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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

September 10, 2003

## Summary and Outlook

## Domestic Developments

The data received since the August Greenbook have been largely consistent with our view that the pace of real activity is on the upswing. Consumer spending has continued to strengthen, single-family housing starts have moved up to their highest level in nearly 25 years, and shipments of nondefense capital goods have posted another robust increase. With indicators of goods production showing less strength than the readings on domestic final sales, however, we believe that some of the demand is being met out of inventories and imports. Balancing the available information on spending and production, we now project that real GDP is growing at an annual rate of nearly $4-1 / 2$ percent in the current quarter- $3 / 4$ percentage point more than in the last Greenbook. We have also raised our forecast of real growth in the fourth quarter, by $1 / 4$ percentage point, to a pace a bit above $4-1 / 2$ percent.

The contrast between indicators of spending, which have been quite strong, and readings from the labor market, which were surprisingly weak again in August, has intensified. The ongoing reluctance of businesses to hire and their continued focus on restructuring and cost-cutting have yielded extraordinary gains in productivity. We have reacted to the continuing developments in this area by considerably raising the current level of potential output and by nudging up our assumption about its future growth to an average annual rate of $3-1 / 2$ percent. In light of that adjustment, as well as the intermeeting rally in the stock market, we have increased our forecast of real GDP growth in 2004 by $1 / 4$ percentage point, to 5 percent. Real GDP is expected to decelerate to a pace of 4 percent in 2005, partly as a result of the expiration of the partial-expensing tax incentive for business investment.

We have revised up the level of potential GDP somewhat more than actual GDP over the forecast period. The resulting higher level of the output gap, in turn, has led us to raise our forecast of the unemployment rate slightly. The unemployment rate is expected to move back up to 6.2 percent in coming months and to remain at that level for the balance of this year; it is then projected to drift down to 5.7 percent by the end of 2004 and to 5.3 percent by the fourth quarter of 2005-still $1 / 4$ percentage point above our estimate of the natural rate. With this continued slack in resource utilization as well as strong growth in structural productivity, core consumer price inflation is expected to edge off; after a rise of 1.1 percent this year, core PCE prices are projected to decelerate to a pace of 0.9 percent in 2005.

## Key Background Factors

As in the August Greenbook, we assume that the federal funds rate will remain at 1 percent through the end of 2004 . We also assume that in 2005, when slack in resource utilization is taken up further, policy will become a bit less accommodative late in the year. Financial markets still appear to be pricing into bond yields a much more substantial increase in the funds rate over this period.

We continue to believe that, as incoming data show that the economy can grow at an above-potential pace for a considerable time without stoking inflationary pressures, market participants will gradually move closer to our expectation for the path of the funds rate. As private expectations are revised, bond yields should decline from current levels. Indeed, we have interpreted the recent rally in bond markets as signaling that the first installment on this reassessment has occurred a bit more quickly than we forecast in the August Greenbook.

Equity prices have risen 6 percent, on balance, since the August Greenbook, and we have raised our projected path for the stock market by roughly this amount. We assume that share prices will increase from their current level at an annual rate of 6-1/2 percent, thereby maintaining risk-adjusted parity with the return on long-term bonds.

The President has requested $\$ 87$ billion in additional budget authority to finance the cost of military operations and reconstruction in Iraq and Afghanistan. In the August Greenbook, we had anticipated the bulk of this request, and thus we have boosted our projection of nominal defense spending by only $\$ 11$ billion in fiscal 2004. On balance, the federal unified deficit is now projected to widen from $\$ 388$ billion this fiscal year to $\$ 488$ billion in fiscal 2004. The stimulus to economic growth provided by the federal sector, as gauged by the staff's measure of fiscal impetus, is close to $1-1 / 4$ percent of GDP this year and next, as in the previous Greenbook.

Because a number of provisions in the Jobs and Growth Tax Relief Reconciliation Act (JGTRRA) of 2003 that reduced personal and corporate income taxes are scheduled to expire at the end of 2004, the outlook for the federal budget in 2005 is especially uncertain. Our assumption is that the personal provisions-the larger child credit, reduced marriage penalty, expanded 10 percent income bracket, and increased alternative minimum tax exemption-will be extended but the tax incentive that permits the partial expensing of equipment investment will not. We also expect the provision of extended unemployment insurance benefits to lapse in 2005. With regard to operations in Iraq, we anticipate that the level of real defense spending in 2005 will be little changed from the level in 2004. All told, the unified budget deficit is expected to shrink to $\$ 359$ billion in fiscal 2005 and fiscal impetus on a calendar-year basis to shift to a slight amount of restraint, about $1 / 4$ percent of GDP.

The trade-weighted exchange value of the dollar is, on balance, little changed since the August Greenbook. As in our previous projection, we assume some modest real depreciation of the dollar over the forecast period. Our outlook for foreign GDP growth is a touch stronger than last time. We expect that trade-
weighted foreign growth will be about 1-3/4 percent this year and 3-1/2 percent in each of the next two years.

The spot price of West Texas intermediate (WTI) crude oil has fallen a little more than $\$ 2.50$ per barrel over the intermeeting period, closing at $\$ 29.18$ per barrel on September 9. The spot price is projected to fall to $\$ 25.75$ per barrel by the end of 2004 ( $\$ .70$ below our previous projection) and $\$ 24.50$ by the end of 2005. These lower prices reflect heightened market focus on the effects of prospective increases in non-OPEC supply.

## Recent Developments and the Near-Term Outlook

We now estimate that real GDP increased at an annual rate of 3.3 percent in the second quarter, 0.2 percentage point faster than in the BEA's preliminary release. Most indicators of spending in the current quarter that have become available since the August Greenbook-notably the July readings on consumer spending, shipments of nondefense capital goods, and housing starts as well as the August report on motor vehicle sales-have come in stronger than we had anticipated. But as noted above, production seems to be picking up more slowly than spending. On balance, we see output growth this quarter proceeding at nearly a $4-1 / 2$ percent pace. We expect GDP to rise at about the same rate in the fourth quarter.

Consumer spending increased rapidly in July. In August, sales of light vehicles surged, and reports suggest that other types of household spending were also brisk. On the basis of this information, we expect real consumer expenditures to rise at an annual rate of $4-3 / 4$ percent this quarter, an upward revision of $1-1 / 2$ percentage points from the August Greenbook. We do not anticipate that this pace of real PCE growth will continue in the fourth quarter. In particular, as the incentive-laden push to clear out 2003 model-year vehicles winds down, purchases of new motor vehicles should decline and hold real PCE growth to an annual rate of 2-3/4 percent. However, we anticipate that spending, excluding that on new autos and trucks, will advance at a robust pace of nearly 4 percent next quarter, supported by the stimulus to disposable income from the midyear tax cut.

Given the rapid pace at which new housing units were started in June and July, we expect real residential investment to rise at an annual rate of 15 percent this quarter-an upward revision of 9 percentage points since the August Greenbook. However, we have real outlays for housing declining 3-1/2 percent at an annual rate in the fourth quarter in response to the rise in mortgage rates since late June. The recent drop-off in the Mortgage Bankers Association index of mortgage applications for home purchases suggests that some softening in housing activity is likely already under way.

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

| Measure | 2003:Q3 |  | 2003:Q4 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | August GB | Sept. GB | August GB | Sept. GB |
| Real GDP | 3.6 | 4.4 | 4.4 | 4.6 |
| Private domestic final purchases | 3.9 | 6.2 | 3.7 | 2.8 |
| Personal consumption expenditures | 3.3 | 4.8 | 3.6 | 2.8 |
| Residential investment | 6.1 | 14.8 | -1.1 | -3.6 |
| Business fixed investment | 7.0 | 11.5 | 7.2 | 6.3 |
| Government outlays for consumption and investment | 3.5 | -1.0 | 2.4 | 6.6 |
|  | Contribution to growth (percentage points) |  |  |  |
| Inventory investment | -. 4 | -. 3 | . 7 | . 8 |
| Net exports | -. 1 | -. 3 | . 0 | . 1 |

Recent data on orders and shipments for nondefense capital goods and on motor vehicle sales lead us to expect that real spending on equipment and software is posting a 16-1/2 percent annual rate of increase this quarter. However, we expect the rate of growth of E\&S investment to slow in the fourth quarter. Orders data point to some moderation of the increase in outlays outside the high-tech and transportation areas, and business purchases of motor vehicles also are likely to slow somewhat. Even so, we still expect real E\&S spending to rise at a rate of 8 percent next quarter.

We remain pessimistic about the near-term prospects for nonresidential construction, especially in light of vacancy rates for office and industrial buildings that were high and still rising in the second quarter. We expect that much of the increase recorded by this sector last quarter will be reversed this quarter and that real construction outlays will fall a bit further in the fourth quarter.

In the federal sector, the projected costs of our military operations in Iraq point to a further rise in real defense outlays over the next few quarters. But with the available data on defense spending this quarter softer than we had expected, we have pushed off the increases to the last quarter of this year and the first quarter of next year. We project that, on average over the second half of this year, real defense spending will rise at a rate of 7 percent and nondefense spending at a rate of 5-1/2 percent. At the state and local level, budgetary pressures are expected to hold real spending nearly flat over the second half of this year.

We expect that a pickup in the growth of foreign output, a recovery of travel and related services, the continuing effects of past dollar depreciation, and a global rebound in the high-tech sector will boost export growth to a pace of $10-1 / 4$ percent in the second half of the year. The increase in real imports is projected to step up to a rate of 7-3/4 percent in the second half of 2003, partly in response to the acceleration in U.S. activity. Because the level of imports is much higher than that of exports, this differential in projected growth rates implies that net exports will make little net contribution to GDP growth in the second half.

Although final sales are apparently headed for a substantial increase this quarter (our expectation is that they are rising at a pace of $4-3 / 4$ percent), the gains in manufacturing production have been much more subdued. Manufacturing IP is on track to increase at a rate of 2-1/4 percent this quarter, with more than half the increase coming from a step-up in motor vehicle assemblies. Some of the increase in final demand is likely being met by a further drawdown of stocks, a view that is supported by the limited inventory data we have so far. We project that liquidation this quarter is holding the rate of increase of GDP $1 / 4$ percentage point below that of final sales.

The caution restraining firms' hiring and production decisions should lessen somewhat in coming months. In the fourth quarter, private payrolls are forecast to begin rising slowly-with average monthly increases of 75,000-and manufacturing IP to rise a touch faster than its third-quarter pace.

The July increase in core inflation has supported our view that consumer price inflation will be temporarily boosted in the second half of this year as a result of the unwinding of some special developments that held down price increases in the first half. We now project core PCE prices to rise at a pace of nearly $1-1 / 2$ percent, on average, in the second half but still view the increase for the year as a whole-just a bit more than 1 percent-as providing a reasonable indication of the current underlying trend in price inflation. Swings in gasoline prices should push overall PCE inflation above core this quarter and hold it below core next quarter.

## The Longer-Term Outlook for the Economy

Our forecast has output growing more rapidly than potential over each of the next two years. We project that real GDP will rise 5 percent in 2004, supported by stimulative fiscal and financial conditions and by increased optimism on the part of firms in their hiring and investment decisions. In 2005, after the partialexpensing tax provision has expired, the increase in real activity is projected to slow to 4 percent. Other factors that contribute to this slowdown are the waning of the effects of personal tax cuts on consumption and a smaller contribution to growth from inventory accumulation.

## Projections of Real GDP

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

| Measure | 2004 |  | 2005 |
| :---: | ---: | :---: | :---: |
|  | H 1 | H 2 |  |
| Real GDP | $\mathbf{5 . 2}$ | $\mathbf{4 . 9}$ | $\mathbf{3 . 9}$ |
| Previous | 4.8 | 4.8 | -- |
| Final sales | 4.3 | 4.9 | 3.7 |
| Previous | 3.5 | 4.9 | -- |
| PCE | 4.6 | 4.4 | 4.0 |
| Previous | 3.9 | 4.6 | -- |
| Residential investment | 0.7 | 3.9 | 0.6 |
| Previous | 2.4 | 5.9 | -- |
| BFI | 11.9 | 15.6 | 7.2 |
| Previous | 10.9 | 15.1 | -- |
| Government purchases | 2.9 | 1.5 | 2.1 |
| Previous | 1.4 | 0.9 | -- |
| Exports | 8.4 | 11.1 | 9.6 |
| Previous | 7.8 | 10.4 | -- |
| Imports | 11.1 | 10.0 | 9.2 |
| Previous | 10.6 | 9.7 | -- |
|  | Contribution to growth, |  |  |
| Prento | percentage points |  |  |
| Inventory change | .9 | .0 | .3 |
| Previous | 1.3 | -.1 | -- |
| Net exports | -.8 | -.4 | -.4 |
| Previous | -.8 | -.4 | -- |

Household spending. Over 2004 and 2005, gains in disposable income are expected to be the main factor driving increases in consumer spending. Our forecast calls for real disposable income to rise $5-1 / 4$ percent next year and $3-3 / 4$ percent in 2005, roughly mirroring the pattern of output growth. Because consumers tend to adjust their spending gradually in response to movements in income, we project that real PCE will follow a smoother path, rising $4-1 / 2$ percent in 2004 and 4 percent in 2005.

The recent run-up in mortgage rates is expected to restrain housing starts later this year; but as rates reverse part of this increase next year, housing activity should pick up a bit. We are expecting that total housing starts will rise from a rate of 1.75 million units in the fourth quarter of this year to an average rate of 1.80 million units in each of the next two years. Single-family dwellings account for all the increase; the current high level of vacancy rates in the multifamily sector suggests that starts of those units will be flat at 340,000 from the second half of this year through 2005.

Business spending. We are looking for a solid advance of 17 percent in real outlays for equipment and software in 2004, on the strength of rising business confidence, a pickup in growth of business output, a modest decline in longterm interest rates, and the partial expensing tax provision. The influence of this tax incentive on investment is magnified by its temporary nature, which should induce firms to shift some capital expenditures from 2005, after the provision expires, into 2004. Because of this shift, we are anticipating that real E\&S spending will rise only 7 percent in 2005.

In response to generally improving economic conditions, real spending on nonresidential construction should rise 3 percent in 2004 and 7 percent in 2005. The advance in 2005 is driven by a resumption of growth in outlays for office and industrial buildings, an acceleration of non-office commercial construction, and a strong pickup in investment by public utilities. However, drilling of oil and gas wells is projected to decline, reflecting falling energy prices.

We anticipate a continuation over the projection period of the tendency for the ratio of inventories to sales to fall over time. This year, however, the likely pace of inventory liquidation and the associated dramatic decline in the inventory-sales ratio seem to be driven less by permanent improvements in inventory management than by caution on the part of firms as they wait for clear signs that demand is picking up. As economic conditions improve, stockbuilding should resume and contribute $1 / 2$ percentage point to GDP growth in 2004 and $1 / 4$ percentage point in 2005.

Government spending. We have few details on the likely timing of the spending related to our operations in Iraq, and our information is also limited on the allocation of this spending to domestic production, imports, and transfers to foreigners. Nonetheless, it seems clear that over the next two years real defense purchases will be somewhat higher than we had anticipated, and we have raised our forecast \$13 billion in calendar year 2004.

Despite this boost, we project that the rate of increase of real federal outlays will slow from 9-1/2 percent this year to 4 percent in 2004 and 2 percent in 2005.

Decomposition of Structural Labor Productivity
(Percent change, Q4 to Q4, except as noted)

| Measure | $1973-$ <br> 95 | $1996-$ <br> 2001 | 2002 | 2003 | 2004 | 2005 |
| :--- | ---: | :---: | :---: | :---: | :---: | :---: |
| Structural labor productivity | 1.4 | 2.7 | 2.6 | 2.8 | 2.6 | 2.8 |
| $\quad$ Previous | 1.4 | 2.4 | 2.3 | 2.2 | 2.3 | -- |
| Contributions $^{1}$ |  |  |  |  |  |  |
| Capital deepening | .6 | 1.2 | .4 | .4 | .7 | 1.0 |
| $\quad$ Previous | .6 | 1.2 | .4 | .4 | .6 | -- |
| Multifactor productivity | .6 | 1.2 | 2.0 | 2.1 | 1.6 | 1.6 |
| $\quad$ Previous | .6 | 1.0 | 1.7 | 1.6 | 1.4 | -- |
| Labor composition | .3 | .3 | .3 | .3 | .3 | .3 |
| MEMO |  |  |  |  |  |  |
| Potential GDP | 2.9 | 3.4 | 3.5 | 3.6 | 3.4 | 3.6 |
| $\quad$ Previous | 2.9 | 3.4 | 3.3 | 3.1 | 3.2 | -- |

Note. Components may not sum to totals because of rounding.

1. Percentage points.

Most of the slowdown comes in the defense category. By contrast, we expect continued moderate gains in nondefense spending. At the state and local level, spending increases should be modest in light of fiscal stresses that ease only gradually. We forecast real outlays to rise 1-1/4 percent in 2004 and 2 percent in 2005.

Net exports. The projected growth of foreign economic activity in 2004 and 2005, together with the effects of past and projected dollar depreciation, should support a growth rate of $9-1 / 2$ percent in U.S. exports. U.S. imports are expected to grow at a 9-3/4 percent pace, mainly reflecting the strength of economic expansion in the United States. All told, net exports should arithmetically deduct roughly $1 / 2$ percentage point from U.S. GDP growth in each of the next two years. (The International Developments section provides more detail on the outlook for the external sector.)

## Aggregate Supply, the Labor Market, and Inflation

We have reassessed our estimates of structural productivity and other elements of potential GDP. Our reassessment takes account of the upward revisions to historical productivity data published by the Bureau of Labor Statistics after the August Greenbook as well as the current indications that output per hour is registering another strong advance this quarter. With the increases in output per hour now appearing to be larger and more persistent, we have boosted somewhat

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

| Measure | 2002 | 2003 | 2004 | 2005 |
| :--- | ---: | ---: | ---: | :---: |
| Output per hour, nonfarm business | 4.4 | 4.3 | 1.4 | 1.4 |
| $\quad$ Previous | 4.1 | 3.2 | .7 | -- |
| Nonfarm private payroll employment | -.7 | -.4 | 3.7 | 2.8 |
| $\quad-.7$ | .0 | 3.9 | -- |  |
| $\quad$ Previous | .3 | 1.1 | 2.6 | 1.9 |
| Household survey employment | .3 | 1.2 | 2.9 | -- |
| $\quad$ Previous | 66.5 | 66.3 | 66.9 | 67.1 |
| Labor force participation rate ${ }^{1}$ | 66.5 | 66.4 | 66.9 | -- |
| $\quad$ Previous | 5.9 | 6.2 | 5.7 | 5.3 |
| Civilian unemployment rate ${ }^{1}$ | 5.9 | 6.2 | 5.5 | -- |
| $\quad$ Previous |  |  |  |  |

1. Percent, average for the fourth quarter.
the share of these increases that we attribute to permanent improvements in organization and technology and reduced somewhat the share that we attribute to temporary factors. For 2002 and 2003, we have raised our estimates of the rates of increase in structural multifactor productivity 0.4 percentage point and in potential GDP 0.3 percentage point, on average. ${ }^{1}$ We have raised our assumptions about growth in both structural multifactor productivity and potential GDP somewhat less over the forecast period.

Productivity and the labor market. An implication of our view that firms have been very cautious in hiring because of uncertainty about the prospects for output growth is that, when this uncertainty diminishes, increases in employment will be robust. This scenario should start to unfold early next year, albeit with somewhat less intensity than we had previously anticipated given the revisions we have made to structural productivity. We expect payrolls in 2004 to increase almost 350,000 per month on average. Part of this rise in the pace of employment gains reflects more-rapid output growth, but part is due to the unwinding of the effects of business caution on hiring. The latter is reflected in our forecast of output per hour, which is projected to rise 1-1/2 percent next year-a bit more than 1 percentage point below our forecast of the growth rate

[^1]
## Inflation Projections

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

| Measure | 2002 | 2003 | 2004 | 2005 |
| :--- | ---: | :---: | :---: | :---: |
| PCE chain-weighted price index | 1.8 | 1.6 | .7 | .8 |
| Previous | 1.8 | 1.6 | .7 | -- |
| Food and beverages | 1.4 | 1.9 | 1.4 | 1.3 |
| Previous | 1.4 | 2.0 | 1.3 | -- |
| Energy | 7.0 | 8.8 | -6.7 | -1.1 |
| $\quad$ Previous | 7.0 | 8.2 | -5.5 | -- |
| Excluding food and energy | 1.6 | 1.1 | 1.0 | .9 |
| $\quad$ Previous | 1.6 | 1.1 | .9 | -- |
| Consumer price index | 2.2 | 2.0 | .9 | 1.1 |
| $\quad$ Previous | 2.2 | 1.9 | .9 | -- |
| Excluding food and energy | 2.1 | 1.4 | 1.4 | 1.3 |
| $\quad$ Previous | 2.1 | 1.3 | 1.3 | -- |
| GDP chain-weighted price index | 1.3 | 1.4 | .9 | 1.0 |
| Previous | 1.3 | 1.3 | 1.0 | -- |
| ECI for compensation of private |  |  |  |  |
| $\quad$ industry workers |  |  |  |  |

1. December to December.
of structural labor productivity. We also expect that improving conditions in labor markets will induce a substantial rebound in the participation rate next year. Nonetheless, employment should rise faster than the labor force, causing the unemployment rate to fall to 5-3/4 percent by the end of 2004 . We anticipate that in 2005 additional gains in employment, partly offset by a further rise in participation, will reduce the unemployment rate to $5-1 / 4$ percent by the end of the year.

Wages and prices. Despite the decline in unemployment and the rise in capacity utilization over the projection period, labor and capital resources remain under-utilized even at the end of 2005. For this reason, we expect that key measures of price and wage inflation will decline slowly over the next two
years. We project that the rate of increase of core PCE prices will edge down from 1.1 percent this year to 1.0 percent in 2004 and 0.9 percent in 2005. With energy prices projected to fall, the rate of increase of overall PCE prices is even lower- 0.7 percent in 2004 and 0.8 percent in 2005. On the wage side, we anticipate that increases in the employment cost index will decline from 3.8 percent in 2003 to 3.3 percent in 2004 and 3.2 percent in 2005.

## Financial Flows and Conditions

Growth of total debt in the domestic nonfinancial sector this year has been marked up to $8-1 / 4$ percent, reflecting data revisions for the second quarter and some additional borrowing in the second half of the year. Still, the contour of the forecast remains similar to that in the August projection. As before, we project debt growth to moderate over the second half of the year, dropping to a pace of $6-1 / 2$ percent in the fourth quarter. Debt growth is expected to slow on balance over the next two years, to just over 6 percent in 2005.

Nonfinancial business debt expanded at a 6-1/2 percent rate in the second quarter-well above our previous estimate-with the increase paced by robust bond issuance. We view much of this jump in borrowing as an opportunistic response to a perceived trough in longer-term interest rates, and thus we expect debt growth to recede in the second half of the year. Business debt growth is projected to pick up somewhat in 2004 and 2005, as investment spending rises faster than internal funds.

The growth in household debt also has been revised up this year, to a bit below last year's pace of 10 percent; we expect household borrowing to slow noticeably next year and to soften a bit further in 2005. Mortgage borrowing in the second quarter came in well above our projection in the last Greenbook, and expected growth for the year as a whole has been boosted 2 percentage points, to $11-3 / 4$ percent. The projected growth of mortgage debt slows to 7 percent in 2004 and 6-1/2 percent in 2005, restrained by slower appreciation in home prices and by a contraction in refinancing activity. The growth of consumer credit is expected to trend up from 4-1/4 percent this year to $6-1 / 4$ percent in 2005, in part because the substitution toward mortgage debt wanes.

Exceptionally heavy Treasury borrowing is expected to boost federal debt more than 13 percent this year. Federal debt growth slows somewhat in 2004 and then drops back to 7 percent in 2005, owing to the projected shrinkage of the federal deficit. State and local borrowing for this year has been revised down considerably on the basis of new data showing that bond retirements are proceeding at a faster pace than we thought previously. The debt of this sector is now projected to expand 7 percent this year and then to slow to about 4-3/4 percent in 2004 and 2005 as a result of a much reduced pace of advance
refunding in those years and, as the sector's financial position improves, a paydown of shorter-term debt.

Despite the projected acceleration in economic activity, we expect the growth of M2 to slow over the balance of the year, held down by a falloff in mortgage refinancing and the ebbing of the effect of past policy easings that had buoyed this aggregate. M2 growth is projected to remain in the neighborhood of $5-1 / 2$ percent next year before dropping to around 4 percent in 2005, restrained by the combined effects of a rise in short-term rates after midyear and a projected slowing of GDP growth.

## Alternative Simulations

In this section we explore alternatives to the staff forecast using simulations of the FRB/US model. The first two involve modifications to our aggregate supply assumptions-specifically, faster structural productivity growth and a lower NAIRU. The next two scenarios consider upside and downside risks to the outlook for business investment. We conclude with two financial alternatives. In the first, bond rates more rapidly reverse their run-up since June, and in the second, the funds rate follows a path consistent with current readings from the futures market. In all the scenarios except the last, the federal funds rate follows the baseline path.

Faster structural productivity growth. Although we have revised up our forecast of structural productivity growth in this projection, we may have been too conservative in light of the large gains in actual output per hour registered in recent years. In this scenario, growth of multifactor productivity continues at its 2002-03 pace, raising structural productivity growth $1 / 2$ percentage point above baseline in 2004 and 2005. Because this faster growth is assumed to come as a surprise and to be viewed as permanent, households and firms increase their willingness to spend out of current income and earnings; consumption and investment are also spurred by an increase in equity valuations. Real GDP growth climbs above 5-1/2 percent next year and remains close to $4-3 / 4$ percent in 2005. Because aggregate demand is revised up more than is aggregate supply, the unemployment rate falls a little below baseline in 2005. Core inflation declines to $1 / 2$ percent in 2005 because of smaller increases in unit labor costs.

Low NAIRU. This scenario considers the possibility that the staff's estimate of the NAIRU- 5 percent - is too high and, as an alternative, assumes that the NAIRU is currently-and has been for some time- $4-1 / 4$ percent. The implied higher amount of economic slack puts more downward pressure on wages and prices; as a result, core inflation falls to $1 / 2$ percent in 2005.

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

| Measure | 2003 | 2004 |  | 2005 |
| :--- | ---: | ---: | ---: | ---: |
|  | Q 4 | H 1 | H 2 |  |
| Real GDP |  |  |  |  |
| Greenbook baseline | $\mathbf{4 . 6}$ | $\mathbf{5 . 2}$ | $\mathbf{4 . 9}$ | $\mathbf{3 . 9}$ |
| Faster productivity growth | 4.6 | 5.6 | 5.7 | 4.8 |
| Low NAIRU | 4.7 | 5.3 | 5.0 | 3.9 |
| Investment boom | 6.6 | 5.6 | 5.2 | 4.8 |
| Weaker investment | 2.6 | 4.3 | 3.8 | 2.3 |
| Lower bond yields | 4.6 | 6.2 | 5.8 | 4.3 |
| Market-based funds rate | 4.6 | 5.2 | 4.8 | 3.0 |
|  |  |  |  |  |
| Unemployment rate |  |  |  |  |
| Greenbook baseline | $\mathbf{6 . 2}$ | $\mathbf{6 . 0}$ | $\mathbf{5 . 7}$ | $\mathbf{5 . 3}$ |
| Faster productivity growth | 6.2 | 6.0 | 5.7 | 5.1 |
| Low NAIRU | 6.2 | 6.0 | 5.6 | 5.2 |
| Investment boom | 6.1 | 5.7 | 5.3 | 4.6 |
| Weaker investment | 6.3 | 6.4 | 6.3 | 6.6 |
| Lower bond yields | 6.2 | 5.8 | 5.3 | 4.7 |
| Market-based funds rate | 6.2 | 6.0 | 5.7 | 5.7 |
|  |  |  |  |  |
| PCE prices excluding food and energy |  |  |  |  |
| Greenbook baseline | $\mathbf{1 . 2}$ | $\mathbf{1 . 1}$ | $\mathbf{1 . 0}$ | $\mathbf{. 9}$ |
| Faster productivity growth | 1.2 | 1.1 | .9 | .6 |
| Low NAIRU | 1.1 | .9 | .7 | .5 |
| Investment boom | 1.2 | 1.1 | 1.0 | 1.0 |
| Weaker investment | 1.2 | 1.1 | 1.0 | .6 |
| Lower bond yields | 1.2 | 1.2 | 1.1 | 1.0 |
| Market-based funds rate | 1.2 | 1.1 | 1.0 | .7 |

1. Average for the final quarter of the period.

Investment boom. The baseline may understate the degree to which firms will respond to the current favorable conditions for investment. In this scenario, outlays for equipment and software grow at an average annual rate of 16 percent through 2005 (compared with 12 percent in the baseline), causing the E\&S share of GDP to approach the peak levels seen in 1999-2000. In addition, firms become less cautious about inventory stockbuilding sooner than they do in the baseline. These two developments, combined with the response of consumption and housing to stronger income and employment, strengthen real GDP in the fourth quarter of this year and continue to boost real activity in 2004 and 2005. As a result, the unemployment rate falls to $4-1 / 2$ percent by late 2005 . Inflation is only a touch higher than in the baseline, in part because the increase in capital deepening boosts the rate of growth of structural productivity.

Weaker investment with adverse market response. Given the uncertainties inherent in the investment forecast, there is also a risk that the recent spurt in business spending may prove short-lived. In this scenario, business investment is hit by shocks of the same magnitude, but of the opposite sign, as those considered in the previous simulation. However, the resulting faltering in real activity is assumed to cause a marked deterioration in investor sentiment. By the middle of next year, risk premiums return to the elevated levels seen earlier this year, and stock prices decline about 20 percent relative to baseline. By 2005, these developments cause the rate of real GDP growth to slow to $2-1 / 4$ percent, the unemployment rate to rise to $6-1 / 2$ percent, and core inflation to decline to $1 / 2$ percent.

Lower bond yields. The baseline projection assumes that bond yields will gradually give back a good deal of their recent run-up. In this scenario, the reversal occurs much more rapidly: Relative to baseline, bond yields are 80 basis points lower by the end of this year; they then rise slowly and match the baseline by the end of 2005. The change in bond rates initially boosts the stock market almost 15 percent above baseline, a difference that narrows over 2004 and 2005. Stimulated by stronger consumption and investment, GDP growth surges to 6 percent in 2004 and $4-1 / 4$ percent in 2005. By late 2005, the unemployment rate falls to $4-3 / 4$ percent, more than eliminating the current slack in labor markets and slowing the driftdown in inflation.

Market-based funds rate. Futures markets are consistent with the federal funds rate rising above 3 percent in 2005, well above the path assumed in the baseline. As the divergence does not become pronounced for several quarters, little effect is evident in 2004. However, by 2005 the consequences of the tighter stance of monetary policy are considerable: With real GDP rising more slowly than potential, the unemployment rate remains at 5-3/4 percent, and core inflation falls to $3 / 4$ percent.

| Interval |  | Nominal GDP |  | Real GDP |  | GDP chain-weighted price index |  | Consumer price index ${ }^{1}$ |  | Unemployment rate ${ }^{2}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 08/06/03 | 09/10/03 | 08/06/03 | 09/10/03 | 08/06/03 | 09/10/03 | 08/06/03 | 09/10/03 | 08/06/03 | 09/10/03 |
| ANNUAL |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  | 2.6 | 2.6 | 0.3 | 0.3 | 2.4 | 2.4 | 2.8 | 2.8 | 4.8 | 4.8 |
| 2002 |  | 3.6 | 3.6 | 2.4 | 2.4 | 1.1 | 1.1 | 1.6 | 1.6 | 5.8 | 5.8 |
| 2003 |  | 3.9 | 4.2 | 2.4 | 2.6 | 1.5 | 1.5 | 2.3 | 2.3 | 6.1 | 6.1 |
| 2004 |  | 5.5 | 5.9 | 4.4 | 4.8 | 1.0 | 1.0 | 1.1 | 1.0 | 5.8 | 5.9 |
| 2005 |  |  | 5.3 |  | 4.3 |  | 1.0 |  | 1.1 |  | 5.4 |
| QUARTERLY |  |  |  |  |  |  |  |  |  |  |  |
| 2002 | Q1 | 6.5 | 6.5 | 5.0 | 5.0 | 1.3 | 1.3 | 1.4 | 1.4 | 5.6 | 5.6 |
|  | Q2 | 2.5 | 2.5 | 1.3 | 1.3 | 1.2 | 1.2 | 3.4 | 3.4 | 5.9 | 5.9 |
|  | Q3 | 5.1 | 5.1 | 4.0 | 4.0 | 1.0 | 1.0 | 2.2 | 2.2 | 5.8 | 5.8 |
|  | Q4 | 3.2 | 3.2 | 1.4 | 1.4 | 1.8 | 1.8 | 2.0 | 2.0 | 5.9 | 5.9 |
| 2003 | Q1 | 3.8 | 3.8 | 1.4 | 1.4 | 2.4 | 2.4 | 3.8 | 3.8 | 5.8 | 5.8 |
|  | Q2 | 3.6 | 4.2 | 2.6 | 3.3 | 1.0 | 0.8 | 0.7 | 0.7 | 6.2 | 6.2 |
|  | Q3 | 4.6 | 5.9 | 3.6 | 4.4 | 0.9 | 1.5 | 1.9 | 2.2 | 6.3 | 6.2 |
|  | Q4 | 5.5 | 5.7 | 4.4 | 4.6 | 1.0 | 1.1 | 1.4 | 1.3 | 6.2 | 6.2 |
| 2004 | Q1 | 6.2 | 6.3 | 4.8 | 5.2 | 1.3 | 1.1 | 0.8 | 0.6 | 6.0 | 6.1 |
|  | Q2 | 5.8 | 6.0 | 4.8 | 5.1 | 0.9 | 0.9 | 0.8 | 0.8 | 5.9 | 6.0 |
|  | Q3 | 5.8 | 6.0 | 4.8 | 5.0 | 0.9 | 0.9 | 1.0 | 1.0 | 5.8 | 5.9 |
|  | Q4 | 5.7 | 5.6 | 4.8 | 4.7 | 0.9 | 0.9 | 1.0 | 1.1 | 5.5 | 5.7 |
| 2005 | Q1 |  | 5.1 |  | 3.8 |  | 1.3 |  | 1.1 |  | 5.5 |
|  | Q2 |  | 5.0 |  | 4.1 |  | 0.9 |  | 1.1 |  | 5.4 |
|  | Q3 |  | 4.9 |  | 4.0 |  | 0.9 |  | 1.1 |  | 5.3 |
|  | Q4 |  | 4.7 |  | 3.9 |  | 0.8 |  | 1.1 |  | 5.3 |
| TWO-QUARTER ${ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |
| 2002 | Q2 | 4.5 | 4.5 | 3.1 | 3.1 | 1.3 | 1.3 | 2.4 | 2.4 | 0.3 | 0.3 |
|  | Q4 | 4.1 | 4.1 | 2.7 | 2.7 | 1.4 | 1.4 | 2.1 | 2.1 | 0.0 | 0.0 |
| 2003 | Q2 | 3.7 | 4.0 | 2.0 | 2.4 | 1.7 | 1.6 | 2.2 | $2.2$ | 0.3 | 0.3 |
|  | Q4 | 5.0 | 5.8 | 4.0 | 4.5 | 1.0 | 1.3 | 1.6 | 1.7 | 0.0 | 0.0 |
| 2004 | Q2 | 6.0 | 6.2 | 4.8 | 5.2 | 1.1 | 1.0 | 0.8 | 0.7 | -0.3 | -0.2 |
|  | 24 | 5.7 | 5.8 | 4.8 | 4.9 | 0.9 | 0.9 | 1.0 | 1.0 | -0.4 | -0.3 |
| 2005 | Q2 |  | 5.1 |  | 3.9 |  | 1.1 |  | 1.1 |  | -0.3 |
|  | Q4 |  | 4.8 |  | 3.9 |  | 0.8 |  | 1.1 |  | -0.1 |
| FOUR-QUARTER ${ }^{4}$ |  |  |  |  |  |  |  |  |  |  |  |
| 2001 Q4 |  | 2.0 | 2.0 | 0.1 | 0.1 | 2.0 | 2.0 | 1.8 | 1.8 | 1.7 | 1.7 |
| 2002 Q4 |  | 4.3 | 4.3 | 2.9 | 2.9 | 1.3 | 1.3 | 2.2 | 2.2 | 0.3 | 0.3 |
| 2003 Q4 |  | 4.4 | 4.9 | 3.0 | 3.4 | 1.3 | 1.4 | 1.9 | 2.0 | 0.3 | 0.3 |
| 2004 Q4 |  | 5.9 | 6.0 | 4.8 | 5.0 | 1.0 | 0.9 | 0.9 | 0.9 | -0.7 | -0.5 |
| 2005 | Q4 |  | 4.9 |  | 3.9 |  | 1.0 |  | 1.1 |  | -0.4 |

1. For all urban consumers.
2. Percent change from two quarters earlier; for unemployment rate, change in percentage points
3. Percent change from four quarters earlier; for unemployment rate, change in percentage points.

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real gross domestic product and related items, annual values
(Seasonally adjusted annual rate)


1. Changes are from fourth quarter to fourth quarter.
2. Private-industry workers.


| Item | Units |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & 2003 \\ & \text { Q3 } \end{aligned}$ | $\begin{aligned} & 2003 \\ & \text { Q4 } \end{aligned}$ | $\begin{gathered} 2004 \\ \text { Q1 } \end{gathered}$ | $\begin{gathered} 2004 \\ \mathrm{Q} 2 \end{gathered}$ | $\begin{gathered} 2004 \\ \text { Q3 } \end{gathered}$ | $\begin{gathered} 2004 \\ \text { Q4 } \end{gathered}$ | $\begin{aligned} & 2005 \\ & \text { Q1 } \end{aligned}$ | $\begin{gathered} 2005 \\ \text { Q2 } \end{gathered}$ | $\begin{aligned} & 2005 \\ & \text { Q3 } \end{aligned}$ | $\begin{gathered} 2005 \\ \text { Q4 } \end{gathered}$ |
| EXPENDITURES |  |  |  |  |  |  |  |  |  |  |  |
| Nominal GDP | Bill. \$ | 10954.3 | 11106.6 | 11277.8 | 11444.1 | 11612.7 | 11772.9 | 11921.6 | 12067.8 | 12212.1 | 12353.9 |
| Real GDP | Bill. Ch. \$ | 9733.7 | 9843.2 | 9968.3 | 10093.9 | 10218.8 | 10335.8 | 10432.2 | 10536.7 | 10640.1 | 10741.6 |
| Real GDP | \% change | 4.4 | 4.6 | 5.2 | 5.1 | 5.0 | 4.7 | 3.8 | 4.1 | 4.0 | 3.9 |
| Gross domestic purchases |  | 4.5 | 4.3 | 5.6 | 5.7 | 5.3 | 4.6 | 4.1 | 4.4 | 4.2 | 3.8 |
| Final sales |  | 4.7 | 3.8 | 4.3 | 4.3 | 4.6 | 5.1 | 2.8 | 3.9 | 4.0 | 4.0 |
| Priv. dom. final purchases |  | 6.2 | 2.8 | 5.0 | 5.5 | 5.6 | 5.9 | 3.3 | 4.8 | 4.7 | 4.2 |
| Personal cons. expenditures |  | 4.8 | 2.8 | 4.7 | 4.5 | 4.4 | 4.4 | 4.4 | 4.3 | 4.0 | 3.5 |
| Durables |  | 14.3 | -0.4 | 5.6 | 8.5 | 7.6 | 8.7 | 7.8 | 7.4 | 7.4 | 6.6 |
| Nondurables |  | 7.2 | 6.1 | 6.0 | 5.3 | 5.3 | 5.0 | 5.1 | 5.0 | 4.7 | 4.1 |
| Services |  | 1.9 | 1.8 | 3.9 | 3.3 | 3.4 | 3.3 | 3.3 | 3.3 | 3.1 | 2.6 |
| Business fixed investment |  | 11.5 | 6.3 | 10.7 | 13.2 | 14.4 | 16.8 | -2.9 | 10.3 | 11.0 | 11.1 |
| Equipment \& Software |  | 16.5 | 8.3 | 13.2 | 16.5 | 17.6 | 20.7 | -4.7 | 11.5 | 11.9 | 11.6 |
| Nonres. structures |  | -4.1 | -0.4 | 2.2 | 2.0 | 3.2 | 3.2 | 4.4 | 6.0 | 7.9 | 9.2 |
| Residential structures |  | 14.8 | -3.6 | -2.4 | 3.9 | 3.3 | 4.6 | 3.3 | 1.1 | -0.5 | -1.3 |
| Exports |  | 9.0 | 11.6 | 7.0 | 9.7 | 10.0 | 12.2 | 7.9 | 9.7 | 9.5 | 11.5 |
| Imports |  | 8.5 | 7.1 | 9.8 | 12.4 | 10.4 | 9.6 | 8.9 | 10.4 | 9.0 | 8.3 |
| Gov't. cons. \& investment |  | -1.0 | 6.6 | 3.8 | 2.0 | 1.6 | 1.5 | 2.4 | 1.6 | 2.0 | 2.5 |
| Federal |  | -3.5 | 17.9 | 8.6 | 3.5 | 1.7 | 1.0 | 3.0 | 1.0 | 1.8 | 3.0 |
| Defense |  | -8.1 | 25.0 | 10.2 | 3.8 | 1.3 | -0.0 | 3.1 | -0.0 | 1.1 | 3.1 |
| State \& local |  | 0.5 | 0.3 | 0.9 | 1.1 | 1.5 | 1.8 | 2.0 | 1.9 | 2.2 | 2.2 |
| Change in bus. inventories | Bill. Ch. \$ | -30.8 | -9.5 | 14.1 | 37.3 | 50.9 | 38.2 | 66.4 | 72.4 | 72.8 | 69.6 |
| Nonfarm |  | -33.0 | -11.2 | 12.8 | 36.0 | 49.6 | 36.7 | 64.9 | 70.9 | 71.4 | 68.2 |
| Net exports |  | -553.5 | -551.6 | -571.8 | -595.9 | -611.7 | -618.8 | -635.2 | -653.1 | -665.9 | -669.6 |
| Nominal GDP | \% change | 5.9 | 5.7 | 6.3 | 6.0 | 6.0 | 5.6 | 5.1 | 5.0 | 4.9 | 4.7 |
| EMPLOYMENT AND PRODUCTION |  |  |  |  |  |  |  |  |  |  |  |
| Nonfarm payroll employment | Millions | 129.8 | 129.8 | 130.6 | 131.7 | 132.8 | 134.0 | 134.9 | 135.8 | 136.6 | 137.3 |
| Unemployment rate | \% | 6.2 | 6.2 | 6.1 | 6.0 | 5.9 | 5.7 | 5.5 | 5.4 | 5.3 | 5.3 |
| Industrial prod. index | \% change | 2.8 | 2.3 | 6.9 | 6.8 | 6.8 | 6.6 | 5.1 | 4.9 | 4.7 | 4.8 |
| Capacity util. rate - mfg. | \% | 72.8 | 73.2 | 74.3 | 75.5 | 76.6 | 77.6 | 78.4 | 79.0 | 79.6 | 80.3 |
| Housing starts | Millions | 1.80 | 1.76 | 1.77 | 1.79 | 1.80 | 1.82 | 1.82 | 1.81 | 1.80 | 1.79 |
| Light motor vehicle sales |  | 17.39 | 16.93 | 17.06 | 17.20 | 17.32 | 17.47 | 17.37 | 17.41 | 17.47 | 17.54 |
| North Amer. produced |  | 14.07 | 13.61 | 13.72 | 13.81 | 13.86 | 13.99 | 13.89 | 13.93 | 13.97 | 14.02 |
| Other |  | 3.33 | 3.32 | 3.34 | 3.39 | 3.46 | 3.48 | 3.48 | 3.48 | 3.50 | 3.52 |
| INCOME AND SAVING |  |  |  |  |  |  |  |  |  |  |  |
| Nominal GNP | Bill. \$ | 10951.0 | 11102.3 | 11271.5 | 11436.6 | 11603.4 | 11762.2 | 11911.8 | 12057.8 | 12198.2 | 12333.5 |
| Nominal GNP | \% change | 6.1 | 5.6 | 6.2 | 6.0 | 6.0 | 5.6 | 5.2 | 5.0 | 4.7 | 4.5 |
| Nominal personal income |  | 3.4 | 4.5 | 6.1 | 5.7 | 5.9 | 5.7 | 5.5 | 4.9 | 4.7 | 4.6 |
| Real disposable income |  | 6.0 | 1.3 | 7.8 | 4.4 | 4.5 | 4.5 | 4.1 | 3.8 | 3.6 | 3.6 |
| Personal saving rate | \% | 3.6 | 3.2 | 4.0 | 3.9 | 4.0 | 4.0 | 4.0 | 3.9 | 3.8 | 3.9 |
| Corp. profits, IVA \& CCAdj. | \% change | 24.4 | 18.8 | 10.8 | 5.5 | 3.5 | 0.2 | -3. 5 | 3.1 | 3.3 | 2.2 |
| Profit share of GNP |  | 8.7 | 8.9 | 9.0 | 9.0 | 9.0 | 8.8 | 8.7 | 8.6 | 8.6 | 8.5 |
| Excluding FR Banks |  | 8.5 | 8.7 | 8.8 | 8.8 | 8.8 | 8.7 | 8.5 | 8.4 | 8.4 | 8.4 |
| Federal surpl./deficit | Bill. \$ | -423.0 | -406.4 | -460.0 | -454.3 | -409.1 | -365.1 | -284.2 | -239.0 | -215.2 | -217.0 |
| State \& local surpl./def. |  | -21.5 | 9.1 | -6.1 | 0.5 | -3.5 | 2.0 | 3.7 | 5.2 | 6.2 | 6.5 |
| Ex. social ins. funds |  | -21.4 | 9.2 | -6.0 | 0.6 | -3.4 | 2.1 | 3.8 | 5.3 | 6.3 | 6.6 |
| Gross natl. saving rate | \% | 13.8 | 14.1 | 14.2 | 14.5 | 14.7 | 14.8 | 14.8 | 14.8 | 14.8 | 14.9 |
| Net natl. saving rate |  | 0.9 | 1.3 | 1.6 | 1.9 | 2.1 | 2.3 | 2.2 | 2.3 | 2.3 | 2.3 |
| Prices and costs |  |  |  |  |  |  |  |  |  |  |  |
| GDP chn.-wt. price index Gross Domestic Purchases chn.-wt. price index | \% change | 1.5 | 1.1 | 1.1 | 0.9 | 0.9 | 0.9 | 1.3 | 0.9 | 0.9 | 0.8 |
|  |  | 1.7 | 0.9 | 1.0 | 0.7 | 0.8 | 0.8 | 1.2 | 0.9 | 0.8 | 0.9 |
| PCE chn.-wt. price index Ex. food and energy |  | 2.0 | 1.0 | 0.5 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
|  |  | 1.7 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 |
| CPI <br> Ex. food and energy |  | 2.2 | 1.3 | 0.6 | 0.8 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 |
|  |  | 1.7 | 1.7 | 1.5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 |
| ECI, hourly compensation ${ }^{1}$ |  | 3.2 | 3.2 | 3.3 | 3.3 | 3.2 | 3.3 | 3.2 | 3.2 | 3.2 | 3.2 |
| Nonfarm business sector |  |  |  |  |  |  |  |  |  |  |  |
| Output per hour |  | 4.5 | 3.4 | 2.4 | 1.3 | 1.1 | 0.8 | 0.8 | 1.4 | 1.7 | 1.6 |
| Compensation per hour |  | 3.3 | 2.9 | 3.0 | 2.9 | 2.9 | 2.9 | 3.1 | 3.0 | 3.0 | 3.0 |
| Unit labor cost |  | -1.2 | -0.5 | 0.6 | 1.6 | 1.8 | 2.1 | 2.3 | 1.6 | 1.3 | 1.3 |

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Note: Components may not sum to totals because of rounding.

| Item | $\begin{aligned} & 2003 \\ & \text { Q4 } \end{aligned}$ | -- 2004 Q1 | -- 2004 Q2 | -- 2004 03 | Projecter 2004 24 | --- 2005 Q1 | --- 2005 Q2 | --- 2005 Q3 | $\begin{aligned} & 2005 \\ & \text { Q4 } \end{aligned}$ | $\begin{gathered} 03 Q 4 \text { / } \\ 02 Q 4 \end{gathered}$ | $\begin{aligned} & \text { cojectec } \\ & 04 Q 4 / \\ & 0324 \end{aligned}$ | $\begin{gathered} 05 Q 4 / \\ 04 Q 4 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Real GDP | 4.6 | 5.2 | 5.1 | 5.0 | 4.7 | 3.8 | 4.1 | 4.0 | 3.9 | 3.4 | 5.0 | 3.9 |
| Gross dom. purchases | 4.5 | 5.9 | 5.9 | 5.6 | 4.9 | 4.3 | 4.6 | 4.4 | 4.0 | 3.6 | 5.6 | 4.3 |
| Final sales | 3.8 | 4.3 | 4.3 | 4.6 | 5.1 | 2.8 | 3.9 | 4.0 | 4.0 | 3.7 | 4.6 | 3.7 |
| Priv. dom. final purchases | 2.5 | 4.3 | 4.7 | 4.8 | 5.0 | 2.9 | 4.1 | 4.0 | 3.6 | 3.2 | 4.7 | 3.6 |
| Personal cons. expenditures | 2.0 | 3.3 | 3.2 | 3.1 | 3.1 | 3.0 | 3.0 | 2.8 | 2.5 | 2.3 | 3.2 | 2.8 |
| Durables | -0.0 | 0.5 | 0.7 | 0.6 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.7 | 0.6 | 0.6 |
| Nondurables | 1.2 | 1.2 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 0.9 | 0.8 | 1.0 | 1.1 | 1.0 |
| Services | 0.8 | 1.6 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.3 | 1.1 | 0.6 | 1.4 | 1.3 |
| Business fixed investment | 0.7 | 1.1 | 1.3 | 1.5 | 1.7 | -0.3 | 1.1 | 1.2 | 1.2 | 0.5 | 1.4 | 0.8 |
| Equipment \& Software | 0.7 | 1.0 | 1.3 | 1.4 | 1.7 | -0.4 | 1.0 | 1.0 | 1.0 | 0.5 | 1.4 | 0.6 |
| Nonres. structures | -0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | -0.0 | 0.1 | 0.2 |
| Residential structures | -0.2 | -0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | -0.0 | -0.1 | 0.3 | 0.1 | 0.0 |
| Net exports | 0.1 | -0.7 | -0.8 | -0.5 | -0.2 | -0.5 | -0.6 | -0.4 | -0.1 | -0.2 | -0.6 | -0.4 |
| Exports | 1.1 | 0.7 | 0.9 | 1.0 | 1.2 | 0.8 | 1.0 | 1.0 | 1.2 | 0.4 | 0.9 | 1.0 |
| Imports | -1.0 | -1.4 | -1.7 | -1.5 | -1.4 | -1.3 | -1.5 | -1.3 | -1.2 | -0.6 | -1.5 | -1.4 |
| Government cons. \& invest. | 1.2 | 0.7 | 0.4 | 0.3 | 0.3 | 0.5 | 0.3 | 0.4 | 0.5 | 0.7 | 0.4 | 0.4 |
| Federal | 1.2 | 0.6 | 0.3 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.6 | 0.3 | 0.2 |
| Defense | 1.1 | 0.5 | 0.2 | 0.1 | 0.0 | 0.2 | 0.0 | 0.1 | 0.1 | 0.6 | 0.2 | 0.1 |
| Nondefense | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| State and local | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.0 | 0.2 | 0.2 |
| Change in bus. inventories | 0.8 | 0.9 | 0.8 | 0.5 | -0.4 | 1.0 | 0.2 | 0.0 | -0.1 | -0.3 | 0.4 | 0.3 |
| Nonfarm | 0.8 | 0.9 | 0.8 | 0.5 | -0.5 | 1.0 | 0.2 | 0.0 | -0.1 | -0.4 | 0.4 | 0.3 |
| Farm | -0.0 | -0.0 | -0.0 | -0.0 | 0.0 | -0.0 | -0.0 | -0.0 | -0.0 | 0.1 | -0.0 | -0.0 |

Note: Components may not sum to totals because of rounding.
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Staff Projections of Federal Sector Accounts and Related Items
(Billions of dollars except as noted)

| Item | Fiscal year |  |  |  | 2003 |  |  |  | 2004 |  |  |  | 2005 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $2002^{\text {a }}$ | 2003 | 2004 | 2005 | Q1 ${ }^{\text {a }}$ | Q2 ${ }^{\text {a }}$ | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Unified budget ${ }^{1}$ [ Not seasonally adjus |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receipts ${ }^{2}$ | 1853 | 1775 | 1825 | 2019 | 398 | 528 | 422 | 433 | 410 | 520 | 462 | 466 | 436 | 601 | 516 | 508 |
| Outlays ${ }^{2}$ | 2011 | 2163 | 2313 | 2378 | 543 | 544 | 541 | 586 | 585 | 579 | 563 | 597 | 596 | 592 | 593 | 606 |
| Surplus/deficit ${ }^{2}$ | -158 | -388 | -488 | -359 | -145 | -17 | -119 | -153 | -174 | -59 | -101 | -132 | -160 | 9 | -77 | -99 |
| On-budget | -317 | -553 | -664 | -555 | -169 | -91 | -132 | -196 | -214 | -138 | -117 | -177 | -204 | -75 | -99 | -147 |
| Off-budget | 160 | 165 | 177 | 196 | 24 | 75 | 13 | 43 | 40 | 79 | 15 | 46 | 44 | 84 | 22 | 48 |
| Means of financing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Borrowing | 221 | 420 | 540 | 354 | 64 | 106 | 154 | 158 | 158 | 109 | 116 | 98 | 153 | 34 | 70 | 68 |
| Cash decrease | -17 | 31 | -15 | 0 | 20 | -17 | -0 | -5 | 11 | -36 | 15 | 15 | 0 | -30 | 15 | 15 |
| Other ${ }^{3}$ | -46 | -62 | -38 | 5 | 62 | -73 | -35 | 0 | 5 | -14 | -29 | 19 | 7 | -13 | -8 | 16 |
| Cash operating balance, end of period | 61 | 30 | 45 | 45 | 13 | 30 | 30 | 35 | 24 | 60 | 45 | 30 | 30 | 60 | 45 | 30 |
| NIPA federal sector |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receipts | 1906 | 1854 | 1891 | 2128 | 1870 | 1876 | 1811 | 1885 | 1855 | 1884 | 1939 | 2003 | 2113 | 2177 | 2220 | 2241 |
| Expenditures | 2039 | 2189 | 2323 | 2404 | 2145 | 2259 | 2234 | 2292 | 2315 | 2339 | 2348 | 2368 | 2398 | 2416 | 2435 | 2458 |
| Consumption expenditures | 570 | 639 | 707 | 739 | 627 | 664 | 658 | 684 | 709 | 716 | 720 | 723 | 741 | 744 | 749 | 755 |
| Defense | 375 | 426 | 482 | 501 | 409 | 452 | 442 | 465 | 483 | 488 | 490 | 491 | 503 | 504 | 507 | 511 |
| Nondefense | 195 | 213 | 226 | 238 | 218 | 213 | 216 | 219 | 226 | 228 | 230 | 232 | 238 | 240 | 242 | 244 |
| Other spending | 1469 | 1550 | 1616 | 1665 | 1519 | 1595 | 1576 | 1608 | 1606 | 1623 | 1628 | 1645 | 1657 | 1672 | 1687 | 1703 |
| Current account surplus | -133 | -335 | -432 | -276 | -275 | -383 | -423 | -406 | -460 | -454 | -409 | -365 | -284 | -239 | -215 | -217 |
| Gross investment | 106 | 112 | 129 | 133 | 109 | 116 | 117 | 125 | 129 | 131 | 131 | 132 | 133 | 134 | 134 | 136 |
| Gross saving less gross investment ${ }^{4}$ | -138 | -342 | -452 | -295 | -279 | -393 | -434 | -424 | -480 | -475 | -430 | -385 | -304 | -258 | -234 | -236 |
| Fiscal indicators ${ }^{5}$ <br> High-employment (HEB) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| surplus/deficit | -73 | -250 | -385 | -268 | -186 | -294 | -339 | -333 | -408 | -417 | -384 | -351 | -275 | -233 | -212 | -217 |
| Change in HEB, percent of potential GDP | 1.8 | 1.6 | 1.1 | -1.1 | 0.0 | 0.9 | 0.4 | -0.1 | 0.6 | 0.0 | -0.3 | -0.3 | -0.7 | -0.4 | -0.2 | 0.0 |
| Fiscal impetus (FI) percent of GDP | 1.1 | 1.1 | 1.2 | -0.3 | 0.0 | 0.7 | 0.1 | 0.8 | 0.2 | 0.2 | 0.1 | 0.2 | -0.5 | -0.0 | 0.0 | 0.1 |


 from the on-budget surplus and shown separately as off-budget, as classified under current law.





[^2]September 10, 2003

| Strictly Confidential (FR) Class II FOMC |  |  | Change in Debt of the Domestic Nonfinancial Sectors (Percent) |  |  |  |  | September 10, 2003 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period ${ }^{1}$ | Total | Federal government | Nonfederal |  |  |  |  |  |  |
|  |  |  | Total | Total | Households |  | Business | State and local governments |  |
|  |  |  |  |  | Home mortgages | Consumer credit |  |  |  |
| Year |  |  |  |  |  |  |  |  |  |
| 1998 | 6.9 | -1.4 | 9.6 | 8.1 | 8.8 | 6.5 | 12.1 | 6.3 | 6.0 |
| 1999 | 6.3 | -1.9 | 8.8 | 8.3 | 9.0 | 8.4 | 10.6 | 3.4 | 5.9 |
| 2000 | 4.9 | -8.0 | 8.4 | 8.6 | 8.3 | 10.7 | 9.7 | 1.3 | 4.6 |
| 2001 | 6.1 | -0.2 | 7.6 | 8.7 | 9.8 | 7.3 | 6.1 | 8.9 | 2.0 |
| 2002 | 7.1 | 7.6 | 7.0 | 10.0 | 12.4 | 4.3 | 2.9 | 11.2 | 4.3 |
| 2003 | 8.3 | 13.2 | 7.3 | 9.7 | 11.7 | 4.3 | 4.3 | 7.0 | 4.9 |
| 2004 | 6.9 | 11.7 | 5.8 | 6.6 | 7.1 | 5.4 | 5.1 | 4.8 | 6.0 |
| 2005 | 6.1 | 7.1 | 5.9 | 6.3 | 6.4 | 6.2 | 5.7 | 4.7 | 4.9 |
| Quarter |  |  |  |  |  |  |  |  |  |
| 2003:1 | 6.0 | 2.2 | 6.8 | 9.9 | 11.6 | 4.8 | 3.5 | 5.1 | 3.8 |
| 2 | 12.0 | 24.3 | 9.4 | 11.5 | 14.2 | 3.4 | 6.4 | 12.0 | 4.2 |
| 3 | 7.6 | 12.9 | 6.5 | 9.0 | 10.5 | 4.3 | 3.5 | 5.8 | 5.9 |
| 4 | 6.6 | 11.4 | 5.5 | 7.2 | 8.4 | 4.4 | 3.7 | 4.4 | 5.7 |
| 2004:1 | 6.5 | 11.1 | 5.5 | 6.6 | 7.5 | 4.8 | 4.5 | 3.8 | 6.3 |
| 2 | 8.5 | 21.2 | 5.6 | 6.4 | 7.0 | 5.1 | 4.7 | 4.8 | 6.0 |
| 3 | 6.2 | 7.8 | 5.8 | 6.3 | 6.8 | 5.4 | 5.2 | 5.1 | 6.0 |
| 4 | 5.7 | 4.7 | 5.9 | 6.3 | 6.6 | 5.7 | 5.5 | 5.3 | 5.6 |
| 2005:1 | 6.5 | 9.5 | 5.8 | 6.4 | 6.6 | 6.0 | 5.4 | 4.6 | 5.1 |
| 2 | 7.1 | 12.7 | 5.8 | 6.2 | 6.3 | 6.1 | 5.5 | 4.6 | 5.0 |
| 3 | 5.4 | 3.9 | 5.7 | 6.0 | 6.1 | 6.1 | 5.6 | 4.5 | 4.9 |
| 4 | 4.9 | 1.7 | 5.7 | 6.0 | 6.0 | 6.1 | 5.6 | 4.6 | 4.7 |

Note. Quarterly data are at seasonally adjusted annual rates. 1. Data after 2003:Q2 are staff projections. Changes are measured from end of the preceding period to end of period indicated except for annual nominal GDP growth, which is calculated from Q4 to Q4.
2.6.3 FOF
Strictly Confidential (FR)
Class II FOMC

| Category |  |  |  |  |  |  |  |  | nally ad | sted annu | rates |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Calendar year |  |  |  | 2003 |  | 2004 |  |  |  | 2005 |  |  |  |
|  | 2002 | 2003 | 2004 | 2005 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Net funds raised by domestic nonfinancial sectors |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 Total | 1332.7 | 1652.6 | 1492.4 | 1441.7 | 1591.1 | 1389.8 | 1407.2 | 1878.3 | 1385.1 | 1299.3 | 1533.9 | 1703.1 | 1308.9 | 1220.8 |
| 2 Net equity issuance | -41.9 | -63.4 | -50.8 | -23.5 | -57.0 | -59.0 | -58.0 | -53.0 | -51.0 | -41.0 | -31.0 | -26.0 | -21.0 | -16.0 |
| 3 Net debt issuance | 1374.6 | 1716.0 | 1543.2 | 1465.2 | 1648.1 | 1448.8 | 1465.2 | 1931.3 | 1436.1 | 1340.3 | 1564.9 | 1729.1 | 1329.9 | 1236.8 |
| Borrowing sectors |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonfinancial business |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 Financing gap ${ }^{1}$ | 80.8 | 14.3 | 45.4 | 218.9 | -10.7 | -9.3 | -4.9 | 19.9 | 60.5 | 106.2 | 176.5 | 213.9 | 235.0 | 250.2 |
| 5 Net equity issuance | -41.9 | -63.4 | -50.8 | -23.5 | -57.0 | -59.0 | -58.0 | -53.0 | -51.0 | -41.0 | -31.0 | -26.0 | -21.0 | -16.0 |
| 6 Credit market borrowing | 200.0 | 308.9 | 376.4 | 440.9 | 252.0 | 271.2 | 330.4 | 354.6 | 396.1 | 424.2 | 424.4 | 434.2 | 448.1 | 456.6 |
| Households |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7 Net borrowing ${ }^{2}$ | 771.8 | 825.3 | 611.6 | 622.0 | 807.2 | 656.5 | 617.1 | 603.6 | 609.3 | 616.3 | 629.3 | 622.8 | 618.1 | 617.8 |
| 8 Home mortgages | 666.4 | 705.6 | 481.7 | 463.7 | 679.3 | 552.8 | 503.9 | 479.7 | 472.6 | 470.6 | 476.1 | 464.7 | 457.7 | 456.2 |
| 9 Consumer credit | 79.2 | 83.0 | 107.9 | 131.9 | 85.6 | 87.4 | 96.5 | 103.2 | 112.5 | 119.3 | 126.8 | 131.7 | 134.0 | 135.2 |
| 10 Debt/DPI (percent) ${ }^{3}$ | 103.5 | 108.8 | 111.3 | 112.8 | 109.5 | 111.1 | 110.7 | 111.1 | 111.5 | 111.7 | 112.1 | 112.6 | 113.1 | 113.5 |
| State and local governments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11 Net borrowing | 145.3 | 100.7 | 74.8 | 75.3 | 86.9 | 66.5 | 58.8 | 74.8 | 80.8 | 84.8 | 74.8 | 74.8 | 74.8 | 76.8 |
| 12 Current surplus ${ }^{4}$ | 127.7 | 159.0 | 188.3 | 202.9 | 162.4 | 194.7 | 181.2 | 189.6 | 187.5 | 194.9 | 198.4 | 201.8 | 204.7 | 206.8 |
| Federal government |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13 Net borrowing | 257.5 | 481.1 | 480.4 | 324.4 | 501.9 | 454.5 | 458.8 | 898.2 | 349.9 | 214.9 | 436.4 | 597.3 | 188.9 | 85.6 |
| 14 Net borrowing (quarterly, n.s.a.) | 257.5 | 481.1 | 480.4 | 324.4 | 153.6 | 157.6 | 158.3 | 108.8 | 115.6 | 97.7 | 152.6 | 33.6 | 70.2 | 68.0 |
| 15 Unified deficit (quarterly, n.s.a.) | 230.6 | 433.4 | 466.1 | 326.4 | 118.7 | 153.2 | 174.3 | 58.9 | 101.2 | 131.7 | 160.1 | -9.4 | 76.8 | 98.9 |
| Depository institutions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16 Funds supplied | 482.5 | 459.4 | 429.6 | 478.8 | 238.0 | 242.4 | 406.9 | 399.4 | 512.2 | 400.0 | 478.8 | 478.8 | 478.8 | 478.8 |
| Memo (percentage of GDP) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17 Domestic nonfinancial debt ${ }^{5}$ | 191.2 | 197.6 | 200.8 | 203.0 | 199.0 | 199.8 | 200.0 | 200.8 | 201.5 | 201.7 | 202.2 | 203.2 | 203.9 | 204.2 |
| 18 Domestic nonfinancial borrowing | 13.2 | 15.8 | 13.4 | 12.1 | 15.0 | 13.0 | 13.0 | 16.9 | 12.4 | 11.4 | 13.1 | 14.3 | 10.9 | 10.0 |
| 19 Federal government ${ }^{6}$ | 2.5 | 4.4 | 4.2 | 2.7 | 4.6 | 4.1 | 4.1 | 7.8 | 3.0 | 1.8 | 3.7 | 4.9 | 1.5 | 0.7 |
| 20 Nonfederal | 10.7 | 11.3 | 9.2 | 9.4 | 10.5 | 9.0 | 8.9 | 9.0 | 9.4 | 9.6 | 9.5 | 9.4 | 9.3 | 9.3 |

[^3](This page intentionally blank.)

## International Developments

Over the intermeeting period, financial markets and confidence surveys have displayed a widespread increase in optimism about the prospects for foreign economic growth. This optimism reflects a belief that stronger U.S. growth will contribute to activity abroad through exports. There are some tentative indications that foreign domestic demand also may be poised to accelerate, especially in developing Asia, where the economic effects of last spring's SARS epidemic appear to have receded. In the foreign industrial countries, we assume that monetary and fiscal policies for the most part will remain supportive of domestic demand growth through the forecast period.

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

| Indicator | 2002 |  |  | Projection |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2003: | H1 |  |  | $2003:$ <br> H 2 | 2004 |
|  |  |  | 2005 |  |  |  |
| Foreign output | 3.5 | 2.1 | 0.5 | 3.2 | 3.6 | 3.4 |
| Previous GB | 3.5 | 2.0 | 0.6 | 2.5 | 3.4 | -- |
| Foreign CPI | 2.4 | 2.8 | 1.9 | 1.8 | 1.9 | 1.9 |
| Previous GB | 2.5 | 2.6 | 2.1 | 1.6 | 1.8 | -- |

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

Compared with the August Greenbook, our estimate of foreign economic growth in the first half of 2003 has edged down slightly, and our projection of secondhalf growth has been increased significantly. The reduction in first-half growth reflects a greater-than-expected SARS effect on developing Asian economies in the second quarter that was largely offset by significantly stronger activity than previously estimated in Japan and Mexico. The boost to second-half growth reflects a rebound in the SARS-affected economies during the third quarter, along with more positive indicators elsewhere. Our projection for solid growth in 2004 has also risen a bit, and we expect growth to remain strong in 2005.

Foreign inflation has stepped down to a 2 percent pace this year. We project inflation abroad to stay close to this rate through the forecast period as output gaps gradually diminish but are not eliminated.

On balance, the broad real value of the dollar has changed little over the intermeeting period. We are projecting a depreciation of the dollar at slightly more than 1 percent per year, leaving the dollar's path essentially unchanged from our previous forecast through 2004. The dollar is projected to continue
depreciating at this rate in 2005.
After subtracting $1 / 4$ percentage point from U.S. GDP growth in the first half of this year, net exports are projected to make roughly a zero arithmetic contribution to growth in the second half. The lagged effects of dollar depreciation are expected to boost exports nearly enough to offset the effect of faster U.S. growth on imports. With U.S. economic activity projected to continue to grow faster than foreign activity in 2004 and 2005, the negative arithmetic contribution from import growth should outweigh the positive contribution from export growth. Net exports are expected to deduct roughly $1 / 2$ percentage point from U.S. GDP growth in each of the next two years. The U.S. current account deficit is projected to expand from about $\$ 550$ billion in the second half of 2003 to about $\$ 660$ billion in the second half of 2005, which is nearly $5^{1 / 2}$ percent of GDP.

## Oil Prices

Since the August FOMC meeting, the spot price of West Texas intermediate (WTI) crude oil has fallen about $\$ 2.80$ per barrel, closing at $\$ 29.18$ per barrel on September 9. The decrease in the spot price appears to reflect heightened market attention on non-OPEC supply, which is expected to increase markedly in the fourth quarter of this year and in 2004. The spot price is projected to fall, in line with quotes from futures markets, to about $\$ 25.75$ per barrel by the end of 2004 and $\$ 24.50$ by the end of 2005 . Relative to the August Greenbook, the spot price of WTI is projected to be about $\$ 1.25$ per barrel lower on average in the current quarter, $\$ 2.00$ per barrel lower in the fourth quarter of this year, but only $\$ 0.70$ per barrel lower by the end of 2004 .

## International Financial Markets

The foreign exchange value of the dollar, as measured by the staff's major currencies index, was about unchanged on balance in fairly volatile market conditions over the intermeeting period. The dollar gained 1 to 2 percent against most European currencies but depreciated about the same extent against the yen and the Canadian dollar. Early in the intermeeting period, the dollar was boosted by greater market optimism about the U.S. recovery, especially relative to that in Europe. The weak U.S. labor market report for August contributed to the unwinding of the dollar's gains late in the intermeeting period. Against the currencies of our other important trading partners, the dollar was nearly unchanged on balance.

Yields on Japanese bellwether bonds soared almost 70 basis points over the intermeeting period, while yields on European bellwether bonds rose 20 to 30 basis points. In contrast, yields on U.S. and Canadian benchmark bonds were little changed. Citing recent declines in inflation and a subdued outlook for
inflation, the Bank of Canada eased its policy rate 25 basis points on September 3, as had been widely anticipated. This move returned the policy rate to its level at the beginning of this year. The central banks of the United Kingdom and the euro area kept their policy stances unchanged. Nevertheless, the steepening of the paths of short-term interest rates implied by futures contracts in most major foreign currencies suggests that market participants have come to believe that monetary policy may tighten sooner than had been anticipated. In an attempt to counteract upward pressures on yen interest rates, the Bank of Japan undertook several open market operations in relatively longterm instruments to signal its continued commitment to quantitative easing policies as long as domestic deflation is not definitively ended. After the dollar depreciated to below $¥ 117$ at the end of August, the Japanese monetary authorities resumed intervening in foreign exchange markets, selling the equivalent of more than $\$ 22$ billion in yen.

In real terms the broad trade-weighted index of the dollar has changed little since the August Greenbook. We project that this index will decline at an average annual rate of about $1 \frac{1}{4}$ percent over the forecast period. Our path for the dollar reflects an attempt to balance two major and opposing risks: First, stronger projected growth in the United States than abroad may put upward pressure on the dollar, and second, potential financing pressures from the widening of the U.S. current account deficit to unprecedented levels may put downward pressure on the dollar.

Share prices continued to rise in most foreign countries during the intermeeting period. Broad market indexes moved up between 3 percent and 7 percent in Europe, about 4 percent in Canada, and more than 12 percent in Japan. Share price indexes in the emerging Asian economies also rose robustly, paced by strong gains in the share prices of export-oriented technology firms. Stock prices rose during the period in Latin America as well, led by a 15 percent gain in Brazil's equity market index. Yield spreads of emerging-market sovereign bonds narrowed about 50 basis points over the intermeeting period, with Brazil's EMBI+ spread falling 130 basis points. The declines in risk spreads on sovereign debt of several emerging economies coincided with reductions in U.S. high-yield spreads to multiyear lows.
. The Desk did not intervene during the period for the accounts of the System or the Treasury.

## Foreign Industrial Countries

Recent indicators have come in stronger than expected for a number of foreign
industrial countries. Real GDP is projected to grow slightly more than $11 / 2$ percent (a.r.) in the third quarter, after growing $1 / 2$ percent in the second quarter. The recovery of the U.S. economy, continued accommodative monetary policies, positive equity wealth effects, and increasing consumer and business confidence are expected to support foreign activity over the forecast period, despite some small drag from higher long-term interest rates. We are projecting GDP growth to rise further to about $23 / 4$ percent in both 2004 and 2005.

Twelve-month headline inflation rates in most major foreign industrial countries declined or held steady in the second quarter. We expect inflation in the foreign industrial countries to average $1 \frac{1}{4}$ percent over the forecast period. In Japan, deflation is projected to continue over the forecast period.

In Japan, real GDP growth should moderate somewhat in the third quarter after exceptionally strong activity in the second quarter. We project that, over the forecast period, activity will grow at a rate of $1 \frac{1}{2}$ percent. The external sector should boost economic activity as domestic demand grows strongly in China and the United States. Consumption is projected to continue to expand at a moderate pace, supported by the stabilization of the labor market as well as the recent increase in Japanese equity prices. Increasing exports and consumption, along with improved profit conditions resulting from corporate cost-cutting, are expected to support business investment.

The outlook for growth in euro-area GDP has improved a bit. In August, German business confidence increased for the fourth straight month. The Belgian National Bank survey, thought to be a good indicator of overall euroarea growth, registered increases in both July and August. The purchasing managers indexes (PMIs) for both services and manufacturing have been improving over the last few months. The outlook for growth in the euro area has also been helped by the recent depreciation of the euro, brightening the prospect for exports after several quarters of declines. The recent retreat of the euro combined with a headline inflation rate that remains near the 2 percent mark has made it less likely that the ECB will adopt further easing, and we now assume a flat policy rate for the remainder of the year and throughout 2004. After contracting in the second quarter, GDP should grow modestly in the third quarter, and then accelerate in the fourth quarter and early next year, supported by some fiscal stimulus and a rebound in exports. Growth is expected to level off at around $2 \frac{1}{2}$ percent in 2005.

We expect that real GDP growth in the United Kingdom will continue its upward trend in the third and fourth quarters after dipping to near zero in the first quarter. Industrial production rose in July. In August, business confidence
and both the manufacturing and services PMIs moved up. Consumption growth should moderate as the rapid increase in house prices that has marked the U.K. economy for the past five years is beginning to show signs of slowing. We expect stronger exports and government spending to support U.K. GDP growth, which is projected to reach nearly $23 / 4$ percent in 2004 before dropping back slightly in 2005.

In Canada, negative contributions to growth from inventories and net exports offset strong final domestic demand in the second quarter, leaving real GDP down slightly. Over the next two years, steady growth in final domestic demand, an unwinding of the inventory cycle, and a strong pickup in exports should return GDP growth to nearly $31 / 2$ percent. Having eased on September 3, the Bank of Canada is assumed to keep its policy rate constant through 2004.

## Other Countries

Data on second-quarter GDP growth for the emerging Asian economies were generally lower than we had expected, especially in the SARS-affected economies, where output declines were steep. Travel and tourism fell sharply, supporting the view that the downturn was largely a result of the epidemic. Recent data suggest that travel is rebounding strongly. In addition, the outlook for global high-tech demand has improved. We thus expect a sharper rebound in the second half of the year than previously projected for these economies. Growth in the emerging Asian economies is projected to average $61 / 2$ percent in the second half, about 2 percentage points stronger than in the August Greenbook. We continue to expect growth to average around $51 / 2$ percent next year, in line with a projected pickup in global demand for high-tech goods. The recently reported case of SARS in Singapore underlines the risk to this outlook from the potential re-emergence of the virus.

In China, recent indicators suggest that economic growth has rebounded sharply following a second-quarter decline. Industrial production in August was 17 percent above its year-earlier level, and retail sales also have been expanding at a robust pace. We expect Chinese GDP growth to step up to 10 percent (a.r.) in the second half of this year and then to fall back to a still-sizable rate of 8 percent over the following two years. Growth of imports has been even faster than the rapid expansion of exports in recent quarters, suggesting robust growth in Chinese domestic demand.

Other economies that were severely affected by the SARS epidemic are also showing indications of a third-quarter rebound, aided by a strengthening in global high-tech markets. Industrial production rose in June and July in both Taiwan and Singapore, with particular strength in high-tech products. In contrast, recent performance in Korea, which was relatively unscathed by

SARS, has been less favorable. Consumer spending has been weakened by high debt levels and government measures to curb the growth of credit-card lending. A strike in the auto sector depressed production in July. We now expect only a small increase in Korean GDP on average for this year, although we continue to expect some improvement next year in response to the pickup in the global economy.

The Mexican economy grew considerably faster than expected, at an annual rate of 5 percent in the second quarter. The growth reflected increases in agriculture, mining, and services; weakness persisted in the manufacturing sector. Business confidence has remained at a favorable level, and we continue to expect the projected pickup in the U.S. economy to have a positive effect on Mexican industrial production and GDP growth starting in the second half of this year. Mexican GDP is projected to grow at an annual rate of $31 / 2$ percent in the second half of 2003 and to accelerate further next year before slowing a bit in 2005, roughly mirroring the contour of projected U.S. growth. In Brazil, GDP fell at a 6 percent rate in the second quarter, with sharp declines in both consumption and investment, largely reflecting the effect of very high levels of interest rates that began to be cut only in June. We expect the competitive level of the exchange rate and further reductions in policy interest rates to support modest growth through the remainder of this year and next.

We expect average inflation in the developing countries to be around $23 / 4$ percent over the forecast period, little changed from the August Greenbook. Hong Kong is still projected to experience sustained deflation over the forecast period.

## Prices of Internationally Traded Goods

Prices of imported core goods increased at an annual rate of 2.6 percent in the first half of 2003. We project continued increases, but at a slower rate, over the forecast period, in line with modest depreciation of the dollar. The projected increases for late 2003 and early 2004 are slightly higher than in the previous forecast owing primarily to higher commodity prices.

As we noted in the August Greenbook, we would have expected the dollar's depreciation in the first half of 2003 to have had a larger effect on import prices. We are unsure whether the surprisingly low increases in import prices reflect the hesitancy of foreign exporters to raise prices in an environment of economic slack or some longer-lasting change in behavior. We have based our forecast on the assumption that the traditional relationship between exchange rates and import prices will hold true for future exchange rate movements, but we are not predicting any lagged effect of previous dollar movements beyond the current quarter.

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

| Trade category | 2002 |  |  | Projection |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H1 | H2 | H1 <br> H1 | $2003:$ <br> H2 | 2004 | 2005 |
| Exports |  |  |  |  |  |  |
| Core goods | 1.2 | 3.1 | 3.3 | 0.6 | 0.9 | 0.9 |
| Imports |  |  |  |  |  |  |
| Non-oil core goods <br> Oil (dollars per barrel) | -0.1 | 1.4 | 2.6 | 1.7 | 1.4 | 1.3 |

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.

Higher prices for energy-related products are responsible for the acceleration of prices of exported core goods that began late last year. After an increase of 3.3 percent (a.r.) in the first half of 2003, core export prices are expected to increase at a more subdued pace of $1 / 2$ percent in the second half, a forecast about unchanged from the August Greenbook. Over the remainder of the forecast period, core export price inflation is expected to be in line with projected prices of U.S. domestic goods.

## Trade in Goods and Services

The first-half decline in exports appears to have been somewhat smaller than we estimated in the August Greenbook, with services exports accounting for much of the revision. We project that real exports of goods and services will grow at a rate of nearly 10 percent through the forecast period. This projection is about 1 percentage point higher than that in the August Greenbook for the second half of this year and $1 / 2$ percentage point higher for next year, consistent with higher foreign growth.

The projected pickup in exports in our forecast is widespread. Core goods, computers, and services all show sharp rebounds in the second half, with growth rates that are, for the most part, sustained through 2005. Exports of core goods are projected to increase at a pace of $7 \frac{1}{2}$ percent beginning in the second half of this year. The recovery of core exports reflects an acceleration of foreign activity and a lagged response to the dollar's previous depreciation. In addition, because exports had fallen well below the level suggested by their historical relationship with exchange rates and foreign GDP, we have built in some further
growth of exports over the forecast period to return them gradually to a more normal level. Exports of semiconductors, which rebounded strongly in the first half of 2003, are expected to continue to grow at double-digit rates. Computer exports are projected to accelerate in the second half of this year and into next year, consistent with a solid recovery in the global high-tech sector. We project that exports of services will grow at a rate of more than 11 percent in the second half of this year before returning to a pace of 6 percent in 2004 and 2005. The rebound in services receipts in the near term owes in large part to waning effects on travel of the SARS outbreak and the Iraq war.

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

| Measure | 2002 |  |  | Projection |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H1 | H2 | 2003: <br> H1 | $2003:$ <br> H2 | 2004 | 2005 |  |
|  | 8.7 | -0.7 | -1.3 | 10.3 | 9.7 | 9.6 |  |
| $\quad$ Previous $G B$ | 8.7 | -0.7 | -2.2 | 9.1 | 9.1 | -- |  |
| Real imports | 15.2 | 5.3 | 0.6 | 7.8 | 10.5 | 9.2 |  |
| Previous $G B$ | 15.2 | 5.3 | 1.1 | 6.2 | 10.2 | -- |  |

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

Import growth in the first half of 2003 was close to zero, a bit weaker than estimated in the August Greenbook. The revision was largely in core goods. We project that real imports of goods and services will grow at annual rates of more than 7 percent beginning in the second half of 2003 and continuing through the forecast period. This path was revised up from the previous forecast about $11 / 2$ percentage points for the second half of this year, in part as a result of the upward revision to U.S. GDP growth, but is little changed for next year.

The acceleration of imports in the second half of this year is marked by strong growth in core and high-tech goods and a surge in imports of services (reflecting the same bounceback as in services exports); oil imports, however, fall off from their unusually high level in the second quarter. Next year, import growth should pick up still further, largely reflecting a further rise in the growth rate of U.S. GDP, but then edge down a bit in 2005 as U.S. GDP growth slows. As with exports of core goods, imports of core goods have fallen below their traditional relationship with U.S. GDP and exchange rates, leading us to build in a small additional increment to their growth rates over the forecast period. All told, imports of core goods are projected to increase at a pace of 8 percent or
more over the forecast period. We project that imports of services will grow at a rate of more than 10 percent in the second half before returning to around 5 percent in 2004 and 2005.

## Alternative Simulations

We project that the United States will continue to grow faster than the foreign economies throughout the forecast period. This relatively favorable outlook for the U.S. economy may increase the appetite of investors for U.S. dollar assets more than is implied in our projections. In our alternative simulation, we use the FRB/Global model to assess the effects of a fall in the risk premium on the dollar in foreign exchange markets that would generate substantial dollar appreciation. The shock is assumed to occur in 2003:Q4 and has been scaled so that the real value of our broad dollar index would rise 10 percent in the absence of endogenous adjustments in long-term interest rates.

## Alternative Simulation: <br> 10 Percent Appreciation of the Broad Real Dollar

(Percent change from previous period, annual rate)

| Indicator and simulation | 2003 |  | 2004 |  | 2005 |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H1 | H2 | H1 | H2 | H1 | H2 |
| U.S. real GDP |  |  |  |  |  |  |
| Baseline |  |  |  |  |  |  |
| Dollar Appreciation | 2.4 | 4.5 | 5.2 | 4.9 | 3.9 | 3.9 |
|  | 2.4 | 4.4 | 4.8 | 4.5 | 3.3 | 3.4 |
| U.S. PCE prices excl. food and energy |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Baseline |  |  |  |  |  |  |
| Dollar Appreciation | 0.8 | 1.4 | 1.1 | 1.0 | 0.9 | 0.8 |

Note. H1 is Q2/Q4; H2 is Q4/Q2. In these simulations, the nominal federal funds rate remains unchanged from baseline, and the monetary authorities in major foreign economies adjust their policy rates according to a Taylor rule.

This shock depresses net exports, lowering U.S. GDP growth 0.4 percentage point in 2004, relative to baseline, and about 0.6 percentage point in 2005. Core PCE inflation falls 0.5 percentage point below baseline in 2004, mainly because of the direct effect of lower prices for imported goods and services. Inflation falls 0.2 percentage point below baseline in 2005, reflecting the effects of reduced capacity utilization on domestic prices.
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Strictly Confidential (FR)
Class II FOMC

| ```Strictly Confidential (FR) September 10, 2003 Class II FOMC OUTLOOK FOR FOREIGN REAL GDP AND CONSUMER PRICES: SELECTED COUNTRIES (Percent, Q4 to Q4)``` |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | --- | - jec | ---- |
| Measure and country | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| REAL GDP (1) |  |  |  |  |  |  |  |  |  |
| Total foreign | 4.2 | 1.5 | 4.9 | 4.4 | 0.3 | 2.8 | 1.8 | 3.6 | 3.4 |
| Industrial Countries of which: | 3.5 | 2.7 | 4.2 | 3.8 | 0.6 | 2.6 | 1.6 | 2.7 | 2.7 |
| Canada | 4.4 | 4.4 | 5.9 | 4.2 | 1.4 | 3.5 | 1. 9 | 3.4 | 3.3 |
| Japan | 0.3 | -1.3 | -0.5 | 5.1 | -2.4 | 2.5 | 2.5 | 1.6 | 1.5 |
| United Kingdom | 3.7 | 2.6 | 3.2 | 2.2 | 1.9 | 2.3 | 1.6 | 2.7 | 2.5 |
| Euro Area (2) | 3.2 | 2.0 | 3.8 | 2.7 | 0.8 | 1.1 | 0.5 | 2.3 | 2.4 |
| Germany | 1.7 | 0.7 | 3.3 | 1.9 | 0.5 | 0.5 | 0.1 | 2.1 | 2.1 |
| Developing Countries | 5.4 | -0.3 | 6.1 | 5.3 | -0.3 | 3.1 | 2.2 | 4.8 | 4.4 |
| Asia | 5.0 | -2. 2 | 8.6 | 6.2 | 0.9 | 5.6 | 2.7 | 5.6 | 5.3 |
| Korea | 3.4 | -5.2 | 13.8 | 5.1 | 4.2 | 7.0 | 0.8 | 4.6 | 5.5 |
| China | 8.7 | 9.5 | 4.1 | 8.0 | 7.5 | 8.0 | 8.1 | 8.3 | 7.7 |
| Latin America | 6.1 | 1.2 | 4.2 | 4.5 | $-1.4$ | 1.1 | 1.7 | 4.5 | 3.7 |
| Mexico | 6.8 | 2.9 | 5.4 | 4.8 | $-1.4$ | 2.0 | 2.5 | 5.0 | 4.0 |
| Brazil | 2.5 | $-1.6$ | 3.4 | 3.9 | -0.9 | 3.2 | -0.5 | 3.5 | 3.5 |
| CONSUMER PRICES (3) |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Japan $\begin{array}{llllllllllllllll} & 2.1 & 0.7 & -1.1 & -1.3 & -1.3 & -0.4 & -0.3 & -0.4 & -0.3\end{array}$ |  |  |  |  |  |  |  |  |  |
| $\begin{array}{llllllllllllll}\text { United Kingdom (4) } & 2.7 & 2.7 \\ & 1.5 & 2.2 & 2.1 & 2.0 & 2.6 & 2.7\end{array}$ |  |  |  |  |  |  |  |  |  |
| $\begin{array}{clllllll}\text { Euro Area (2) } & 1.5 & 0.8 & 1.5 & 2.5 & 2.1 & 2.3 & 1.7 \\ \text { Germany }\end{array}$ |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Korea | 4.9 | 5.8 | 1.2 | 2.5 | 3.3 | 3.4 | 2.7 | 2.7 | 2.7 |
|  |  |  |  |  |  |  |  |  |  |
| Latin America | 15.5 | 15.4 | 12.5 | 8.4 | 5.3 | 6.4 | 4.8 | 4.0 | 3.5 |
| Mexico | 17.0 | 17.3 | 13.4 | 8.7 | 5.1 | 5.3 | 3.9 | 3.6 | 3.1 |
| Brazil | 4.6 | 2.0 | 8.4 | 6.4 | 7.5 | 10.7 | 11.6 | 5.8 | 5.2 |

[^4]Strictly Confidential (FR)
Class II FOMC
OUTLOOK FOR FOREIGN REAL GDP AND CONSUMER PRICES: SELECTED COUNTRIES
(Percent changes)

| Measure and country | 2003 |  |  |  | $\begin{aligned} & \text { Projected } \\ & 2004 \end{aligned}$ |  |  |  | 2005 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| REAL GDP (1) ------------------- Quarterly changes at an annual rate |  |  |  |  |  |  |  |  |  |  |  |  |
| Total foreign | 0.7 | 0.3 | 2.9 | 3.4 | 3.5 | 3.6 | 3.6 | 3.6 | 3.5 | 3.4 | 3.3 | 3.3 |
| Industrial Countries of which: | 1.6 | 0.5 | 1.7 | 2.5 | 2.6 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.7 | 2.7 |
| Canada | 2.6 | -0.3 | 2.1 | 3.4 | 3.5 | 3.5 | 3.4 | 3.3 | 3.4 | 3.4 | 3.3 | 3.3 |
| Japan | 2.4 | 3.9 | 1.7 | 2.0 | 1.6 | 1.6 | 1.6 | 1.5 | 1.4 | 1.4 | 1.4 | 1.5 |
| United Kingdom | 0.4 | 1.4 | 2.3 | 2.4 | 2.6 | 2.7 | 2.7 | 2.6 | 2.6 | 2.6 | 2.4 | 2.4 |
| Euro Area (2) | 0.1 | -0.3 | 0.9 | 1.5 | 1.9 | 2.2 | 2.6 | 2.6 | 2.5 | 2.5 | 2.4 | 2.4 |
| Germany | -1.0 | -0.2 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 2.4 | 2.2 | 2.2 | 2.0 | 2.0 |
| Developing Countries | -0.6 | 0.1 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 4.4 | 4.4 | 4.3 | 4.3 |
| Asia | 2.8 | -5.1 | 6.9 | 6.4 | 5.5 | 5.6 | 5.5 | 5.6 | 5.5 | 5.5 | 5.2 | 5.1 |
| Korea | -1.6 | -2.9 | 3.0 | 5.0 | 4.5 | 4.5 | 4.5 | 5.0 | 5.5 | 5.5 | 5.5 | 5.5 |
| China | 16.3 | -2.9 | 10.0 | 10.0 | 8.5 | 8.5 | 8.2 | 8.2 | 8.0 | 8.0 | 7.5 | 7.5 |
| Latin America | -4.2 | 4.5 | 3.2 | 3.8 | 4.5 | 4.5 | 4.5 | 4.5 | 3.7 | 3.7 | 3.7 | 3.7 |
| Mexico | -1.7 | 4.9 | 3.0 | 3.8 | 5.0 | 5.0 | 5.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Brazil |  | -6.2 | 3.5 |  | 3.5 |  | 3.5 |  | 3.5 |  |  | 3.5 |
| CONSUMER PRICES (3) |  |  |  |  |  |  |  |  |  |  |  |  |
| Industrial Countries of which: | 2.5 | 1.8 | 1.6 | 1.3 | 0.8 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Canada | 4.5 | 2.8 | 2.2 | 1.8 | 0.7 | 2.0 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Japan | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.3 | -0.4 | -0.4 | -0.4 | -0.4 | -0.3 | -0.3 |
| United Kingdom (4) | 2.9 | 2.9 | 3.0 | 2.7 | 2.4 | 2.6 | 2.5 | 2.4 | 2.4 | 2.4 | 2.4 | 2.5 |
| Euro Area (2) | 2.3 | 2.0 | 2.1 | 1.7 | 1.4 | 1.5 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| Germany | 1.1 | 0.9 | 0.9 | 0.8 | 0.5 | 0.9 | 0.9 | 1.1 | 1.0 | 1.1 | 1.1 | 1.0 |
| Developing Countries | 3.6 | 3.1 | 2.7 | 2.6 | 2.3 | 2.5 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.7 |
| Asia | 1.4 | 1.2 | 1.1 | 1.2 | 1.1 | 1.5 | 1.9 | 1.9 | 2.0 | 2.1 | 2.1 | 2.2 |
| Korea | 4.1 | 3.3 | 3.0 | 2.7 | 2.1 | 2.2 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 |
| China | 0.5 | 0.6 | 0.7 | 0.9 | 0.7 | 1.2 | 1.5 | 1.6 | 1.8 | 1.8 | 1.8 | 1.8 |
| Latin America | 7.1 | 6.3 | 5.4 | 4.8 | 4.3 | 4.2 | 4.2 | 4.0 | 3.8 | 3.7 | 3.6 | 3.5 |
| Mexico | 5.5 | 4.7 | 4.1 | 3.9 | 3.9 | 3.9 | 3.8 | 3.6 | 3.4 | 3.3 | 3.2 | 3.1 |
| Brazil | 15.6 | 17.0 | 15.3 | 11.6 | 6.7 | 5.2 | 5.9 | 5.8 | 5.6 | 5.5 | 5.3 | 5.2 |

[^5]OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

|  | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | $\begin{array}{r} \text { Project } \\ 2004 \end{array}$ | ------ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NIPA REAL EXPORTS and IMPORTS Percentage point contribution to GDP growth, Q4/Q4 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -0.8 | -1.1 | $-1.0$ | -0.8 | -0.1 | -1.0 | -0.2 | -0.6 | -0.4 |
| Exports of G\&S | 1.0 | 0.3 | 0.5 | 0.8 | -1.3 | 0.4 | 0.4 | 0.9 | 1.0 |
| Imports of G\&S | $-1.7$ | $-1.3$ | $-1.5$ | $-1.5$ | 1.2 | $-1.3$ | -0.6 | $-1.5$ |  |
| Percentage change, Q4/Q4 |  |  |  |  |  |  |  |  |  |
| Exports of $G \& S$ | 8.5 | 2.3 | 4.9 | 7.3 | -11.4 | 3.9 | 4.4 | 9.7 | 9.6 |
| Services | 1.4 | 2.9 | 3.2 | 4.8 | -9.2 | 11.4 | 3.6 | 6.1 | 6.0 |
| Computers | 25.8 | 8.1 | 13.4 | 23.0 | -23.4 | -2.1 | 8.0 | 37.2 | 33.5 |
| Semiconductors | 21.3 | 9.1 | 34.6 | 26.9 | -34.9 | 8.5 | 34.8 | 40.1 | 36.2 |
| Other Goods 1/ | 9.8 | 1.3 | 3.2 | 5.7 | -9.4 | 0.5 | 2.7 | 7.7 | 7.5 |
| Imports of $G \& S$ | 14.3 | 10.8 | 11.9 | 11.1 | -8.0 | 10.1 | 4.1 | 10.5 | 9.2 |
| Services | 14.0 | 8.5 | 5.9 | 10.9 | -8.6 | 11.5 | -0.1 | 5.4 | 4.3 |
| Oil | 3.9 | 4.1 | -3.4 | 13.3 | 0.1 | 4.0 | -1.1 | 1.7 | 2.4 |
| Computers | 33.0 | 25.8 | 26.0 | 13.6 | -13.8 | 13.6 | 17.7 | 37.3 | 33.6 |
| Semiconductors | 32.9 | -8.7 | 34.2 | 22.5 | -51.4 | 9.3 | 14.7 | 40.1 | 36.2 |
| Other Goods 2/ | 12.7 | 11.5 | 12.7 | 10.4 | $-6.2$ | 10.1 | 4.6 | 10.2 | 8.3 |
| Billions of chained 1996 dollars |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services |  | $-221.1$ | $-320.5$ | -398.8 | -415.9 | $-488.5$ |  |  |  |
| Exports of G\&S | 981.5 | 1002.4 | 1036.3 | 1137.2 | 1076.1 | 1058.8 | 1074.7 | 1169.3 | 1284.2 |
| Imports of G\&S | 1094.8 | 1223.5 | 1356.8 | 1536.0 | 1492.0 | 1547.4 | 1614.5 | 1768.9 | 1940.2 |


| Billions of dollars |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| US CURRENT ACCOUNT BALANCE | -127.7 | -204.7 | -290.8 | -411.5 | -393.7 | -480.9 | -550.0 | -594.3 | -649.0 |
| Current Acct as Percent of GDP | -1.5 | -2.3 | -3.1 | -4.2 | -3.9 | -4.6 | -5.1 | -5.2 | -5.3 |
| Net Goods \& Services (BOP) | -107.0 | $-163.2$ | -261. 2 | -375.4 | -357.8 | -418.0 | -497.1 | -543.3 | -592.2 |
| Investment Income, Net | 25.1 | 11.5 | 22.3 | 24.2 | 15.7 | 1.3 | 19.0 | 16.6 | 11.5 |
| Direct, Net | 72.4 | 65.5 | 78.2 | 94.9 | 106.5 | 93.5 | 103.7 | 105.5 | 113.3 |
| Portfolio, Net | -47.3 | -54.1 | -55.9 | -70.7 | -90.8 | -92.2 | -84.7 | -88.9 | -101.8 |
| Other Income \& Transfers, Net | -45.7 | -53.0 | -52.0 | -60.3 | -51.6 | -64.1 | -71.9 | $-67.6$ | -68.2 |

[^6]September 10, 2003
NIPA REAL EXPORTS and IMPORTS


1. Merchandise exports excluding computers and semiconductors.
2. Merchandise imports excluding oil, computers, and semiconductors
Strictly Confidential (FR)
Class II FOMC
OUTLOOK FOR U.S. INTERNATIONAL TRANSACTIONS

|  | 2003 |  |  |  | $\begin{aligned} & \text { Projected } \\ & 2004 \end{aligned}$ |  |  |  | 2005 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| NIPA REAL EXPORTS and IMPORTS |  |  |  |  |  |  |  |  |  |  |  |  |
| Percentage point contribution to GDP growth |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | 0.8 | -1.2 | -0.3 | 0.1 | -0.7 | -0.8 | -0.5 | -0.2 | -0.5 | -0.5 | -0.4 | -0.1 |
| Exports of G\&S | -0.1 | -0.1 | 0.8 | 1.1 | 0.7 | 0.9 | 1.0 | 1.2 | 0.8 | 1.0 | 1.0 | 1.2 |
| Imports of G\&S | 0.9 | -1.1 | $-1.2$ | $-1.0$ | -1.3 | $-1.7$ | -1. 5 | $-1.4$ | $-1.3$ | $-1.5$ | $-1.3$ | $-1.2$ |
| Percentage change from previous period, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Exports of G\&S | $-1.3$ | $-1.2$ | 9.0 | 11.6 | 7.0 | 9.7 | 10.0 | 12.2 | 7.9 | 9.7 | 9.5 | 11.5 |
| Services | -8.0 | 0.6 | 12.5 | 10.5 | 6.1 | 5.8 | 6.2 | 6.2 | 6.1 | 6.1 | 5.9 | 5.9 |
| Computers | -7.2 | $-10.7$ | 26.2 | 30.0 | 33.5 | 38.5 | 38.5 | 38.5 | 33.5 | 33.5 | 33.5 | 33.5 |
| Semiconductors | 44.8 | 30.5 | 29.3 | 35.3 | 36.3 | 41.4 | 41.4 | 41.4 | 36.2 | 36.2 | 36.2 | 36.2 |
| Other Goods 1/ | 0.2 | -3.4 | 5.0 | 9.6 | 4.1 | 7.8 | 7.9 | 11.3 | 4.8 | 7.7 | 7.3 | 10.4 |
| Imports of $G \& S$ | $-6.2$ | 7.9 | 8.5 | 7.1 | 9.8 | 12.4 | 10.4 | 9.6 | 8.9 | 10.4 | 9.0 | 8.3 |
| Services | -4.0 | -14.7 | 13.1 | 7.4 | 4.4 | 6.2 | 5.8 | 5.2 | 4.1 | 4.5 | 4.4 | 4.2 |
| Oil | -12. 6 | 54.5 | -5.7 | -24.8 | -0.5 | 25.9 | -2.3 | -12.8 | 5.2 | 20.1 | $-1.7$ | -11.6 |
| Computers | -2.1 | 20.8 | 23.9 | 31.1 | 33.6 | 38.6 | 38.6 | 38.6 | 33.6 | 33.6 | 33.6 | 33.6 |
| Semiconductors | -1.0 | 4.3 | 24.1 | 35.3 | 36.3 | 41.5 | 41.4 | 41.4 | 36.3 | 36.2 | 36.2 | 36.2 |
| Other Goods 2/ | -6.4 | 8.5 | 7.9 | 9.3 | 10.1 | 10.2 | 10.1 | 10.1 | 7.9 | 8.6 | 8.4 | 8.2 |
| Billions of chained 1996 dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -510.3 | $-543.6$ | -553.5 | -551.6 | -571.8 | -595.9 | $-611.7$ | $-618.8$ | $-635.2$ | -653.1 | -665.9 | -669.6 |
| Exports of $G \& S$ | 1058.1 | 1054.9 | 1077.9 | 1108.0 | 1127.0 | 1153.4 | 1181.2 | 1215.7 | 1238.9 | 1268.0 | 1297.2 | 1332.9 |
| Imports of G\&S | 1568.4 | 1598.6 | 1631.4 | 1659.6 | 1698.8 | 1749.2 | 1792.9 | 1834.5 | 1874.1 | 1921.1 | 1963.0 | 2002.4 |
| Billions of dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| US CURRENT ACCOUNT BALANCE | -544.6 | -544.0 | -558.5 | -553.0 | $-569.4$ | -591.2 | -604.9 | -611.7 | $-625.3$ | -641.9 | -658.6 | -670.1 |
| Current Account as \% of GDP | -5.1 | -5.0 | -5.1 | -5.0 | -5.0 | -5.2 | -5.2 | -5.2 | -5.2 | $-5.3$ | -5.4 | -5.4 |
| Net Goods \& Services (BOP) | -486.4 | -490.7 | -509.0 | -502.3 | -520.7 | -541.3 | -553.3 | -557.9 | -572.2 | -588.8 | -601.5 | -606.5 |
| Investment Income, Net | 15.8 | 17.9 | 21.7 | 20.7 | 18.7 | 17.5 | 15.7 | 14.4 | 15.2 | 15.1 | 11.1 | 4.6 |
| Direct, Net | 97.9 | 103.4 | 106.9 | 106.6 | 105.2 | 105.2 | 105.3 | 106.2 | 109.4 | 112.0 | 114.5 | 117.2 |
| Portfolio, Net | -82.1 | -85.5 | -85.2 | -85.9 | -86.5 | -87.7 | -89.6 | -91.9 | -94.2 | -96.9 | -103.4 | -112.6 |
| Other Inc. \& Transfers, Net | - -73.9 | $-71.2$ | -71.2 | -71.4 | $-67.4$ | -67.4 | $-67.4$ | $-68.2$ | -68.2 | $-68.2$ | $-68.2$ | -68.2 |

[^7]
[^0]:    ${ }^{1}$ In some cases, original copies needed to be photocopied before being scanned into electronic format. All scanned images were deskewed (to remove the effects of printer- and scanner-introduced tilting) and lightly cleaned (to remove dark spots caused by staple holes, hole punches, and other blemishes caused after initial printing).
    ${ }^{2}$ A two-step process was used. An advanced optical character recognition computer program (OCR) first created electronic text from the document image. Where the OCR results were inconclusive, staff checked and corrected the text as necessary. Please note that the numbers and text in charts and tables were not reliably recognized by the OCR process and were not checked or corrected by staff.

[^1]:    1. The source of the upward revision to the historical estimates of actual productivity was a downward revision to the estimates of actual hours worked. The latter change has led us to revise down 0.1 percentage point our estimates of the annual rate of increase in structural hours worked. This adjustment to structural hours offsets part of the effect of the more-rapid structural productivity gains on potential GDP.
[^2]:    > a--Actual

[^3]:    4. NIPA surplus less changes in retirement fund assets plus consumption of fixed capital.
    5. Average debt levels in the period (computed as the average of period-end debt positions) divided by nominal GDP.
    

    Note. Data after 2003:Q2 are staff projections.

    1. For corporations: Excess of capital expenditures over U.S. internal funds. 2. Includes change in liabilities not shown in lines 8 and 9 . 3. Average debt levels in the period (computed as the average of period-end debt positions)
    divided by disposable personal income.
    2.6.4 FOF
[^4]:    1. Foreign GDP aggregates calculated using shares of U.S. exports.
    2. Harmonized data for euro area from Eurostat.
    3. CPI excluding mortgage interest payments, which is the targeted inflation rate.
[^5]:    1. Foreign GDP aggregates calculated using shares of U.S. exports

    Foreign GDP aggregates calculated using shares of U.S. exports
    Harmonized data for euro area from Eurostat.
    3. Foreign CPI aggregates calculated using shares of U.S. non-oil imports.
    4. CPI excluding mortgage interest payments, which is the targeted inflation rate.

[^6]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, computers, and semiconductors.
[^7]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, computers, and semiconductors
