## 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.

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## Part 1

## CURRENT ECONOMIC AND FINANCIAL CONDITIONS

## Summary and Outlook

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

## Summary and Outlook

Class II FOMC—Restricted (FR)

## Domestic Developments

Economic growth stepped down in the second quarter, though not as much as we had anticipated in the June Greenbook. According to our latest estimates, the growth of real GDP slowed from an annual rate of 5.6 percent in the first quarter to 3.0 percent in the second as residential investment contracted and consumer spending and business investment decelerated after substantial first-quarter increases. The labor market information likewise indicates that employment gains moderated in the spring; Friday's employment report will indicate whether that pattern continued into July.

The news about resource utilization that we have received over the intermeeting period has been mixed. On the upside, manufacturing output has continued to exhibit considerable vigor, and capital goods orders have remained on a firm upward trend. In addition, information in the Administration's recent Mid-Session Review of the budget prompted us to mark up our assumption for the path for defense spending starting later this year. On the downside, homebuilding seems to be declining more steeply than we had anticipated; in addition, the restraint from high energy costs is likely to be somewhat greater. As best we can judge, the implications of these factors for our projections of resource utilization nearly offset one another: As in the June Greenbook, we expect the unemployment rate to rise over the next six quarters, to 5.2 percent at the end of 2007.

By themselves, the above factors would have suggested little change to our projections for the growth of real GDP, but the annual revision of the national income and product accounts (discussed in the appendix to Greenbook Part II) has caused us to adjust our assumptions about aggregate supply. In particular, we have reduced our estimates of the growth of potential output in 2006 and 2007 by 0.3 percentage point per year. On the assumption that businesses and households anchor their spending plans around their longer-term income prospects, we have overlaid the effects of the other factors influencing the outlook for the growth of real GDP with a 0.3 percentage point adjustment for the reduction in the growth of potential. All in all, we now expect real GDP to rise at an annual rate of 2.1 percent in the second half of 2006 and 2.3 percent in 2007; in the June Greenbook, we had projected increases of 2.7 percent in both periods.

The incoming data on core consumer prices have continued to show a substantial run-up in shelter costs and sizable increases for a wide variety of other items. In addition, the higher energy prices imply somewhat greater cost pressures than we had anticipated, and unit labor costs appear to be on a faster track than we had expected. In response, we have edged up our forecast of core inflation 0.1 percentage point this year and next. We now
project that core PCE prices will increase 2.5 percent in 2006 and 2.3 percent in 2007; as in our previous forecast, core inflation falls back next year as the effects of the higher energy prices abate. Given our projection for energy prices, we expect overall PCE prices to rise 2.9 percent in 2006 and 2.1 percent in 2007.

## Key Background Factors

We continue to assume that the federal funds rate will remain at 5¼ percent through the end of 2007. In contrast, market expectations for the federal funds rate have been revised down and now incorporate a $1 / 4$ percentage point easing by the end of the forecast horizon. Given the market's downward shift in expectations for policy, rates on longerterm securities have fallen, on balance, since the June Greenbook. We assume that longterm rates will stay around current levels over the next year and a half.

Broad equity indexes have risen about 2 percent, on balance, since the June Greenbook. Stock prices have been supported by perceptions that policy tightening will end sooner than had been expected; investors have also drawn comfort from the fact that the forward-looking guidance in earnings reports has not signaled a broad-based downturn in profits. We continue to assume that equity prices will henceforth increase at a rate of $61 / 2$ percent per year, which would roughly maintain risk-adjusted parity with the return on Treasury securities. Meanwhile, with the available data suggesting that residential real estate prices decelerated more significantly than we had expected during the spring, we have lowered our projection for the increase in house prices (as measured by the purchase-only version of the OFHEO house price index) to 4 percent in 2006 and 2 percent in 2007.

On the fiscal side, we learned from the Mid-Session Review that the Administration plans to request $\$ 110$ billion in budget authority next year to fund operations in Iraq and Afghanistan. This amount was considerably larger than we had anticipated and led us to add $\$ 17$ billion to the level of nominal defense spending in fiscal year 2007 to bring our defense path close to the Administration's. Other major fiscal assumptions are the same as in the June Greenbook: They include flat real nondefense spending, no changes in the laws governing mandatory spending, and the extension of the research and experimentation credit and AMT relief. In all, federal fiscal policy is expected to provide an impetus to real GDP growth of 0.4 percentage point in 2006 and 0.3 percentage point in 2007; our estimate for fiscal impetus in 2006 is the same as in the June Greenbook, while our estimate for 2007 is a tenth higher.

Class II FOMC -- Restricted (FR)

## Key Background Factors Underlying the Baseline Staff Projection

Federal Funds Rate


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

## Equity Prices



Crude Oil Prices


Long-term Interest Rates


House Prices
Index, 2002:Q1=100, ratio scale


Note. The projection period begins in 2006:Q2. There is no June Greenbook projection because we previously forecast the OFHEO repeat-transactions index.
Broad Real Dollar


Note. Shading represents the projection period.

We now expect the unified budget deficit to total \$281 billion in fiscal 2006 and $\$ 310$ billion in fiscal 2007, compared with projections of $\$ 296$ billion and $\$ 329$ billion, respectively, in the June Greenbook. Although spending has been boosted by the higher defense path we are now assuming, we have made a larger upward adjustment to receipts partly in response to the continued strength in the incoming data.

In the foreign exchange markets, the trade-weighted value of the dollar has changed little on balance since the time of the June Greenbook, and we continue to expect the broad real dollar to decline moderately over the next year and a half. The incoming data on economic activity abroad pointed to a stronger second quarter than we had anticipated. Our forecast is little changed, with foreign growth edging down from $31 / 2$ percent in the second half of this year to a still-solid $31 / 4$ percent rate in 2007.

The spot price of West Texas intermediate (WTI) crude oil now stands at nearly $\$ 76$ per barrel, $\$ 7$ per barrel above its level at the time of the June Greenbook. The recent increase seems to be attributable mainly to the escalation of tensions in the Middle East, as well as to further supply disruptions in Nigeria, all amidst more-generalized concerns about supply disruptions, relatively strong worldwide demand, and limited spare capacity among oil producers. Futures prices have also risen, and we have revised up our projection for WTI in 2007 by $\$ 61 / 2$ per barrel.

## Recent Developments and the Near-Term Outlook

According to the advance estimate from the BEA, real GDP rose at an annual rate of 2.5 percent in the second quarter; we estimate that the data we have received subsequent to the BEA report would push this figure up to 3.0 percent. As expected, residential investment contracted sharply, and growth in consumer spending and business fixed investment slowed after sizable increases in the first quarter. We have almost no hard data for the third quarter, but in light of the negative news from the housing sector, the higher path for the price of oil, and the slower trend growth indicated by the revised NIPA data, we now project that real GDP will rise just 2.2 percent in the third quarter and will post a similar advance in the fourth quarter. In the June Greenbook, we had projected increases of 2.7 percent in both periods.

The recent data for the labor market have been in line with our expectations. Private nonfarm payrolls rose 90,000 in June, about the same as in April and May; given the recent readings on initial claims and other available information, we are looking for

| Summary of the Near-Term Outlook (Percent change at annual rate except as noted) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Measure | 2006:Q2 |  | 2006:Q3 |  |
|  | June GB | Aug. <br> GB | June <br> GB | Aug. <br> GB |
| Real GDP | 2.0 | 3.0 | 2.7 | 2.2 |
| Private domestic final purchases | 1.8 | 1.9 | 2.6 | 2.5 |
| Personal consumption expenditures | 2.2 | 2.5 | 3.2 | 3.2 |
| Residential investment | -7.4 | -9.0 | -11.6 | -16.4 |
| Business fixed investment | 4.8 | 4.9 | 7.2 | 9.7 |
| Government outlays for consumption and investment | . 9 | 1.6 | 1.5 | 2.1 |
|  | Contribution to growth (percentage points) |  |  |  |
| Inventory investment | . 1 | . 7 | -. 2 | -. 7 |
| Net exports | . 2 | . 3 | . 3 | . 3 |

similar increases in July and August. The unemployment rate is expected to remain close to its second-quarter level over the next few months.

Meanwhile, manufacturing output has recorded broad-based gains in recent monthsindeed, manufacturing IP increased 0.7 percent in June and rose at an annual rate of $51 / 2$ percent in the second quarter. We have raised our third-quarter projection for the increase in manufacturing IP to $43 / 4$ percent, $11 / 2$ percentage points more than in the June Greenbook and in line with the pattern of new orders and other indicators.

We expect real consumer spending to rise at an annual rate of 3114 percent this quarter, $3 / 4$ percentage point faster than in the second quarter. PCE growth is expected to get a boost from a step-up in purchases of motor vehicles-in fact, sales of light motor vehicles came in at an annual rate of 17.1 million units in July, nearly 1 million units above the second-quarter pace. However, with energy prices having risen further, and with consumer confidence (as measured by the Michigan survey) well below the levels of earlier this year, growth in non-auto spending is expected to remain around its secondquarter pace. Our forecast for the fourth quarter has motor vehicle expenditures holding steady and PCE growth slowing to $2 ½$ percent.

In the housing sector, single-family starts have continued to slide in recent months and were down to an annual rate of 1.49 million units in June. June starts were only a little below our expectations, but the accompanying steep fall in permits, together with signals from other indicators of housing activity, suggests that further declines in starts are in train. Accordingly, we have lowered our projection of third-quarter single-family starts to 1.43 million units and now expect real residential investment to decrease at an annual rate of $161 / 2$ percent this quarter-enough to subtract 1 percentage point from real GDP growth—and to fall another $111 / 2$ percent in the fourth quarter.

Growth of real investment in equipment and software has been uneven in recent quarters, with sharp fluctuations in virtually all major categories. Nonetheless, the underlying pace of investment seems solid, and we are looking for an increase of about 8 percent at an annual rate in the second half, a pace slightly above the average for the first half. Hightech spending will likely be held down in the near term by a further unwinding of the first-quarter surge in spending on communication equipment. But real computer spending should be boosted by the introduction of much-anticipated new products; outlays for transportation equipment seem poised for a second-half upturn; and the upward trend in orders for capital goods outside the high-tech and transportation areas points to further gains for this broad category.

After factoring in the data for June, we estimate that real outlays for construction of nonresidential structures rose at an annual rate of 15 percent over the first half of the year as a result of both the ongoing surge in drilling and mining activity and a sharp increase in spending on other structures. We expect nonresidential construction to continue to expand briskly in the second half.

In the government sector, real federal expenditures on consumption and gross investment fell at an annual rate of $31 / 2$ percent in the second quarter, mainly because of a marked decrease in hurricane-related nondefense purchases. We expect defense spending to rise $21 / 2$ percent in the third quarter-in line with its average rate of increase over the past year—and to pick up a bit in the fourth quarter; real nondefense spending is expected to be about unchanged over the two quarters. In the state and local sector, real purchases appear to have registered an outsized increase in the first half of 2006 after three years of little growth. Given the upward tilt in the recent monthly data for employment and construction, we expect spending to continue to firm in the second half of the year, though gains are likely to fall far short of the $31 / 2$ percent annual rate we now estimate for the first half.

Real nonfarm inventory investment appears to have stepped up to an annual rate of nearly $\$ 60$ billion in the second quarter, but with only a few exceptions-most notably, light trucks-stocks seem well-aligned with sales. Our projection assumes that inventory investment will recede some in the second half, in part because of a moderate run-off in motor vehicle stocks.

Based on trade data through May and other information, net exports are estimated to have added a bit more than $1 / 4$ percentage point to real GDP growth in the second quarter; real exports rose nearly 4 percent, and imports were about flat. We expect the contribution from the external sector to remain at about this level in the third quarter before turning negative in the fourth quarter.

As for prices, core PCE inflation is currently estimated to have averaged $21 / 2$ percent over the first half of the year, $1 / 2$ percentage point higher than over the four quarters of 2005. The pickup in the price of housing services and-as best we can tell-the pass-through of higher energy prices both played important roles. We expect these two factors to continue to boost core inflation over the next couple of quarters-indeed, by a bit more than we had anticipated in June. As a result, we now forecast that core PCE inflation will remain at $2 \frac{1}{2}$ percent in the second half of the year, $1 / 4$ percentage point higher than in the June Greenbook. On the assumption that retail energy prices will ease in the autumn after this summer's big increases, we expect overall PCE prices to rise at an annual rate of $31 / 2$ percent this quarter and 2 percent in the fourth quarter.

## The Longer-Run Outlook for the Economy

Our forecast has real GDP growth slowing from 3.2 percent over the four quarters of 2006 to 2.3 percent in 2007, with significant decelerations in both consumer spending and business fixed investment. Our current projection for growth in 2007 is 0.4 percentage point lower than that in the June Greenbook; most of the change is attributable to the shallower path for potential GDP. With real GDP projected to increase less rapidly than potential, the unemployment rate is expected to rise to 5.2 percent by the end of 2007, a level matching that in the June Greenbook and slightly above our estimate of the NAIRU.

Household spending. We have lowered our projection for real PCE growth in 2007 to $2^{1 / 2}$ percent, $1 / 2$ percentage point less than in the June Greenbook. One reason is a downward adjustment to our estimate of permanent income in line with the downward

## Projections of Real GDP

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

| Measure | 2006 |  | 2007 |
| :---: | :---: | :---: | :---: |
|  | H1 | H2 |  |
| Real GDP | 4.3 | 2.1 | 2.3 |
| Previous | 3.9 | 2.7 | 2.7 |
| Final sales | 4.0 | 2.6 | 2.4 |
| Previous | 3.9 | 2.6 | 2.6 |
| PCE | 3.6 | 2.8 | 2.4 |
| Previous | 3.7 | 3.0 | 2.9 |
| Residential investment | -4.8 | -14.0 | -3.1 |
| Previous | -2.9 | -7.5 | -1.7 |
| BFI | 9.2 | 9.3 | 5.3 |
| Previous | 8.9 | 6.8 | 5.4 |
| Government purchases | 3.2 | 2.3 | 2.0 |
| Previous | 2.8 | 1.5 | 1.3 |
| Exports | 8.8 | 5.3 | 5.1 |
| Previous | 10.0 | 5.2 | 5.2 |
| Imports | 4.7 | 3.1 | 4.0 |
| Previous | 6.3 | 3.5 | 4.6 |
|  | Contribution to growth (percentage points) |  |  |
| Inventory change | . 4 | -. 4 | -. 1 |
| Previous | . 0 | . 1 | . 1 |
| Net exports | . 1 | . 1 | -. 1 |
| Previous | -. 0 | -. 0 | -. 2 |

revision to potential GDP; we have also factored in a hit to real disposable income over the projection period from the higher energy prices. As before, the contour of the PCE projection is influenced importantly by the waning of our estimated wealth effects, which are likely to be a small negative for PCE growth in 2007 after adding about 1 percentage point in 2005 and $3 / 4$ percentage point in 2006. The lagged effects of earlier increases in interest rates are also likely to restrain the growth of real PCE in 2007.

Our forecast has single-family starts dropping noticeably over the next few quarters as demand softens further and as homebuilders work off excess inventories. By early next
year, inventories should be in better shape; with real household incomes rising briskly and mortgage rates flattening out at a level still relatively low by historical norms, we expect starts to level out. All in all, single-family starts are projected to total 1.4 million units in 2007, which would be nearly 20 percent below the level of 2005 but still a reasonably solid pace by historical standards. Real residential investment is projected to fall 3 percent in 2007 after falling $91 ⁄ 2$ percent in 2006; the decline in 2007 is expected to be concentrated in the first part of the year.

Business investment. We expect growth in real spending on equipment and software to taper off from $71 / 2$ percent in 2006 to 5 percent next year. In the main, the slowing reflects the projected deceleration in business output and the lagged effects of the rise in financing costs over the past year. In addition, with trucking firms apparently having pulled forward their orders for new trucks into 2006 before new environmental regulations go into effect in 2007, spending on motor vehicles is likely to drop sharply after the turn of the year.

Real outlays for nonresidential construction are expected to rise about 6 percent next year. Provided that energy prices remain high, as we have assumed, spending on drilling and mining structures should post another rapid increase, even if not of the same magnitude that seems to be in train for this year. And with vacancy rates having fallen in recent quarters, the demand for office and commercial space should be sufficient to keep other nonresidential construction on an upward trend.

On the whole, inventories seem to be well aligned with sales, and we expect inventory investment to be a roughly neutral influence on real GDP growth in 2007.

Government spending. Given our current fiscal assumptions, real federal expenditures for consumption and investment are projected to rise $21 / 2$ percent in 2006 and 2 percent in 2007; virtually all of the growth over this period is expected to be in defense. In the state and local sector, real purchases are forecast to rise 2 percent next year, the same as we now anticipate for the second half of 2006.

Net exports. We continue to expect real exports to rise 5 percent in 2007 as foreign economic activity expands at a solid pace and the real exchange value of the dollar declines. Meanwhile, we have trimmed our projection for growth in real imports in 2007 to 4 percent because of the lower forecast for U.S. GDP growth; in the June Greenbook, we had expected real imports to rise $41 / 2$ percent next year. All told, real net exports are
expected to be a very small negative influence on the growth of real GDP in 2007 after being a very small plus in 2006. (The International Developments section provides more detail on the outlook for the external sector.)

## Aggregate Supply, the Labor Market, and Inflation

As noted, we have made some adjustments to our assumptions for the supply side of the economy. ${ }^{1}$ Structural labor productivity is now assumed to grow 2.7 percent in both 2006 and 2007, while potential GDP is assumed to grow 2.9 percent per year. Both figures are revised down 0.3 percentage point.

Productivity and the labor market. Productivity in the nonfarm business sector now appears to have risen at an annual rate of $21 / 4$ percent in the second quarter. With the level of productivity above its longer-term structural trend, and with output decelerating, we expect productivity to continue to rise at this pace, on average, over the next six quarters, $1 / 2$ percentage point below its assumed trend rate of increase. The forecast for employment is about the same as in the June Greenbook, with monthly private payroll gains expected to average 80,000 in the second half of 2006 and about 40,000 in 2007. Given this pace of hiring, the unemployment rate is expected to reach $51 / 4$ percent by the fourth quarter of 2007 even as labor force participation continues to trend down.

Wages and prices. The projection for core PCE inflation is slightly above that in the June Greenbook, in part because of the pass-through of the higher energy prices we have built into this forecast. Nonetheless, as in the previous Greenbook, the basic story features a modest lessening in inflation pressures after the next few quarters as energy prices stabilize and their indirect effects peter out. Inflation is also expected to be restrained a bit in 2007 by a deceleration in core nonfuel import prices and somewhat smaller increases in shelter costs. All in all, we expect core PCE prices to rise 2.5 percent this year and 2.3 percent in 2007; both projections are 0.1 percentage point higher than those in the June Greenbook.

We have made no significant changes to our forecast for the employment cost index (ECI). The ECI data for the second quarter were about in line with our expectations, and

[^0]
## Decomposition of Structural Labor Productivity

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

| Measure | $1974-$ <br> 95 | $1996-$ <br> 2000 | $2001-$ <br> 04 | 2004 | 2005 | 2006 | 2007 |
| :--- | ---: | ---: | :---: | :---: | :---: | :---: | :---: |
| Structural labor productivity | $\mathbf{1 . 5}$ | $\mathbf{2 . 5}$ | $\mathbf{3 . 0}$ | 2.7 | 2.7 | 2.7 | 2.7 |
| $\quad$ Previous | 1.5 | 2.5 | 3.3 | 3.1 | 3.1 | 3.0 | 3.0 |
| Contributions $^{1}$ |  |  |  |  |  |  |  |
| Capital deepening | .7 | 1.4 | .6 | .5 | .6 | .6 | .7 |
| $\quad$ Previous | .7 | 1.4 | .7 | .7 | 1.0 | 1.0 | 1.0 |
| Multifactor productivity | .5 | .8 | 2.1 | 1.9 | 1.9 | 1.8 | 1.8 |
| $\quad$ Previous | .5 | .8 | 2.3 | 2.1 | 1.9 | 1.8 | 1.8 |
| Labor composition | .3 | .3 | .3 | .3 | .3 | .2 | .2 |
| MEMO |  |  |  |  |  |  |  |
| Potential GDP | 3.0 | 3.3 | 2.9 | 2.6 | 2.6 | 2.9 | 2.9 |
| $\quad$ Previous | 3.0 | 3.3 | 3.2 | 2.9 | 2.9 | 3.2 | 3.2 |

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

1. Percentage points.

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

| Measure | 2004 | 2005 | 2006 | 2007 |
| :--- | ---: | ---: | ---: | ---: |
| Output per hour, nonfarm business | 2.6 | 2.6 | 2.4 | 2.5 |
| $\quad$ Previous | 2.6 | 2.5 | 2.6 | 2.9 |
| Nonfarm private payroll employment | 1.7 | 1.6 | 1.2 | .4 |
| $\quad$ Previous | 1.7 | 1.6 | 1.4 | .4 |
| Household survey employment | 1.3 | 1.9 | 1.3 | .3 |
| $\quad$ Previous | 1.3 | 1.9 | 1.2 | .3 |
| Labor force participation rate $^{1}$ | 66.0 | 66.1 | 66.0 | 65.7 |
| $\quad$ Previous | 66.0 | 66.1 | 66.0 | 65.7 |
| Civilian unemployment rate $^{1}$ | 5.4 | 5.0 | 4.8 | 5.2 |
| $\quad$ Previous | 5.4 | 5.0 | 4.9 | 5.2 |
| MEMO |  |  |  |  |
| GDP gap $^{2}$ | -.6 | -.0 | .3 | -.4 |
| $\quad$ Previous | -.7 | -.4 | -.3 | -.8 |

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.

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

| Measure | 2004 | 2005 | 2006 | 2007 |
| :---: | ---: | ---: | ---: | ---: |
| PCE chain-weighted price index | 3.0 | 3.1 | 2.9 | 2.1 |
| Previous | 3.1 | 3.0 | 2.5 | 2.2 |
| Food and beverages | 2.8 | 2.1 | 2.4 | 2.3 |
| Previous | 2.9 | 2.1 | 2.4 | 2.3 |
| Energy | 17.8 | 21.2 | 10.4 | -.1 |
| Previous | 17.9 | 21.8 | 4.1 | 1.4 |
| Excluding food and energy | 2.2 | 2.1 | 2.5 | 2.3 |
| Previous | 2.2 | 2.0 | 2.4 | 2.2 |
| Consumer price index | 3.3 | 3.7 | 3.4 | 2.3 |
| Previous | 3.3 | 3.7 | 2.6 | 2.3 |
| Excluding food and energy | 2.1 | 2.1 | 2.9 | 2.5 |
| Previous | 2.1 | 2.1 | 2.7 | 2.4 |
| GDP chain-weighted price index | 3.2 | 3.1 | 2.8 | 2.3 |
| Previous | 2.9 | 3.1 | 2.7 | 2.3 |
| ECI for compensation of private |  |  |  |  |
| industry workers ${ }^{1}$ | 3.8 | 2.9 | 3.2 | 3.8 |
| Previous | 3.8 | 2.9 | 3.2 | 3.7 |
| Compensation per hour, |  |  |  |  |
| nonfarm business sector | 3.8 | 4.2 | 5.5 | 5.3 |
| Previous | 5.9 | 2.8 | 5.1 | 5.2 |
| Prices of core nonfuel imports | 3.7 | 2.2 | 3.3 | 1.4 |
| Previous | 3.7 | 2.2 | 3.1 | 1.5 |

1. December to December.
we continue to expect this measure to rise $31 / 4$ percent in 2006 and $33 / 4$ percent in 2007. Meanwhile, the NIPA revisions significantly altered the contour of the "productivity and cost" (P\&C) measure of hourly compensation in recent years: In contrast to the sharp step-down in 2005 indicated by the earlier data, P\&C compensation is now estimated to have risen $41 / 4$ percent last year after an increase of $33 / 4$ percent in 2004. With the incoming data pointing to a further step-up in the first half of 2006, we are projecting increases in P\&C compensation of approximately $51 / 2$ percent both this year and next as past productivity gains and the relatively large price increases of the past few years pass through to wages.

## Financial Flows and Conditions

Growth of total domestic nonfinancial debt rose to an annual rate of 11 percent in the first quarter of 2006 but is estimated to have fallen to 7 percent in the second quarter, as borrowing by households, businesses, and the federal government appears to have eased. We expect overall debt to increase $81 / 4$ percent over 2006 and then to slow to about $61 / 2$ percent in 2007. The broad contour of our forecast is the same as in the June Greenbook: We expect slower household, business, and municipal government borrowing to outweigh a projected pickup in borrowing by the federal government.

Household debt expanded nearly 12 percent in 2005 and the first quarter of 2006, driven mainly by the demand for mortgages to keep up with rapidly rising house prices. With housing markets cooling significantly, we expect growth in mortgage debt to slow over the rest of 2006 and into 2007. And with growth of consumer credit remaining tepid, the increase in overall household debt is expected to fall to $93 / 4$ percent over 2006 as a whole and to just $61 ⁄ 2$ percent in 2007.

Growth of nonfinancial business debt stepped up to almost $91 / 2$ percent in the first half of 2006 as companies tapped credit markets, in large part to finance an exceptional volume of mergers and acquisitions and share buybacks. We do not expect the impetus to borrowing from this unusually large volume of equity retirements to persist, but we anticipate that rising capital expenditures will sustain a robust pace of borrowing. In all, we expect nonfinancial business debt to expand $71 / 2$ percent in the second half of this year and 7 percent in 2007.

The projected contour of federal government borrowing matches that of the budget deficit: After having increased 7 percent in 2005, federal debt is expected to rise $51 / 4$ percent in 2006 and 7 percent in 2007. Increases in state and local government debt are forecast to slow to about $53 / 4$ percent this year and to $41 / 4$ percent in 2007 , reflecting less advance-refunding activity in light of the rise in interest rates over the past year.

Growth of M2 is expected to remain at its 2005 pace of 4 percent in 2006 and to step up to about $41 / 2$ percent in 2007. Rising interest rates have held M2 growth below nominal GDP growth for the past couple of years; with rates expected to flatten out, M2 growth should begin to edge up.

## Alternative Simulations

In this section, we consider several risks to the staff outlook using simulations of the FRB/US model. ${ }^{2}$ We begin with a scenario in which the energy cost pass-through effects and other forces driving the recent step-up in core inflation prove to be unexpectedly persistent, leading to a marked deterioration in long-run inflation expectations. In the second scenario, by contrast, price pressures turn out to be less intense than we anticipate because the NAIRU is lower than we estimate. The next two scenarios focus on opposing risks to aggregate demand-first, that the current stance of monetary policy will prove less restrictive than we have assumed in the baseline, allowing overall spending to continue to outpace potential output; and second, that the slowdown in the housing market may be greater than we expect. We evaluate each of these risks under the assumption that monetary policy responds to the change in the outlook as suggested by an estimated version of the Taylor rule.

Persistent inflation. In the baseline forecast, we have attributed much of this year's pickup in core inflation to transitory factors, such as the pass-through of higher energy costs into prices of other goods and services, and to what we see as a short-lived step-up in the rise of shelter costs. In this alternative scenario, the forces driving the acceleration in prices in the first half of 2006 persist into the second half to a greater extent than expected in the baseline, resulting in core inflation at 3 percent. The continued bad news on prices in turn prompts a gradual rise in long-run inflation expectations; as a result, core inflation continues at 3 percent in 2007 despite an easing in the shocks that sparked the acceleration. Under the estimated Taylor rule, monetary policy responds to the higher inflation by raising the nominal federal funds rate to almost 6 percent by late next year. Real activity weakens a bit, partly because real bond rates rise in anticipation of tighter monetary policy in the longer run and partly because the higher nominal mortgage rates damp residential investment.

Lower NAIRU. Our estimates of aggregate resource utilization are imprecise, and in this scenario we assume that additional slack remains in labor markets-specifically, that the NAIRU has decreased from 5 percent to $41 / 4$ percent over the recent past. With this additional margin of slack, core inflation falls to 2 percent in 2007. The nominal federal funds rate gradually declines to $43 / 4$ percent as policymakers observe the favorable inflation developments and come to realize that the level of output is below potential.

[^1]
## Alternative Scenarios

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

| Measure and scenario | 2006 |  | 2007 |
| :---: | :---: | :---: | :---: |
|  | H1 | H2 |  |
| Real GDP |  |  |  |
| Greenbook Baseline | 4.3 | 2.1 | 2.3 |
| Persistent inflation | 4.3 | 2.0 | 2.1 |
| Lower NAIRU | 4.3 | 2.2 | 2.7 |
| No slowdown | 4.3 | 2.9 | 3.5 |
| Housing slump | 4.3 | 1.5 | 1.7 |
| Unemployment rate ${ }^{1}$ |  |  |  |
| Greenbook Baseline | 4.7 | 4.8 | 5.2 |
| Persistent inflation | 4.7 | 4.8 | 5.3 |
| Lower NAIRU | 4.7 | 4.8 | 5.2 |
| No slowdown | 4.7 | 4.7 | 4.5 |
| Housing slump | 4.7 | 4.9 | 5.6 |
| Core PCE inflation |  |  |  |
| Greenbook Baseline | 2.5 | 2.5 | 2.3 |
| Persistent inflation | 2.5 | 3.0 | 3.0 |
| Lower NAIRU | 2.5 | 2.3 | 2.0 |
| No slowdown | 2.5 | 2.5 | 2.3 |
| Housing slump | 2.5 | 2.5 | 2.3 |
| Federal funds rate ${ }^{1}$ |  |  |  |
| Greenbook Baseline | 4.9 | 5.3 | 5.3 |
| Persistent inflation | 4.9 | 5.4 | 5.9 |
| Lower NAIRU | 4.9 | 5.1 | 4.7 |
| No slowdown | 4.9 | 5.6 | 6.7 |
| Housing slump | 4.9 | 5.1 | 4.4 |

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

Real GDP receives a boost from the associated fall in the real federal funds rate as households and firms also come to realize that prospects for the levels of permanent income and of earnings have improved.

No slowdown. We anticipate that economic growth will slow considerably from its average pace in the first half of this year, but with long-term interest rates still low relative to historical norms, this moderation may not materialize. Fueled by historically high profit margins, real business spending on equipment and software in this simulation continues to expand at roughly the $81 / 2$ percent annual rate seen over the past two years,
and nonresidential investment extends its recent rebound. Households are content to allow the personal saving rate to run $1 / 2$ percentage point below its baseline value. Finally, the slump in residential investment proves to be less persistent than in the baseline, with spending in this category posting a modest gain in 2007. All told, real GDP rises at an annual rate of $31 / 4$ percent on average over the second half of this year and in 2007, somewhat faster than its potential rate. As a result, resource pressures are greater than in the staff forecast, with the unemployment rate almost $3 / 4$ percentage point below baseline at the end of 2007. In response, the federal funds rate rises above $61 / 2$ percent by late next year. With monetary policy tightening and the dollar a bit stronger than in the baseline, inflation is essentially unchanged relative to baseline over the projection period.

Housing slump. Recent data have led us to mark down our projection for residential investment, but we may not have gone far enough, especially because, by some estimates, houses would remain roughly 20 percent overvalued in our baseline forecast. In this scenario, home prices fall enough to eliminate the estimated overvaluation by the end of next year, thereby reducing household wealth by $\$ 4 \frac{1}{4}$ trillion. Falling values for real estate in turn weaken the demand for new homes and cause real residential investment to fall nearly 30 percent from the peak reached late last year, a two-year decline similar in magnitude to those in the early 1980s and early 1990s. The reductions in employment and income implied by the falloff in construction activity, combined with the loss in wealth, directly damp consumer spending and indirectly depress business investment. All told, GDP growth slows to less than $13 / 4$ percent in 2007, causing the unemployment rate to rise to more than $51 / 2$ percent. As in the previous scenario, inflation through the end of next year is not noticeably affected, but it will be reduced in the longer run if the weakness in real activity persists. Monetary policy responds to the emerging slack by lowering the federal funds rate to $4 ½$ percent by late 2007.

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

| Measure | 2006 | 2007 |
| :---: | :---: | :---: |
| Real GDP <br> (percent change, Q4 to Q4) |  |  |
|  |  |  |
| Projection | 3.2 | 2.3 |
| Confidence interval |  |  |
| Greenbook forecast errors | 2.4-4.0 | 0.7-3.9 |
| FRB/US stochastic simulations | 2.4-4.0 | 0.8-3.8 |
| Civilian unemployment rate (percent, Q4) |  |  |
| Projection | 4.8 | 5.2 |
| Confidence interval |  |  |
| Greenbook forecast errors | 4.5-5.0 | 4.5-5.9 |
| FRB/US stochastic simulations | 4.4-5.1 | 4.5-5.7 |
| PCE prices |  |  |
| excluding food and energy (percent change, Q4 to Q4) |  |  |
| Projection | 2.5 | 2.3 |
| Confidence interval |  |  |
| Greenbook forecast errors | 2.2-2.8 | 1.6-3.0 |
| FRB/US stochastic simulations | 2.2-2.8 | 1.6-3.0 |
| Federal funds rate (percent, Q4) |  |  |
| Projection | 5.2 | 5.2 |
| Confidence interval |  |  |
| FRB/US stochastic simulations | 4.8-5.7 | 4.0-6.7 |

Note. Shocks underlying FRB/US stochastic simulations are randomly drawn from the 1986-2004 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 | Lower NAIRU |
| :--- | :--- |
| Persistent inflation | No slowdown |$\quad$ Housing slump

Real GDP Unemployment Rate


Percent


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




1. Level, except for two-quarter and four-quarter intervals.


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| E | $\begin{aligned} & \text { sno!ıa.d } \\ & \text { dGD [हәप } \end{aligned}$ |  |  | $\begin{aligned} & \text { Residential investment } \\ & \text { Previous } \end{aligned}$ |  |  |  |  |

[^2]

| Item | 2005 |  |  |  | 2006 |  |  |  | 2007 |  |  |  | $2005^{1}$ | $2006{ }^{1}$ | $2007{ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |  |  |  |
| GDP chain-wt. price index | 3.5 | 2.4 | 3.3 | 3.3 | 3.3 | 3.3 | 3.0 | 1.6 | 2.1 | 2.6 | 2.5 | 2.2 | 3.1 | 2.8 | 2.3 |
| Previous | 3.1 | 2.6 | 3.3 | 3.5 | 3.3 | 3.8 | 2.3 | 1.6 | 2.3 | 2.5 | 2.3 | 2.1 | 3.1 | 2.7 | 2.3 |
| PCE chain.-wt. price index | 2.3 | 3.1 | 4.1 | 2.9 | 2.0 | 4.1 | 3.5 | 2.1 | 2.0 | 2.2 | 2.2 | 2.1 | 3.1 | 2.9 | 2.1 |
| Previous | 2.3 | 3.3 | 3.7 | 2.9 | 2.0 | 4.3 | 1.8 | 1.8 | 2.2 | 2.2 | 2.1 | 2.0 | 3.0 | 2.5 | 2.2 |
| Energy | 3.0 | 22.1 | 56.3 | 9.8 | . 1 | 29.7 | 18.6 | -3.4 | -2.6 | . 8 | 1.2 | . 1 | 21.2 | 10.4 | -. 1 |
| Previous | 3.6 | 28.6 | 50.0 | 10.3 | -. 2 | 30.2 | -5.0 | -5.0 | 2.2 | 2.0 | 1.3 | . 2 | 21.8 | 4.1 | 1.4 |
| Food | 1.3 | 3.5 | 1.4 | 2.2 | 2.7 | 1.7 | 2.8 | 2.5 | 2.4 | 2.4 | 2.4 | 2.3 | 2.1 | 2.4 | 2.3 |
| Previous | 1.0 | 3.5 | 1.3 | 2.4 | 2.7 | 1.7 | 2.6 | 2.5 | 2.4 | 2.4 | 2.4 | 2.3 | 2.1 | 2.4 | 2.3 |
| Ex. food \& energy | 2.4 | 1.9 | 1.6 | 2.5 | 2.1 | 2.9 | 2.5 | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 | 2.1 | 2.5 | 2.3 |
| Previous | 2.4 | 1.7 | 1.4 | 2.4 | 2.0 | 3.1 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.0 | 2.4 | 2.2 |
| CPI | 2.3 | 3.8 | 5.5 | 3.3 | 2.2 | 4.9 | 4.2 | 2.3 | 2.1 | 2.4 | 2.3 | 2.2 | 3.7 | 3.4 | 2.3 |
| Previous | 2.3 | 3.8 | 5.5 | 3.3 | 2.2 | 4.8 | 1.7 | 1.7 | 2.4 | 2.4 | 2.3 | 2.1 | 3.7 | 2.6 | 2.3 |
| Ex. food \& energy | 2.6 | 1.8 | 1.6 | 2.4 | 2.4 | 3.6 | 3.0 | 2.9 | 2.6 | 2.5 | 2.4 | 2.4 | 2.1 | 2.9 | 2.5 |
| Previous | 2.6 | 1.8 | 1.6 | 2.4 | 2.4 | 3.4 | 2.5 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | 2.1 | 2.7 | 2.4 |
| ECI, hourly compensation ${ }^{2}$ | 3.8 | 2.5 | 2.9 | 2.8 | 2.4 | 3.2 | 3.6 | 3.6 | 3.7 | 3.8 | 3.8 | 3.9 | 2.9 | 3.2 | 3.8 |
| Previous ${ }^{2}$ | 3.8 | 2.5 | 2.9 | 2.8 | 2.4 | 3.4 | 3.5 | 3.6 | 3.7 | 3.7 | 3.7 | 3.7 | 2.9 | 3.2 | 3.7 |
| Nonfarm business sector ${ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Output per hour | 3.7 | 2.4 | 4.4 | -. 1 | 4.0 | 2.2 | 1.6 | 2.0 | 2.3 | 2.4 | 2.5 | 2.6 | 2.6 | 2.4 | 2.5 |
| Previous | 3.8 | 2.4 | 4.2 | -. 3 | 4.4 | . 9 | 2.3 | 2.7 | 2.6 | 2.9 | 2.9 | 2.9 | 2.5 | 2.6 | 2.9 |
| Compensation per hour | 4.5 | 1.6 | 8.0 | 2.9 | 6.4 | 5.4 | 5.0 | 5.3 | 5.3 | 5.3 | 5.3 | 5.3 | 4.2 | 5.5 | 5.3 |
| Previous | 5.6 | 1.3 | 5.5 | -. 9 | 5.1 | 4.8 | 5.1 | 5.3 | 5.3 | 5.3 | 5.2 | 5.1 | 2.8 | 5.1 | 5.2 |
| Unit labor costs | . 8 | -. 8 | 3.4 | 3.0 | 2.3 | 3.2 | 3.4 | 3.2 | 2.9 | 2.8 | 2.8 | 2.7 | 1.6 | 3.0 | 2.8 |
| Previous | 1.8 | -1.0 | 1.2 | -. 6 | . 6 | 3.8 | 2.7 | 2.5 | 2.6 | 2.3 | 2.2 | 2.1 | . 3 | 2.4 | 2.3 |

[^3]| Item | 2005 |  |  |  | 2006 |  |  |  | 2007 |  |  |  | $2005^{1}$ | $2006{ }^{1}$ | $2007{ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |  |  |  |
| Employment and production Nonfarm payroll employment ${ }^{2}$ | . 5 | . 5 | . 5 | . 4 | . 6 | . 4 | . 3 | . 3 | . 2 | . 2 | . 1 | . 1 | 1.9 | 1.5 | . 7 |
| Unemployment rate ${ }^{3}$ | 5.2 | 5.1 | 5.0 | 5.0 | 4.7 | 4.7 | 4.7 | 4.8 | 4.9 | 5.0 | 5.1 | 5.2 | 5.0 | 4.8 | 5.2 |
| Previous ${ }^{3}$ | 5.2 | 5.1 | 5.0 | 5.0 | 4.7 | 4.7 | 4.8 | 4.9 | 5.0 | 5.1 | 5.1 | 5.2 | 5.0 | 4.9 | 5.2 |
| GDP gap ${ }^{4}$ | -. 4 | -. 2 | . 2 | . 0 | . 6 | . 6 | . 5 | . 3 | . 1 | -. 1 | -. 2 | -. 4 | . 0 | . 3 | -. 4 |
| Previous ${ }^{4}$ | -. 5 | -. 4 | -. 1 | -. 4 | . 3 | . 0 | -. 1 | -. 3 | -. 4 | -. 5 | -. 7 | -. 8 | -. 4 | -. 3 | -. 8 |
| Industrial production ${ }^{5}$ | 3.8 | 1.6 | 1.4 | 5.3 | 5.1 | 6.6 | 5.4 | 3.9 | 3.8 | 3.4 | 3.2 | 3.2 | 3.0 | 5.3 | 3.4 |
| Previous ${ }^{5}$ | 3.8 | 1.6 | 1.4 | 5.3 | 5.3 | 5.5 | 3.7 | 4.5 | 3.7 | 2.9 | 2.6 | 2.6 | 3.0 | 4.7 | 2.9 |
| Manufacturing industr. prod. ${ }^{5}$ | 4.5 | 1.3 | 2.0 | 9.1 | 5.3 | 5.4 | 4.8 | 4.1 | 3.8 | 3.5 | 3.4 | 3.5 | 4.2 | 4.9 | 3.6 |
| Previous ${ }^{5}$ | 4.5 | 1.3 | 2.0 | 9.1 | 5.4 | 4.1 | 3.3 | 4.2 | 3.8 | 3.0 | 2.7 | 2.9 | 4.2 | 4.3 | 3.1 |
| Capacity utilization rate - mfg. ${ }^{3}$ | 78.7 | 78.5 | 78.5 | 79.8 | 80.3 | 80.9 | 81.3 | 81.6 | 81.8 | 81.9 | 81.9 | 81.9 | 79.8 | 81.6 | 81.9 |
| Previous ${ }^{3}$ | 78.7 | 78.5 | 78.5 | 79.8 | 80.4 | 80.7 | 80.8 | 81.1 | 81.3 | 81.3 | 81.2 | 81.1 | 79.8 | 81.1 | 81.1 |
| Housing starts ${ }^{6}$ | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 | 1.7 | 1.7 | 2.1 | 1.9 | 1.7 |
| Light motor vehicle sales ${ }^{6}$ | 16.5 | 17.2 | 17.9 | 15.9 | 16.9 | 16.3 | 16.8 | 16.7 | 16.7 | 16.7 | 16.7 | 16.7 | 16.9 | 16.7 | 16.7 |
| Income and saving Nominal GDP ${ }^{5}$ | 7.0 | 5.8 | 7.6 | 5.1 | 9.0 | 6.5 | 5.3 | 3.7 | 4.3 | 4.9 | 4.8 | 4.7 | 6.4 | 6.1 | 4.7 |
| Real disposable pers. income ${ }^{5}$ | -4.0 | . 5 | -. 6 | 5.5 | 1.7 | 1.0 | 3.5 | 4.4 | 5.2 | 3.7 | 3.8 | 4.0 | . 3 | 2.6 | 4.2 |
| Previous ${ }^{5}$ | -3.4 | . 2 | -1.4 | 5.1 | 2.0 | 2.5 | 5.3 | 4.7 | 4.9 | 3.9 | 3.8 | 3.9 | . 1 | 3.6 | 4.1 |
| Personal saving rate ${ }^{3}$ | . 6 | -. 3 | -1.5 | -. 3 | -1.0 | -1.5 | -1.3 | -. 9 | -. 2 | . 2 | . 5 | . 9 | -. 3 | -. 9 | . 9 |
| Previous ${ }^{3}$ | . 5 | -. 2 | -1.6 | -. 5 | -1.3 | -1.3 | -. 8 | -. 3 | . 1 | . 4 | . 6 | . 9 | -. 5 | -. 3 | . 9 |
| Corporate profits ${ }^{7}$ | 30.6 | 7.1 | -20.9 | 46.6 | 60.8 | 9.9 | -. 3 | -5.1 | -5.8 | -5.0 | -1.0 | -. 3 | 12.8 | 13.7 | -3.0 |
| Profit share of GNP3 | 10.8 | 10.9 | 10.0 | 10.9 | 12.0 | 12.1 | 12.0 | 11.7 | 11.4 | 11.2 | 11.0 | 10.9 | 10.9 | 11.7 | 10.9 |
| Net federal saving ${ }^{8}$ | -288 | -290 | -396 | -264 | -165 | -154 | -185 | -212 | -242 | -250 | -254 | -262 | -309 | -179 | -252 |
| Net state \& local saving ${ }^{8}$ | 11 | 12 | -19 | -17 | 13 | 25 | 13 | 21 | 19 | 16 | 14 | 14 | -3 | 18 | 15 |
| Gross national saving rate ${ }^{3}$ | 13.2 | 12.6 | 13.1 | 12.7 | 13.8 | 13.6 | 13.1 | 13.1 | 13.1 | 13.1 | 13.2 | 13.2 | 12.7 | 13.1 | 13.2 |
| Net national saving rate ${ }^{3}$ | 1.3 | . 7 | -2.3 | . 5 | 2.2 | 2.2 | 1.8 | 1.7 | 1.8 | 1.7 | 1.8 | 1.9 | . 5 | 1.7 | 1.9 |

[^4]| Item | Fiscal year |  |  |  | 2005 |  |  |  | 2006 |  |  |  | 2007 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $2004{ }^{\text {a }}$ | $2005^{\text {a }}$ | 2006 | 2007 | Q1 ${ }^{\text {a }}$ | Q2 ${ }^{\text {a }}$ | Q3 ${ }^{\text {a }}$ | Q4 ${ }^{\text {a }}$ | Q1 ${ }^{\text {a }}$ | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Unified budget |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receipts ${ }^{1}$ | 1880 | 2154 | 2391 | 2484 | 452 | 665 | 549 | 530 | 507 | 772 | 581 | 563 | 525 | 794 | 603 | 594 |
| Outlays ${ }^{1}$ | 2293 | 2472 | 2673 | 2795 | 628 | 620 | 618 | 650 | 691 | 676 | 656 | 682 | 730 | 698 | 684 | 738 |
| Surplus/deficit ${ }^{1}$ | -412 | -318 | -281 | -310 | -177 | 45 | -69 | -119 | -184 | 96 | -75 | -119 | -205 | 95 | -81 | -145 |
| Previous | -412 | -318 | -296 | -329 | -177 | 45 | -69 | -119 | -184 | 98 | -91 | -129 | -219 | 97 | -79 | -155 |
| On-budget | -568 | -494 | -465 | -504 | -202 | -37 | -84 | -170 | -216 | 11 | -91 | -183 | -231 | 8 | -98 | -208 |
| Off-budget | 155 | 175 | 184 | 193 | 25 | 83 | 15 | 51 | 32 | 85 | 16 | 64 | 26 | 88 | 16 | 63 |
| Means of financing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Borrowing | 378 | 297 | 244 | 328 | 165 | -43 | 73 | 112 | 156 | -75 | 51 | 114 | 190 | -66 | 90 | 135 |
| Cash decrease | -1 | 1 | 6 | -5 | 2 | -11 | -2 | -1 | 28 | -38 | 16 | 5 | 15 | -25 | 0 | 10 |
| Other ${ }^{2}$ | 35 | 21 | 31 | -12 | 10 | 8 | -1 | 8 | -1 | 16 | 8 | -0 | 0 | -4 | -8 | -0 |
| Cash operating balance, end of period | 36 | 36 | 30 | 35 | 22 | 33 | 36 | 37 | 8 | 46 | 30 | 25 | 10 | 35 | 35 | 25 |
| NIPA federal sector |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receipts | 1964 | 2174 | 2475 | 2607 | 2214 | 2240 | 2182 | 2350 | 2473 | 2532 | 2546 | 2569 | 2595 | 2619 | 2647 | 2678 |
| Expenditures | 2349 | 2509 | 2667 | 2847 | 2502 | 2530 | 2578 | 2613 | 2638 | 2686 | 2731 | 2781 | 2837 | 2869 | 2901 | 2940 |
| Consumption expenditures | 712 | 758 | 797 | 843 | 758 | 761 | 784 | 771 | 804 | 803 | 812 | 822 | 842 | 851 | 858 | 864 |
| Defense | 475 | 509 | 535 | 570 | 508 | 512 | 531 | 517 | 538 | 538 | 546 | 553 | 569 | 576 | 581 | 586 |
| Nondefense | 237 | 249 | 263 | 274 | 250 | 249 | 253 | 254 | 266 | 264 | 267 | 268 | 274 | 275 | 277 | 278 |
| Other spending | 1638 | 1751 | 1870 | 2004 | 1744 | 1769 | 1794 | 1842 | 1834 | 1883 | 1919 | 1959 | 1995 | 2018 | 2043 | 2076 |
| Current account surplus | -386 | -335 | -192 | -240 | -288 | -290 | -396 | -264 | -165 | -154 | -185 | -212 | -242 | -250 | -254 | -262 |
| Gross investment | 99 | 107 | 118 | 125 | 105 | 108 | 112 | 115 | 118 | 119 | 120 | 122 | 124 | 126 | 127 | 127 |
| Gross saving less gross investment ${ }^{3}$ | -392 | -344 | -207 | -256 | -295 | -299 | -408 | -278 | -180 | -169 | -201 | -228 | -259 | -267 | -271 | -278 |
| Fiscal indicators ${ }^{4}$ <br> High-employment (HEB) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| surplus/deficit | -358 | -336 | -227 | -263 | -284 | -294 | -414 | -281 | -204 | -199 | -226 | -247 | -269 | -270 | -266 | -267 |
| Change in HEB, percent of potential GDP | 0.5 | -0.3 | -1.0 | 0.2 | -0.6 | 0.1 | 0.9 | -1.1 | -0.6 | -0.1 | 0.2 | 0.1 | 0.1 | -0.0 | -0.1 | -0.0 |
| Fiscal impetus (FI) percent of GDP | 0.7 | 0.2 | 0.4 | 0.3 | 0.1 | 0.1 | 0.2 | -0.0 | 0.2 | 0.0 | 0.1 | 0.1 | 0.2 | 0.0 | -0.0 | 0.0 |
| Previous | 0.8 | 0.3 | 0.4 | 0.2 | 0.0 | 0.1 | 0.1 | -0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | -0.0 | -0.0 | 0.0 |

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
[^5]
## Staff Projections of Federal Sector Accounts and Related Items

| Class II FOMC <br> Restricted (FR) |  | Change in Debt of the Domestic Nonfinancial Sectors <br> (Percent) |  |  |  |  | August 3, 2006 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Households |  |  |  |  |  |
| Period ${ }^{1}$ | Total | Total | Home mortgages | Consumer credit | Business | State and local governments | Federal government | Nominal GDP |
| Year |  |  |  |  |  |  |  |  |
| 2000 | 4.8 | 8.6 | 8.2 | 10.8 | 9.3 | 1.3 | -8.0 | 4.6 |
| 2001 | 6.1 | 8.6 | 9.5 | 7.7 | 6.1 | 8.8 | -. 2 | 2.7 |
| 2002 | 6.9 | 9.7 | 11.9 | 4.5 | 2.7 | 11.0 | 7.6 | 3.6 |
| 2003 | 8.1 | 11.3 | 14.3 | 4.2 | 2.7 | 8.3 | 10.9 | 5.9 |
| 2004 | 8.8 | 11.2 | 13.6 | 4.2 | 5.9 | 7.4 | 9.0 | 6.7 |
| 2005 | 9.5 | 11.7 | 14.2 | 2.7 | 7.9 | 10.2 | 7.0 | 6.4 |
| 2006 | 8.3 | 9.7 | 11.6 | 2.5 | 8.6 | 5.8 | 5.2 | 6.1 |
| 2007 | 6.6 | 6.6 | 7.7 | 2.6 | 7.0 | 4.2 | 7.0 | 4.7 |
| Quarter |  |  |  |  |  |  |  |  |
| 2005:1 | 9.8 | 9.8 | 11.8 | 3.0 | 6.6 | 12.0 | 14.4 | 7.0 |
| 2 | 8.1 | 11.9 | 13.9 | 3.8 | 8.2 | 6.0 | . 1 | 5.8 |
| 3 | 9.5 | 12.3 | 14.9 | 4.7 | 7.6 | 13.0 | 5.1 | 7.6 |
| 4 | 9.4 | 11.1 | 13.4 | -. 7 | 8.3 | 8.5 | 7.8 | 5.1 |
| 2006:1 | 10.9 | 11.6 | 13.6 | 2.2 | 9.9 | 5.9 | 12.9 | 9.0 |
| 2 | 6.9 | 9.5 | 11.5 | 2.7 | 8.8 | 7.7 | -3.0 | 6.5 |
| 3 | 7.0 | 8.4 | 10.0 | 2.8 | 7.4 | 6.0 | 3.2 | 5.3 |
| 4 | 7.3 | 7.9 | 9.5 | 2.1 | 7.3 | 3.0 | 7.6 | 3.7 |
| 2007:1 | 8.2 | 6.8 | 8.0 | 2.2 | 7.2 | 4.3 | 15.0 | 4.3 |
| 2 | 4.9 | 6.5 | 7.5 | 2.4 | 6.8 | 4.2 | -2.2 | 4.9 |
| $3$ | $6.3$ | 6.3 | 7.3 | 2.7 | 6.8 | 4.1 | 6.1 | 4.8 |
| 4 | 6.5 | 6.2 | 7.0 | 2.9 | 6.3 | 4.1 | 8.7 | 4.7 |

[^6]1. Data after 2006:Q1 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.
Class II FOMC
Flow of Funds Projections: Highlights
(Billions of dollars at seasonally adjusted annual rates except as noted)

| Category | 2004 | 2005 | 2006 | 2007 | 2005 |  | 2006 |  |  |  | 2007 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Domestic nonfinancial sectors <br> Net funds raised |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 1815.9 | 1935.7 | 1713.0 | 1631.0 | 1934.8 | 2014.8 | 2316.6 | 1403.0 | 1475.0 | 1657.5 | 2055.7 | 1170.7 | 1587.0 | 1710.6 |
| Net equity issuance | -126.6 | -363.8 | -476.5 | -262.4 | -470.8 | -420.0 | -560.0 | -478.7 | -465.0 | -402.4 | -282.4 | -262.4 | -262.4 | -242.4 |
| Net debt issuance | 1942.4 | 2299.5 | 2189.5 | 1893.4 | 2405.6 | 2434.8 | 2876.6 | 1881.7 | 1940.0 | 2059.9 | 2338.1 | 1433.1 | 1849.4 | 1953.0 |
| Borrowing indicators |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Debt (percent of GDP) ${ }^{1}$ | 197.4 | 202.8 | 207.1 | 212.5 | 202.8 | 205.0 | 205.7 | 207.0 | 207.9 | 209.7 | 211.6 | 212.5 | 212.9 | 213.8 |
| Borrowing (percent of GDP) | 16.6 | 18.5 | 16.5 | 13.6 | 19.1 | 19.1 | 22.1 | 14.2 | 14.5 | 15.2 | 17.1 | 10.4 | 13.2 | 13.8 |
| Households |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net borrowing ${ }^{2}$ | 1032.8 | 1208.9 | 1117.5 | 832.2 | 1333.2 | 1243.5 | 1333.7 | 1130.0 | 1023.3 | 983.0 | 859.2 | 830.1 | 823.9 | 815.8 |
| Home mortgages | 910.1 | 1078.4 | 1009.2 | 741.5 | 1207.7 | 1122.3 | 1181.5 | 1032.1 | 923.3 | 899.7 | 775.8 | 741.7 | 730.4 | 718.1 |
| Consumer credit | 86.2 | 57.6 | 53.9 | 57.1 | 100.5 | -14.5 | 47.5 | 58.5 | 62.2 | 47.2 | 48.4 | 54.4 | 60.6 | 65.3 |
| Debt/DPI (percent) ${ }^{3}$ | 112.5 | 120.6 | 126.5 | 128.4 | 121.8 | 122.8 | 125.2 | 126.9 | 127.5 | 128.1 | 128.1 | 128.4 | 128.5 | 128.6 |
| Business |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Financing gap ${ }^{4}$ | 32.2 | -162.5 | 52.2 | 109.2 | -331.9 | -249.4 | -33.7 | 64.4 | 78.0 | 100.3 | 81.5 | 99.2 | 108.0 | 147.9 |
| Net equity issuance | -126.6 | -363.8 | -476.5 | -262.4 | -470.8 | -420.0 | -560.0 | -478.7 | -465.0 | -402.4 | -282.4 | -262.4 | -262.4 | -242.4 |
| Credit market borrowing | 432.4 | 611.2 | 718.6 | 629.9 | 611.6 | 677.2 | 825.7 | 753.1 | 647.4 | 648.3 | 651.6 | 631.8 | 633.4 | 602.9 |
| State and local governments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net borrowing | 115.3 | 172.4 | 107.2 | 83.2 | 228.9 | 155.0 | 109.5 | 145.8 | 114.8 | 58.8 | 84.6 | 82.8 | 82.8 | 82.8 |
| Current surplus ${ }^{5}$ | 175.7 | 204.5 | 201.9 | 196.0 | 200.3 | 192.0 | 225.8 | 197.4 | 187.5 | 196.7 | 196.8 | 195.5 | 195.1 | 196.8 |
| Federal government |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net borrowing | 361.9 | 306.9 | 246.4 | 348.1 | 231.9 | 359.0 | 607.7 | -147.1 | 154.6 | 369.7 | 742.8 | -111.6 | 309.4 | 451.6 |
| Net borrowing (n.s.a.) | 361.9 | 306.9 | 246.4 | 348.1 | 72.8 | 112.2 | 156.1 | -74.8 | 50.6 | 114.4 | 189.9 | -66.3 | 89.8 | 134.6 |
| Unified deficit (n.s.a.) | 400.7 | 319.7 | 281.4 | 335.6 | 69.0 | 119.3 | 183.7 | -96.5 | 74.9 | 119.2 | 204.9 | -95.3 | 81.5 | 144.5 |
| Depository institutions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

[^7]
## Class II FOMC-Restricted (FR)

## International Developments

Data received over the intermeeting period confirm that growth of foreign output slowed in the second quarter from its very rapid first-quarter pace. However, the slowdown was slightly less pronounced than we had expected in the June Greenbook, as we were surprised on the upside by economic indicators in several key industrial and emerging market economies. As a result, we have marked up our estimates of foreign growth for both the second and current quarters. For next year, we project that foreign output growth will move down further, to a still-solid $31 / 4$ percent rate. Foreign consumer price inflation moved up noticeably in the second quarter, and we expect it to remain high in the second half of the year, mainly as recent increases in energy and other commodity prices are passed on to consumer prices, but it should fall back next year.

## Summary of Staff Projections

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

| Indicator | 2005 | 2006: |  | Qrojection |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2006 |  |  |  |  |
|  |  |  | H2 |  |  |  |
| Foreign output | 3.7 | 4.6 | 3.7 | 3.4 | 3.2 |  |
| June GB | 3.7 | 4.5 | 3.5 | 3.3 | 3.3 |  |
| Foreign CPI | 2.3 | 2.0 | 2.7 | 2.9 | 2.5 |  |
| June GB | 2.3 | 2.0 | 2.7 | 2.7 | 2.5 |  |

Note. Changes for years measured as Q4/Q4; half-year is measured as Q4/Q2.

Crude oil prices were once again volatile over the intermeeting period. Spot prices soared to new all-time highs in nominal terms in mid-July, mainly on heightened geopolitical turmoil, and fluctuated thereafter. On balance, the spot price of West Texas intermediate (WTI) crude oil has risen about $\$ 7$ per barrel since the time of the June Greenbook, and futures prices have risen by similar amounts. The foreign exchange value of the dollar fluctuated over the intermeeting period, falling in response to the June FOMC statement and to indications that U.S. growth may be slowing but rising on increases in geopolitical tensions. The projected path of the broad real dollar is little changed compared to the one in the previous Greenbook. On balance, financial market volatility and risk spreads on emerging market debt declined over the intermeeting period. Market volatility increased briefly in early July in response to an upturn in geopolitical tensions but not to the extent experienced earlier this year.

We estimate that, after subtracting from U.S. real GDP growth in each of the previous three quarters, real net exports made a positive arithmetic contribution of $1 / 3$ percentage point at an annual rate in the second quarter; a sharp slowdown in import growth more than offset the effects of a comparable deceleration in exports. In the current quarter, we expect the contribution to remain positive, as real exports are projected to rebound more rapidly than real imports. Over the remainder of the forecast period, however, net exports are expected to subtract about 0.1 percentage point (annual rate) from growth on average, mainly because real import growth recovers somewhat. The projected rebound in import growth is slightly smaller than in the June Greenbook, mainly because of the lower projected rate of U.S. growth.

The U.S. current account deficit is now estimated to have widened $\$ 26$ billion from the first to the second quarter, to about $\$ 860$ billion at an annual rate, or 6.5 percent of GDP. The increase was due both to a worsening of the trade balance, largely reflecting the increase in oil prices, and to a deterioration of the net investment income balance. We project that the current account deficit will rise to about $\$ 1$ trillion, or 7.2 percent of GDP, by late 2007. The deterioration of the current account balance is accounted for about equally by a widening of the trade deficit and a decline in the net investment income balance.

## Oil Prices

The spot price of West Texas intermediate (WTI) crude oil closed at $\$ 75.82$ per barrel on August 2, down more than $\$ 1$ from its intermeeting peak on July 14 but up about $\$ 7$ per barrel since the time of the June Greenbook. Prices of crude oil futures contracts have also moved higher on balance; the price of the contract for delivery in December 2012 closed at $\$ 70.23$ per barrel on August 2, up about $\$ 6$ since the June Greenbook.

The recent increases in oil prices appear to reflect primarily current and potential supply disruptions. Fears that the conflict between Israel and Lebanon could widen to other countries in the region contributed to the sharp price runups in mid-July. Iran, under pressure from the United Nations to end its uranium enrichment program, has threatened to reduce oil exports should sanctions be imposed. In Iraq, oil production has recently improved from low levels earlier this year, but the escalating violence has put future production at greater risk. To support high prices of its heavier grades of crude oil and limit the growth in global crude inventories, Saudi Arabia has reduced production about 250,000 barrels per day since the first quarter. In addition, some production in Nigeria
continues to be shut in due to violence in the Niger River delta; new pipeline damage has raised the total outage in Nigeria to around 650,000 barrels per day.

Oil demand, particularly in emerging market economies, is expected to remain solid and thus to help maintain a tight global oil market. Currently, spare capacity in global oil production amounts only to about 2 percent of consumption, low by historical standards. Spare capacity is expected to increase 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 $\$ 78.80$ per barrel in the second quarter of 2007 and to remain near that level through the end of the forecast period. Compared with the June Greenbook forecast, the current projection averages about $\$ 5.50$ per barrel higher in the second half of this year and about $\$ 6.50$ higher in 2007. The projected path of the oil import price has been revised up a similar amount.

## International Financial Markets

The trade-weighted exchange value of the dollar against the major foreign currencies has declined almost $11 / 4$ percent since the June FOMC meeting. The dollar depreciated on news that U.S. economic activity is softening and on reduced market expectations for further tightening of U.S. monetary policy. The dollar depreciated sharply against sterling on August 3, after the Bank of England (BoE) surprised markets by raising its policy rate 25 basis points. On balance, the dollar has depreciated 4 percent against sterling, 2 percent against the euro, and 1 percent versus the yen. In contrast, it has appreciated 1 percent vis-à-vis the Canadian dollar, after the Bank of Canada indicated that it was not likely to resume policy tightening in the near term and after Canadian economic data confirmed that growth had slowed considerably in the second quarter.

The dollar depreciated $31 / 2$ percent on balance against the Mexican peso over the intermeeting period; the exchange value of the peso surged after Mexico's July 2 presidential election, in which Felipe Calderon narrowly edged out Andres Manuel Lopez Obrador, and has largely held its gains even as the election result has come under challenge. The dollar also depreciated moderately against most other Latin American currencies and East Asian emerging market currencies.

In summary, the broad nominal index of the dollar declined about 1 percent over the intermeeting period. However, because the dollar appreciated somewhat between the
time the previous Greenbook was completed and the June FOMC meeting, the starting point of the projected path of the broad real dollar index is little changed from that in the June Greenbook. We project that the broad real dollar will depreciate at an annual rate of about 2 percent-roughly the same rate as in the previous Greenbook-as we continue to expect that the rising U.S. current account deficit should weigh on the willingness of foreign investors to continue accumulating dollar-denominated assets at unchanged exchange rates.

Euro-area and Japanese long-term bond yields declined slightly over the intermeeting period, and yields changed little on balance in the United Kingdom. News about economic activity in the euro area, the United Kingdom, and Japan was generally positive, and headline inflation came in at the high end of expected ranges in Europe. The European Central Bank (ECB) and the BoE raised their policy rates 25 basis points on August 3. While the ECB's decision had been widely anticipated and prompted only minor market reactions, the BoE's move was not, and interest rates implied by near-dated sterling three-month futures contracts jumped 10 to 15 basis points following the announcement. On balance, three-month spot sterling and euro interest rates have increased 19 and 12 basis points, respectively, over the period. The Bank of Japan (BoJ) tightened policy on July 14, raising its policy rate above zero for the first time in more than five years. The Bank of Canada's indication that it was not likely to resume raising its policy rates in the near term led three-month Canadian dollar interest rates to decline 16 basis points over the intermeeting period, and the benchmark Canadian government bond yield dropped 30 basis points, comparable to the decline of the yield on the ten-year U.S. Treasury note. Long-term breakeven inflation rates declined 10 basis points in Canada; they were little changed in Japan and the euro area; and they rose slightly in the United Kingdom.

Share prices in the foreign industrial economies rose markedly after the June FOMC meeting, but they fell back around mid-July as investors focused on the mounting geopolitical tensions and as the price of oil climbed to new highs. Later in the month, share prices recovered, as geopolitical risks were perceived to abate and on economic data and statements by Federal Reserve officials that were interpreted as signaling a higher likelihood of a pause at the FOMC's August 8 meeting. On balance, headline share price indexes gained 1 to $31 / 2$ percent in Canada, the euro area, the United Kingdom, and Japan.

Over the intermeeting period, Mexican share prices rose 11 percent; Mexico's EMBI+ spread declined about 25 basis points, bringing it close to its record low in February. Most of these changes occurred in the week after the July 2 presidential election. Financial indicators in the other Latin American economies and in most emerging Asian economies also improved over the intermeeting period, though by smaller amounts than in Mexico.

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

## Advanced Foreign Economies

Incoming data suggest that real GDP in the advanced foreign economies rose an estimated $23 / 4$ percent in the second quarter, about $1 / 4$ percentage point slower than in the previous quarter. We expect the pace of GDP growth to slow further over the current and next quarter, to an average of around $21 / 4$ percent, and to remain at about that pace in 2007, as slowing U.S. growth, high energy prices, and past and expected future monetary tightening weigh on foreign activity. The average four-quarter change in consumer prices is expected to run at about 2 percent through early 2007 as the recent energy price increases show through. Inflation then moderates a bit, edging down to roughly $13 / 4$ percent for most of the rest of the forecast.

Second-quarter data in Japan point to stronger growth in investment, consumption, and exports than we had estimated at the time of the June Greenbook. As a result, we revised up our estimate for real GDP growth in the second quarter to 4 percent at an annual rate, 1 percentage point higher than in the June Greenbook. We project that real GDP growth will slow to $13 / 4$ percent by the end of 2007 as investment decelerates to rates more compatible with our assessment of potential growth. The recent robust growth of output and some pass-through of oil price increases that occurred earlier this year should push the twelve-month rate of inflation up from around $3 / 4$ percent in the second quarter to 1 percent in the second half of this year; inflation should recede to slightly less than $3 / 4$ percent in 2007. The BoJ raised its target for the overnight rate to 0.25 percent and stated on several occasions its intention to raise rates gradually. We continue to assume that the BoJ will increase its policy target rate 50 basis points during the forecast period.

Incoming data for the euro area-on retail sales, industrial production, labor market conditions, and measures of economic sentiment-suggest considerable momentum, and
we estimate that GDP growth in the second quarter came in at almost 3 percent, up from 2.5 percent in the first quarter. We project that growth in the euro area will slow to $13 / 4$ percent during much of next year, as rising energy costs, monetary policy tightening, and a planned increase in the value-added tax (VAT) in Germany restrain activity. Increases in energy prices pushed up the twelve-month rate of headline inflation in the euro area to 2.5 percent in July. We expect inflation to edge down to 2 percent by mid2007 as energy prices level off and economic growth slows; the scheduled increase in the German VAT should interrupt this decline in inflation only temporarily. In addition to the ECB's August 3 move, we assume that the ECB will raise its official interest rates a further 25 basis points, to $3 \frac{1}{4}$ percent, later this year.

After rising to 3.8 percent in the first quarter, Canadian GDP growth is estimated to have stepped down to just above 2 percent in the second quarter, as monthly GDP figures for April and May came in fairly weak. Growth should remain subdued in the second half of this year at a pace of about $21 / 4$ percent as U.S. growth slows further, before returning to about $2 \frac{1}{2}$ percent by late 2007. Consumer prices, boosted by higher energy prices, rose 2.5 percent in the twelve months ending in June. As the effects of earlier energy price increases wane, inflation should fall to below 2 percent by the end of 2007. We assume that the Bank of Canada will keep monetary policy on hold for the forecast period.

In the United Kingdom, real GDP increased 3.4 percent in the second quarter, according to the preliminary estimate. We project GDP growth will average just below $23 / 4$ percent for the rest of 2006 and $2 \frac{1}{2}$ percent in 2007. The recent increases in energy prices have raised headline inflation to above the BoE's 2 percent target. We project inflation will fall to around the target by the end of the forecast period as the effects of rising energy prices recede. We assume that the Bank will keep its policy rate unchanged over the forecast period.

## Emerging Market Economies

Output growth in the emerging market economies is estimated to have declined from an elevated pace of $61 / 2$ percent in the first quarter to a still-robust $43 / 4$ percent rate in the second, and it is expected to stay around this rate over the forecast period. Our projection for the second half of this year is a bit stronger than in the June Greenbook, particularly for China, where the economy has so far slowed much less than expected in response to government measures aimed at restraining investment spending. When spillover effects to the other emerging market economies are included, this upward revision outweighs the effects of the weaker U.S. outlook and the higher price of crude oil. High commodity
prices, as well as the strength of the Chinese economy, are expected to continue to support activity in many emerging market economies.

China's second-quarter rate of growth in real GDP is estimated by the staff at $113 / 4$ percent (annual rate), down only slightly from its blistering first-quarter pace of more than 13 percent and much higher than the 8 percent rate that we had expected in the previous Greenbook. Investment growth has remained well above the authorities' preferred range despite administrative measures imposed earlier this year, and the trade balance registered a record surplus in the second quarter. The People's Bank of China raised reserve requirements for the second time in two months following the stronger-than-expected second-quarter data. In addition, the government announced further measures to curb speculative real estate investment and to review other investment projects. As a result, we expect Chinese growth to slow further, to about 8 percent by next year.

Elsewhere in emerging Asia, growth in Singapore in the second quarter appears to have been surprisingly weak, weighed down by a sharp contraction in the volatile biomedical sector. However, industrial production rebounded in June, and the continued expansion in global high-tech demand should support a pickup in growth in Singapore in the second half of this year. Growth in Korea also declined in the second quarter, in part in response to tax and regulatory measures aimed at cooling the housing market, monetary policy tightening, and currency appreciation over the past year. We expect growth will average a moderate pace of about 4 percent over the forecast period, restrained by the continued high price of oil and some further exchange rate appreciation. For the rest of the region, growth is expected to range from about 4 percent to about $61 / 2$ percent, with India and Malaysia, an oil exporter, at the high end of this range.

In Latin America, real GDP growth is estimated to have averaged $33 / 4$ percent in the second quarter, down from $61 / 4$ percent in the first quarter. Much of this slowdown reflects a deceleration in activity in Mexico from an unusually high pace in the first quarter. Growth in Mexico over the forecast period is expected to average about $31 / 2$ percent, with the contour roughly in line with projected growth in U.S. manufacturing production. The dispute surrounding the outcome of the Mexican presidential election is not expected to weigh on the outlook, consistent with financial markets having remained orderly. We expect high prices for commodities, including oil, to continue to support economic activity in South America over the forecast period, although growth is expected to slow somewhat, from about $51 / 4$ percent in the second quarter to $41 / 2$ percent by the end
of 2007, in response to a leveling-off of commodity prices and slower growth in both the United States and China. The presidential election campaigns in Brazil (October) and Venezuela (December) have begun to heat up, but, as of now, the incumbents are expected to win and the economic policies in these countries are expected to remain little changed.

Four-quarter inflation in the emerging market economies is projected to increase from 3 percent in the second quarter to a peak of $33 / 4$ percent in mid- 2007 before edging down to $31 / 2$ percent by the end of the year. This increase is largely a result of the pass-through of higher oil prices to final goods prices in emerging Asia. In that region, inflation is expected to move up from its current rate of $21 / 2$ percent to 4 percent by mid-2007 and then to drop back to $31 / 4$ percent by the end of the year. This forecast is a bit higher than in the June Greenbook, mostly because of the higher projected price of oil. In Latin America, four-quarter headline inflation dropped from $4 \frac{1}{4}$ percent in the first quarter to only $31 / 2$ percent in the second quarter, an extremely low level by recent historical standards, owing in part to unexpectedly low inflation in Brazil. Inflation is expected to pick up a little in Latin America, reaching $33 / 4$ percent by early 2007. This projection incorporates a rise in domestic fuel prices in Brazil following the October presidential election. Authorities in Mexico and Venezuela are expected to continue suppressing domestic energy price increases.

## Prices of Internationally Traded Goods

Core import price inflation rose from an annual rate of $1 \frac{1}{2}$ percent in the first quarter to $33 / 4$ percent in the second, with most of the pickup occurring in May and June. As in the first quarter, much of the recent rise in core import prices has been concentrated in prices of imported nonfuel industrial supplies, especially metals. In contrast, prices of finished goods have shown much smaller increases.

For the current quarter, we project core import prices to rise at an annual rate of $4 \frac{1}{4}$ percent, a pace that reflects the continued effects of higher nonfuel commodity prices and the depreciation of the dollar that occurred earlier this year. Although industrial metals prices and overall nonfuel commodity prices both peaked in May and declined somewhat in June, they partially rebounded in July and remain well above first-quarter levels. Consistent with futures markets, we expect nonfuel commodity prices to level out; however, their earlier increases should continue to provide upward (but diminishing) impetus to import prices for the next several quarters.

## Staff Projections of Selected Trade Prices

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

| Trade category | 2005 | $\begin{gathered} \text { 2006: } \\ \text { Q1 } \end{gathered}$ | Projection |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2006 |  | 2007 |
|  |  |  | Q2 | H2 |  |
| Exports |  |  |  |  |  |
| Core goods | 3.9 | 3.7 | 6.6 | 5.8 | 1.8 |
| June GB | 3.9 | 3.6 | 6.9 | 5.1 | 1.7 |
| Imports |  |  |  |  |  |
| Non-oil core goods | 2.2 | 1.6 | 3.7 | 3.9 | 1.4 |
| June GB | 2.2 | 1.8 | 3.3 | 3.6 | 1.5 |
| Oil price (dollars per barrel) | 55.39 | 55.10 | 63.69 | 70.65 | 73.42 |
| June GB | 55.39 | 55.10 | 63.03 | 65.43 | 66.63 |

Note. Prices for core exports and non-oil core imports, which exclude computers and semiconductors, 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.

Beginning in the fourth quarter of 2006, core import prices are projected to decelerate because of a waning of the effects of higher commodity prices and earlier dollar depreciation. By the end of 2007, with commodity prices having leveled off and the dollar depreciating only gradually, core import price inflation is projected to drop to about 1 percent. Our projection of core import price inflation is very close to that in the June Greenbook, as data have come in about as expected and our projections for commodity prices and the dollar are little changed.

Core export prices increased at an annual rate of $61 / 2$ percent in the second quarter. This rise was concentrated in prices of exported industrial supplies, which increased at an annual rate of nearly 17 percent. In the current quarter, core export prices are expected to accelerate further because of the recent strength of producer prices for intermediate materials excluding food and energy as well as of prices for primary commodities (especially metals). Thereafter, core export price inflation is expected to decline, as prices for intermediate materials and primary commodities level off. Compared with the previous Greenbook, the projected rate of core export price inflation in the current quarter is almost $11 / 2$ percentage points higher, primarily because of higher projected prices for intermediate materials and metals. In subsequent quarters, the forecast is little changed.

## Trade in Goods and Services

We estimate that real net exports contributed $1 / 3$ percentage point to the growth of U.S. real GDP in the second quarter, as imports are estimated to have grown only weakly, while exports are estimated to have increased at an annual rate of almost 4 percent. In the current quarter, we project that net exports will again make a positive contribution of $1 / 3$ percentage point to real GDP growth, with import and export growth both picking up a bit. Over the remainder of the forecast period, we project that the arithmetic contribution of net exports will turn slightly negative; although export growth continues to exceed that of imports, somewhat-stronger import growth results in a decline in net exports. Compared with the June Greenbook, net exports add about 0.2 percentage point more to growth in the second quarter, as incoming data point to weaker imports than we had anticipated. For next year, the projected contribution is up 0.1 percentage point on average, in part because the downward revision to the projected path for U.S. GDP reduces the growth of imports.

Real imports of goods and services are estimated to have increased only $1 / 2$ percent at an annual rate in the second quarter, a sharp drop from the first quarter's near double-digit pace. To some extent, this low rate reflects a significant drop in reported oil imports caused, in large part, by the BEA's unusual seasonal adjustment procedures. In addition, after growing robustly in the previous two quarters, imports of core goods and services appear to have slowed noticeably in the second quarter. Our estimate of import growth in the second quarter is $13 / 4$ percentage points below the projection in the previous Greenbook, largely because of the weakness of core imports in the May trade data. Consumer goods imports came in below expectations in May, while average auto imports in April and May were well below their first-quarter level.

After its near-pause in the second quarter, the growth of real imports should rebound to 3 percent in the second half of this year and move up further next year. Growth of core imports averages almost 4 percent through the projection period, supported by stable but modest U.S. GDP growth; core import growth slows a bit by early next year, in part as a decline in U.S. inflation makes domestic goods more attractive, but picks up later in the forecast period as core import prices also decelerate. Imports of services are expected to grow more slowly than imports of core goods because of higher price inflation in service imports. Growth of imports of computers and semiconductors should remain solid. Compared with the June Greenbook, our projections for real import growth in the second half of this year and next year have been revised down $1 / 2$ percentage point, mainly because of the downward revision to the projected path of U.S. growth.

| Staff Projections forTrade in Goods and Services(Percent change from end of previous period, s.a.a.r.) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Measure | 2005 | $\begin{gathered} \text { 2006: } \\ \text { Q1 } \end{gathered}$ | Projection |  |  |
|  |  |  | 2006 |  | 2007 |
|  |  |  | Q2 | H2 |  |
| Real exports | 6.7 | 14.0 | 3.9 | 5.3 | 5.1 |
| June GB | 6.4 | 14.9 | 5.4 | 5.2 | 5.2 |
| Real imports | 5.2 | 9.1 | 0.5 | 3.1 | 4.0 |
| June GB | 5.3 | 10.5 | 2.3 | 3.5 | 4.6 |

Note. Changes for years are measured as Q4/Q4; half-year is measured as Q4/Q2.

Real exports of goods and services are estimated to have risen at an annual rate of about 4 percent in the second quarter, well below their 14 percent pace in the first quarter. Growth in real services exports was moderately strong, and exports of semiconductors were very rapid. However, exports of core goods are estimated to have grown only modestly, likely because of some payback from earlier rapid growth. The second quarter estimate is down somewhat from the June Greenbook primarily because of technical issues pertaining to the translation of balance of payments data to a NIPA basis in the advance GDP report.

In the second half of this year and next year, we project that growth in real exports will average close to $5 \frac{1}{4}$ percent; core export growth returns to a pace more in line with relative prices and solid foreign GDP growth, while exports of services hold close to their second-quarter growth rate and semiconductors decelerate from their elevated secondquarter pace. The boost to growth of core goods exports from relative prices lessens as the effects of the dollar's depreciation in 2003 and 2004 diminish. Conversely, real exports of services, which respond more rapidly to exchange rate fluctuations than do real exports of core goods, should derive support from the projected trend of dollar depreciation. Exports of computers and semiconductors are projected to rise at a brisk pace throughout the forecast period. This outlook is about unchanged from the June Greenbook, in line with our projections for the dollar and foreign growth.

## Alternative Simulation

Although our benchmark forecast is for oil prices to remain nearly flat over the forecast period, prices could jump considerably higher in the event of a significant supply disruption. To explore the implications of this possibility, we used SIGMA, the staff's forward-looking multi-country model, to analyze the effects of an immediate and permanent rise in oil prices to $\$ 120$ per barrel. ${ }^{1}$

| Alternative Simulation: Higher Oil Prices <br> (Percent change from previous period, annual rate) |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Indicator and simulation | 2006 |  | 2007 |  |
|  | H1 | H2 | H1 | H2 |
| U.S. real GDP |  |  |  |  |
| Baseline | 4.3 | 2.1 | 2.2 | 2.3 |
| Permanent oil price rise | 4.3 | 1.8 | 2.0 | 2.1 |
| U.S. PCE prices |  |  |  |  |
| excluding food and energy |  |  |  |  |
| Baseline |  |  |  |  |
| Permanent oil price rise | 2.5 | 2.5 | 2.3 | 2.2 |
| U.S. trade balance |  | 2.7 | 2.6 | 2.5 |
| (percent of GDP) |  |  |  |  |
| Baseline | -5.9 | -5.9 | -6.1 | -5.9 |
| Permanent oil price rise | -5.9 | -6.6 | -6.8 | -6.6 |

Note. H1 is Q2/Q4; H2 is Q4/Q2. The monetary authorities in the United States and the major foreign economies adjust their policy rates according to a Taylor rule.

We assume that the oil price shock occurs in the third quarter of 2006 and that both households and firms understand the permanent nature of the shock. U.S. real GDP growth declines about $1 / 4$ percentage point below baseline over the remainder of the forecast period. Consumer spending (relative to baseline) falls in response to the reduction in permanent income, while firms reduce investment as higher energy costs depress the productivity of capital. The core PCE inflation rate rises 0.2 percentage point above baseline in the latter half of 2006 and peaks at 0.3 percentage point above baseline in 2007. The rise in core inflation results from higher production costs, as a decline in labor productivity is only gradually offset by falling real wages.

[^8]Rising energy costs also contribute to an immediate deterioration of the U.S. trade deficit equal to about $3 / 4$ percentage point of GDP. Given that both firms and households have limited ability to substitute away from energy in the short run, the effects on the trade balance persist through the forecast period. At more distant horizons, the trade deficit induced by the higher oil prices narrows gradually because real imports decline as the demand for energy wanes and U.S. domestic demand weakens.

## 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.
Class II FOMC
Restricted (FR)
COUNTRIES
GDP AND CONSUMER PRICES: SELACI

| Measure and country | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | $\begin{array}{r} \text { Pro } \\ 2006 \end{array}$ | $\begin{aligned} & \text { cted } \\ & 2007 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| REAL GDP (1) |  |  |  |  |  |  |  |  |  |
| Total foreign | 5.1 | 4.2 | 0.4 | 3.1 | 3.0 | 3.8 | 3.7 | 3.7 | 3.2 |
| Industrial Countries of which: | 4.4 | 3.6 | 0.9 | 2.5 | 1.8 | 2.5 | 2.7 | 2.7 | 2.2 |
| Canada | 5.9 | 4.1 | 1.3 | 3.5 | 1.5 | 3.7 | 2.8 | 2.6 | 2.5 |
| Japan | 0.2 | 3.3 | -1.5 | 2.0 | 2.6 | 0.5 | 4.0 | 2.9 | 1.9 |
| United Kingdom | 3.5 | 3.1 | 2.0 | 2.3 | 3.3 | 2.6 | 1.8 | 2.9 | 2.5 |
| Euro Area (2) | 4.1 | 3.3 | 1.1 | 1.2 | 1.0 | 1.6 | 1.7 | 2.4 | 1.5 |
| Germany | 3.5 | 2.3 | 1.1 | 0.2 | 0.2 | 0.5 | 1.7 | 2.3 | 0.8 |
| Developing Countries | 6.3 | 5.2 | -0.4 | 3.9 | 4.7 | 5.7 | 5.3 | 5.3 | 4.7 |
| Asia | 8.8 | 5.8 | 1.1 | 6.3 | 6.9 | 6.1 | 7.2 | 6.2 | 5.6 |
| Korea | 11.8 | 4.3 | 4.7 | 7.8 | 4.2 | 2.9 | 5.3 | 4.0 | 3.9 |
| China | 7.7 | 8.2 | 7.8 | 9.2 | 10.5 | 10.1 | 9.9 | 10.9 | 8.2 |
| Latin America | 4.4 | 4.4 | -1.3 | 1.6 | 2.3 | 5.2 | 3.1 | 4.4 | 3.7 |
| Mexico | 5.5 | 4.8 | $-1.3$ | 2.0 | 2.1 | 4.8 | 2.7 | 4.1 | 3.4 |
| Brazil | 3.4 | 3.8 | -0.9 | 4.1 | 0.9 | 4.7 | 1.5 | 4.2 | 3.8 |
| CONSUMER PRICES (3) |  |  |  |  |  |  |  |  |  |
| Industrial Countries | 1.2 | 1.8 | 0.9 | 2.1 | 1.3 | 1.8 | 1.6 | 2.0 | 1.7 |
| Canada | 2.4 | 3.1 | 1.1 | 3.8 | 1.7 | 2.3 | 2.3 | 2.4 | 1.8 |
| Japan | -1.0 | -0.9 | -1.0 | -0.5 | -0.4 | 0.5 | -0.5 | 1.0 | 0.7 |
| United Kingdom (4) | 1.1 | 0.9 | 1.1 | 1.5 | 1.3 | 1.4 | 2.1 | 2.4 | 1.9 |
| Euro Area (2) | 1.5 | 2.5 | 2.1 | 2.3 | 2.0 | 2.3 | 2.3 | 2.2 | 2.0 |
| Germany | 1.1 | 1.7 | 1.4 | 1.2 | 1.1 | 2.1 | 2.2 | 1.6 | 2.5 |
| Developing Countries | 4.5 | 4.1 | 2.8 | 2.9 | 3.1 | 3.9 | 3.1 | 3.4 | 3.4 |
| Asia | 0.1 | 1.8 | 1.2 | 0.8 | 2.2 | 3.2 | 2.7 | 3.2 | 3.2 |
| Korea | 1.2 | 2.5 | 3.3 | 3.4 | 3.5 | 3.4 | 2.5 | 3.2 | 3.5 |
| China | -1.0 | 1.0 | -0.1 | -0. 5 | 2.7 | 3.3 | 1.4 | 2.9 | 3.0 |
| Latin America | 12.5 | 8.4 | 5.3 | 6.4 | 4.9 | 5.7 | 3.8 | 3.6 | 3.8 |
| Mexico | 13.4 | 8.7 | 5.1 | 5.2 | 3.9 | 5.3 | 3.1 | 3.3 | 3.5 |
| Brazil | 8.4 | 6.4 | 7.5 | 10.7 | 11.5 | 7.2 | 6.1 | 3.7 | 4.3 |

[^9]| Measure and country | 2005 |  |  |  | 2006 |  |  |  | Ojected -----707 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| REAL GDP (1) ------------------ Quarterly changes at an annual rate |  |  |  |  |  |  |  |  |  |  |  |  |
| Total foreign | 2.8 | 3.9 | 4.4 | 3.9 | 4.6 | 3.7 | 3.4 | 3.3 | 3.2 | 3.2 | 3.3 | 3.3 |
| Industrial Countries of which: | 2.2 | 3.3 | 2.5 | 2.6 | 3.1 | 2.8 | 2.5 | 2.2 | 2.1 | 2.2 | 2.3 | 2.3 |
| Canada | 2.2 | 3.4 | 3.2 | 2.6 | 3.8 | 2.1 | 2.4 | 2.2 | 2.4 | 2.3 | 2.6 | 2.6 |
| Japan | 5.1 | 5.5 | 1.0 | 4.5 | 3.1 | 4.0 | 2.5 | ${ }_{2} 2.1$ | 2.0 | 1.9 | 1.9 | 1.8 |
| United Kingdom | 0.9 | 2.2 | $\frac{1}{2} .6$ | 2.7 1.1 | 3.0 2.0 | 3.4 | 2.8 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Germany | 2.4 | 1.7 | 2.5 | 0.0 | 1.5 | 3.3 | 2.1 | 2.3 | -0.9 | 1.5 | 1.4 | 1.4 |
| Developing Countries | 3.6 | 4.8 | 7.1 | 5.7 | 6.6 | 4.8 | 4.8 | 4.8 | 4.7 | 4.7 | 4.6 | 4.6 |
| Asia | 5.4 | 7.7 | 7.9 | 7.8 | 7.3 | 5.8 | 5.8 | 5.8 | 5.7 | 5.6 | 5.6 | 5.6 |
| Korea | 2.1 | 5.9 | 6.6 | 6.7 | 4.9 | 3.3 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| China | 11.9 | 7.2 | 8.9 | 11.5 | 13.3 | 11.7 | 9.5 | 9.0 | 8.5 | 8.1 | 8.1 | 8.1 |
| Latin America | 1.2 | 1.5 | 6.5 | 3.2 | 6.3 | 3.8 | 3.8 | 3.8 | 3.7 | 3.7 | 3.6 | 3.6 |
| Mexico | 0.4 | -0.5 | 8.5 | 2.7 | 6.3 | 3.4 | 3.4 | 3.5 | 3.5 | 3.5 | 3.4 | 3.4 |
| Brazil | 0.4 | 5.5 | -3.3 | 3.8 | 5.7 | 3.8 | 3.8 | 3.7 | 3.8 | 3.8 | 3.8 | 3.8 |
| CONSUMER PRICES (3) |  |  |  |  |  |  |  |  |  |  |  |  |
| Industrial Countries | 1.5 | 1.5 | 1.8 | 1.6 | 1.9 | 2.1 | 1.9 | 2.0 | 2.1 | 1.8 | 1.7 | 1.7 |
| Canada | 2.1 | 1.9 | 2.7 | 2.3 | 2.5 | 2.5 | 2.3 | 2.4 | 2.3 | 2.0 | 1.8 | 1.8 |
| Japan | -0.2 | -0.1 | -0.2 | -0.5 | 0.4 | 0.7 | 1.0 | 1.0 | 0.7 | 0.7 | 0.7 | 0.7 |
| United Kingdom (4) | 1.7 | 2.0 | 2.4 | 2.1 | 2.0 | 2.2 | 2.1 | 2.4 | 2.5 | 2.2 | 2.0 | 1.9 |
| Euro Area (2) Germany | 2.1 | 2.0 1.6 | 2.3 2.1 | 2.3 2.2 | 2.3 2.1 | 2.4 2.1 | 2.3 1.8 | 2.2 1.6 | 2.6 3.0 | 2.2 2.7 | 2.0 2.5 | 2.0 2.5 |
| Developing Countries | 3.5 | 3.3 | 3.0 |  | 3.1 | 3.0 | 3.1 | 3.4 | 3.7 | 3.8 | 3.6 |  |
| Asia | 2.9 | 2.4 | 2.3 | 2.7 | 2.5 | 2.6 | 2.8 | 3.2 | 3.8 | 3.9 | 3.5 | 3.2 |
| Korea | 3.1 | 3.0 | 2.4 | 2.5 | 2.4 | 2.3 | 2.5 | 3.2 | 3.9 | 4.2 | 4.0 | 3.5 |
| China | 2.7 | 1.8 | 1.3 | 1.4 | 1.2 | 1.4 | 2.1 | 2.9 | 3.6 | 3.7 | 3.3 | 3.0 |
| Latin America | 4.9 | 5.1 | 4.5 | 3.8 | 4.2 | 3.5 | 3.5 | 3.6 | 3.4 | 3.7 | 3.8 | 3.8 |
| Mexico | 4.4 | 4.5 | 4.0 | 3.1 | 3.7 | 3.1 | 3.1 | 3.3 | 3.0 | 3.4 | 3.5 | 3.5 |
| Brazil | 7.4 | 7.7 | 6.2 | 6.1 | 5.6 | 4.3 | 4.1 | 3.7 | 3.4 | 3.9 | 4.4 | 4.3 |

[^10]Class II FOMC
Restricted (FR)
OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

|  | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | $\begin{array}{r} \mathrm{Pr} \\ 2006 \end{array}$ | $\begin{aligned} & \text { ected } \\ & 2007 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NIPA REAL EXPORTS and IMPORTS Percentage point contribution to GDP growth, Q4/Q4 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -1.0 | -0.9 | -0.2 | -0.9 | -0.1 | -0.8 | -0.1 | 0.1 | -0.1 |
| Exports of G\&S | 0.6 | 0.7 | -1.3 | 0.4 | 0.6 | 0.7 | 0.7 | 0.8 | 0.6 |
| Imports of G\&S | -1.6 | -1.6 | 1.1 | -1.3 | -0.7 | -1.5 | -0.8 | -0.7 | -0.7 |
| Percentage change, Q4/Q4 |  |  |  |  |  |  |  |  |  |
| Exports of G\&S | 5.6 | 6.5 | -11.9 | 3.8 | 5.8 | 7.0 | 6.7 | 7.1 | 5.1 |
| Services | 5.3 | 1.8 | -8.9 | 10.2 | 3.0 | 7.1 | 3.1 | 6.1 | 6.4 |
| Computers | 13.4 | 22.7 | -23.5 | -1.1 | 11.3 | 6.4 | 14.1 | 8.9 | 14.4 |
| Semiconductors | 34.6 | 27.6 | -34.6 | 10.1 | 38.3 | -6.3 | 17.2 | 18.4 | 17.0 |
| Other Goods 1/ | 3.3 | 5.9 | -10.2 | 0.7 | 4.9 | 8.0 | 7.5 | 6.8 | 3.5 |
| Imports of G\&S | 12.1 | 11.2 | -7.6 | 9.7 | 4.8 | 10.6 | 5.2 | 3.9 | 4.0 |
| Services | 6.6 | 10.6 | -5.9 | 8.8 | 2.2 | 7.6 | 1.9 | 4.2 | 2.5 |
| Oil | -3.4 | 13.3 | 3.7 | 3.8 | 1.2 | 9.6 | 0.9 | -6.9 | 0.2 |
| Computers | 26.0 | 13.9 | -13.6 | 13.2 | 17.0 | 22.5 | 11.8 | 20.1 | 17.5 |
| Semiconductors | 34.2 | 22.8 | -51.1 | 11.0 | -0.1 | 9.3 | 7.5 | 11.6 | 17.0 |
| Other Goods 2/ | 13.0 | 10.3 | -6.5 | 10.0 | 5.2 | 10.7 | 6.2 | 5.3 | 4.1 |
| Billions of Chained 2000 Dollars |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -296.2 | -379.5 | -399.1 | -471.3 | -518.9 | -590.9 | -619.2 | -625.8 | -625.0 |
| Exports of G\&S | 1008.2 | 1096.3 | 1036.7 | 1013.3 | 1026.1 | 1120.4 | 1196.1 | 1291.2 | 1356.9 |
| Imports of G\&S | 1304.4 | 1475.8 | 1435.8 | 1484.6 | 1545.0 | 1711.3 | 1815.3 | 1917.0 | 1982.0 |
| Billions of dollars |  |  |  |  |  |  |  |  |  |
| US CURRENT ACCOUNT BALANCE | -299.8 | -415.2 | -389.0 | -472.4 | -527.5 | -665.3 | -791.5 | -878.3 | -976.7 |
| Current Acct as Percent of GDP | -3.2 | -4.2 | -3.8 | -4.5 | -4.8 | -5.7 | -6.4 | -6.6 | -7.0 |
| Net Goods \& Services (BOP) | -263.3 | -377.6 | -362.8 | -421.1 | -494.9 | -611.3 | -716.7 | -782.9 | -838.1 |
| Investment Income, Net | 19.1 | 25.7 | 30.3 | 17.8 | 42.3 | 33.6 | 17.6 | -2.4 | -46.1 |
| Direct, Net | 78.2 | 94.9 | 115.9 | 102.4 | 112.8 | 123.9 | 134.4 | 163.6 | 189.8 |
| Portfolio, Net | -59.1 | -69.2 | -85.5 | -84.6 | -70.5 | -90.2 | -116.8 | -166.0 | -235.9 |
| Other Income \& Transfers, Net | -55.6 | -63.3 | -56.5 | -69.2 | -74.9 | -87.6 | -92.4 | -93.0 | -92.5 |

[^11]NIPA REAL EXPORTS and IMPORTS

|  | 2002 |  |  |  | 2003 |  |  |  | 2004 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 | $-1.0$ | -0.6 | $-0.5$ | $-1.5$ | 0.2 | $-0.7$ | 0.5 | -0.5 | $-0.7$ | $-1.6$ | $-0.2$ | -0.8 |
| Exports of G\&S | 0.5 | 1.0 | 0.3 | -0.3 | -0.5 | -0.2 | 1.0 | 1.8 | 0.7 | 0.6 | 0.5 | 1.0 |
| Imports of G\&S | -1.4 | -1.6 | -0.8 | $-1.2$ | 0.7 | -0.6 | -0.5 | -2.3 | $-1.4$ | -2.2 | -0.7 | $-1.8$ |
| Percentage change from previous period, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Exports of $G \& S$ | 5.2 | 10.6 | 2.9 | -3.1 | $-5.3$ | $-1.7$ | 11.4 | 20.8 | 7.2 | 6.2 | 4.8 | 9.9 |
| Services | 22.9 | 2.7 | 4.6 | 11.7 | -20.0 | -2.8 | 17.5 | 23.1 | 7.5 | 5.6 | -2.8 | 19.2 |
| Computers | -21.1 | 14.7 | -6.0 | 12.6 | $-2.3$ | -5.2 | 34.7 | 23.2 | -5.8 | -3.1 | 20.7 | 16.5 |
| Semiconductors | 22.3 | 42.1 | 12.6 | -25.0 | 37.4 | 30.9 | 44.6 | 40.7 | 11.5 | -7.8 | -19.1 | -7.2 |
| Other Goods 1/ | -1.6 | 12.5 | 2.0 | -9.1 | 0.3 | -2.9 | 5.1 | 18.2 | 7.6 | 8.1 | 9.7 | 6.4 |
| Imports of G\&S | 11.7 | 12.5 | 5.7 | 9.0 | $-5.0$ | 4.1 | 3.8 | 17.6 | 10.2 | 16.0 | 4.4 | 12.0 |
| Services | 24.7 | $-3.0$ | 1.7 | 14.0 | $-10.6$ | $-15.7$ | 21.2 | 19.6 | 10.9 | 7.6 | 3.1 | 9.0 |
| Oil | -9.8 | $-10.3$ | $-12.7$ | 64.3 | -9.7 | 12.4 | -6.0 | 9.9 | 37.2 | -22.9 | -6.4 | 45.5 |
| Computers | 52.2 | 5.3 | 2.8 | -0.2 | 11.4 | 10.7 | 11.1 | 36.9 | 21.1 | 30.2 | 27.5 | 11.9 |
| Semiconductors | 39.8 | 34.8 | -6.2 | -14.0 | -6.3 | 1.1 | -4.2 | 9.7 | 43.3 | 19.6 | 3.8 | -19.9 |
| Other Goods 2/ | 7.7 | 19.6 | 9.2 | 4.0 | -3.1 | 7.2 | -0.1 | 18.1 | 5.3 | 23.2 | 4.2 | 11.0 |
| Billions of Chained 2000 Dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | $-441.3$ | -458.9 | -472.2 | -513.0 | -507.2 | -526.9 | -513.8 | $-527.8$ | $-548.5$ | -593.9 | -599.4 | -621.9 |
| Exports of $G \& S$ | 992.8 | 1018.0 | 1025.2 | 1017.2 | 1003.3 | 999.0 | 1026.3 | 1075.8 | 1094.8 | 1111.3 | 1124.3 | 1151.3 |
| Imports of G\&S | 1434.0 | 1476.9 | 1497.4 | 1530.2 | 1510.5 | 1525.9 | 1540.0 | 1603.6 | 1643.2 | 1705.2 | 1723.7 | 1773.1 |
| Billions of dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| US CURRENT ACCOUNT BALANCE | -436.2 | -476.9 | -476.3 | $-500.3$ | -548.7 | -524.4 | -526.2 | -510.8 | $-583.3$ | $-667.1$ | $-665.3$ | -745.4 |
| Current Account as \% of GDP | -4.2 | -4.6 | -4.5 | -4.7 | -5.1 | -4.8 | -4.7 | -4.6 | -5.1 | -5.7 | -5.6 | -6.2 |
| Net Goods \& Services (BOP) | $-372.7$ | -413.1 | -429.0 | -469.4 | -496.9 | -492.9 | -491.9 | -497.9 | -544.6 | $-605.6$ | -626.7 | $-668.3$ |
| Investment Income, Net Direct, Net | $15.3$ | 1.1 | 16.5 |  |  |  |  |  |  | 28.2 | 33.4 122.4 | $\begin{array}{r} 15.6 \\ 128 \end{array}$ |
|  | 104.8 | 90.9 | 97.6 -81.1 | 116.2 | 97.2 | $108.4$ | 109.3 | $136.3$ | 130.4 | 113.4 | 122.8 | $\begin{array}{r} 128.8 \\ -113.2 \end{array}$ |
| Portfolio, Net | -89.5 | -89.8 | -81.1 | -77.8 | -72.7 | -66.6 | -70.1 | -72.5 | -73.1 | -85.2 | -89.4 | -113.2 |
| Other Inc. \& Transfers, Net -78.8 |  | -64.8 | $-63.8$ | -69.2 | $-76.2$ | -73.2 | -73.5 | -76.7 | -96.1 | -89.7 | -72.0 | -92.7 |

[^12]Last Page
NIPA REAL EXPORTS and IMPORTS
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[^13]
[^0]:    ${ }^{1}$ By itself, the information from the annual NIPA revision implied a downward adjustment to potential GDP growth of 0.3 percentage point per year for the years 2003-05. In addition, we lowered the level of potential GDP a bit more to narrow the recent overprediction errors in our models of the unemployment rate based on Okun's law. This latter change brought the GDP gap more in line with the discrepancy between the unemployment rate and the NAIRU.

[^1]:    ${ }^{2}$ Because the market's expected trajectory for the federal funds rate is very close to ours, on average, we have not included a scenario based on a market-based federal funds rate.

[^2]:    1．Change from fourth quarter of previous year to fourth quarter of year indicated．
    2．Billions of chained（2000）dollars．

[^3]:    1. Change from fourth quarter of previous year to fourth quarter of year indicated.
    2. Data in history reflect the staff's translation of newly revised NIPA data.
[^4]:    1. Change from fourth quarter of previous year to fourth quarter of year indicated, unless otherwise indicated
    2. Percent difference between actual and potential GDP; a negative number indicates that the economy is operating below potential. (In previous Annual values are for the fourth quarter of the year indicated.
    3. Percent change, annual rate.
    4. Percent change, annual rate, with inventory valuation and capital consumption adjustments.
[^5]:    aggregate demand stimulus.
    a--Actual

[^6]:    Note. Quarterly data are at seasonally adjusted annual rates. 1
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[^7]:    Note. Data after 2006:Q1 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
[^8]:    ${ }^{1}$ 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.

[^9]:    Foreign GDP agregates calculated using shares of U S exports

    1. Foreign GDP aggregates calculated using shares of U.S. exports.
    2. Foreign CPI aggregates calculated using shares of U.S. non-oil imports.
[^10]:    1. Foreign GDP aggregates calculated using shares of U.S. exports.
    . Foreign GDP aggregates calculated using shares of U.S. exports
    2. Foreign CPI aggregates calculated using shares of U.S. non-oil imports.
    3. CPI excluding mortgage interest payments, which is the targeted inflation rate.
[^11]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, computers, and semiconductors.
[^12]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, computers, and semiconductors
[^13]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, computers, and semiconductors
