

## **Prefatory Note**

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

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

## **Part 1**

October 18, 2006

# CURRENT ECONOMIC AND FINANCIAL CONDITIONS

---

## **Summary and Outlook**

Class II FOMC - Restricted (FR)

---

October 18, 2006

## **Summary and Outlook**

---

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

## **Domestic Developments**

---

Real GDP over the second half of this year is projected to increase about 1½ percent at an annual rate—a pace just a little lower than in the September Greenbook. Although the contraction in residential construction remains a significant drag on overall economic activity, the decline suggested by recent data on housing activity has not, for a change, outrun our expectation. The latest indicators of consumer and business spending also have come in about as we had anticipated. Together with the recent declines in energy prices and continued respectable increases in payroll employment and labor income, those indicators suggest that consumer and business spending should increase through the end of the year at the moderate pace that we have been projecting for a while.

Although real GDP growth over the second half of the year is little changed, the incoming data suggest that growth during the third quarter ran at a 1 percent annual pace—significantly weaker than we had assumed previously. However, two of the key factors that held down growth in the third quarter—motor vehicle production and defense spending—are likely to be neutral or to provide a small plus for real GDP growth in the fourth quarter. Thus, we expect real output to rise at an annual rate of 2¼ percent in the fourth quarter—noticeably faster than in our previous projection.

As for the longer-term outlook, real GDP is projected to rise 2¼ percent in 2007 and 2½ percent in 2008 after increasing at an annual rate of 1½ percent in the second half of 2006. Taken together, household wealth, interest rates, and fiscal policy should provide less impetus to growth over the next two years than in 2006, but the restraining effects of the contraction in residential investment are expected to diminish. With the projected pace of output growth a little below our estimate of potential growth, a small gap opens up in resource utilization by the middle of next year.

Our forecast for core consumer price inflation is little changed from the previous projection; as before, we expect the diminishing impetus from energy and other commodity prices and the emerging slack in resource utilization to nudge core PCE price inflation down from an average annual rate of 2.3 percent in the second half of this year to 2.1 percent in 2008. In contrast to the roughly unchanged outlook for core inflation, the prognosis for top-line PCE inflation in the near term has improved considerably owing to the much sharper decline in energy prices than we had previously anticipated. However, this favorable development is not expected to be sustained. As a result, we now project that, after running at less than 1 percent at an annual rate over the second half

of this year, overall PCE price inflation will average 2.7 percent in 2007 before dropping back to a 2.1 percent pace in 2008.

### **Key Background Factors**

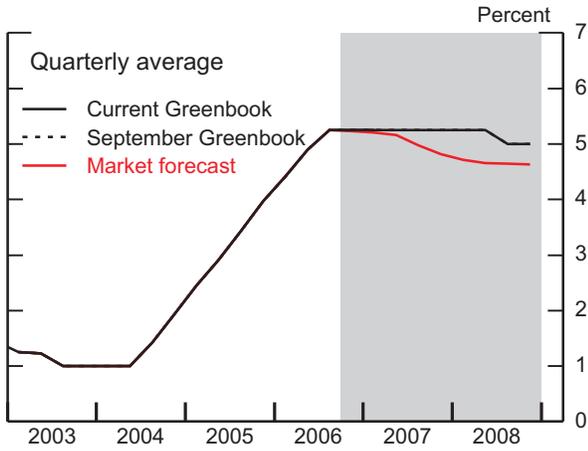
We continue to assume that the FOMC will keep the federal funds rate at 5¼ percent through the first half of 2008 and then lower it to 5 percent at midyear. In contrast, financial market participants appear to anticipate an earlier and somewhat greater easing of monetary policy—they expect the federal funds rate to drop to a shade below 4¾ percent by the end of 2008. Interest rates on longer-term securities are about unchanged, on net, since our last projection, but we assume that long-term rates will rise slightly over the forecast period as market participants come to realize that the federal funds rate will need to stay higher than they were expecting in order to achieve a moderate decline in inflation.

Boosted by the continued strength in corporate profits and perhaps by the further decline in spot oil prices, broad equity indexes are now about 3½ percent above the level we had anticipated in the September Greenbook. We have raised the assumed current-quarter level of share prices by this amount. Over the forecast period, we continue to assume that equity prices will increase 6½ percent per year, which would roughly maintain risk-adjusted parity with the rate of return on Treasury securities. In contrast, the incoming information on prices of residential real estate has led us to mark down slightly our forecast for house-price appreciation. We now assume that the OFHEO purchase-only index of house prices will increase at an annual rate of 1¾ percent in the second half of this year, a downward revision of about 1 percentage point from our previous projection. We expect this house-price index to rise 1½ percent in 2007 and 1¼ percent in 2008, a little slower than in the September Greenbook.

Our fiscal policy assumptions have changed only a little since the September Greenbook. We project that real federal outlays will increase 2¼ percent in calendar year 2007 and that all of the lift will come from real defense purchases. In 2008, both real defense and real nondefense purchases are projected to be about unchanged. On the revenue side, we continue to assume that the key provisions of the tax law that expired in 2005 or that are scheduled to expire at the end of 2006, such as the research and experimentation credit and alternative minimum tax relief, will be extended in both 2007 and 2008. All told, federal fiscal policy is expected to provide an impetus to real GDP growth of about 0.3 percentage point this year and in 2007 and then be roughly neutral in 2008.

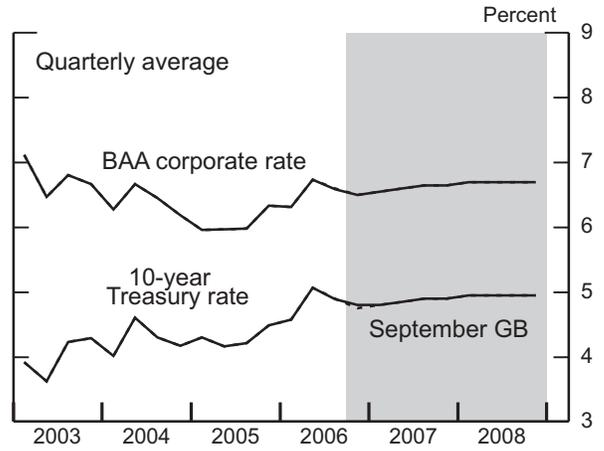
## Key Background Factors Underlying the Baseline Staff Projection

Federal Funds Rate



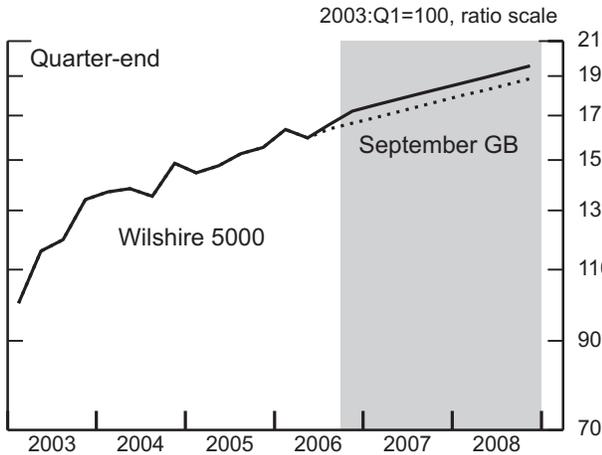
Note. The assumed federal funds rate is unchanged from the September Greenbook.

Long-Term Interest Rates

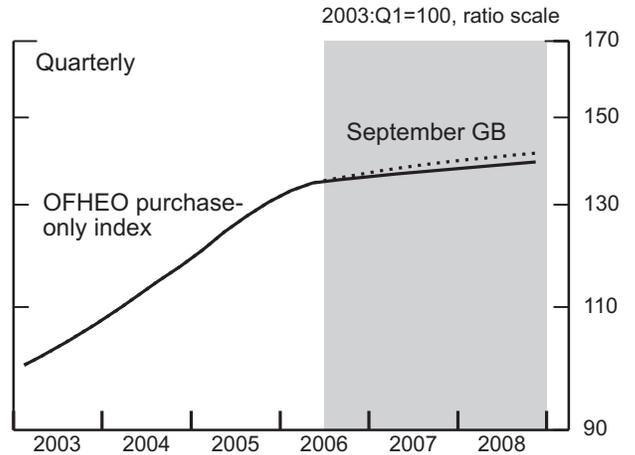


Note. The projection for the BAA corporate rate is unchanged from the September Greenbook.

Equity Prices

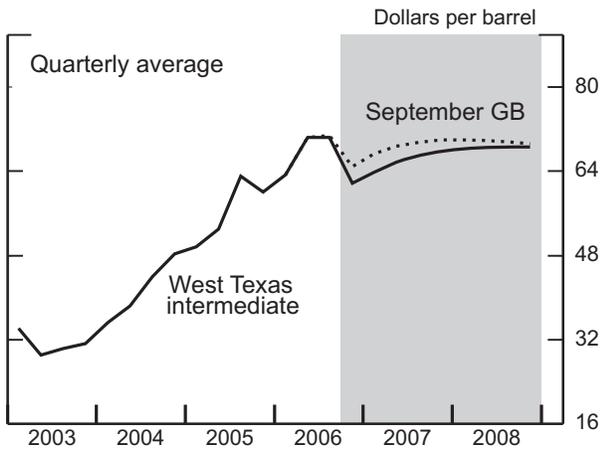


House Prices

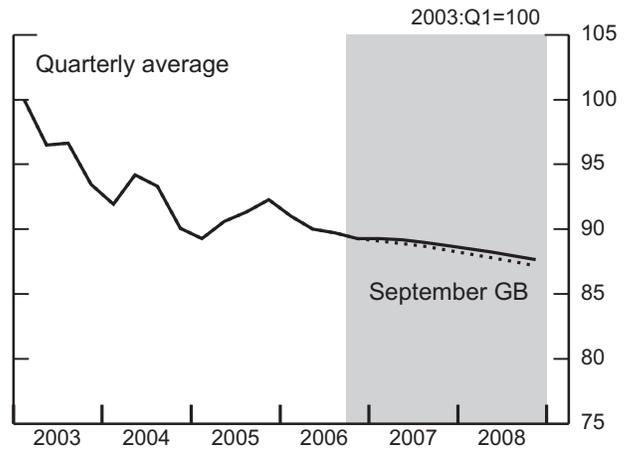


Note. The projection period begins in 2006:Q3.

Crude Oil Prices



Broad Real Dollar



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

A surge in corporate tax receipts in September resulted in a federal unified budget deficit for fiscal year 2006 of \$248 billion, \$18 billion lower than we had anticipated in the last Greenbook. We expect this upside tax surprise to persist through the projection period, and we have trimmed our projection of the federal budget deficit to \$254 billion in fiscal 2007 and to \$282 billion in fiscal 2008—both amounts almost \$30 billion less than in our previous forecast. The deterioration in the projected deficit over our forecast period primarily reflects a deceleration in revenues, from a rate of growth that has exceeded increases in nominal incomes to a pace more in line with income growth.

The foreign exchange value of the dollar has edged up since the time of the September Greenbook, and in response, our projection of the real trade-weighted dollar in the current quarter also has been raised slightly. Over the next two years, we continue to project that the broad real dollar will depreciate at an annual rate of about 1 percent. We anticipate that foreign real GDP will increase at an annual rate of about 3¼ percent over the projection period after rising at a rate of roughly 4½ percent over the first half of this year.

Reduced concerns about hurricane-related disruptions in the Gulf of Mexico and the earlier-than-expected resumption of production in the Prudhoe Bay oil field in Alaska have helped to pull oil prices down further in recent weeks. In particular, the spot price of West Texas intermediate (WTI) crude oil currently is about \$59 per barrel—approximately \$5 per barrel lower than at the time of the September Greenbook. Given prices in futures markets, we anticipate that the WTI price will rise to about \$68 per barrel by the end of 2007 and remain near that level through 2008. This path of oil prices is \$2 per barrel lower at the end of 2007 and less than \$1 per barrel lower at the end of 2008 than assumed in our previous forecast.

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

Domestic final demand has developed much as we had anticipated in the September Greenbook. Consumer spending appears to be increasing at a moderate pace, business outlays for equipment and software seem to have picked up solidly after a second-quarter pause, and nonresidential construction continues to strengthen. Of course, outlays for residential construction have fallen steeply, but even here the decline thus far has not been out of line with our expectation. As a result, our projection of real GDP growth for the second half of this year as a whole is only a shade weaker than that in the September Greenbook.

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

Measure	2006:Q3		2006:Q4	
	Sept. GB	Oct. GB	Sept. GB	Oct. GB
<b>Real GDP</b>	<b>1.8</b>	<b>1.0</b>	<b>1.7</b>	<b>2.3</b>
Private domestic final purchases	2.1	2.3	1.8	1.7
Personal consumption expenditures	3.1	2.9	2.7	3.1
Residential investment	-20.6	-18.8	-20.5	-20.8
Business fixed investment	9.5	12.0	9.2	5.8
Government outlays for consumption and investment	2.7	.8	1.9	3.0
	Contribution to growth (percentage points)			
Inventory investment	-.5	-.7	-.1	-.0
Net exports	-.0	-.6	-.1	.3

Similarly, the recent data on labor market conditions have been in line with our expectations. In particular, the monthly increase in private payroll employment averaged 108,000 through the three months ending in September. We anticipate that the slower pace of activity in the second half of this year will lead to a moderation in hiring in coming months; as a result, we expect the unemployment rate to edge up from 4.6 percent in September to 4.8 percent by the end of the year.<sup>1</sup>

We estimate that manufacturing production increased at an annual rate of 3¾ percent in the third quarter after rising at a 5¼ percent pace in the first half of the year. In part, the recent weakness has resulted from cutbacks in motor vehicle assemblies that were implemented to deal with uncomfortably high levels of inventories. But even apart from motor vehicles, factory production has eased noticeably in August and September. Manufacturing production is projected to slow further, to an annual rate of about 2 percent in the fourth quarter, a move reflecting smaller gains outside of the high-tech and transportation sectors.

<sup>1</sup> The BLS announced that its preliminary estimate of the annual benchmark revision to the establishment survey would raise the level of total nonfarm employment in March 2006 by 810,000, which implies that the rate of employment growth from the first quarter of 2005 to the first quarter of 2006 was 0.6 percentage point higher than previously reported. However, the benchmark revision will not affect the level of income over this period because the BEA has already incorporated the wage and salary information from the relevant unemployment insurance tax records into the national accounts.

Consumer spending has continued to rise at a moderate pace in recent months. Sales of new light vehicles averaged an annual rate of 16½ million units in the third quarter—the same pace as in the first half of the year. The sparse information we have for October suggests that sales have continued at about the same pace. With the incoming data pointing to a solid increase in spending on other goods and services, we estimate that total real personal consumption expenditures increased at an annual rate of close to 3 percent last quarter. We are projecting another 3 percent advance in real PCE in the fourth quarter, supported by further increases in real disposable income—related, in part, to the recent declines in energy prices—and the lagged effects of earlier increases in household wealth.

Single-family starts increased in September but were still about 20 percent below their peak in January, but new permit issuance slid further to its lowest level in nearly five years. While the level of starts in September was above our expectation, permits were below the level that we had anticipated. Although the latest readings on starts and home sales have been a touch more upbeat, the historically high backlog of unsold homes and the low levels of permits suggest that production will weaken in coming months. We currently project that single-family starts will drop from a third-quarter pace of 1.41 million units (annual rate) to a pace of 1.24 million units in the fourth quarter. Given this outlook for starts, real outlays for residential construction are expected to fall at an annual rate of about 21 percent this quarter after a similarly sized decline last quarter.

Outlays for equipment and software are expected to increase at an annual rate of 5¼ percent over the final two quarters of the year—a bit below the average pace of the first half. In the high-tech area, the introduction of new, more-efficient hardware appears to be providing a substantial boost to spending for computing equipment, but expenditures for communications equipment have edged down further from the elevated level they reached in the first quarter of this year. Meanwhile, outlays for transportation equipment continue to be supported by spending on medium and heavy trucks that appears to have been pulled forward by emissions-related EPA regulations scheduled to take effect in 2007. Orders for other business equipment remained robust in recent months, but demand is expected to slow somewhat over the remainder of the year as business sales decelerate. We project that spending on equipment outside of the transportation and high-technology sectors rose at an annual rate of 6¾ percent in the third quarter and will decelerate to about a 3½ percent rate of growth in the fourth quarter.

Investment in nonresidential structures remains on a strong upward trajectory, and all of the major categories of construction exhibit sustained increases in spending.

Architectural billings—which tend to lead construction spending—have moved up recently, and employment in the nonresidential construction sectors has continued to expand in recent months. Energy prices remain at relatively high levels despite their recent declines; thus, investment in drilling and mining also is expected to be robust in the near term.

Real nonfarm inventory investment is estimated to have reduced the rate of growth in real GDP by more than  $\frac{1}{2}$  percentage point in the third quarter and is expected to be roughly neutral for growth in the fourth quarter. Stocks of new motor vehicles were drawn down more quickly in the third quarter than we previously expected, as the Big Three motor vehicle manufacturers reduced assemblies even more aggressively in response to uncomfortably high inventory levels; given current production schedules and our projection for sales, we expect motor vehicle inventories to decline further in the fourth quarter. In contrast, inventory investment at non-auto businesses in the second half of this year is expected to run somewhat above its pace in the first half. According to the staff's flow-of-goods inventory system, there are few signs at this point of any emerging overhangs in business inventories outside of the motor vehicle sector.

In the government sector, real federal expenditures on consumption and gross investment are estimated to have risen at an annual rate of just  $\frac{1}{2}$  percent in the third quarter, as a decline in defense purchases mostly offset an increase in FEMA-related nondefense purchases. In the fourth quarter, we expect that defense spending will rebound strongly—to a level more consistent with appropriations for defense activities—and that nondefense spending will decline slightly; on balance, we project total real federal outlays to increase at an annual rate of almost 5 percent in the fourth quarter.

We estimate that spending by state and local governments increased at an annual rate of only 1 percent in the third quarter as construction slowed markedly from its robust pace in the first half of this year. In the fourth quarter, construction spending is expected to increase modestly, and thus, real state and local expenditures are projected to rise at an annual rate of about 2 percent.

Incoming data have led us to revise up the projected growth rates of both imports and exports in the third quarter. But with the revision for imports larger than that for exports, net exports are now projected to subtract  $\frac{1}{2}$  percentage point from the rate of real GDP growth in third quarter—in contrast to the neutral effect projected in the September

Greenbook. In the fourth quarter, net exports are projected to add  $\frac{1}{4}$  percentage point to the rise in GDP. In part, the quarterly pattern over the second half of this year reflects swings in oil imports, which ran up sharply in the third quarter and are expected to drop back in the fourth quarter. Moreover, the rise in core imports is estimated to have been quite strong in the third quarter and is projected to slow in the fourth quarter.

Recent declines in energy prices have again led us to lower our near-term inflation projection. In particular, with consumer energy prices now projected to drop a cumulative 16 percent in September and October, we expect that total PCE prices will decline at an annual rate of about  $\frac{3}{4}$  percent in the fourth quarter, compared with the  $\frac{1}{4}$  percent increase projected in the September Greenbook. In contrast, our projection for core inflation is little changed from the September Greenbook. As expected, the core CPI increased 0.2 percent in September, and we anticipate monthly increases of about that amount for the remainder of this year. In light of the low reading that was recorded in July, our quarterly projection for core PCE price inflation shows a small step-up from  $2\frac{1}{4}$  percent in the third quarter to  $2\frac{1}{2}$  percent in the fourth quarter.

### **The Longer-Run Outlook for the Economy**

We currently project that real GDP will increase 2.2 percent in 2007 and 2.5 percent in 2008. Both figures are 0.1 percentage point higher than in the September forecast, as the positive effects of lower energy prices and a higher stock market slightly outweigh the additional drag from the lower projected rate of house-price appreciation and the projected higher path of the dollar. Because the projected pace of real GDP growth is below our estimate of its potential rate through 2007, we anticipate that a small gap will open in resource utilization and that the unemployment rate will move up to 5.1 percent near the end of next year.

**Household spending.** Consumer spending is projected to decelerate from a  $3\frac{1}{4}$  percent rate of growth in 2006 to increases averaging above  $2\frac{1}{2}$  percent in 2007 and 2008. Real income growth is expected to be relatively well maintained over the forecast period, but we anticipate that increases in household wealth should provide a diminishing impetus to consumption. Over the long term, we expect that households will continue to adjust the level of their spending to past increases in interest rates, as well as to the projected

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

Measure	2006: H2	2007: H1	2007	2008
<b>Real GDP</b>	<b>1.6</b>	<b>2.1</b>	<b>2.2</b>	<b>2.5</b>
Previous	1.7	2.0	2.1	2.4
Final sales	2.0	2.1	2.1	2.3
Previous	2.1	2.0	2.1	2.2
PCE	3.0	2.6	2.6	2.8
Previous	2.9	2.5	2.5	2.7
Residential investment	-19.8	-12.5	-7.7	2.2
Previous	-20.6	-12.6	-7.5	2.2
BFI	8.9	4.9	4.4	3.8
Previous	9.3	4.7	4.2	3.0
Government purchases	1.9	2.6	2.1	1.2
Previous	2.3	2.2	1.9	1.2
Exports	6.1	4.6	4.5	4.9
Previous	4.8	4.7	4.6	5.1
Imports	4.8	3.8	4.2	5.4
Previous	3.5	3.2	3.7	5.3
	Contribution to growth (percentage points)			
Inventory change	-.3	.0	.1	.2
Previous	-.3	-.0	-.0	.2
Net exports	-.1	-.1	-.2	-.4
Previous	-.1	-.0	-.1	-.3

gradual decline in the wealth-to-income ratio. In addition, we estimate that, over the past few years, consumers have partially buffered their spending from the real income effects of higher energy prices by temporarily reducing their saving—an effect we expect to be unwound over the next two years. All told, we expect the personal saving rate to rise from less than zero currently to 1¼ percent in 2008.

Residential construction activity is projected to decline well into next year before edging up a bit in 2008. Although we expect that relatively low mortgage rates and solid income growth should lead to some firming in the demand for housing, the currently high backlog of unsold homes suggests that production will be slow to turn upward. As a

result, we expect single-family housing starts to decline about 10 percent further to an annual rate of 1.25 million units in early 2007 and to remain at that pace for most of next year. In 2008, with homebuilders' backlogs anticipated to be on their way back down to more-comfortable levels, our projection calls for single-family starts to edge up to a pace of 1.29 million units. With this path of starts, we expect residential investment to decline  $7\frac{3}{4}$  percent in 2007 and then to rise  $2\frac{1}{4}$  percent in 2008.

**Business investment.** Real spending by businesses for equipment and software (E&S) is projected to slow to an increase of about 4 percent in 2007 before rising  $5\frac{1}{4}$  percent in 2008. That forecast, in large part, reflects the overall deceleration and acceleration of business output in 2007 and 2008. The pattern shows through most clearly in our projection for spending on equipment other than high tech and transportation, which rises only  $1\frac{1}{4}$  percent in 2007 before moving up  $2\frac{3}{4}$  percent in 2008. In addition, the projected growth of E&S spending next year is held down by an expected decline in business outlays for motor vehicles; as mentioned earlier, truck purchases have been elevated this year in advance of new EPA regulations. Real outlays for high-tech equipment and software, which tend to be less affected by fluctuations in the pace of activity, are projected to steadily rise about 9 percent in both 2007 and 2008.

We project that increases in real nonresidential investment spending will slow from a 16 percent rate this year to 5 percent in 2007 and just 1 percent in 2008. As in the previous Greenbook, increases in outlays for drilling and mining structures are expected to slow from their very rapid pace of the past few years in response to the projected flattening in prices for crude oil and natural gas. In addition, with vacancy rates still relatively elevated in some sectors and the pace of overall economic activity and employment expected to moderate, construction of commercial and office space and of industrial facilities seems likely to decelerate.

We expect that the overhang of inventories in the motor vehicle industry will be eliminated by the end of this year, and, as noted earlier, there are few signs of inventory problems in other sectors. Our forecast assumes that businesses will promptly adjust their production to the lower projected increases in final demand over the next year. Therefore, we do not anticipate swings in inventory investment to be an important factor influencing the contour of real activity in either 2007 or 2008.

**Government spending.** Real federal expenditures on consumption and investment are projected to rise at an annual rate of  $2\frac{1}{4}$  percent in 2007 and to be about unchanged in

2008. Real defense spending is expected to rise 3½ percent in 2007, a pace consistent with spending allowed by current appropriations along with an additional supplemental appropriation for military activities in Iraq and Afghanistan. In 2008, real defense spending is assumed to remain roughly constant, which would allow for some reduction in real spending for military activities in Iraq and Afghanistan and further real growth in other defense purchases. Real nondefense outlays, which on balance have changed little this year, are expected to remain about constant in 2007 and 2008. In the state and local sector, real expenditures are expected to rise at a moderate pace of 2 percent in both 2007 and 2008, as the improved fiscal position of states continues to provide some impetus to spending, especially for construction.

**Net exports.** With real activity abroad projected to expand at a solid pace through 2008 and the foreign exchange value of the dollar assumed to depreciate a bit, real exports are projected to rise about 4½ percent in 2007 and almost 5 percent in 2008. Real imports are expected to increase 4¼ percent in 2007 and then to rise 5½ percent in 2008 as the pace of U.S. real GDP growth picks up. All told, real net exports of goods and services are expected to subtract 0.2 percentage point from the increase in real GDP in 2007 and nearly 0.4 percentage point in 2008. (*The International Developments section provides more detail on the outlook for the external sector.*)

### **Aggregate Supply, the Labor Market, and Inflation**

In this forecast, we have updated our projection of structural productivity growth to reflect the BLS's preliminary estimate of the annual benchmark revision to data from the payroll employment survey. In particular, we now assume that structural productivity will rise at an annual rate of 2½ percent over the forecast period—about ¼ percentage point less than in the September Greenbook. Because we have offset this adjustment in the assumed trend in hours worked, our estimate of potential output is unchanged; the assumed rate of potential GDP growth is 2.7 percent in 2006 and 2007, and 2.5 percent in 2008.<sup>2</sup>

---

<sup>2</sup> The BLS's anticipated benchmark revision to the rate of growth in employment, all else equal, would increase the rate of growth in labor hours and reduce the rate of productivity growth between the first quarter of 2005 and the first quarter of 2006 by an equivalent amount. In response, we have reduced our estimate of the rate of growth of structural productivity by 0.2 percentage point annually from 2005 to 2008. With no reason to think that the output gap was different in the first quarter of 2006 than we had thought previously, we made an offsetting revision in the technical factor that accounts for the discrepancy between the trend rates of growth in payroll employment and household employment, which we also carried forward over the projection period. These revisions to structural productivity and trend hours end up leaving our estimate of the rate of growth in potential GDP unrevised.

**Decomposition of Structural Labor Productivity**

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

Measure	1974-95	1996-2000	2001-04	2005	2006	2007	2008
<b>Structural labor productivity</b>	<b>1.5</b>	<b>2.5</b>	<b>3.0</b>	<b>2.5</b>	<b>2.6</b>	<b>2.6</b>	<b>2.5</b>
Previous	1.5	2.5	3.0	2.7	2.8	2.8	2.7
<i>Contributions<sup>1</sup></i>							
Capital deepening	.7	1.4	.6	.5	.7	.7	.6
Previous	.7	1.4	.6	.6	.7	.7	.7
Multifactor productivity	.5	.8	2.1	1.8	1.7	1.7	1.7
Previous	.5	.8	2.1	1.9	1.8	1.8	1.8
Labor composition	.3	.3	.3	.3	.2	.2	.2
MEMO							
Potential GDP	3.0	3.3	2.9	2.6	2.7	2.7	2.5
Previous	3.0	3.3	2.9	2.6	2.7	2.7	2.5

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	2005	2006	2007	2008
Output per hour, nonfarm business	2.5	1.7	2.5	2.7
Previous	2.5	1.9	2.4	2.7
Nonfarm private payroll employment	1.6	1.3	.4	.4
Previous	1.6	1.3	.2	.3
Household survey employment	1.9	1.5	.3	.6
Previous	1.9	1.4	.3	.6
Labor force participation rate <sup>1</sup>	66.1	66.1	65.8	65.5
Previous	66.1	66.1	65.7	65.5
Civilian unemployment rate <sup>1</sup>	5.0	4.7	5.1	5.1
Previous	5.0	4.8	5.1	5.2
MEMO				
GDP gap <sup>2</sup>	-.0	.1	-.4	-.4
Previous	-.0	.2	-.4	-.5

1. Percent, average for the fourth quarter.

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

**Productivity and the labor market.** Given the projected deceleration in economic activity, we anticipate that increases in private employment will slow markedly in coming quarters. Although productivity is estimated to have declined in the third quarter, we expect businesses to hold employment and hours worked thereafter on a trajectory that keeps productivity increasing at a pace close to its trend rate of 2½ percent per year. As a result, the average gain in total payroll employment is projected to decline from about 120,000 per month in the third quarter to about 75,000 per month in the fourth quarter and then to move down further in 2007 and 2008 to roughly 50,000 per month. On this outlook for employment, we expect the unemployment rate to rise to 5.1 percent near the end of 2007.

The path of employment growth that we are projecting would represent a significant step-down from the average pace of recent years and is noticeably below what many outside forecasters are projecting. To a significant degree, this difference reflects our view that trend growth of the labor force will slow markedly over the projection period. In particular, on the basis of Census projections, we expect population growth to decline from an annual rate of about 1.2 percent in 2006 (approximately 225,000 per month) to around 1.1 percent in 2008 (approximately 205,000 per month). At the same time, we believe that demographic factors—most importantly, the aging of the baby-boom cohort—will reduce the trend rate of labor force participation by roughly 0.2 percentage point per year. As a result, our forecast of trend labor force growth slows from about 120,000 per month in 2006 to about 90,000 per month in 2008; adjusting for typical differences between the household and payroll surveys, the monthly increase in payroll employment that is consistent with no change in the unemployment rate drops from its current pace of about 105,000 per month to roughly 80,000 per month in 2008. Our actual forecast of payroll employment growth is somewhat short of this pace because we expect real GDP to increase less than its potential rate of growth and thereby to increase the unemployment rate.

To provide some perspective on the sensitivity of the employment forecast to our assumption about labor force trends, we recalculated our employment forecast under the assumption that the labor force participation rate remains at its current level of 66.2 percent over the remainder of the projection period but that population growth still slows in line with Census projections. In this case, the average gain in monthly payroll employment consistent with an unchanged unemployment rate would be about 120,000 in 2008.

**Inflation Projections**

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

Measure	2005	2006	2007	2008
PCE chain-weighted price index	3.1	1.9	2.7	2.1
Previous	3.1	2.2	2.5	2.0
Food and beverages	2.1	2.5	2.4	2.2
Previous	2.1	2.5	2.4	2.2
Energy	21.2	-5.9	9.0	1.4
Previous	21.2	-.6	5.6	-.0
Excluding food and energy	2.1	2.4	2.3	2.1
Previous	2.1	2.4	2.3	2.1
Consumer price index	3.7	2.0	3.0	2.2
Previous	3.7	2.5	2.7	2.1
Excluding food and energy	2.1	2.9	2.5	2.3
Previous	2.1	2.9	2.5	2.3
GDP chain-weighted price index	3.1	2.5	2.7	2.5
Previous	3.1	2.7	2.6	2.4
ECI for compensation of private industry workers <sup>1</sup>	2.9	3.2	4.0	4.0
Previous	2.9	3.2	4.1	4.1
Compensation per hour, nonfarm business sector	4.1	6.5	5.1	4.9
Previous	4.1	6.5	5.3	5.1
Prices of core nonfuel imports	2.2	3.2	1.4	1.0
Previous	2.2	3.1	1.4	1.0

1. December to December.

**Wages and prices.** We have made no material changes to our projection of core consumer price inflation in this forecast. Given the backdrop of apparently well-anchored inflation expectations, we expect that a diminishing upward impetus from energy prices and smaller increases in rents, along with the emergence of a small margin of slack in resource utilization, will cause core PCE price inflation to edge down from 2.4 percent this year to 2.3 percent in 2007 and 2.1 percent in 2008. Overall PCE price inflation is expected to pick up next year, to 2.7 percent, as the recent and projected near-term declines in energy prices are partially reversed early in the year. In 2008, the direct effects of changes in energy prices are expected to be small, so the total PCE price index rises at the same rate as the core index.

With regard to labor compensation, the rate of increase in hourly compensation in the nonfarm business sector is projected to drop back from its elevated 6½ percent pace this year to 5 percent in 2007 and in 2008. The reduction reflects the slower pace of price inflation, the slightly softer conditions in the labor market, and our assumption that some of the factors that boosted the growth of hourly compensation early this year will not be repeated in the forecast period. In contrast, we continue to expect a pickup in the rate of increase in the employment cost index next year that will bring it more in line with other measures of wage growth.

### **Financial Flows and Conditions**

Domestic nonfinancial debt is estimated to have risen at an annual rate of 6½ percent in the third quarter, down from the 8 percent pace in the first half of this year as borrowing by households and businesses slowed. We anticipate that the rate of growth in domestic nonfinancial debt will ease slightly further over the projection period, to 6¼ percent in 2007 and 6 percent in 2008.

Household debt is projected to increase at an annual rate of 6¾ percent in the second half of this year, well below the 9¼ percent pace in the first half. We expect further moderation in household borrowing over the forecast period as house price appreciation slows dramatically. Although the extraordinary rise in household debt in recent years has pushed the financial obligations ratio well above its historical range, net worth is relatively high, and delinquency rates on consumer and mortgage loans have been quite low. Nonetheless, our outlook for sharply reduced increases in house prices—and the likelihood that a substantial share of homeowners will experience outright declines in prices—suggest some erosion in the financial conditions of households.

We estimate that nonfinancial business debt expanded at an annual rate of about 7 percent in the third quarter, down from an 8½ percent pace in the first half of the year. With profits expected to be flat over the projection period, we anticipate that businesses will continue to borrow at about the recent pace and will draw on their ample liquid asset positions to finance the projected rise in capital expenditures. The flattening of profits and the slight deterioration in balance sheet conditions may cause default rates to rise a bit from their current, unusually low levels.

Federal debt grew slowly in the third quarter, and it is expected to increase 4½ percent over the year as a whole. The widening of the federal deficit that we project should cause the growth of federal debt to pick up to about a 6 percent pace in 2007 and 2008. In the

state and local sector, bond issuance to finance capital expenditures has remained strong. Municipal borrowing is expected to moderate a bit in 2007 and 2008 as interest rates rise slightly and strong fiscal positions tamp down the need for short-term debt issuance.

M2 is projected to expand just 4¼ percent this year—well short of the increase in nominal GDP—as rising market interest rates have boosted the opportunity cost of holding liquid assets. With opportunity costs assumed to edge down, M2 growth is projected to be about 5 percent in 2007 and 2008, about matching the increase in nominal GDP.

### **Alternative Simulations**

In this section we illustrate some alternatives to the staff forecast using simulations of the FRB/US model. The first two scenarios focus on the risks to the outlook from the residential housing sector—both to the downside and to the upside. The third scenario examines the possibility that the impetus to aggregate spending from current financial conditions may be greater than assumed in the baseline forecast. We then shift the focus to the inflation outlook. In the initial inflation-related scenario, the pickup in core inflation this year is assumed to have been driven substantially by a persistent rise in inflation expectations, and the subsequent scenario assumes instead that current inflation pressures will be more transitory than we expect. In each of these scenarios, the monetary policy response to changes from the baseline outlook is governed by an estimated version of the Taylor rule. In the final scenario, we assume that monetary policy follows the path for the federal funds rate implied by current readings from the futures markets.

**Housing correction with spillovers.** Although our forecast assumes a continued downturn in homebuilding, we still expect that a backlog of unsold homes will persist into 2008; in addition, home prices will remain overvalued by more than 20 percent according to some models. In this scenario, homebuilders are assumed to trim their backlogs more aggressively, causing real residential construction to fall 10 percent below the baseline path by early next year and to decline further thereafter. Moreover, home prices fall sharply over the next two years, eliminating the estimated overvaluation and eventually reducing household wealth by about \$4½ trillion relative to our baseline. Finally, the housing slump is assumed to adversely affect consumer and business confidence; as a result, business capital spending and consumer outlays for durable goods slow by more than might be expected given fundamentals but by an amount consistent with the experience in some past downturns in the housing market. The economic fallout

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

Measure and scenario	2006		2007		2008
	H1	H2	H1	H2	
<i>Real GDP</i>					
Greenbook baseline	4.1	1.6	2.1	2.3	2.5
Housing correction with spillovers	4.1	.3	.1	1.5	2.3
Milder housing cycle	4.1	1.8	2.6	2.5	2.5
Stronger demand	4.1	2.1	3.0	3.1	3.1
Higher expected inflation	4.1	1.6	2.1	2.3	2.4
Less-persistent inflation	4.1	1.6	2.2	2.5	2.7
Market-based federal funds rate	4.1	1.6	2.1	2.4	2.8
<i>Unemployment rate<sup>1</sup></i>					
Greenbook baseline	4.7	4.7	5.0	5.1	5.1
Housing correction with spillovers	4.7	4.8	5.5	5.8	6.0
Milder housing cycle	4.7	4.7	4.9	5.0	4.9
Stronger demand	4.7	4.7	4.8	4.8	4.5
Higher expected inflation	4.7	4.7	5.0	5.1	5.1
Less-persistent inflation	4.7	4.7	5.0	5.0	5.0
Market-based federal funds rate	4.7	4.7	5.0	5.1	5.0
<i>Core PCE inflation</i>					
Greenbook baseline	2.4	2.3	2.4	2.3	2.1
Housing correction with spillovers	2.4	2.3	2.4	2.3	2.0
Milder housing cycle	2.4	2.3	2.4	2.3	2.1
Stronger demand	2.4	2.3	2.4	2.3	2.1
Higher expected inflation	2.4	2.4	2.7	2.6	2.5
Less-persistent inflation	2.4	2.2	2.1	1.8	1.6
Market-based federal funds rate	2.4	2.3	2.4	2.3	2.2
<i>Federal funds rate<sup>1</sup></i>					
Greenbook baseline	4.9	5.3	5.3	5.3	5.0
Housing correction with spillovers	4.9	4.9	3.9	3.5	3.2
Milder housing cycle	4.9	5.3	5.6	5.7	5.4
Stronger demand	4.9	5.4	5.8	6.2	6.3
Higher expected inflation	4.9	5.3	5.4	5.6	5.4
Less-persistent inflation	4.9	5.3	5.2	5.1	4.6
Market-based federal funds rate	4.9	5.3	5.2	4.9	4.7

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

from these events is severe: Real GDP contracts this quarter and in the first quarter of next year, and growth in output recovers slowly thereafter, causing the unemployment rate to level out at 6 percent in 2008. As monetary policy eases in response to the weakness in real activity, the federal funds rate declines gradually to about 3¼ percent by

late 2008. Under these conditions, inflation moderates only a bit relative to the baseline projection, as the effects of increased slack are partially offset by depreciation in the dollar and its effect on import prices.

**Milder housing cycle.** The baseline forecast for housing activity is markedly weaker than what some econometric models—including the FRB/US model—would predict given our projections for income, wealth, and interest rates. To be more consistent with these models, this scenario assumes that housing starts begin to rebound early next year; by the end of 2008 the level of real residential investment is about 9 percent above the baseline forecast. The resulting increase in aggregate demand is sufficient to cause the unemployment rate to level out at about 5 percent by late next year despite a federal funds rate that averages 5½ percent in 2007 and 2008. Because labor and product markets are only a bit tighter than in the baseline projection, inflation is little changed.

**Stronger demand.** The baseline scenario incorporates a marked deceleration in business investment and a noticeable increase in the personal saving rate. But with real long-term interest rates projected to remain low by historical norms, the projected moderation in the growth of aggregate spending may not materialize. In this scenario, real business fixed investment continues to expand at an annual rate of about 9 percent over the next two years; an increase in outlays for consumer durables to an annual rate of 10 percent causes the personal saving rate to rise about ½ percentage point less than in the baseline forecast. As a result, real GDP rises roughly in line with its potential rate, and the unemployment rate in late 2008 is close to its current level. Despite tighter labor and product markets, inflation is little changed from the baseline projection, in part because stronger capital spending boosts productivity and restrains unit labor costs. Under these conditions, the federal funds rate moves up to almost 6¼ percent in 2008.

**Higher expected inflation.** Long-run inflation expectations appear to have been reasonably well anchored since 2003 despite elevated readings for top-line inflation. However, the available measures of inflation expectations are imperfect; the expectations of inflation relevant for price setting may have deteriorated more substantially than these measures indicate—thus, higher inflation expectations may account for more of this year’s rise in core inflation than we currently estimate. In this scenario, we assume that inflation expectations have deteriorated and will remain persistently elevated for some time at a level around 2½ percent instead of 2 percent. Taken together, these assumptions imply that core PCE prices will continue rising about 2½ percent per year rather than moderating to around a 2 percent pace as in the baseline forecast. Under the estimated

Taylor rule, monetary policy responds by raising the nominal federal funds rate to an average of about 5½ percent for the remainder of the projection period. However, this policy response is insufficient to have an appreciable effect on the level of real interest rates over the forecast period, so real activity is little changed.

**Less-persistent inflation.** As is consistent with our reading of the historical evidence, the baseline forecast assumes that inflation retains considerable inertia, which limits the deceleration in prices over the projection period. In contrast, this scenario allows inflation to be less persistent than in the baseline—perhaps for structural reasons or because of enhanced policy credibility. As a result, inflation returns more rapidly to the lower rate that prevailed in the years before the run-up in energy prices that began near the end of 2003. Specifically, core PCE inflation falls to a rate below 2 percent next year and then settles at a rate a bit above 1½ percent in 2008—the average rate of inflation experienced from 1995 through 2003. In response, monetary policy gradually lowers the federal funds rate to 4½ percent. As a result, the unemployment rate settles at a level close to the staff’s estimate of the NAIRU.

**Market-based federal funds rate.** Quotes from futures markets imply a path for the federal funds rate that averages a bit more than ¼ percentage point below the staff’s assumed path in 2007 and 2008. If the federal funds rate were to follow the market’s expectations, and the underlying forces shaping the staff’s forecast evolved accordingly, then in 2008 the rate of growth would rise to 2¾ percent, and the unemployment rate would drop back to 5 percent. As a result, inflation would moderate less than in the baseline forecast.

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

Measure	2006	2007	2008
<i>Real GDP</i>			
<i>(percent change, Q4 to Q4)</i>			
Projection	2.8	2.2	2.5
Confidence interval			
Greenbook forecast errors	2.3–3.3	.6–3.8	.7–4.3
FRB/US stochastic simulations	2.4–3.3	1.0–3.6	.9–4.4
<i>Civilian unemployment rate</i>			
<i>(percent, Q4)</i>			
Projection	4.7	5.1	5.1
Confidence interval			
Greenbook forecast errors	4.6–4.8	4.5–5.7	4.1–6.1
FRB/US stochastic simulations	4.6–4.8	4.7–5.4	4.5–5.7
<i>PCE prices</i>			
<i>excluding food and energy</i>			
<i>(percent change, Q4 to Q4)</i>			
Projection	2.4	2.3	2.1
Confidence interval			
Greenbook forecast errors	2.2–2.6	1.6–3.0	1.2–3.1
FRB/US stochastic simulations	2.2–2.5	1.8–2.9	1.4–2.9
<i>Federal funds rate</i>			
<i>(percent, Q4)</i>			
Projection	5.2	5.2	5.0
Confidence interval			
FRB/US stochastic simulations	5.0–5.6	4.3–6.4	3.7–6.6

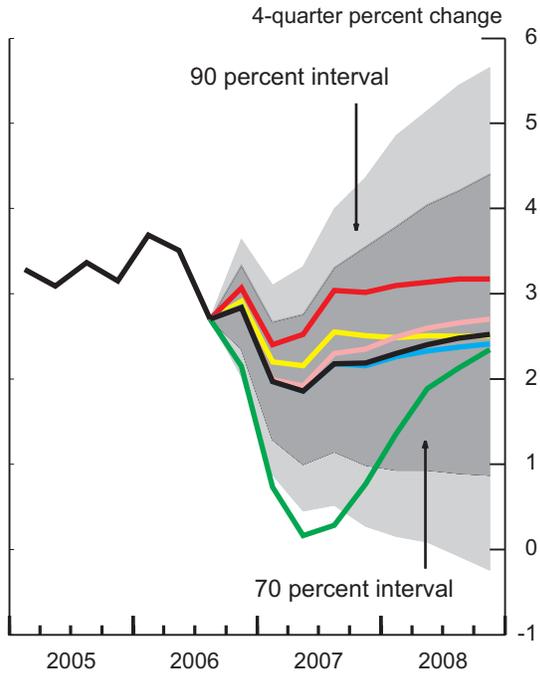
Note. Shocks underlying FRB/US stochastic simulations are randomly drawn from the 1986-2005 set of model equation residuals. Intervals derived from Greenbook forecast errors are based on the 1986-2004 set of Greenbook historical errors.

### Forecast Confidence Intervals and Alternative Scenarios under the Assumption that Monetary Policy Follows an Estimated Taylor Rule

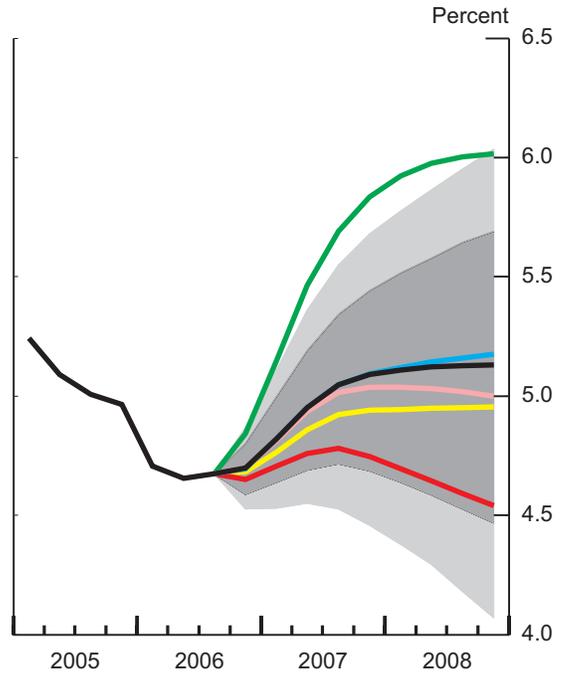
Confidence Intervals based on FRB/US Stochastic Simulations

- Greenbook baseline
  - Housing correction with spillovers
- Milder housing cycle
  - Stronger demand
- Higher expected inflation
  - Less-persistent inflation

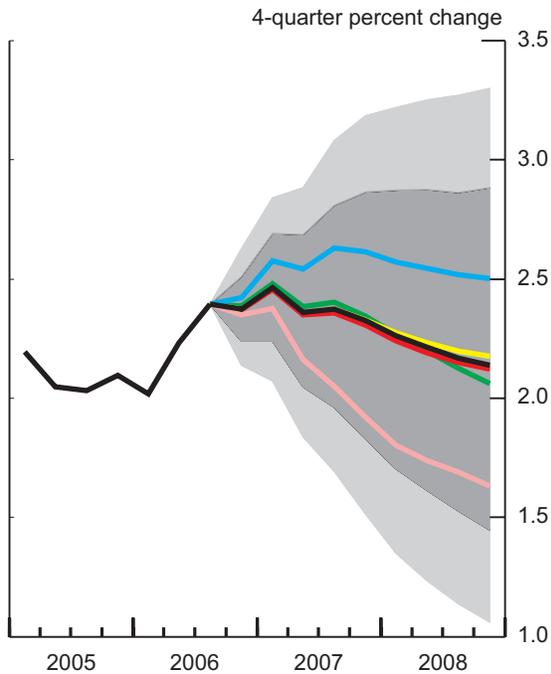
Real GDP



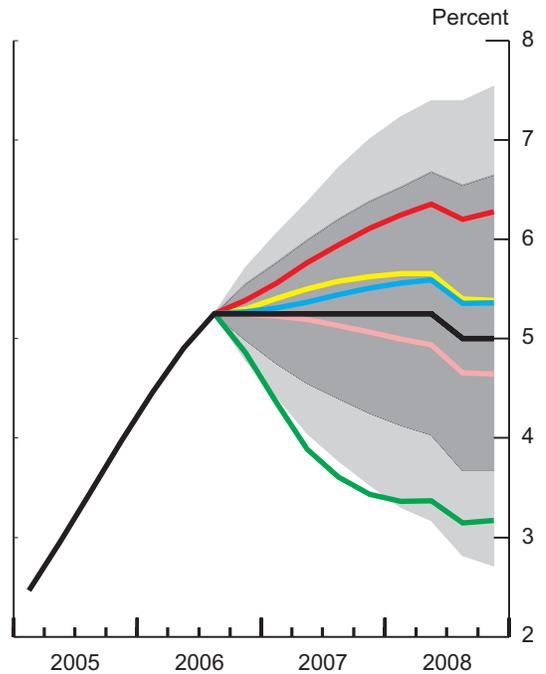
Unemployment Rate



PCE Prices excluding Food and Energy



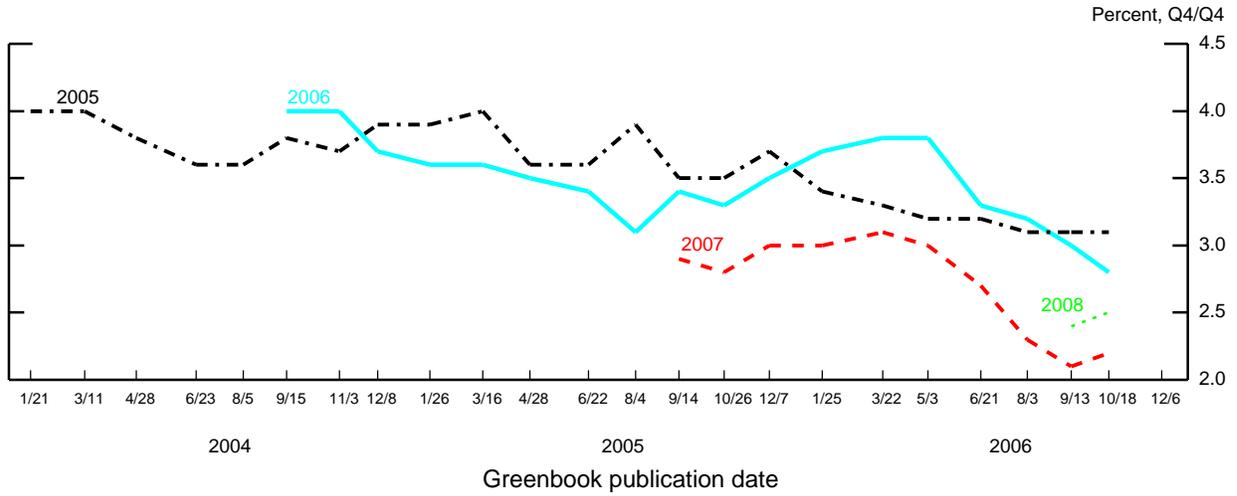
Federal Funds Rate



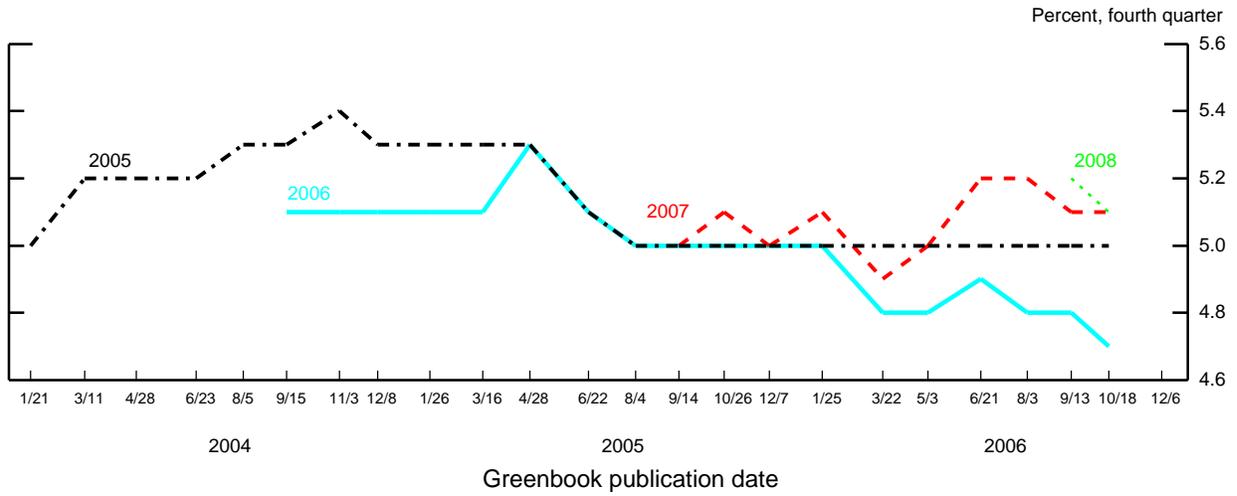
Class II FOMC - Restricted (FR)

### Evolution of the Staff Forecast

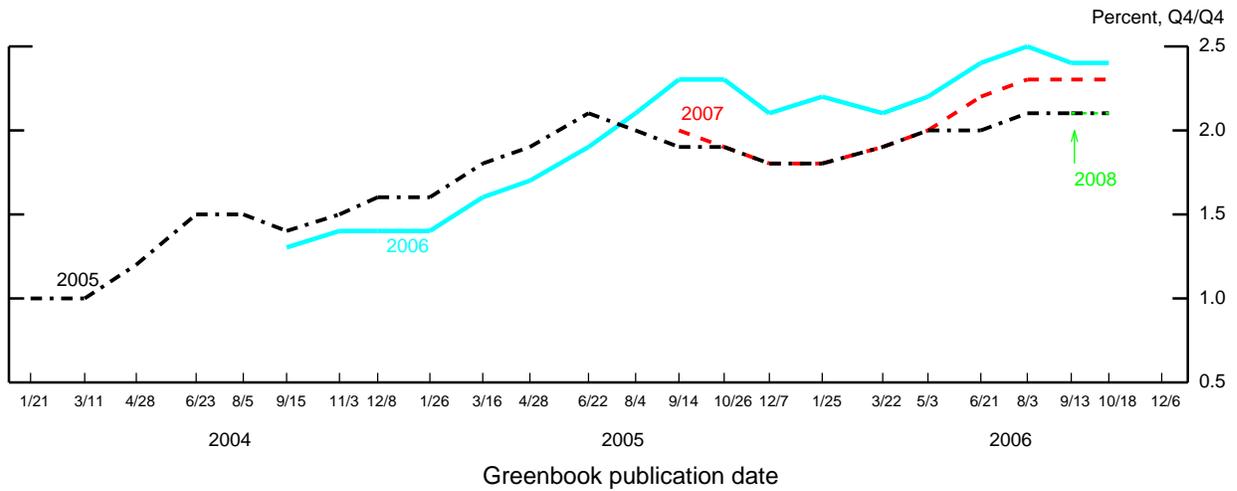
Change in Real GDP



Unemployment Rate



Change in PCE Prices excluding Food and Energy



**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>	
	09/13/06	10/18/06	09/13/06	10/18/06	09/13/06	10/18/06	09/13/06	10/18/06	09/13/06	10/18/06
<i>Quarterly</i>										
2006:Q1	9.0	9.0	5.6	5.6	2.0	2.0	2.1	2.1	4.7	4.7
Q2	6.3	5.9	2.8	2.6	4.1	4.0	2.8	2.7	4.7	4.7
Q3	4.0	2.8	1.8	1.0	2.5	2.4	2.3	2.2	4.7	4.7
Q4	3.7	4.0	1.7	2.3	3	-8	2.5	2.4	4.8	4.7
2007:Q1	4.6	5.1	1.9	2.1	2.9	3.3	2.4	2.4	4.9	4.8
Q2	4.9	4.9	2.0	2.1	2.5	2.7	2.3	2.3	5.0	5.0
Q3	4.8	4.9	2.1	2.2	2.4	2.5	2.3	2.3	5.0	5.0
Q4	4.6	4.8	2.2	2.3	2.2	2.3	2.2	2.2	5.1	5.1
2008:Q1	4.9	5.2	2.3	2.5	2.1	2.2	2.2	2.2	5.1	5.1
Q2	5.1	5.1	2.4	2.5	2.1	2.1	2.2	2.1	5.2	5.1
Q3	4.9	5.0	2.5	2.5	2.0	2.1	2.1	2.1	5.2	5.1
Q4	4.8	4.9	2.5	2.5	2.0	2.0	2.1	2.1	5.2	5.1
<i>Two-quarter<sup>2</sup></i>										
2006:Q2	7.6	7.5	4.2	4.1	3.1	3.0	2.5	2.4	-3	-3
Q4	3.9	3.4	1.7	1.6	1.4	.8	2.4	2.3	.1	.0
2007:Q2	4.7	5.0	2.0	2.1	2.7	3.0	2.4	2.4	2	3
Q4	4.7	4.8	2.2	2.3	2.3	2.4	2.3	2.3	.1	.1
2008:Q2	5.0	5.2	2.4	2.5	2.1	2.2	2.2	2.2	.1	.0
Q4	4.9	4.9	2.5	2.5	2.0	2.1	2.1	2.1	.0	.0
<i>Four-quarter<sup>3</sup></i>										
2005:Q4	6.4	6.4	3.1	3.1	3.1	3.1	2.1	2.1	-4	-4
2006:Q4	5.7	5.4	3.0	2.8	2.2	1.9	2.4	2.4	-2	-3
2007:Q4	4.7	4.9	2.1	2.2	2.5	2.7	2.3	2.3	3	4
2008:Q4	4.9	5.0	2.4	2.5	2.0	2.1	2.1	2.1	.1	.0
<i>Annual</i>										
2005	6.3	6.3	3.2	3.2	2.9	2.9	2.1	2.1	5.1	5.1
2006	6.4	6.2	3.3	3.2	2.9	2.8	2.3	2.3	4.7	4.7
2007	4.5	4.6	2.0	2.0	2.3	2.2	2.4	2.4	5.0	5.0
2008	4.9	5.0	2.3	2.4	2.2	2.2	2.2	2.2	5.2	5.1

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	2006				2007				2008				2006'	2007'	2008'
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Real GDP <i>Previous</i>	5.6	2.6	1.0	2.3	2.1	2.1	2.2	2.3	2.5	2.5	2.5	2.5	2.8	2.2	2.5
Final sales <i>Previous</i>	5.6	2.8	1.8	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.5	3.0	2.1	2.4
Priv. dom. final purch. <i>Previous</i>	5.6	2.1	1.6	2.3	1.6	2.5	2.5	1.9	2.2	2.6	2.6	2.0	2.9	2.1	2.3
Personal cons. expend. <i>Previous</i>	5.6	2.1	2.3	1.8	1.5	2.5	2.6	1.9	1.8	2.6	2.6	1.9	3.0	2.1	2.2
Durables	5.5	1.8	2.3	1.7	1.6	2.3	2.4	2.6	2.9	2.8	2.9	2.8	2.8	2.2	2.9
Nondurables	5.5	1.8	2.1	1.8	1.4	2.2	2.4	2.5	2.6	2.7	2.8	2.8	2.8	2.1	2.7
Services	4.8	2.6	2.9	3.1	2.6	2.6	2.6	2.6	2.8	2.7	2.8	2.8	3.3	2.6	2.8
Residential investment <i>Previous</i>	4.8	2.6	3.1	2.7	2.5	2.5	2.6	2.6	2.6	2.7	2.8	2.8	3.3	2.5	2.7
Business fixed invest. <i>Previous</i>	19.8	-1	4.8	6.7	4.2	4.2	4.2	4.1	4.7	4.2	4.3	4.3	7.6	4.2	4.4
Equipment & software <i>Previous</i>	5.9	1.4	2.1	3.4	3.1	3.1	3.1	3.2	3.3	3.3	3.3	3.3	3.2	3.1	3.3
Nonres. structures <i>Previous</i>	1.6	3.7	2.9	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.6	2.1	2.2
Net exports <sup>2</sup> <i>Previous</i>	-3	-11.1	-18.8	-20.8	-17.2	-7.5	-4.3	-1.1	1.4	1.5	2.9	3.2	-13.1	-7.7	2.2
Exports	-3	-10.9	-20.6	-20.5	-17.4	-7.6	-3.2	-8	.8	1.5	3.1	3.3	-13.5	-7.5	2.2
Imports	13.7	4.4	12.0	5.8	4.9	4.8	4.1	3.9	4.6	3.7	3.5	3.2	8.9	4.4	3.8
Govt. cons. & invest. <i>Previous</i>	13.7	4.4	9.5	9.2	4.7	4.8	3.8	3.6	3.5	3.1	2.9	2.4	9.1	4.2	3.0
Federal	15.6	-1.4	8.1	2.5	3.3	4.6	4.3	4.5	6.1	4.9	5.1	4.9	6.0	4.1	5.3
Defense	15.6	-1.5	7.1	7.5	3.8	5.0	4.2	4.3	4.9	4.8	5.1	5.0	7.0	4.3	4.9
Nondefense	8.7	20.3	21.8	13.7	8.6	5.2	3.7	2.7	1.7	1.2	.5	-2	16.0	5.1	.8
State & local	8.7	21.0	15.4	13.0	6.7	4.4	2.8	2.2	.6	-4	-1.5	-2.9	14.5	4.0	-1.0
Change in bus. inventories <sup>2</sup> <i>Previous</i>	-637	-624	-639	-631	-641	-638	-634	-653	-670	-671	-673	-695	-633	-642	-677
Nonfarm <sup>2</sup>	-637	-624	-625	-627	-634	-628	-622	-638	-658	-656	-656	-676	-628	-631	-661
Farm <sup>2</sup>	14.0	6.2	7.4	4.9	4.6	4.6	4.5	4.4	4.5	4.8	5.0	5.2	8.1	4.5	4.9
Imports	9.1	1.4	8.1	1.7	5.2	2.4	2.3	6.9	6.5	3.4	3.7	7.8	5.0	4.2	5.4
Govt. cons. & invest. <i>Previous</i>	4.9	.8	.8	3.0	3.1	2.1	1.7	1.5	1.2	1.2	1.2	1.2	2.4	2.1	1.2
Federal	4.9	.9	2.7	1.9	2.4	2.1	1.7	1.5	1.2	1.2	1.2	1.2	2.6	1.9	1.2
Defense	8.8	-4.5	.6	4.8	5.0	2.2	1.3	.7	.0	.0	.0	.0	2.3	2.3	.0
Nondefense	8.9	-2.0	-3.1	10.0	7.5	3.3	1.9	1.0	.0	.0	.0	.0	3.3	3.4	.0
State & local	8.5	-9.3	8.4	-5.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0	.0
Change in bus. inventories <sup>2</sup> <i>Previous</i>	2.7	4.0	1.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.4	2.0	1.9
Nonfarm <sup>2</sup>	41	54	35	35	47	37	29	42	53	51	48	65	41	39	54
Farm <sup>2</sup>	41	60	46	44	57	44	31	40	54	50	45	64	48	43	53
Imports	37	52	36	35	47	36	28	42	53	51	48	66	40	38	54
Farm <sup>2</sup>	4	2	-1	-0	1	1	1	1	1	1	1	1	1	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**  
(Percent, annual rate except as noted)

Item	2000 <sup>1</sup>	2001 <sup>1</sup>	2002 <sup>1</sup>	2003 <sup>1</sup>	2004 <sup>1</sup>	2005 <sup>1</sup>	2006 <sup>1</sup>	2007 <sup>1</sup>	2008 <sup>1</sup>
Real GDP	2.2	.2	1.9	3.7	3.4	3.1	2.8	2.2	2.5
<i>Previous</i>	2.2	.2	1.9	3.7	3.4	3.1	3.0	2.1	2.4
Final sales	2.9	1.5	.8	3.7	3.1	3.2	2.9	2.1	2.3
<i>Previous</i>	2.9	1.5	.8	3.7	3.1	3.2	3.0	2.1	2.2
Priv. dom. final purch.	4.3	1.0	1.1	4.1	4.4	3.6	2.8	2.2	2.9
<i>Previous</i>	4.3	1.0	1.1	4.1	4.4	3.6	2.8	2.1	2.7
Personal cons. expend.	4.1	2.8	1.9	3.4	4.0	2.9	3.3	2.6	2.8
<i>Previous</i>	4.1	2.8	1.9	3.4	4.0	2.9	3.3	2.5	2.7
Durables	4.7	10.8	1.2	8.3	5.6	2.5	7.6	4.2	4.4
Nondurables	3.0	1.9	2.1	3.9	3.8	4.4	3.2	3.1	3.3
Services	4.5	1.6	1.9	2.2	3.7	2.3	2.6	2.1	2.2
Residential investment	-1.9	1.4	7.0	11.7	6.1	9.0	-13.1	-7.7	2.2
<i>Previous</i>	-1.9	1.4	7.0	11.7	6.1	9.0	-13.5	-7.5	2.2
Business fixed invest.	7.8	-9.6	-6.5	4.9	6.9	5.6	8.9	4.4	3.8
<i>Previous</i>	7.8	-9.6	-6.5	4.9	6.9	5.6	9.1	4.2	3.0
Equipment & software	7.5	-9.0	-3.4	6.6	8.3	7.0	6.0	4.1	5.3
<i>Previous</i>	7.5	-9.0	-3.4	6.6	8.3	7.0	7.0	4.3	4.9
Nonres. structures	8.8	-11.1	-14.9	.2	2.7	1.8	16.0	5.1	.8
<i>Previous</i>	8.8	-11.1	-14.9	.2	2.7	1.8	14.5	4.0	-1.0
Net exports <sup>2</sup>	-379	-399	-471	-519	-591	-619	-633	-642	-677
<i>Previous</i> <sup>2</sup>	-379	-399	-471	-519	-591	-619	-628	-631	-661
Exports	6.5	-11.9	3.8	5.8	7.0	6.7	8.1	4.5	4.9
Imports	11.2	-7.6	9.7	4.8	10.6	5.2	5.0	4.2	5.4
Govt. cons. & invest.	.4	5.0	4.0	1.7	1.1	1.2	2.4	2.1	1.2
<i>Previous</i>	.4	5.0	4.0	1.7	1.1	1.2	2.6	1.9	1.2
Federal	-2.2	6.4	7.8	5.5	2.3	2.1	2.3	2.3	.0
Defense	-3.5	6.5	8.4	7.5	2.5	1.9	3.3	3.4	.0
Nondefense	.3	6.3	6.8	1.9	1.8	2.4	.3	.0	.0
State & local	1.7	4.2	2.1	-.4	.4	.8	2.4	2.0	1.9
Change in bus. inventories <sup>2</sup>	56	-32	12	14	53	20	41	39	54
<i>Previous</i> <sup>2</sup>	56	-32	12	14	53	20	48	43	53
Nonfarm <sup>2</sup>	58	-32	15	14	47	20	40	38	54
Farm <sup>2</sup>	-1	0	-2	0	6	0	1	1	1

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

2. Billions of chained (2000) dollars.

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

Item	2006				2007				2008				2006 <sup>1</sup>	2007 <sup>1</sup>	2008 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	Real GDP <i>Previous</i>	5.6	2.6	1.0	2.3	2.1	2.1	2.2	2.3	2.5	2.5	2.5			
Final sales <i>Previous</i>	5.6	2.8	1.8	1.7	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.5	3.0	2.1	2.4
Priv. dom. final purch. <i>Previous</i>	5.6	2.1	1.6	2.3	1.6	2.5	2.5	1.9	2.2	2.6	2.6	2.0	2.9	2.1	2.3
Personal cons. expend. <i>Previous</i>	5.6	2.1	2.3	1.8	1.5	2.5	2.5	1.9	1.8	2.6	2.6	1.9	2.9	2.1	2.2
Durables	4.7	1.5	2.0	1.5	1.4	2.0	2.1	2.2	2.5	2.4	2.5	2.4	2.4	1.9	2.5
Nondurables	4.7	1.6	1.8	1.6	1.2	1.9	2.0	2.2	2.3	2.3	2.4	2.4	2.4	1.8	2.3
Services	3.4	1.8	2.0	2.1	1.8	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.3	1.9	1.9
Residential investment <i>Previous</i>	3.4	1.8	2.2	1.9	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.3	1.8	1.9
Business fixed invest. <i>Previous</i>	1.5	.0	.4	.5	.3	.3	.3	.3	.4	.3	.3	.3	.6	.3	.3
Equipment & software <i>Previous</i>	1.2	.3	.4	.7	.6	.6	.6	.6	.7	.7	.7	.7	.6	.6	.7
Nonres. structures <i>Previous</i>	.7	1.5	1.2	.9	.9	.9	.9	.9	.9	.9	.9	.9	1.1	.9	.9
Net exports <i>Previous</i>	.0	-.7	-1.2	-1.3	-1.0	-.4	-2	-1	.1	.1	.1	.2	-.8	-.4	.1
Exports	.0	-.7	-1.3	-1.3	-1.0	-.4	-2	.0	.0	.1	.1	.2	-.8	-.4	.1
Imports	1.4	.5	1.2	.6	.5	.5	.4	.4	.5	.4	.4	.4	.9	.5	.4
Govt. cons. & invest. <i>Previous</i>	1.4	.5	1.0	.9	.5	.5	.4	.4	.4	.3	.3	.3	.9	.5	.3
Federal	1.1	-.1	.6	.2	.2	.3	.3	.3	.4	.4	.4	.4	.4	.3	.4
Defense	1.1	-.1	.5	.5	.3	.4	.3	.3	.4	.3	.4	.4	.5	.3	.4
Nondefense	.3	.6	.6	.4	.3	.2	.1	.1	.1	.0	.0	.0	.5	.2	.0
State & local	.3	.6	.4	.4	.2	.1	.1	.1	.0	.0	.0	-.1	.4	.1	.0
Net exports <i>Previous</i>	.0	.4	-.6	.3	-.4	.1	.1	-.7	-.6	.0	-.1	-.7	.0	-.2	-.4
Exports	.0	.4	.0	-.1	-.2	.2	.2	-.6	-.7	.0	.0	-.7	.1	-.1	-.3
Imports	1.4	.7	.8	.5	.5	.5	.5	.5	.5	.5	.6	.6	.9	.5	.6
Govt. cons. & invest. <i>Previous</i>	-1.5	-.2	-1.3	-.3	-.9	-.4	-.4	-1.2	-1.1	-.6	-.6	-1.3	-.8	-.7	-.9
Federal	.9	.2	.2	.6	.6	.4	.3	.3	.2	.2	.2	.2	.5	.4	.2
Defense	.9	.2	.5	.4	.5	.4	.3	.3	.2	.2	.2	.2	.5	.4	.2
Nondefense	.6	-.3	.0	.3	.3	.2	.1	.0	.0	.0	.0	.0	.2	.2	.0
State & local	.4	-.1	-.1	.4	.3	.2	.1	.0	.0	.0	.0	.0	.2	.2	.0
Change in bus. inventories <i>Previous</i>	.2	-.2	-.2	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nonfarm	.3	.5	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.2	.2
Farm	.0	.4	-.7	.0	.4	-.4	-.3	.5	.4	-.1	-.1	.6	-.1	.1	.2
Nonfarm	.0	.7	-.5	-.1	.5	-.5	-.5	.3	.5	-.2	-.2	.6	.0	.0	.2
Farm	.0	.5	-.6	.0	.4	-.4	-.3	.5	.4	-.1	-.1	.6	.0	.1	.2
Farm	.0	-.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

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

Class II FOMC  
Restricted (FR)

October 18, 2006

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

Item	2006				2007				2008				2006 <sup>1</sup>	2007 <sup>1</sup>	2008 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
GDP chain-wt. price index <i>Previous</i>	3.3	3.3	1.8	1.6	3.0	2.7	2.6	2.4	2.6	2.5	2.4	2.3	2.5	2.7	2.5
PCE chain-wt. price index <i>Previous</i>	3.3	3.4	2.2	1.9	2.6	2.8	2.6	2.3	2.5	2.6	2.4	2.2	2.7	2.6	2.4
Energy <i>Previous</i>	2.0	4.0	2.4	-8	3.3	2.7	2.5	2.3	2.2	2.1	2.1	2.0	1.9	2.7	2.1
Food <i>Previous</i>	2.0	4.1	2.5	.3	2.9	2.5	2.4	2.2	2.1	2.1	2.0	2.0	2.2	2.5	2.0
Ex. food & energy <i>Previous</i>	.1	29.7	3.5	-41.6	19.9	8.0	5.4	3.4	2.4	1.7	1.1	.5	-5.9	9.0	1.4
CPI <i>Previous</i>	.1	29.7	5.0	-28.4	11.1	5.8	3.9	1.7	.7	.1	-.3	-.5	-.6	5.6	.0
Ex. food & energy <i>Previous</i>	2.7	1.7	2.9	2.7	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.5	2.4	2.2
CPI <i>Previous</i>	2.7	1.7	2.8	2.6	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.5	2.4	2.2
Ex. food & energy <i>Previous</i>	2.1	2.7	2.2	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.4	2.3	2.1
CPI <i>Previous</i>	2.1	2.8	2.3	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.4	2.3	2.1
Ex. food & energy <i>Previous</i>	2.2	4.9	3.0	-1.9	3.8	2.9	2.7	2.5	2.4	2.3	2.1	2.1	2.0	3.0	2.2
ECI, hourly compensation <sup>2</sup> <i>Previous</i> <sup>2</sup>	2.2	4.9	3.1	-2	3.3	2.8	2.6	2.3	2.2	2.1	2.0	2.0	2.5	2.7	2.1
Nonfarm business sector Output per hour <i>Previous</i>	2.4	3.6	3.0	2.9	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.9	2.5	2.3
Compensation per hour <i>Previous</i>	2.4	3.2	3.6	3.8	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.2	4.0	4.0
Unit labor costs <i>Previous</i>	2.4	3.2	3.6	3.8	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	3.2	4.1	4.1
Nonfarm business sector Output per hour <i>Previous</i>	4.3	1.2	-.8	2.4	2.4	2.4	2.5	2.6	2.7	2.7	2.7	2.6	1.7	2.5	2.7
Compensation per hour <i>Previous</i>	4.3	1.4	.4	1.6	2.4	2.4	2.4	2.6	2.6	2.7	2.8	2.9	1.9	2.4	2.7
Unit labor costs <i>Previous</i>	13.7	6.7	1.3	4.7	5.2	5.2	5.1	5.1	5.0	5.0	4.9	4.9	6.5	5.1	4.9
Unit labor costs <i>Previous</i>	13.7	6.6	1.5	4.8	5.3	5.3	5.3	5.3	5.2	5.2	5.1	5.1	6.5	5.3	5.1
Unit labor costs <i>Previous</i>	9.0	5.4	2.1	2.3	2.8	2.7	2.5	2.4	2.2	2.2	2.2	2.2	4.7	2.6	2.2
Unit labor costs <i>Previous</i>	9.0	5.1	1.1	3.2	2.8	2.8	2.8	2.7	2.6	2.4	2.2	2.1	4.5	2.8	2.3

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

2. Private-industry workers.

## Other Macroeconomic Indicators

Item	2006				2007				2008				2006 <sup>1</sup>	2007 <sup>1</sup>	2008 <sup>1</sup>
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	<i>Employment and production</i>	.6	.4	.4	.3	.2	.1	.1	.2	.2	.2	.2	.2	1.6	.6
Nonfarm payroll employment <sup>2</sup>	4.7	4.7	4.7	4.7	4.8	5.0	5.0	5.1	5.1	5.1	5.1	5.1	4.7	5.1	5.1
Unemployment rate <sup>3</sup>	4.7	4.7	4.7	4.8	4.9	5.0	5.0	5.1	5.1	5.2	5.2	5.2	4.8	5.1	5.2
<i>Previous<sup>3</sup></i>	.7	.6	.2	.1	.0	-.2	-.3	-.4	-.4	-.4	-.4	-.4	.1	-.4	-.4
GDP gap <sup>4</sup>	.7	.7	.5	.2	.0	-.1	-.3	-.4	-.4	-.5	-.5	-.5	.2	-.4	-.5
<i>Previous<sup>4</sup></i>															
Industrial production <sup>5</sup>	5.1	6.6	3.6	1.0	3.5	3.3	3.6	2.9	3.6	3.4	3.5	2.7	4.1	3.3	3.3
<i>Previous<sup>5</sup></i>	5.1	6.2	5.5	2.3	4.1	3.6	3.4	3.1	3.2	3.3	3.4	2.7	4.8	3.6	3.2
Manufacturing industr. prod. <sup>5</sup>	5.3	5.1	3.8	2.0	3.6	3.4	3.6	3.4	3.8	3.8	3.8	3.3	4.0	3.5	3.7
<i>Previous<sup>5</sup></i>	5.3	5.1	4.7	2.7	4.0	3.6	3.5	3.5	3.9	3.6	3.7	3.4	4.5	3.7	3.6
Capacity utilization rate - mfg. <sup>3</sup>	80.3	80.8	81.1	81.0	81.1	81.2	81.2	81.2	81.2	81.3	81.3	81.3	81.0	81.2	81.3
<i>Previous<sup>3</sup></i>	80.3	80.8	81.2	81.3	81.5	81.6	81.7	81.6	81.7	81.7	81.8	81.7	81.3	81.6	81.7
Housing starts <sup>6</sup>	2.1	1.9	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.8	1.6	1.6
Light motor vehicle sales <sup>6</sup>	16.9	16.3	16.6	16.5	16.5	16.5	16.5	16.5	16.6	16.6	16.6	16.6	16.6	16.5	16.6
<i>Income and saving</i>															
Nominal GDP <sup>5</sup>	9.0	5.9	2.8	4.0	5.1	4.9	4.9	4.8	5.2	5.1	5.0	4.9	5.4	4.9	5.0
Real disposable pers. income <sup>5</sup>	4.6	1.7	2.3	5.9	3.1	2.8	3.7	3.6	4.3	3.0	3.4	3.1	3.6	3.3	3.5
<i>Previous<sup>5</sup></i>	4.6	1.6	3.2	5.1	3.8	2.9	3.7	3.6	4.4	2.9	3.4	3.2	3.6	3.5	3.5
Personal saving rate <sup>3</sup>	-.3	-.6	-.7	.0	.1	.2	.4	.7	1.0	1.1	1.3	1.4	.0	.7	1.4
<i>Previous<sup>3</sup></i>	-.3	-.6	-.6	.0	.3	.4	.7	1.0	1.4	1.4	1.6	1.7	.0	1.0	1.7
Corporate profits <sup>7</sup>	60.8	5.9	-1.8	-6.4	1.2	-4.0	-1.6	.6	.9	2.9	2.5	1.9	11.9	-1.0	2.1
Profit share of GNP <sup>3</sup>	12.0	12.0	11.9	11.6	11.5	11.3	11.1	11.0	10.9	10.8	10.8	10.7	11.6	11.0	10.7
Net federal savings <sup>8</sup>	-147	-132	-206	-199	-217	-226	-233	-244	-269	-265	-261	-267	-171	-230	-265
Net state & local savings <sup>8</sup>	13	26	27	19	19	21	13	13	15	18	10	9	21	17	13
Gross national saving rate <sup>3</sup>	14.4	14.4	13.6	13.9	13.7	13.5	13.4	13.4	13.4	13.4	13.5	13.4	13.9	13.4	13.4
Net national saving rate <sup>3</sup>	2.9	2.8	2.2	2.5	2.3	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.5	2.0	2.1

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. (In previous Greenbooks, we expressed the GDP gap with the opposite sign, so that a positive number indicated that actual output fell short of 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.

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

October 18, 2006

Item	Fiscal year			2006				2007				2008				
	2005 <sup>a</sup>	2006 <sup>a</sup>	2007	2008	Q1 <sup>a</sup>	Q2 <sup>a</sup>	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Not seasonally adjusted															
<b>Unified budget</b>																
Receipts <sup>1</sup>	2154	2407	2521	2657	507	772	597	576	534	809	603	602	562	858	635	622
Outlays <sup>1</sup>	2473	2654	2775	2939	691	675	639	686	724	696	668	745	744	731	718	776
Surplus/deficit <sup>1</sup>	-318	-248	-254	-282	-183	97	-42	-111	-191	113	-65	-144	-183	127	-83	-154
Previous	-318	-266	-283	-308	-184	96	-59	-123	-201	107	-66	-151	-187	116	-87	-162
On-budget	-494	-434	-444	-487	-215	12	-61	-174	-214	24	-79	-212	-208	31	-97	-228
Off-budget	175	186	190	205	32	85	19	64	24	89	14	69	26	96	15	75
Means of financing																
Borrowing	297	237	244	288	156	-75	43	85	170	-84	74	134	162	-98	91	144
Cash decrease	1	-16	17	0	28	-38	-6	27	14	-24	0	10	15	-25	0	10
Other <sup>2</sup>	22	27	-8	-7	-1	15	5	-1	6	-4	-8	-0	6	-4	-8	-0
Cash operating balance, end of period	36	52	35	35	8	46	52	25	11	35	35	25	10	35	35	25
<b>NIPA federal sector</b>																
Receipts	2174	2484	2609	2725	2491	2555	2540	2557	2601	2625	2651	2681	2708	2739	2769	2799
Expenditures	2509	2671	2828	2984	2638	2686	2746	2757	2818	2851	2885	2926	2977	3004	3030	3066
Consumption expenditures	758	797	843	882	804	802	809	818	843	852	860	866	882	887	892	896
Defense	509	532	569	597	538	538	538	549	569	576	582	587	597	600	604	607
Nondefense	249	264	274	285	266	265	272	269	275	276	278	279	285	286	288	290
Other spending	1751	1874	1984	2103	1834	1884	1937	1938	1975	1999	2025	2060	2095	2118	2138	2169
Current account surplus	-335	-187	-219	-260	-147	-132	-206	-199	-217	-226	-233	-244	-244	-269	-265	-267
Gross investment	107	117	124	127	118	117	117	121	124	125	126	127	127	127	127	127
Gross saving less gross investment <sup>3</sup>	-344	-201	-235	-274	-163	-145	-219	-214	-233	-242	-249	-260	-283	-279	-273	-278
<b>Fiscal indicators<sup>4</sup></b>																
High-employment (HEB) surplus/deficit	-336	-220	-237	-260	-188	-174	-235	-228	-239	-240	-243	-249	-269	-264	-257	-261
Change in HEB, percent of potential GDP	-0.3	-1.0	0.0	0.1	-0.8	-0.1	0.4	-0.1	0.1	-0.0	-0.0	0.0	0.1	-0.1	-0.1	0.0
Fiscal impetus (FI), percent of GDP	0.2	0.3	0.3	-0.0	0.2	-0.0	0.1	0.1	0.2	0.0	-0.0	0.0	-0.0	-0.0	-0.0	-0.0
Previous	0.2	0.4	0.3	0.0	0.2	-0.0	0.1	0.0	0.2	0.0	-0.0	0.0	0.0	0.0	0.0	0.0

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**      **October 18, 2006**  
(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>								
2001	6.3	9.4	10.1	8.9	6.0	8.8	-2	2.7
2002	7.2	10.6	12.9	5.7	2.5	11.0	7.6	3.6
2003	8.2	11.7	14.3	5.3	2.6	8.3	10.9	5.9
2004	8.9	11.5	14.1	5.3	5.9	7.4	9.0	6.7
2005	9.5	11.7	13.8	4.1	7.7	10.2	7.0	6.4
2006	7.4	8.3	9.1	4.0	7.9	6.6	4.5	5.4
2007	6.3	6.2	6.9	3.8	7.0	4.4	6.0	4.9
2008	6.1	5.9	6.5	3.7	6.7	4.6	5.7	5.0
<i>Quarter</i>								
2006:1	9.5	9.6	10.9	2.0	9.5	3.5	11.3	9.0
2	6.4	9.1	9.1	5.9	7.6	6.6	-2.4	5.9
3	6.5	7.0	7.8	4.1	6.9	9.4	3.3	2.8
4	6.4	6.7	7.5	3.9	6.6	6.3	5.4	4.0
2007:1	7.2	6.3	6.9	3.8	7.0	2.9	12.0	5.1
2	4.7	6.1	6.7	3.9	6.8	5.0	-3.1	4.9
3	6.1	6.0	6.6	3.7	6.9	4.7	5.6	4.9
4	6.6	5.9	6.5	3.7	6.6	4.6	9.0	4.8
2008:1	6.8	5.9	6.4	3.7	6.4	4.6	10.7	5.2
2	4.3	5.8	6.4	3.7	6.6	4.5	-3.9	5.1
3	6.1	5.8	6.3	3.7	6.6	4.5	6.6	5.0
4	6.5	5.8	6.3	3.7	6.6	4.4	9.3	4.9

Note. Quarterly data are at seasonally adjusted annual rates.

1. Data after 2006:Q2 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**

**October 18, 2006**

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

Category	2005	2006	2007	2008	2006				2007				2008			
					2006		2007		2008		2006		2007		2008	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<i>Domestic nonfinancial sectors</i>																
Net funds raised																
Total	1951.5	1429.3	1540.5	1612.3	1233.8	1329.3	1788.3	1101.8	1549.4	1722.5	1830.4	1099.3	1674.5	1845.0		
Net equity issuance	-363.6	-541.4	-260.0	-232.0	-572.8	-480.0	-280.0	-260.0	-260.0	-240.0	-232.0	-232.0	-232.0	-232.0		
Net debt issuance	2315.1	1970.7	1800.5	1844.3	1806.6	1809.3	2068.3	1361.8	1809.4	1962.5	2062.4	1331.3	1906.5	2077.0		
<i>Borrowing indicators</i>																
Debt (percent of GDP) <sup>1</sup>	204.6	208.9	213.4	215.7	210.2	211.6	212.5	213.1	213.4	214.3	215.1	215.4	215.5	216.4		
Borrowing (percent of GDP)	18.6	14.9	13.0	12.7	13.6	13.5	15.2	9.9	13.0	13.9	14.5	9.2	13.0	14.0		
<i>Households</i>																
Net borrowing <sup>2</sup>	1241.5	984.9	795.5	806.9	867.1	841.2	801.7	795.8	792.4	792.1	797.4	803.5	809.6	817.2		
Home mortgages	1078.1	810.2	665.4	674.9	729.3	710.4	672.5	663.0	663.0	663.0	667.8	672.5	677.2	682.0		
Consumer credit	91.1	93.3	92.5	93.9	96.4	92.6	91.3	95.1	91.9	91.5	91.9	93.0	94.1	96.5		
Debt/DPI (percent) <sup>3</sup>	123.8	128.5	130.3	130.5	129.5	130.1	130.1	130.4	130.3	130.3	130.2	130.4	130.5	130.7		
<i>Business</i>																
Financing gap <sup>4</sup>	-138.6	55.9	150.4	247.4	66.1	86.7	119.8	137.3	155.4	189.2	222.7	235.3	248.6	282.8		
Net equity issuance	-363.6	-541.4	-260.0	-232.0	-572.8	-480.0	-280.0	-260.0	-260.0	-240.0	-232.0	-232.0	-232.0	-232.0		
Credit market borrowing	595.3	653.9	625.4	644.0	600.0	583.7	621.9	621.9	640.4	617.3	615.6	642.6	651.7	665.9		
<i>State and local governments</i>																
Net borrowing	171.5	122.6	86.2	94.8	179.5	122.5	56.4	98.8	94.8	94.8	94.8	94.8	94.8	94.8		
Current surplus <sup>5</sup>	203.8	215.6	196.6	200.5	200.8	195.1	196.8	200.2	193.4	195.8	199.9	204.3	198.4	199.4		
<i>Federal government</i>																
Net borrowing	306.9	209.3	293.4	298.7	160.0	261.9	588.3	-154.7	281.8	458.3	554.6	-209.5	350.5	499.2		
Net borrowing (n.s.a.)	306.9	209.3	293.4	298.7	43.4	84.6	170.3	-84.4	73.8	133.7	161.9	-98.1	91.0	143.9		
Unified deficit (n.s.a.)	322.1	238.5	286.7	292.1	42.0	110.5	190.5	-112.8	65.4	143.6	182.8	-127.1	82.6	153.8		
<i>Depository institutions</i>																
Funds supplied	814.1	651.6	521.7	380.5	417.4	163.5	629.4	542.2	570.8	344.5	357.6	394.9	405.5	363.9		

Note. Data after 2006:Q2 are staff projections.

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

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

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

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

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

n.s.a. Not seasonally adjusted.

2.6.4 FOF

(This page intentionally blank.)

## International Developments

Recent data confirm that growth in foreign output moderated from the rapid pace earlier this year to a more sustainable annual rate of 3¼ percent in the third quarter. We expect foreign activity to continue to expand at this solid pace over the forecast period.

Although our outlook for foreign real GDP growth in the aggregate is unchanged, it reflects a slightly weaker near-term forecast for emerging-market economies and a slightly stronger forecast for the advanced foreign economies.

The decline in oil prices since the summer should continue to feed through to foreign consumer price inflation over the remainder of this year; our forecast is for inflation to dip below 2 percent in the current quarter, ½ percentage point lower than in the September Greenbook. Inflation should be held in check over the forecast period, as oil prices are expected to only partially reverse their drop since early August, and monetary and fiscal restraint abroad are expected to keep foreign growth at rates close to potential.

### Summary of Staff Projections

(Percent change from end of previous period, s.a.a.r.)

Indicator	2005	2006: H1	Projection			
			2006		2007	2008
			Q3	Q4		
Foreign output	3.8	4.4	3.3	3.3	3.2	3.3
September GB	3.7	4.3	3.3	3.3	3.2	3.3
Foreign CPI	2.2	2.4	2.1	1.7	2.3	2.1
September GB	2.2	2.3	2.4	2.3	2.3	2.2

NOTE. Changes for years are measured as Q4/Q4; for half-years, Q2/Q4 or Q4/Q2.

As measured by the broad nominal index, the foreign exchange value of the dollar has appreciated just a little over the intermeeting period, resulting in a slightly higher starting point for the projected path of the dollar. As in the previous Greenbook, we continue to expect a modest depreciation over the forecast period.

We now estimate that the arithmetic contribution of real net exports to U.S. GDP growth was a negative ½ percentage point in the third quarter and that it will swing to a positive ¼ percentage point in the fourth quarter. Compared with our previous forecast of roughly neutral contributions in both quarters, these changes reflect surprisingly strong partial data on third-quarter imports as well as a revision to the expected path of oil imports in

line with the faster-than-anticipated recovery of oil production in Alaska's Prudhoe Bay. We project that real net exports will subtract about 0.2 percentage point from growth in 2007 and nearly 0.4 percentage point in 2008 as core import growth strengthens in line with the pickup in U.S. GDP growth.

The U.S. current account deficit for the second quarter was \$874 billion, or 6.6 percent of GDP, a bit larger than we had estimated at the time of the September Greenbook. We project that the deficit will widen further over the forecast period to more than \$1 trillion, or 7 percent of GDP, in 2008. Although nominal oil imports are revised down in this forecast, which trims the projected current account deficit, this effect is more than offset by deterioration in the balances for non-oil trade and net investment income.

### **Oil Prices**

The spot price of West Texas intermediate (WTI) crude oil closed at \$58.94 per barrel on October 17, down about \$5 since the time of the September Greenbook and \$18 from its peak on August 7. Prices of crude oil futures contracts maturing over the forecast period have also moved lower, but to a lesser extent. In contrast, the price of the contract for delivery in December 2012 closed at \$64.31 per barrel on October 17, up almost \$1.50 since the September Greenbook.

The recent decrease in near-dated oil prices appears primarily to reflect continuing improvements in the outlook for global oil supply. The absence of damaging storms this hurricane season has removed a large risk to U.S. production; at the beginning of the summer, most forecasters had envisaged a very active hurricane season. Domestic output has also received a boost from an earlier-than-anticipated return to nearly full production at the Prudhoe Bay oil field. The anticipation of supply outages had led to a substantial increase in U.S. oil inventories over the past few months, but recent developments have likely reduced the demand for precautionary inventories and thereby contributed to the fall in prices.

Despite the recent sharp fall in oil prices, remaining supply disruptions and risks have kept prices at historically elevated levels; even with these recent declines, the spot price for WTI is near its end-2005 level. A significant share of Nigerian production is still shut in, ongoing violence continues to put Iraqi production at risk, and a disruption in Iranian oil supplies should sanctions be imposed by the United Nations remains a possibility. Discussions by OPEC regarding a possible cut in oil production have also lent some

support to oil prices, but it remains unclear how much oil, if any, will be withdrawn from the market.

Oil demand—particularly in developing countries—is expected to remain solid, given our projection for moderate growth in global economic activity. Currently, spare oil production capacity worldwide is estimated to account for a little more than 2 percent of consumption, up from less than ½ percent in late 2004 but still low by historical standards. Spare capacity is expected to expand only gradually as a host of political and economic factors continue to hinder investment by oil companies.

In line with NYMEX futures prices, our projection calls for the spot price of WTI to rise to about \$68.70 per barrel in the second half of 2008. Compared with the September Greenbook forecast, the current projection averages about \$4.50 per barrel lower in the fourth quarter of this year, but slopes up a bit more steeply over the rest of the forecast period, with the price averaging about \$2.80 lower in 2007 and \$1.20 lower in 2008. The projected path of the oil import price has been revised down a similar amount.

### **International Financial Markets**

The broad nominal trade-weighted foreign exchange value of the dollar rose ½ percent on balance over the intermeeting period, as the dollar appreciated about 1¼ percent against the major foreign currencies but depreciated ½ percent against the currencies of the other important trading partners of the United States. On a bilateral basis, the dollar appreciated 1½ percent against the euro and the yen and slightly more than 1 percent against sterling and the Canadian dollar. In contrast, the dollar depreciated more than 1 percent against the Brazilian *real* and the Mexican peso and also depreciated some against several East Asian emerging-market currencies over the period.

On the basis of these developments, the fourth-quarter starting point for the projected path of the broad real dollar is slightly higher than in the previous forecast. We project that the broad real dollar will depreciate at an average annual rate of about 1 percent over the remainder of the forecast period. This rate of depreciation is similar to that in the September Greenbook, although the higher starting point generates a slightly stronger dollar path. The downward trajectory for the dollar reflects our view that concerns about the rising U.S. current account deficit should eventually weigh on the willingness of foreign investors to continue accumulating dollar-denominated assets at unchanged exchange rates.

Nominal benchmark bond yields in Europe and Canada declined early in the intermeeting period but then more than reversed these declines, generally following movements of yields on U.S. Treasuries. On balance, benchmark bond yields rose 4 to 12 basis points in the major foreign industrial countries. Long-term real bond yields also rose slightly on net over the intermeeting period, leaving breakeven inflation rates little changed. The European Central Bank raised its policy rate 25 basis points on October 5, a move that had been widely anticipated.

Headline equity price indexes rose between 3 percent and 6 percent in the major foreign industrial economies. Equity prices also rose robustly in many important emerging-market economies, with the exception of South Korea, where prices fell 1 percent on balance after North Korea's nuclear test.

The Desk did not intervene during the period for the accounts of the System or the Treasury.

### **Advanced Foreign Economies**

We forecast that real GDP in the advanced foreign economies will rise at an annual rate of 2½ percent in the final two quarters of this year, a rate similar to that in the second quarter. Subsequently, we expect GDP growth to edge down to an average pace of around 2¼ percent over the rest of the forecast period as monetary and fiscal tightening restrain foreign activity. Lower oil prices and declines in the price of gasoline are holding down consumer price inflation, and we estimate that the average four-quarter change in consumer prices was about 1¾ percent in the third quarter. Inflation is expected to edge down to average 1½ percent through most of 2007 and 2008.

We continue to be surprised by the strength of euro-area economic activity. Both consumer and industrial sentiment improved in September, and industrial production surged in August, more than reversing the decline in July. We estimate that real GDP rose nearly 3 percent at an annual rate in the third quarter, slower than in the second quarter, but slightly stronger than we anticipated in the September Greenbook. Our forecast, however, calls for growth to slow to 1¾ percent by the second half of 2007. This slowing in part reflects tightened monetary and fiscal policies, including a planned increase in the value-added tax (VAT) in Germany in early 2007. With oil prices down from recent peaks, the twelve-month rate of inflation declined to 1.7 percent in September. The scheduled increase in the German VAT will likely push euro-area

inflation back up to 2 percent in 2007, but this effect should be temporary and inflation should average just below 1¾ percent in 2008. We assume that the European Central Bank will raise its official interest rate another 25 basis points, to 3.5 percent, later this year.

In Japan, recent indicators have been mixed: Household consumption data have been weak, but investment indicators rebounded in August, and real exports for July and August on average rose above their second-quarter level. Taken together, these data suggest that real GDP expanded 1¾ percent at an annual rate in the third quarter, up from 1 percent in the previous quarter. For the fourth quarter, we expect GDP growth to rise further, to 2¼ percent, as consumption recovers. Growth is then projected to slow to about 1¾ percent, near the economy's potential growth rate, over the remainder of the forecast period. Food prices spiked in August, raising the twelve-month rate of Japanese consumer price inflation to about 1 percent. Once this effect passes, the rate of inflation should remain near ½ percent for the rest of the forecast period. We continue to assume that the Bank of Japan will increase its policy interest rate gradually from 0.25 percent at present to 1.5 percent by the end of 2008.

We estimate that Canadian GDP grew at an annual rate of about 2 percent in the third quarter, the same pace as in the second quarter. Although data for the housing sector suggest a further decline in residential construction in the third quarter, indicators showing brisk expansion in the retail and energy sectors suggest that, on balance, domestic demand growth stayed relatively strong. However, strong import data for July and August partially offset the robust domestic demand growth. Our forecast calls for real GDP growth to pick up over the forecast period, in line with the contour of the U.S. forecast. The twelve-month rate of consumer price inflation declined to 2 percent in August; we expect it to remain at or below that pace during the rest of the forecast period, in part because of our projection for energy prices. We assume that the Bank of Canada will keep monetary policy on hold over the forecast period.

Third-quarter GDP growth in the United Kingdom likely remained close to 2¾ percent, as consumption indicators softened but business confidence and investment indicators improved. Real GDP growth is expected to edge down to around 2½ percent over the rest of the forecast period, as the effects of somewhat tighter policy are felt. In September, the twelve-month rate of CPI inflation was 2.4 percent, down slightly from August. We expect the four-quarter rate of inflation to remain elevated through mid-2007, in part because of the run-up in energy prices earlier this year and a hike in

university tuition fees. Inflation is then projected to fall below the Monetary Policy Committee's 2 percent target in 2008. We assume that the MPC will raise policy rates a further 25 basis points by the end of this year and again in early 2007, but will begin to ease monetary policy early in 2008.

### **Emerging-Market Economies**

Recent indicators suggest that real GDP growth in emerging-market economies moderated to a pace of about 4½ percent in the third quarter, down from an average rate of 6½ percent in the first half of the year. The slowdown was primarily in Latin America, where a number of economies—particularly Mexico—had seen above-trend growth in the first half. We expect real GDP in the emerging-market economies to continue to expand at about a 4½ percent pace on average, a projection that includes continued rapid growth of nearly 6 percent in the Asian economies and 3½ percent growth in the Latin American economies. This outlook is little changed from the September Greenbook, as the effects of the lower level of U.S. economic activity in the near term are offset by the net effects of the lower path of oil prices.

In China, slower growth in both fixed asset investment and industrial production in July and August provide some tentative evidence that recent administrative measures implemented by the Chinese authorities to restrain investment may be having some effect. We project that Chinese GDP growth will step down from an annual rate of 12 percent in the second quarter to 9 percent in the fourth quarter and will average about 8½ percent for the remainder of the forecast period. Elsewhere in emerging Asia, average annual growth over the forecast period ranges from about 4¼ percent in Hong Kong and Korea to 7¼ percent in India. Although the moderation in economic growth from that in recent years in both the United States and China will have a restraining effect on these economies, strengthening demand for high-tech products should provide some offset. In Thailand, any potential negative effect of the military coup on economic activity is expected to be small and short lived.

Recent indicators in Latin America suggest that average real GDP growth moderated in the third quarter, and we expect growth on average in the region to remain around 3½ percent through the forecast period. In particular, Mexican growth is estimated to have dropped to 3 percent at an annual rate in the third quarter and is projected to remain around that rate over the next two years, as the effects of slower growth in U.S. manufacturing production offset the continued strength in Mexican construction activity. In South America, recent indicators suggest that growth dropped back from an upwardly

revised  $6\frac{3}{4}$  percent in the second quarter to about 4 percent in the third quarter, and we expect it to remain around that pace over the rest of the forecast period. The Brazilian outlook remains unchanged despite President Lula's inability to secure a first-round victory; he is still expected to win the election runoff in late October.

Four-quarter consumer price inflation in the emerging-market economies is projected to edge up to about 3 percent in 2007 and then to fall a touch to just over  $2\frac{3}{4}$  percent by 2008. This contour is similar to that in the last Greenbook, but inflation is slightly lower, largely the result of the lower path for oil prices. Chinese inflation is expected to rise to near  $2\frac{1}{2}$  percent by the third quarter of next year and then to edge down to just over 2 percent in 2008. The outlook for inflation elsewhere in Asia has also been revised down from the September Greenbook. In Latin America, Mexican inflation moved slightly above the Bank of Mexico's inflation target band of 2-to-4 percent in September as a result of food price increases, but it is expected to fall back to about  $3\frac{1}{2}$  percent for most of the forecast period. Brazilian inflation is projected to remain well contained, averaging roughly  $3\frac{3}{4}$  percent in 2007 and 2008.

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

Since the September Greenbook, we have received data for core import prices in August and September. These data came in a bit stronger than we had anticipated, and we now estimate that core import prices increased at an annual rate of  $4\frac{1}{4}$  percent in the third quarter. This elevated third-quarter pace reflects continued effects of higher nonfuel commodity prices and the depreciation of the dollar earlier this year.

As in the previous Greenbook, core import prices are projected to begin decelerating in the fourth quarter, with import price inflation declining to an annual rate of about 1 percent by the end of 2007 and remaining near that rate in 2008. This contour reflects our expectation, which is consistent with futures markets, that nonfuel commodity prices will remain about flat and that earlier commodity price increases will provide a diminishing impetus to import prices over the next several quarters. Compared with the September Greenbook, our projection of core import price inflation in the first quarter of 2007 is  $\frac{1}{4}$  percentage point lower, as the recent appreciation of the dollar provides some additional restraint. Thereafter, our projection for core import price inflation is little changed because our projections for commodity prices and for the dollar in 2007 and 2008 have not changed enough to materially alter the price outlook.

**Staff Projections of Selected Trade Prices**  
(Percent change from end of previous period except as noted; s.a.a.r.)

Trade category	2005	2006: H1	Projection			
			2006		2007	2008
			Q3	Q4		
<i>Exports</i>						
Core goods	3.9	5.3	6.0	2.7	2.2	1.2
September GB	3.9	5.2	6.3	3.2	2.2	1.1
<i>Imports</i>						
Nonfuel core goods	2.2	2.7	4.2	3.3	1.4	1.0
September GB	2.2	2.7	3.9	3.2	1.4	1.0
Oil (dollars per barrel)	55.39	63.75	65.69	55.17	62.69	63.66
September GB	55.39	63.75	65.37	59.10	64.81	64.32

NOTE. Prices for core exports exclude computers and semiconductors. Prices for nonfuel core imports exclude computers, semiconductors, oil, and natural gas. Both price series are on a NIPA chain-weighted basis.

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

We estimate that core export prices rose at an annual rate of 6 percent in the third quarter after increasing at a 7 percent pace in the second quarter. Prices of exported industrial supplies rose 1½ percent in the third quarter, a surge that would have been even larger if petroleum prices had not fallen sharply in September. The effects of this decline in petroleum prices will continue to be felt in the current quarter. As a result, core export prices are projected to increase at an annual rate of only 2¾ percent this quarter, notwithstanding some lagged effects of higher prices for metals. We expect export price inflation to edge up in the first half of 2007 along with the prices of petroleum products, but this increase should be short lived. In subsequent quarters, core export price inflation should decline, as prices for intermediate materials and primary commodities decelerate. Compared with the previous Greenbook, core export price inflation is ¼ percentage point lower in the third quarter and ½ percentage point lower in the fourth quarter because of the recent drop in petroleum prices. For 2007 and 2008, the forecast is little changed.

### Trade in Goods and Services

We now estimate that real net exports of goods and services subtracted just over ½ percentage point from the growth of U.S. real GDP in the third quarter, as recent import data—for both oil and core goods—have come in much stronger than we had expected. In the current quarter, we see the contribution from net exports swinging to a positive ¼ percentage point, as imports decelerate sharply. Our previous forecast had

incorporated roughly neutral contributions from net exports in both the third and fourth quarters. Over the remainder of the forecast period, we project that net exports will subtract 0.2 percentage point from growth in 2007 and nearly 0.4 percentage point in 2008; the contribution for 2007 is slightly more negative than in the September Greenbook, as somewhat stronger projected U.S. GDP growth provides greater support to imports.

Real imports of goods and services are estimated to have increased at an annual rate of 8 percent in the third quarter, a pace nearly 5 percentage points stronger than in our last forecast. This upward revision is driven by two features of the recent data. First, the nominal trade data for August were well above our expectations, with core goods showing particular strength. Within core goods, the strong performance was fairly widespread, with particularly large upward surprises in capital goods and industrial supplies. The quantity of oil imports was also higher than expected. Second, data from the Department of Energy on the quantity of oil imports in September were stronger than expected, with most of the surprise coming from larger additions to oil inventories. In addition to the strong readings on imports of core goods and oil, imports of computers and semiconductors also appear to have posted solid growth in the third quarter. In contrast, nominal services imports in August were softer than expected, and we now estimate that real imports of services contracted during the third quarter.

The growth of real imports is projected to slow sharply in the fourth quarter to an annual rate of  $1\frac{3}{4}$  percent. This slowing is partly attributable to weaker imports of oil, due primarily to the resumption of domestic production from Prudhoe Bay and reduced demand for oil imports following the inventory buildup in the third quarter. The slowing also reflects weaker growth of imports of core goods, which we project will moderate from the rapid third-quarter rate to a pace more in line with U.S. GDP growth and relative prices. Compared with the September Greenbook, our projection for real import growth in the fourth quarter has been revised down 2 percentage points, mostly because of the revised outlook for oil imports. For the second half of the year, real imports are projected to increase on average at an annual rate of  $4\frac{3}{4}$  percent, compared with  $5\frac{1}{4}$  percent in the first half of the year.

Beyond this year, import growth is expected to be about  $4\frac{1}{4}$  percent in 2007 and  $5\frac{1}{2}$  percent in 2008. An acceleration of core imports is supported by the edging up of U.S. growth and the slowing of core import price inflation. Imports of services are expected to grow more slowly than imports of core goods because of higher projected

price inflation for services imports. Growth of imports of computers and semiconductors should remain solid. Compared with the September Greenbook, our projection for overall real import growth has been revised up  $\frac{1}{2}$  percentage point for 2007, in part because of the upward revision to the projected path of U.S. growth, and is little changed in 2008.

**Staff Projections for Trade in Goods and Services**  
(Percent change from end of previous period, s.a.a.r.)

Measure	2005	2006: H1	Projection			
			2006		2007	2008
			Q3	Q4		
Real exports	6.7	10.0	7.4	4.9	4.5	4.9
September GB	6.7	10.1	4.7	4.9	4.6	5.1
Real imports	5.2	5.2	8.1	1.7	4.2	5.4
September GB	5.2	5.2	3.2	3.8	3.7	5.3

NOTE. Changes for years are measured as Q4/Q4; for half-years, Q2/Q4 or Q4/Q2.

Real exports of goods and services are estimated to have risen at an annual rate of about  $7\frac{1}{2}$  percent in the third quarter. This projection is  $2\frac{3}{4}$  percentage points stronger than in the September Greenbook, as the August nominal trade data indicated much stronger export growth than we had expected, particularly of core goods. As with imports, the strength was spread fairly evenly across a number of categories, with the largest increases in industrial supplies and capital goods. We now estimate that real exports of core goods grew nearly 12 percent in the third quarter. Real services exports, however, are now estimated to have fallen slightly, as August data on nominal services unexpectedly continued the softness seen in recent months. Exports of computers and semiconductors are estimated to have posted only lackluster growth in the third quarter.

In the current quarter and over the next two years, we project that the growth of real exports of goods and services will proceed at an average annual rate of  $4\frac{3}{4}$  percent, with growth being slightly higher near the end of the forecast period. After its third-quarter burst, core export growth slows to  $3\frac{3}{4}$  percent in the fourth quarter and to just above 3 percent next year before picking up again in 2008. Against the backdrop of continued solid support from foreign GDP growth, the contours of this forecast reflect both the lagged effects of the dollar's appreciation in 2005, which pulls core export growth down slightly next year, and subsequent dollar depreciation, which raises core export growth in

2008. The deceleration of core export prices also boosts core goods exports. Growth in exported services is projected to remain close to the fourth quarter rate of 4¾ percent through the remainder of the forecast period, while exports of computers and semiconductors are projected to rise at a double-digit pace. Compared with the September Greenbook, total export growth is slightly weaker in both 2007 and 2008, primarily because the path of the dollar is a bit stronger throughout the forecast period.

### **Alternative Simulations**

Our benchmark forecast for oil prices follows futures markets in projecting some reversal of the sharp declines of the past few months, but of course a wide range of outcomes for oil prices remains plausible. Accordingly, in our alternative scenarios, we used SIGMA, the staff's forward-looking multicountry model, to consider the effects of both a \$20 per barrel permanent decline in oil prices (relative to our baseline path) and a similar-sized rise in oil prices.<sup>1</sup> In both cases, we assume that the oil price shock occurs in the fourth quarter of 2006 and that both households and firms understand the permanent nature of the shock. Moreover, the simulation exercises assume that monetary policy is highly credible, so that long-run inflation expectations remain well anchored.

In the first scenario, more-favorable global supply conditions result in oil prices falling permanently by \$20 per barrel relative to our baseline path. U.S. real GDP growth rises about 0.2 percentage point above baseline in 2007 and by a smaller amount in 2008. Consumer spending rises in response to higher permanent income, while firms increase investment as lower energy costs boost the productivity of capital. Core PCE inflation declines ¼ percentage point below baseline over most of the forecast horizon. The fall in core inflation results from lower production costs, as a pickup in labor productivity is only gradually offset by rising real wages. Falling energy costs also contribute to an immediate narrowing of the U.S. trade deficit equal to about ½ percent of GDP. Given that both firms and households have limited scope to adjust their energy usage in the short-run, the effects on the trade balance persist through the forecast period.

The second scenario, in which adverse supply shocks cause oil prices to rise permanently by \$20 per barrel (relative to our baseline path), yields similar quantitative effects, but of the opposite sign.<sup>2</sup> Taken together, our results suggest that even sizeable changes in oil

---

<sup>1</sup> The effects of an oil shock that are reported below for SIGMA are within the range of estimates derived from other macroeconomic models used at the Board. These models include the FRB/Global model and variants of the FRB/US model with model-consistent expectations.

<sup>2</sup> As is evident from the table, the \$20 per barrel rise in oil prices has slightly smaller effects in absolute value terms than the \$20 per barrel fall in oil prices. In mathematical terms, this reflects that the

prices of either sign would be unlikely to push core inflation very far from the 2 to 2½ percent range projected in our baseline forecast, as long as long-run inflation expectations remain anchored.

**Alternative Simulations:  
Alternative Oil Price Paths**  
(Percent change from previous period, annual rate)

Indicator and simulation	2006		2007		2008	
	H1	H2	H1	H2	H1	H2
<i>U.S. real GDP</i>						
Baseline	4.1	1.6	2.1	2.3	2.5	2.5
Permanently lower oil price	4.1	1.8	2.3	2.4	2.6	2.5
Permanently higher oil price	4.1	1.5	1.9	2.2	2.4	2.5
<i>U.S. PCE prices excluding food and energy</i>						
Baseline	2.4	2.3	2.4	2.3	2.2	2.1
Permanently lower oil price	2.4	2.2	2.2	2.0	2.0	1.9
Permanently higher oil price	2.4	2.3	2.6	2.5	2.4	2.2
<i>U.S. trade balance (percent of GDP)</i>						
Baseline	-5.9	-5.8	-5.7	-5.7	-5.8	-5.7
Permanently lower oil price	-5.9	-5.2	-5.2	-5.2	-5.4	-5.3
Permanently higher oil price	-5.9	-6.2	-6.1	-6.1	-6.1	-6.0

Note. H1 is Q2/Q4; H2 is Q4/Q2. The federal funds rate is adjusted according to a Taylor rule.

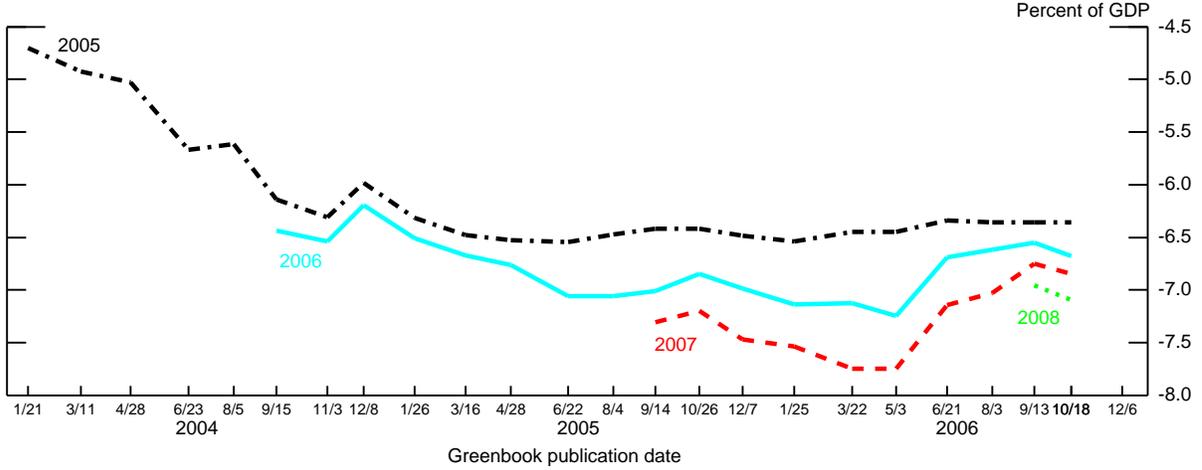
---

responses of our model are close to log linear and that a \$20 rise from a given base implies a smaller logarithmic percentage change than a \$20 decrease (even though the arithmetic changes are the same).

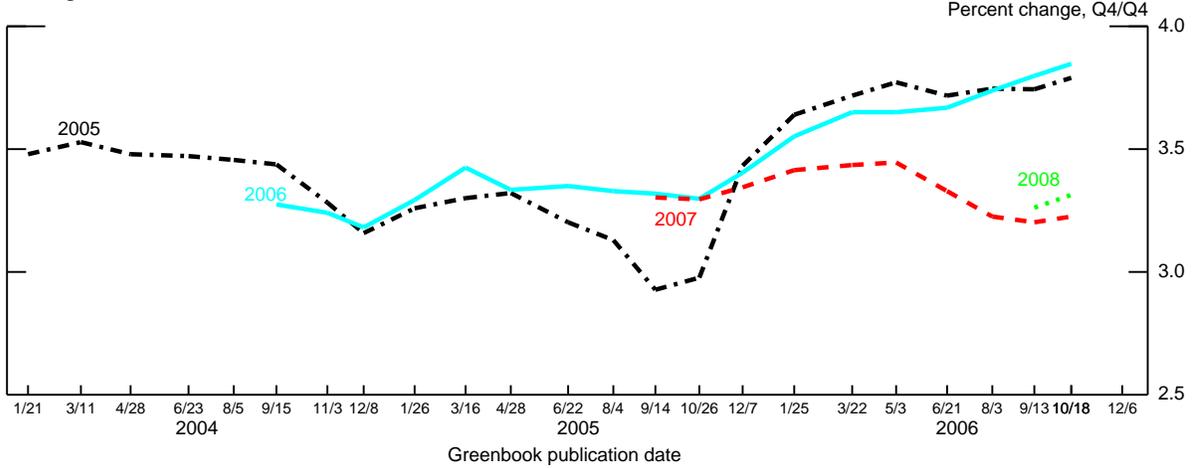
Class II FOMC -- Restricted (FR)

### Evolution of the Staff Forecast

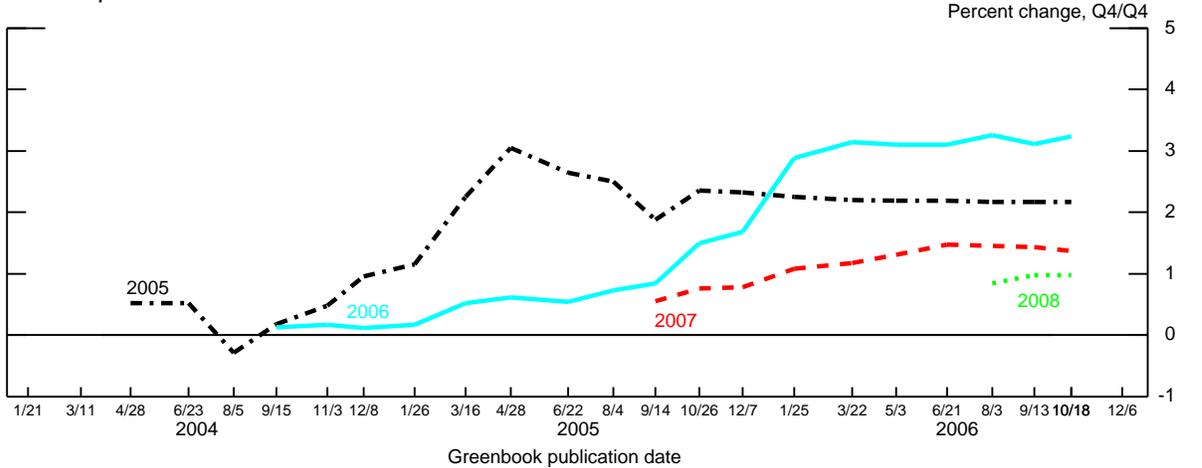
Current Account Balance



Foreign Real GDP



Core Import Prices\*



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

October 18, 2006

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

Measure and country	-----Projected-----								
	2000	2001	2002	2003	2004	2005	2006	2007	2008
REAL GDP (1)									
-----									
Total foreign	4.2	0.4	3.0	3.0	3.8	3.8	3.8	3.2	3.3
Industrial Countries	3.6	0.9	2.5	1.8	2.5	2.7	2.7	2.3	2.3
of which:									
Canada	4.1	1.3	3.5	1.5	3.7	2.8	2.5	2.5	2.7
Japan	3.4	-1.5	2.0	2.6	0.5	4.0	2.0	1.8	1.6
United Kingdom	3.1	2.0	2.3	3.3	2.6	1.9	2.7	2.5	2.4
Euro Area (2)	3.3	1.0	1.1	1.0	1.5	1.8	3.1	1.6	1.7
Germany	2.3	1.1	0.0	0.2	0.2	1.7	3.2	1.0	1.5
Developing Countries	5.2	-0.4	3.8	4.7	5.6	5.4	5.5	4.6	4.7
Asia	5.8	1.0	6.2	6.8	6.0	7.3	6.1	5.7	5.9
Korea	4.3	4.7	7.8	4.2	2.9	5.3	4.0	4.3	4.5
China	7.8	7.1	8.4	10.1	9.6	9.9	10.7	8.3	8.4
Latin America	4.4	-1.3	1.5	2.4	5.2	3.2	4.9	3.5	3.4
Mexico	4.8	-1.3	2.0	2.0	4.8	2.7	4.7	3.3	3.3
Brazil	3.8	-1.0	4.1	0.9	4.8	1.5	3.3	3.2	3.2
CONSUMER PRICES (3)									
-----									
Industrial Countries	1.9	0.9	2.1	1.3	1.8	1.5	1.6	1.6	1.5
of which:									
Canada	3.1	1.1	3.8	1.7	2.3	2.3	1.8	1.8	2.0
Japan	-0.5	-1.1	-0.5	-0.4	0.5	-1.0	0.7	0.5	0.6
United Kingdom (4)	0.9	1.1	1.5	1.3	1.4	2.1	2.8	2.2	1.8
Euro Area (2)	2.5	2.1	2.3	2.0	2.3	2.3	1.7	2.0	1.6
Germany	1.7	1.4	1.2	1.1	2.1	2.2	0.9	2.5	1.4
Developing Countries	4.1	2.8	2.9	3.1	3.9	3.0	2.8	3.0	2.8
Asia	1.8	1.2	0.8	2.2	3.2	2.6	2.2	2.6	2.4
Korea	2.5	3.3	3.4	3.5	3.4	2.5	2.9	3.0	2.3
China	1.0	-0.1	-0.5	2.7	3.3	1.4	1.8	2.3	2.1
Latin America	8.4	5.3	6.4	4.9	5.7	3.8	3.9	3.7	3.7
Mexico	8.7	5.1	5.2	3.9	5.3	3.1	3.8	3.5	3.5
Brazil	6.4	7.5	10.7	11.5	7.2	6.1	3.0	3.7	3.7

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

Measure and country	2006				Projected			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
REAL GDP (1)	----- Quarterly changes at an annual rate -----							
Total foreign	4.7	4.0	3.3	3.3	3.2	3.2	3.2	3.3
Industrial Countries of which:	3.2	2.5	2.4	2.5	2.1	2.3	2.3	2.4
Canada	3.6	2.0	2.1	2.4	2.4	2.4	2.5	2.6
Japan	3.3	1.0	1.7	2.2	2.0	1.9	1.7	1.8
United Kingdom	2.6	2.8	2.7	2.6	2.6	2.6	2.5	2.5
Euro Area (2)	3.1	3.8	2.9	2.7	1.2	1.9	1.8	1.7
Germany	2.7	3.6	2.9	3.4	-0.7	1.7	1.6	1.6
Developing Countries	6.8	6.1	4.5	4.5	4.6	4.6	4.6	4.6
Asia	7.5	5.6	5.8	5.6	5.7	5.7	5.7	5.9
Korea	4.9	3.4	3.9	3.9	4.1	4.2	4.3	4.4
China	12.5	12.1	9.4	9.0	8.5	8.2	8.2	8.2
Latin America	6.7	6.2	3.3	3.4	3.5	3.5	3.5	3.5
Mexico	6.6	6.1	3.1	3.1	3.3	3.3	3.3	3.3
Brazil	5.2	1.8	3.0	3.2	3.2	3.2	3.2	3.2
CONSUMER PRICES (3)	----- Four-quarter changes -----							
Industrial Countries	1.8	2.0	1.8	1.6	1.7	1.4	1.4	1.6
of which:	2.5	2.6	2.0	1.8	1.8	1.5	1.5	1.8
Canada	-0.1	0.2	0.6	0.7	0.4	0.5	0.4	0.5
Japan	2.0	2.2	2.4	2.8	3.0	2.8	2.4	2.2
United Kingdom (4)	2.3	2.5	2.1	1.7	2.1	1.8	1.7	2.0
Euro Area (2)	2.1	2.1	1.6	0.9	2.3	2.0	2.1	2.5
Germany	3.0	2.9	2.7	2.8	2.9	2.9	3.0	3.0
Developing Countries	2.4	2.6	2.2	2.2	2.6	2.4	2.6	2.6
Asia	2.4	2.3	2.5	2.9	3.4	3.6	3.3	3.0
Korea	1.2	1.4	1.2	1.8	2.2	2.1	2.4	2.3
China	4.2	3.5	3.8	3.9	3.7	4.1	3.8	3.7
Latin America	3.7	3.1	3.5	3.8	3.6	3.9	3.5	3.5
Mexico	5.6	4.3	3.8	3.0	2.5	2.8	3.4	3.7
Brazil								

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

	2000	2001	2002	2003	2004	2005	2006	Projected 2007	2008
NIPA REAL EXPORTS and IMPORTS									
Percentage point contribution to GDP growth, Q4/Q4									
Net Goods & Services	-0.9	-0.2	-0.9	-0.1	-0.8	-0.1	0.0	-0.2	-0.4
Exports of G&S	0.7	-1.3	0.4	0.6	0.7	0.7	0.9	0.5	0.6
Imports of G&S	-1.6	1.1	-1.3	-0.7	-1.5	-0.8	-0.8	-0.7	-0.9
Percentage change, Q4/Q4									
Exports of G&S	6.5	-11.9	3.8	5.8	7.0	6.7	8.1	4.5	4.9
Services	1.8	-8.9	10.2	3.0	7.1	3.1	4.3	4.9	4.9
Computers	22.7	-23.5	-1.1	11.3	6.4	14.1	10.4	14.4	14.4
Semiconductors	27.6	-34.6	10.1	38.3	-6.3	17.2	16.9	17.0	17.0
Other Goods 1/	5.9	-10.2	0.7	4.9	8.0	7.5	9.3	3.2	3.8
Imports of G&S	11.2	-7.6	9.7	4.8	10.6	5.2	5.0	4.2	5.4
Services	10.6	-5.9	8.8	2.2	7.6	1.9	4.4	3.2	3.6
Oil	13.3	3.7	3.8	1.2	9.6	0.9	-6.0	0.0	0.4
Computers	13.9	-13.6	13.2	17.0	22.5	11.8	21.7	17.5	17.5
Semiconductors	22.8	-51.1	11.0	-0.1	9.3	7.5	9.4	17.0	17.0
Other Goods 2/	10.3	-6.5	10.0	5.2	10.7	6.2	6.8	4.1	5.8
Billions of Chained 2000 Dollars									
Net Goods & Services	-379.4	-399.1	-471.3	-518.9	-590.9	-619.2	-632.6	-641.6	-677.3
Exports of G&S	1096.3	1036.7	1013.3	1026.1	1120.4	1196.1	1299.3	1365.0	1428.6
Imports of G&S	1475.8	1435.8	1484.6	1545.0	1711.3	1815.3	1931.9	2006.7	2105.9
Billions of dollars									
US CURRENT ACCOUNT BALANCE	-415.2	-389.0	-472.4	-527.5	-665.3	-791.5	-883.1	-946.7	-1030.3
Current Acct as Percent of GDP	-4.2	-3.8	-4.5	-4.8	-5.7	-6.4	-6.7	-6.8	-7.1
Net Goods & Services (BOP)	-377.6	-362.8	-421.1	-494.9	-611.3	-716.7	-772.0	-785.1	-834.9
Investment Income, Net	25.7	30.3	17.8	42.3	33.6	17.6	-18.8	-70.3	-103.0
Direct, Net	94.9	115.9	102.4	112.8	123.9	134.4	141.8	154.6	181.3
Portfolio, Net	-69.2	-85.5	-84.6	-70.5	-90.2	-116.8	-160.6	-224.9	-284.2
Other Income & Transfers, Net	-63.3	-56.5	-69.2	-74.9	-87.6	-92.4	-92.3	-91.3	-92.5

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

OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

	2003				2004				2005			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Percentage point contribution to GDP growth												
Net Goods & Services	0.2	-0.7	0.5	-0.5	-0.7	-1.6	-0.2	-0.8	-0.2	0.7	-0.1	-1.1
Exports of G&S	-0.5	-0.2	1.0	1.8	0.7	0.6	0.5	1.0	0.5	0.9	0.3	1.0
Imports of G&S	0.7	-0.6	-0.5	-2.3	-1.4	-2.2	-0.7	-1.8	-0.6	-0.2	-0.4	-2.0
Percentage change from previous period, s.a.a.r.												
Exports of G&S	-5.3	-1.7	11.4	20.8	7.2	6.2	4.8	9.9	4.7	9.4	3.2	9.6
Services	-20.0	-2.8	17.5	23.1	7.5	5.6	-2.8	19.2	2.9	2.0	2.1	5.5
Computers	-2.3	-5.2	34.7	23.2	-5.8	-3.1	20.7	16.5	13.6	21.9	17.8	3.9
Semiconductors	37.4	30.9	44.6	40.7	11.5	-7.8	-19.1	-7.2	-7.7	21.3	26.3	33.6
Other Goods 1/	0.3	-2.9	5.1	18.2	7.6	8.1	9.7	6.4	5.8	11.9	1.8	10.7
Imports of G&S	-5.0	4.1	3.8	17.6	10.2	16.0	4.4	12.0	4.1	1.4	2.5	13.2
Services	-10.6	-15.7	21.2	19.6	10.9	7.6	3.1	9.0	-0.2	-1.5	1.2	8.3
Oil	-9.7	12.4	-6.0	9.9	37.2	-22.9	-6.4	45.5	7.0	-21.2	-12.5	40.5
Computers	11.4	10.7	11.1	36.9	21.1	30.2	27.5	11.9	9.2	9.4	19.6	9.3
Semiconductors	-6.3	1.1	-4.2	9.7	43.3	19.6	3.8	-19.9	-7.4	8.4	15.6	14.9
Other Goods 2/	-3.1	7.2	-0.1	18.1	5.3	23.2	4.2	11.0	4.4	5.8	2.7	12.3
Billions of Chained 2000 Dollars, s.a.a.r.												
Net Goods & Services	-507.2	-526.9	-513.8	-527.8	-548.5	-593.9	-599.4	-621.9	-626.4	-606.1	-607.6	-636.6
Exports of G&S	1003.3	999.0	1026.3	1075.8	1094.8	1111.3	1124.3	1151.3	1164.5	1191.0	1200.5	1228.4
Imports of G&S	1510.5	1525.9	1540.0	1603.6	1643.2	1705.2	1723.7	1773.1	1790.9	1797.1	1808.1	1865.0
Billions of dollars, s.a.a.r.												
US CURRENT ACCOUNT BALANCE	-548.7	-524.4	-526.2	-510.8	-583.3	-667.1	-665.3	-745.4	-766.9	-773.0	-733.7	-892.4
Current Account as % of GDP	-5.1	-4.8	-4.7	-4.6	-5.1	-5.7	-5.6	-6.2	-6.3	-6.3	-5.8	-7.0
Net Goods & Services (BOP)	-496.9	-492.9	-491.9	-497.9	-544.6	-605.6	-626.7	-668.3	-672.4	-688.2	-727.2	-779.1
Investment Income, Net	24.4	41.7	39.2	63.8	57.3	28.2	33.4	15.6	20.7	14.2	37.9	-2.3
Direct, Net	97.2	108.4	109.3	136.3	130.4	113.4	122.8	128.8	121.4	124.2	161.5	130.6
Portfolio, Net	-72.7	-66.6	-70.1	-72.5	-73.1	-85.2	-89.4	-113.2	-100.7	-110.0	-123.6	-132.9
Other Inc. & Transfers, Net	-76.2	-73.2	-73.5	-76.7	-96.1	-89.7	-72.0	-92.7	-115.1	-99.0	-44.3	-111.0

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

OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

	2006				2007				2008			
	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	-0.0	0.4	-0.6	0.3	-0.4	0.1	0.1	-0.7	-0.6	-0.0	-0.1	-0.7
Exports of G&S	1.4	0.7	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
Imports of G&S	-1.5	-0.2	-1.3	-0.3	-0.9	-0.4	-0.4	-1.2	-1.1	-0.6	-0.6	-1.3
	Percentage change from previous period, s.a.a.r.											
Exports of G&S	14.0	6.2	7.4	4.9	4.6	4.6	4.5	4.4	4.5	4.8	5.0	5.2
Services	6.7	6.7	-0.9	4.8	4.5	5.0	5.1	5.1	4.9	4.8	4.9	5.0
Computers	9.8	12.0	3.1	17.0	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4
Semiconductors	15.7	29.9	6.2	16.9	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
Other Goods 1/	17.8	4.4	11.8	3.7	3.5	3.3	3.0	2.9	3.2	3.7	3.9	4.2
Imports of G&S	9.1	1.4	8.1	1.7	5.2	2.4	2.3	6.9	6.5	3.4	3.7	7.8
Services	7.4	9.9	-2.4	3.1	3.0	3.2	3.3	3.2	3.6	3.6	3.6	3.5
Oil	-4.8	-18.3	9.1	-7.9	13.5	-13.2	-15.1	19.8	14.3	-15.7	-13.2	21.2
Computers	34.3	17.0	18.9	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
Semiconductors	3.6	-1.3	19.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
Other Goods 2/	12.4	2.4	10.4	2.5	3.5	3.8	4.4	4.8	5.5	5.9	6.0	6.0
	Billions of Chained 2000 Dollars, s.a.a.r.											
Net Goods & Services	-636.6	-624.2	-638.7	-630.9	-641.1	-637.8	-634.3	-653.3	-670.3	-671.3	-672.8	-694.7
Exports of G&S	1269.3	1288.5	1311.8	1327.5	1342.4	1357.7	1372.6	1387.4	1402.9	1419.5	1436.9	1455.2
Imports of G&S	1905.9	1912.7	1950.5	1958.5	1983.5	1995.5	2006.9	2040.7	2073.2	2090.8	2109.7	2149.9
	Billions of dollars, s.a.a.r.											
US CURRENT ACCOUNT BALANCE	-852.8	-873.6	-914.2	-891.9	-923.5	-935.1	-942.3	-985.7	-1009.8	-1016.6	-1024.9	-1069.9
Current Account as % of GDP	-6.6	-6.6	-6.9	-6.6	-6.8	-6.8	-6.8	-7.0	-7.1	-7.0	-7.0	-7.2
Net Goods & Services (BOP)	-764.6	-775.3	-805.7	-742.6	-778.3	-778.4	-778.2	-805.5	-831.6	-827.7	-826.9	-853.2
Investment Income, Net	-3.6	-10.1	-13.0	-48.4	-57.6	-67.6	-73.3	-82.5	-87.5	-98.2	-107.2	-119.0
Direct, Net	137.2	144.1	152.1	133.9	142.7	149.8	160.6	165.5	174.3	178.4	184.7	187.7
Portfolio, Net	-140.8	-154.2	-165.0	-182.3	-200.3	-217.4	-233.9	-248.0	-261.8	-276.5	-292.0	-306.7
Other Inc. & Transfers, Net	-84.7	-88.3	-95.5	-100.8	-87.6	-89.0	-90.7	-97.7	-90.7	-90.7	-90.7	-97.7

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