

## **Prefatory Note**

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## **Part 1**

January 22, 2009

# CURRENT ECONOMIC AND FINANCIAL CONDITIONS

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## **Summary and Outlook**

January 22, 2009

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## Domestic Developments

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The information received since the time of the December Greenbook indicates that economic activity has continued to contract sharply. Sales and starts of new homes remain on a steep downtrend with no sign yet of stabilization, consumer spending has declined significantly for more than six months, the deterioration in equipment investment has intensified, and foreign demand has weakened. In addition, both labor markets and industrial production (IP) have deteriorated considerably, and by more than we had expected. Thus, we now estimate a 5 percent rate of decline in fourth-quarter real gross domestic product (GDP) and we project a 5½ percent rate of decline in the current quarter, contractions that are somewhat steeper than we previously projected. And we now expect the unemployment rate to increase more rapidly in this forecast, approaching 8 percent by March.

Beyond the near term, the key factors conditioning our projection have moved in a direction that, on net, point to slightly greater stimulus to aggregate demand than was incorporated into the December Greenbook projection. Most important, we now anticipate that the Congress will pass a significantly larger fiscal stimulus plan than we had previously assumed, one that totals \$800 billion, rather than \$500 billion, over two years. In addition, the futures path for oil prices has moved lower, and long-term interest rates have come down somewhat, with the largest declines for corporate bond rates. Stresses also have eased a bit in short-term funding markets. Nevertheless, the improvement in overall credit conditions has not been appreciable, and most areas remain under considerable stress—most notably, the condition of the largest banks has become more precarious. Moreover, our baseline assumptions do not provide for any further monetary stimulus beyond that already in place: We assume that the nominal funds rate will remain near zero for several years (not materially different from the December Greenbook assumption), and we have conditioned the projection on no additional unconventional credit-easing or liquidity actions, which likely will disappoint market participants. In addition, our assumed path for equity prices is somewhat lower than in December and the outlook for foreign growth has weakened.

All told, we now project a slightly stronger recovery in the second half of this year and in 2010. Specifically, we now look for real GDP to increase at an annual rate of 2 percent in the second half and to rise 2½ percent in 2010. These figures are about ½ percentage point and ¼ percentage point, respectively, larger than in the December Greenbook. The unemployment rate is expected to reach a peak of 8½ percent in early 2010 before edging back down to near 8 percent by the end of that year.

Core inflation has moved considerably lower in recent months, and headline inflation has turned negative, reflecting the sharp declines in energy prices through December. The main forces that we see influencing the inflation outlook are little changed in this Greenbook. In particular, we continue to think that inflation will be held down by low rates of resource utilization, falling import prices, and a drop in cost pressures from the sharp declines in oil and other raw material prices since the summer. On net, we look for core personal consumption expenditures (PCE) prices to rise 1 percent this year—just a shade lower than in the December Greenbook—and increase 0.8 percent in 2010. Headline inflation is projected to come in close to core inflation, on average, this year and next, with small differences associated with the recent decline and projected increase in energy prices.

### **Key Background Factors**

As noted, we now assume that the Federal Open Market Committee (FOMC) will hold the target federal funds rate in the current range of zero to  $\frac{1}{4}$  percent through the end of 2010; in December we had assumed that the target would move down to  $\frac{1}{4}$  percent at the January meeting and hold at that level thereafter. Market participants have revised down their expected path for the federal funds rate since the time of the last Greenbook by about  $\frac{1}{4}$  percentage point, on average, both this year and next. Nevertheless, the market's expected path for the federal funds rate moves above the current target range in the second half of this year and continues to rise in 2010; the amount of tightening that is expected, however, is hard to estimate precisely because of the heightened uncertainty about term premiums at present.<sup>1</sup>

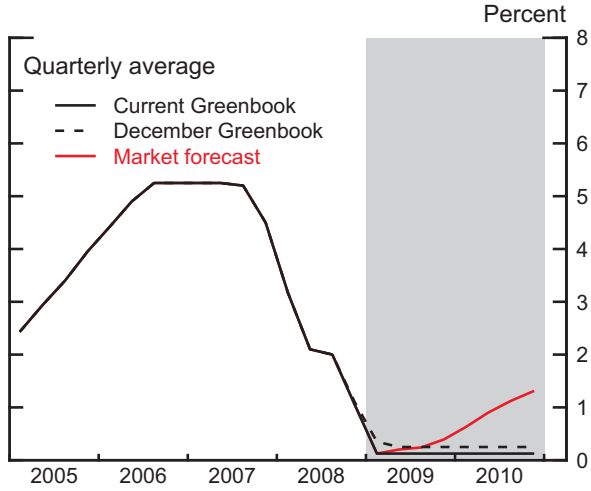
The 10-year Treasury rate has edged down about 10 basis points on net since the last Greenbook. As before, we assume that the 10-year Treasury rate will drift up from its starting level as the demand for safe assets moderates when economic activity begins to pick up and as the 10-year window for the Treasury rate moves through the period of very low short-term rates anticipated for the next few years. In addition, market participants seem to place noticeable odds on a program to purchase long-term Treasury securities; the 10-year Treasury rate could be pushed up when such a program, which is

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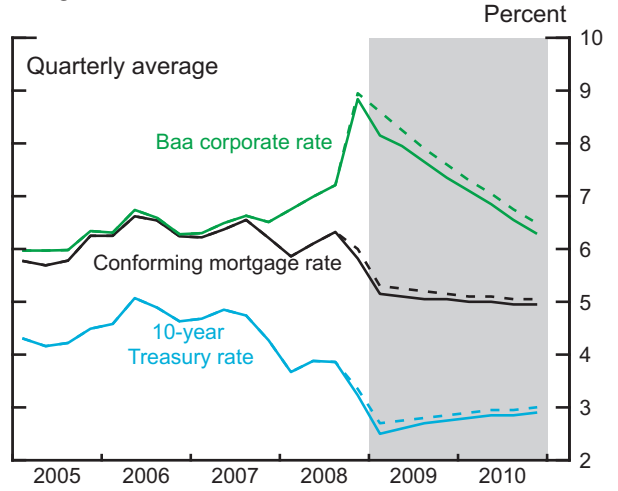
<sup>1</sup> The zero lower bound introduces a related consideration in inferring market expectations of the federal funds rate path. With the nominal federal funds rate already at its effective lower bound, the probability distribution for future short-term interest rates is now highly skewed to the upside. Thus, even though the market's *modal* forecast may be that the federal funds rate will remain close to zero for some time, its *mean* forecast is likely to be increasingly above zero as the forecast horizon increases, because the odds of "lifting off" from the zero lower bound increase with time.

## Key Background Factors Underlying the Baseline Staff Projection

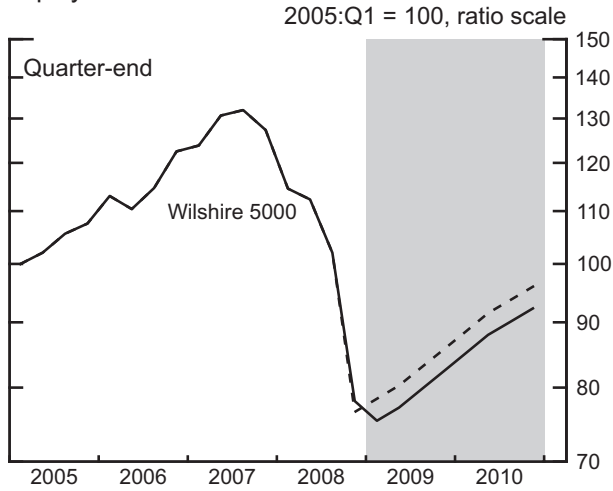
Federal Funds Rate



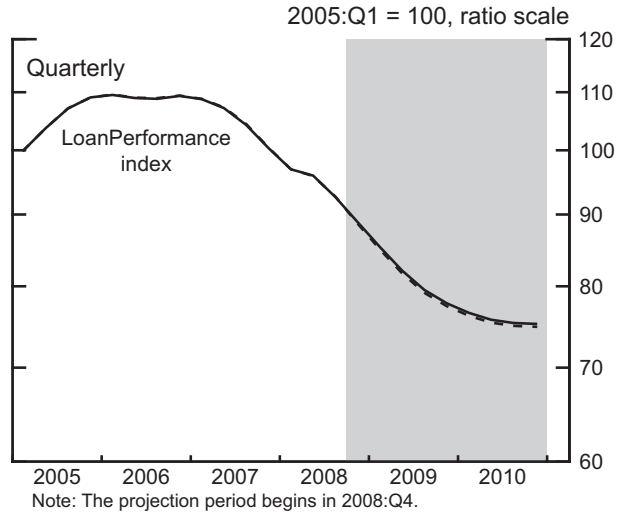
Long-Term Interest Rates



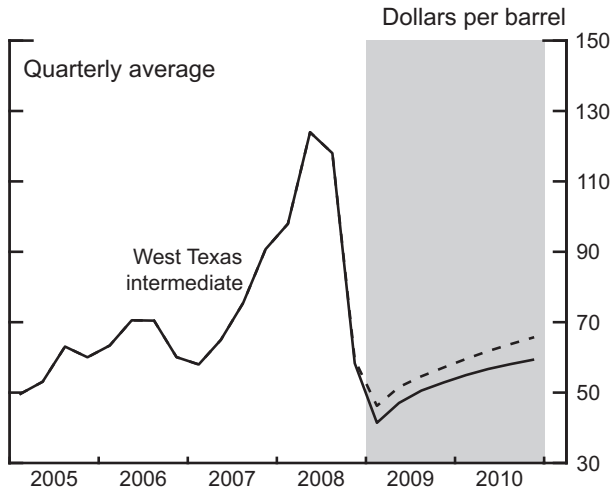
Equity Prices



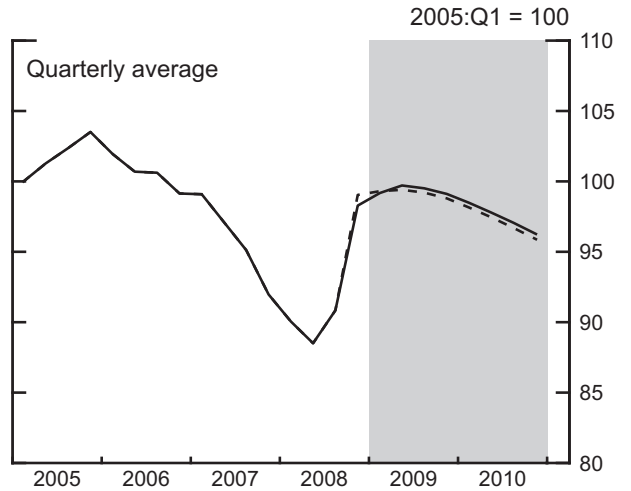
House Prices



Crude Oil Prices



Broad Real Dollar



Note: In each panel, shading represents the projection period, which begins in 2009:Q1 except as noted.

not incorporated in our baseline, fails to materialize. These factors more than offset the downward pressure on long-term rates from market participants' gradual realization that the federal funds rate will be kept at the effective zero bound for longer than they currently expect.

Yields on investment-grade corporate bonds have fallen roughly  $\frac{1}{2}$  percentage point since we closed the December Greenbook, and speculative-grade yields have posted considerably steeper declines, albeit from extremely high levels. The narrowing of the spread on Baa-rated corporate bonds has been greater than we anticipated in the last Greenbook, and we expect that corporate bond yields will decline further over the remainder of this year and next, as economic conditions begin to improve and risk aversion decreases.

Fixed mortgage rates have declined somewhat more than Treasury rates in recent weeks, reflecting the favorable reaction in the market for agency mortgage-backed securities (MBS) to the Fed's ongoing purchases of these securities. The narrowing of the mortgage spread over the 10-year Treasury rate is about in line with what we had anticipated in the December Greenbook. We project that the conforming mortgage rate will drift down from its current level and will average about 5 percent in the second half of this year and in 2010. The mortgage rate path in this projection is about 10 basis points, on average, below the path assumed in the December Greenbook.

Equity prices have moved down about 4 percent, on net, since the time of the December Greenbook, and we have revised down our projected path for the stock market by this amount throughout the forecast period. As before, we assume that the equity risk premium will gradually decline from its unusually high current level so that by the end of 2010, it will have erased about half of its increase since mid-2007. This path for the equity risk premium implies that stock prices will rise about 12 percent in both the remainder of 2009 and 2010.

We have made only small changes to our assumptions for house prices in this projection. We expect that prices will continue to fall rapidly in the first half of this year and that the declines will start to diminish thereafter as housing demand begins to firm and the inventory of unsold homes is brought into better alignment with sales. All told, the LoanPerformance house price index is projected to decline more than 12 percent this year and about 3 percent in 2010.

As noted earlier, we have increased the size of the two-year fiscal stimulus package incorporated into our baseline projection to \$800 billion, up from the \$500 billion package that we built into our forecast in the December Greenbook. The specific composition of the stimulus package still is uncertain, but based on recent reports, we have assumed that it will include:

- grants to state governments of \$200 billion for infrastructure investments (versus \$115 billion assumed in December) and \$200 billion for general purposes (versus \$40 billion);
- a permanent reduction in personal income taxes of \$180 billion over this year and next (somewhat less than the \$230 billion assumed for these tax cuts in the last Greenbook);
- temporary business tax cuts of \$120 billion over two years, which include an extension of the bonus depreciation allowance through 2009, a provision that allows firms to carry back tax losses up to five years to offset earlier taxes paid, and other types of business tax relief (we did not assume any business tax cuts in our last projection);
- temporary increases in transfer payments to individuals that total \$90 billion over this year and next (up from \$55 billion in the last forecast); we have retained our assumption for the extension of emergency unemployment compensation (EUC) benefits, and we boosted our assumption for payments for food stamps and other low-income support programs; and
- an extra \$10 billion (unchanged from December) for additional federal nondefense purchases.

In addition, we continue to assume the enactment of two new programs of \$50 billion each to aid current and prospective homeowners: one to provide subsidized mortgage financing for qualifying home purchases this year at 1 percentage point below the conforming mortgage rate, and one to enhance other federal programs aimed at reducing preventable home foreclosures. Both of these programs were included in the December Greenbook projection. However, in December we included the cost of the subsidized-mortgage program as part of the \$500 billion stimulus package; we now assume instead that this program (as well as the foreclosure-reduction program) will be funded out of the Troubled Asset Relief Program (TARP).

We estimate that this larger fiscal stimulus package, together with the TARP-funded programs to aid homeowners, will add roughly 1½ percentage points to the change in real



GDP in 2009 and about  $\frac{3}{4}$  percentage point in 2010; both of these figures are about 50 percent larger than in the last Greenbook. For the personal tax cuts, transfers to households, and programs to aid homeowners, the behavioral assumptions underlying these GDP effects are largely unchanged from the December Greenbook.<sup>2</sup> The much larger amount of aid to state governments translates into greater spending by states and municipalities than in our December projection, though the amount of additional spending through 2010 falls well short of the entire boost to aid. For infrastructure, where spend-out rates are usually slow, we assume that only about one-quarter of the aid will be spent by the end of 2010; for the general aid to states, we look for about one-half to be spent during this period.<sup>3</sup> Further, we assume that the new business tax cuts will provide only a small boost to business investment. As we have discussed in the past, we read the evidence from 2002 to 2004 as suggesting that the bonus depreciation provisions will have very little effect on business capital outlays. And we think that the five-year carryback provision will provide a small boost to capital spending by raising firms' cash flow but otherwise will not provide a significant incentive to invest.

Mostly reflecting the bigger fiscal stimulus package in this forecast, we are projecting even larger deficits in the federal unified budget than previously. Specifically, we now expect the deficit to reach about \$1.8 trillion (12½ percent of GDP) in fiscal 2009 and \$1 trillion (7 percent of GDP) in fiscal 2010; these figures are about \$100 billion and \$200 billion, respectively, larger than in the December Greenbook. The deficit projected for fiscal 2009 is boosted importantly by the expected outlays from the TARP and from capital injections for the housing-related government-sponsored enterprises (GSEs); we expect these outlays to diminish substantially in fiscal 2010. Even so, we anticipate that the deficit will still be extremely wide next year as a result of the fiscal stimulus package and the weak economic outlook.

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<sup>2</sup> Briefly, we assume that households spend the increase in disposable income resulting from the reduction in income taxes as they would an increase in ordinary income, with about 40 percent spent by the end of the first year and about 60 percent spent by the end of the second year. The additional transfer payments are assumed to be entirely spent by the recipients soon after they are received. The reduced-rate mortgage financing program is assumed to have only a small effect on construction activity as builders understand the temporary nature of the program. Finally, we assume that the foreclosure mitigation program will result in about 1 million mortgage modifications, about two-thirds of which avoid default in the medium term; we estimate that this will lift the level of home prices by roughly 4 percent by the end of 2010 relative to what would have occurred in the absence of the program.

<sup>3</sup> The fact that we estimate a smaller effect of the fiscal stimulus package on GDP through 2010 than do some outside analysts stems most importantly from these analysts' assumption that essentially all of the grants to states will be spent by the end of next year.

The foreign exchange value of the dollar has moved up a bit, on net, since the time of the December Greenbook, and the path going forward remains just a little above our previous assumption. We continue to assume that the dollar will remain about flat over the remainder of this year and then will decline 3 percent in 2010. Incoming data on foreign economic activity point to a somewhat steeper decline than we had anticipated in December, particularly for emerging market economies, but we continue to expect a moderate recovery abroad beginning around the middle of the year—the same time as in the United States. In all, we project foreign economic activity to be little changed, on net, this year—down from an anticipated increase of  $\frac{1}{2}$  percent in the last Greenbook—and then to rise about  $2\frac{3}{4}$  percent in 2010.

Despite considerable volatility since the time of the December Greenbook, the spot price of West Texas intermediate (WTI) crude oil is little changed, on net, closing most recently at around \$42 per barrel. In contrast, the price of futures contracts for delivery beyond the near-term have fallen by an average of about \$5 per barrel over the remainder of the projection period. Consistent with these futures prices, we expect crude oil prices to move up as global economic activity gradually recovers, with the price of WTI reaching \$53 per barrel by the end of this year and about \$60 per barrel by the end of 2010.

### **Recent Developments and the Near-Term Outlook**

We estimate that real GDP decreased at an annual rate of about 5 percent in the fourth quarter of 2008, and we project an even larger decline, at an annual rate of  $5\frac{1}{2}$  percent, in the current quarter. Although we expect the drop in final sales to be less severe than in the fourth quarter, we anticipate that firms will slash production further as they attempt to continue to draw down their inventories.

Indeed, industrial production has contracted with increasing severity as manufacturers have responded aggressively to declines in both domestic and foreign demand. IP fell at an annual rate of  $11\frac{1}{2}$  percent last quarter despite some rebound from the Boeing strike and the effects of the September hurricanes. Motor vehicle producers have slashed first-quarter production schedules to unusually low levels in response to the plunge in sales. Elsewhere, the breadth of recent production cuts and the deterioration of forward-looking indicators, such as orders for new durable goods and industry reports, all point to continued deep and broad-based declines in factory output in the current quarter. As a result, we now project overall IP to decline at an annual rate of 14 percent in the first quarter—7 percentage points more negative than our forecast in the December

<b>Summary of the Near-Term Outlook</b> (Percent change at annual rate except as noted)				
Measure	2008:Q4		2009:Q1	
	December Greenbook	January Greenbook	December Greenbook	January Greenbook
<b>Real GDP</b>	<b>-4.7</b>	<b>-4.9</b>	<b>-5.0</b>	<b>-5.6</b>
Private domestic final purchases	-6.6	-6.1	-5.2	-5.9
Personal consumption expenditures	-4.3	-3.9	-1.3	-1.7
Residential investment	-27.0	-28.1	-32.5	-40.7
Business fixed investment	-14.0	-12.9	-19.8	-19.8
Government outlays for consumption and investment	1.2	3.4	-.4	.4
	Contribution to growth (percentage points)			
Inventory investment	.3	-.4	-1.6	-2.0
Net exports	.4	-.1	.9	1.2

Greenbook. With this path of output, capacity utilization in manufacturing is expected to move down to 68½ percent this quarter—more than 10 percentage points below its recent cyclical high in mid-2007.

Labor market conditions also deteriorated at an increasing pace in the fourth quarter. Private payroll employment fell more than 500,000 in December, and payroll counts for October and November were revised down substantially, evidence of an employment situation that is weaker than we had anticipated. Since then, new claims for unemployment insurance have remained at a very high level, and the level of continuing claims has continued to rise. We are now looking for private employment to fall another 500,000 in the January survey and to decline 375,000 per month, on average, in February and March. Accordingly, we expect the unemployment rate to climb from 7.2 percent in December to 7.5 percent in January and to almost 8 percent by March.

Consumer outlays have fallen sharply further, on net, in recent months. The deteriorating labor market, drops in equity and housing wealth, and tight credit availability have outweighed the boost to household purchasing power associated with the substantial declines in energy prices. We estimate that real PCE declined at an annual rate close to 4 percent in the fourth quarter, similar to both the pace of decline in the third quarter and the drop we projected in the December Greenbook. We project that real PCE will decline at a slower rate of 1¾ percent in the first quarter. Sales of light motor vehicles plunged

last quarter; in the current quarter, we expect vehicle sales to remain very low but not to fall further. In addition, we project that the tax cuts and the boost to transfer payments from the fiscal stimulus plan will begin to show through to spending by March.

Activity in the housing sector contracted sharply near the end of last year, and we expect further declines in the early months of this year. Starts of new single-family homes dropped steeply in November and December, and the recent low level of new permit issuance points to additional declines in the near term. Starts of multifamily homes also moved down noticeably toward year-end. News on the demand for houses has been bleak as well: Sales of new homes continued to move lower through November, and sales of existing homes, which had been flat, on balance, for much of last year (elevated, at least in part, by deep discounting on foreclosed properties), turned back down. We expect single-family starts to fall to an annual rate of only 360,000 units in the first quarter—less than one-quarter the pace of starts in 2005. The recent and prospective pace of starts implies that real residential investment will contract at an annual rate of 40 percent in the current quarter after an estimated decline of nearly 30 percent in the fourth quarter.

The downturn in businesses' spending on capital equipment appears to have broadened and deepened in the fourth quarter. As has been the case for some time, sizable declines in outlays for motor vehicles were evident. But domestic shipments also dropped back across a wide range of both high-tech and non-high-tech equipment categories, and imports slumped. The downtrend in new orders points to further softening in spending in the near term, as do the distressed readings from elevated risk spreads, surveys of business sentiment, and the continued tight credit conditions faced by many borrowers. All told, we expect real spending on equipment and software (E&S) to fall at an annual rate of almost 20 percent in the first quarter, similar to the pace of decline that we estimate occurred in the fourth quarter.

As for nonresidential structures, the available spending data remained surprisingly resilient through November, and real investment in this category now appears to have eked out a small gain last quarter. Nevertheless, the fundamentals for investment in structures have deteriorated, as evidenced by increasing vacancy rates, declining commercial property values, and tighter lending standards for commercial real estate loans. In addition, the architectural billings index, which is a fairly good indicator of spending about six months ahead, fell to an extremely low level late last year. New investment in drilling and mining structures also seems likely to fall off given the steep

drop in oil and natural gas prices. Thus, we project real outlays for nonresidential structures to fall at an annual rate of about 20 percent in the current quarter.

In the government sector, information through December from the Monthly Treasury Statement suggests that real federal purchases rose at an annual rate of almost 9 percent in the fourth quarter because of another sizable increase in defense spending. We expect defense spending to decelerate following an extremely large increase over the past year, and we look for federal spending growth to slow to a rate of about 1 percent in the first quarter before resuming a moderate pace thereafter. Meanwhile, state and local governments have been facing increasing budgetary strains that likely would intensify if not for the increased federal grants that we assume to be part of the fiscal stimulus package. Indicators suggest that real purchases by states and municipalities were about unchanged in the fourth quarter, and we assume they will remain about flat again in the current quarter; the anticipation of forthcoming grants may be playing some role in helping to forestall spending cuts this quarter.

Both real exports and real imports appear to have fallen sharply in the fourth quarter and by considerably more than we had anticipated. Overall net exports were an approximately neutral influence on the change in GDP in the fourth quarter. We expect trade flows to continue to decline in the near term, primarily reflecting weak demand in the United States and abroad, and with the drop in imports outweighing a continued decline in exports. Smoothing through some of the quarterly variability in these series, we look for net exports to contribute just above  $\frac{1}{2}$  percentage point to the change in real GDP in the first half of this year.

The monthly Census data through November suggest that inventories outside the motor vehicle sector continued to fall in the fourth quarter as producers moved aggressively to pare production in response to the weakening outlook for sales. Nevertheless, inventory imbalances appear to have developed in a number of areas, and with sales prospects remaining bleak, we expect firms to slash production further in order to generate an even larger pace of liquidation in the first half of this year. In the motor vehicle sector, we anticipate an especially large inventory drawdown this quarter in light of the automakers' low scheduled pace of assemblies. Altogether, we expect the faster pace of inventory liquidation to hold down real GDP growth this quarter by 2 percentage points.

Recent data on consumer prices have been to the low side of our expectations, and we now estimate that core PCE prices rose at an annual rate of only 0.6 percent in the fourth

quarter, more than  $\frac{1}{2}$  percentage point below our projection in the last Greenbook. Part of the revision is associated with the nonmarket component of PCE prices, which has been especially soft and from which we take little signal. But the market-based component of PCE prices also came in very low, showing no change for a second month in November and, judging from the CPI (consumer price index) and PPI (producer price index) data, again in December. These data likely reflect, in part, diminished cost pressures and the recent drop in import prices, but they are also consistent with the anecdotal reports of heavy discounting for many consumer goods in an environment of weak demand and inventory buildups. Given the weakness in retail sales at year-end, such discounting is likely to have intensified early this year; we thus expect core inflation to remain especially subdued in the near term, with core PCE prices projected to rise at an annual rate of just 0.8 percent in the first quarter,  $\frac{3}{4}$  percentage point below our forecast in the December Greenbook.

The December CPI also provided a clearer sign that food prices are starting to decelerate in response to the drop in farm prices in the second half of last year. Meanwhile, consumer energy prices have plummeted in response to the drop in crude oil prices over the past six months, and we estimate that headline PCE prices declined at a  $5\frac{1}{2}$  percent annual rate in the fourth quarter. Even though we think these energy price declines are now largely behind us, on a quarterly average basis we should see another sizable decline in the first quarter, and we expect overall PCE prices to fall at a  $2\frac{1}{4}$  percent rate this quarter.

### **The Medium-Term Outlook**

We project that real GDP will continue to decline through the second quarter and then gradually strengthen, rising at an annual rate of 2 percent in the second half of this year and advancing  $2\frac{1}{2}$  percent next year. This projection is a little stronger than we projected in December, with the effects of the larger fiscal package, lower oil prices, and lower long-term interest rates mostly offset by the lower stock market and weaker foreign activity. Beyond the fiscal and monetary stimulus, and as in previous projections, the recovery is supported by numerous factors including a gradual easing of the stresses in financial markets, and a waning drag from the housing market.

**Household sector.** We project that consumer spending will flatten out in the second quarter and will gradually accelerate thereafter. The tax cuts and transfer payments from the fiscal stimulus plan provide an important boost to households' disposable income this year in the face of declining employment and weak real wage growth, and these factors

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

Measure	2008: H2	2009: H1	2009	2010
<b>Real GDP</b>	<b>-2.7</b>	<b>-3.5</b>	<b>-0.8</b>	<b>2.6</b>
Previous Greenbook	-2.6	-3.1	-.9	2.4
Final sales	-2.9	-2.7	-1.3	2.6
Previous Greenbook	-3.1	-2.4	-1.4	2.4
Personal consumption expenditures	-3.9	-.6	.6	2.9
Previous Greenbook	-4.0	-.2	.7	2.7
Residential investment	-22.3	-31.6	-12.8	10.0
Previous Greenbook	-21.6	-22.2	-10.4	8.9
Business fixed investment	-7.4	-19.5	-16.7	3.0
Previous Greenbook	-7.5	-19.7	-16.9	4.8
Government purchases	4.6	1.6	2.4	2.5
Previous Greenbook	3.4	.8	1.2	1.2
Exports	-9.2	-3.9	-2.1	2.4
Previous Greenbook	-.4	-2.7	-1.3	2.6
Imports	-9.6	-6.9	-.8	5.4
Previous Greenbook	-4.2	-5.6	-1.0	4.9
	Contribution to growth (percentage points)			
Inventory change	.2	-.7	.6	.0
Previous Greenbook	.5	-.7	.4	.0
Net exports	.5	.6	-.1	-.5
Previous Greenbook	.7	.5	-.0	-.4

should promote greater spending in the quarters ahead. And, as in previous Greenbooks, consumption is supported over time by a gradual improvement in credit availability and consumer confidence as the economy starts to revive and by a waning of the adverse effects of declines in household wealth. In all, we project that real PCE will show a slight increase of about ½ percent for 2009 as a whole and will rise 3 percent in 2010.

The pattern of the personal saving rate is importantly influenced by the tax cuts, as the gradual spending response to the increase in disposable income implies a near-term jump

in the saving rate, from 3¼ percent late last year to about 5½ percent in the first half of 2009. This factor alone would imply a sizable decline in the saving rate in subsequent quarters as spending continues to adjust to the tax cuts; however, because we expect that households will also be continuing to adjust to past and projected declines in wealth, the personal saving rate is projected to only edge down, reaching 4¾ percent by the end of 2010.

Single-family housing starts, after reaching a nadir in the first half of this year, are projected to move higher over the remainder of the forecast period. The increase is quite modest, however, and by the end of 2010, starts are projected to have recovered only to about the depressed pace of early 2008. The recovery results from several factors. The recent drop in mortgage rates and the assumed programs providing foreclosure relief and below-market financing for some homebuyers should provide support for housing demand. In addition, the lower level of home prices should, over time, improve affordability and encourage more potential buyers to enter the market. As demand stabilizes with construction activity at a very low level, we expect the overhang of unsold homes to move down further and create the incentive for the modest improvement in building activity that we are projecting. All told, we project that real residential investment, which lags housing starts slightly, will decline about 13 percent this year and rise 10 percent in 2010. Although this projection is weaker in the near term relative to the December Greenbook, the pickup later this year is more pronounced because of the lower mortgage rates.

**Business investment.** Our projection for business investment is very similar to that in the last Greenbook. We expect real business outlays for E&S to decline throughout this year, as the weak sales environment, tight financial conditions, and high level of uncertainty continue to restrain spending. As previously mentioned, we think the business tax incentives that are part of the fiscal stimulus package will provide only a small boost to investment spending, which we estimate to be on the order of 1 percent of E&S this year. In all, we project real expenditures for E&S to decline 12 percent this year before turning up 9 percent in 2010 as credit conditions improve somewhat and overall demand strengthens. As for investment in structures, we expect spending to decline 24 percent this year and another 8 percent in 2010. This bleak outlook reflects the particularly unfavorable credit conditions in this sector, the long planning and implementation lags for these projects, and the adverse effects of low oil and natural gas prices on the construction of new drilling structures.



Given our projection that final sales will stabilize later this year, the sharp inventory liquidation that we project to occur in the first half of this year should go a long way toward reducing firms' excess stocks, and we expect the drawdowns to diminish and give way to modest restocking by early 2010. In fact, the cessation of sharp inventory runoffs, and the associated movement of production back up toward the level of final sales, accounts for essentially all of the 2 percent annual rate of increase in real GDP in the second half of this year. In 2010, we expect stockbuilding to roughly keep pace with the rise in final sales, so that inventory investment is a neutral factor for our projection of real activity.

**Government spending.** Real spending by state and local governments is projected to be much stronger than in the December Greenbook, reflecting the sizable boost in federal aid to these governments in our fiscal stimulus package. As discussed previously, only a portion of these grants is expected to be spent over the forecast period given our assumption of substantial implementation lags for most infrastructure projects and our view that state and local governments will choose to smooth the budgetary cushion provided by the general grants to avoid sharp spending cuts when the grants have been exhausted. Nonetheless, our projection calls for real state and local spending to rise 2½ percent this year and about 3 percent in 2010; both figures are up from increases of about ½ percent in the previous Greenbook, when the grants were assumed to be less than one-half as large as those at present. In the absence of any increase in federal grants, we would expect to see declines in real state and local spending in the period ahead given these governments' increasing budgetary problems. At the federal level, spending is expected to decelerate considerably over the projection period from the elevated pace over the past year as the rise in defense purchases slows; nondefense purchases are expected to increase at an annual rate of 2¾ percent over the projection period, about the same pace as last year. In all, increases in real federal purchases are projected to step down from 8¾ percent last year to around 2 percent, on average, in 2009 and 2010.

**Net exports.** We expect the demand for both exports and imports to gradually strengthen in line with overall activity at home and abroad. We project that real exports will be about flat in the second half of this year and will rise 2½ percent in 2010. Real imports are projected to rise more robustly, at an annual rate of about 5½ percent both in the second half and next year. In total, we project that real net exports of goods and services will be a drag on the change in real GDP beyond the near term, subtracting about ¾ percentage point from the annual rate of change in the second half and about

½ 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**

We have made no changes to our estimates of structural labor productivity and potential GDP. Structural productivity is still assumed to grow 1¾ percent per year in both 2009 and 2010, while potential GDP growth is assumed to be 2¼ percent per year. With actual GDP projected to remain weak well into this year, the level of real GDP is expected to fall 6 percent short of potential by year-end. Real GDP is expected to increase more rapidly than potential in 2010, causing the gap to narrow to 5½ percent by the end of that year.

**Productivity and the labor market.** Labor productivity appears to have risen faster than our estimate of its structural rate last year despite the downturn in activity. But we expect productivity to turn down sharply in the first half of this year, bringing output per hour below our estimate of its structural level—the pattern often seen in a downturn—as firms become increasingly reluctant to shed core personnel even as demand falls to low levels. From this lower level, productivity is then projected to rise more rapidly than trend as firms in recovering sectors have room to boost output without initially adding to payrolls. Accordingly, job losses in the private sector are expected to continue, though at a diminishing pace, through the second half of the year. Specifically, our projection calls for private payroll employment to fall about 170,000 per month in the second quarter and about 60,000 per month in the second half of this year, with the unemployment rate peaking at 8.5 percent in early 2010. As production and sales accelerate next year, private payrolls begin to turn up, with the pace of job gains strengthening to about 150,000 per month by the end of 2010. Next year’s pace of employment growth is sufficient to bring down the unemployment rate to about 8 percent by the end of the forecast period.<sup>4</sup>

**Prices and labor costs.** As noted above, we interpret the recent low readings on core inflation as largely transitory, reflecting heavy price discounting in reaction to weak demand and excess inventories. Thus, beyond the near term, we expect core inflation to

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<sup>4</sup> As in the December Greenbook, we estimate that the availability of EUC benefits will raise the unemployment rate about ¼ percentage point this year and ½ percentage point in 2010 by inducing workers to extend their job search and remain in the labor force.

**Decomposition of Structural Labor Productivity**  
**Nonfarm Business Sector**  
(Percent change, Q4 to Q4, except as noted)

Measure	1974-95	1996-2000	2001-06	2007	2008	2009	2010
<b>Structural labor productivity</b>	<b>1.5</b>	<b>2.5</b>	<b>2.6</b>	<b>2.1</b>	<b>1.9</b>	<b>1.7</b>	<b>1.7</b>
Previous Greenbook	1.5	2.5	2.6	2.1	1.9	1.7	1.7
<i>Contributions</i> <sup>1</sup>							
Capital deepening	.7	1.4	.7	.6	.4	-.0	.1
Previous Greenbook	.7	1.4	.7	.6	.4	-.0	.1
Multifactor productivity	.5	.7	1.6	1.2	1.3	1.6	1.5
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	2.2	2.2
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.

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

Measure	2007	2008	2009	2010
Output per hour, nonfarm business	2.7	2.4	1.1	2.0
Previous Greenbook	2.7	2.0	.8	2.4
Nonfarm private payroll employment	.9	-1.9	-2.2	1.0
Previous Greenbook	.9	-1.8	-1.9	.4
Household survey employment	.4	-1.5	-1.1	1.1
Previous Greenbook	.4	-1.3	-.9	.6
Labor force participation rate <sup>1</sup>	66.0	65.9	65.5	65.3
Previous Greenbook	66.0	65.9	65.5	65.3
Civilian unemployment rate <sup>1</sup>	4.8	6.9	8.4	8.1
Previous Greenbook	4.8	6.7	8.1	8.2
MEMO				
GDP gap <sup>2</sup>	-.3	-3.2	-6.0	-5.5
Previous Greenbook	-.3	-3.1	-6.0	-5.8

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.

move back up, about in line with our projection in the December Greenbook.<sup>5</sup> The other key determinants of inflation are little revised. We still expect slack in resource utilization, subdued import prices, and reduced costs of energy and other materials to hold down inflation—and inflation expectations—in the period ahead. In all, we project

### Inflation Projections

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

Measure	2007	2008	2009	2010
PCE chain-weighted price index	3.5	1.7	.6	1.1
Previous Greenbook	3.5	1.9	.7	1.0
Food and beverages	4.5	6.2	2.0	1.2
Previous Greenbook	4.5	6.3	2.0	1.0
Energy	19.1	-9.8	-8.8	5.2
Previous Greenbook	19.1	-9.8	-8.1	4.8
Excluding food and energy	2.2	1.9	1.0	.8
Previous Greenbook	2.2	2.0	1.1	.8
Consumer price index	4.0	1.5	.4	1.3
Previous Greenbook	4.0	1.7	.7	1.3
Excluding food and energy	2.3	2.0	1.3	1.0
Previous Greenbook	2.3	2.1	1.3	1.0
GDP chain-weighted price index	2.6	2.3	1.5	.9
Previous Greenbook	2.6	2.6	1.5	.8
ECI for compensation of private industry workers <sup>1</sup>	3.0	2.5	1.9	1.5
Previous Greenbook	3.0	2.5	2.0	1.6
Compensation per hour, nonfarm business sector	3.6	3.4	2.1	1.5
Previous Greenbook	3.6	3.2	2.4	1.6
Prices of core goods imports <sup>2</sup>	3.4	3.4	-3.2	1.3
Previous Greenbook	3.4	3.9	-2.7	1.3

1. December to December.

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

<sup>5</sup> We boosted our projection for core PCE inflation in the second quarter to reflect the likely imposition of a substantial increase in the federal excise tax on cigarettes, which is part of expected legislation to increase funding for the State Children's Health Insurance Program.

core PCE prices, which rose 1.9 percent last year, to increase 1.0 percent in 2009 and 0.8 percent in 2010. Given the declines in energy prices that continue into the current quarter (on a quarterly average basis), headline PCE price inflation is projected to average 0.6 percent this year, a little less than core inflation. In 2010, we expect overall PCE prices to rise 1.1 percent, a bit faster than core because of the projected upward trend in oil prices.

Our projection for labor compensation is a little lower in coming quarters than in the December Greenbook, reflecting the more pronounced weakening in labor market conditions and increasing indications that bonuses have been especially low around the turn of the year. We project hourly compensation in the nonfarm business sector to rise 2 percent this year and 1½ percent in 2010. Our projection for the employment cost index follows a similar trajectory.

### **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 1¾ percent in the long run, consistent with the discussion of longer-term inflation forecasts provided by FOMC participants in October. We have made no provision for further unconventional policy actions in the construction of this extension.
- 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 spending from this source gradually fades and is small by 2013.
- Government budget deficits narrow after 2010, reflecting in part the effects of the economic recovery on tax receipts and transfer payments. In addition, governments at all levels are assumed to undertake actions to further reduce their budget deficits.

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

Measure	2008	2009	2010	2011	2012	2013
Real GDP	-0.5	-0.8	2.6	4.9	5.3	5.0
Civilian unemployment rate <sup>1</sup>	6.9	8.4	8.1	6.7	5.5	4.4
PCE prices, total	1.7	0.6	1.1	0.8	0.7	0.8
Core PCE prices	1.9	1.0	0.8	0.6	0.6	0.7
Federal funds rate <sup>1</sup>	1.1	0.1	0.1	0.1	0.1	2.3

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

- Beyond 2010, foreign real GDP expands 4½ percent per year on average while the dollar depreciates 2½ percent per year in real terms; nominal WTI crude oil prices rise gradually from recent levels to about \$65 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 4¾ percent, and potential GDP expands a little more than 2½ percent per year, on average, over the 2011-13 period.

The unemployment rate enters 2011 considerably above the staff's estimate of the NAIRU. Moreover, inflation is well below the assumed long-run target. Under the assumptions used to construct the baseline extension, the federal funds rate does not begin to rise above the effective lower bound until 2013. The lingering effects of financial upheaval continue to fade, and the recovery in residential construction gains momentum; coupled with stimulative monetary policy, these factors propel real GDP to increases of about 5 percent per year, on average, over the 2011-13 period. With actual output increasing faster than its potential by a wide margin, the unemployment rate declines steadily over this period and falls below the NAIRU in 2013. Nevertheless, reflecting the considerable margin of slack on average over this period, inflation moves down further after 2010.

### Financial Flows and Conditions

We expect that the growth of domestic nonfinancial debt will slow from an annual rate of 6½ percent in the fourth quarter of last year to a rate of 4½ percent in the current quarter, as federal borrowing to address financial market strains slows somewhat from its extraordinary fourth-quarter rate. Excluding the federal sector, we forecast that the level of debt will be essentially unchanged in the first quarter, as it was last quarter. In 2009

and 2010, we project that federal debt will continue to expand at a rapid pace, but borrowing by households and nonfinancial businesses is expected to be extremely weak by historical standards.

We estimate that household debt contracted at an annual rate of about 2¾ percent last quarter, and we expect a similar decline this quarter. Mortgage borrowing and consumer credit have been sharply curtailed by the effects of falling home prices, very weak household spending, and tighter 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 expand only a little in 2010.

Growth of nonfinancial business debt is anticipated to slow to an annual rate of 2¼ percent this quarter, down from 2¾ percent in the fourth quarter. The continued slowdown reflects weaker demand for credit in light of the deterioration in the macroeconomic outlook, the high costs of borrowing in the corporate bond market, and tighter terms and standards for bank loans. We expect that overall credit conditions will begin to ease later this year but that business borrowing will remain relatively weak throughout the forecast period, reflecting a tepid pace of capital spending.

Federal government debt surged in the second half of 2008 at an annual rate of more than 35 percent and is expected to increase about 22 percent in 2009 and 13 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 more than \$1.4 trillion in 2009 and nearly \$1 trillion in 2010.

We anticipate that state and local government debt will increase at an annual rate of about 5 percent this quarter, up from the anemic 1 percent pace in the fourth quarter that largely reflected strained conditions in the municipal bond market. Although conditions in the bond market improved somewhat late last year, and we expect further recovery this year, we think that the deteriorating outlook for the fiscal positions of state and local governments will restrain borrowing in 2009 and 2010.

M2 expanded sharply in the fourth quarter, reflecting increased household demand for safe and liquid assets and depository institutions' aggressive bidding for small time deposits. We expect M2 to rise more slowly in 2009 but still faster than the rise in nominal GDP because of the lagged effects of recent declines in opportunity cost. In 2010, we expect the increase in M2 to be roughly in line with that of nominal GDP.

### Alternative Scenarios

In this section, we illustrate risks to the staff forecast using simulations of the FRB/US model. In the first scenario, financial market turmoil is greater and more persistent than in the baseline, while the second scenario examines the implications of even more cautious spending by households and firms than that factored into the staff forecast. In contrast to these two pessimistic scenarios, the next one considers the possibility that the recovery from the recession will be more in line with historical experience and thus faster than we anticipate. The fourth scenario illustrates the potential stimulus from a program that doubles the size of the ongoing program to purchase agency MBS and initiates large-scale purchases of long-term Treasury securities. The fifth and sixth scenarios then focus on opposing inflation risks—specifically, that we have underestimated deflationary pressures, as suggested by some of our models, or, by contrast, that long-run inflation expectations will remain solidly anchored rather than drifting down as in the baseline forecast. In each of these 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 12½ basis points.<sup>6</sup>

**More financial stress.** In the baseline projection, we continue to anticipate that financial market strains will gradually wane over the next two years. However, the unexpectedly large losses reported by some banks in recent weeks highlight the risks attending our baseline assumption. In this scenario, we assume that credit losses continue to mount and that solvency concerns for many financial institutions intensify further and remain elevated through 2010, with adverse consequences for asset prices, the cost of borrowing, and credit availability. Specifically, risk premiums on conventional mortgages, investment-grade private securities, and corporate equity move up about 100 basis points from their current levels over the next few months and then come down more slowly than in the baseline. In this environment, problems in the housing market deepen by more than in the staff projection, causing home prices to decline an additional 10 percent relative to baseline by the end of 2010; prices only slowly return to baseline thereafter. We also assume that these more adverse financial conditions spill over to activity abroad, causing foreign output to expand about 1 percentage point per year more slowly in 2009 and 2010, on average, than in the baseline; weaker global activity, in turn, drives the price of crude oil about \$10 per barrel below baseline, on average, over the next two years.

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<sup>6</sup> The rule is  $i_t = \rho_t + \pi_t + 0.5(\pi_t - \pi^*) + 1.0y_t$ , 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 1.75 percent), and  $y_t$  is the output gap.



<b>Alternative Scenarios</b>						
(Percent change, annual rate, from end of preceding period except as noted)						
Measure and scenario	2008	2009		2010	2011	2012-13
	H2	H1	H2			
<i>Real GDP</i>						
Greenbook extension	-2.7	-3.5	2.0	2.6	4.9	5.1
More financial stress	-2.7	-4.5	-0.3	0.6	4.2	5.2
More cautious spending	-2.7	-6.1	0.2	1.7	4.4	4.7
Faster recovery	-2.7	-3.4	5.6	6.1	5.5	2.5
Large-scale asset purchases	-2.7	-3.3	2.6	3.3	5.8	5.3
Deflation	-2.7	-3.5	2.0	2.5	4.6	4.6
Anchored inflation expectations	-2.7	-3.5	2.0	2.7	5.1	5.2
<i>Unemployment rate<sup>1</sup></i>						
Greenbook extension	6.9	8.2	8.4	8.1	6.7	4.4
More financial stress	6.9	8.3	8.9	9.3	8.2	5.6
More cautious spending	6.9	8.5	9.1	9.2	7.9	5.7
Faster recovery	6.9	8.2	8.0	6.4	4.5	4.0
Large-scale asset purchases	6.9	8.2	8.3	7.7	6.0	3.6
Deflation	6.9	8.2	8.4	8.1	6.8	4.8
Anchored inflation expectations	6.9	8.2	8.4	8.1	6.6	4.3
<i>Core PCE inflation</i>						
Greenbook extension	1.5	1.2	0.9	0.8	0.6	0.7
More financial stress	1.5	1.2	0.7	0.3	-0.2	-0.2
More cautious spending	1.5	1.2	0.8	0.5	0.0	-0.3
Faster recovery	1.5	1.2	0.9	1.2	1.4	1.7
Large-scale asset purchases	1.5	1.3	1.0	1.0	0.9	1.0
Deflation	1.5	0.8	0.4	0.1	-0.3	-0.6
Anchored inflation expectations	1.5	1.2	1.0	1.2	1.2	1.5
<i>Federal funds rate<sup>1</sup></i>						
Greenbook extension	1.1	0.1	0.1	0.1	0.1	2.3
More financial stress	1.1	0.1	0.1	0.1	0.1	0.1
More cautious spending	1.1	0.1	0.1	0.1	0.1	0.1
Faster recovery	1.1	0.1	0.1	1.4	4.3	5.0
Large-scale asset purchases	1.1	0.1	0.1	0.1	0.1	4.9
Deflation	1.1	0.1	0.1	0.1	0.1	0.1
Anchored inflation expectations	1.1	0.1	0.1	0.1	0.1	3.8

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

The additional financial market stress causes household and business spending to weaken more appreciably than in the staff projection. Real GDP contracts 2½ percent in 2009 (1½ percentage points more than in the baseline) and increases only ½ percent in 2010. The unemployment rate peaks at 9¼ percent next year, and inflation declines to

¼ percent. GDP growth picks up further after 2010, but with so much slack persisting through late 2013—the unemployment rate is still ¾ percentage point above the NAIRU at that point—the economy shifts into modest deflation. Under these conditions, the federal funds rate remains pinned at its effective lower bound through 2013.

**More cautious spending.** Reflecting a variety of adverse factors, the staff forecast incorporates a marked cutback in private spending this year and next. Nevertheless, we may have underestimated the degree to which the uncertain prospects for recovery will lead consumers to postpone spending; we may also have underestimated the desire of households to repair their balance sheets over time. In this scenario, the personal saving rate moves up to more than 6½ percent in 2010, compared with a bit less than 5 percent in the staff projection; beyond 2010, the saving rate remains elevated relative to baseline by roughly the same amount. Heightened uncertainty may also affect business spending more than we have assumed in the baseline, and reflecting these concerns, real business fixed investment contracts more significantly this year and expands more sluggishly next year, leaving the level of such expenditures about 12 percent below baseline by the end of 2010. These developments, although quite adverse, would only be just outside the 90 percent confidence interval of our models; moreover, even such a persistent cutback in household spending would still leave the personal saving rate well below its average over the past 50 years.

The higher degree of caution leads to a sharper contraction in GDP and a more severe deterioration in labor market conditions—a situation exacerbated by the inability of conventional monetary policy actions to provide much offset. Real GDP contracts almost 3 percent in 2009 and expands only 1¾ percent in 2010; overall economic activity remains subdued relative to baseline through 2013. Correspondingly, the unemployment rate peaks at 9¼ percent in 2010 and thereafter declines quite slowly, falling back to 5¾ percent by late 2013. As in the previous scenario, the substantial and persistent economic slack in this simulation puts considerable downward pressure on wages and prices. As a result, the economy shifts into a mildly deflationary state by 2012.

**Faster recovery.** Our baseline outlook is for a sluggish recovery despite considerable stimulus from monetary and fiscal policy. In this scenario, the baseline fiscal package, a federal funds rate close to zero, and the various liquidity and credit-easing programs now in place or already announced prove more successful in jump-starting the economy than we assume in the baseline. As a result, business and household sentiment bounces back more quickly and financial stress abates faster than in the baseline forecast. The

reduction in financial market stress is reflected in lower risk premiums on conventional mortgages, investment-grade private securities, and corporate equity, which decline about 50 basis points below their baseline paths. Moreover, real estate prices undershoot their fundamental values by less in this environment, and house prices are 5 percent above baseline by late 2010. Finally, improved financial conditions and healthier household and business balance sheets lead to greater credit availability than in the baseline, augmenting the stimulus to consumption and investment.

Under these assumptions, real GDP rises at an annual rate of 5½ percent in the second half of 2009 and at an average pace of about 5¾ in 2010 and 2011. Thus, this cyclical episode turns out to be more V-shaped, similar to the average pattern seen before the past two U-shaped business cycles. The unemployment rate peaks at 8¼ percent in mid-2009 and falls rapidly thereafter, falling below the NAIRU in 2011. Because of the stronger real activity, actual and expected inflation remain closer to the presumed target; by 2013, core PCE inflation is 1¾ percent, a percentage point higher than the baseline rate. With a robust recovery under way in 2010, monetary policy boosts the federal funds rate to 1½ percent by the end of next year and 4¼ percent by late 2011.

**Large-scale asset purchases.** In the baseline forecast, the economy recovers only gradually even though the federal funds rate remains close to zero for several years. Accordingly, the Federal Reserve System may wish to provide stimulus through the expansion of various liquidity and credit-easing programs. To illustrate this possibility, we assume in this scenario that the Federal Reserve purchases an additional \$500 billion in agency debt and MBS beyond that already announced, as well as \$500 billion in long-term Treasury securities. We assume that these transactions are completed by early 2010; these positions are gradually unwound in 2012 and 2013 as the economy recovers.

Based on the admittedly limited historical evidence, the staff estimates that these actions would lower the interest rate on conventional 30-year mortgages by about 125 basis points and yields on 10-year Treasury securities and Baa-rated corporate bonds by about 75 basis points.<sup>7</sup> We assume that long-term interest rates fall by these amounts over the

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<sup>7</sup> The empirical evidence underlying these estimates is discussed in two of the notes on zero-lower-bound issues that were circulated to the Committee on December 5, 2008: “Purchases of Longer-Term Treasury Securities,” by Spence Hilton and Joe Gagnon, and “Purchases of Agency MBS and Debt,” by Joe Gagnon. In the simulation, we have reduced the initial effect of the program on interest rates somewhat, because financial market participants already had put some weight on the possibility that such actions will be undertaken, and in the baseline, this anticipation (which ultimately is not met) holds down long-term rates for a time.

next several quarters, and that thereafter, the effect of the program on yields persists until the program begins to unwind in 2012. Lower long-term bond yields in turn reduce the user cost of capital, boost the value of corporate equity, and put downward pressure on the real exchange rate. Investment, consumption, and net exports pick up gradually in response, and real GDP rises about  $\frac{3}{4}$  percentage point faster than baseline, per year, from 2009 to 2011. As a result, labor market conditions improve relative to baseline starting next year and inflation declines less markedly. With inflation and real activity both higher than in the baseline, the federal funds rate lifts off from the zero lower bound in early 2012, a year earlier than in the baseline.

**Deflation.** Although the staff projection assumes that persistent economic slack and falling commodity prices will have a sizable depressing effect on inflation, some reduced-form models suggest even larger effects. In this scenario, we follow these models, with the result that core PCE inflation declines to zero by 2010 and falls a bit below negative  $\frac{1}{2}$  percent in 2012 and 2013. In response, the federal funds rate remains at zero through 2013, and inflation expectations drift down further.

With the federal funds rate pinned at its effective lower bound, the decline in inflation raises real interest rates relative to baseline. However, the effects on real activity through this channel are small, in part because the decline in long-run inflation expectations is small, especially early in the simulation period. Rather, real activity is more importantly affected through another channel: the assumption that lower-than-expected inflation will raise the real debt burden of firms and households, thereby increasing default probabilities and contributing to higher risk premiums.<sup>8</sup> Based on micro-level studies, we estimate that this scenario's higher leverage ratios would by themselves raise the Baa-rated corporate bond spread 60 basis points relative to baseline by 2011 and lower equity prices about 20 percent. By 2013, these less favorable financial conditions boost the unemployment rate  $\frac{1}{2}$  percentage point relative to baseline.

**Anchored inflation expectations.** In the staff forecast, core inflation drops below 1 percent in 2010 and edges down further through 2012 despite improving economic conditions. Long-run inflation expectations are a key element in this projection; the staff expects them to move down to 1 percent by 2012 in response to persistently low readings on headline inflation, continued economic slack, and, with the federal funds rate pinned at its effective lower bound, the perception that the Federal Reserve will be unable to

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<sup>8</sup> While this channel is always at work when inflation falls short of expectations, it is accentuated at the zero bound because monetary policy cannot act to offset the adverse effects of these greater debt burdens.

reverse these factors anytime soon. In this scenario, long-run inflation expectations remain near their assumed current level of about 2 percent, thereby preventing any short-run decline in actual inflation from becoming entrenched in wage and price formation. As a result, as activity recovers, so does inflation. In response, the federal funds rate begins to increase starting in 2012 and climbs to 3¾ percent in 2013. However, real economic activity is slightly stronger than baseline because better-anchored inflation expectations result in somewhat lower long-term real interest rates.

### **Assessment of Forecast Uncertainty**

Although the risks associated with the staff forecast are always considerable, we continue to view the current outlook as much more uncertain than usual. The disruptions to credit market functioning and to the stability of financial institutions have been extraordinary, and since last fall they have sparked an abrupt and pronounced contraction in real activity. Fiscal and monetary policy have responded to these developments in almost unprecedented ways: The federal funds rate has reached its lower bound, the Federal Reserve has initiated a range of new unconventional liquidity and credit actions, and the federal government is poised to enact a remarkably large fiscal stimulus package. All these developments limit the applicability of the historical analyses and models used to guide our projections, and so we see the range of plausible outcomes for real GDP and unemployment as being much wider than usual. In addition, we still see the risks as being skewed to the downside.

We also view the price outlook as more uncertain than usual. In particular, our standard inflation forecasting tools may be of limited usefulness under the extreme conditions we project, with the economy in deep recession and monetary policy unable to provide further stimulus through conventional means. For this reason, we suspect that our history-based confidence intervals probably understate both the risk of deflation and the chance that inflation could run considerably above the baseline forecast. We judge the risks to our price forecast as roughly balanced.

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

Measure	2008	2009	2010	2011	2012	2013
<i>Real GDP</i>						
<i>(percent change, Q4 to Q4)</i>						
Projection	-0.5	-0.8	2.6	4.9	5.3	5.0
Confidence interval						
Greenbook forecast errors	-0.6–-.3	-2.2–.7	1.2–4.0	...	...	...
FRB/US stochastic simulations	-0.6–-.3	-1.9–.2	1.3–3.8	3.4–6.1	3.7–6.6	3.5–6.4
<i>Civilian unemployment rate</i>						
<i>(percent, Q4)</i>						
Projection	6.9	8.4	8.1	6.7	5.5	4.4
Confidence interval						
Greenbook forecast errors	6.8–6.9	8.0–8.9	7.2–8.9	...	...	...
FRB/US stochastic simulations	6.8–6.9	8.1–8.8	7.6–8.7	6.2–7.5	5.0–6.3	3.9–5.3
<i>PCE prices, total</i>						
<i>(percent change, Q4 to Q4)</i>						
Projection	1.7	0.6	1.1	0.8	0.7	0.8
Confidence interval						
Greenbook forecast errors	1.6–1.9	-.2–1.4	.1–2.0	...	...	...
FRB/US stochastic simulations	1.7–1.8	.0–1.2	.3–1.7	-1–1.6	-3–1.5	-3–1.6
<i>PCE prices excluding food and energy</i>						
<i>(percent change, Q4 to Q4)</i>						
Projection	1.9	1.0	0.8	0.6	0.6	0.7
Confidence interval						
Greenbook forecast errors	1.7–2.0	.5–1.5	-.1–1.6	...	...	...
FRB/US stochastic simulations	1.8–1.9	.6–1.4	.2–1.3	-1–1.2	-3–1.2	-2–1.4
<i>Federal funds rate</i>						
<i>(percent, Q4)</i>						
Projection	1.1	0.1	0.1	0.1	0.1	2.3
Confidence interval						
FRB/US stochastic simulations	1.1–1.1	.1–1.1	.1–1.5	.1–1.5	.1–1.5	.5–3.7

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.

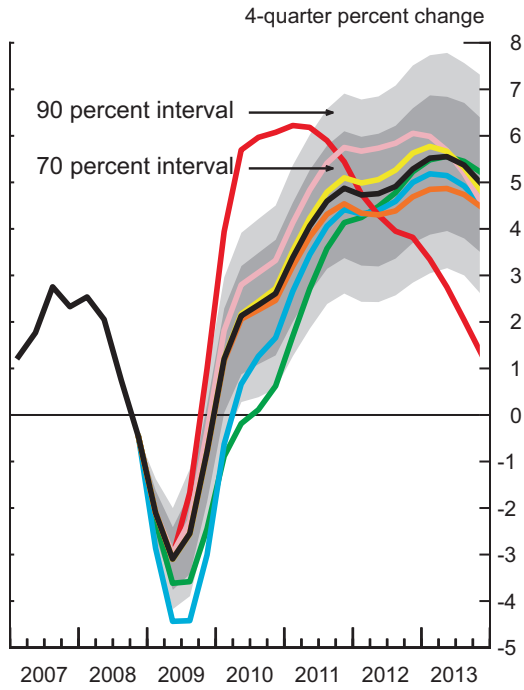
... Not applicable. The Greenbook forecast horizon has typically extended about two years.

## Forecast Confidence Intervals and Alternative Scenarios

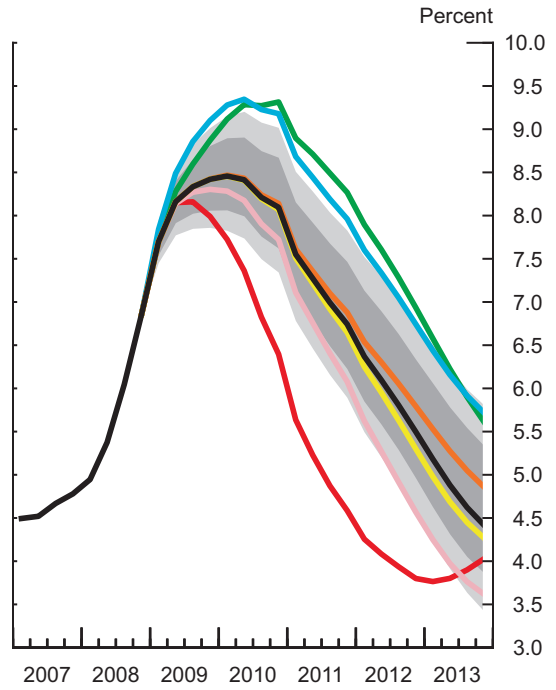
Confidence Intervals Based on FRB/US Stochastic Simulations

- Greenbook extension
- More financial stress
- More cautious spending
- Faster recovery
- Large-scale asset purchases
- Deflation
- Anchored inflation expectations

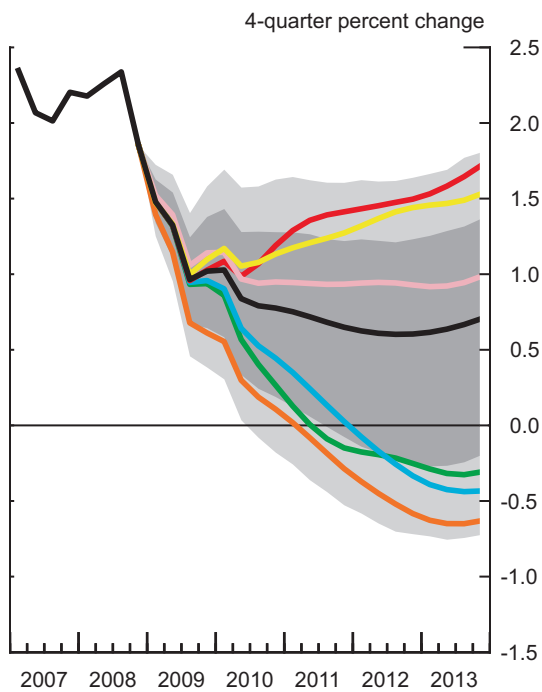
Real GDP



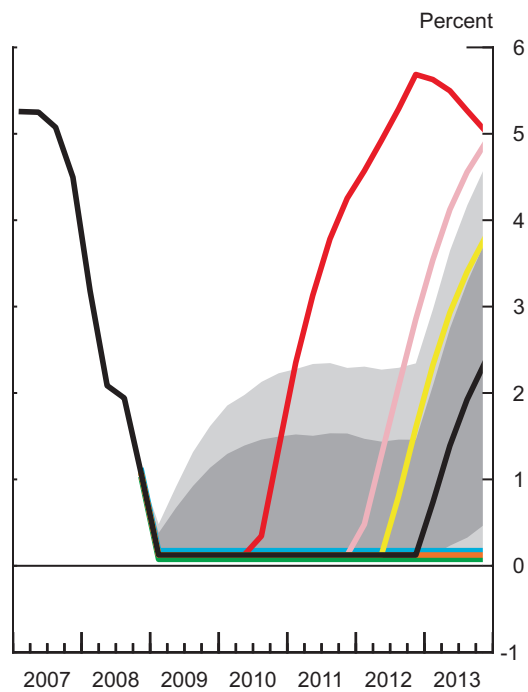
Unemployment Rate



PCE Prices excluding Food and Energy

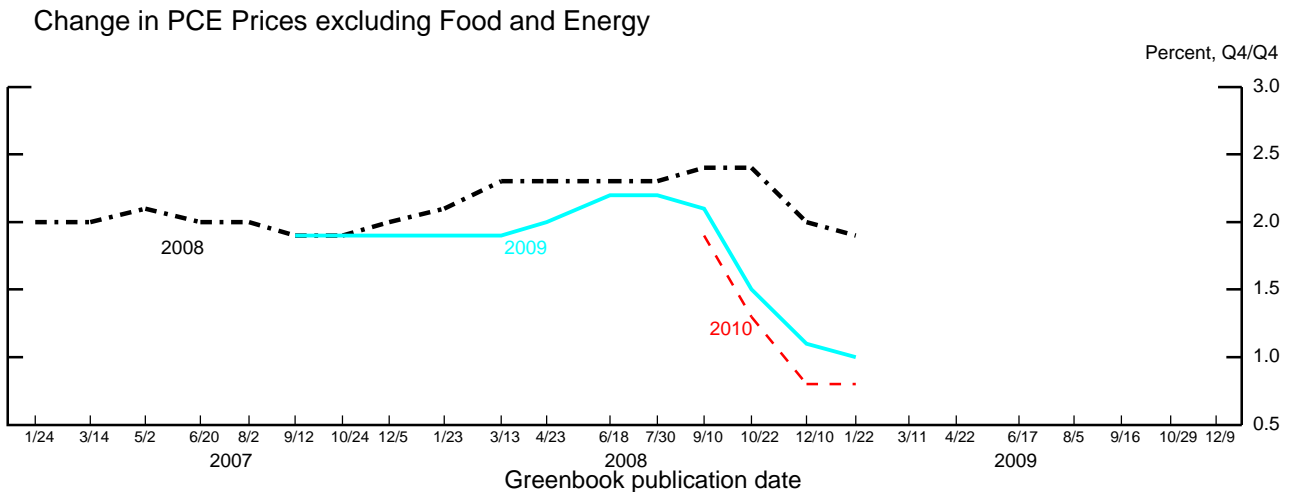
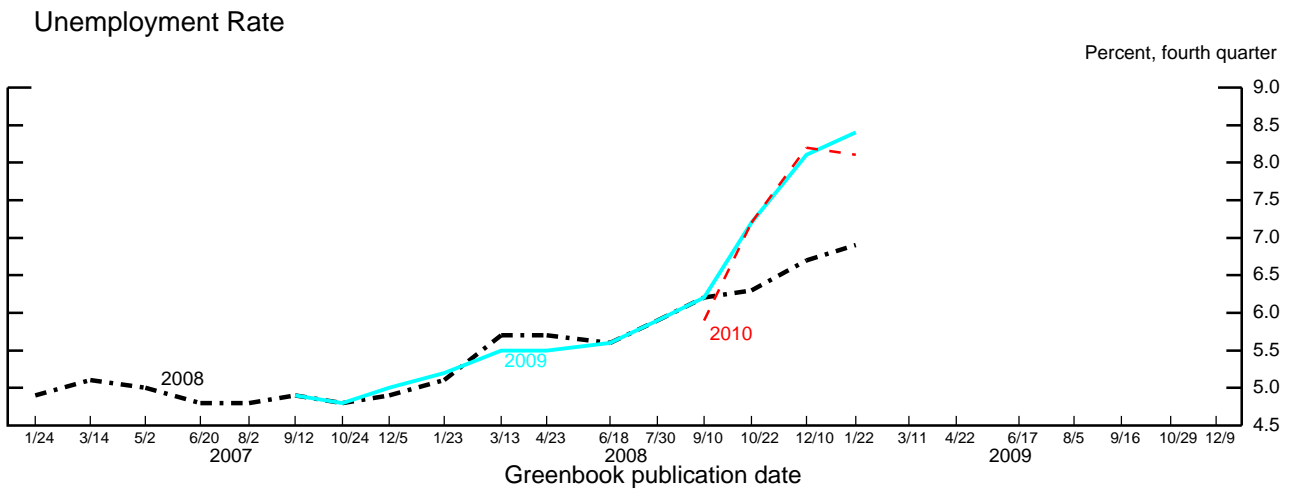
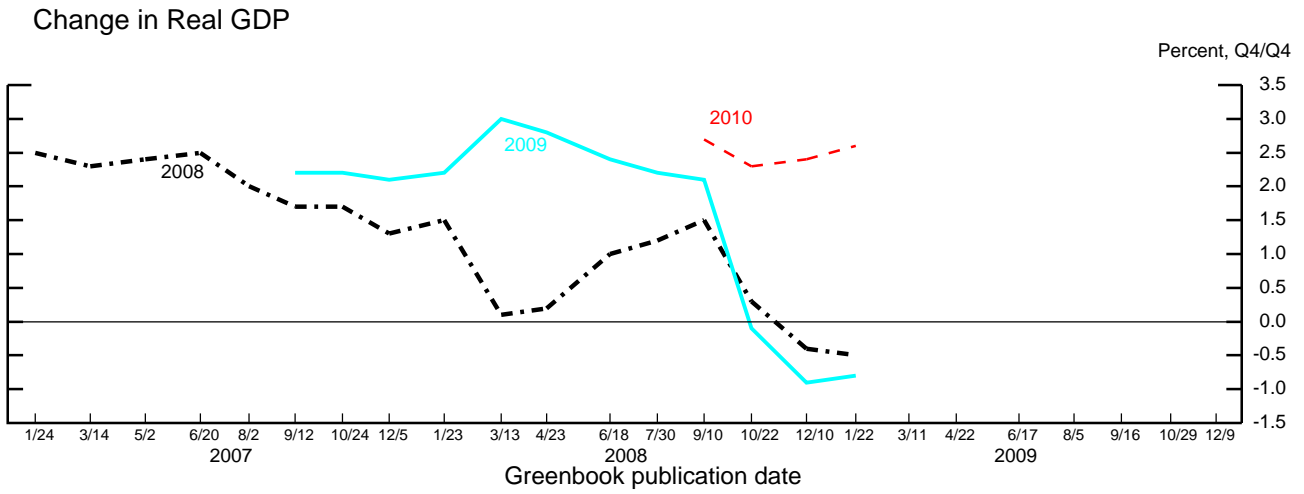


Federal Funds Rate



Class II FOMC - Restricted (FR)

### Evolution of the Staff Forecast





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

Interval	Nominal GDP		Real GDP		PCE price index		Core PCE price index		Unemployment rate <sup>1</sup>	
	12/10/08	1/22/09	12/10/08	1/22/09	12/10/08	1/22/09	12/10/08	1/22/09	12/10/08	1/22/09
<i>Quarterly</i>										
2008:Q1	3.5	3.5	.9	.9	3.6	3.6	2.3	2.3	4.9	4.9
Q2	4.1	4.1	2.8	2.8	4.3	4.3	2.2	2.2	5.3	5.4
Q3	3.6	3.4	-4	-5	5.2	5.0	2.6	2.4	6.0	6.0
Q4	-2.4	-3.3	-4.7	-4.9	-5.1	-5.6	1.2	.6	6.7	6.9
2009:Q1	-3.0	-4.3	-5.0	-5.6	-1.8	-2.3	1.5	.8	7.5	7.7
Q2	.4	1.0	-1.2	-1.3	2.2	1.9	1.3	1.6	7.8	8.2
Q3	2.4	3.2	1.0	1.8	1.5	1.5	1.0	1.0	8.0	8.3
Q4	2.5	3.2	1.6	2.1	1.2	1.2	.8	.8	8.1	8.4
2010:Q1	2.7	3.2	1.9	2.2	1.1	1.2	.8	.8	8.3	8.5
Q2	3.1	3.4	2.2	2.4	1.1	1.1	.8	.8	8.3	8.4
Q3	3.4	3.6	2.6	2.7	1.0	1.0	.8	.8	8.2	8.2
Q4	3.7	4.0	3.0	3.1	.9	1.0	.7	.7	8.2	8.1
<i>Two-quarter<sup>2</sup></i>										
2008:Q2	3.8	3.8	1.8	1.8	3.9	3.9	2.2	2.2	.5	.6
Q4	.6	.0	-2.6	-2.7	-1	-4	1.9	1.5	1.4	1.5
2009:Q2	-1.3	-1.7	-3.1	-3.5	.2	-2	1.4	1.2	1.1	1.3
Q4	2.5	3.2	1.3	2.0	1.3	1.4	.9	.9	.3	.2
2010:Q2	2.9	3.3	2.1	2.3	1.1	1.1	.8	.8	.2	.0
Q4	3.6	3.8	2.8	2.9	1.0	1.0	.8	.8	-.1	-.3
<i>Four-quarter<sup>3</sup></i>										
2007:Q4	4.9	4.9	2.3	2.3	3.5	3.5	2.2	2.2	.4	.4
2008:Q4	2.2	1.9	-4	-5	1.9	1.7	2.0	1.9	1.9	2.1
2009:Q4	.6	.7	-9	-8	.7	.6	1.1	1.0	1.4	1.5
2010:Q4	3.2	3.6	2.4	2.6	1.0	1.1	.8	.8	.1	-.3
<i>Annual</i>										
2007	4.8	4.8	2.0	2.0	2.6	2.6	2.2	2.2	4.6	4.6
2008	3.6	3.5	1.2	1.2	3.3	3.3	2.2	2.2	5.7	5.8
2009	.0	-.3	-2.0	-2.1	.1	-.2	1.5	1.2	7.9	8.2
2010	2.7	3.2	1.8	2.1	1.2	1.2	.8	.9	8.2	8.3

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

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

Item	2008				2009				2010				2008 <sup>1</sup>	2009 <sup>1</sup>	2010 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	Real GDP <i>Previous Greenbook</i>	.9	2.8	-5	-4.9	-5.6	-1.3	1.8	2.1	2.2	2.4	2.7			
Final sales <i>Previous Greenbook</i>	.9	4.4	-1.3	-4.5	-3.6	-1.8	-1	.2	1.3	3.0	3.3	2.9	-2	-1.3	2.6
Priv. dom. final purch. <i>Previous Greenbook</i>	-3	.7	-4.1	-6.1	-5.9	-2.8	-3	.7	2.1	2.9	3.8	3.9	-2.5	-2.1	3.2
Personal cons. expend. <i>Previous Greenbook</i>	.9	1.2	-3.8	-3.9	-1.7	.6	1.7	2.0	2.6	2.8	3.1	3.2	-1.4	.6	2.9
Durables	-4.3	-2.8	-14.8	-23.6	-4.9	9.2	7.2	4.9	5.6	6.3	6.6	4.1	-11.8	4.0	5.6
Nondurables	-4	3.9	-7.1	-7.8	-4.3	-8	1.1	1.3	1.7	2.7	3.1	3.1	-3.0	-7	2.6
Services	2.4	.7	-1	1.7	.0	-1	1.2	1.9	2.5	2.3	2.7	3.2	1.2	.8	2.7
Residential investment <i>Previous Greenbook</i>	-25.1	-13.3	-16.0	-28.1	-40.7	-21.0	8.6	13.8	10.5	7.3	11.3	11.0	-20.9	-12.8	10.0
Business fixed invest. <i>Previous Greenbook</i>	2.4	2.5	-1.7	-12.9	-19.8	-19.3	-15.9	-11.6	-4.1	2.7	6.4	7.5	-2.6	-16.7	3.0
Equipment & software <i>Previous Greenbook</i>	-6	-5.0	-7.5	-20.3	-19.0	-13.2	-9.8	-5.3	.0	9.6	13.4	13.7	-8.7	-12.0	9.0
Nonres. structures <i>Previous Greenbook</i>	8.6	18.5	9.7	1.5	-21.0	-28.7	-25.6	-22.0	-11.5	-9.5	-6.6	-4.9	9.4	-24.4	-8.2
Net exports <sup>2</sup> <i>Previous Greenbook</i> <sup>2</sup>	-462	-381	-353	-359	-322	-324	-342	-375	-406	-406	-414	-438	-389	-341	-416
Exports	5.1	12.3	3.0	-19.9	-316	-311	-324	-344	-372	-372	-380	-397	-385	-324	-380
Imports	-8	-7.3	-3.5	-15.4	-5.1	-2.7	-1.0	.7	1.4	2.1	2.8	3.4	-7	-2.1	2.4
Govt. cons. & invest. <i>Previous Greenbook</i>	1.9	3.9	5.8	3.4	.4	2.8	3.4	3.1	3.1	2.7	2.2	2.1	3.8	2.4	2.5
Federal	1.9	3.9	5.8	1.2	-4	2.1	1.4	1.8	1.9	1.6	.6	.6	3.2	1.2	1.2
Defense	5.8	6.6	13.8	8.8	1.1	2.9	2.1	3.3	3.5	2.8	.7	.7	8.7	2.3	1.9
Nondefense	7.3	7.3	18.0	13.2	.9	3.3	2.1	2.4	1.2	1.2	1.9	1.9	11.4	2.2	1.6
State & local	2.9	5.0	5.1	-7	1.7	1.8	2.0	5.2	8.7	6.3	-1.9	-1.9	3.0	2.7	2.7
Change in bus. inventories <sup>2</sup> <i>Previous Greenbook</i> <sup>2</sup>	-3	2.5	1.3	.4	.0	2.7	4.2	3.1	2.9	2.6	3.2	3.0	1.0	2.5	2.9
Nonfarm <sup>2</sup>	-10	-51	-30	-43	-101	-86	-33	21	47	31	15	22	-33	-50	29
Farm <sup>2</sup>	-10	-51	-33	-29	-73	-73	-19	22	42	23	16	28	-31	-36	27
	-18	-55	-33	-44	-100	-85	-34	20	46	30	14	21	-38	-50	28
	6	2	2	1	1	1	1	1	1	1	1	1	3	1	1

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

2. Billions of chained (2000) dollars.

**Changes in Real Gross Domestic Product and Related Items**

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

Item	2002	2003	2004	2005	2006	2007	2008	2009	2010
Real GDP	1.9	3.7	3.1	2.7	2.4	2.3	-5	-8	2.6
<i>Previous Greenbook</i>	1.9	3.7	3.1	2.7	2.4	2.3	-4	-9	2.4
Final sales	.8	3.7	2.8	2.7	2.8	2.5	-2	-1.3	2.6
<i>Previous Greenbook</i>	.8	3.7	2.8	2.7	2.8	2.5	-3	-1.4	2.4
Priv. dom. final purch.	1.1	4.1	4.3	3.1	2.3	1.4	-2.5	-2.1	3.2
<i>Previous Greenbook</i>	1.1	4.1	4.3	3.1	2.3	1.4	-2.5	-2.0	3.2
Personal cons. expend.	1.9	3.4	3.7	2.6	3.2	2.2	-1.4	.6	2.9
<i>Previous Greenbook</i>	1.9	3.4	3.7	2.6	3.2	2.2	-1.5	.7	2.7
Durables	1.2	8.3	5.6	1.2	6.9	4.2	-11.8	4.0	5.6
Nondurables	2.1	3.9	3.5	3.6	3.2	1.7	-3.0	-7	2.6
Services	1.9	2.2	3.3	2.4	2.6	2.1	1.2	.8	2.7
Residential investment	7.0	11.7	6.7	5.4	-15.5	-19.0	-20.9	-12.8	10.0
<i>Previous Greenbook</i>	7.0	11.7	6.7	5.4	-15.5	-19.0	-20.5	-10.4	8.9
Business fixed invest.	-6.5	4.9	7.5	4.9	6.5	6.4	-2.6	-16.7	3.0
<i>Previous Greenbook</i>	-6.5	4.9	7.5	4.9	6.5	6.4	-2.7	-16.9	4.8
Equipment & software	-3.4	6.6	9.4	7.0	4.2	2.8	-8.7	-12.0	9.0
<i>Previous Greenbook</i>	-3.4	6.6	9.4	7.0	4.2	2.8	-7.6	-12.4	11.8
Nonres. structures	-14.9	.2	2.3	-5	12.8	14.5	9.4	-24.4	-8.2
<i>Previous Greenbook</i>	-14.9	.2	2.3	-5	12.8	14.5	7.2	-24.4	-8.6
Net exports <sup>1</sup>	-471	-519	-594	-617	-616	-547	-389	-341	-416
<i>Previous Greenbook<sup>1</sup></i>	-471	-519	-594	-617	-616	-547	-385	-324	-380
Exports	3.8	5.8	7.4	7.0	10.1	8.9	-7	-2.1	2.4
Imports	9.7	4.8	11.5	4.8	3.8	1.1	-6.9	-8	5.4
Govt. cons. & invest.	4.0	1.7	.7	.6	2.1	2.4	3.8	2.4	2.5
<i>Previous Greenbook</i>	4.0	1.7	.7	.6	2.1	2.4	3.2	1.2	1.2
Federal	7.8	5.5	2.4	1.0	2.9	2.3	8.7	2.3	1.9
Defense	8.4	7.5	2.5	.8	4.1	2.7	11.4	2.2	1.6
Nondefense	6.8	1.9	2.3	1.4	.5	1.5	3.0	2.7	2.7
State & local	2.1	-4	-4	.3	1.6	2.4	1.0	2.5	2.9
Change in bus. inventories <sup>1</sup>	12	14	54	39	42	-2	-33	-50	29
<i>Previous Greenbook<sup>1</sup></i>	12	14	54	39	42	-2	-31	-36	27
Nonfarm <sup>1</sup>	15	14	48	39	46	-4	-38	-50	28
Farm <sup>1</sup>	-2	0	6	0	-3	1	3	1	1

1. Billions of chained (2000) dollars.

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

Item	2008				2009				2010				2008 <sup>1</sup>	2009 <sup>1</sup>	2010 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	Real GDP <i>Previous Greenbook</i>	.9	2.8	-5	-4.9	-5.6	-1.3	1.8	2.1	2.2	2.4	2.7			
Final sales <i>Previous Greenbook</i>	.9	2.8	-4	-4.7	-5.0	-1.2	1.0	1.6	1.9	2.2	2.6	3.0	-4	-9	2.4
Priv. dom. final purch. <i>Previous Greenbook</i>	.9	4.3	-1.4	-4.5	-3.5	-1.8	-.1	.2	1.3	3.0	3.3	2.9	-.2	-1.3	2.6
Personal cons. expend. <i>Previous Greenbook</i>	.9	4.3	-1.1	-5.0	-3.4	-1.2	-.8	.1	1.2	2.9	2.9	2.6	-.3	-1.4	2.4
Durables	-.3	.6	-3.5	-5.2	-4.9	-2.4	-.2	.6	1.7	2.4	3.0	3.2	-.2	-1.7	2.6
Nondurables	-.3	.6	-3.3	-5.6	-4.3	-1.8	-.7	.4	1.8	2.5	3.0	3.0	-.2	-1.6	2.6
Services	.6	.9	-2.8	-2.7	-1.1	.4	1.2	1.4	1.8	1.9	2.2	2.3	-1.0	.4	2.0
Residential investment <i>Previous Greenbook</i>	.6	.9	-2.7	-3.0	-.9	.6	1.0	1.4	1.6	1.9	2.0	2.1	-1.1	.5	1.9
Business fixed invest. <i>Previous Greenbook</i>	-.3	-.2	-1.2	-1.8	-.3	.6	.5	.3	.4	.4	.4	.3	-.9	.3	.4
Equipment & software <i>Previous Greenbook</i>	-.1	.8	-1.6	-1.7	-.8	-.1	.2	.2	.3	.5	.6	.6	-.6	-.1	.5
Nonres. structures <i>Previous Greenbook</i>	1.0	.3	.0	.8	.0	.0	.5	.8	1.1	1.0	1.2	1.4	.5	.3	1.2
Net exports <i>Previous Greenbook</i>	-1.1	-.5	-.6	-1.1	-1.5	-.6	.2	.3	.3	.2	.3	.3	-.8	-.4	.3
Exports	-1.1	-.5	-.6	-1.0	-1.1	-.3	-.1	.3	.2	.2	.3	.2	-.8	-.3	.2
Imports	.3	.3	-.2	-1.5	-2.3	-2.1	-1.6	-1.1	-.4	.2	.6	.6	-.3	-1.8	.3
Govt. cons. & invest. <i>Previous Greenbook</i>	.3	.3	-.1	-1.6	-2.3	-2.2	-1.6	-1.2	-.1	.4	.6	.7	-.3	-1.8	.4
Federal	.0	-.4	-.6	-1.5	-1.4	-.9	-.6	-.3	.0	.5	.7	.8	-.6	-.8	.5
Defense	.0	-.4	-.4	-1.4	-1.3	-1.0	-.7	-.4	-.3	.7	.8	.9	-.6	-.8	.7
Nondefense	.3	.6	.4	.1	-.9	-1.3	-1.0	-.8	-.4	-.3	-.2	-.1	.3	-1.0	-.3
State & local	.3	.6	.4	-.2	-1.0	-1.2	-1.0	-.8	-.4	-.3	-.2	-.1	.3	-1.0	-.3
Change in bus. inventories <i>Previous Greenbook</i>	.8	2.9	1.1	-.1	1.2	-.1	-.6	-1.1	-1.0	.0	-.3	-.8	1.1	-.1	-.5
Nonfarm	.8	2.9	1.1	.4	.9	.1	-.4	-.7	-.9	.0	-.2	-.6	1.2	.0	-.4
Farm	.6	1.5	.4	-2.9	-.6	-.3	-.1	.1	-.2	.2	.3	.4	-.1	-.3	.3
	.1	1.4	.7	2.8	1.9	.3	-.5	-1.2	-1.2	-.2	-.6	-1.2	1.2	.1	-.8
Change in bus. inventories <i>Previous Greenbook</i>	.4	.8	1.1	.7	.1	.6	.7	.7	.7	.6	.5	.5	.7	.5	.5
Nonfarm	.4	.8	1.1	.3	-.1	.4	.3	.4	.4	.3	.1	.1	.6	.3	.2
Farm	.4	.5	1.0	.7	.1	.2	.2	.3	.3	.2	.1	.1	.6	.2	.2
Change in bus. inventories <i>Previous Greenbook</i>	.3	.4	.9	.7	.1	.2	.1	.1	.1	.1	.1	.1	.6	.1	.1
Nonfarm	.1	.1	.1	.0	.0	.0	.0	.1	.2	.2	.0	.0	.1	.1	.1
Farm	.0	.3	.2	.1	.0	.3	.5	.4	.4	.3	.4	.4	.1	.3	.4
Change in bus. inventories <i>Previous Greenbook</i>	.0	-1.5	.8	-.4	-2.0	.6	1.9	1.9	.9	-.6	-.6	.2	-.3	.6	.0
Nonfarm	.0	-1.5	.7	.3	-1.6	.0	1.9	1.4	.7	-.6	-.2	.4	-.1	.4	.0
Farm	.2	-1.4	.8	-.4	-2.0	.5	1.9	1.9	.9	-.6	-.6	.2	-.2	.6	.0
	-.2	-.1	.0	.0	-.1	.0	.0	.0	.0	.0	.0	.0	-.1	.0	.0

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

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

Item	2008				2009				2010				2008 <sup>1</sup>	2009 <sup>1</sup>	2010 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	GDP chain-wt. price index <i>Previous Greenbook</i>	2.6	1.1	3.9	1.7	1.3	2.3	1.4	1.1	1.0	1.0	.9			
PCE chain-wt. price index <i>Previous Greenbook</i>	2.6	1.1	4.1	2.4	2.1	1.6	1.4	.9	.8	.9	.8	.7	2.6	1.5	.8
Energy <i>Previous Greenbook</i>	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
Food <i>Previous Greenbook</i>	3.6	4.3	5.2	-5.1	-1.8	2.2	1.5	1.2	1.1	1.1	1.0	.9	1.9	.7	1.0
Ex. food & energy <i>Previous Greenbook</i>	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
	19.0	27.4	31.6	-66.8	-48.3	19.2	8.7	6.2	6.3	5.2	4.2	3.6	-9.8	-8.1	4.8
	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
	4.9	6.4	8.5	5.3	2.4	1.8	2.0	1.7	1.0	.9	.9	.9	6.3	2.0	1.0
	2.3	2.2	2.4	.6	.8	1.6	1.0	.8	.8	.8	.8	.7	1.9	1.0	.8
	2.3	2.2	2.6	1.2	1.5	1.3	1.0	.8	.8	.8	.8	.7	2.0	1.1	.8
CPI <i>Previous Greenbook</i>	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 <i>Previous Greenbook</i>	4.3	5.0	6.7	-8.5	-3.2	2.6	1.9	1.4	1.4	1.3	1.2	1.1	1.7	.7	1.3
	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
	2.5	1.9	3.2	.8	1.6	1.5	1.3	1.0	1.0	1.0	1.0	.9	2.1	1.3	1.0
ECI, hourly compensation <sup>2</sup> <i>Previous Greenbook</i> <sup>2</sup>	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
	3.0	2.3	2.6	2.2	2.0	2.0	1.9	1.9	1.8	1.7	1.6	1.5	2.5	2.0	1.6
Nonfarm business sector															
Output per hour <i>Previous Greenbook</i>	2.6	3.6	1.5	1.7	-3.2	.6	3.4	3.7	2.6	1.8	1.7	2.0	2.4	1.1	2.0
Compensation per hour <i>Previous Greenbook</i>	2.6	3.6	1.4	.4	-2.5	.2	2.6	2.8	2.7	2.5	2.1	2.2	2.0	.8	2.4
Unit labor costs <i>Previous Greenbook</i>	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
	3.8	.9	4.1	4.2	2.2	2.7	2.4	2.1	1.8	1.6	1.5	1.4	3.2	2.4	1.6
	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
	1.2	-2.6	2.6	3.8	4.8	2.5	-2	-7	-9	-8	-6	-8	1.2	1.6	-8
Core goods imports chain-wt price index <sup>3</sup> <i>Previous Greenbook</i> <sup>3</sup>	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
	8.5	10.6	4.6	-7.0	-8.5	-2.4	-7	1.0	1.4	1.4	1.3	1.3	3.9	-2.7	1.3

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

## Changes in Prices and Costs

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

Item	2002	2003	2004	2005	2006	2007	2008	2009	2010
GDP chain-wt price index <i>Previous Greenbook</i>	1.7 1.7	2.2 2.2	3.2 3.2	3.5 3.5	2.8 2.8	2.6 2.6	2.3 2.6	1.5 1.5	.9 .8
PCE chain-wt price index <i>Previous Greenbook</i>	1.8 1.8	1.9 1.9	3.1 3.1	3.3 3.3	1.9 1.9	3.5 3.5	1.7 1.9	.6 .7	1.1 1.0
Energy <i>Previous Greenbook</i>	7.7 7.7	7.6 7.6	18.3 18.3	23.1 23.1	-4.0 -4.0	19.1 19.1	-9.8 -9.8	-8.8 -8.1	5.2 4.8
Food <i>Previous Greenbook</i>	1.3 1.3	2.6 2.6	2.9 2.9	2.1 2.1	2.3 2.3	4.5 4.5	6.2 6.3	2.0 2.0	1.2 1.0
Ex. food & energy <i>Previous Greenbook</i>	1.6 1.6	1.4 1.4	2.2 2.2	2.2 2.2	2.3 2.3	2.2 2.2	1.9 2.0	1.0 1.1	.8 .8
CPI <i>Previous Greenbook</i>	2.3 2.3	2.0 2.0	3.4 3.4	3.8 3.8	1.9 1.9	4.0 4.0	1.5 1.7	.4 .7	1.3 1.3
Ex. food & energy <i>Previous Greenbook</i>	2.1 2.1	1.2 1.2	2.1 2.1	2.1 2.1	2.7 2.7	2.3 2.3	2.0 2.1	1.3 1.3	1.0 1.0
ECI, hourly compensation <sup>1</sup> <i>Previous Greenbook</i> <sup>1</sup>	3.1 3.1	4.0 4.0	3.8 3.8	2.9 2.9	3.2 3.2	3.0 3.0	2.5 2.5	1.9 2.0	1.5 1.6
Nonfarm business sector Output per hour <i>Previous Greenbook</i>	2.9 2.9	4.7 4.7	1.8 1.8	1.5 1.5	.6 .6	2.7 2.7	2.4 2.0	1.1 .8	2.0 2.4
Compensation per hour <i>Previous Greenbook</i>	3.2 3.2	5.3 5.3	3.9 3.9	3.6 3.6	4.3 4.3	3.6 3.6	3.4 3.2	2.1 2.4	1.5 1.6
Unit labor costs <i>Previous Greenbook</i>	.2 .2	.5 .5	2.1 2.1	2.1 2.1	3.6 3.6	.9 .9	1.0 1.2	1.0 1.6	-5 -8
Core goods imports chain-wt. price index <sup>2</sup> <i>Previous Greenbook</i> <sup>2</sup>	.1 .1	1.6 1.6	3.6 3.6	2.2 2.2	2.4 2.4	3.4 3.4	3.4 3.9	-3.2 -2.7	1.3 1.3

1. Private-industry workers.

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

## Other Macroeconomic Indicators

Item	2008				2009				2010				2008 <sup>1</sup>	2009 <sup>1</sup>	2010 <sup>1</sup>				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4							
	<i>Employment and production</i>																		
Nonfarm payroll employment <sup>2</sup>	-1	-2	-4	-1.3	-1.4	-7	-1	-1	-1.4	-7	-1	-1	8.5	8.4	8.2	8.1	-2.0	-2.3	1.4
Unemployment rate <sup>3</sup>	4.9	5.4	6.0	6.9	7.7	8.2	8.3	8.4	7.7	8.2	8.3	8.4	8.3	8.3	8.2	8.2	6.9	8.4	8.1
<i>Previous Greenbook<sup>3</sup></i>	4.9	5.3	6.0	6.7	7.5	7.8	8.0	8.1	7.5	7.8	8.0	8.1	8.3	8.3	8.2	8.2	6.7	8.1	8.2
GDP gap <sup>4</sup>	-7	-6	-1.3	-3.2	-5.1	-5.9	-6.0	-6.0	-5.1	-5.9	-6.0	-6.0	-5.9	-5.9	-5.8	-5.5	-3.2	-6.0	-5.5
<i>Previous Greenbook<sup>4</sup></i>	-7	-6	-1.3	-3.1	-4.8	-5.6	-5.9	-6.0	-4.8	-5.6	-5.9	-6.0	-6.1	-6.1	-6.0	-5.8	-3.1	-6.0	-5.8
Industrial production <sup>5</sup>	4	-3.4	-8.9	-11.5	-13.8	-2.3	1.4	2.6	-13.8	-2.3	1.4	2.6	3.5	2.9	4.2	4.3	-6.0	-3.2	3.7
<i>Previous Greenbook<sup>5</sup></i>	4	-3.4	-7.6	-9.1	-6.5	-1.0	.2	1.4	-6.5	-1.0	.2	1.4	1.6	2.1	3.3	3.3	-5.0	-1.5	2.6
Manufacturing industr. prod. <sup>5</sup>	-1.0	-4.1	-8.8	-16.2	-17.3	-2.0	3.2	3.7	-17.3	-2.0	3.2	3.7	3.5	3.0	4.5	4.1	-7.7	-3.5	3.8
<i>Previous Greenbook<sup>5</sup></i>	-1.0	-4.0	-7.8	-13.2	-8.5	.0	1.0	1.2	-8.5	.0	1.0	1.2	1.1	2.0	3.4	3.5	-6.6	-1.7	2.5
Capacity utilization rate - mfg. <sup>3</sup>	78.7	77.5	75.5	71.9	68.6	68.3	68.8	69.4	68.6	68.3	68.8	69.4	70.1	70.7	71.6	72.4	71.9	69.4	72.4
<i>Previous Greenbook<sup>3</sup></i>	78.7	77.5	75.7	72.8	71.2	71.2	71.3	71.6	71.2	71.2	71.3	71.6	71.8	72.3	73.0	73.7	72.8	71.6	73.7
Housing starts <sup>6</sup>	1.1	1.0	.9	.7	.5	.6	.7	.8	.5	.6	.7	.8	.8	.8	.9	.9	.9	.6	.9
Light motor vehicle sales <sup>6</sup>	15.2	14.1	12.9	10.3	10.3	11.0	11.4	11.8	10.3	11.0	11.4	11.8	12.2	12.6	13.1	13.4	13.1	11.1	12.8
<i>Income and saving</i>																			
Nominal GDP <sup>5</sup>	3.5	4.1	3.4	-3.3	-4.3	1.0	3.2	3.2	-4.3	1.0	3.2	3.2	3.2	3.4	3.6	4.0	1.9	.7	3.6
Real disposable pers. income <sup>5</sup>	-7	10.7	-8.8	4.6	7.4	1.9	-1	1.0	7.4	1.9	-1	1.0	2.4	1.9	2.5	2.3	1.2	2.5	2.3
<i>Previous Greenbook<sup>5</sup></i>	-7	10.7	-9.2	5.7	8.1	.9	-5	1.1	8.1	.9	-5	1.1	1.9	1.5	2.0	2.3	1.3	2.4	1.9
Personal saving rate <sup>3</sup>	.2	2.5	1.2	3.3	5.4	5.8	5.4	5.2	5.4	5.8	5.4	5.2	5.2	5.0	4.9	4.7	3.3	5.2	4.7
<i>Previous Greenbook<sup>3</sup></i>	.2	2.5	1.1	3.4	5.7	5.8	5.4	5.3	5.7	5.8	5.4	5.3	5.2	5.0	4.9	4.8	3.4	5.3	4.8
Corporate profits <sup>7</sup>	-4.3	-14.3	-4.7	-26.0	-30.5	-18.7	14.3	11.5	-30.5	-18.7	14.3	11.5	13.0	11.2	7.9	7.3	-12.8	-7.9	9.8
Profit share of GNP <sup>3</sup>	11.2	10.6	10.4	9.8	9.1	8.6	8.8	8.9	9.1	8.6	8.8	8.9	9.1	9.3	9.4	9.5	9.8	8.9	9.5
Net federal savings <sup>8</sup>	-331	-650	-548	-571	-904	-1,022	-1,042	-1,060	-904	-1,022	-1,042	-1,060	-987	-973	-994	-996	-525	-1,007	-988
Net state & local savings <sup>8</sup>	-52	-67	-104	-102	-15	-43	-50	-55	-15	-43	-50	-55	-50	-55	-52	-52	-81	-41	-52
Gross national saving rate <sup>3</sup>	12.4	11.3	11.4	12.3	12.2	11.1	10.9	10.7	12.2	11.1	10.9	10.7	10.6	10.7	10.6	10.5	12.3	10.7	10.5
Net national saving rate <sup>3</sup>	.0	-1.3	-1.9	-.8	-1.3	-2.7	-3.0	-3.1	-1.3	-2.7	-3.0	-3.1	-3.3	-3.2	-3.2	-3.3	-.8	-3.1	-3.3

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

2. Change, millions.

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

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

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

5. Percent change, annual rate.

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

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

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



## Other Macroeconomic Indicators

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

Item	2002	2003	2004	2005	2006	2007	2008	2009	2010
<i>Employment and production</i>									
Nonfarm payroll employment <sup>1</sup>	-7	-1	2.1	2.4	2.1	1.2	-2.0	-2.3	1.4
Unemployment rate <sup>2</sup>	5.8	5.8	5.4	4.9	4.4	4.8	6.9	8.4	8.1
<i>Previous Greenbook<sup>2</sup></i>	5.8	5.8	5.4	4.9	4.4	4.8	6.7	8.1	8.2
GDP gap <sup>3</sup>	-2.5	-1.7	-7	-2	-1	-3	-3.2	-6.0	-5.5
<i>Previous Greenbook<sup>3</sup></i>	-2.5	-1.7	-7	-2	-1	-3	-3.1	-6.0	-5.8
Industrial production <sup>4</sup>	2.6	1.5	3.1	2.6	1.7	2.1	-6.0	-3.2	3.7
<i>Previous Greenbook<sup>4</sup></i>	2.6	1.5	3.1	2.6	1.7	2.1	-5.0	-1.5	2.6
Manufacturing industr. prod. <sup>4</sup>	2.6	1.7	3.7	3.7	1.1	2.3	-7.7	-3.5	3.8
<i>Previous Greenbook<sup>4</sup></i>	2.6	1.7	3.7	3.7	1.1	2.3	-6.6	-1.7	2.5
Capacity utilization rate - mfg. <sup>2</sup>	73.2	74.8	77.5	79.2	79.0	79.3	71.9	69.4	72.4
<i>Previous Greenbook<sup>2</sup></i>	73.2	74.8	77.5	79.2	79.0	79.3	72.8	71.6	73.7
Housing starts <sup>5</sup>	1.7	1.8	2.0	2.1	1.8	1.4	.9	.6	.9
Light motor vehicle sales <sup>5</sup>	16.7	16.6	16.8	16.9	16.5	16.1	13.1	11.1	12.8
<i>Income and saving</i>									
Nominal GDP <sup>4</sup>	3.6	5.9	6.5	6.3	5.3	4.9	1.9	.7	3.6
Real disposable pers. income <sup>4</sup>	2.9	3.7	4.1	.9	3.6	1.8	1.2	2.5	2.3
<i>Previous Greenbook<sup>4</sup></i>	2.9	3.7	4.1	.9	3.6	1.8	1.3	2.4	1.9
Personal saving rate <sup>2</sup>	1.8	2.2	2.5	.8	.9	.4	3.3	5.2	4.7
<i>Previous Greenbook<sup>2</sup></i>	1.8	2.2	2.5	.8	.9	.4	3.4	5.3	4.8
Corporate profits <sup>6</sup>	20.6	12.6	20.3	18.8	6.9	-2.0	-12.8	-7.9	9.8
Profit share of GNP <sup>2</sup>	9.0	9.5	10.8	12.0	12.2	11.3	9.8	8.9	9.5
Net federal saving <sup>7</sup>	-248	-372	-371	-292	-201	-229	-525	-1007	-988
Net state & local saving <sup>7</sup>	-34	-20	2	29	46	10	-81	-41	-52
Gross national saving rate <sup>2</sup>	13.6	13.7	13.8	15.0	15.5	13.4	12.3	10.7	10.5
Net national saving rate <sup>2</sup>	1.5	1.9	2.1	2.8	3.4	1.2	-.8	-3.1	-3.3

1. Change, millions.

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

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

4. Percent change.

5. Level, millions, values are annual averages.

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

7. Billions of dollars, values are annual averages.

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

January 22, 2009

Item	Fiscal year			2008				2009				2010				
	2007 <sup>a</sup>	2008 <sup>a</sup>	2009	2010	Q1 <sup>a</sup>	Q2 <sup>a</sup>	Q3 <sup>a</sup>	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Not seasonally adjusted															
<b>Unified budget</b>																
Receipts <sup>1</sup>	2568	2524	2263	2405	540	788	590	547	488	683	545	524	545	742	594	586
Outlays <sup>1</sup>	2729	2978	4054	3438	746	761	759	1033	1041	1070	910	903	859	848	828	894
Surplus/deficit <sup>1</sup>	-162	-455	-1791	-1033	-206	27	-169	-485	-553	-387	-365	-378	-314	-106	-234	-309
<i>Previous</i>	-162	-455	-1675	-842	-206	27	-169	-503	-567	-315	-291	-260	-312	-76	-195	-278
On-budget	-343	-638	-1937	-1179	-237	-64	-171	-538	-564	-472	-363	-437	-322	-191	-229	-366
Off-budget	181	183	146	146	31	91	2	53	11	85	-3	58	8	85	-5	58
Means of financing																
Borrowing	206	768	1608	1051	200	-48	526	561	487	353	207	368	303	131	249	298
Cash decrease	-23	-296	322	0	11	-7	-318	5	116	30	170	15	15	-20	-10	15
Other <sup>2</sup>	-22	-17	-138	-18	-5	29	-39	-81	-50	4	-12	-5	-5	-5	-5	-5
Cash operating balance, end of period	75	372	50	50	46	53	372	367	250	220	50	35	20	40	50	35
<b>NIPA federal sector</b>																
Receipts	2624	2606	2433	2549	2673	2479	2592	2563	2402	2358	2409	2428	2563	2588	2616	2642
Expenditures	2832	3047	3318	3552	3003	3128	3140	3134	3307	3381	3451	3488	3550	3562	3610	3638
Consumption expenditures	842	910	987	1036	898	918	954	970	982	993	1003	1016	1032	1045	1050	1056
Defense	569	624	684	710	614	629	660	675	680	688	694	701	708	713	719	725
Nondefense	273	286	303	325	284	289	295	295	302	306	309	315	325	332	331	331
Other spending	1990	2136	2331	2517	2105	2210	2186	2164	2324	2388	2448	2473	2518	2517	2560	2583
Current account surplus	-209	-441	-885	-1004	-331	-650	-548	-571	-904	-1022	-1042	-1060	-987	-973	-994	-996
Gross investment	123	134	148	152	129	138	144	148	146	148	149	151	151	152	154	155
Gross saving less gross investment <sup>3</sup>	-221	-459	-910	-1026	-344	-671	-572	-598	-928	-1046	-1066	-1084	-1010	-995	-1015	-1017
<b>Fiscal indicators<sup>4</sup></b>																
High-employment (HEB) surplus/deficit	-225	-429	-694	-713	-325	-643	-507	-465	-734	-798	-779	-778	-694	-679	-702	-712
Change in HEB, percent of potential GDP	-0.3	1.3	1.6	-0.0	0.6	2.2	-1.0	-0.3	1.8	0.4	-0.2	-0.0	-0.6	-0.1	0.1	0.0
Fiscal impetus (FI), percent of GDP	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
<i>Previous</i>	0.2	0.8	0.6	0.7	0.1	0.5	0.7	-0.3	0.0	0.4	0.1	0.1	0.3	0.1	0.1	0.1

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

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

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

4. HEB is gross saving less gross investment (NIPA) of the federal government in current dollars, with cyclically sensitive receipts and outlays adjusted to the staff's measure of potential output and the NAIRU. Quarterly figures for change in HEB and FI are not at annual rates. The sign on Change in HEB, as a percent of nominal potential GDP, is reversed. FI is the weighted difference of discretionary changes in federal spending and taxes in chained (2000) dollars, scaled by real GDP. The annual FI estimates are on a calendar year basis. Also, for FI and the change in HEB, positive values indicate aggregate demand stimulus.

a--Actual

**Class II FOMC Restricted (FR)**      **Change in Debt of the Domestic Nonfinancial Sectors**      **January 22, 2009**  
(Percent)

Period <sup>1</sup>	Total	Households			Business	State and local governments	Federal government	Memo: Nominal GDP
		Total	Home mortgages	Consumer credit				
<i>Year</i>								
2003	8.1	11.6	14.2	5.2	2.5	8.3	10.9	5.9
2004	8.9	11.1	13.6	5.5	6.2	7.4	9.0	6.5
2005	9.5	11.0	13.2	4.3	8.7	10.2	7.0	6.3
2006	9.0	10.2	11.2	4.5	10.5	8.1	3.9	5.3
2007	8.6	6.8	6.8	5.5	13.1	9.3	4.9	4.9
2008	5.7	.1	-7	1.6	5.0	2.1	24.2	1.9
2009	5.0	-1.1	-1.4	-1.3	2.7	5.2	22.2	.7
2010	4.7	1.4	.6	3.5	3.2	4.6	12.6	3.6
<i>Quarter</i>								
2008:1	5.3	3.2	2.6	4.7	7.1	3.4	8.1	3.5
2	3.1	.6	-1	3.9	5.5	.9	5.9	4.1
3	7.7	-7	-2.5	1.2	4.1	3.0	39.2	3.4
4	6.4	-2.7	-2.9	-3.4	2.8	1.0	37.0	-3.3
2009:1	4.6	-2.7	-2.8	-4.0	2.2	4.9	24.5	-4.3
2	6.4	-1.3	-1.5	-1.8	2.7	5.3	28.4	1.0
3	3.4	-5	-8	-2	2.9	5.0	11.1	3.2
4	5.3	.1	-3	.9	2.9	5.0	18.6	3.2
2010:1	3.9	.6	-1	2.0	3.2	4.7	10.6	3.2
2	4.6	1.0	.2	3.2	3.2	4.7	12.9	3.4
3	4.6	1.6	.7	4.1	3.0	4.4	11.7	3.6
4	5.2	2.4	1.6	4.6	3.1	4.4	13.0	4.0

Note. Quarterly data are at seasonally adjusted annual rates.

1. Data after 2008:Q3 are staff projections. Changes are measured from end of the preceding period to end of period indicated except for annual nominal GDP growth, which is calculated from Q4 to Q4.

2.6.3 FOF

**Class II FOMC  
Restricted (FR)**

**Flow of Funds Projections: Highlights**

January 22, 2009

(Billions of dollars at seasonally adjusted annual rates except as noted)

Category	2007	2008			2009			2010						
		2008	2009	2010	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
<i>Domestic nonfinancial sectors</i>														
Net funds raised														
Total	1692.4	1405.8	1495.5	1500.1	2052.4	1667.6	1323.2	1956.2	1022.7	1679.9	1236.3	1507.9	1499.2	1757.2
Net equity issuance	-831.2	-417.3	-185.0	-140.0	-447.7	-450.0	-220.0	-200.0	-160.0	-160.0	-140.0	-140.0	-140.0	-140.0
Net debt issuance	2523.6	1823.2	1680.5	1640.1	2500.1	2117.6	1543.2	2156.2	1182.7	1839.9	1376.3	1647.9	1639.2	1897.2
<i>Borrowing indicators</i>														
Debt (percent of GDP) <sup>1</sup>	220.6	228.4	241.4	245.1	226.9	232.8	238.7	241.3	242.4	243.1	243.9	244.5	245.1	245.7
Borrowing (percent of GDP)	18.3	12.8	11.8	11.2	17.3	14.8	10.9	15.2	8.3	12.8	9.5	11.3	11.1	12.7
<i>Households</i>														
Net borrowing <sup>2</sup>	876.4	12.6	-150.2	187.6	-92.1	-370.1	-372.3	-181.1	-64.1	16.6	76.2	136.4	213.3	324.5
Home mortgages	674.6	-75.9	-142.9	61.4	-260.3	-307.1	-292.9	-160.6	-85.0	-33.1	-9.4	18.9	70.9	165.4
Consumer credit	133.6	40.1	-33.1	89.8	30.5	-90.0	-104.4	-45.5	-5.0	22.7	50.6	81.6	105.5	121.7
Debt/DPI (percent) <sup>3</sup>	131.5	129.8	126.1	122.7	130.3	130.1	127.7	125.8	125.1	124.4	123.4	122.7	122.0	121.6
<i>Business</i>														
Financing gap <sup>4</sup>	185.6	180.4	6.4	68.4	129.2	105.2	-2.5	12.6	1.6	14.1	107.1	70.1	42.3	54.3
Net equity issuance	-831.2	-417.3	-185.0	-140.0	-447.7	-450.0	-220.0	-200.0	-160.0	-160.0	-140.0	-140.0	-140.0	-140.0
Credit market borrowing	1224.2	525.2	300.8	362.3	446.9	309.9	245.5	301.6	331.6	324.5	363.5	372.0	351.5	362.3
<i>State and local governments</i>														
Net borrowing	185.9	46.1	115.4	109.1	66.8	22.6	110.6	119.6	115.6	115.6	111.6	111.6	106.6	106.6
Current surplus <sup>5</sup>	246.6	157.9	173.7	167.2	153.1	108.3	197.1	171.0	165.0	161.7	167.3	163.9	168.1	169.5
<i>Federal government</i>														
Net borrowing	237.1	1239.2	1414.5	981.1	2078.5	2155.2	1559.4	1916.1	799.6	1383.1	825.0	1027.8	967.8	1103.8
Net borrowing (n.s.a.)	237.1	1239.2	1414.5	981.1	526.5	560.9	486.9	353.0	206.8	367.9	303.3	130.9	248.8	298.0
Unified deficit (n.s.a.)	187.9	833.2	1684.2	963.1	168.9	485.2	553.4	387.3	365.2	378.4	313.8	106.4	234.3	308.5
<i>Depository institutions</i>														
Funds supplied	851.7	220.9	238.3	427.7	537.3	-621.9	-78.3	133.8	461.4	436.3	382.5	560.8	457.6	309.8

Note. Data after 2008:Q3 are staff projections.

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

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

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

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

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

n.s.a. Not seasonally adjusted.

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## International Developments

With indicators of foreign activity continuing to come in weaker than expected, we now estimate that foreign real gross domestic product (GDP) contracted 3¾ percent at an annual rate in the fourth quarter. The near-term outlook also has deteriorated since the December Greenbook, and we project that foreign GDP will decline a further 1¾ percent at an annual rate in the first half of this year. Thereafter activity should begin to recover, in line with projected improvement in credit market conditions, the rebound in U.S. GDP growth, and further monetary and fiscal stimulus abroad. However, even with the projected foreign recovery, we expect net exports to subtract from U.S. GDP growth for most of the forecast period, as U.S. import growth responds to the projected recovery in the U.S. economy.

The slowing pace of global activity has continued to put downward pressure on consumer prices and prices for globally traded commodities. We now estimate that foreign consumer prices declined about 1 percent at an annual rate in the fourth quarter. We forecast that headline foreign consumer price inflation will turn positive again this year -- to rates that are slightly lower than our previous forecast.

### Summary of Staff Projections

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

Indicator	2008		Projection				
	H1	Q3	2008: Q4	2009			2010
				Q1	Q2	H2	
Foreign output	1.8	.7	-3.7	-2.7	-.7	1.5	2.8
Previous Greenbook	1.8	.7	-1.6	-1.2	.1	1.5	2.8
Foreign consumer prices	5.1	4.5	-1.1	-.8	1.3	1.7	2.0
Previous Greenbook	5.1	4.4	-.1	.4	1.4	1.8	2.0
	Contribution to growth (percentage points)						
U.S. net exports	1.8	1.1	-.1	1.2	-.1	-.8	-.5
Previous Greenbook	1.8	1.1	.4	.9	.1	-.5	-.4

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

Our key conditioning assumptions for the dollar and for international commodity prices have not changed appreciably. The starting point for our projected path for the broad

real dollar is a little higher than in the last Greenbook, and we continue to project a slight decline. Amid considerable volatility, the spot price of West Texas intermediate (WTI) crude oil has declined a bit further since the time of the December Greenbook. However, we project oil prices to rise over the forecast period, consistent with futures market quotes. Indexes of spot and futures prices for most nonfuel primary commodities are little changed on net.

We estimate that core goods import prices declined at a 9 percent annual rate in the fourth quarter and project that they will continue to decline sharply in the current quarter, before leveling out in the second half of 2009 and then rising a bit in 2010.

We estimate that the contribution of net exports to real GDP growth in the fourth quarter was roughly neutral (about ½ percentage point lower than projected in the December Greenbook). Exports and imports both declined sharply in October and November. For the first half of 2009, we expect net exports to contribute just above ½ percentage point to GDP growth, as protracted weakness in U.S. economic activity continues to depress import growth, more than offsetting the negative impact of a continued decline in exports. Thereafter, we expect net exports to subtract about ½ percentage point from GDP growth, little changed from the December Greenbook.

### **International Financial Markets**

In the wake of a variety of government efforts over the past several months to foster market liquidity and support banks, conditions in foreign funding markets have eased somewhat. At auctions conducted by foreign central banks, demand for dollar funding has receded somewhat from its December highs. Credit default swap premiums and near-term Libor-OIS spreads in euro and sterling have narrowed.

Foreign equity prices increased through early January, but concerns over the stability of the global banking system heightened in mid-January, contributing to substantial and widespread net declines in share price indexes since the December Greenbook. Amid bad news about financial institutions' balance sheets and deteriorating prospects, bank stock prices generally have fallen more than the broader indexes. Bank share price declines have been particularly acute in the United Kingdom, where the Royal Bank of Scotland Group warned that it would recognize significant impairment losses. Foreign governments have announced several new efforts to ease credit and funding conditions, including an Asset Protection Scheme announced January 19 by the United Kingdom, in

which the government would assume exposure to losses on particular pools of bank assets.

The dollar fell sharply against major foreign currencies after the Federal Open Market Committee cut its target for the federal funds rate in December. However, the dollar subsequently erased this move as a worsening economic outlook and declining inflationary pressures prompted policy easing by a number of foreign central banks. The European Central Bank, the Bank of England, and the Bank of Canada cut policy rates earlier this month, as did the Bank of Japan in late December. The major currencies index is now about ½ percent higher than at the time of the December forecast. The dollar has also increased by about the same amount against the currencies of our other important trading partners. Consistent with easing monetary policy and declining inflation, long-term sovereign bond yields in major industrial economies have dropped sharply.

Overall, the broad real index of the dollar is slightly higher than at the time of the December forecast. The staff and the market have revised down their expectations of foreign policy rates by about the same amount, and as a result, the projected path for slow depreciation of the broad real dollar over the next two years is little changed.

### **Advanced Foreign Economies**

We estimate that real GDP in the advanced foreign economies contracted at an annual rate of about 2½ percent in the fourth quarter. Recent indicators continue to be uniformly grim. The Japanese economy has been particularly hard-hit, with industrial production, exports, and household earnings all registering large declines. Compared with the December Greenbook, our estimate for fourth-quarter growth is about ½ percentage point lower, reflecting downward revisions across the major foreign economies.

We project that activity will contract a further 3¼ percent at an annual rate in the current quarter, as a result of widespread weakness in the advanced foreign economies. Output is projected to continue to fall in the second quarter, before bottoming out later this year and recovering gradually through 2010, reaching an annual growth rate of about 2¼ percent by the end of the forecast period. This recovery is conditioned on improving financial conditions, a return to positive growth in U.S. GDP, and monetary and fiscal stimulus. Compared with the December Greenbook, our outlook for growth is about 1 percentage point lower in the first quarter of 2009 and ½ percentage point lower in the second quarter.



Falling commodity prices and weak activity led to outright declines in headline consumer prices in the advanced foreign economies in the fourth quarter. Consumer prices should bottom out early this year and start moving back up slowly thereafter. Nevertheless, four-quarter inflation should continue moving down until the third quarter of this year, when it turns briefly negative. Inflation subsequently rises to 1¼ percent by the end of 2010. We project that consumer prices in Japan will decline throughout the forecast period. The outlook for inflation in 2009 is down a bit from the December Greenbook, mainly as a result of greater economic slack.

In light of the deteriorating economic conditions and decelerating consumer prices, our projection incorporates more monetary policy accommodation in the advanced foreign economies than in the December forecast. In particular, we assume that, by the second quarter of 2009, policy rates will fall to 1 percent in the euro area, ¾ percent in the United Kingdom, and ½ percent in Canada. We also anticipate further announcements of additional fiscal measures, with fiscal stimulus expected to add almost ½ percentage point to GDP growth in the advanced foreign economies in late 2009 and 2010. The possibility of more sizable packages continues to be an upside risk to our outlook.

### **Emerging Market Economies**

We estimate that real GDP fell at a 5 percent pace in the fourth quarter in the emerging market economies, a much sharper decline than projected in the December Greenbook. Both exports and imports across much of the developing world plummeted, manufacturing Purchasing Managers' Indexes for December sank to very low levels, and consumer confidence indicators were abysmal.

The weakness was particularly pronounced in emerging Asia, which was hit by the recession in advanced countries and by continued financial stresses. Real GDP was flat in China in the fourth quarter, plunged 20 percent in Korea, and fell a reported 16 percent in Singapore. Output in Mexico and Brazil also appears to have fallen in the fourth quarter, with Mexican activity hampered by weak U.S. demand and by troubles in the auto industry. So far in January, indicators and anecdotal reports point to a steeper contraction in the emerging economies in the current quarter than we had anticipated previously. By the end of the year, growth is projected to recover to about a 3 percent pace, and we forecast that it will increase to 4¾ percent by the end of 2010. This recovery will be supported by the pickup in the United States, the easing of financial stresses, and policy stimulus. Monetary policy has been eased recently across most of emerging Asia and Latin America.

Given the weaker-than-expected data and lower path for economic activity, we have also revised down our outlook for consumer prices. We now expect four-quarter inflation in the emerging market economies to drop to 3 percent this quarter and to 1 percent by the third quarter, before picking up to about 2¾ percent by late 2010. The near-term decrease in inflation is largely driven by emerging Asia, which has seen some outright declines in consumer prices, generally reflecting weaker activity and lower prices for food and other commodities. In Mexico and Brazil, inflation pressures have lessened but are still present.

### **Commodity Prices**

The spot price of West Texas intermediate (WTI) crude oil dipped to a five-year low of \$30 per barrel in mid-December before rebounding sharply to almost \$50 by the first week of January. The spot price of WTI has subsequently fallen back to close on January 21 at \$42.25 per barrel, about \$1.50 lower than at the time of the December Greenbook. Futures prices declined more sharply, with the price of the December 2017 contract closing nearly \$12 lower than six weeks earlier. Given the path of futures prices, our current projection has the price of WTI crude oil rising to about \$60 per barrel at the end of next year. Relative to the December Greenbook, this projection is \$4.50 lower, on average, this year and \$5.50 lower in 2010.

The decline in oil prices since the time of the December Greenbook appears to reflect continued weakening of global oil demand, which has more than offset upward pressure from other developments, such as heightened geopolitical tensions in the Middle East, disruptions to European natural gas shipments stemming from the pipeline dispute between Russia and Ukraine, and numerous analyst reports of reduced oil shipments from OPEC countries.

Nonfuel commodity prices declined at an annual rate of 71 percent in the fourth quarter of 2008, and we project a further decline of 23 percent in the current quarter. However, spot prices have stabilized recently, and futures markets point to small increases in subsequent quarters. Both the current level and projected path of nonfuel commodity prices are little changed from the December Greenbook.

### **Prices of Internationally Traded Goods**

With some data now in hand for November and December, we estimate that core import prices fell at an annual rate of 9 percent in the fourth quarter, 2 percentage points more than was projected in the previous Greenbook. The decline was primarily due to lower prices for metals, chemicals, and, to a lesser extent, foods. In contrast, prices of imported finished

goods were little changed. We project that core import prices will decline at a 9½ percent pace in the current quarter, mainly reflecting the lagged effects of declines in commodity prices and the appreciation of the dollar in late 2008. Core import prices are projected to fall at a more modest pace in the second quarter before bottoming out and rising gradually in 2010.

### Staff Projections of Selected Trade Prices

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

Trade category	2008		Projection				
	H1	Q3	2008: Q4	2009			2010
				Q1	Q2	H2	
<i>Imports</i>							
Core goods	9.5	4.6	-9.0	-9.4	-3.0	-.1	1.3
Previous Greenbook	9.5	4.6	-7.0	-8.5	-2.4	.1	1.3
Oil (dollars per barrel)	108.65	117.49	68.52	45.55	44.56	48.60	54.82
Previous Greenbook	108.65	117.53	68.09	43.81	47.92	52.64	61.12
<i>Exports</i>							
Core goods	13.0	6.6	-19.0	-12.9	-2.9	.5	1.1
Previous Greenbook	13.0	6.7	-13.5	-8.6	-2.1	.6	.9

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.

Core export prices registered their largest one-quarter decline in over 40 years, falling an estimated 19 percent at an annual rate in the fourth quarter, on account of the sharp declines in commodity prices. We project that core export prices will move down 13 percent in the current quarter but only 3 percent in the second quarter of 2009, given slowing declines in some commodity prices. Thereafter, core export price inflation is projected to average under 1 percent. Compared with the previous Greenbook, data for November and December have led us to decrease our estimate for core export price inflation in the fourth quarter by about 5½ percentage points. We have also marked down our forecast of core export price inflation in the current quarter by about 4¼ percentage points, with lower projected prices for petroleum products, intermediate goods, and other commodities.

### Trade in Goods and Services

Based on weak incoming data for October and November, we now estimate that real exports of goods and services plunged nearly 20 percent (annual rate) in the fourth quarter, about 16 percentage points worse than projected in the December Greenbook. For the first half of 2009, we expect exports to decline at an average pace of about 4 percent, reflecting the dismal pace of foreign activity. We currently expect real exports to bottom out in the second half of 2009 and then expand at a 2½ percent pace in 2010, as the recovery in foreign GDP growth more than offsets some drag from the recent appreciation of the dollar. Relative to the previous Greenbook, our export growth projection for the current quarter is about 3 percentage points weaker.

**Staff Projections for  
Trade in Goods and Services**  
(Percent change from end of previous period, annual rate)

Measure	2008		Projection				
	H1	Q3	2008: Q4	2009			2010
				Q1	Q2	H2	
Real imports	-4.1	-3.5	-15.4	-11.7	-1.9	5.8	5.4
Previous Greenbook	-4.1	-3.2	-5.2	-7.4	-3.7	3.7	4.9
Real exports	8.6	3.0	-19.9	-5.1	-2.7	-.1	2.4
Previous Greenbook	8.6	3.4	-4.1	-2.2	-3.2	.1	2.6

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

We estimate that real imports of goods and services decreased at an annual rate of 15½ percent in the fourth quarter. Our estimate is about 10 percentage points lower than our projection in the December Greenbook, mostly as a result of surprisingly weak imports in November. We expect imports to decrease at an average annual rate of about 7 percent in the first half of this year, mainly reflecting weak U.S. demand, before shifting to positive growth thereafter alongside the projected recovery of the U.S. economy. We revised down our projection for import growth in the first half of 2009 slightly, in part because of lower projected imports of automotive products, reflecting cutbacks in motor vehicle production schedules. For the rest of the forecast period, our projection is a little stronger, mostly reflecting the higher projected path for U.S. growth.

### Alternative Simulations

Our baseline forecast for major U.S. trading partners already incorporates the effects of fiscal stimulus measures that we believe are likely to be implemented over the forecast

period. However, this assumed level of fiscal stimulus is considerably smaller as a share of GDP than that projected for the United States. Given the possibility that foreign countries may adopt larger fiscal stimulus packages than assumed in the baseline forecast, our first alternative simulation uses the FRB/Global model to examine the effects of more aggressive fiscal expansion abroad. Similarly, in addition to the considerable monetary easing already embedded in our baseline forecast, we examine the effects of even larger cuts in foreign policy rates in a second alternative scenario.

**More expansionary fiscal policy abroad.** In this scenario, the autonomous component of government spending in all major foreign countries is boosted by three percent of baseline GDP over a three-year period beginning in the first quarter of 2009. U.S. real net exports rise because foreign demand increases relative to baseline and because the dollar depreciates as our foreign trading partners raise interest rates. As a result, U.S. real GDP growth rises nearly 0.2 percentage point above baseline in 2009 and 0.5 percentage point in 2010. Core personal consumption expenditures (PCE) inflation rises noticeably above baseline in 2009 in response to the depreciation of the dollar, and it remains elevated thereafter due to the stronger path for U.S. activity. The stimulative effects of the foreign demand shock on U.S. activity and prices are amplified relative to a situation in which monetary policy is not constrained by the zero lower bound. Because U.S. policy rates in the baseline are already higher than would be suggested by an unconstrained Taylor rule, the expansion of output and pickup in inflation in the alternative simulation do not prompt an increase in the policy rate until the second half of 2011. After some initial deterioration due to J-curve effects, the U.S. trade balance improves by 0.8 percent of GDP by 2013.

**More expansionary monetary policy abroad.** In this scenario, we assume that most of our major foreign trading partners, both in industrial and emerging market economies, reduce policy rates to 100 basis points below baseline throughout 2009. However, the declines in Japan, Canada, and the United Kingdom are smaller because of the zero-bound constraint on nominal interest rates. Lower foreign policy rates boost foreign activity substantially but also cause the dollar to appreciate. On balance, U.S. net exports and thus GDP are virtually unaffected by the shock. However, it is possible that foreign monetary policy could have considerably larger stimulative effects on the United States through channels not captured by our simulation model, such as a substantial fall in global risk spreads or improved business confidence.

**Alternative Scenarios:**  
**More Expansionary Fiscal and Monetary Policies Abroad**  
 (Percent change from previous period, annual rate, except as noted)

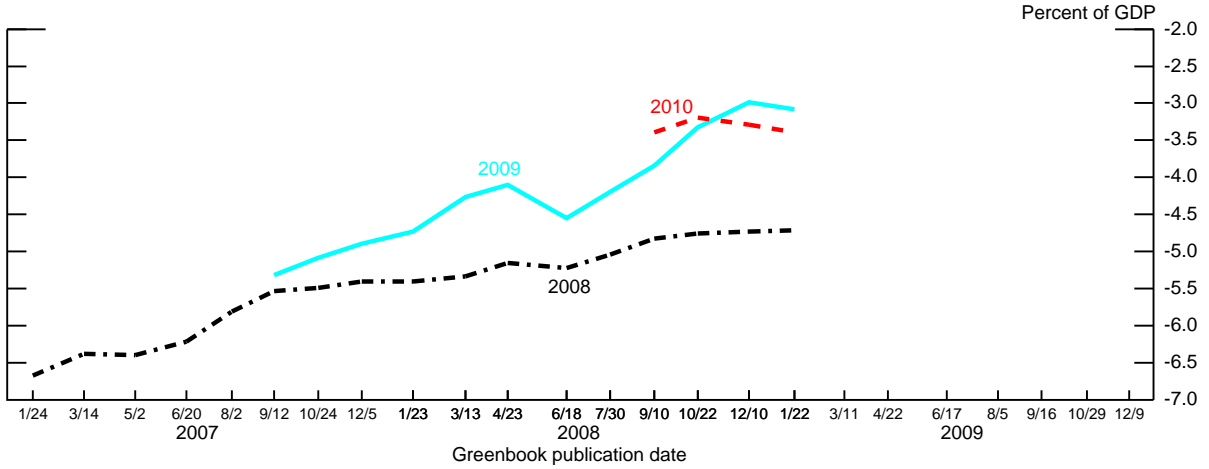
Indicator and simulation	2009		2010		2011	2012-13
	H1	H2	H1	H2		
<i>U.S. real GDP</i>						
Baseline	-3.5	2.0	2.3	2.9	4.9	5.1
Larger Fiscal Stimulus Abroad	-3.4	2.2	2.7	3.5	5.7	5.3
Larger Monetary Stimulus Abroad	-3.5	2.0	2.3	2.9	4.9	5.0
<i>U.S. PCE prices excluding food and energy</i>						
Baseline	1.2	0.9	0.8	0.8	0.7	0.7
Larger Fiscal Stimulus Abroad	1.2	1.1	1.1	1.1	1.0	1.1
Larger Monetary Stimulus Abroad	1.2	0.9	0.9	0.9	0.6	0.7
<i>U.S. federal funds rate (percent)</i>						
Baseline	0.1	0.1	0.1	0.1	0.1	1.2
Larger Fiscal Stimulus Abroad	0.1	0.1	0.1	0.1	0.5	3.1
Larger Monetary Stimulus Abroad	0.1	0.1	0.1	0.1	0.1	1.1
<i>U.S. trade balance (percent share of GDP)</i>						
Baseline	-2.5	-2.7	-3.2	-3.4	-3.7	-4.2
Larger Fiscal Stimulus Abroad	-2.6	-3.0	-3.4	-3.5	-3.4	-3.4
Larger Monetary Stimulus Abroad	-2.5	-2.7	-3.3	-3.4	-3.6	-4.5

Note: H1 is Q2/Q4; H2 is Q4/Q2. U.S. real Gross Domestic Product and U.S. Personal Consumption Expenditures (PCE) prices are the average rates over the period. The federal funds rate and the trade balance are the values for the final quarter of the period.

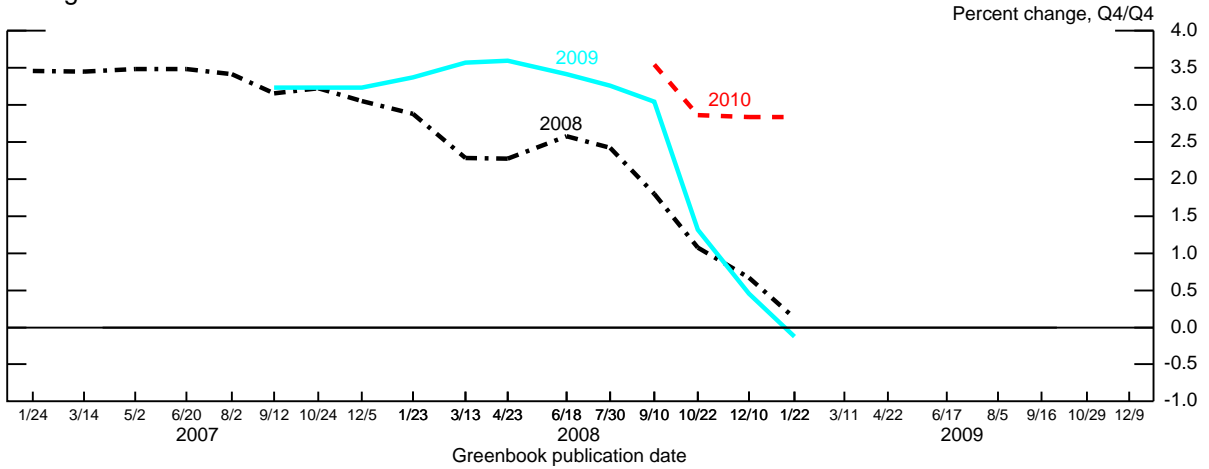
Class II FOMC -- Restricted (FR)

### Evolution of the Staff Forecast

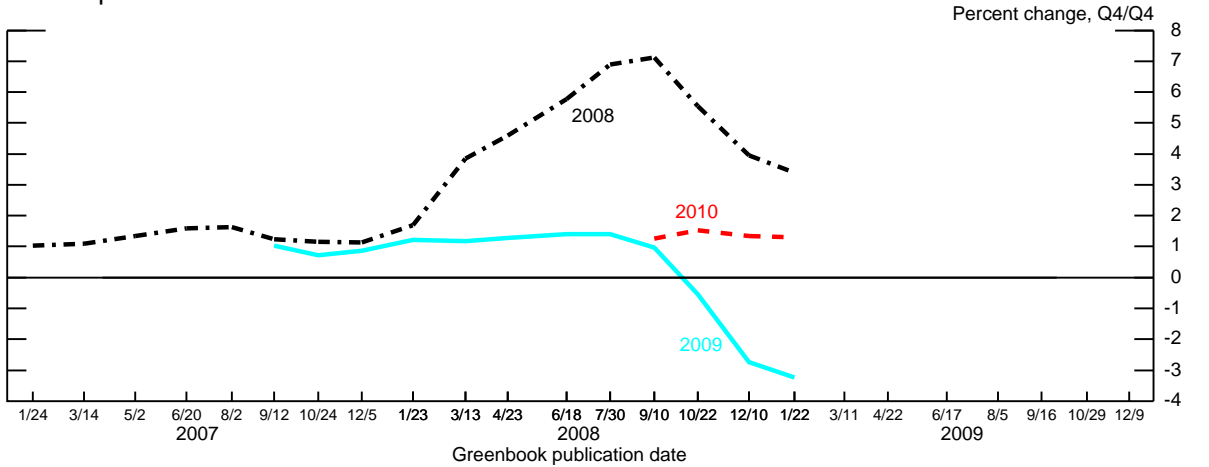
Current Account Balance



Foreign Real GDP



Core Import Prices\*



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

OUTLOOK FOR FOREIGN REAL GDP AND CONSUMER PRICES: SELECTED COUNTRIES  
(Percent changes)

Measure and country	2008				2009				Projected			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
REAL GDP (1)	----- Quarterly changes at an annual rate -----											
Total Foreign	2.3	1.3	0.7	-3.7	-2.7	-0.7	1.2	1.8	2.3	2.7	3.1	3.3
Advanced Foreign Economies	1.0	-0.3	-0.1	-2.6	-3.3	-1.9	0.3	1.0	1.4	1.8	2.1	2.2
of which:												
Canada	-0.6	0.6	1.3	-2.4	-4.4	-2.8	0.3	1.1	1.6	2.0	2.2	2.4
Japan	2.4	-3.7	-1.8	-5.2	-3.7	-1.5	-0.3	0.4	0.9	1.1	1.2	1.2
United Kingdom	1.5	0.0	-2.6	-2.9	-2.7	-1.7	-0.3	1.7	0.7	1.4	2.3	2.5
Euro Area (2)	2.7	-0.7	-0.7	-2.0	-2.0	-1.0	0.5	0.9	1.4	1.8	2.1	2.1
Germany	5.7	-1.7	-2.1	-2.1	-2.1	-1.0	0.4	0.9	1.4	1.8	2.0	2.1
Emerging Market Economies	4.0	3.4	1.7	-5.0	-1.9	0.8	2.4	2.9	3.4	4.0	4.4	4.7
Asia	7.8	3.9	0.3	-6.5	-0.8	1.8	4.0	4.6	5.3	5.7	5.9	6.0
Korea	3.3	3.4	2.1	-20.8	-6.0	-4.0	2.5	3.3	3.8	4.1	4.2	4.3
China	11.3	10.8	5.4	0.3	4.0	6.5	7.3	7.8	8.5	8.9	9.0	9.0
Latin America	-0.1	2.6	3.1	-4.1	-3.5	-0.4	0.7	1.1	1.5	2.3	2.9	3.3
Mexico	-0.8	0.8	2.6	-5.0	-4.0	-1.0	0.2	0.6	1.0	2.0	2.7	3.2
Brazil	6.9	6.4	7.4	-4.5	-3.0	2.0	2.5	2.7	3.0	3.2	3.5	3.5
CONSUMER PRICES (3)	----- Four-quarter changes -----											
Total Foreign	4.1	4.7	4.8	3.4	2.0	0.9	0.2	1.0	1.7	1.9	1.9	2.0
Advanced Foreign Economies	2.2	2.7	3.4	2.2	1.0	0.2	-0.5	0.2	1.1	1.3	1.3	1.3
of which:												
Canada	1.8	2.3	3.4	2.2	1.3	-0.1	-1.1	-0.1	0.8	1.3	1.5	1.5
Japan	1.0	1.4	2.2	1.2	-0.1	-0.9	-1.9	-1.5	-0.6	-0.3	-0.3	-0.3
United Kingdom (4)	2.4	3.4	4.8	3.9	2.6	1.4	0.1	0.6	2.4	2.4	2.5	2.4
Euro Area (2)	3.4	3.6	3.8	2.3	1.1	1.0	0.7	1.5	2.2	2.0	1.9	1.9
Germany	3.1	3.0	3.3	1.7	0.9	0.8	0.4	0.9	1.3	1.2	1.2	1.4
Emerging Market Economies	5.9	6.7	6.2	4.6	2.9	1.7	1.0	1.7	2.3	2.4	2.6	2.7
Asia	6.5	7.1	6.1	3.6	1.2	-0.1	-0.6	0.8	1.7	2.0	2.2	2.4
Korea	3.8	4.8	5.5	4.5	4.0	2.4	1.6	1.7	1.7	1.7	1.7	1.7
China	8.0	7.8	5.2	2.5	-0.5	-1.3	-1.1	0.4	1.5	1.9	2.2	2.4
Latin America	4.5	5.5	6.1	6.6	6.4	5.4	4.5	3.7	3.4	3.3	3.3	3.3
Mexico	3.9	4.9	5.5	6.2	6.2	5.2	4.3	3.3	2.9	2.9	2.8	2.8
Brazil	4.6	5.5	6.3	6.2	5.6	4.9	4.2	4.2	4.2	4.2	4.2	4.2

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.



January 22, 2009

Class II FOMC  
Restricted (FR)OUTLOOK FOR FOREIGN REAL GDP AND CONSUMER PRICES: SELECTED COUNTRIES  
(Percent, Q4 to Q4)

Measure and country	2002	2003	2004	2005	2006	2007	2008	2009	2010
REAL GDP (1)									
-----									
Total Foreign	3.0	2.9	3.8	4.0	4.0	4.2	0.1	-0.1	2.8
Advanced Foreign Economies	2.5	1.8	2.6	2.7	2.7	2.6	-0.5	-1.0	1.9
of which:									
Canada	3.5	1.5	3.7	3.0	2.2	2.8	-0.3	-1.5	2.1
Japan	2.1	2.4	1.1	2.9	2.1	2.0	-2.1	-1.3	1.1
United Kingdom	2.4	3.2	2.3	2.0	3.2	3.0	-1.0	-0.8	1.7
Euro Area (2)	1.1	1.2	1.8	2.1	3.3	2.1	-0.2	-0.4	1.9
Germany	0.0	0.2	0.2	1.6	4.1	1.7	-0.1	-0.5	1.8
Emerging Market Economies	3.9	4.5	5.5	5.8	5.7	6.4	0.9	1.0	4.1
Asia	6.4	6.9	6.0	7.6	7.0	7.8	1.3	2.4	5.7
Korea	7.7	4.1	2.9	5.6	4.2	5.9	-3.6	-1.1	4.1
China	8.6	10.3	9.8	10.2	10.6	11.4	6.8	6.4	8.8
Latin America	1.6	1.8	5.0	4.0	4.4	4.8	0.3	-0.6	2.5
Mexico	2.0	1.3	4.4	3.4	3.7	4.2	-0.6	-1.1	2.2
Brazil	4.9	1.0	4.7	3.6	4.6	6.1	3.9	1.0	3.3
CONSUMER PRICES (3)									
-----									
Total Foreign	2.5	2.1	2.8	2.3	2.1	3.6	3.4	1.0	2.0
Advanced Foreign Economies	2.1	1.3	1.8	1.6	1.4	2.2	2.2	0.2	1.3
of which:									
Canada	3.8	1.7	2.3	2.3	1.3	2.4	2.2	-0.1	1.5
Japan	-0.5	-0.3	0.5	-1.0	0.3	0.5	1.2	-1.5	-0.3
United Kingdom (4)	1.5	1.3	1.4	2.1	2.7	2.1	3.9	0.6	2.4
Euro Area (2)	2.3	2.0	2.3	2.3	1.8	2.9	2.3	1.5	1.9
Germany	1.2	1.1	2.1	2.2	1.3	3.1	1.7	0.9	1.4
Emerging Market Economies	2.9	3.1	3.9	3.0	2.9	5.1	4.6	1.7	2.7
Asia	0.8	2.3	3.1	2.6	2.3	5.4	3.6	0.8	2.4
Korea	3.4	3.5	3.4	2.5	2.1	3.4	4.5	1.7	1.7
China	-0.6	2.7	3.2	1.4	2.1	6.6	2.5	0.4	2.4
Latin America	6.4	4.9	5.6	3.8	4.1	4.3	6.6	3.7	3.3
Mexico	5.2	3.9	5.3	3.1	4.1	3.8	6.2	3.3	2.8
Brazil	10.7	11.5	7.2	6.1	3.2	4.3	6.2	4.2	4.2

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.

OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

	2002	2003	2004	2005	2006	2007	2008	Projected 2009	2010
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	1.1	-0.1	-0.5
Exports of G&S	0.4	0.6	0.7	0.7	1.1	1.0	-0.1	-0.3	0.3
Imports of G&S	-1.3	-0.7	-1.7	-0.8	-0.6	-0.2	1.2	0.1	-0.8
Percentage change, Q4/Q4									
Exports of G&S	3.8	5.8	7.4	7.0	10.1	8.9	-0.7	-2.1	2.4
Services	10.2	3.0	8.3	4.0	11.5	9.3	1.7	-4.4	2.6
Computers	-1.1	11.3	5.8	14.2	8.1	0.9	-2.5	-2.4	9.5
Semiconductors	10.1	38.3	-6.0	17.6	2.9	29.3	-6.1	-1.7	11.0
Core Goods 1/	0.6	4.9	8.0	7.4	10.0	8.2	-1.6	-0.8	1.8
Imports of G&S	9.7	4.8	11.5	4.8	3.8	1.1	-6.9	-0.8	5.4
Services	8.8	2.2	9.3	-0.1	8.0	1.8	0.6	1.7	3.3
Oil	3.8	1.2	10.8	1.0	-9.2	0.6	-4.0	-6.7	1.8
Natural Gas	19.5	1.3	4.9	13.7	-12.6	12.1	-26.3	11.1	5.2
Computers	13.2	17.0	23.2	12.5	13.8	8.4	-8.1	-1.7	15.5
Semiconductors	11.0	-0.1	9.8	7.5	-0.3	3.8	-6.7	-2.4	5.0
Core Goods 2/	10.0	5.2	11.4	5.9	5.7	0.1	-8.9	-0.7	6.1
Billions of Chained 2000 Dollars									
Net Goods & Services	-471.3	-518.9	-593.8	-616.6	-615.7	-546.5	-388.8	-340.5	-415.9
Exports of G&S	1013.3	1026.1	1126.1	1205.3	1314.8	1425.9	1518.4	1444.2	1460.7
Imports of G&S	1484.6	1545.0	1719.9	1821.9	1930.5	1972.4	1907.2	1784.8	1876.6
Billions of dollars									
US CURRENT ACCOUNT BALANCE	-461.3	-523.4	-625.0	-729.0	-788.1	-731.2	-673.3	-439.1	-498.7
Current Acct as Percent of GDP	-4.4	-4.8	-5.3	-5.9	-6.0	-5.3	-4.7	-3.1	-3.4
Net Goods & Services (BOP)	-423.7	-496.9	-607.7	-711.6	-753.3	-700.3	-658.9	-372.6	-482.8
Investment Income, Net	33.0	51.0	73.4	78.8	63.8	88.8	113.4	59.0	107.7
Direct, Net	102.4	112.7	150.9	173.2	184.1	233.9	251.9	173.6	190.8
Portfolio, Net	-69.4	-61.7	-77.5	-94.4	-120.3	-145.1	-138.5	-114.6	-83.0
Other Income & Transfers, Net	-70.5	-77.5	-90.6	-96.2	-98.6	-119.7	-127.7	-125.5	-123.6

1. Merchandise exports excluding computers and semiconductors.  
2. Merchandise imports excluding oil, natural gas, computers, and semiconductors.

OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

	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
Services	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
Services	-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	1177.9	1203.1	1204.3	1235.7	1284.3	1301.4	1312.6	1361.1	1363.2	1392.2	1466.2	1482.1
Imports of G&S	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	-696.2	-711.3	-675.6	-832.9	-783.8	-799.6	-843.6	-725.4	-787.7	-776.4	-691.8	-669.0
Current Account as % of GDP	-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, 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
Portfolio, Net	-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

1. Merchandise exports excluding computers and semiconductors.

2. Merchandise imports excluding oil, natural gas, computers, and semiconductors.

OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

	2008				2009				Projected				2010			
	Q1	Q2	Q3	Q4	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	0.8	2.9	1.1	-0.1	1.2	-0.1	-0.6	-1.1	-1.0	0.0	-0.3	-0.8	-1.0	0.0	-0.3	-0.8
Exports of G&S	0.6	1.5	0.4	-2.9	-0.6	-0.3	-0.1	0.1	0.2	0.2	0.3	0.4	0.2	0.2	0.3	0.4
Imports of G&S	0.1	1.4	0.7	2.8	1.9	0.3	-0.5	-1.2	-1.2	-0.2	-0.6	-1.2	-1.2	-0.2	-0.6	-1.2
	Percentage change from previous period, s.a.a.r.															
Exports of G&S	5.1	12.3	3.0	-19.9	-5.1	-2.7	-1.0	0.7	1.4	2.1	2.8	3.4	1.4	2.1	2.8	3.4
Services	6.4	3.8	1.4	-4.3	-8.0	-5.7	-2.9	-1.0	0.3	2.0	3.6	4.7	0.3	2.0	3.6	4.7
Computers	0.4	57.4	5.4	-45.7	-9.6	-3.9	0.0	4.7	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Semiconductors	4.6	-6.8	21.3	-34.4	-7.8	-3.9	0.0	5.4	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Core Goods 1/	4.7	16.1	2.9	-25.0	-3.3	-1.1	-0.0	1.3	1.4	1.5	1.9	2.3	1.4	1.5	1.9	2.3
Imports of G&S	-0.8	-7.3	-3.5	-15.4	-11.7	-1.9	3.3	8.2	8.3	1.5	4.0	7.9	8.3	1.5	4.0	7.9
Services	5.5	-8.0	3.3	2.3	-3.7	2.6	4.9	3.4	6.7	-1.0	3.6	3.9	6.7	-1.0	3.6	3.9
Oil	17.6	-38.1	-6.6	24.8	-11.0	-27.0	-11.7	32.2	17.1	-24.5	-11.6	37.2	17.1	-24.5	-11.6	37.2
Natural Gas	-40.5	3.7	-38.0	-22.9	9.6	34.9	54.2	-33.1	29.1	20.2	24.8	-36.7	29.1	20.2	24.8	-36.7
Computers	6.3	26.0	-13.1	-38.7	-9.6	-3.9	0.0	7.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
Semiconductors	-3.3	14.4	-4.5	-28.4	-7.8	-3.9	0.0	2.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Core Goods 2/	-6.4	2.4	-2.5	-26.3	-14.5	0.9	4.9	7.4	6.8	6.1	5.8	5.6	6.8	6.1	5.8	5.6
	Billions of Chained 2000 Dollars, s.a.a.r.															
Net Goods & Services	-462.0	-381.3	-353.0	-358.9	-322.0	-323.6	-341.7	-374.8	-406.3	-405.7	-413.9	-437.7	-406.3	-405.7	-413.9	-437.7
Exports of G&S	1500.6	1544.7	1556.1	1472.0	1452.9	1442.8	1439.3	1441.8	1447.0	1454.4	1464.6	1476.9	1447.0	1454.4	1464.6	1476.9
Imports of G&S	1962.6	1926.0	1909.1	1830.9	1774.9	1766.5	1781.0	1816.7	1853.3	1860.1	1878.5	1914.6	1853.3	1860.1	1878.5	1914.6
	Billions of dollars, s.a.a.r.															
US CURRENT ACCOUNT BALANCE	-702.6	-723.8	-696.4	-570.5	-456.0	-422.3	-425.9	-452.3	-492.8	-485.3	-492.3	-524.5	-492.8	-485.3	-492.3	-524.5
Current Account as % of GDP	-5.0	-5.1	-4.8	-4.0	-3.2	-3.0	-3.0	-3.1	-3.4	-3.3	-3.3	-3.5	-3.4	-3.3	-3.3	-3.5
Net Goods & Services (BOP)	-708.4	-720.3	-706.1	-500.8	-356.2	-346.6	-371.3	-416.3	-463.4	-467.8	-483.0	-517.2	-463.4	-467.8	-483.0	-517.2
Investment Income, Net	140.0	119.8	130.5	63.2	33.8	47.2	68.2	86.9	93.5	105.4	113.6	118.5	93.5	105.4	113.6	118.5
Direct, Net	281.0	259.5	261.2	205.7	175.5	170.7	172.0	176.4	181.7	188.3	194.0	199.1	181.7	188.3	194.0	199.1
Portfolio, Net	-141.0	-139.7	-130.7	-142.5	-141.6	-123.5	-103.9	-89.6	-88.2	-82.9	-80.4	-80.6	-88.2	-82.9	-80.4	-80.6
Other Inc. & Transfers, Net	-134.2	-123.2	-120.8	-132.8	-133.6	-122.8	-122.8	-122.8	-122.8	-122.8	-122.8	-125.8	-122.8	-122.8	-122.8	-125.8

1. Merchandise exports excluding computers and semiconductors.  
2. Merchandise imports excluding oil, natural gas, computers, and semiconductors.