we expect imports to rise about $33 / 4$ percent in 2010. In sum, net exports are a modest drag on the GDP projection beyond the near term, subtracting about $11 / 4$ percentage point from the annual rate of change in 2009 and nearly $1 / 2$ percentage point in 2010. (The International Developments section provides more detail on the outlook for the external sector.)

## Aggregate Supply, the Labor Market, and Inflation

In this forecast, we further reduced our estimates of structural productivity and potential output growth to reflect the effects of the larger projected decrease in business investment on capital deepening. We now assume that structural productivity will increase about $11 / 2$ percent in 2009 and 2010, and that potential GDP will rise 2 percent in both years. By the end of 2010, the projected level of output falls short of potential by about $81 / 4$ percent, up from $51 / 2$ percent in the January Greenbook.

Productivity and the labor market. We expect the pace of job losses to gradually slow in the second half of this year as real economic activity begins to stabilize. Specifically, our projection calls for private payroll employment to fall about 370,000 per month in the second quarter and about 145,000 per month in the second half of this year. The cumulative destruction of about $71 / 2$ million jobs over the cycle is anticipated to push the unemployment rate up to $91 / 2$ percent in 2010 . We expect firms to begin adding to

## Decomposition of Structural Labor Productivity Nonfarm Business Sector

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

| Measure | $\begin{gathered} 1974- \\ 95 \end{gathered}$ | $\begin{aligned} & 1996- \\ & 2000 \end{aligned}$ | $\begin{gathered} 2001- \\ 06 \end{gathered}$ | 2007 | 2008 | 2009 | 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Structural labor productivity | 1.5 | 2.5 | 2.6 | 2.1 | 1.9 | 1.6 | 1.5 |
| Previous Greenbook | 1.5 | 2.5 | 2.6 | 2.1 | 1.9 | 1.7 | 1.7 |
| Contributions ${ }^{1}$ |  |  |  |  |  |  |  |
| Capital deepening | . 7 | 1.4 | . 7 | . 6 | . 4 | -. 3 | -. 3 |
| Previous Greenbook | . 7 | 1.4 | . 7 | . 6 | . 4 | -. 1 | . 1 |
| Multifactor productivity | . 5 | . 7 | 1.6 | 1.2 | 1.3 | 1.7 | 1.7 |
| Previous Greenbook | . 5 | . 7 | 1.6 | 1.2 | 1.3 | 1.6 | 1.5 |
| Labor composition | . 3 | . 3 | . 3 | . 2 | . 2 | . 2 | . 1 |
| Memo |  |  |  |  |  |  |  |
| Potential GDP | 3.0 | 3.4 | 2.6 | 2.5 | 2.5 | 2.0 | 2.0 |
| Previous Greenbook | 3.0 | 3.4 | 2.6 | 2.5 | 2.5 | 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.
. . . Not applicable.
The Outlook for the Labor Market
(Percent change, Q4 to Q4, except as noted)

| Measure | 2007 | 2008 | 2009 | 2010 |
| :--- | ---: | ---: | ---: | ---: |
| Output per hour, nonfarm business | 2.6 | 2.1 | .9 | 2.0 |
| $\quad$ Previous Greenbook | 2.7 | 2.4 | 1.1 | 2.0 |
| Nonfarm private payroll employment | .8 | -2.1 | -3.8 | -.1 |
| $\quad$ Previous Greenbook | .9 | -1.9 | -2.2 | 1.0 |
| Household survey employment | .4 | -1.5 | -2.6 | .4 |
| $\quad$ Previous Greenbook | .4 | -1.5 | -1.1 | 1.1 |
| Labor force participation rate $^{1}$ | 66.0 | 65.9 | 65.3 | 65.1 |
| $\quad$ Previous Greenbook | 66.0 | 65.9 | 65.5 | 65.3 |
| Civilian unemployment rate $^{1}$ | 4.8 | 6.9 | 9.2 | 9.5 |
| $\quad$ Previous Greenbook | 4.8 | 6.9 | 8.4 | 8.1 |
| MEMO |  |  |  |  |
| GDP gap $^{2}$ | -.4 | -3.7 | -7.7 | -8.2 |
| $\quad$ Previous Greenbook | -.3 | -3.2 | -6.0 | -5.5 |

1. Percent, average for the fourth quarter.
2. Actual less potential GDP in the fourth quarter of the year indicated as a percent of potential GDP. A negative number thus indicates that the economy is operating below potential.
. . . Not applicable.
payrolls about the middle of 2010, but at a pace that is sufficient only to keep the unemployment rate from rising further.

Productivity fell in the fourth quarter, and given the severity of the output decline that we are projecting, we are anticipating another drop this quarter. Over 2009 as a whole, we expect productivity to increase a good bit below the growth rate of structural productivity. Productivity then accelerates in 2010 to above its structural rate, as the economy recovers and firms lag slightly in their hiring.

## Inflation Projections

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

| Measure | 2007 | 2008 | 2009 | 2010 |
| :---: | ---: | ---: | ---: | ---: |
| PCE chain-weighted price index | 3.5 | 1.9 | .4 | .8 |
| Previous Greenbook | 3.5 | 1.7 | .6 | 1.1 |
| Food and beverages | 4.5 | 6.3 | 1.9 | 1.2 |
| Previous Greenbook | 4.5 | 6.2 | 2.0 | 1.2 |
| Energy | 19.1 | -8.6 | -11.3 | 4.5 |
| $\quad$ Previous Greenbook | 19.1 | -9.8 | -8.8 | 5.2 |
| Excluding food and energy | 2.2 | 1.9 | 1.0 | .5 |
| $\quad$ Previous Greenbook | 2.2 | 1.9 | 1.0 | .8 |
| Consumer price index | 4.0 | 1.5 | .3 | 1.1 |
| $\quad$ Previous Greenbook | 4.0 | 1.5 | .4 | 1.3 |
| Excluding food and energy | 2.3 | 2.0 | 1.3 | .7 |
| $\quad$ Previous Greenbook | 2.3 | 2.0 | 1.3 | 1.0 |
| GDP chain-weighted price index | 2.6 | 2.0 | 1.6 | .8 |
| Previous Greenbook | 2.6 | 2.3 | 1.5 | .9 |
| ECI for compensation of private |  |  |  |  |
| industry workers |  | 3.0 | 2.4 | 1.8 |
| Previous Greenbook | 3.0 | 2.5 | 1.9 | 1.1 |
| Compensation per hour, |  |  |  |  |
| nonfarm business sector | 3.6 | 4.1 | 2.2 | 1.1 |
| Previous Greenbook | 3.6 | 3.4 | 2.1 | 1.5 |
| Prices of core goods imports ${ }^{2}$ | 3.4 | 3.6 | -4.2 | 1.1 |
| Previous Greenbook | 3.4 | 3.4 | -3.2 | 1.3 |

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

Wages and prices. Given the weaker outlook for economic activity in this forecast, we are projecting a greater deceleration in core consumer prices than in the January Greenbook. In particular, we anticipate that the considerable degree of slack in product and labor markets will weigh heavily on pricing decisions and, more gradually, on inflation expectations. In addition, the rise in the exchange value of the dollar and the lagged effects of prior declines in commodity prices are expected to result in ongoing reductions in core import prices this year. Reflecting these influences, we expect core inflation to slow from 1.9 percent in 2008 to 1 percent in 2009 and to just $1 / 2$ percent in 2010. Headline PCE prices are projected to rise $1 / 2$ percent in 2009, reflecting a moderation in food price inflation and a continued decline in energy prices. We expect total PCE prices to rise $3 / 4$ percent in 2010, a bit more than core inflation, as energy prices turn up again.

In light of the weaker outlook for the labor market and the slower projected pace of price inflation, we have also marked down our forecast for compensation growth. In particular, we now project that compensation per hour in the nonfarm business sector will rise $21 / 4$ percent in 2009 and 1 percent in 2010; the forecast for 2010 is about $1 / 2$ percentage point lower than in the January Greenbook. Similarly, the change in the employment cost index is projected to slow from $13 / 4$ percent in 2009 to 1 percent in 2010.

## The Long-Term Outlook

We have extended the staff forecast to 2013 using the FRB/US model, adjusted to incorporate staff assessments of long-run potential output growth, fiscal policy, and foreign economic conditions. 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 longer-term inflation projections provided by FOMC participants in January. We have made no provision for further unconventional policy actions in the construction of this extension beyond those that have already been announced.
- Risk premiums on corporate bonds and equity continue to fall back toward historically more normal levels beyond 2010 as financial market strains abate further.
- The fiscal stimulus package continues to boost government spending beyond 2010, reflecting the staff's assumptions about the rate at which state and local governments ramp up spending in response to increased grants. However, the level of government spending from this source gradually fades and is small by 2013.
- Government budget deficits narrow after 2010. This improvement mostly reflects the effects of the economic recovery on tax receipts and transfer payments.

The Long-Term Outlook
(Percent change, Q4 to Q4, except as noted)

| Measure | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Real GDP | -0.9 | -2.3 | 1.5 | 3.9 | 5.3 | 5.3 |
| Civilian unemployment rate $^{1}$ | 6.9 | 9.2 | 9.5 | 8.6 | 6.9 | 5.6 |
| PCE prices, total | 1.9 | 0.4 | 0.8 | 0.6 | 0.7 | 0.9 |
| Core PCE prices $_{\text {Federal funds rate }^{1}}$ | 1.9 | 1.0 | 0.5 | 0.5 | 0.6 | 0.8 |

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

- Beyond 2010, foreign real GDP expands 5 percent per year on average as the economic recovery picks up speed abroad. The dollar is assumed to depreciate 3 percent per year in real terms. Nominal WTI crude oil prices rise gradually from recent levels to a bit more than $\$ 60$ per barrel by the end of 2013, consistent with futures prices. Under these assumptions, movements in prices of energy and imports have only minor implications for domestic inflation.
- The NAIRU remains flat at $43 / 4$ percent, and potential GDP expands a little more than 2¼ percent per year, on average, over the 2011-13 period.

The unemployment rate enters 2011 at a very high level, and inflation is well below the assumed long-run target. Under the assumptions used to construct the baseline extension, the federal funds rate remains at the effective lower bound through 2013. The lingering effects of financial upheaval continue to fade after 2010, and the recovery in residential construction gains momentum; coupled with stimulative monetary policy, these factors propel real GDP to increases of almost 5 percent per year, on average, from 2011 through 2013. With actual output increasing faster than its potential by a wide margin, the unemployment rate declines steadily over this period; nonetheless, it is still well above the NAIRU at the end of 2013. Core PCE inflation moves up slightly after 2011 as economic activity recovers and long-run inflation expectations are assumed to remain relatively well anchored.

## Financial Flows and Conditions

We expect that the increase in domestic nonfinancial debt will slow from an annual rate of $61 / 4$ percent in the fourth quarter of last year to $41 / 2$ percent in the current quarter, as federal borrowing to address financial market strains slows somewhat from its extremely high fourth-quarter rate. Excluding the federal sector, we forecast that the level of debt
will edge down in the first quarter, as it did in the fourth quarter. We project that federal debt will continue to expand at a rapid pace through the end of 2010, but that borrowing by households and nonfinancial businesses will remain extremely weak by historical standards.

We estimate that household debt contracted at an annual rate of about 2 percent last quarter, and we expect a $21 / 2$ percent rate of decline this quarter. Mortgage borrowing and consumer credit have been sharply curtailed by the effects of falling home prices, very weak household spending, and tight terms and standards for loans. With these conditions expected to persist well into this year and to ease only gradually thereafter, we expect household debt to contract in 2009 and to only edge up in 2010.

Nonfinancial business debt is expected to rise at an annual rate of 3 percent this quarter, up from a $11 / 2$ percent pace last quarter. The projected pickup arises from a sharp increase in net issuance of corporate bonds so far this year, as firms took advantage of improved market liquidity to bring out a spate of new offerings. However, we expect the pace of corporate borrowing to slow next quarter and to remain sluggish through the end of the forecast period, reflecting weak investment spending, continued high cost of borrowing in the corporate bond market, and tight terms and standards for bank loans.

Federal government debt surged in the second half of 2008 at an annual rate of 40 percent and is expected to increase nearly 27 percent in 2009 and about 15 percent in 2010. The effects of cyclical shortfalls in tax receipts, a large fiscal stimulus package, and outlays by the Treasury associated with the GSEs and the TARP are projected to result in federal borrowing of nearly $\$ 1.7$ trillion in 2009 and about $\$ 1.2$ trillion in 2010. In the state and local government sector, we anticipate that debt will rise at an annual rate of only $11 / 4$ percent this quarter, in line with the pace last quarter, largely reflecting strained conditions in the municipal bond market. Although we expect bond market conditions to improve later this year, state and local government borrowing is projected to remain tepid amid a weak underlying pace of spending and reliance on federal grants for funding.

M2 expanded at an average annual rate of about 9 percent during January and February, a deceleration from the fourth quarter of last year. We expect M2 growth to slow further over the remainder of this year, although the projected 3 percent increase for 2009 is still sizable given the contraction in economic activity. In 2010, we expect M2 to increase in line with nominal GDP.

## Alternative Scenarios

In this section, we illustrate risks to the staff forecast using simulations of the FRB/US model. To gauge the importance of financial healing to the baseline projection, the first scenario shows the consequences of a more delayed easing in financial strains. The second considers the implications of an intensification of those strains. In contrast, the third scenario involves a faster recovery in financial conditions, consumer sentiment, and business confidence. The fourth scenario explores the possibility that the current financial dislocations and associated disruptions to real activity may be having more adverse consequences for the supply side of the economy than we estimate. The final two scenarios examine opposing inflation risks-that long-run inflation expectations will remain more solidly anchored than we anticipate, or alternatively, that we might have underestimated deflationary pressures. In all of the scenarios, we assume that the federal funds rate follows the prescriptions of a version of the Taylor rule, subject to an effective lower bound of $121 / 2$ basis points. ${ }^{3}$

Delayed financial repair. Our expectation that the economy will begin to recover next year rests in part on the assumption of a gradual easing in financial market stresses and an improvement in credit availability. To illustrate the importance of this assumption, in this scenario, we assume risk spreads on private securities, mortgages, and corporate equity remain at their current high levels through the end of 2010. In addition, the direct effects on private spending of restricted credit availability do not ease appreciably next year. Finally, the less favorable financial and economic conditions put additional downward pressure on real estate values, leaving the level of house prices 5 percent below baseline by the end of next year. In this environment, real GDP continues to contract in 2010, the unemployment rate climbs to $101 / 4$ percent, and inflation falls somewhat below baseline. Beyond 2010, economic growth resumes as financial strains finally begin to abate, but the recovery is weaker than in the baseline, in part because of the rise in real interest rates that occurs with the nominal federal funds rate constrained near zero.

Intensifying financial strains. Rather than easing as in the baseline, in this scenario we assume that financial strains worsen, perhaps reflecting a more intense feedback loop

[^2]Alternative Scenarios
(Percent change, annual rate, from end of preceding period except as noted)

| Measure and scenario | 2009 |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | :---: |

1. Percent, average for the final quarter of the period.
between the poor health of financial institutions' balance sheets and the weakness in real activity. Risk premiums on investment-grade private securities, home mortgages, and corporate equity are assumed to increase an additional 50 basis points, relative to baseline, and to remain at these elevated levels into next year. Home prices fall more rapidly, so that by late 2010 they stand 10 percent below baseline. Finally, credit
conditions become even more restrictive, directly impinging on consumer spending, homebuilding, and business investment. Under these conditions, real GDP contracts almost 6 percent this year, causing the unemployment rate to rise to 11 percent by the middle of next year; in the face of such slack, core inflation falls steadily, dropping below zero late in 2010 and reaching close to negative 1 percent by the end of the scenario.

Faster recovery. The historical record suggests that financial market conditions, consumer sentiment, and business confidence can improve just as rapidly as they deteriorate; as a result, the economy can quickly shift out of a recessionary state. In this scenario, such a switch in growth states occurs this year, with the result that real GDP expands at an annual rate of $2 \frac{1}{4}$ percent in the second half of 2009 and 3 percent in 2010. The stronger pace of spending and production is sufficient to limit the rise in the unemployment rate so that it tops out just below 9 percent this year, and to put it on a downward path next year. With the rapid recovery in real activity continuing into 2011 and beyond, inflation moves up substantially, reaching $13 / 4$ percent by the end of the scenario, 1 percentage point higher than in the baseline. Consequently, the liftoff of the federal funds rate from the effective zero bound begins in mid-2012.

More adverse supply conditions. Although the financial crisis clearly has had extremely adverse consequences for aggregate demand, we judge that its supply-side effects have been more limited. However, this view may be too sanguine. Costly reallocation of labor and capital across sectors is a feature of all recessions, but its toll on productivity and the efficiency of the labor market this time could be more severe than we have assumed. Moreover, the impairment of the financial intermediation process may be hindering the allocation of capital to its most effective uses. Reflecting these risks, this scenario assumes that trend productivity has expanded $3 / 4$ percentage point per year more slowly than the staff estimates since mid-2007, and that this slower pace will persist indefinitely. We further assume that the crisis will boost the equilibrium unemployment rate by $1 / 4$ percentage point. This reinterpretation of history implies both less slack in labor and goods markets and higher trend unit labor costs than in the baseline, factors that result in less downward pressure on prices. Accordingly, core inflation never drops much below 1 percent. Less-favorable supply conditions also imply lower permanent household income and corporate earnings; as a result, real GDP contracts about 3 percent this year and increases only a little in 2010.

Anchored inflation expectations. In the baseline scenario, core inflation drops to $1 / 2$ percent in 2010 and lingers near that rate through 2012, as the upward impetus to
prices from an improving economy is roughly offset by our assumption that long-term inflation expectations will slowly drift down in the face of persistently low inflation and high unemployment. In this scenario, long-run inflation expectations remain near their current level of about 2 percent rather than declining to $1 \frac{1}{4}$ percent as in the baseline. This anchoring prevents any near-term decline in actual inflation from becoming entrenched in wage and price formation. Inflation thus proves more resilient to deteriorating economic conditions in the first few years of the scenario and turns upward earlier than in the baseline. Even so, core inflation falls below 1 percent in 2010 and 2011, and the federal funds rate remains near zero until mid-2013. The lower real interest rates implied by this monetary policy and higher inflation provide a modest boost to real activity.

Deflation. Although inflation falls substantially in the staff projection, we may have understated the extent to which adverse economic conditions will force firms, domestic and foreign, to slash prices in an increasingly competitive environment. And, in fact, some of our reduced-form price models point to a more pronounced decline in inflation than we are projecting. In this scenario, domestic profit margins fall steadily over the simulation period relative to baseline. Moreover, import prices continue to decline over the next few years rather than rising slowly as in the staff projection. These forces combine to drive core inflation below zero by late next year and close to negative 1 percent in 2013. With the nominal federal funds rate already near zero, the greater disinflation implies higher real interest rates. At the same time, the increasing real burden of nominal debt obligations boosts corporate bond spreads. Over time, these factors work to restrain aggregate spending more than in the staff forecast, resulting in a somewhat slower recovery in real activity after 2010.

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

| Measure | 2009 | 2010 | 2011 | 2012 | 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Real GDP <br> (percent change, Q4 to Q4) |  |  |  |  |  |
|  |  |  |  |  |  |
| Projection | -2.3 | 1.5 | 3.9 | 5.3 | 5.3 |
| Confidence interval |  |  |  |  |  |
| Greenbook forecast errors | -3.7--. 8 | .1-3.0 |  |  |  |
| FRB/US stochastic simulations | -3.2--1.4 | .2-2.6 | $2.4-5.1$ | $3.7-6.5$ | 3.6-6.5 |
| Civilian unemployment rate (percent, Q4) |  |  |  |  |  |
| Projection | 9.2 | 9.5 | 8.6 | 6.9 | 5.6 |
| Confidence interval |  |  |  |  |  |
| Greenbook forecast errors | 8.8-9.7 | 8.6-10.4 |  |  |  |
| FRB/US stochastic simulations | 8.9-9.6 | 9.1-10.0 | 8.1-9.2 | 6.4-7.6 | 5.2-6.6 |
| PCE prices, total (percent change, Q4 to Q4) |  |  |  |  |  |
| Projection | 0.4 | 0.8 | 0.6 | 0.7 | 0.9 |
| Confidence interval |  |  |  |  |  |
| Greenbook forecast errors | -.4-1.2 | -.3-1.8 |  |  |  |
| FRB/US stochastic simulations | -. $1-.9$ | .1-1.4 | -.3-1.4 | -.3-1.4 | -.3-1.5 |
| PCE prices excluding food and energy |  |  |  |  |  |
| (percent change, Q4 to Q4) |  |  |  |  |  |
| Projection | 1.0 | 0.5 | 0.5 | 0.6 | 0.8 |
| Confidence interval |  |  |  |  |  |
| Greenbook forecast errors | .5-1.5 | -.4-1.3 |  |  |  |
| FRB/US stochastic simulations | .7-1.3 | -. $1-.9$ | -.3-1.0 | -.3-1.1 | -.2-1.3 |
| Federal funds rate (percent, Q4) |  |  |  |  |  |
| Projection | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Confidence interval |  |  |  |  |  |
| FRB/US stochastic simulations | . $1-1.3$ | . $1-1.8$ | .1-2.0 | .1-2.0 | .1-2.0 |

Notes: Intervals derived from Greenbook forecast errors are based on projections made from 1987-2007. Shocks underlying FRB/US stochastic simulations are randomly drawn from the 1987-2007 set of model equation residuals.
. . . Not applicable. The Greenbook forecast horizon has typically extended about two years.

Forecast Confidence Intervals and Alternative Scenarios
Confidence Intervals Based on FRB/US Stochastic Simulations

| $\square$ Extended Greenbook baseline | $\square$ Faster recovery | $\square$ Anchored inflation expectations |
| :--- | :--- | :--- |
| $\square$ Delayed financial repair | $\square$ More adverse supply conditions | $\square$ Deflation |
| $\square$ Intensifying financial strains |  |  |

Real GDP


PCE Prices excluding Food and Energy
4-quarter percent change


Unemployment Rate


Federal Funds Rate


Class II FOMC - Restricted (FR)

## Evolution of the Staff Forecast

Change in Real GDP


Unemployment Rate


Change in PCE Prices excluding Food and Energy



[^3]|  | － | $\stackrel{n}{\sim}$ | $\underset{-}{\forall} \underset{\sim}{\infty} \underset{\sim}{\infty}$ | $\underset{\sim}{i} \underset{\sim}{\infty} \stackrel{\infty}{+} \underset{\sim}{+}$ | No | oono No No No | $\underset{1}{\sim} \underset{F}{\circ}-\infty$ | かin on nir | No |
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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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| $\underset{\sim}{\infty}$ | $9 ?$ | ${\underset{i}{M}}_{\sim}^{\infty} \underset{i}{n}$ | $\stackrel{n}{\sim} \underset{\sim}{\square} \underset{\sim}{\sim}$ | $\begin{aligned} & 00 \\ & \underset{1}{0} \underset{\sim}{c} \end{aligned}$ |  | $\underset{\sim}{\text { N }} \underset{\sim}{\infty} \underset{\sim}{\infty} \underset{\sim}{\infty}$ | Non Noo． $\dot{\cos } \infty \dot{0}$ | oncror |
| $\stackrel{\rightharpoonup}{8}$ | $\stackrel{m}{n}$ | $\cdots \cdots \stackrel{t}{i}$ | $\underset{\sim}{N} \underset{\sim}{\sim} \underset{\sim}{\sim}$ | ơo |  | $\underset{\sim}{\sim} \underset{\sim}{\sim}$ | ナナmNnす。 ㄱ $\sim \sim \sim \sim$ | $\mathrm{NT}_{1}$ |
| è | $\stackrel{\star}{\sim} \stackrel{+}{i}$ | $\infty \infty$ nn ヘ ㅅ へ | nッのno мi $\dot{0}$ ri | $\begin{aligned} & n \\ & n \\ & n \end{aligned}$ | $\mathfrak{n} \mathfrak{n} \underset{\sim}{\sim} \underset{\sim}{\infty} \infty$ | $e_{0}^{0} \underset{0}{0} \dot{m}$ | $\vec{i} \vec{i} \underset{\sim}{\dot{\sigma}}$ | NT |
| $\overbrace{i}^{2}$ | $\stackrel{N}{i}$ |  |  | $\begin{gathered} \underset{\sim}{*} \\ \stackrel{\rightharpoonup}{n} \end{gathered}$ |  | $\stackrel{\wedge}{0} \stackrel{0}{0} \underset{\sim}{\circ}$ | $0.0 \infty . \pi$ | लेखे入 |
| $\underset{\sim}{\mathrm{O}}$ | $\vec{m} \vec{m}$ | $\stackrel{\infty}{\infty} \stackrel{m}{\sim} \underset{\sim}{\sim}$ | Nronm ウi inim | $\underset{0}{0}$ | $\stackrel{n}{n} \underset{\sim}{*} \underset{\sim}{c} \text { n }$ |  |  | ざ |
| $\underset{\sim}{\infty}$ | N． ni | $\stackrel{N}{\text { ले }} \underset{\dot{F}}{F}$ | ナ．mの ！ $\dot{\sim} \infty \dot{\sim}$ | $\underset{=}{\approx}$ |  | $\stackrel{\Omega}{\sim} \stackrel{\infty}{n} \stackrel{\infty}{i}$ |  | $\pm \pm$－ |
| N | $9$ | $\infty, \infty$ |  | $\stackrel{O}{\mathrm{O}}$ |  | $\underset{广}{\underset{F}{*}} \underset{\sim}{\infty}$ | $\underset{\forall}{\bigcirc} \underset{\sim}{\circ} \underset{\sim}{\infty} \underset{\sim}{\infty} \underset{\sim}{\infty}$ | $\cdots \sim \sim 1$ |
| $\frac{E}{ \pm}$ |  |  |  |  |  |  |  |  |



| Item | 2008 |  |  |  | 2009 |  |  |  | 2010 |  |  |  | $2008^{1}$ | $200{ }^{1}$ | $2010^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |  |  |  |
| GDP chain-wt. price index | 2.6 | 1.1 | 3.9 | . 3 | 3.4 | . 9 | 1.1 | . 9 | . 8 | . 8 | . 7 | . 6 | 2.0 | 1.6 | . 8 |
| Previous Greenbook | 2.6 | 1.1 | 3.9 | 1.7 | 1.3 | 2.3 | 1.4 | 1.1 | 1.0 | 1.0 | . 9 | . 8 | 2.3 | 1.5 | . 9 |
| PCE chain-wt. price index | 3.6 | 4.3 | 5.0 | -5.0 | -1.4 | 1.0 | 1.1 | 1.0 | . 9 | . 8 | . 7 | . 7 | 1.9 | . 4 | . 8 |
| Previous Greenbook | 3.6 | 4.3 | 5.0 | -5.6 | -2.3 | 1.9 | 1.5 | 1.2 | 1.2 | 1.1 | 1.0 | 1.0 | 1.7 | . 6 | 1.1 |
| Energy | 19.0 | 27.4 | 31.7 | -65.1 | -36.0 | -7.8 | 1.9 | 2.6 | 4.4 | 4.8 | 4.4 | 4.3 | -8.6 | -11.3 | 4.5 |
| Previous Greenbook | 19.0 | 27.4 | 31.7 | -66.8 | -45.4 | 8.8 | 9.5 | 6.4 | 6.9 | 5.7 | 4.5 | 3.8 | -9.8 | -8.8 | 5.2 |
| Food | 4.9 | 6.4 | 8.5 | 5.6 | 1.8 | 1.8 | 2.1 | 1.9 | 1.3 | 1.2 | 1.1 | 1.1 | 6.3 | 1.9 | 1.2 |
| Previous Greenbook | 4.9 | 6.4 | 8.5 | 5.0 | 2.4 | 1.8 | 2.0 | 1.7 | 1.3 | 1.2 | 1.2 | 1.1 | 6.2 | 2.0 | 1.2 |
| Ex. food \& energy | 2.3 | 2.2 | 2.4 | . 8 | . 9 | 1.4 | . 9 | . 7 | . 6 | . 5 | . 5 | . 4 | 1.9 | 1.0 | . 5 |
| Previous Greenbook | 2.3 | 2.2 | 2.4 | . 6 | . 8 | 1.6 | 1.0 | . 8 | . 8 | . 8 | . 8 | . 7 | 1.9 | 1.0 | . 8 |
| CPI | 4.5 | 4.5 | 6.2 | -8.3 | -2.4 | . 9 | 1.4 | 1.3 | 1.2 | 1.1 | 1.0 | 1.0 | 1.5 | . 3 | 1.1 |
| Previous Greenbook | 4.3 | 5.0 | 6.7 | -9.2 | -3.7 | 2.1 | 1.9 | 1.6 | 1.5 | 1.4 | 1.3 | 1.2 | 1.5 | . 4 | 1.3 |
| Ex. food \& energy | 2.5 | 2.0 | 2.8 | . 6 | 1.3 | 1.6 | 1.2 | 1.0 | . 8 | . 7 | . 7 | . 6 | 2.0 | 1.3 | . 7 |
| Previous Greenbook | 2.5 | 1.9 | 3.2 | . 4 | . 9 | 1.7 | 1.3 | 1.1 | 1.0 | 1.0 | 1.0 | . 9 | 2.0 | 1.3 | 1.0 |
| ECI, hourly compensation ${ }^{2}$ | 3.0 | 2.3 | 2.6 | 1.9 | 2.0 | 1.9 | 1.8 | 1.5 | 1.3 | 1.2 | 1.1 | 1.0 | 2.4 | 1.8 | 1.1 |
| Previous Greenbook ${ }^{2}$ | 3.0 | 2.3 | 2.6 | 2.2 | 2.0 | 1.9 | 1.8 | 1.8 | 1.6 | 1.6 | 1.5 | 1.5 | 2.5 | 1.9 | 1.5 |
| Nonfarm business sector <br> Output per hour | 2.6 | 4.7 | 2.2 | -. 9 | -1.1 | 2.4 | 1.3 | 1.2 | 2.1 | 2.0 | 1.9 | 1.8 | 2.1 | 9 | 2.0 |
| Previous Greenbook | 2.6 | 3.6 | 1.5 | 1.7 | -1.1 -3.2 | 2.4 .6 | 3.4 | 3.7 | 2.6 | 1.8 | 1.7 | 1.8 2.0 | 2.4 | 1.1 | 2.0 |
| Compensation per hour | 3.7 | 1.7 | 5.7 | 5.2 | 2.5 | 2.7 | 2.1 | 1.5 | 1.3 | 1.2 | 1.1 | 1.0 | 4.1 | 2.2 | 1.1 |
| Previous Greenbook | 3.8 | . 9 | 4.1 | 4.7 | 2.0 | 2.4 | 2.1 | 1.8 | 1.6 | 1.5 | 1.5 | 1.4 | 3.4 | 2.1 | 1.5 |
| Unit labor costs | 1.1 | -2.8 | 3.5 | 6.2 | 3.7 | . 3 | . 8 | . 3 | -. 8 | -. 8 | -. 8 | -. 7 | 1.9 | 1.3 | -. 8 |
| Previous Greenbook | 1.2 | -2.6 | 2.6 | 3.0 | 5.4 | 1.8 | $-1.3$ | -1.8 | -. 9 | -. 3 | -. 2 | -. 6 | 1.0 | 1.0 | -. 5 |
| Core goods imports chain-wt price index ${ }^{3}$ | 8.5 | 10.6 | 4.6 | -8.3 | -10.0 | -4.7 | $-2.1$ | . 4 | 1.0 | 1.2 | 1.1 | 1.1 | 3.6 | -4.2 | 1.1 |
| Previous Greenbook ${ }^{3}$ | 8.5 | 10.6 | 4.6 | -9.0 | -9.4 | -3.0 | -1.0 | . 8 | 1.3 | 1.3 | 1.3 | 1.3 | 3.4 | -3.2 | 1.3 |

1. Change from fourth quarter of previous year to fourth quarter of year indicated.
2. Core goods imports exclude computers, semiconductors, oil, and natural gas.
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| $\stackrel{0}{2}$ | $\infty \bigcirc$ |  | －n ㅇọ | － |  | $\because$ |
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| $\underset{\sim}{\infty}$ | $\stackrel{\text { in }}{i}$ |  | nno o | $\stackrel{\rightharpoonup}{i} \stackrel{n}{i}$ |  | $\stackrel{\bullet}{\omega} \stackrel{\rightharpoonup}{r}$ |
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| E |  |  |  | ECI ，hourly compensation ${ }^{1}$ Previous Greenbook ${ }^{1}$ |  |  |

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| Item | 2008 |  |  |  | 2009 |  |  |  | 2010 |  |  |  | $2008{ }^{1}$ | $2009{ }^{1}$ | $2010^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |  |  |  |
| Employment and production Nonfarm payroll employment ${ }^{2}$ | -. 1 | -. 4 | -. 5 | -1.3 | -2.0 | -1.4 | -. 4 | -. 3 | -. 3 | . 2 | -. 1 | . 2 | -2.3 | -4.1 | . 0 |
| Unemployment rate ${ }^{3}$ | 4.9 | 5.4 | 6.0 | 6.9 | 8.0 | 8.7 | 9.0 | 9.2 | 9.4 | 9.5 | 9.5 | 9.5 | 6.9 | 9.2 | 9.5 |
| Previous Greenbook ${ }^{3}$ | 4.9 | 5.4 | 6.0 | 6.9 | 7.7 | 8.2 | 8.3 | 8.4 | 8.5 | 8.4 | 8.2 | 8.1 | 6.9 | 8.4 | 8.1 |
| GDP gap ${ }^{4}$ | -. 8 | -. 7 | -1.4 | -3.7 | -5.7 | -6.7 | -7.3 | -7.7 | -8.0 | -8.2 | -8.2 | -8.2 | -3.7 | -7.7 | -8.2 |
| Previous Greenbook ${ }^{4}$ | -. 7 | -. 6 | -1.3 | -3.2 | -5.1 | -5.9 | -6.0 | -6.0 | -5.9 | -5.9 | -5.8 | -5.5 | -3.2 | -6.0 | -5.5 |
| Industrial production ${ }^{5}$ | . 4 | -3.4 | -8.9 | -12.1 | -18.3 | -9.3 | -2.6 | -. 2 | 2.7 | 3.0 | 3.1 | 3.5 | -6.1 | -7.9 | 3.1 |
| Previous Greenbook ${ }^{5}$ | . 4 | -3.4 | -8.9 | -11.5 | -13.8 | -2.3 | 1.4 | 2.6 | 3.5 | 2.9 | 4.2 | 4.3 | -6.0 | -3.2 | 3.7 |
| Manufacturing industr. prod. ${ }^{5}$ | -1.0 | -4.1 | -8.7 | -17.4 | -21.7 | -9.9 | -2.0 | . 3 | 2.5 | 2.9 | 2.9 | 3.1 | -8.0 | -8.7 | 2.9 |
| Previous Greenbook ${ }^{5}$ | -1.0 | -4.1 | -8.8 | -16.2 | -17.3 | -2.0 | 3.2 | 3.7 | 3.5 | 3.0 | 4.5 | 4.1 | -7.7 | -3.5 | 3.8 |
| Capacity utilization rate - mfg. ${ }^{3}$ | 78.7 | 77.5 | 75.5 | 71.7 | 67.4 | 65.8 | 65.6 | 65.8 | 66.6 | 67.5 | 68.3 | 69.2 | 71.7 | 65.8 | 69.2 |
| Previous Greenbook ${ }^{3}$ | 78.7 | 77.5 | 75.5 | 71.9 | 68.6 | 68.3 | 68.8 | 69.4 | 70.1 | 70.7 | 71.6 | 72.4 | 71.9 | 69.4 | 72.4 |
| Housing starts ${ }^{6}$ | 1.1 | 1.0 | . 9 | . 7 | . 4 | . 4 | . 4 | . 5 | . 5 | . 6 | . 6 | . 6 | . 9 | . 4 | . 6 |
| Light motor vehicle sales ${ }^{6}$ | 15.2 | 14.1 | 12.9 | 10.3 | 9.2 | 9.3 | 9.8 | 10.4 | 10.8 | 11.7 | 12.2 | 12.4 | 13.1 | 9.7 | 11.8 |
| Income and saving Nominal GDP ${ }^{5}$ | 3.5 | 4.1 | 3.4 | -6.3 | -3.3 | -1.1 | . 6 | . 8 | 1.6 | 2.2 | 2.6 | 2.8 | 1.1 | -. 8 | 2.3 |
| Real disposable pers. income ${ }^{5}$ | -. 7 | 10.7 | -8.5 | 3.3 | 6.4 | 4.3 | -1.6 | 1.5 | 1.7 | 1.1 | 1.4 | 1.3 | 1.0 | 2.6 | 1.4 |
| Previous Greenbook ${ }^{5}$ | -. 7 | 10.7 | -8.8 | 4.6 | 7.4 | 1.9 | -. 1 | 1.0 | 2.4 | 1.9 | 2.5 | 2.3 | 1.2 | 2.5 | 2.3 |
| Personal saving rate ${ }^{3}$ | . 2 | 2.5 | 1.3 | 3.2 | 4.6 | 5.6 | 5.3 | 5.4 | 5.5 | 5.4 | 5.2 | 5.0 | 3.2 | 5.4 | 5.0 |
| Previous Greenbook ${ }^{3}$ | . 2 | 2.5 | 1.2 | 3.3 | 5.4 | 5.8 | 5.4 | 5.2 | 5.2 | 5.0 | 4.9 | 4.7 | 3.3 | 5.2 | 4.7 |
| Corporate profits ${ }^{7}$ | -4.3 | -14.3 | -4.7 | -34.0 | -26.4 | -24.2 | -6.5 | -. 8 | 5.2 | 8.1 | 6.3 | 6.4 | -15.2 | -15.2 | 6.5 |
| Profit share of GNP ${ }^{3}$ | 11.2 | 10.6 | 10.4 | 9.6 | 9.0 | 8.4 | 8.2 | 8.2 | 8.3 | 8.4 | 8.5 | 8.5 | 9.6 | 8.2 | 8.5 |
| Net federal saving ${ }^{8}$ | -331 | -650 | -544 | -523 | -852 | -1,018 | -1,083 | -1,132 | -1,184 | -1,167 | -1,213 | -1,208 | -512 | -1,022 | -1,193 |
| Net state \& local saving ${ }^{8}$ | -52 | -67 | -104 | -71 | -34 | -79 | -47 | -48 | -43 | -49 | -39 | -39 | -73 | -52 | -42 |
| Gross national saving rate ${ }^{3}$ | 12.4 | 11.3 | 11.5 | 12.7 | 11.3 | 10.3 | 9.7 | 9.5 | 9.1 | 9.2 | 9.0 | 9.0 | 12.7 | 9.5 | 9.0 |
| Net national saving rate ${ }^{3}$ | . 0 | -1.3 | -1.8 | -. 3 | -2.2 | -3.6 | -4.3 | -4.7 | -5.2 | -5.1 | -5.4 | -5.4 | -. 3 | -4.7 | -5.4 |

[^6]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.
7. Percent change, annual rate, with inventory valuation and capital consumption adjustments.
8. Billions of dollars, annual values are annual averages.
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| Other Macroeconomic Indicators <br> (Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise noted) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| Employment and production Nonfarm payroll employment ${ }^{1}$ | -. 7 | -. 1 | 2.0 | 2.4 | 2.1 | 1.2 | -2.3 | -4.1 | . 0 |
| Unemployment rate ${ }^{2}$ | 5.8 | 5.8 | 5.4 | 4.9 | 4.4 | 4.8 | 6.9 | 9.2 | 9.5 |
| Previous Greenbook ${ }^{2}$ | 5.8 | 5.8 | 5.4 | 4.9 | 4.4 | 4.8 | 6.9 | 8.4 | 8.1 |
| GDP gap $^{3}$ | -2.6 | -1.8 | -. 8 | -. 3 | -. 2 | -. 4 | -3.7 | -7.7 | -8.2 |
| Previous Greenbook ${ }^{3}$ | -2.5 | -1.7 | -. 7 | -. 2 | -. 1 | -. 3 | -3.2 | -6.0 | -5.5 |
| Industrial production ${ }^{4}$ | 2.6 | 1.5 | 3.1 | 2.6 | 1.7 | 2.1 | -6.1 | -7.9 | 3.1 |
| Previous Greenbook ${ }^{4}$ | 2.6 | 1.5 | 3.1 | 2.6 | 1.7 | 2.1 | -6.0 | -3.2 | 3.7 |
| Manufacturing industr. prod. ${ }^{4}$ | 2.6 | 1.7 | 3.7 | 3.7 | 1.1 | 2.3 | -8.0 | -8.7 | 2.9 |
| Previous Greenbook ${ }^{4}$ | 2.6 | 1.7 | 3.7 | 3.7 | 1.1 | 2.3 | -7.7 | -3.5 | 3.8 |
| Capacity utilization rate - mfg. ${ }^{2}$ | 73.2 | 74.8 | 77.5 | 79.2 | 79.0 | 79.3 | 71.7 | 65.8 | 69.2 |
| Previous Greenbook ${ }^{2}$ | 73.2 | 74.8 | 77.5 | 79.2 | 79.0 | 79.3 | 71.9 | 69.4 | 72.4 |
| Housing starts ${ }^{5}$ | 1.7 | 1.8 | 2.0 | 2.1 | 1.8 | 1.4 | . 9 | . 4 | . 6 |
| Light motor vehicle sales ${ }^{5}$ | 16.7 | 16.6 | 16.8 | 16.9 | 16.5 | 16.1 | 13.1 | 9.7 | 11.8 |
| Income and saving <br> Nominal GDP ${ }^{4}$ | 3.6 | 5.9 | 6.5 | 6.3 | 5.3 | 4.9 | 1.1 | -. 8 | 2.3 |
| Real disposable pers. income ${ }^{4}$ | 2.9 | 3.7 | 4.1 | . 9 | 3.6 | 1.8 | 1.0 | 2.6 | 1.4 |
| Previous Greenbook ${ }^{4}$ | 2.9 | 3.7 | 4.1 | . 9 | 3.6 | 1.8 | 1.2 | 2.5 | 2.3 |
| Personal saving rate ${ }^{2}$ | 1.8 | 2.2 | 2.5 | . 8 | . 9 | . 4 | 3.2 | 5.4 | 5.0 |
| Previous Greenbook ${ }^{2}$ | 1.8 | 2.2 | 2.5 | . 8 | . 9 | . 4 | 3.3 | 5.2 | 4.7 |
| Corporate profits ${ }^{6}$ | 20.6 | 12.6 | 20.3 | 18.8 | 6.9 | -2.0 | -15.2 | -15.2 | 6.5 |
| Profit share of GNP ${ }^{2}$ | 9.0 | 9.5 | 10.8 | 12.0 | 12.2 | 11.3 | 9.6 | 8.2 | 8.5 |
| Net federal saving ${ }^{7}$ | -248 | -372 | -371 | -292 | -201 | -229 | -512 | -1022 | -1193 |
| Net state \& local saving ${ }^{7}$ | -34 | -20 | 2 | 29 | 46 | 10 | -73 | -52 | -42 |
| Gross national saving rate ${ }^{2}$ | 13.6 | 13.7 | 13.8 | 15.0 | 15.5 | 13.4 | 12.7 | 9.5 | 9.0 |
| Net national saving rate ${ }^{2}$ | 1.5 | 1.9 | 2.1 | 2.8 | 3.4 | 1.2 | -. 3 | -4.7 | -5.4 |

## 1. Change, millions.

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

| Item | Fiscal year |  |  |  | 2008 |  |  |  | 2009 |  |  |  | 2010 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $2007{ }^{\text {a }}$ | $2008^{\text {a }}$ | 2009 | 2010 | Q1 ${ }^{\text {a }}$ | Q2 ${ }^{\text {a }}$ | Q3 ${ }^{\text {a }}$ | Q4 ${ }^{\text {a }}$ | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Unified budget |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receipts ${ }^{1}$ | 2568 | 2524 | 2193 | 2259 | 540 | 788 | 590 | 547 | 457 | 648 | 541 | 524 | 516 | 658 | 560 | 553 |
| Outlays ${ }^{1}$ | 2729 | 2978 | 4108 | 3480 | 746 | 761 | 759 | 1033 | 977 | 1141 | 957 | 932 | 862 | 852 | 833 | 900 |
| Surplus/deficit ${ }^{1}$ | -162 | -455 | -1915 | -1221 | -206 | 27 | -169 | -485 | -520 | -494 | -416 | -408 | -346 | -194 | -273 | -348 |
| Previous Greenbook | -162 | -455 | -1791 | -1033 | -206 | 27 | -169 | -485 | -553 | -387 | -365 | -378 | -314 | -106 | -234 | -309 |
| On-budget | -343 | -638 | -2048 | -1353 | -237 | -64 | -171 | -538 | -529 | -571 | -411 | -463 | -351 | -275 | -264 | -401 |
| Off-budget | 181 | 183 | 133 | 132 | 31 | 91 | 2 | 53 | 9 | 77 | -5 | 56 | 5 | 80 | -9 | 53 |
| Means of financing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Borrowing | 206 | 768 | 2062 | 1031 | 200 | -48 | 526 | 561 | 467 | 560 | 475 | 188 | 336 | 219 | 288 | 338 |
| Cash decrease | -23 | -296 | 112 | 210 | 11 | -7 | -318 | 5 | 142 | -20 | -15 | 225 | 15 | -20 | -10 | 15 |
| Other ${ }^{2}$ | -22 | -17 | -258 | -20 | -5 | 29 | -39 | -81 | -89 | -46 | -43 | -5 | -5 | -5 | -5 | -5 |
| Cash operating balance, end of period | 75 | 372 | 260 | 50 | 46 | 53 | 372 | 367 | 225 | 245 | 260 | 35 | 20 | 40 | 50 | 35 |
| NIPA federal sector |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receipts | 2624 | 2607 | 2445 | 2428 | 2673 | 2479 | 2596 | 2590 | 2416 | 2383 | 2393 | 2413 | 2412 | 2440 | 2445 | 2473 |
| Expenditures | 2832 | 3047 | 3315 | 3602 | 3003 | 3128 | 3140 | 3113 | 3269 | 3401 | 3476 | 3545 | 3596 | 3607 | 3657 | 3681 |
| Consumption expenditures | 842 | 910 | 985 | 1053 | 898 | 918 | 954 | 957 | 971 | 994 | 1017 | 1032 | 1051 | 1063 | 1067 | 1072 |
| Defense | 569 | 624 | 674 | 707 | 614 | 629 | 660 | 656 | 662 | 679 | 696 | 700 | 706 | 709 | 715 | 721 |
| Nondefense | 273 | 286 | 311 | 346 | 284 | 289 | 295 | 301 | 309 | 314 | 322 | 332 | 345 | 354 | 352 | 351 |
| Other spending | 1990 | 2136 | 2330 | 2548 | 2105 | 2210 | 2186 | 2155 | 2297 | 2407 | 2459 | 2514 | 2545 | 2545 | 2591 | 2608 |
| Current account surplus | -209 | -440 | -869 | -1174 | -331 | -650 | -544 | -523 | -852 | -1018 | -1083 | -1132 | -1184 | -1167 | -1213 | -1208 |
| Gross investment | 123 | 134 | 152 | 158 | 129 | 138 | 144 | 149 | 148 | 153 | 157 | 158 | 158 | 158 | 160 | 161 |
| Gross saving less gross investment ${ }^{3}$ | -221 | -458 | -898 | -1203 | -344 | -671 | -569 | -552 | -878 | -1046 | -1115 | -1163 | -1213 | -1195 | -1240 | -1235 |
| Fiscal indicators ${ }^{4}$ <br> High-employment (HEB) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| surplus/deficit | -222 | -426 | -647 | -802 | -322 | -641 | -502 | -406 | -653 | -758 | -770 | -780 | -820 | -786 | -821 | -812 |
| Change in HEB, percent of potential GDP | -0.3 | 1.3 | 1.4 | 0.9 | 0.6 | 2.2 | -1.0 | -0.7 | 1.6 | 0.7 | 0.0 | 0.0 | 0.2 | -0.3 | 0.2 | -0.1 |
| Fiscal impetus (FI), percent of GDP | 0.2 | 0.8 | 0.9 | 0.9 | 0.1 | 0.5 | 0.7 | -0.3 | 0.0 | 0.6 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.0 |
| Previous Greenbook | 0.2 | 0.8 | 1.0 | 1.0 | 0.1 | 0.5 | 0.7 | -0.2 | 0.2 | 0.4 | 0.2 | 0.3 | 0.3 | 0.2 | 0.1 | 0.1 |

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 aggregate demand stimulus.
a--Actual

| Class II FOMC <br> Restricted (FR) |  | Change in Debt of the Domestic Nonfinancial Sectors (Percent) |  |  |  |  | March 12, 2009 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Households |  |  |  |  |  |
| Period ${ }^{1}$ | Total | Total | Home mortgages | Consumer credit | Business | State and local governments | Federal government | Nominal GDP |
| Year |  |  |  |  |  |  |  |  |
| 2003 | 8.1 | 11.6 | 14.2 | 5.2 | 2.5 | 8.3 | 10.9 | 5.9 |
| 2004 | 8.9 | 11.2 | 13.6 | 5.5 | 6.2 | 7.4 | 9.0 | 6.5 |
| 2005 | 9.5 | 11.1 | 13.3 | 4.3 | 8.7 | 10.2 | 7.0 | 6.3 |
| 2006 | 8.9 | 10.0 | 10.9 | 4.5 | 10.5 | 8.2 | 3.9 | 5.3 |
| 2007 | 8.6 | 6.6 | 6.6 | 5.5 | 13.1 | 9.3 | 4.9 | 4.9 |
| 2008 | 5.8 | . 4 | -. 4 | 1.7 | 4.7 | 2.2 | 24.2 | 1.1 |
| 2009 | 5.1 | -1.8 | -2.0 | -1.8 | 1.7 | 2.9 | 26.6 | -. 8 |
| 2010 | 4.4 | . 5 | . 1 | 1.9 | 2.0 | 3.0 | 14.7 | 2.3 |
| Quarter |  |  |  |  |  |  |  |  |
| 2008:1 | 5.2 | 3.0 | 2.4 | 4.7 | 7.2 | 3.5 | 8.1 | 3.5 |
| 2 | 3.1 | . 3 | -. 3 | 3.9 | 5.8 | . 9 | 5.9 | 4.1 |
| 3 | 8.1 | . 2 | -2.3 | 1.5 | 4.1 | 3.1 | 39.2 | 3.4 |
| 4 | 6.3 | -2.0 | -1.6 | -3.2 | 1.5 | 1.2 | 37.0 | -6.3 |
| 2009:1 | 4.4 | -2.6 | -2.7 | -3.0 | 2.9 | 1.2 | 23.3 | -3.3 |
| 2 | 7.7 | -2.2 | -2.3 | -2.6 | . 7 | 3.6 | 40.7 | -1.1 |
| 3 | 5.5 | -1.6 | -1.8 | -1.4 | 1.4 | 3.4 | 25.2 | . 6 |
| 4 | 2.3 | -. 8 | -1.1 | -. 2 | 1.6 | 3.4 | 8.4 | . 8 |
| 2010:1 | 3.6 | . 2 | -. 3 | 1.5 | 1.8 | 3.2 | 11.9 | 1.6 |
| 2 | 4.9 | . 6 | . 0 | 2.5 | 1.9 | 3.2 | 16.7 | 2.2 |
| 3 | 4.2 | . 7 | . 2 | 2.0 | 1.9 | 2.8 | 13.0 | 2.6 |
| 4 | 4.6 | . 7 | . 4 | 1.5 | 2.3 | 2.8 | 14.2 | 2.8 |

Note. Quarterly data are at seasonally adjusted annual rates.

[^7]Class II FOMC
Flow of Funds Projections: Highlights

| Class II FOMC <br> Restricted (FR) |  |  | llions of | Flow o ollars at | unds sonally | jections: justed an | ighlight <br> al rates | cept as |  |  |  |  | March | , 2009 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | 08 |  |  | 09 |  |  |  | 10 |  |
| Category | 2007 | 2008 | 2009 | 2010 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Domestic nonfinancial sectors Net funds raised |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 1668.8 | 1446.1 | 1519.1 | 1407.8 | 2233.9 | 1622.4 | 1290.4 | 2402.8 | 1727.1 | 656.1 | 1117.3 | 1610.9 | 1358.7 | 1544.3 |
| Net equity issuance | -831.2 | -395.1 | -175.0 | -140.0 | -393.2 | -450.0 | -180.0 | -200.0 | -160.0 | -160.0 | -140.0 | -140.0 | -140.0 | -140.0 |
| Net debt issuance | 2500.0 | 1841.1 | 1694.1 | 1547.8 | 2627.0 | 2072.5 | 1470.4 | 2602.8 | 1887.1 | 816.1 | 1257.3 | 1750.9 | 1498.7 | 1684.3 |
| Borrowing indicators |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Debt (percent of GDP) ${ }^{1}$ | 220.3 | 228.6 | 244.6 | 252.4 | 226.7 | 234.5 | 239.6 | 243.9 | 247.6 | 249.5 | 250.4 | 251.6 | 252.8 | 253.9 |
| Borrowing (percent of GDP) | 18.1 | 12.9 | 12.1 | 10.9 | 18.2 | 14.6 | 10.5 | 18.6 | 13.4 | 5.8 | 8.9 | 12.3 | 10.5 | 11.7 |
| Households |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net borrowing ${ }^{2}$ | 848.8 | 50.9 | -244.9 | 73.0 | 28.6 | -278.7 | -352.9 | -300.0 | -216.9 | -109.9 | 26.3 | 81.1 | 88.6 | 95.8 |
| Home mortgages | 651.5 | -46.2 | -207.3 | 7.1 | -241.3 | -163.0 | -284.3 | -241.7 | -189.5 | -113.7 | -28.4 | 0.0 | 19.0 | 37.9 |
| Consumer credit | 133.6 | 44.3 | -45.7 | 47.6 | 38.4 | -83.0 | -76.6 | -65.9 | -35.3 | -5.0 | 37.8 | 63.4 | 51.0 | 38.4 |
| Debt/DPI (percent) ${ }^{3}$ | 131.2 | 129.6 | 125.7 | 122.3 | 129.8 | 130.1 | 127.8 | 125.4 | 125.0 | 123.8 | 123.0 | 122.5 | 122.0 | 121.6 |
| Business |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Financing gap ${ }^{4}$ | 185.6 | 172.3 | -35.2 | -20.8 | 127.9 | 74.3 | -31.1 | -34.4 | -34.7 | -40.7 | 2.8 | -25.4 | -38.0 | -22.6 |
| Net equity issuance | -831.2 | -395.1 | -175.0 | -140.0 | -393.2 | -450.0 | -180.0 | -200.0 | -160.0 | -160.0 | -140.0 | -140.0 | -140.0 | -140.0 |
| Credit market borrowing | 1228.4 | 503.0 | 184.0 | 224.2 | 451.2 | 169.3 | 317.3 | 78.8 | 155.6 | 184.4 | 200.3 | 214.6 | 221.5 | 260.6 |
| State and local governments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net borrowing | 185.7 | 48.0 | 66.0 | 69.7 | 68.7 | 26.7 | 26.7 | 81.7 | 77.7 | 77.7 | 73.7 | 73.7 | 65.7 | 65.7 |
| Current surplus ${ }^{5}$ | 246.6 | 167.0 | 165.1 | 180.0 | 153.1 | 144.8 | 181.3 | 137.1 | 170.6 | 171.2 | 177.4 | 172.9 | 183.8 | 185.9 |
| Federal government |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net borrowing | 237.1 | 1239.2 | 1689.0 | 1180.9 | 2078.5 | 2155.2 | 1479.2 | 2742.2 | 1870.8 | 663.9 | 957.0 | 1381.5 | 1122.8 | 1262.1 |
| Net borrowing (n.s.a.) | 237.1 | 1239.2 | 1689.0 | 1180.9 | 526.5 | 560.9 | 466.9 | 559.5 | 474.6 | 188.1 | 336.3 | 219.4 | 287.6 | 337.6 |
| Unified deficit (n.s.a.) | 187.9 | 833.2 | 1837.9 | 1160.9 | 168.9 | 485.2 | 520.0 | 493.6 | 416.3 | 408.0 | 346.3 | 194.4 | 272.6 | 347.6 |
| Depository institutions Funds supplied | 858.7 | 507.6 | 88.5 | 319.6 | 549.5 | 503.4 | -303.8 | -42.3 | 322.1 | 378.0 | 184.3 | 391.5 | 417.5 | 285.3 |

[^8]
## Class II FOMC—Restricted (FR)

## International Developments

Data from the foreign economies indicate that economic activity has been far weaker than we had projected in the January Greenbook. We now estimate that foreign real GDP contracted $71 / 4$ percent at an annual rate in the fourth quarter, which is more than 5 percentage points greater than any decline we have seen in the past 40 years. Moreover, there are few indications that a recovery is imminent. We project that foreign output will fall an additional $43 / 4$ percent at an annual rate in the first half of this year before stabilizing in the second half. The beginning of a recovery late this year is predicated on financial markets improving, the U.S. economy beginning to stabilize, fiscal stimulus abroad, and monetary policy-both conventional and unconventional- continuing to ease in many countries. With many economic indicators currently in free fall, however, this outlook is very uncertain.

## Summary of Staff Projections

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

| Indicator | 2008 |  | Projection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H1 | Q3 | $\begin{gathered} \text { 2008: } \\ \text { Q4 } \end{gathered}$ | 2009 |  |  | 2010 |
|  |  |  |  | Q1 | Q2 | H2 |  |
| Foreign output | 1.7 | . 5 | -7.2 | -6.7 | -2.9 | . 3 | 2.3 |
| Previous Greenbook | 1.8 | . 7 | -3.7 | -2.7 | -. 7 | 1.5 | 2.8 |
| Foreign consumer prices | 5.0 | 4.3 | -. 7 | -1.5 | 1.1 | 1.5 | 1.5 |
| Previous Greenbook | 5.1 | 4.5 | -1.1 | -. 8 | 1.3 | 1.7 | 2.0 |
|  | Contribution to growth (percentage points) |  |  |  |  |  |  |
| U.S. net exports | 1.8 | 1.1 | -. 6 | . 1 | . 0 | -. 7 | -. 4 |
| Previous Greenbook | 1.8 | 1.1 | -. 1 | 1.2 | -. 1 | -. 8 | -. 5 |

Note: Change for year measured as Q4/Q4; half-years are Q2/Q4 or Q4/Q2.
Falling commodity prices and the global economic contraction have put considerable downward pressure on consumer prices. We estimate that foreign consumer prices dropped $3 / 4$ percent at an annual rate in the fourth quarter and project that prices will continue to fall, at about a $11 / 2$ percent pace, in the first. With commodity prices bottoming out, we project that consumer prices then will begin to rise and that inflation will average about $11 / 2$ percent in 2010, down from the January Greenbook, reflecting greater slack in the foreign economies. Our projection of oil prices is lower than in the

January Greenbook, but we continue to project the price of oil to rise from its current level, consistent with futures market quotes. Prices for most nonfuel primary commodities are little changed on net.

The sharper-than-anticipated contraction in foreign economic activity in the fourth quarter contributed to a greater plunge in U.S. exports than estimated in the January Greenbook. As imports were only a little weaker than we had expected, net exports are now estimated to have subtracted $1 / 2$ percentage point from U.S. real GDP growth in the fourth quarter, rather than being neutral. Our projection of the contribution of net exports is about neutral in the first half of this year and has also been revised lower, reflecting weaker-than-expected trade data for December, our markdown of foreign growth, and a higher dollar. The starting point of our projected path for the broad real dollar is about 3 percent higher than in the January Greenbook; however, as before, we project a slight decline in the value of the dollar over the forecast period. In the second half of this year and in 2010, net exports are projected to subtract about $3 / 4$ percentage point and $1 / 2$ percentage point, respectively, from real U.S. GDP growth, as imports recover more quickly than exports.

## International Financial Markets

Foreign equity markets declined sharply as global economic growth slowed far more rapidly than had been expected. Financial stocks fell particularly far, despite announcements of new government support for financial firms over the period. In particular, the British government launched its Asset Protection Scheme, insuring $£ 325$ billion of assets placed in the Scheme by Royal Bank of Scotland and $£ 260$ billion of assets from Lloyds. In addition, the Bank of Japan voted to resume purchases of equities held on banks' balance sheets. Nonetheless, weak earnings reports and mounting concerns about losses on loans to emerging European countries weighed on bank share prices, with declines in Europe of 12 percent to 17 percent and in Japan of 9 percent since the January Greenbook.

Despite these rising concerns over the health of many financial institutions, conditions in money markets remained relatively unchanged, as the myriad official actions taken over the last year have helped stabilize banks’ funding sources. The European Central Bank and the Bank of Canada both cut policy rates 50 basis points in March, to $11 / 2$ percent and $1 / 2$ percent, respectively. The Bank of England cut its target by a cumulative 1 percentage point, to 0.50 percent, and announced that it would purchase up to $£ 150$ billion in government and corporate bonds, which has prompted 10-year sovereign yields in the

United Kingdom to fall 60 basis points. The Swiss National Bank cut its target for threemonth Swiss franc Libor by 25 basis points and announced that it would purchase domestic corporate bonds and foreign currency to inject liquidity. The Bank of Japan announced plans to purchase up to $¥ 1$ trillion in corporate bonds; market reaction was muted, possibly reflecting the relatively small size of the announced purchases.

The dollar appreciated significantly and to a similar extent against both the major foreign currencies and those of our other important trading partners, driven by weak foreign data. Overall, the broad real index of the dollar is 3 percent higher than at the time of the January forecast. Although the staff expects further rate cuts abroad as foreign economic activity continues to decline, which in principle would boost the dollar, we believe that markets have already incorporated the prospect of those rate cuts into the current levels of exchange rates. Accordingly we project a modest pace of depreciation for the broad real dollar, little changed from the January Greenbook, because we assume that, as financial and economic conditions stabilize, flight-to-safety flows will abate and investor attention will refocus on the need to finance the U.S. current account deficit.

## Advanced Foreign Economies

Real GDP in the advanced foreign economies contracted a record 51/4 percent at an annual rate in the fourth quarter, a much sharper decline than we wrote down in January. Consumption and especially investment declined sharply, and trade collapsed. Japanese GDP was particularly weak, falling 12 percent. Very grim incoming data and worsening prospects for U.S. growth suggest further deterioration in economic activity in the near term. Real GDP in the advanced foreign economies is projected to continue to contract in the first half of this year, falling 7 percent in the current quarter, before bottoming out in the second half. Growth recovers only gradually, reaching $13 / 4$ percent by the end of the forecast period, as a result of easing financial strains, recovery in the United States, and monetary and fiscal stimulus. Compared with the January Greenbook, weaker incoming financial and economic data and the sizable downward revisions to U.S. growth have led us to project a deeper and longer recession in the advanced foreign economies.

Reflecting the fall in commodity prices, we project that four-quarter consumer price inflation in the advanced foreign economies will continue to move down in the near term, reaching its nadir at negative $3 / 4$ percent in the third quarter. With commodity prices no longer falling, inflation subsequently rises to 1 percent in 2010. Japan is projected to experience deflation throughout the forecast period. For the advanced foreign economies
as a whole, we revised down the outlook for inflation relative to the January Greenbook forecast, mainly reflecting wider output gaps.

Consistent with the worsening economic conditions, we now assume that the major central banks will sustain accommodative policies throughout the forecast period, with policy rates to remain at current low levels in Japan and the United Kingdom and to be cut further in the euro area and Canada. We also anticipate that the major central banks will undertake greater unconventional monetary policy measures over the forecast period. We now expect that fiscal stimulus will provide about 1 percentage point to GDP growth in the advanced foreign economies in 2009, but provide little impetus in 2010.

## Emerging Market Economies

Fourth-quarter real GDP fell an estimated $93 / 4$ percent at an annual rate in the emerging market economies, as the recession in advanced economies, continued financial market stresses, and very weak capital inflows weighed on growth. The fall in GDP was particularly pronounced in emerging Asia, which the staff estimates contracted at an 11 percent pace, comparable to the steepest quarterly contraction during the Asian crisis in 1998. Real GDP in the fourth quarter fell more than 20 percent in Korea, Taiwan, and Thailand; Singapore and Malaysia also posted double-digit declines. In Latin America, real GDP decelerated very sharply as well, led by a $101 / 4$ percent fall in Mexico and a $13 ½$ percent decline in Brazil. Mexico’s GDP was dragged down by shrinking U.S. demand, particularly for automotive products, and a continued decline in remittances.

Incoming data and anecdotal reports continue to paint a very gloomy picture for economic activity. Accordingly, we expect real GDP in the emerging market economies to contract at an annual rate of $61 / 4$ percent in the current quarter, and we do not envision much of a recovery until the fourth quarter of this year. Relative to the January Greenbook, our projections of real GDP growth in the fourth and first quarters are down about $41 / 2$ percentage points. In part because of its large fiscal stimulus package, China's economy may be starting to pick up steam after growing less than 2 percent in the fourth quarter. However, Chinese growth will no doubt continue to face headwinds owing to shrinking global demand.

As economic activity in the advanced economies stabilizes toward the end of this year, output growth in the emerging market economies is expected to pick up, eventually reaching about $41 / 4$ percent by the end of 2010. This is a little lower than the January Greenbook projection, and well below the average rate of growth experienced by these
economies in recent years. Our projected recovery is conditional upon a pickup in the advanced economies, a resumption of capital flows to emerging market economies, and some support from expansionary fiscal and monetary policies. None of these developments is assured, and a possible worsening of financial conditions poses a significant downside risk to the outlook.

Consumer prices in emerging market economies have been relatively flat on average in recent months, driving down our estimate of four-quarter inflation to less than 3 percent this quarter. This fall in inflation was largely concentrated in emerging Asia and generally reflected weak economic activity and lower prices for food and other commodities. In Latin America, inflation pressures have also now begun to moderate. Inflation in the emerging market economies is projected to fall to about 1 percent in the second half of this year before gradually climbing to around 2 percent by the end of the forecast period, about $1 / 2$ percentage point lower than in the previous Greenbook.

## Commodity Prices

The spot price of West Texas intermediate (WTI) crude oil closed on March 11 at $\$ 42.33$ per barrel, about unchanged from the time of the January Greenbook. Consistent with the path of futures prices, we project that the spot price of WTI will rise to $\$ 55$ per barrel by the end of next year. This forecast is down on average, relative to the January Greenbook, about \$3.50 per barrel in the remainder of 2009 and about \$4.50 in 2010. Recent movements in oil prices have been influenced by several factors, including a weakening in the outlook for oil demand, on the one hand, and reductions in OPEC production, on the other. Although compliance among OPEC members appears high relative to historic standards, recent data indicate that OPEC output is still nearly 1 million barrels per day above its target. OPEC meets again on March 15 to reassess the state of the oil market, and still deeper cuts in production are possible.

Nonfuel commodity prices declined at an annual rate of 70 percent in the fourth quarter of 2008, but they have flattened out in recent months. Going forward, we expect small increases in commodity prices beginning in the second half of 2009, consistent with readings from future markets. Overall, our projection of nonfuel commodity prices is little changed from the January Greenbook.

## Prices of Internationally Traded Goods

Based in part on data for January, we project core import prices to decline at an annual rate of 10 percent in the current quarter, a bit faster than the 8 percent fall recorded in the
fourth quarter of 2008. The decline in core import prices reflects both the recent appreciation of the dollar as well as the lagged effect of previous declines in commodity prices. Core import prices are projected to continue falling at a modest pace through the end of this year, but thereafter they start to rise slowly, as commodity prices edge up and the dollar depreciates. Compared with the January Greenbook, our projection for import prices is lower in the near term, reflecting the recent upward move of the dollar.

Staff Projections of Selected Trade Prices
(Percent change from end of previous period, annual rate, excepted as noted)

| Trade category | 2008 |  | Projection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H1 | Q3 | $\begin{gathered} \text { 2008: } \\ \text { Q4 } \end{gathered}$ | 2009 |  |  | 2010 |
|  |  |  |  | Q1 | Q2 | H2 |  |
| Imports |  |  |  |  |  |  |  |
| Core goods | 9.5 | 4.6 | -8.3 | -10.0 | -4.7 | -. 8 | 1.1 |
| Previous Greenbook | 9.5 | 4.6 | -9.0 | -9.4 | -3.0 | -. 1 | 1.3 |
| Oil (dollars per barrel) | 108.65 | 117.49 | 68.74 | 41.46 | 43.09 | 44.79 | 50.51 |
| Previous Greenbook | 108.65 | 117.49 | 68.52 | 45.55 | 44.56 | 48.60 | 54.82 |
| Exports |  |  |  |  |  |  |  |
| Core goods | 13.0 | 6.6 | -25.6 | -10.9 | -5.2 | -. 3 | 1.2 |
| Previous Greenbook | 13.0 | 6.6 | -19.0 | -12.9 | -2.9 | . 5 | 1.1 |

Note: Prices for core exports exclude computers and semiconductors. Prices for core imports exclude computers, semiconductors, oil, and natural gas. Both prices are on a national income and product account chain-weighted basis.

The price of imported oil for multi-quarter periods is the price for the final quarter of the period. Imported oil includes both crude oil and refined products.

In the fourth quarter, core export prices showed their largest one-quarter decline in more than 40 years, falling at an annual rate of 26 percent. Small price increases for finished goods were vastly outweighed by large declines in prices for agricultural products and industrial supplies, which reflected the collapse of nonfuel commodity prices. We expect the lagged effect of previous declines in commodity prices to pull down core export prices through the first three quarters of 2009, but core export prices should flatten out late in the year and resume modest growth in 2010.

## Trade in Goods and Services

Real exports of goods and services declined at an annual rate of $231 / 2$ percent in the fourth quarter, about $33 / 4$ percentage points steeper than projected in the January Greenbook. The downward revision was primarily the result of substantially weaker-than-expected
data for December, reflecting sharp declines in most categories of exports, which more than offset a rebound in exports of aircraft following the end of production disruptions at Boeing. In the current quarter, we expect exports to again plunge 24 percent. This is more than 18 percentage points larger than we had projected in the January Greenbook, reflecting weaker foreign activity and a higher dollar, as well as our response to the December data. This steep fall-off in exports in part reflects the high responsiveness of trade, particularly in durable goods, to the business cycle. We expect real exports to continue declining through the rest of 2009, although at a slower pace, before edging up in 2010, in line with the recovery in foreign GDP growth. Relative to the January Greenbook, our projection for export growth in the last three quarters of 2009 and for 2010 is, on average, about $13 / 4$ percentage points lower, reflecting both the sizable markdown in foreign growth and the stronger dollar.

## Staff Projections for Trade in Goods and Services

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

| Measure | 2008 |  | Projection |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H1 | Q3 | $\begin{gathered} \text { 2008: } \\ \text { Q4 } \end{gathered}$ | 2009 |  |  | 2010 |
|  |  |  |  | Q1 | Q2 | H2 |  |
| Real imports | -4.1 | -3.5 | -16.0 | -19.7 | -4.7 | 3.2 | 3.8 |
| Previous Greenbook | -4.1 | -3.5 | -15.4 | -11.7 | -1.9 | 5.8 | 5.4 |
| Real exports | 8.6 | 3.0 | -23.6 | -23.6 | -5.6 | -2.3 | 1.0 |
| Previous Greenbook | 8.6 | 3.0 | -19.9 | -5.1 | -2.7 | -. 1 | 2.4 |

Note: Changes for years are measured as Q4/Q4; half-years are measured as Q2/Q4 or Q4/Q2.

Real imports of goods and services decreased at an annual rate of 16 percent in the fourth quarter, in line with our projection in the January Greenbook. For the current quarter, we expect imports to decline 20 percent, as U.S. demand continues to weaken and imports of automotive products reflect cutbacks in motor vehicle production schedules in Canada and Mexico. As with exports, the recent sharp decline in imports in part reflects the strong cyclicality of trade flows. The decline in imports is projected to moderate to a 5 percent pace in the second quarter. Import growth should turn positive towards the end of the year and average roughly $33 / 4$ percent in 2010. The pickup in imports reflects the lagged effect of recent dollar appreciation as well as the projected stabilization and eventual recovery of the U.S. economy. Compared with the January Greenbook, we have lowered our import growth forecast for the first quarter 8 percentage points, a little less
than 3 percentage points in the remainder of 2009, and about $11 / 2$ percentage points in 2010.

## Alternative Simulation

Although our baseline forecast projects a sizable contraction in foreign activity in the first half of this year followed by some recovery, it is possible that the foreign economies may experience an even deeper and more protracted recession. To investigate this possibility, we use the SIGMA model, which now incorporates a zero-bound constraint for U.S. monetary policy, to examine the effects of a larger-than-expected deceleration in domestic demand of major U.S. trading partners. ${ }^{1}$

The foreign demand shock, which begins next quarter, is calibrated to reduce foreign GDP growth about 1 percentage point in 2009 and 2010. After declining a bit further in 2011, foreign output begins to recover gradually in 2012. The negative impact of the shock on foreign activity is cushioned by a decline in foreign policy rates, which fall about $1 / 2$ percentage point below baseline by the fourth quarter of 2010 . $^{2}$

The foreign demand shock generates a sizable U.S. output decline, largely attributable to weaker real net exports, which in turn reflects the combination of lower foreign activity and an induced appreciation of the dollar. This effect is greatly amplified because the federal funds rate is constrained from declining below zero, as discussed below. Expected inflation falls in response to the negative shock and, accordingly, real interest rates rise substantially relative to baseline, causing U.S. domestic demand to fall. Declines in stock prices and associated reductions in collateral values work through the financial accelerator channel to boost corporate bond spreads $3 / 4$ percentage point, deepening the decline in private demand. U.S. GDP growth declines about $3 / 4$ percentage point relative to baseline in the second half of 2009 and $11 / 4$ percentage points relative to baseline in 2010. The weaker U.S. growth causes core PCE price inflation to fall roughly $1 / 4$ percentage point below baseline in 2009 and more in 2010.

These adverse effects of the foreign demand shock on the United States described above are considerably larger than we have described in previous Greenbooks, when the baseline path for the federal funds rate was well above zero. In those situations, the U.S.

[^9]policy rate could be lowered in response to weaker foreign demand, inducing a decline in real interest rates that would stimulate domestic demand and reduce the appreciation of the dollar. With the negative effect on U.S. GDP arising from the net export channel smaller and largely offset by stronger U.S. domestic demand, U.S. GDP would fall only about a quarter as much in the first couple of years as reported in our current simulation. Thus, the zero bound constraint induces a much larger fall in U.S. GDP because the contraction in net exports is reinforced, rather than offset, by the change in domestic demand.

## Alternative Scenario:

Lower Foreign Demand
(Percent change from previous period, annual rate, except as noted)

| Indicator and simulation | 2009 |  | 2010 |  | 2011 | $\begin{gathered} 2012- \\ 13 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H1 | H2 | H1 | H2 |  |  |
| U.S. real GDP |  |  |  |  |  |  |
| Baseline | -4.2 | -. 3 | 1.1 | 2.0 | 3.9 | 5.3 |
| Lower Foreign Demand | -4.3 | -1.0 | -. 1 | . 7 | 3.1 | 5.4 |
| U.S. PCE prices excluding food and energy |  |  |  |  |  |  |
| Baseline | 1.2 | . 8 | . 5 | . 4 | . 5 | . 7 |
| Lower Foreign Demand | 1.1 | . 5 | . 1 | -. 1 | . 1 | . 6 |
| U.S federal funds rate (percent) |  |  |  |  |  |  |
| Baseline | . 1 | . 1 | . 1 | . 1 | . 1 | . 1 |
| Lower Foreign Demand | . 1 | . 1 | . 1 | . 1 | . 1 | . 1 |
| U.S. trade balance (percent share of GDP) |  |  |  |  |  |  |
| Baseline | -3.0 | -3.2 | -3.5 | -3.7 | -3.8 | -4.1 |
| Lower Foreign Demand | -3.1 | -3.4 | -3.8 | -4.1 | -4.1 | -4.1 |

Note: H1 is Q2/Q4; H2 is Q4/Q2. The federal funds rate is the average rate for the final quarter of the period.

## Evolution of the Staff Forecast

## Current Account Balance



Foreign Real GDP


Core Import Prices*

*Prices for merchandise imports excluding computers, semiconductors, oil, and natural gas.

|  | 2008 |  |  |  | $2009$ |  |  |  | $2010$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Measure and country | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| REAL GDP (1) |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Foreign | 2.3 | 1.2 | 0.5 | -7.2 | -6.7 | -2.9 | -0.2 | 0.8 | 1.5 | 2.2 | 2.7 | 2.9 |
| Advanced Foreign Economies of which: | 0.8 | -0.5 | -0.3 | -5.3 | -7.0 | -3.8 | -0.8 | 0.2 | 0.7 | 1.4 | 1.7 | 1.8 |
| Canada | -0.9 | 0.6 | 0.9 | -3.4 | -6.1 | -4.1 | -0.5 | 0.1 | 0.5 | 1.5 | 1.8 | 2.0 |
| Japan | 1. 4 | -4.5 | -1.4 | -12.1 | -15.9 | -4.4 | -1.8 | -0.1 | 0.6 | 0.9 | 1.1 | 1.1 |
| United Kingdom | 1.6 | -0.1 | -2.8 | -6.0 | -4.8 | -2.9 | -1.2 | 1.1 | 0.7 | 1.2 | 2.0 | 2.3 |
| Euro Area (2) | 2.8 | $-1.0$ | $-1.0$ | -5.7 | -6.0 | -4.1 | $-1.0$ | 0.0 | 1.0 | 1.3 | 1.6 | 1.6 |
| Germany | 6.2 | -2.0 | -2.1 | -8.2 | -6.5 | -4.3 | -1.1 | -0.2 | 0.9 | 1.2 | 1.3 | 1.5 |
| Emerging Market Economies | 4.2 | 3.4 | 1.6 | -9.7 | -6. 3 | -1. 6 | 0.5 | 1.7 | 2.5 | 3.4 | 3.9 | 4.3 |
| Asia | 6.8 | 3.8 | 0.9 | -11.0 | -4.3 | -0.4 | 2.1 | 3.0 | 4.1 | 4.8 | 5.2 | 5.6 |
| Korea | 3.3 | 3.4 | 2.1 | -20.8 | -7.0 | -4.7 | 1.2 | 2.1 | 3.1 | 3.6 | 3.7 | 3.8 |
| China | 10.3 | 10.9 | 5.3 | 1.6 | 2.2 | 4.8 | 5.8 | 6.8 | 7.6 | 8.2 | 8.4 | 8.9 |
| Latin America | 1. 5 | 2.9 | 2.3 | -9.2 | -8.9 | -3.2 | $-1.3$ | 0.1 | 0.7 | 1.8 | 2.5 | 2.9 |
| Mexico | 1. 2 | 1.3 | 1.6 | -10.3 | $-10.8$ | -3.7 | -1.7 | -0.1 | 0.4 | 1.8 | 2.7 | 3.2 |
| Brazil | 6.7 | 6.5 | 6.9 | $-13.6$ | -4.0 | -2.0 | 0.0 | 1.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| CONSUMER PRICES (3) |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Foreign | 4.1 | 4.7 | 4.8 | 3.3 | 1.7 | 0.7 | 0.1 | 0.6 | 1.4 | 1.5 | 1.6 | 1.5 |
| Advanced Foreign Economies of which: | 2.3 | 2.7 | 3.4 | 2.0 | 0.7 | 0.0 | -0.7 | 0.1 | 1.0 | 0.9 | 0.9 | 0.9 |
| Canada | 1.9 | 2.3 | 3.4 | 1.9 | 0.5 | -0.2 | $-1.0$ | 0.1 | 1.3 | 1.3 | 1. 2 | 1. 2 |
| Japan | 1.0 | 1.4 | 2.2 | 1.0 | -0.2 | -1.1 | -2.0 | -1. 5 | -0.7 | -0.4 | -0.4 | -0.5 |
| United Kingdom (4) | 2.4 | 3.4 | 4.8 | 3.9 | 2.8 | 1.6 | 0.2 | 0.5 | 1.5 | 1.6 | 1.7 | 1.6 |
| Euro Area (2) | 3.4 | 3.6 | 3.8 | 2.3 | 1.1 | 0.7 | 0.3 | 0.8 | 1.4 | 1.1 | 1.2 | 1.2 |
| Germany | 3.1 | 3.0 | 3.3 | 1.7 | 0.5 | 0.4 | -0.1 | 0.5 | 1.1 | 1.1 | 1.1 | 1.1 |
| Emerging Market Economies | 6.0 | 6.6 | 6.1 | 4.6 | 2.7 | 1. 4 | 0.8 | 1.2 | 1.9 | 2.1 | 2.2 | 2.1 |
| Asia | 6.6 | 7.0 | 6.0 | 3.7 | 1.0 | -0.4 | -0.9 | 0.1 | 1.2 | 1.6 | 1.7 | 1.7 |
| Korea | 3.8 | 4.8 | 5.5 | 4.5 | 3.9 | 2.3 | 1.4 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 |
| China | 8.1 | 7.7 | 5.1 | 2.7 | -0.7 | -1.7 | $-1.5$ | -0.7 | 0.7 | 1.2 | 1. 2 | 1. 2 |
| Latin America | 4.5 | 5.5 | 6.1 | 6.6 | 6.3 | 5.3 | 4.4 | 3.5 | 3.3 | 3.2 | 3.2 | 3.1 |
| Mexico | 3.9 | 4.9 | 5.5 | 6.2 | 6.1 | 5.1 | 4.1 | 3. 2 | 2.8 | 2.7 | 2.7 | 2.7 |
| Brazil | 4.6 | 5.5 | 6.3 | 6.2 | 5.8 | 4.9 | 4.1 | 3.9 | 3.7 | 3.7 | 3.7 | 3.7 |

[^10]Class II FOMC
Restricted (FR)

| Total Foreign | 3.1 | 2.9 | 3.8 | 4.0 | 4.1 | 4.2 | -0.9 | -2.3 | 2.3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Advanced Foreign Economies of which: | 2.5 | 1.8 | 2.6 | 2.7 | 2.7 | 2.6 | -1.4 | -2.9 | 1.4 |
| Canada | 3.5 | 1.5 | 3.7 | 3.0 | 2.2 | 2.8 | -0.7 | -2.7 | 1.4 |
| Japan | 2.1 | 2.4 | 1.1 | 2.9 | 2.2 | 2.1 | -4.3 | -5.8 | 0.9 |
| United Kingdom | 2.4 | 3.2 | 2.3 | 2.0 | 3.2 | 3.0 | -1.9 | -2.0 | 1.6 |
| Euro Area (2) | 1.1 | 1.2 | 1.8 | 2.1 | 3.4 | 2.1 | -1.3 | -2.8 | 1.4 |
| Germany | 0.0 | 0.2 | 0.2 | 1.6 | 4.1 | 1.7 | -1.6 | -3.1 | 1.2 |
| Emerging Market Economies | 3.9 | 4.6 | 5.5 | 5.9 | 5.9 | 6.3 | -0.3 | -1.5 | 3.5 |
| Asia | 6.4 | 7.0 | 6.0 | 7.7 | 7.1 | 8.1 | -0.1 | 0.1 | 4.9 |
| Korea | 7.7 | 4.1 | 2.9 | 5.6 | 4.2 | 5.9 | -3.6 | -2.2 | 3.5 |
| China | 8.6 | 10.3 | 9.9 | 10.3 | 10.8 | 12.3 | 6.9 | 4.9 | 8.3 |
| Latin America | 1.6 | 2.0 | 5.0 | 4.1 | 4.7 | 4.5 | -0.8 | -3.4 | 2.0 |
| Mexico | 2.0 | 1.5 | 4.5 | 3.6 | 4.0 | 3.7 | -1.7 | -4.2 | 2.0 |
| Brazil | 4.9 | 1.0 | 4.7 | 3.7 | 4.6 | 6.1 | 1.2 | -1.3 | 2.0 |
| CONSUMER PRICES (3) |  |  |  |  |  |  |  |  |  |
| Total Foreign | 2.5 | 2.1 | 2.8 | 2.3 | 2.1 | 3.6 | 3.3 | 0.6 | 1.5 |
| Advanced Foreign Economies of which: | 2.1 | 1.3 | 1.8 | 1.6 | 1.4 | 2.2 | 2.0 | 0.1 | 0.9 |
| Canada | 3.8 | 1.7 | 2.3 | 2.3 | 1.4 | 2.5 | 1.9 | 0.1 | 1.2 |
| Japan | -0.5 | -0.3 | 0.5 | -1.0 | 0.3 | 0.5 | 1.0 | -1.5 | -0.5 |
| United Kingdom (4) | 1.5 | 1.3 | 1.4 | 2.1 | 2.7 | 2.1 | 3.9 | 0.5 | 1.6 |
| Euro Area (2) | 2.3 | 2.0 | 2.3 | 2.3 | 1.8 | 2.9 | 2.3 | 0.8 | 1.2 |
| Germany | 1.2 | 1.1 | 2.1 | 2.2 | 1.3 | 3.1 | 1.7 | 0.5 | 1.1 |
| Emerging Market Economies | 2.9 | 3.1 | 3.9 | 3.0 | 2.9 | 5.1 | 4.6 | 1.2 | 2.1 |
| Asia | 0.8 | 2.3 | 3.2 | 2.6 | 2.4 | 5.4 | 3.7 | 0.1 | 1.7 |
| Korea | 3.3 | 3.5 | 3.4 | 2.5 | 2.1 | 3.4 | 4.5 | 1.4 | 1.6 |
| China | -0.6 | 2.7 | 3.3 | 1.4 | 2.1 | 6.7 | 2.7 | -0.7 | 1.2 |
| Latin America | 6.4 | 4.9 | 5.6 | 3.7 | 4.1 | 4.3 | 6.6 | 3.5 | 3.1 |
| Mexico | 5.2 | 3.9 | 5.3 | 3.1 | 4.1 | 3.8 | 6.2 | 3.2 | 2.7 |
| Brazil | 10.7 | 11.5 | 7.2 | 6.1 | 3.2 | 4.3 | 6.2 | 3.9 | 3.7 |

Class II FOMC
Restricted (FR)
OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

|  | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | $\begin{array}{r} \text { Project } \\ 2009 \end{array}$ | ------ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NIPA REAL EXPORTS and IMPORTS |  |  |  |  |  |  |  |  |  |
|  | Percentage point contribution to GDP growth, Q4/Q4 |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -0.9 | -0.1 | -0.9 | -0.1 | 0.4 | 0.8 | 1.0 | -0.3 | -0.4 |
| Exports of G\&S | 0.4 | 0.6 | 0.7 | 0.7 | 1.1 | 1.0 | -0.2 | -1.1 | 0.1 |
| Imports of G\&S | -1.3 | -0.7 | -1.7 | -0.8 | -0.6 | -0.2 | 1.2 | 0.8 | -0.5 |
| Percentage change, Q4/Q4 |  |  |  |  |  |  |  |  |  |
| Exports of G\&S | 3.8 | 5.8 | 7.4 | 7.0 | 10.1 | 8.9 | -1.8 | -8.9 | 1.0 |
| Services | 10.2 | 3.0 | 8.3 | 4.0 | 11.5 | 9.3 | 3.7 | -8.0 | 1.6 |
| Computers | -1.1 | 11.3 | 5.8 | 14.2 | 8.1 | 0.9 | -2.2 | -3.3 | 9.5 |
| Semiconductors | 10.1 | 38.3 | -6.0 | 17.6 | 2.9 | 29.3 | -14.0 | -15.8 | 11.1 |
| Core Goods 1/ | 0.6 | 4.9 | 8.0 | 7.4 | 10.0 | 8.2 | -4.0 | -9.3 | -0.0 |
| Imports of G\&S | 9.7 | 4.8 | 11.5 | 4.8 | 3.8 | 1.1 | -7.1 | -5.0 | 3.8 |
| Services | 8.8 | 2.2 | 9.3 | -0.1 | 8.0 | 1.8 | 0.7 | -0.6 | 1.8 |
| Oil | 3.8 | 1.2 | 10.8 | 1.0 | -9.2 | 0.6 | -1.1 | -12.6 | 1.1 |
| Natural Gas | 19.5 | 1.3 | 4.9 | 13.7 | -12.6 | 12.1 | -27.3 | 12.8 | 6.0 |
| Computers | 13.2 | 17.0 | 23.2 | 12.5 | 13.8 | 8.4 | -11.5 | -9.3 | 15.5 |
| Semiconductors | 11.0 | -0.1 | 9.8 | 7.5 | -0.3 | 3.8 | -10.1 | -12.4 | 5.0 |
| Core Goods 2/ | 10.0 | 5.2 | 11.4 | 5.9 | 5.7 | 0.1 | -9.7 | -5.1 | 4.2 |
| Billions of Chained 2000 Dollars |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -471.3 | -518.9 | -593.8 | -616.6 | -615.7 | -546.5 | -392.3 | -383.3 | -445.0 |
| Exports of G\&S | 1013.3 | 1026.1 | 1126.1 | 1205.3 | 1314.8 | 1425.9 | 1514.0 | 1339.0 | 1330.3 |
| Imports of G\&S | 1484.6 | 1545.0 | 1719.9 | 1821.9 | 1930.5 | 1972.4 | 1906.3 | 1722.3 | 1775.3 |
| Billions of dollars |  |  |  |  |  |  |  |  |  |
| US CURRENT ACCOUNT BALANCE | -461.3 | -523.4 | -625.0 | -729.0 | -788.1 | -731.2 | -684.2 | -511.1 | -574.9 |
| Current Acct as Percent of GDP | -4.4 | -4.8 | -5.3 | -5.9 | -6.0 | -5.3 | -4.8 | -3.6 | -4.0 |
| Net Goods \& Services (BOP) | -423.7 | -496.9 | -607.7 | -711.6 | -753.3 | -700.3 | -677.1 | -430.0 | -515.3 |
| Investment Income, Net | 33.0 | 51.0 | 73.4 | 78.8 | 63.8 | 88.8 | 117.2 | 44.4 | 64.0 |
| Direct, Net | 102.4 | 112.7 | 150.9 | 173.2 | 184.1 | 233.9 | 249.5 | 157.5 | 182.5 |
| Portfolio, Net | -69.4 | -61.7 | -77.5 | -94.4 | -120.3 | -145.1 | -132.3 | -113.1 | -118.5 |
| Other Income \& Transfers, Net | -70.5 | -77.5 | -90.6 | -96.2 | -98.6 | -119.7 | -124.3 | -125.5 | -123.6 |

[^11]NIPA REAL EXPORTS and IMPORTS

|  | 2005 |  |  |  | 2006 |  |  |  | 2007 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| NIPA REAL EXPORTS and IMPORTS |  |  |  |  |  |  |  |  |  |  |  |  |
| Percentage point contribution to GDP growth |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | 0.3 | 0.8 | -0.1 | -1. 3 | 0.1 | 0.6 | -0.1 | 1.3 | -1.2 | 1.7 | 2.0 | 0.9 |
| Exports of G\&S | 0.8 | 0.9 | 0.0 | 1.1 | 1.7 | 0.6 | 0.4 | 1.7 | 0.1 | 1.0 | 2.5 | 0.5 |
| Imports of $G \& S$ | -0.5 | -0.1 | -0.1 | -2.4 | -1.6 | 0.0 | -0. 5 | -0.3 | -1.2 | 0.7 | -0.5 | 0.4 |
| Percentage change from previous period, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Exports of G\&S | 8.1 | 8.8 | 0.4 | 10.9 | 16.7 | 5.5 | 3.5 | 15.6 | 0.6 | 8.8 | 23.0 | 4.4 |
|  | 10.2 | -2.8 | 3.2 | 5.7 | 13.4 | 2.7 | 3.2 | 28.6 | -2.7 | 13.3 | 25.9 | 2.7 |
| Computers | 16.8 | 27.9 | 8.3 | 5.2 | 12.0 | 17.5 | -7.9 | 12.7 | 3.9 | -4.0 | 14.4 | -9.2 |
| Semiconductors | -5.2 | 11.7 | 30.7 | 38.0 | 20.3 | 16.1 | -5.6 | -15.0 | 15.9 | 23.7 | 20.5 | 61.7 |
| Core Goods 1/ | 7.3 | 13.8 | -2.9 | 12.4 | 18.3 | 5.6 | 4.8 | 11.8 | 1.3 | 6.6 | 22.1 | 3.7 |
| Imports of G\&S | 3.2 | 0.6 | 0.8 | 15.3 | 10.3 | 0.1 | 3.1 | 2.0 | 7.7 | -3.7 | 3.0 | -2.3 |
|  | -5.7 | -0.0 | -1.0 | 6.8 | 17.7 | -2.0 | -0.3 | 18.4 | 4.2 | -2.0 | 6.3 | -0.9 |
| Oil | 5.1 | -27.1 | -11.6 | 53.6 | -2.8 | -27.1 | 7.5 | -10.6 | 30.9 | -22.3 | -13.5 | 16.5 |
| Natural Gas | 58.6 | -14.1 | 111.1 | -41.9 | -50.7 | 91.9 | 26.6 | -51.2 | 70.8 | 74.2 | 28.2 | -58.6 |
| Computers | 3.2 | 11.6 | 20.4 | 15.4 | 20.7 | 21.1 | 19.7 | -4.3 | 34.9 | -6. 5 | -0.2 | 9.7 |
| Semiconductors | -9.2 | 7.7 | 14.0 | 20.0 | 0.2 | -0.5 | 17.7 | -15.8 | 1.2 | 6.7 | 1.0 | 6.4 |
| Core Goods 2/ | 4.8 | 6.1 | 0.3 | 12.7 | 13.7 | 4.9 | 1.2 | 3.2 | 2.2 | -1.1 | 5.8 | -6.0 |
| Billions of Chained 2000 Dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -623.7 | -601.3 | -603.6 | -637.8 | -636.0 | -619.4 | -623.0 | -584.2 | -618.6 | -571.2 | -511.8 | -484.5 |
| Exports of $G \& S$Imports of $G \& S$ | 1177.9 | 1203.1 | 1204.3 | 1235.7 | 1284.3 | 1301.4 | 1312.6 | 1361.1 | 1363.2 | 1392.2 | 1466.2 | 1482.1 |
|  | 1801.7 | 1804.4 | 1807.9 | 1873.6 | 1920.2 | 1920.9 | 1935.7 | 1945.3 | 1981.8 | 1963.4 | 1978.0 | 1966.5 |
| Billions of dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| US CURRENT ACCOUNT BALANCE Current Account as \% of GDP | -696.2 | -711.3 | -675.6 | -832.9 | -783.8 | -799.6 | -843.6 | -725.4 | -787.7 | -776.4 | -691.8 | -669.0 |
|  | -5.7 | -5.8 | -5.4 | -6.6 | -6.0 | -6.1 | -6.4 | -5.4 | -5.8 | -5.7 | -5.0 | -4.8 |
| Net Goods \& Services (BOP) | -664.0 | -682.9 | -721.4 | -778.0 | -756.4 | -767.4 | -789.9 | -699.5 | -718.2 | -715.3 | -672.5 | -695.1 |
| Investment Income, Net | 88.6 | 77.8 | 88.7 | 59.9 | 65.2 | 70.7 | 51.7 | 67.7 | 57.8 | 45.8 | 98.9 | 152.6 |
| Direct, NetPortfolio, Net | 170.2 | 168.5 | 187.8 | 166.3 | 177.2 | 189.2 | 171.9 | 198.2 | 201.1 | 196.2 | 238.8 | 299.3 |
|  | -81.6 | -90.7 | -99.0 | -106.5 | -112.0 | -118.5 | -120.3 | -130.5 | -143.2 | -150.4 | -139.9 | -146.7 |
| Other Inc. \& Transfers, Net-120.9 |  | -106.2 | -42.9 | -114.8 | -92.6 | -103.0 | -105.4 | -93.6 | -127.4 | -106.9 | -118.3 | -126.4 |

[^12]NIPA REAL EXPORTS and IMPORTS


[^13]
## Class II FOMC—Restricted (FR) <br> Abbreviations-Part 1

E\&S equipment and software
FOMC Federal Open Market Committee; also, the Committee
GDP gross domestic product
GSE government-sponsored enterprise
IP industrial production
MBS mortgage-backed securities
NAIRU nonaccelerating-inflation rate of unemployment
OPEC Organization of the Petroleum Exporting Countries
PCE personal consumption expenditures
TARP Troubled Asset Relief Program
WTI West Texas intermediate


[^0]:    ${ }^{1} \mathrm{~A}$ list of abbreviations is available at the end of part 1.

[^1]:    ${ }^{2}$ In this projection, we have incorporated the Administration's proposal to use $\$ 75$ billion of the funds available to the Treasury through the Troubled Asset Relief Program, or TARP, to help reduce preventable home foreclosures. We assume that the funds for the Administration's foreclosure mitigation program will result in about $21 / 2$ million mortgage modifications, of which more than half will avoid default in the medium term. Based on these assumptions, we estimate that the program will raise the level of home prices about $61 / 2$ percent by the end of 2010, all else equal. The assumed boost to house prices from the program is about 3 percentage points larger than our assumption in the January Greenbook.

[^2]:    ${ }^{3}$ The rule is $i_{t}=\rho_{t}+\pi_{t}+0.5\left(\pi_{t}-\pi^{*}\right)+1.0 y_{t}$, where $i_{t}$ is the nominal funds rate, $\rho_{t}$ is a weighted moving average of past values of the real federal funds rate, $\pi_{t}$ is the four-quarter rate of core PCE inflation, $\pi^{*}$ is the inflation target (assumed to equal 2 percent), and $y_{t}$ is the output gap.

[^3]:    1. Level, except for two-quarter and four-quarter intervals.
    
[^4]:    

[^5]:    1．Private－industry workers．
    2．Core goods imports exclude computers，semiconductors，oil and natural gas．

[^6]:    1. Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise indicated.
[^7]:    1. Data after 2008: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.
    
[^8]:    Note. Data after 2008: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.
    4. 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
[^9]:    ${ }^{1}$ The simulation is run in a new two-country version of SIGMA that embeds a financial accelerator channel similar to that developed by Bernanke, Gertler, and Gilchrist.
    ${ }^{2}$ Our simulation does not impose the zero bound constraint on the aggregate foreign economy, as only two major economies—Canada and Japan—would be subject to that constraint, and imposing it would make little difference to the results.

[^10]:    1. Foreign GDP aggregates calculated using shares of U.S. exports.
    2. Harmonized data for euro area from Eurostat.
    3. Foreign CPI aggregates calculated using shares of u.S. non-oil imports.
    4. CPI excluding mortgage interest payments, which is the targeted inflation rate.
[^11]:    2. Merchandise imports excluding oil, natural gas, computers, and semiconductors
[^12]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, natural gas, computers, and semiconductors.
[^13]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, natural gas, computers, and semiconductors.
