## Prefatory Note

The attached document represents the most complete and accurate version available based on original copies culled from the files of the FOMC Secretariat at the Board of Governors of the Federal Reserve System. This electronic document was created through a comprehensive digitization process which included identifying the bestpreserved paper copies, scanning those copies, ${ }^{1}$ and then making the scanned versions text-searchable. ${ }^{2}$ Though a stringent quality assurance process was employed, some imperfections may remain.

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

[^0]
## Part 1

## CURRENT ECONOMIC AND FINANCIAL CONDITIONS

## Summary and Outlook

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

## Summary and Outlook

## Domestic Developments

The reduction in Iraq-related uncertainty as well as positive news regarding corporate earnings have caused the tenor of financial markets to improve markedly since the March Greenbook. Equity prices have risen, risk premiums on corporate bonds have narrowed, crude oil prices have declined sharply, and consumer confidence has rebounded. But these favorable developments have occurred against the backdrop of slower growth of real activity in recent months than we anticipated earlier. Spending by both households and businesses was anemic, on balance, in the first months of the year. Judging by the upward movement in initial claims for unemployment insurance, conditions in labor markets continued to deteriorate through April. Available indicators suggest that industrial production has remained very soft. And in contrast to consumer confidence, business sentiment seems to have remained quite downbeat.

We continue to believe that the economy will improve substantially later this year. Monetary policy has been and remains accommodative, federal fiscal policy is expansionary and is projected to become more so, negative wealth effects on the growth of consumer spending should diminish, continued solid gains in labor productivity ought to help support spending by both households and businesses, and declines in energy prices should provide a further boost to real incomes.

Nevertheless, the timing and the magnitude of the pickup in the pace of growth are subject to considerable uncertainty, and despite the more-favorable financial conditions in this projection, the softer tone of recent indicators has led us to slightly reduce our projection of growth in the second half of this year. We now project that real GDP growth will move up from an annual rate of less than 2 percent in the first half of this year to a 4 percent pace in the second half, when federal tax and spending actions are expected to provide an important lift to aggregate demand. We expect to see the growth of real GDP pick up further in 2004, to $4-3 / 4$ percent. With subpar growth continuing in the near term, the unemployment rate is projected to move above 6 percent in the coming months and to fall below this level only in 2004.

Aside from energy prices-which already have begun to decline in the wake of falling crude oil prices-consumer prices have increased very slowly in recent months. Although transitory factors probably have exaggerated the recent degree of softness, we view these data as indicating that inflation is on a slightly lower trajectory than we had thought; we are now expecting both total and core PCE inflation to slow to just 1 percent by 2004, with the further deceleration driven by continuing slack in resource utilization. Taking account of measurement bias in consumer prices, our projection for PCE inflation is at the upper end of the range associated with zero inflation.

## Key Background Factors

The March Greenbook was written shortly before the start of military action in Iraq. As a means of dealing with the wide range of possible military outcomes, we based that forecast not on any specific war scenario and its attendant economic effects but instead on the probability-weighted average of possible outcomes that were implicit in stock prices, interest rates, and oil prices. Because these variables presumably were affected by the perception of a small, but positive, probability that a war could lead to extremely adverse economic outcomes, the mean values of these variables probably differed from the most likely or modal outcome that we typically aim to describe in our projections. In the event, many of these downside risks to the economy have receded since the last FOMC meeting, and financial markets have in turn responded favorably. As a consequence, the constellation of possible economic outcomes that underlie prices in oil and financial markets at present appear to be more symmetric, and in our view there is no longer a meaningful difference between the mean and the modal outcome for these financial variables.

Equity prices have risen around 14 percent since the last Greenbook, and we have raised our assumed path for the stock market by approximately this amount throughout the projection period. Consistent with our past practice, we assume that share prices will increase from current levels at an annual pace of about 7 percent, which roughly maintains risk-adjusted parity with the return on Treasury securities.

We have not changed the monetary policy assumptions underlying this projection and continue to assume that the federal funds rate will remain at $1-1 / 4$ percent throughout the forecast period. After 2004, however, the funds rate should eventually move back toward a more neutral setting; this expectation generates a gradual uptrend in longer-term Treasury rates over our forecast period. Risk spreads for corporate issues have narrowed since the time of the March Greenbook, but they remain relatively wide, and we are looking for them to narrow further as the economy gradually strengthens. Thus, although we expect Treasury rates to drift up from current levels, we project yields on corporate bonds to move lower over the forecast period.

Crude oil prices have dropped sharply as OPEC increased oil production and the geopolitical uncertainty regarding Iraq unwound. The spot price of West Texas intermediate (WTI) closed a bit over \$25 per barrel on April 29, a drop of nearly $\$ 12$ per barrel from the time of the last Greenbook. Although this drop was more sudden than participants in futures markets had expected, futures prices for late 2004 have been revised down only a little in recent weeks. Accordingly, we expect WTI to edge down only slightly from current levels, to a little below $\$ 24$ per barrel by the end of 2004-a projection just a bit lower than that in the March Greenbook.

Federal fiscal policy is assumed to be more stimulative in this projection, as we have raised our spending assumptions in light of the budget authority provided for in the recently enacted supplemental appropriations bill. Relative to the March Greenbook, the current projection assumes additional spending on both defense and nondefense items (the latter includes aid to airlines, homeland security spending, and international aid) of $\$ 12$ billion in fiscal 2003 and $\$ 30$ billion in fiscal 2004. This higher level of spending is consistent with the continued commitment of troops to the Persian Gulf region throughout the forecast period. ${ }^{1}$ On the tax side, our policy assumptions are unchanged from the March Greenbook. We continue to expect a package of tax cuts that will be worth roughly $\$ 350$ billion over ten years-similar to the amount being considered by the Senate-and that will reduce tax liabilities relative to current law about $\$ 70$ billion both this calendar year and next. ${ }^{2}$ Taking into account both the tax cuts and the additional spending, we estimate that discretionary fiscal policy will boost the growth of real aggregate demand about 1 percentage point in both 2003 and 2004, a bit more stimulus than we had assumed in the last Greenbook. (Alternative simulations examine the implications of both greater and lesser fiscal stimulus than is in our baseline forecast.)

Tax receipts for both individuals and corporations have been coming in a little weaker than we had expected, and given the higher federal spending assumptions in this projection, we now anticipate a unified deficit of more than $\$ 300$ billion in fiscal 2003 and more than $\$ 400$ billion in fiscal 2004. These figures are about $\$ 40$ billion higher than projected in the March Greenbook.

The real trade-weighted foreign exchange value of the dollar slipped a little further over the intermeeting period, and we continue to project a modest depreciation of the dollar from current levels. We have somewhat marked down our projection for foreign real GDP growth in the second quarter, in part because of the effect of SARS on prospects for a number of Asian economies. But we continue to anticipate a moderate rebound in economic activity abroad.

## Recent Developments and the Near-Term Outlook

The data on economic activity that we have received since the time of the last Greenbook-almost all of which pertain to activity before the war-have pointed, on balance, to a more sluggish pace of growth than we had anticipated

[^1]Summary of the Near-Term Outlook
(Percent change at annual rate except as noted)

| Measure | 2003:Q1 |  | 2003:Q2 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Mar. <br> GB | Apr. <br> GB | Mar. <br> GB | Apr. <br> GB |
| Real GDP | 2.3 | 1.6 | 2.3 | 2.0 |
| Private domestic final purchases | 1.8 | 1.2 | 2.9 | 2.6 |
| Personal consumption expenditures | 1.7 | 1.4 | 2.3 | 2.5 |
| Residential investment | 16.7 | 11.5 | 4.9 | -1.5 |
| Business fixed investment | -3.5 | -4.2 | 6.3 | 5.6 |
| Government outlays for consumption and investment | 3.9 | 1.0 | 3.9 | 7.5 |
|  | Contribution to growth (percentage points) |  |  |  |
| Inventory investment | -. 2 | -. 4 | -. 2 | -1.0 |
| Net exports | . 2 | . 8 | -. 7 | -. 7 |

in the last Greenbook. News from the labor market has been particularly discouraging. Payroll employment continued moving down through March, and initial claims for unemployment insurance have moved higher in recent weeks, boosting the odds that further sizable job losses will be recorded in April and May. In addition, manufacturing production decreased in the first quarter and is expected to fall again in the second quarter; declines are expected to be concentrated in the motor vehicle industry, where inventories have risen above desired levels. Nevertheless, we project that, after rising at an annual rate of $1-1 / 2$ percent in the first quarter, real GDP will step up to a 2 percent rate of increase this quarter on the strength of a large rise in defense purchases.

Sales of light motor vehicles averaged an annual pace of 15-3/4 million units in the first quarter, noticeably below the pace of 16-1/2 million units recorded in the fourth quarter. However, a further boost in incentives appears to be pushing up sales in April, and we now project that sales will bounce back to a pace of 16-1/2 million units in the second quarter. The growth of consumer spending outside the motor vehicle sector also slowed in the first quarter, only partly, as best we can tell, because of the severe February snowstorms. But we expect that the strengthening in consumer sentiment and equity values will help support spending in the second quarter as will the boost to real incomes from falling energy prices. We now project real PCE excluding new motor vehicles to rise at an annual rate of 2-1/4 percent in the second quarter.

Residential construction activity has remained solid, though some signs of moderation have emerged. In the single-family sector, housing starts, supported by continued low mortgage interest rates, remained at an annual rate of 1.41 million units in the first quarter. However, new home sales were down from their fourth-quarter pace, and permit issuance edged lower in March. And in the multifamily sector, vacancy rates remain high. All told, we expect housing starts to remain about flat in the near term.

Consistent with the downbeat tone of anecdotal reports about the business sector, investment spending was generally lackluster in the first quarter, though some of that weakness was likely transitory. Real spending on equipment and software (E\&S), after rising in the preceding three quarters, declined at an annual rate of $4-1 / 2$ percent. Much of that decline reflected a fall in spending on motor vehicles and aircraft, and a projected rebound in those sectors leads us to expect real E\&S to rise at an 8 percent annual rate this quarter. Such an increase would still leave the average growth rate over the first half of the year at a feeble $1-1 / 2$ percent. Outside the transportation sector, the increase in spending on computers and on software was somewhat below our expectation. Recent data on orders and shipments of communications equipment, however, suggest a firming of activity in that sector. Real spending on items other than high-tech and transportation goods also declined in the first quarter-the first such decline in more than a year-though the nominal orders and shipments data for March point to some improvement in the current quarter.

Meanwhile, spending on nonresidential structures has continued to fall, but the rate of decline diminished notably in the first quarter, and we expect spending in this area to edge just a bit lower through the summer. Motor vehicle manufacturers have been attempting to deal with excess stocks, and other businesses were reluctant to add to inventories in the first quarter; we expect to see a decline in overall nonfarm inventories in the second quarter before restocking resumes later in the year.

In the government sector, real federal expenditures on consumption and gross investment were reported to have increased at an annual rate of only $2-1 / 2$ percent in the first quarter, and defense spending edged lower. These figures were considerably less than we had anticipated at the time of the last Greenbook. Nonetheless, in light of the budget authority provided for in the recently enacted supplemental appropriations bill, we are projecting defense spending to jump at an annual rate of 30 percent in the second quarter, which would contribute about 1-1/4 percentage points to the annual rate of growth of
real GDP. ${ }^{3}$ Real outlays by state and local governments were quite weak in the first quarter, with ongoing budgetary pressures continuing to restrain the pace of spending, and we expect very slow spending growth in this sector to persist.

The trade data available through February indicate that imports turned lower in the first quarter after rising notably last year. We view that decline as temporary, however, and expect imports to recoup their losses in the near term. Exports moved lower in the first quarter as well. But because the decline in imports was larger, net exports arithmetically contributed $3 / 4$ percentage point to the growth of real GDP in the first quarter. With a projected rebound in import spending this quarter, we expect net exports to make a negative contribution to the change in GDP of about that same magnitude.

Consumer energy prices rose sharply in the first quarter but have now begun to decline in response to the recent drop in crude oil prices. The consumer price index excluding food and energy increased at an annual rate of 1.3 percent in the first quarter, a lower rate than we had expected in the March Greenbook. Core PCE inflation was a little higher than we expected, but this reflected a jump in prices of imputed financial services and other nonmarket transactions. We think that the low readings on the core CPI not only signal a further reduction in underlying trends in consumer price inflation but also reflect some transitory factors, and we have assumed some larger increases in core inflation in the next few months. ${ }^{4}$ Still, we are projecting the core CPI prices to rise at an annual rate of only 1-3/4 percent, and core PCE prices to rise at a $1-1 / 2$ percent rate, in the second quarter.

As for compensation, the ECI for private industry workers rose at an annual rate of 5-1/2 percent in the first quarter following an increase of only 3 percent in the fourth quarter. The ECI is erratic on a quarterly basis, and we are inclined to expect a notably smaller increase of 3-1/4 percent in the second quarter. We are projecting the productivity and cost measure of compensation per hour in the nonfarm business sector to rise at about the same 3-1/4 percent rate over the first half of the year.
3. While we are confident that the expenditures provided for in the supplemental appropriations bill will be forthcoming eventually, the timing of those expenditures is subject to considerable uncertainty. The projected second-quarter jump in real defense spending is consistent with our assumption that an extra $\$ 29$ billion of defense expenditures will be spent in fiscal 2003 as a result of the bill. Extrapolating the experience of the first Gulf War would generate a more gradual increase in spending. However, many categories of spending plausibly could be increased quickly, and CBO and OMB are assuming that defense expenditures for this fiscal year will be between $\$ 5$ billion and $\$ 15$ billion larger than in our forecast.
4. Some of the recent decline in consumer price inflation reflects unusually weak prices for erratic components like tobacco, lodging away from home, telephone services, and motor vehicles, and we expect a portion of these declines to be reversed in the coming months.

## The Longer-Term Outlook for the Economy

As discussed above, our forecast for the second half of this year is a little weaker than in the March Greenbook. In our judgment, the recent improvements in financial market conditions, oil prices, and consumer confidence will be insufficient to fully offset the weaker economic conditions that now appear to have prevailed in the early part of this year. However, those more favorable developments have led us to strengthen somewhat our projection of growth in real activity next year. The basic logic behind our forecast remains the same as it has been for several months: The ongoing

## Projections of Real GDP

| Projections of Real GDP <br> (Percent change at annual rate from end of <br> preceding period except as noted) |  |  |  |
| :---: | ---: | ---: | ---: |
| Measure | 2003 |  | 2004 |
|  | H 1 | H2 |  |
| Real GDP | $\mathbf{1 . 8}$ | $\mathbf{3 . 9}$ | $\mathbf{4 . 8}$ |
| Previous | 2.3 | 4.1 | 4.6 |
| Final sales | 2.5 | 3.4 | 4.2 |
| Previous | 2.5 | 4.0 | 4.3 |
| PCE | 1.9 | 3.3 | 4.6 |
| Previous | 2.0 | 3.5 | 4.3 |
| Residential investment | 4.8 | 1.6 | 3.8 |
| Previous | 10.6 | 9.8 | 3.9 |
| BFI | .6 | 4.4 | 11.2 |
| Previous | 1.2 | 8.1 | 11.9 |
| Government purchases | 4.2 | 3.7 | 1.1 |
| Previous | 3.9 | 1.8 | 1.7 |
| Exports | .6 | 9.3 | 9.0 |
| Previous | 4.1 | 8.9 | 9.0 |
| Imports | -.1 | 6.9 | 10.0 |
| Previous | 4.4 | 6.9 | 9.6 |
|  | Contribution to growth, |  |  |
| Inventory change | percentage points |  |  |
| Previous | -.7 | .4 | .5 |
| Net exports | -.2 | .2 | .3 |
| Previous | .1 | -.1 | -.5 |
|  | -.2 | -.1 | -.5 |

impetus from accommodative monetary policy, stimulative fiscal policy, and strong underlying structural productivity growth should eventually show through to solid gains in real GDP. We project real GDP growth to increase from an annual pace of less than 2 percent in the first half of this year to about 4 percent in the second half of 2003 and to $4-3 / 4$ percent in 2004.

Household spending. After rising at an annual rate of 2 percent in the first half of this year, real consumer spending is expected to rise at a rate of more than 3 percent in the second half and around $4-1 / 2$ percent in 2004. As in previous Greenbooks, the strengthening stems from a number of factors, including wealth effects that become less negative over time, continued aggressive discounting by motor vehicle manufacturers, and an underlying trend in real income growth that is supported by rapid productivity growth and boosted further by falling energy prices in the near term and by additional tax cuts starting in October. ${ }^{5}$

We also expect residential investment spending to increase over the projection period, albeit by not as much as in recent Greenbooks. Our move to trim the forecast reflects incoming data that have been weaker than we had anticipated, our assumption that mortgage interest rates will be on a slightly higher path, and a reevaluation of the relationship between residential construction and its fundamental determinants. In all, we now expect single-family housing starts to move up only a little from their current annual pace of 1.41 million units to a rate of 1.44 million units in the second half of this year and to 1.47 million units on average in 2004. In the multifamily sector, we continue to expect a small increase in starts as the demand for rental units gradually strengthens.

Business spending. The factors influencing our projection for business spending on fixed investment remain the same as in previous Greenbooks. Favorable financing conditions, the partial-expensing tax incentives, and replacement demand should all help to promote a more solid expansion of equipment spending by the second half of this year. Nevertheless, with businesses still appearing reluctant to raise spending appreciably, we have marked down the projection for the second half of this year. We now expect real outlays for equipment and software to rise at a 6 percent annual rate in the second half, $4-1 / 2$ percentage points lower than the rate of expansion anticipated in the March Greenbook. But we still project a solid increase of 14 percent in 2004. We look for investment in nonresidential structures to be about flat in the second half of this year, with increases in expenditures on drilling and mining structures offsetting further declines in spending on buildings. We project that,

[^2]by 2004, declines in spending on industrial and office buildings will diminish greatly and spending for other commercial and institutional buildings will move up.

We also have delayed somewhat the boost to demand from inventory investment in light of data showing weaker stockbuilding in the first quarter and our sense that businesses remain very cautious about the outlook for sales. We now expect that firms will not begin restocking in earnest until the fourth quarter of this year. Consequently, we now look for more of the pickup to occur next year, contributing 1/2 percentage point to GDP growth in 2004.

Government spending. As discussed above, we have raised our estimates of federal spending in both the defense and the nondefense areas in light of the additional war-related expenditures approved by the Congress, with much of the step-up occurring quickly. We now project that real defense spending will rise 11 percent in 2003 before contracting a bit in 2004. The rise in real nondefense outlays is expected to be more balanced over the two years, about 6 percent in 2003 and 3-1/2 percent in 2004. In the state and local sector, ongoing budget pressures are likely to hold down the increase in real spending substantially, and we are projecting increases of only 1 percent this year and 2 percent in 2004.

Net exports. Real exports are expected to accelerate gradually over the forecast period as foreign economic growth improves and the dollar depreciates modestly further. We expect real exports to rise about 5 percent this year and 9 percent in 2004. We are looking for imports to pick up after their first-quarter drop and to rise rapidly in 2004, as faster U.S. growth more than offsets the effect of dollar depreciation. All told, we are expecting net exports to have no arithmetic influence on the change in real GDP this year and to make a negative contribution of about $1 / 2$ percentage point in 2004. (The International Developments section provides more detail on the outlook for the external sector.)

## Aggregate Supply, the Labor Market, and Prospects for Inflation

Our estimates of structural productivity and potential output growth are essentially the same as they were in the March Greenbook. ${ }^{6}$ We judge that real GDP is increasing more slowly than potential over the first half of this year, so we expect the current slack in resource utilization to increase slightly further. But the more rapid output growth expected for the second half of this year and 2004 should be sufficient to narrow the output gap somewhat over the

[^3]Decomposition of Structural Labor Productivity
(Percent change, Q4 to Q4, except as noted)

| Measure | $1973-$ <br> 95 | $1996-$ <br> 99 | 2000 | 2001 | 2002 | 2003 | 2004 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Structural labor productivity | 1.4 | 2.5 | 2.6 | 1.8 | 2.3 | 2.2 | 2.3 |
| $\quad$ Previous | 1.4 | 2.5 | 2.6 | 1.8 | 2.3 | 2.2 | 2.3 |
| Contributions $^{1}$ |  |  |  |  |  |  |  |
| Capital deepening | .6 | 1.3 | 1.2 | .5 | .4 | .3 | .6 |
| $\quad$ Previous | .6 | 1.3 | 1.1 | .3 | .2 | .3 | .6 |
| Multifactor productivity | .6 | 1.0 | 1.1 | 1.1 | 1.7 | 1.6 | 1.4 |
| $\quad$ Previous | .6 | 1.0 | 1.2 | 1.3 | 1.8 | 1.6 | 1.5 |
| Labor composition | .3 | .3 | .3 | .3 | .3 | .3 | .3 |
|  |  |  |  |  |  |  |  |
| MEMO | 2.9 | 3.5 | 3.7 | 2.9 | 3.3 | 3.1 | 3.2 |
| Potential GDP | 2.9 | 3.5 | 3.7 | 2.9 | 3.3 | 3.1 | 3.3 |
| $\quad$ Previous |  |  |  |  |  |  |  |

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

1. Percentage points.
projection period. Meanwhile, the ongoing slack is expected to help generate a further slowing of core consumer price inflation.

Productivity and the labor market. We estimate that labor productivity in the nonfarm business sector increased at an annual rate of about $1-1 / 2$ percent in the first quarter. However, this rise followed last year's unusually rapid productivity growth as firms achieved output gains by using their existing workforces more intensively rather than by hiring additional workers, and we estimate that productivity remains well above its structural level. Although we believe that the current intensity of utilization is not sustainable indefinitely, we nevertheless expect it to persist for a while longer. Indeed, we expect firms to continue shedding jobs through the current quarter and employment growth to be meager over the summer. But we project that hiring will reach 200,000 per month during the fourth quarter and will rise to more than 300,000 per month in 2004.

The absence of increases in the unemployment rate over the past year has been hard to understand in light of declines in payroll employment, but our best guess is that this steadiness stems from an unusually large withdrawal of people from the labor force during a period of labor market weakness. Although we are projecting the labor force participation rate to remain low in the near term, labor force gains still are expected to be in excess of hiring, and we project the unemployment rate to move above 6 percent by this summer. But we expect

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

| Measure | 2001 | 2002 | 2003 | 2004 |
| :--- | ---: | ---: | ---: | ---: |
| Output per hour, nonfarm business | 1.9 | 4.0 | 2.0 | 1.5 |
| $\quad$ Previous | 1.9 | 4.1 | 1.9 | 1.6 |
| Nonfarm private payroll employment | -1.4 | -.5 | .2 | 3.5 |
| $\quad$ Previous | -1.4 | -.5 | 1.1 | 3.3 |
| Household employment survey $^{\text {Previous }}$ | -.8 | .3 | 1.3 | 2.6 |
| Labor force participation rate $^{1}$ | -.8 | .3 | 1.7 | 2.4 |
| $\quad$ Previous | 66.8 | 66.5 | 66.4 | 67.0 |
| Civilian unemployment rate $^{1}$ | 66.8 | 66.5 | 66.6 | 67.0 |
| Previous | 5.6 | 5.9 | 6.1 | 5.6 |

1. Percent, average for the fourth quarter.
more-substantial employment gains next year to push the unemployment rate back down to $5-1 / 2$ percent by the end of the projection period. As the economy improves, we expect to see a noticeable rebound in labor force participation, which should temper the decline in the unemployment rate.

Prices and wages. As discussed above, incoming data that indicate low core consumer price inflation have led us to reduce our inflation projection slightly from the last Greenbook. Core PCE prices are now projected to rise at an annual rate of 1-1/4 percent in the second half of this year and 1 percent in 2004. Ongoing slack in resource utilization is the main factor expected to push inflation lower from current levels. Energy prices are expected to move down sharply in the next several months and to level off thereafter, and so overall consumer price inflation should rise at the same rate as the core measures in 2004.

We also expect the continued slack in the labor market to contribute to smaller increases in compensation costs. However, the energy-induced run-up of inflation through early this year likely will feed into compensation to some degree, and compensation costs are also expected to be held up by the rising cost of benefits-especially for health insurance. All told, we expect increases in the employment cost index for hourly compensation to move down to about 3 percent in 2004.

## Inflation Projections

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

| Measure | 2001 | 2002 | 2003 | 2004 |
| :---: | ---: | ---: | ---: | ---: |
| PCE chain-weighted price index | 1.5 | 1.8 | 1.3 | 1.0 |
| Previous | 1.5 | 1.8 | 1.5 | 1.0 |
| Food and beverages | 3.1 | 1.4 | 1.9 | 1.5 |
| Previous | 3.1 | 1.4 | 1.7 | 1.8 |
| Energy | -10.3 | 7.0 | -.5 | -.4 |
| Previous | -10.3 | 7.0 | 3.5 | -3.6 |
| Excluding food and energy | 1.9 | 1.6 | 1.2 | 1.0 |
| Previous | 1.9 | 1.6 | 1.3 | 1.1 |
| Consumer price index | 1.8 | 2.2 | 1.6 | 1.4 |
| Previous | 1.8 | 2.2 | 2.0 | 1.4 |
| Excluding food and energy | 2.7 | 2.1 | 1.7 | 1.5 |
| Previous | 2.7 | 2.1 | 1.9 | 1.7 |
| GDP chain-weighted price index | 2.0 | 1.3 | 1.5 | 1.2 |
| Previous | 2.0 | 1.3 | 1.4 | 1.3 |
| ECI for compensation of private |  |  |  |  |
| industry workers ${ }^{1}$ | 4.2 | 3.2 | 3.7 | 3.1 |
| Previous | 4.2 | 3.2 | 3.2 | 3.2 |
| NFB compensation per hour | 1.4 | 3.2 | 3.1 | 2.7 |
| Previous | 1.4 | 4.2 | 3.1 | 2.9 |
| Prices of core non-oilmerchandise imports <br> Previous | -2.9 | .7 | 3.3 | 1.3 |
| Decemer Decmer. | -2.9 | .7 | 2.6 | 1.2 |

1. December to December.

## Financial Flows and Conditions

The overall picture for debt growth is little changed from the last Greenbook. After growing 7 percent in 2002, domestic nonfinancial debt is expected to expand at about the same rate in 2003 and only slightly less in 2004. Borrowing by the federal government and nonfinancial business is expected to rise over the forecast period, but this increase is offset by a reduction in borrowing by households and state and local governments from the blistering pace of last year.

Federal debt is projected to expand about 10 percent both this year and next, an upward revision from the last Greenbook that is due to the larger budget deficit in this forecast. The Treasury's maneuvering to remain below the debt ceiling
held down federal borrowing from the public in the first quarter; we assume that the ceiling will be raised by the third quarter, at which point borrowing will move back up. This timing shift is expected to have no net effect on the amount of federal borrowing for the year as a whole.

After jumping 11-1/2 percent in 2002, state and local government debt decelerates in this projection to half that rate by the end of 2004, a forecast similar to the one in the last Greenbook. Much of the projected slowdown in long-term issuance is concentrated in advance refundings, as the recent refunding activity has reduced the eligible pool of bonds; by contrast, issuance for new capital projects should hold up well. Short-term financing needs decline next year with the expected improvement in state and local government budgets.

Borrowing by nonfinancial businesses has remained soft in recent months, despite an improvement in financial market conditions. We expect business debt growth to rise gradually over the forecast period with the projected acceleration in capital spending. Even so, the roughly 5 percent growth in business debt in 2004 is well below the rapid increases of the late 1990s. In addition, negative net equity issuance continues to hold down net funds raised by nonfinancial businesses this year and next.

As in the last Greenbook, we expect the growth of household debt to moderate from its nearly 10 percent pace in 2002. In particular, home mortgage borrowing should cool off given our outlook for an upturn in mortgage interest rates and slower increases in house prices. Nonetheless, mortgage debt is still projected to grow more than 7 percent next year. In this forecast, consumer credit continues to expand slowly this year but then accelerates somewhat in 2004 in response to a pickup in expenditures on durable goods and a lessening of the substitution of mortgage debt for other consumer loans.

After expanding nearly 7 percent in 2002, M2 is projected to increase 6 percent this year and next. M2 growth exceeds that of nominal income this year mainly because of the lagged effects of policy easing late last year. Next year, M2 grows in line with nominal income, as the lagged effects of policy easing disappear.

## Alternative Simulations

In this section, we illustrate several risks to the staff forecast using simulations of the FRB/US model. We first use stochastic simulations to calculate the probability of deflation by next year. We then assess two risks to fiscal policy-that the baseline stimulus package may not be enacted and, alternatively, that the tax cuts may be more generous and may be accompanied by higher-than-anticipated defense spending. We next return to a long-running

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

| Measure | $\begin{gathered} 2002: \\ \text { H2 } \end{gathered}$ | 2003 |  |  | 2004 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Q1 | Q2 | H2 |  |
| Real GDP |  |  |  |  |  |
| Greenbook Baseline | 2.7 | 1.6 | 2.0 | 3.9 | 4.8 |
| Political gridlock | 2.7 | 1.6 | 2.0 | 3.7 | 4.1 |
| More fiscal stimulus | 2.7 | 1.6 | 3.0 | 4.0 | 5.0 |
| Prolonged investment slump | 2.7 | 1.6 | 1.8 | 3.6 | 4.2 |
| Financial-market rebound | 2.7 | 1.6 | 2.0 | 4.5 | 5.4 |
| Lower funds rate | 2.7 | 1.6 | 2.0 | 4.0 | 5.2 |
| Civilian unemployment rate ${ }^{1}$ |  |  |  |  |  |
| Greenbook Baseline | 5.9 | 5.8 | 6.0 | 6.1 | 5.6 |
| Political gridlock | 5.9 | 5.8 | 6.0 | 6.1 | 6.0 |
| More fiscal stimulus | 5.9 | 5.8 | 5.9 | 6.0 | 5.4 |
| Prolonged investment slump | 5.9 | 5.8 | 6.0 | 6.2 | 5.9 |
| Financial-market rebound | 5.9 | 5.8 | 6.0 | 6.0 | 5.2 |
| Lower funds rate | 5.9 | 5.8 | 6.0 | 6.1 | 5.4 |
| PCE prices excluding food and energy |  |  |  |  |  |
| Greenbook Baseline | 1.6 | . 9 | 1.6 | 1.2 | 1.0 |
| Political gridlock | 1.6 | . 9 | 1.6 | 1.2 | 1.0 |
| More fiscal stimulus | 1.6 | . 9 | 1.6 | 1.2 | 1.1 |
| Prolonged investment slump | 1.6 | . 9 | 1.6 | 1.2 | 1.0 |
| Financial-market rebound | 1.6 | . 9 | 1.6 | 1.2 | 1.1 |
| Lower funds rate | 1.6 | . 9 | 1.6 | 1.2 | 1.1 |

1. Average for the final quarter of the period.
concern, the chance that the projected recovery in E\&S investment will be further delayed. On a more optimistic note, we also consider the possibility that risk premiums in financial markets may return to more-normal levels. In all these simulations, the federal funds rate is held unchanged at its baseline value. In our last simulation, we consider the effects of a lower funds rate.

The probability of deflation. In light of the surprisingly small increases in core consumer prices this year as well as the current subpar pace of real activity, there is a risk that disinflation may turn into outright deflation. To assess this risk, we use the FRB/US model to simulate the effects of shocks of the sort experienced over the past thirty years, with the goal of generating the likely
range of possible outcomes for the economy through next year. ${ }^{7}$ For present purposes, we define deflation to be a four-quarter core PCE inflation rate below $1 / 2$ percent (our estimate of measurement bias) by the end of 2004. On this definition, we estimate the probability of deflation by the end of next year to be 35 percent - up from the estimate of 28 percent prepared last December.

Political gridlock. Our assumption that a major fiscal stimulus package will be passed later this year is an important ingredient in the anticipated pickup in real activity next year. However, given the current disagreement between the House and the Senate about the size of the package, the two sides may fail to find a satisfactory compromise. In this scenario, we assume that political gridlock occurs and no additional tax cuts are passed, causing personal income taxes to be $\$ 40$ billion (annual rate) above baseline in 2003:Q4 and $\$ 105$ billion above in 2004. The lower level of disposable income implies weaker household spending and, consequently, lower business investment. Real GDP next year grows about 3/4 percentage point more slowly than in the baseline, and the unemployment rate remains near 6 percent. But inflation is little affected over this interval.

More fiscal stimulus. Alternatively, fiscal policy may prove more stimulative than we assume, both because the Congress may settle on a more generous tax-cut package and because war-related spending may turn out to be greater than we project. As regards the latter, although we expect significant increases in defense spending over the next few quarters, there is a risk that defense spending will ramp up even more quickly this year and remain elevated through 2004. In this alternative, defense spending is $\$ 25$ billion at an annual rate above baseline in 2003:Q2 and remains $\$ 25$ billion higher through the end of 2004. In addition, we assume that the Congress settles on a more generous package of tax cuts, boosting after-tax income an additional $\$ 15$ billion next year-enough to accommodate the larger package being contemplated by the House. As a result, the annual rate of real GDP growth is a full percentage point higher in the current quarter and is $1 / 4$ percentage point higher in 2004, pushing the unemployment rate $1 / 4$ percentage point lower than in the baseline by late next year. Again, inflation is little affected.

Prolonged investment slump. Anecdotal reports on business investment plans remain downbeat. We have lowered equipment and software spending in our baseline forecast to reflect this pessimism, but investment spending has generally surprised us on the downside in recent years, and we may not have revised down the forecast enough. In this scenario, we assume that E\&S
7. To do this, we repeatedly draw a random selection of shocks from the set of model equation errors from 1970 to 2000 and simulate their effects through the end of next year. We then take the generated set of possible outcomes and count the fraction of times the economy falls into deflation.
spending grows about 3 percentage points more slowly than in the baseline for the remainder of this year and about 5 percentage points more slowly next year. As a consequence, the rebound in GDP growth is more modest, and the unemployment rate remains near 6 percent.

Financial-market rebound. Despite recent past and projected declines in corporate bond rates, we expect that risk premiums on bonds and equity will remain elevated relative to historical norms through 2004 owing to continued uncertainty about economic prospects and concerns about corporate governance. In this alternative, we assume that these concerns dissipate more quickly so that corporate risk spreads return to their average historical level by the summer; equity premiums fall by a similar amount. As a result, corporate bond rates are 60 basis points lower, and equity prices are 15 percent higher, giving a substantial boost to the economy through the wealth effect and lower borrowing costs. Real GDP growth is $1 / 2$ percentage point higher than in the baseline in the second half of this year and in 2004. This additional growth is sufficient to bring the unemployment rate down to $5-1 / 4$ percent by the end of next year-enough of a diminution in slack to add one-tenth to inflation in 2004.

Lower funds rate. In this scenario, the federal funds rate is lowered 50 basis points at midyear and remains at $3 / 4$ percent thereafter. The additional monetary stimulus is sufficient to boost the rise in real GDP to $5-1 / 4$ percent next year and allows the unemployment rate to move down to a level $1 / 4$ percentage point below the baseline by the end of 2004. Inflation remains near 1 percent.

Strictly Confidential <FR> Class II FOMC

STAFF PROJECTIONS OF CHANGES IN GDP, PRICES, AND UNEMPLOYMENT (Percent, annual rate)

| Interval |  | Nominal GDP |  | Real GDP |  | GDP chain-weighted price index |  | Consumer price index ${ }^{1}$ |  | Unemployment rate ${ }^{2}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 03/13/03 | 04/30/03 | 03/13/03 | 04/30/03 | 03/13/03 | 04/30/03 | 03/13/03 | 04/30/03 | 03/13/03 | 04/30/03 |
| ANNUAL |  |  |  |  |  |  |  |  |  |  |  |
| 2000 |  | 5.9 | 5.9 | 3.8 | 3.8 | 2.1 | 2.1 | 3.4 | 3.4 | 4.0 | 4.0 |
| 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 |  | 4.1 | 3.9 | 2.6 | 2.3 | 1.5 | 1.6 | 2.5 | 2.1 | 6.0 | 6.0 |
| 2004 |  | 5.7 | 5.6 | 4.4 | 4.3 | 1.3 | 1.2 | 1.3 | 1.3 | 5.8 | 5.9 |
| QUARTERLY |  |  |  |  |  |  |  |  |  |  |  |
| 2001 | Q1 | 3.0 | 3.0 | -0.6 | -0.6 | 3.7 | 3.7 | 4.0 | 4.0 | 4.2 | 4.2 |
|  | Q2 | 0.9 | 0.9 | -1.6 | -1.6 | 2.5 | 2.5 | 3.2 | 3.2 | 4.4 | 4.4 |
|  | Q3 | 1.9 | 1.9 | -0.3 | -0.3 | 2.2 | 2.2 | 0.9 | 0.9 | 4.8 | 4.8 |
|  | Q4 | 2.2 | 2.2 | 2.7 | 2.7 | -0.5 | -0.5 | -0.7 | -0.7 | 5.6 | 5.6 |
| 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 | 3.0 | 3.2 | 1.4 | 1.4 | 1.6 | 1.8 | 2.0 | 2.0 | 5.9 | 5.9 |
| 2003 | Q1 | 4.3 | 4.3 | 2.3 | 1.6 | 2.0 | 2.6 | 3.8 | 3.8 | 5.8 | 5.8 |
|  | Q2 | 3.8 | 3.1 | 2.3 | 2.0 | 1.4 | 1.0 | 2.8 | 0.3 | 6.1 | 6.0 |
|  | Q3 | 4.9 | 4.5 | 3.8 | 3.4 | 1.0 | 1.1 | 0.4 | 0.7 | 6.2 | 6.1 |
|  | Q4 | 5.7 | 5.5 | 4.5 | 4.3 | 1.2 | 1.2 | 1.1 | 1.5 | 6.1 | 6.1 |
| 2004 | Q1 | 6.6 | 6.3 | 4.9 | 4.7 | 1.6 | 1.6 | 1.4 | 1.5 | 6.0 | 6.1 |
|  | Q2 | 6.0 | 6.0 | 4.7 | 4.8 | 1.2 | 1.2 | 1.4 | 1.4 | 5.9 | 6.0 |
|  | Q3 | 5.7 | 6.0 | 4.6 | 4.8 | 1.1 | 1.1 | 1.4 | 1.4 | 5.7 | 5.9 |
|  | Q4 | 5.5 | 5.9 | 4.4 | 4.8 | 1.1 | 1.1 | 1.5 | 1.4 | 5.5 | 5.6 |
| TWO-QUARTER ${ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |
| 2001 | Q2 | 1.9 | 1.9 | -1.1 | -1.1 | 3.1 | 3.1 | 3.5 | 3.5 | 0.5 | 0.5 |
|  | Q4 | 2.1 | 2.1 | 1.2 | 1.2 | 0.8 | 0.8 | 0.2 | 0.2 | 1.2 | 1.2 |
| 2002 | Q2 | 4.5 | 4.5 | 3.1 | 3.1 | 1.3 | 1.3 | 2.4 | 2.4 | 0.3 | 0.3 |
|  | Q4 | 4.0 | 4.1 | 2.7 | 2.7 | 1.3 | 1.4 | 2.1 | 2.1 | 0.0 | 0.0 |
| 2003 | Q2 | 4.0 | 3.7 | 2.3 | 1.8 | 1.7 | 1.8 | 3.3 | 2.1 | 0.2 | 0.1 |
|  | Q4 | 5.3 | 5.0 | 4.1 | 3.9 | 1.1 | 1.1 | 0.8 | 1.1 | 0.0 | 0.1 |
| 2004 | Q2 | 6.3 | 6.1 | 4.8 | 4.7 | 1.4 | 1.4 | 1.4 | 1.5 | -0.2 | -0.1 |
|  | Q4 | 5.6 | 5.9 | 4.5 | 4.8 | 1.1 | 1.1 | 1.4 | 1.4 | -0.4 | -0.4 |
| FOUR-QUARTER ${ }^{4}$ |  |  |  |  |  |  |  |  |  |  |  |
| 2000 Q4 |  | 4.6 | 4.6 | 2.3 | 2.3 | 2.3 | 2.3 | 3.4 | 3.4 | -0.2 | -0.2 |
| 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 |  | 4.7 | 4.3 | 3.2 | 2.8 | 1.4 | 1.5 | 2.0 | 1.6 | 0.2 | 0.2 |
| 2004 Q4 |  | 6.0 | 6.0 | 4.6 | 4.8 | 1.3 | 1.2 | 1.4 | 1.4 | -0.6 | -0.5 |

[^4]

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

Strictly Confidential <FR> Class II FOMC
real gross domestic product and related items, quarterly values
April 30, 2003 (Seasonally adjusted, annual rate except as noted)


[^5]real gross domestic product and related items, quarterly values
April 30, 2003


1. Private-industry workers.

| Strictly Confidential <FR> Class II FOMC | CONTRIBUTIONS |  | GROWTH | REAL G | DOME | PRODU | D REL | ITEMS |  |  | Apri | , 2003 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item | $\begin{gathered} 2000 \\ \text { Q3 } \end{gathered}$ | $\begin{aligned} & 2000 \\ & \mathrm{Q} 4 \end{aligned}$ | $\begin{gathered} 2001 \\ \text { Q1 } \end{gathered}$ | $\begin{gathered} 2001 \\ \mathrm{Q} 2 \end{gathered}$ | $\begin{gathered} 2001 \\ \text { Q3 } \end{gathered}$ | $\begin{aligned} & 2001 \\ & \mathrm{Q4} \end{aligned}$ | $\begin{gathered} 2002 \\ \mathrm{Q} 1 \end{gathered}$ | $\begin{gathered} 2002 \\ \mathrm{Q} 2 \end{gathered}$ | $\begin{aligned} & 2002 \\ & \mathrm{Q} 3 \end{aligned}$ | $\begin{gathered} 0024 / \\ 9924 \end{gathered}$ | $\begin{gathered} 0124 / \\ 0024 \end{gathered}$ | $\begin{gathered} 0294 / \\ 0124 \end{gathered}$ |
| Real GDP | 0.6 | 1.1 | -0.6 | -1.6 | -0.3 | 2.7 | 5.0 | 1.3 | 4.0 | 2.3 | 0.1 | 2.9 |
| Gross dom. purchases | 1.3 | 1.3 | -1.1 | -1.2 | -0.1 | 3.0 | 5.8 | 2.7 | 4.0 | 3.0 | 0.2 | 3.9 |
| Final sales | 1.7 | 1.2 | 2.7 | -0.5 | -0.2 | 4.1 | 2.5 | -0.1 | 3.5 | 2.6 | 1.6 | 1.7 |
| Priv. dom. final purchases | 2.6 | 1.0 | 1.2 | -1.0 | 0.3 | 2.6 | 2.2 | 1.1 | 2.9 | 3.1 | 0.8 | 2.0 |
| Personal cons. expenditures | 2.5 | 1.4 | 1.5 | 0.9 | 1.0 | 4.1 | 2.2 | 1.2 | 2.9 | 2.4 | 1.9 | 1.9 |
| Durables | 0.6 | -0.4 | 0.9 | 0.4 | 0.4 | 2.5 | -0.6 | 0.2 | 1.7 | 0.3 | 1.0 | 0.2 |
| Nondurables | 0.4 | 0.5 | 0.5 | -0.1 | 0.3 | 0.7 | 1.6 | -0.0 | 0.2 | 0.6 | 0.3 | 0.7 |
| Services | 1.5 | 1.3 | 0.2 | 0.6 | 0.4 | 0.9 | 1.2 | 1.1 | 1.0 | 1.5 | 0.5 | 1.0 |
| Business fixed investment | 0.5 | -0.4 | -0.7 | -1.9 | -0.7 | -1.3 | -0.7 | -0.3 | -0.1 | 0.8 | -1.2 | -0.2 |
| Equipment \& Software | 0.1 | -0.5 | -0.6 | -1.6 | -0.8 | -0.2 | -0.2 | 0.3 | 0.5 | 0.5 | -0.8 | 0.3 |
| Nonres. structures | 0.4 | 0.1 | -0.1 | -0.3 | 0.1 | -1.1 | -0.4 | -0.5 | -0.6 | 0.3 | -0.4 | -0.5 |
| Residential structures | -0.4 | 0.0 | 0.3 | -0.0 | 0.0 | -0.2 | 0.6 | 0.1 | 0.1 | -0.1 | 0.0 | 0.3 |
| Net exports | -0.7 | -0.2 | 0.5 | -0.4 | -0.2 | -0.3 | -0.8 | -1.4 | -0.0 | -0.8 | -0.1 | -1.0 |
| Exports | 1.3 | -0.5 | -0.7 | -1.4 | -1.9 | -1.0 | 0.3 | 1.3 | 0.5 | 0.8 | -1.3 | 0.4 |
| Imports | -2.0 | 0.2 | 1.2 | 1.0 | 1.7 | 0.7 | -1.1 | -2.7 | -0.5 | -1.5 | 1.2 | -1. 3 |
| Government cons. \& invest. | -0.2 | 0.5 | 1.0 | 1.0 | -0.2 | 1.9 | 1.0 | 0.3 | 0.6 | 0.2 | 0.9 | 0.7 |
| Federal | -0.5 | 0.1 | 0.5 | 0.4 | 0.1 | 0.8 | 0.5 | 0.5 | 0.3 | -0.1 | 0.4 | 0.5 |
| Defense | -0.2 | 0.2 | 0.3 | 0.1 | 0.2 | 0.5 | 0.5 | 0.3 | 0.3 | -0.1 | 0.3 | 0.4 |
| Nondefense | -0.2 | -0.1 | 0.2 | 0.3 | -0.1 | 0.3 | 0.0 | 0.2 | -0.0 | 0.0 | 0.2 | 0.1 |
| State and local | 0.3 | 0.4 | 0.5 | 0.6 | -0.3 | 1.1 | 0.6 | -0.2 | 0.3 | 0.3 | 0.5 | 0.2 |
| Change in bus. inventories | -1.1 | -0.1 | -3.3 | -1.1 | -0.1 | -1.4 | 2.6 | 1.3 | 0.6 | -0.3 | -1.5 | 1.2 |
| Nonfarm | -1.0 | -0.3 | -3.4 | -0.8 | -0.3 | -1.4 | 2.5 | 1.5 | 0.7 | -0.4 | -1.6 | 1.2 |
| Farm | -0.2 | 0.2 | 0.2 | -0.3 | 0.2 | 0.1 | 0.1 | -0.2 | -0.1 | 0.1 | 0.0 | -0.0 |

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

| Strictly Confidential <FR> Class II FOMC | CONTRIBUTIONS |  | GROWTH | REAL G | DOME | PRODU | D REL | ITEMS |  |  | Apri | , 2003 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Item | $\begin{gathered} 2002 \\ \mathbf{Q 4} \end{gathered}$ | $\begin{gathered} 2003 \\ \mathrm{Q} 1 \end{gathered}$ | $\begin{gathered} 2003 \\ \mathrm{Q} 2 \end{gathered}$ | $\begin{gathered} 2003 \\ \text { Q3 } \end{gathered}$ | $\begin{gathered} 2003 \\ 04 \end{gathered}$ | $\begin{aligned} & 2004 \\ & \mathrm{Q} 1 \end{aligned}$ | $\begin{gathered} 2004 \\ \mathrm{Q} 2 \end{gathered}$ | $\begin{gathered} 2004 \\ 03 \end{gathered}$ | $\begin{gathered} 2004 \\ \mathrm{Q4} \end{gathered}$ | $\begin{gathered} 0224 / \\ 0124 \end{gathered}$ | $\begin{gathered} 0324 / \\ 0204 \end{gathered}$ | $\begin{gathered} 04 Q 4 / \\ 0324 \end{gathered}$ |
| Real GDP | 1.4 | 1.6 | 2.0 | 3.4 | 4.3 | 4.7 | 4.8 | 4.8 | 4.8 | 2.9 | 2.8 | 4.8 |
| Gross dom. purchases | 3.0 | 0.8 | 2.7 | 3.7 | 4.2 | 5.3 | 5.5 | 5.4 | 5.0 | 3.9 | 2.8 | 5.3 |
| Final sales | 1.1 | 2.0 | 3.0 | 3.2 | 3.7 | 4.1 | 3.8 | 4.5 | 4.7 | 1.7 | 3.0 | 4.2 |
| Priv. dom. final purchases | 1.8 | 1.0 | 2.2 | 2.5 | 3.2 | 4.4 | 4.3 | 4.9 | 4.7 | 2.0 | 2.2 | 4.6 |
| Personal cons. expenditures | 1.2 | 1.0 | 1.7 | 2.0 | 2.5 | 3.3 | 2.9 | 3.3 | 3.4 | 1.9 | 1.8 | 3.2 |
| Durables | -0.7 | -0.1 | 0.8 | 0.4 | 0.6 | 0.7 | 0.6 | 0.5 | 0.6 | 0.2 | 0.4 | 0.6 |
| Nondurables | 1.0 | 0.8 | 0.4 | 0.7 | 0.7 | 0.9 | 0.8 | 1.0 | 1.0 | 0.7 | 0.7 | 0.9 |
| Services | 0.9 | 0.2 | 0.5 | 1.0 | 1.2 | 1.8 | 1.5 | 1.8 | 1.8 | 1.0 | 0.7 | 1.7 |
| Business fixed investment | 0.2 | -0.4 | 0.6 | 0.3 | 0.6 | 1.0 | 1.2 | 1.4 | 1.0 | -0.2 | 0.3 | 1.2 |
| Equipment \& Software | 0.5 | -0.4 | 0.6 | 0.4 | 0.6 | 1.0 | 1.2 | 1.3 | 1.0 | 0.3 | 0.3 | 1.1 |
| Nonres. structures | -0.3 | -0.1 | -0.1 | -0.0 | -0.0 | 0.0 | 0.0 | 0.1 | 0.0 | -0.5 | -0.0 | 0.0 |
| Residential structures | 0.4 | 0.5 | -0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 | 0.2 |
| Net exports | -1.6 | 0.8 | -0.7 | -0.3 | 0.1 | -0.6 | -0.7 | -0.6 | -0.2 | -1.0 | -0.0 | -0.5 |
| Exports | -0.6 | -0.2 | 0.3 | 0.7 | 1.0 | 0.6 | 0.9 | 0.9 | 1.1 | 0.4 | 0.5 | 0.9 |
| Imports | -1.0 | 1.0 | -1.0 | -1.0 | -0.9 | -1.2 | -1.6 | -1.5 | -1.3 | -1. 3 | -0.5 | -1.4 |
| Government cons. \& invest. | 0.9 | 0.2 | 1.4 | 1.0 | 0.4 | 0.2 | 0.2 | 0.2 | 0.3 | 0.7 | 0.8 | 0.2 |
| Federal | 0.7 | 0.2 | 1.3 | 0.9 | 0.2 | 0.0 | 0.0 | -0.1 | -0.0 | 0.5 | 0.6 | -0.0 |
| Defense | 0.5 | -0.1 | 1.2 | 0.7 | 0.1 | -0.1 | -0.1 | -0.2 | -0.1 | 0.4 | 0.5 | -0.1 |
| Nondefense | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| State and local | 0.2 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.1 | 0.2 |
| Change in bus. inventories | 0.3 | -0.4 | -1.0 | 0.2 | 0.6 | 0.6 | 1.0 | 0.3 | 0.1 | 1.2 | -0.1 | 0.5 |
| Nonfarm | 0.2 | -0.5 | -0.9 | 0.2 | 0.6 | 0.6 | 1.0 | 0.3 | 0.1 | 1.2 | -0.2 | 0.5 |
| Farm | 0.1 | 0.2 | -0.1 | -0.0 | 0.0 | 0.0 | -0.0 | -0.0 | 0.0 | -0.0 | 0.0 | 0.0 |

Note. Components may not sum to totals because of rounding.
Strictly Confidential (FR)
Class II FOMC

| Item | Fiscal year |  |  |  | 2002 |  |  |  | 2003 |  |  |  | 2004 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $2001{ }^{\text {a }}$ | $2002^{\text {a }}$ | 2003 | 2004 | Q1 ${ }^{\text {a }}$ | Q2 ${ }^{\text {a }}$ | Q3 ${ }^{\text {a }}$ | Q4 ${ }^{\text {a }}$ | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Unified budget ${ }^{1}$ [ $\quad$ Not seasonally adjusted |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receipts ${ }^{2}$ | 1991 | 1853 | 1826 | 1843 | 413 | 523 | 452 | 428 | 398 | 531 | 470 | 443 | 404 | 527 | 468 | 467 |
| Outlays ${ }^{2}$ | 1864 | 2011 | 2155 | 2252 | 509 | 507 | 493 | 536 | 542 | 543 | 534 | 569 | 571 | 563 | 548 | 584 |
| Surplus/deficit ${ }^{2}$ | 127 | -158 | -329 | -409 | -97 | 16 | -41 | -108 | -144 | -12 | -65 | -127 | -167 | -36 | -80 | -117 |
| On-budget | -33 | -317 | -497 | -588 | -127 | -58 | -52 | -161 | -168 | -89 | -78 | -170 | -208 | -114 | -96 | -163 |
| Off-budget | 161 | 160 | 168 | 178 | 30 | 73 | 11 | 53 | 24 | 77 | 14 | 44 | 41 | 78 | 16 | 46 |
| Means of financing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Borrowing | -90 | 221 | 325 | 436 | 51 | 21 | 89 | 97 | 64 | 35 | 129 | 131 | 162 | 70 | 73 | 112 |
| Cash decrease | 8 | -17 | 26 | -10 | 38 | -26 | -21 | 28 | 20 | -43 | 21 | 5 | 0 | -30 | 15 | 15 |
| Other ${ }^{3}$ | -45 | -46 | -22 | -17 | 8 | -11 | -27 | -16 | 61 | 19 | -85 | -10 | 5 | -4 | -8 | -10 |
| Cash operating balance, end of period | 44 | 61 | 35 | 45 | 14 | 40 | 61 | 33 | 13 | 56 | 35 | 30 | 30 | 60 | 45 | 30 |
| NIPA federal sector |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Receipts | 2024 | 1906 | 1903 | 1928 | 1885 | 1884 | 1864 | 1870 | 1898 | 1911 | 1934 | 1929 | 1887 | 1928 | 1969 | 2040 |
| Expenditures | 1909 | 2039 | 2165 | 2276 | 2031 | 2079 | 2075 | 2117 | 2147 | 2183 | 2214 | 2243 | 2272 | 2288 | 2300 | 2316 |
| Consumption expenditures | 517 | 570 | 642 | 691 | 566 | 581 | 590 | 609 | 628 | 656 | 674 | 681 | 694 | 695 | 695 | 696 |
| Defense | 337 | 375 | 426 | 459 | 372 | 383 | 389 | 403 | 410 | 437 | 452 | 456 | 461 | 461 | 458 | 457 |
| Nondefense | 180 | 195 | 216 | 232 | 194 | 199 | 201 | 206 | 219 | 220 | 222 | 225 | 233 | 235 | 237 | 239 |
| Other spending | 1392 | 1469 | 1523 | 1585 | 1464 | 1498 | 1485 | 1508 | 1518 | 1526 | 1539 | 1562 | 1579 | 1593 | 1605 | 1620 |
| Current account surplus | 115 | -133 | -262 | -347 | -146 | -196 | -211 | -248 | -248 | -272 | -280 | -313 | -385 | -361 | -331 | -276 |
| Gross investment | 98 | 106 | 115 | 125 | 106 | 107 | 108 | 108 | 110 | 118 | 124 | 125 | 125 | 125 | 124 | 124 |
| Gross saving less gross investment ${ }^{4}$ | 116 | -138 | -272 | -363 | -151 | -201 | -216 | -252 | -253 | -284 | -297 | -331 | -401 | -375 | -343 | -287 |
| Fiscal indicators ${ }^{5}$ <br> High-employment (HEB) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| surplus/deficit | 115 | -80 | -189 | -300 | -100 | -137 | -158 | -182 | -174 | -195 | -206 | -247 | -334 | -319 | -301 | -259 |
| Change in HEB, percent of potential GDP | 0.1 | 1.9 | 1.0 | 0.9 | 1.7 | 0.3 | 0.2 | 0.2 | -0.1 | 0.2 | 0.1 | 0.3 | 0.7 | -0.2 | -0.2 | -0.4 |
| Fiscal impetus (FI) percent of GDP | 0.6 | 1.1 | 0.9 | 1.0 | 0.6 | 0.4 | 0.0 | 0.3 | 0.1 | 0.4 | 0.3 | 0.3 | 0.6 | 0.0 | 0.0 | -0.0 |

1. Fiscal year data for the unified budget come from OMB; quarterly data come from the Monthly Treasury Statement and may not sum to OMB fiscal year totals.
2. OMB's February 2003 baseline surplus estimates are - $\$ 264$ billion in FY 2003 and $-\$ 158$ billion in FY 2004. CBO's March 2003 baseline surplus estimates are $-\$ 246$ billion in FY 2003 and - $\$ 200$ billion in FY 2004. Budget receipts, outlays, and surplus/deficit include corresponding social security (OASDI) categories. The OASDI surplus and the Postal Service surplus are excluded from the on-budget surplus
and shown separately as off-budget, as classified under current law.
3. Other means of financing are checks issued less checks paid, accrued items, and changes in other financial assets and liabilities.
4. Gross saving is the current account surplus plus consumption of fixed capital of the general government as well as government enterprises.

 HEB, positive values indicate aggregate demand stimulus.
a--Actual


| Strictly Confidential (FR) Class II FOMC |  |  | Change in Debt of the Domestic Nonfinancial Sectors <br> (Percent) <br> April 30, 2003 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Period ${ }^{1}$ | Total | Federal government | Nonfederal |  |  |  | Business | State and local governments |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | Home mortgages | Consumer credit |  |  |  |
| Year |  |  |  |  |  |  |  |  |  |
| 1997 | 5.5 | 0.6 | 7.2 | 6.4 | 6.7 | 4.7 | 9.0 | 4.0 | 6.2 |
| 1998 | 6.9 | -1.4 | 9.6 | 8.2 | 8.9 | 5.9 | 12.1 | 6.3 | 6.0 |
| 1999 | 6.4 | -1.9 | 8.8 | 8.3 | 9.0 | 7.4 | 10.6 | 3.4 | 5.9 |
| 2000 | 4.9 | -8.0 | 8.3 | 8.4 | 8.3 | 9.6 | 9.7 | 1.3 | 4.6 |
| 2001 | 6.2 | -0.2 | 7.7 | 8.6 | 9.8 | 6.8 | 6.4 | 8.6 | 2.0 |
| 2002 | 7.1 | 7.6 | 7.0 | 9.8 | 12.4 | 3.3 | 2.9 | 11.4 | 4.3 |
| 2003 | 7.1 | 9.9 | 6.5 | 8.3 | 10.3 | 3.3 | 4.3 | 7.8 | 4.3 |
| 2004 | 6.8 | 10.4 | 6.0 | 6.7 | 7.7 | 4.5 | 5.1 | 5.7 | 6.0 |
| Quarter |  |  |  |  |  |  |  |  |  |
| 2002:1 | 5.0 | 1.2 | 5.8 | 9.2 | 10.3 | 4.8 | 2.2 | 5.1 | 6.5 |
| 2 | 8.3 | 15.5 | 6.8 | 8.7 | 10.9 | 4.7 | 3.4 | 13.9 | 2.5 |
| 3 | 6.5 | 7.5 | 6.3 | 9.4 | 12.6 | 3.3 | 1.9 | 10.6 | 5.1 |
| 4 | 7.7 | 5.6 | 8.2 | 10.7 | 13.7 | 0.1 | 4.0 | 14.1 | 3.2 |
| 2003:1 | 6.5 | 2.5 | 7.4 | 9.5 | 12.3 | 3.7 | 4.2 | 11.0 | 4.3 |
| 2 | 8.4 | 15.9 | 6.8 | 8.7 | 11.1 | 3.0 | 4.3 | 7.3 | 3.1 |
| 3 | 6.8 | 11.1 | 5.9 | 7.2 | 8.5 | 3.2 | 4.2 | 6.0 | 4.5 |
| 4 | 6.1 | 8.7 | 5.5 | 6.6 | 8.0 | 3.2 | 4.1 | 5.9 | 5.5 |
| 2004:1 | 6.8 | 12.1 | 5.6 | 6.4 | 7.6 | 3.8 | 4.5 | 6.0 | 6.3 |
| 2 | 7.8 | 17.5 | 5.6 | 6.4 | 7.3 | 4.3 | 4.7 | 5.6 | 6.0 |
| 3 | 5.7 | 4.7 | 5.9 | 6.6 | 7.4 | 4.7 | 5.2 | 5.4 | 6.0 |
| 4 | 6.1 | 6.0 | 6.2 | 6.8 | 7.5 | 5.1 | 5.6 | 5.4 | 5.9 |

[^6]Strictly Confidential (FR)
Class II FOMC

| Category |  |  |  |  |  |  |  |  | nally ad | sted annu | rates |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Calendar year |  |  |  | 2002 |  | 2003 |  |  |  | 2004 |  |  |  |
|  | 2001 | 2002 | 2003 | 2004 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Net funds raised by domestic nonfinancial sectors |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 Total | 1078.5 | 1323.5 | 1395.7 | 1436.4 | 1167.2 | 1523.3 | 1290.8 | 1663.3 | 1377.5 | 1251.4 | 1435.9 | 1694.8 | 1245.1 | 1369.9 |
| 2 Net equity issuance | -47.4 | -40.2 | -77.3 | -62.0 | -130.8 | -39.9 | -62.0 | -96.0 | -79.0 | -72.0 | -66.0 | -64.0 | -59.0 | -59.0 |
| 3 Net debt issuance | 1125.9 | 1363.7 | 1473.0 | 1498.4 | 1298.0 | 1563.2 | 1352.8 | 1759.3 | 1456.5 | 1323.4 | 1501.9 | 1758.8 | 1304.1 | 1428.9 |
| Borrowing sectors |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonfinancial business |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 Financing gap ${ }^{1}$ | 141.4 | 81.3 | 72.3 | 135.3 | 90.2 | 97.4 | 96.0 | 62.1 | 57.8 | 73.1 | 91.8 | 124.7 | 144.0 | 180.7 |
| 5 Net equity issuance | -47.4 | -40.2 | -77.3 | -62.0 | -130.8 | -39.9 | -62.0 | -96.0 | -79.0 | -72.0 | -66.0 | -64.0 | -59.0 | -59.0 |
| 6 Credit market borrowing | 417.6 | 201.8 | 304.3 | 379.5 | 132.6 | 285.0 | 298.3 | 311.8 | 306.8 | 300.0 | 336.8 | 357.0 | 393.4 | 430.8 |
| Households |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7 Net borrowing ${ }^{2}$ | 611.8 | 756.9 | 697.6 | 613.6 | 755.7 | 883.1 | 805.6 | 755.9 | 635.1 | 593.9 | 589.0 | 592.7 | 622.5 | 650.5 |
| 8 Home mortgages | 478.5 | 668.4 | 625.7 | 511.2 | 716.7 | 799.3 | 744.2 | 691.1 | 543.2 | 524.2 | 506.2 | 494.2 | 513.2 | 531.2 |
| 9 Consumer credit | 108.8 | 55.5 | 58.3 | 82.4 | 57.9 | 1.0 | 65.0 | 53.6 | 56.5 | 58.3 | 68.1 | 79.7 | 87.1 | 94.8 |
| 10 Debt/DPI (percent) ${ }^{3}$ | 99.8 | 103.2 | 107.9 | 109.3 | 103.4 | 104.9 | 106.4 | 108.0 | 109.2 | 109.3 | 108.5 | 109.0 | 109.4 | 109.9 |
| State and local governments |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11 Net borrowing | 102.2 | 147.4 | 111.9 | 88.8 | 144.0 | 196.5 | 158.0 | 108.2 | 90.8 | 90.8 | 92.8 | 88.8 | 86.8 | 86.8 |
| 12 Current surplus ${ }^{4}$ | 140.6 | 128.1 | 128.7 | 172.4 | 126.2 | 128.3 | 118.3 | 123.9 | 126.6 | 145.9 | 157.7 | 167.1 | 175.2 | 189.8 |
| Federal government |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13 Net borrowing | -5.6 | 258.2 | 359.2 | 416.5 | 265.7 | 201.1 | 90.9 | 583.4 | 423.8 | 338.7 | 483.3 | 720.3 | 201.4 | 260.8 |
| 14 Net borrowing (quarterly, n.s.a.) | -5.6 | 258.2 | 359.2 | 416.5 | 89.4 | 96.9 | 63.5 | 35.4 | 129.0 | 131.3 | 161.6 | 69.7 | 73.4 | 111.8 |
| 15 Unified deficit (quarterly, n.s.a.) | -94.3 | 231.2 | 346.8 | 399.5 | 41.5 | 108.7 | 143.9 | 11.8 | 64.5 | 126.5 | 167.1 | 35.7 | 80.0 | 116.7 |
| Depository institutions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 16 Funds supplied | 289.4 | 489.6 | 381.6 | 405.2 | 743.6 | 553.3 | 348.9 | 357.6 | 429.3 | 390.6 | 419.7 | 375.5 | 421.9 | 403.7 |
| Memo (percentage of GDP) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17 Domestic nonfinancial debt ${ }^{5}$ | 185.8 | 191.2 | 197.0 | 199.5 | 191.4 | 193.2 | 194.6 | 196.8 | 198.3 | 198.8 | 198.9 | 199.6 | 200.1 | 200.1 |
| 18 Domestic nonfinancial borrowing | 11.2 | 13.1 | 13.6 | 13.1 | 12.4 | 14.8 | 12.6 | 16.3 | 13.4 | 12.0 | 13.4 | 15.5 | 11.3 | 12.2 |
| 19 Federal government ${ }^{6}$ | -0.1 | 2.5 | 3.3 | 3.6 | 2.5 | 1.9 | 0.8 | 5.4 | 3.9 | 3.1 | 4.3 | 6.3 | 1.7 | 2.2 |
| 20 Nonfederal | 11.2 | 10.6 | 10.3 | 9.4 | 9.8 | 12.9 | 11.8 | 10.9 | 9.5 | 8.9 | 9.1 | 9.1 | 9.5 | 10.0 |

[^7](This page intentionally blank.)

## International Developments

Recent developments in Iraq have contributed to a sharp drop in the price of oil and a rebound in U.S. and foreign equity markets. However, concerns about the strength of the global economy remain. Confidence measures in the European economies have remained low, and the emergence of Severe Acute Respiratory Syndrome (SARS) threatens the near-term economic prospects of a number of Asian emerging-market economies. In addition, recent indicators of economic activity for both Canada and Mexico have been somewhat less robust than had been anticipated. Taken together, these developments have prompted a downward revision of nearly 1 percentage point to our second-quarter forecast for foreign GDP growth. However, we have not made much change to our growth rates further out. We continue to expect that recent and prospective monetary policy stimulus, lower oil prices, and projected improvement in the U.S. economy will result in a moderate rebound in foreign activity in the second half of this year and a further pickup next year.

Foreign inflation increased in the first quarter but should drop sharply in the second quarter, reflecting movements in oil prices. Going forward, inflation is projected to remain subdued as excess capacity abroad persists.

Regarding SARS, our working assumption is that the epidemic will be contained by the end of May, with most of the economic effect occurring in the second quarter. Going forward, we expect some positive economic payback, but this will probably occur only gradually as confidence recovers. However, the possibility that the effect will be more severe or prolonged is an important downside risk to the forecast and is the subject of our alternative simulation.

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

| Indicator | 2002 |  | Projection |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H 1 |  | H 2 | 2003 |  |  |
|  |  |  | Q 1 | Q 2 | H 2 |  |
| Foreign output | 3.6 | 2.2 | 2.2 | 1.5 | 3.0 | 3.5 |
| March GB | 3.6 | 2.1 | 2.0 | 2.4 | 3.0 | 3.5 |
| Foreign CPI | 2.4 | 2.7 | 3.7 | 0.9 | 2.0 | 1.9 |
| March GB | 2.4 | 2.7 | 2.8 | 2.4 | 2.1 | 2.0 |

Note. Changes for years are measured as Q4/Q4; for half-years, Q2/Q4 or Q4/Q2.
Oil prices are projected to drift down a bit further over the forecast period in line with current quotes from futures markets. The path is lower in this forecast than in the previous one, although the difference is small by the end of 2004. The lower oil prices have contributed to a modest improvement in the outlook for the
U.S. current account deficit, which is now expected to be around 5 percent of GDP on average in both 2003 and 2004. Real net exports are expected to make a zero arithmetic contribution to GDP growth this year and to subtract about $1 / 2$ percentage point next year, as growth in imports exceeds that of exports in response to relatively strong U.S. activity.

The broad nominal exchange value of the dollar has weakened $23 / 4$ percent on balance since the March FOMC meeting. We continue to project a further slight depreciation of the dollar over the forecast period in light of the need to finance the large and growing U.S. external deficit. This depreciation, in turn, restrains the growth of the deficit a bit.

## Oil Prices

Oil prices have fallen significantly since the March Greenbook, reflecting both decreased geopolitical uncertainty as well as increased production from OPEC, particularly from Saudi Arabia, Kuwait, and Venezuela. Prices fell further after OPEC increased its production target on April 24, even though the new target is still somewhat below recent production levels. The spot price of West Texas Intermediate (WTI) crude oil closed at a bit over $\$ 25$ per barrel on April 29, nearly $\$ 12$ lower than at the time of the previous Greenbook. Our oil price projection, in line with quotes from crude oil futures contracts, calls for the price of WTI to fall only slightly further to a little less than $\$ 25$ by the end of this year, about $\$ 4.50$ lower than assumed in the March Greenbook, and to edge down to a bit below $\$ 24$ by the fourth quarter of 2004 , less than $\$ 1$ below the previous forecast.

## International Financial Markets

During the intermeeting period, as well as in the days immediately preceding the period, global financial markets were buffeted by news concerning the war in Iraq. By the second week of April, however, with hostilities in Iraq winding down, market attention seemed to shift to the generally lackluster news on macroeconomic fundamentals and the implications for the dollar of the large and growing U.S. current account deficit.

In the period since the March 18 FOMC meeting, the major currencies index of the dollar's exchange value declined $23 / 4$ percent. Among individual currencies, the dollar depreciated $43 / 4$ percent against the euro, 3 percent against the Canadian dollar, and almost 2 percent against sterling, with most of the change since early April. In contrast, the dollar appreciated nearly 1 percent on balance versus the yen. A lack of new domestic policy initiatives by the Bank of Japan, despite an emergency meeting of its Policy Board on March 25, reportedly weighed on the yen as well as on Japanese share prices. At its meeting on April 30 , the BOJ unexpectedly raised its target for reserve balances of financial
institutions, citing considerable uncertainty about the outlook for global recovery, the possible impact of SARS, and unstable stock prices.

The staff index of the dollar's exchange value against the currencies of our other important trading partners declined $23 / 4$ percent over the intermeeting period, mainly reflecting depreciations against Latin American currencies. The dollar depreciated $51 / 2$ percent and 15 percent, respectively, against the Mexican peso and the Brazilian real. The real and other Brazilian financial indicators received support from news of a higher-than-expected primary fiscal surplus in the first quarter and generally well-received economic reform plans announced by the Lula administration. The Southeast Asian currencies weakened in April amid mounting investor concerns over the impact of SARS but rebounded following the announcement on April 28 by the World Health Organization that the spread of the disease has been contained in some areas.

Taking into account recent market developments, we have lowered the starting point for our dollar forecast against most currencies, and we continue to expect the dollar to depreciate a bit further on balance over the forecast period. Our projection is based on the view that, at current exchange rates, investors may become less willing to absorb indefinitely the large and growing volume of U.S. external liabilities generated by the U.S. current account deficit.

Through much of the intermeeting period, global equity prices and bond yields moved in tandem in reaction to news from Iraq. Broad euro-area share price indexes have risen about $81 / 2$ percent on balance since the March FOMC meeting, while yields on benchmark euro-area bonds rose about 10 basis points over the period. Near-dated interest rate futures on euro and sterling deposits reflect a high likelihood of additional policy easing of about 25 basis points by both the European Central Bank and the Bank of England.

Japanese share price movements were mixed over the intermeeting period, with both the TOPIX and Nikkei indexes touching twenty-year lows late in the period. Yields on long-term Japanese government bonds declined, with the yield on the benchmark thirty-year bond falling 34 basis points to 1.02 percent and the yield on the Japanese ten-year government bond falling 12 basis points to 0.61 percent, both record lows.

In Southeast Asia, stock market indexes declined during much of the intermeeting period in the economies most heavily affected by SARS, with investors expressing considerable concern over the outlook for economic growth in the region as the disease has spread. However, these indexes rebounded sharply in late April following the World Health Organization's announcement.
did not intervene during the period for the accounts of the System or the Treasury.

## Foreign Industrial Countries

Recent information for the foreign industrial countries suggests sluggish nearterm growth. Activity in the euro area is continuing to expand at a very weak pace, and growth appears to be slowing somewhat in Canada. Recent information for Japan suggests that output there will be flat over the first half of the year. Looking ahead, we continue to expect average growth in the industrial countries to pick up from about $11 / 2$ percent in the first half of this year to about 2 percent in the second half and to $2 \frac{1}{2}$ percent in 2004. The projected improvement reflects recent and prospective monetary policy stimulus, a lessening of negative wealth effects as equity prices retrace some of their previous losses, and U.S. economic recovery. Nevertheless, we expect output to remain below potential throughout the forecast period in all major foreign industrial countries.

Twelve-month headline inflation rates in most major foreign industrial countries (with the exception of Japan and Germany) have been above 2 percent since the middle of 2002. However, declining oil prices and excess capacity in most countries are expected to bring inflation within the major central banks' target bands by the end of 2003. In Japan, consumer prices are projected to continue to decline.

Japanese real GDP grew at a rate of $2 \frac{1}{4}$ percent in the last quarter of 2002, with buoyant exports outweighing a marked slowing in domestic demand. Available indicators suggest that economic activity was roughly flat in the early months of this year as exports were weak and consumption remained sluggish amid high unemployment rates. We expect growth to remain near zero on average for the rest of this year. With business confidence still very low, private investment is expected to remain subdued, and tax cuts will be largely offset by reduced supplemental budget spending, leaving fiscal policy roughly neutral. Although SARS has not had a direct effect on Japan, export growth is likely to be held down in the next few months by weakness in some of the affected Asian developing economies. Growth is expected to pick up a little next year, to just over 1 percent, as exports improve along with the global economy.

Growth of euro-area GDP was only 0.7 percent in the fourth quarter of 2002 and is expected to remain sluggish in the near term. Prospects seem particularly weak for Germany, where output was flat in the fourth quarter and apparently was little changed in the first quarter as well. Euro-area business confidence declined in both March and April. Consumer confidence rebounded in April following four months of decline, but remained at a low level. In response to
weak economic activity and improving inflation prospects in the euro-area, the European Central Bank (ECB) reduced its main policy rate 25 basis points at its meeting on March 6, and we expect another 25-basis-point cut by midyear. Lower oil prices are also expected to have a positive effect on activity going forward. However, we expect fiscal policy to be constrained over the forecast period because Germany and France have budget deficits in excess of those allowed by the Maastricht treaty. We thus expect only a gradual pickup in activity in the euro area over the forecast period, with growth averaging nearly 2 percent in the second half of this year and $23 / 4$ percent next year.

Growth has slowed sharply in the United Kingdom in the past two quarters. The preliminary estimate of real GDP growth for 2003:Q1was only 0.8 percent (annual rate), consistent with recent indicators. Consumer confidence has declined, and all of the purchasing manager indexes have fallen over the past several months. As a result, we project growth to average only about $1 \frac{1}{2}$ percent in 2003. Next year, we expect growth of about $2 \frac{1}{2}$ percent, a bit above potential, as consumption picks up in response to the recent rebound in equity prices and as projected further monetary policy stimulus kicks in.

In Canada, recent data suggest that growth was around $2 \frac{1}{4}$ percent in the first quarter, and we expect it to drop to about $1 \frac{1}{2}$ percent in the current quarter. Although the housing market has remained robust and the strong labor market continues to support consumption, exports are expected to be soft along with subdued demand growth in the United States and a decline in auto production. Second-quarter growth will also be hindered by the negative effect on tourism and retail sales of the recent SARS outbreak in Toronto. In line with the projected U.S. recovery, we expect Canadian growth to move slightly above its potential of 3 percent by the end of this year and to continue near this rate through 2004. The Bank of Canada tightened monetary policy 50 basis points in two steps in the past two months, and we project no further tightening until the end of this year. Special factors have recently boosted inflation above the 3 percent upper limit of the Bank of Canada's target range, but inflation is projected to move back toward the 2 percent midpoint of the range by early next year.

## Other Countries

Our near-term outlook for the developing Asian economies is dominated by evolving concerns over SARS, which have largely overshadowed the generally positive effect of lower oil prices. Data and anecdotal evidence suggest that SARS is affecting economic activity mainly through tourism and business travel, but retail sales have also been affected, particularly in Hong Kong, and future disruptions of production are a possibility. Based on our operating assumption that the adverse economic effect of SARS will be felt mainly in the current quarter, growth in the developing Asian economies is projected to drop to less
than 2 percent this quarter before rebounding to over $51 / 2$ percent in the remainder of the forecast period.

Our forecast for growth in Hong Kong has been revised down about $13 / 4$ percentage points for this year; this projection takes into account the government's stimulus package that was announced to counter the negative economic effects of SARS. We also expect a substantial negative effect of SARS on Chinese activity. For the year as a whole, this effect is partially offset by unexpectedly high first-quarter growth of over 16 percent (according to staff estimates). Some of this growth may have been driven by an acceleration of exports as producers attempted to fill orders before the Iraq War, and we have largely offset this effect in the second quarter. In Taiwan, where industrial production was flat in the first quarter (although with some revival of high-tech production), the projected negative impact of SARS has led us to mark down growth for this year a bit.

Elsewhere in developing Asia, recent data have been mixed. Real GDP grew more than 8 percent in the fourth quarter in Korea, but since then growth appears to have moderated. In the ASEAN region, recent information generally suggests a slowdown since the end of last year. With SARS expected to weigh on these economies, especially Singapore, and with no clear sign of a widespread revival of high-tech production, the growth outlook for these countries has been revised down since the previous Greenbook.

In Mexico, recent data are consistent with a pickup of growth from the low level seen at the end of last year. However, we now expect that the increase in growth over the rest of the year will be less than projected in the previous Greenbook as a result of the effect on government revenues and spending of a greater-thanexpected decline in oil prices, a markdown in the near-term outlook for U.S. industrial production, and tighter monetary policy. In Brazil, economic output has continued to increase at a slow pace in recent months, driven in large part by the strength of exports. In mid-April, the government unveiled long-awaited tax and pension system reform proposals, which appeared to be well received by financial markets, contributing to a further reduction in risk spreads.
Accordingly we have revised up the outlook for Brazil, with growth projected to increase to 3 percent next year. Argentine data suggest some recent recovery, although the level of activity remains quite low and prospects for growth remain uncertain. In the first round of the presidential election, ex-president Menem garnered 24 percent of the votes, and Governor Kirchner received 22 percent. They will meet in a runoff on May 18. The Venezuelan economy remains deeply troubled.

Average inflation in the developing countries is estimated to have been about 3 percent last year. The lower path for oil prices has prompted us to revise down
our outlook for inflation in the developing world to less than 3 percent for this year and next. Inflationary pressures remain in countries such as Argentina and Brazil, which experienced large currency depreciations last year. However, with the recent currency appreciations in these countries, these pressures should abate somewhat.

## Prices of Internationally Traded Goods

After rising moderately during the last three quarters of 2002, the price index for U.S. imports of core goods rose $5 \frac{1}{2}$ percent at an annual rate in the first quarter of 2003 and is projected to rise about as fast in the second quarter. The main product category driving these increases, which are considerably higher than anticipated at the time of the March Greenbook, is non-oil industrial supplies, particularly natural gas and chemicals. In the second half of 2003, core import prices are expected to increase at a more subdued pace of $11 / 4$ percent, as natural gas and chemical prices decline. We expect core import price inflation to remain around that pace in 2004.

The price index for U.S. exports of core goods rose $41 / 2$ percent at an annual rate in the first quarter, reflecting largely a sharp jump in the price of industrial supplies. Over the remainder of the forecast period, core export prices are expected to rise at a slower pace in line with projected U.S. producer price inflation.

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

| Trade category | 2002 |  | 2003 | Projection |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | H1 | H2 | Q1 | 2003 |  | 2004 |
|  |  |  |  | Q2 | H2 |  |
| Exports <br> Core goods | 1.2 | 3.1 | 4.4 | . 1 | . 7 | 1.3 |
|  |  |  |  |  |  |  |
| Imports |  |  |  |  |  |  |
| Non-oil core goods | -. 1 | 1.4 | 5.4 | 5.4 | 1.2 | 1.3 |
| Oil (dollars per barrel) | 24.04 | 25.75 | 30.73 | 25.05 | 22.44 | 21.37 |

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.

## Trade in Goods and Services

In the first quarter, real exports of goods and services fell for the second consecutive quarter, reflecting slow economic growth in our major trading
partners. Exported core goods fell a small amount after a much sharper decline in the fourth quarter, with the first-quarter fall largely accounted for by declines in exports of capital goods. Exports of high-tech goods remained sluggish. The weakness in real exports was more pronounced than we had estimated based on partial data on nominal trade flows at the time of the March Greenbook. About half of the difference was a result of the higher-than-expected increases in export prices. In addition, exports of services were flat compared with our expectation for some increase. We expect some of the recent decline in exports to begin to be reversed in the current quarter, although growth should be relatively subdued as foreign demand remains weak.

We expect real exports of goods and services to increase more rapidly in the second half of 2003, growing about 9 percent at an annual rate, and to continue to expand near that pace in 2004. Most of the acceleration in exports of core goods, which are projected to increase at rates around 7 percent in both the second half of this year and in 2004, reflects the projected pickup in growth of foreign GDP. This includes both the standard income effect and an additional boost from the cyclical recovery, as trade in core goods generally shows greater cyclical fluctuation than real GDP. Past and prospective dollar depreciation suggests that relative prices should switch from restraining these exports to providing a moderate boost to their growth. Exports of services are expected to increase at an annual rate of around $51 / 2$ percent over the forecast period. In addition, exports of computers and semiconductors are expected to recover from the high-tech downturn and to resume growth that is broadly in line with historical experience.

## Summary of Staff Projections <br> for Trade in Goods and Services

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

| Measure | 2002 |  | Projection |  |  |  |
| :---: | ---: | ---: | ---: | :---: | :---: | :---: |
|  | H 1 | H 2 | 2003 |  |  |  |
|  |  |  | Q 1 | Q 2 | H 2 |  |
| Real exports | 8.7 | -.7 | -2.1 | 3.5 | 9.3 | 9.0 |
| March GB | 8.7 | -.8 | 2.5 | 5.8 | 8.9 | 9.0 |
| Real imports | 15.2 | 5.3 | -6.8 | 7.2 | 6.9 | 10.0 |
| March GB | 15.2 | 3.3 | .1 | 9.0 | 6.9 | 9.6 |

Note. Changes for years are measured as Q4/Q4; for half-years, Q2/Q4 or Q4/Q2. Real imports of goods and services dropped sharply in the first quarter, nearly reversing the fourth-quarter gain. Imported consumer goods were flat, and imports of aircraft, oil, and non-oil industrial supplies all turned down after
increasing in the previous quarter. Imported automotive products fell for the second consecutive quarter. The only major categories of imports to show increases were computers and other machinery. As with exports, the first-quarter estimate is considerably below the March projection, reflecting both higher prices and lower-than-expected nominal trade data in February. The lower firstquarter imports are also consistent with weaker-than-projected U.S. domestic demand for that quarter. Along with improving activity in the United States in the current quarter, we expect a return to moderate growth of core goods imports. In addition, oil imports are projected to increase, following a normal seasonal pattern.

Real imports of goods and services are projected to rise at an annual rate of 7 percent in the second half of this year and to accelerate to a 10 percent rate in 2004. Imported core goods are projected to increase about 6 percent and 9 percent over the same periods, as the projected strengthening of U.S. economic activity over the forecast period greatly outweighs the restraining effects of a declining dollar. In addition, we have built in a small boost to our forecast for imports of core goods to reflect a cyclical rebound in trade. As in the case of exports, imports of services, computers, and semiconductors are projected to grow steadily over the forecast period.

## Alternative Simulations

As noted above, our baseline forecast assumes that the recent outbreak of the SARS virus is not likely to have substantial effects on output in most of our major trading partners beyond the current quarter. However, this assumes that confidence in the affected areas recovers quickly and people resume their normal activities. In our alternative simulation, we used the FRB/Global model to examine the effects of a much sharper and more prolonged decline in shopping, entertainment, and travel in developing Asia and Japan. In particular, we considered a shock to autonomous demand that would depress private spending by 2 percent of baseline GDP in these economies in the absence of endogenous adjustment. The shock is assumed to occur in 2003:Q2, and is phased in over two quarters, with the level of demand remaining lower than baseline throughout the forecast period. We have not attempted to incorporate other potential downside risks such as supply disruptions. It should also be noted that the simulation incorporates standard trade linkages and their effects, but not factors such as confidence effects on asset prices.

The fall in Asian demand depresses real U.S. exports, lowering U.S. real GDP growth in 2003:H2 about 0.3 percentage point relative to baseline. The shock has negligible effects on real growth in 2004, although the level of GDP remains lower than in the baseline. Given some delay in the response of core prices to activity, the core PCE inflation rate is unchanged in 2003 but declines slightly relative to baseline near the end of the forecast period.

## Alternative Simulation:

## SARS Demand Shock in Asia

(Percent change from previous period, annual rate)

| Indicator and simulation | 2003 |  | 2004 |  |
| :--- | :---: | :---: | :---: | :---: |
|  | H 1 | H 2 | H 1 | H 2 |
| U.S. real GDP |  |  |  |  |
| Baseline | 1.8 | 3.9 | 4.7 | 4.8 |
| SARS shock | 1.7 | 3.6 | 4.6 | 4.8 |
|  |  |  |  |  |
| U.S. PCE prices excl. food and energy |  |  |  |  |
| Baseline | 1.1 | 1.3 | 1.1 | 1.0 |
| SARS shock | 1.1 | 1.3 | 1.1 | 0.9 |

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.

Strictly Confidential (FR)
Class II FOMC

| Measure and country | 2002 |  |  |  | 2003 |  |  |  | 2004 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| REAL GDP (1) | Quarterly changes at an annual rate |  |  |  |  |  |  |  |  |  |  |  |
| Total foreign | 2.7 | 4.6 | 2.8 | 1.5 | 2.2 | 1.5 | 2.8 | 3.2 | 3.4 | 3.6 | 3.6 | 3.6 |
| Industrial Countries of which: | 3.3 | 3.5 | 2.9 | 1.4 | 1.5 | 1.3 | 1.9 | 2.4 | 2.5 | 2.7 | 2.7 | 2.7 |
| Canada | 6.0 | 4.4 | 3.6 | 1.6 | 2.3 | 1.6 | 2.4 | 3.2 | 3.2 | 3.3 | 3.0 |  |
| Japan | 0.4 | 5.5 | 3.1 | 2.2 | 0.4 | -0.2 | 0.2 | 0.6 | 0.9 | 1.2 | 1.3 | 1.3 |
| United Kingdom | 0.5 | 2.4 | 4.3 | 1.5 | 0.8 | 1.4 | 1.9 | 2.1 | 2.2 | 2.4 | 2.6 | 2.8 |
| Euro Area (2) | 1.6 | 1.3 | 1.6 | -0.7 | -0.8 | 1.0 | 1.7 | 2.1 | 2.4 | 2.7 | 2.9 | 2.9 |
| Germany |  |  |  |  | -0.0 |  |  |  | 1.8 |  | 2.5 | 2.6 |
| Developing Countries | 1.8 | 6.2 | 2.8 | 1.7 | 3.3 | 1.8 | 4.0 | 4.5 | 4.8 | 4.8 | 4.9 | 4.9 |
| Asia | 6.2 | 7.4 | 3.1 | 5.5 | 4.8 | 1.8 | 5.3 | 5.7 | 5.7 | 5.8 | 5.8 | 5.8 |
| Korea | 10.5 | 5.4 | 3.9 | 8.3 | 4.2 | 5.2 | 5.6 | 5.6 | 5.5 | 5.5 | 5.5 | 5.5 |
| China | 8.5 | 9.3 | 7.5 | 6.8 | 16.3 | -3.0 | 7.5 | 8.0 | 7.7 | 7.7 | 7.7 | 7.7 |
| Latin America | -1.5 | 5.4 | 2.3 | -1.2 | 2.4 | 1.6 | 3.0 | 3.8 | 4.4 | 4.4 | 4.4 | 4.4 |
| Mexico | -0.7 | 7.4 | 1.2 | 0.6 | 2.8 | 1.6 | 3.4 | 4.3 | 5.0 | 5.0 | 5.0 | 5.0 |
| Brazil | 3.7 | 3.4 |  | 2.9 |  |  |  |  |  |  |  |  |
| CONSUMER PRICES (3) |  |  |  |  |  |  |  |  |  |  |  |  |
| Industrial Countries of which: | 1.2 | 1.0 | 1.4 | 2.2 | 2.5 | 2.2 | 1.9 | 1.6 | 1.0 | 1.2 | 1.2 | 1.2 |
| Canada | 1.6 | 1.3 | 2.3 | 3.8 | 4.5 | 3.8 | 3.1 | 2.7 | 1.6 | 1.8 | 1.9 | 1.9 |
| Japan | -1.5 | -1.1 | -0.9 | -0.4 | -0.3 | -0.4 | -0.6 | -0.8 | -0.9 | -0.9 | -0.8 | -0.8 |
| United Kingdom (4) | 2.4 | 1.9 | 2.0 | 2.6 | 2.9 | 2.8 | 2.8 | 2.5 | 2.2 | 2.6 | 2.5 | 2.6 |
| Euro Area (2) | 2.6 1.9 | 2.1 | 2.1 1.1 | 2.3 1.2 | 2.3 1.2 | 2.1 1.3 | 2.2 1.2 | 1.8 1.0 | 1.4 0.7 | 1.4 0.7 | 1.4 0.7 | 1.4 0.7 |
| Developing Countries | 2.6 | 2.5 | 2.6 | 2.9 | 3.5 | 2.8 | 2.7 | 2.7 | 2.5 | 2.9 | 2.8 | 2.7 |
| Asia | 0.8 | 0.6 | 0.5 | 0.7 | 1.4 | 0.5 | 0.8 | 1.2 | 0.9 | 1.9 | 2.0 | 1.8 |
| Korea | 2.6 | 2.6 | 2.5 | 3.4 | 4.1 | 4.1 | 4.2 | 3.9 | 3.3 | 2.6 | 2.5 | 2.4 |
| China | -0.6 | -1.1 | -0.8 | -0.7 | 0.5 | -1.1 | -0.9 | -0.0 | -0.5 | 1.6 | 1.7 | 1.4 |
| Latin America | 5.1 | 5.4 | 6.0 | 6.5 | 7.1 | 6.5 | 5.6 | 5.0 | 5.0 | 4.6 | 4.4 | 4.2 |
| Mexico | 4.8 | 4.8 | 5.2 | 5.3 | 5.5 | 5.0 | 4.2 | 3.9 | 4.4 | 4.0 | 3.8 | 3.6 |
| Brazil | 7.7 | 7.9 | 7.7 | 10.7 | 15.7 | 16.8 | 16.2 | 12.7 | 8.0 | 7.3 | 7.6 | 7.7 |

[^8]|  | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | $\begin{array}{r} \text { Pre } \\ 2003 \end{array}$ | $\begin{aligned} & \text { ected } \\ & 2004 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NIPA REAL EXPORTS and IMPORTS | Percentage point contribution to GDP growth, Q4/Q4 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services Exports of $G \& S$ Imports of $G \& S$ | -0.2 | -0.8 | $-1.1$ | -1.0 | -0.8 | -0.1 | -1.0 | -0.0 | -0.5 |
|  | 1.1 | 1.0 | 0.3 | 0.5 | 0.8 | -1.3 | 0.4 | 0.5 | 0.9 |
|  | $-1.3$ | -1.7 | $-1.3$ | -1.5 | $-1.5$ | 1.2 | $-1.3$ | -0.5 | $-1.4$ |
|  | Percentage change, Q4/Q4 |  |  |  |  |  |  |  |  |
| Exports of G\&S | 9.8 | 8.5 | 2.3 | 4.9 | 7.3 | $-11.4$ | 3.9 | 4.9 | 9.0 |
| Services | 8.9 | 1.4 | 2.9 | 3.2 | 4.8 | -9.2 | 11.4 | 2.5 | 5.6 |
| Computers | 21.6 | 25.8 | 8.1 | 13.4 | 23.0 | -23.4 | -2.1 | 19.2 | 33.6 |
| Semiconductors | 44.6 | 21.3 | 9.1 | 34.6 | 26.9 | -34.9 | 8.5 | 26.8 | 36.0 |
| Other Goods 1/ | 7.3 | 9.8 | 1.3 | 3.2 | 5.7 | -9.4 | 0.5 | 3.9 | 7.3 |
| Imports of G\&S | 11.2 | 14.3 | 10.8 | 11.9 | 11.1 | -8.0 | 10.1 | 3.4 | 10.0 |
| Services | 5.3 7 | 14.0 | 8.5 | 5.9 -3.4 | 10.9 | $-8.6$ | 11.5 | 0.4 -2.2 | 5.9 |
| Oil | 7.8 | 3.9 | 4.1 | -3.4 | 13.3 | 0.1 | 4.0 | -2. 2 | 5.5 |
| Computers | 17.8 | 33.0 | 25.8 | 26.0 | 13.6 | -13.8 | 13.6 | 23.4 | 33.5 |
| Semiconductors | 56.7 | 32.9 | -8.7 | 34.2 | 22.5 | -51.4 | 9.3 | 22.8 | 36.0 |
| Other Goods $2 /$ | 10.4 | 12.7 | 11.5 | 12.7 | 10.4 | $-6.2$ | 10.1 | 2.8 | 9.1 |
|  |  | Billion | of chai | ed 1996 | llars |  |  |  |  |
| Net Goods \& Services | -89.0 | -113.3 | -221.1 | -320.5 | -398.8 | -415.9 | -488.5 | -527.2 | -579.3 |
| Exports of G\&S | 874.2 | 981.5 | 1002.4 | 1036.3 | 1137.2 | 1076.1 | 1058.8 | 1079.8 | 1170.3 |
| Imports of G\&S | 963.1 | 1094.8 | 1223.5 | 1356.8 | 1536.0 | 1492.0 | 1547.4 | 1607.0 | 1749.6 |


| Billions of dollars |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| US CURRENT ACCOUNT BALANCE | -117.8 | -128.4 | -203.8 | -292.9 | -410.3 | -393.4 | -503.6 | -555.3 | -589.1 |
| Current Acct as Percent of GDP | -1.5 | -1.5 | -2.3 | -3.2 | -4.2 | -3.9 | -4.8 | -5.1 | -5.1 |
| Net Goods \& Services (BOP) | -101.8 | -107.8 | -166.9 | -262. 2 | -378.7 | -358.3 | $-435.7$ | -499.0 | -536.8 |
| Investment Income, Net | 28.6 | 25.1 | 12.7 | 23.9 | 27.6 | 20.5 | -5.4 | 9.5 | 10.6 |
| Direct, Net | 69.4 | 72.4 | 65.5 | 75.0 | 88.9 | 102.6 | 77.9 | 89.9 | 96.5 |
| Portfolio, Net | -40.8 | -47.3 | -52.9 | -51.1 | $-61.2$ | -82.1 | -83.4 | -80.4 | -85.9 |
| Other Income \& Transfers, Net | $-44.6$ | $-45.7$ | -49.6 | -54.5 | -59.3 | -55.6 | -62.5 | $-65.8$ | -62.9 |

[^9]|  | 1999 |  |  |  | 2000 |  |  |  | 2001 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 Exports of G\&S Imports of $\mathrm{G} \& \mathrm{~S}$ | -1. 8 | -1.4 | -0.7 | 0.1 | -1.1 | -1.0 | -0.7 | -0.2 | 0.5 | -0.4 | -0.2 | -0.3 |
|  | -0.8 | 0.4 | 1.1 | 1.3 | 0.8 | 1.5 | 1.2 | -0.5 | -0.7 | -1.4 | -2.0 | -1.0 |
|  | -1.0 | -1.9 | -1.8 | -1.2 | -1.9 | -2.5 | -1.9 | 0.3 | 1.2 | 1.0 | 1.7 | 0.7 |
| Percentage change from previous period, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Exports of G\&S Services | -6.9 | 4.3 | 10.6 | 12.6 | 7.7 | 14.6 | 11.6 | -4.0 | -6.0 | -12.4 | -17.3 | -9.6 |
|  | -1.5 | 3.4 | 4.7 | 6.4 | 10.2 | 11.2 | -5.9 | 4.4 | -6.0 | -2.5 | -13.9 | -13.8 |
| Computers | 0.8 | 24.7 | 20.6 | 9.2 | 33.5 | 45.9 | 28.8 | -8.8 | -7.3 | -41.7 | -22.8 | -17.6 |
| Semiconductors | 34.2 | 45.2 | 41.3 | 19.0 | 14.6 | 90.9 | 43.4 | -17.5 | -34.6 | -47.3 | -40.9 | -11.7 |
| Other Goods 1/ | -12.0 | 0.9 | 10.8 | 15.4 | 4.2 | 9.1 | 16.7 | -5.9 | -2.9 | -10.5 | -16.5 | -6.9 |
| Imports of G\&S | 8.4 | 15.4 | 14.5 | 9.4 | 14.7 | 18.6 | 13.8 | -1.6 | -7.9 | -6.8 | -11.8 | -5.3 |
| ServicesOil | 0.2 | 6.8 | 9.7 | 7.1 | 20.7 | 9.6 | 15.1 | -0.5 | 0.3 | 8.5 | -23.2 | -16.5 |
|  | 3.9 | 29.8 | -5.8 | -31.5 | 28.6 | 40.4 | -2.3 | -6.5 | 23.3 | 7.2 | -26.9 | 3.9 |
| Computers | 35.0 | 43.7 | 14.4 | 13.5 | 2.5 | 40.4 | 27.9 | -9.5 | -21.6 | -24.5 | -18.7 | 14.6 |
| Semiconductors | 23.0 | 67.9 | 16.3 | 35.0 | 23.5 | 50.0 | 69.8 | -28.5 | -43.9 | -68.8 | -55.9 | -27.5 |
| Other Goods 2/ | 7.8 | 12.2 | 17.4 | 13.4 | 13.1 | 15.5 | 12.3 | 1.3 | -9.4 | -6.2 | -4.7 | -4.5 |
| Billions of chained 1996 dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -283.2 | -319.6 | -339.6 | -339.5 | -368.8 | -394.6 | -413.1 | -418.5 | -404.5 | -414.8 | -419.0 | -425.3 |
| Exports of $\mathrm{G} \& \mathrm{~S}$ | 1007.5 | 1018.1 | 1044.1 | 1075.6 | 1095.8 | 1133.9 | 1165.5 | 1153.7 | 1135.8 | 1098.8 | 1048.0 | 1021.8 |
| Imports of G\&S | 1290.7 | 1337.7 | 1383.7 | 1415.2 | 1464.6 | 1528.5 | 1578.6 | 1572.2 | 1540.3 | 1513.6 | 1467.0 | 1447.2 |
| Billions of dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| US CURRENT ACCOUNT BALANCE | -238.7 | -280.6 | -320.6 | -331.6 | -376.4 | -392.3 | -428.7 | -443.9 | -430.9 | -396.9 | -365.3 | -380.3 |
| Current Account as \% of GDP | -2.6 | -3.1 | -3.4 | -3.5 | -3.9 | -4.0 | -4.3 | -4.5 | -4.3 | -3.9 | -3.6 | -3.7 |
| Net Goods \& Services (BOP) | -209.5 | -253.4 | -286.5 | -299.6 | -348.7 | -367.7 | -393.3 | -405.0 | -388.6 | -373.3 | -319.1 | -352.1 |
| Investment Income, Net | 20.8 | 24.9 | 18.3 | 31.5 | 25.1 | 30.6 | 22.1 | 32.8 | 10.3 | 30.1 | 9.4 | 32.4 |
| Direct, Net | 72.3 | 71.4 | 71.3 | 85.0 | 79.0 | 86.9 | 89.2 | 100.3 | 89.0 | 111.3 | 95.6 | 114.4 |
| Portfolio, Net | -51.5 | -46.5 | -53.0 | -53.5 | -53.9 | -56.3 | -67.1 | -67.5 | -78.7 | -81.2 | -86.3 | -82.0 |
| Other Inc. \& Transfers, Net | -50.0 | -52.1 | -52.4 | -63.5 | -52.8 | -55.3 | -57.5 | -71.7 | -52.5 | -53.7 | -55.6 | -60.6 |

[^10]|  | 2002 |  |  |  | 2003 --------- Proje |  |  |  | ted ---------------4 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| NIPA REAL EXPORTS and IMPORTS |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -0.7 | -1.4 | 0.0 | -1.6 | 0.8 | -0.7 | -0.3 | 0.1 | -0.6 | -0.7 | -0.6 | -0.2 |
| Exports of G\&S | 0.3 | 1.3 | 0.5 | -0.6 | -0.2 | 0.3 | 0.7 | 1.0 | 0.6 | 0.9 | 0.9 | 1.1 |
| Imports of $\mathrm{G} \& \mathrm{~S}$ | -1.1 | -2.7 | -0.4 | -1.0 | 1.0 | -1.0 | -1.0 | -0.9 | -1.2 | -1.6 | -1.5 | -1.3 |
| Percentage change from previous period, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Exports of $G \& S$ | 3.5 | 14.3 | 4.6 | $-5.8$ | -2.1 | 3.5 | 7.9 | 10.7 | 6.6 | 9.0 | 9.1 | 11.3 |
| Services | 21.7 | 10.7 | 5.9 |  | -4.6 | 0.9 | 7.2 | 7.2 | 5.5 |  | 5.7 | 5.7 |
| Computers | -21.1 | -0.5 | -0.8 | 17.9 | -3.4 | 17.0 | 33.6 | 33.6 | 33.6 | 33.6 | 33.6 | 33.6 |
| Semiconductors | 13.7 | 65.8 | 21.3 | -39.4 | 17.2 | 19.2 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 |
| Other Goods 1/ | -3.1 | 14.2 | 3.3 | -10.7 | -1.9 | 3.1 | 5.1 | 9.6 | 3.8 | 7.4 | 7.5 | 10.8 |
| Imports of $G \& S$ | 8.5 | 22.2 | 3.3 | 7.4 | -6.8 | 7.2 | 7.3 | 6.5 | 8.9 | 11.5 | 10.6 | 9.1 |
| Services | 35.7 | -2.1 | 3.1 | 13.0 | -6.7 | -0.9 | 3.8 |  | 5.5 | ${ }_{3} 6.1$ | 6.1 | 6.1 |
| Oil | -19.0 | 34.5 | -13.3 | 24.1 | -15.0 | 21.1 | 12.9 | -21.4 | 0.3 | 33.1 | 9.8 | -15.7 |
| Computers | 52.4 | 5.6 | -4.4 | 8.2 | 13.5 | 14.7 | 33.5 | 33.5 | 33.5 | 33.5 | 33.5 | 33.5 |
| Semiconductors | 45.2 | 41.8 | -5.9 | -26.4 | 1.2 | 21.5 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 |
| Other Goods 2/ | 1.9 | 28.8 | 6.3 | 5.2 | -7.3 | 6.8 | 5.2 | 7.3 | 8.2 | 8.9 | 9.5 | 9.7 |
| Billions of chained 1996 dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Goods \& Services | -446.6 | -487.4 | -488.0 | -532.2 | -510.0 | -528.3 | -536.3 | -534.2 | -551.8 | -573.7 | -592.4 | -599.3 |
| Exports of G\&S | 1030.6 | 1065.5 | 1077.7 | 1061.6 | 1055.9 | 1064.9 | 1085.2 | 1113.2 | 1131.1 | 1155.7 | 1181.2 | 1213.2 |
| Imports of $G \& S$ | 1477.1 | 1552.9 | 1565.7 | 1593.8 | 1565.9 | 1593.3 | 1621.5 | 1647.4 | 1682.9 | 1729.4 | 1773.6 | 1812.5 |
| Billions of dollars, s.a.a.r. |  |  |  |  |  |  |  |  |  |  |  |  |
| US CURRENT ACCOUNT BALANCE | -450.2 | -510.8 | -505.3 | -548.0 | -559.3 | -557.5 | -553.8 | -550.5 | -563.0 | -583.3 | -601.0 | -609.1 |
| Current Account as \% of GDP | -4.4 | -4.9 | -4.8 | -5.2 | -5.2 | -5.2 | -5.1 | -5.0 | -5.0 | -5.1 | -5.2 | -5.2 |
| Net Goods \& Services (BOP) | -382.5 | -437.8 | -441.0 | -481.4 | -500.9 | -500.3 | -498.7 | -496.0 | -512.2 | -531.9 | -548.6 | -554.5 |
| Investment Income, Net |  | -14.7 | -5.8 | -3.7 | 5.2 | 9.4 | 11.4 | 12.2 | 11.9 | 11.3 | 10.3 | 8.8 |
| Direct, Net | 88.1 -85.5 | 75.0 -89.7 | 74.5 -80.4 | 74.2 -77.9 | 85.6 -80.4 | 88.9 -79.5 | 91.5 -80.1 | 93.7 -81.5 | 94.9 -83.0 | 96.0 | 97.1 -86.8 | 98.1 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Other Inc. \& Transfers, Net | -70.2 | -58.3 | -58.5 | -62.9 | -63.5 | -66.5 | -66.5 | -66.7 | -62.7 | -62.7 | -62.7 | -63.5 |

[^11]
[^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 war-related costs that are built into our projection total about $\$ 2$ billion per month going forward. They include costs of occupation as well as procurement costs to begin replacing supplies that were used during the fighting.
    2. Specifically, the package we have built in involves accelerating to 2003 the marginal rate reductions, the marriage penalty relief, the increase in the child tax credit, and the expansion of the 10 percent tax bracket, which are currently scheduled to be phased in between 2004 and 2010. Our projection assumes that the package will go into effect on October 1.
[^2]:    5. These tax cuts boost disposable income about $\$ 40$ billion at an annual rate in the fourth quarter of 2003, when the tax law changes are assumed to go into effect, and $\$ 105$ billion in 2004, when taxpayers who did not adjust their withholding schedules receive refunds on their 2003 tax returns.
[^3]:    6. Incoming data on multifactor productivity led us to slightly reduce our estimate of the contribution of multifactor productivity to structural productivity growth, but this reduction was offset by a higher contribution from capital deepening.
[^4]:    1. For all urban consumers.
    2. Level, except as noted.
    3. Percent change from two quarters earlier; for unemployment rate, change in percentage points.
    4. Percent change from four quarters earlier; for unemployment rate, change in percentage points.
[^5]:    1. Private-industry workers
[^6]:    Note. Quarterly data are at seasonally adjusted annual rates.

    1. Data after 2002:Q4 are staff projections. Changes are measured from end of the preceding period to
    end of period indicated except for annual nominal GDP growth, which is calculated from Q4 to Q4. 2.6.3 FOF
[^7]:    Note. Data after 2002:Q4 are staff projections. 6. Excludes government-insured mortgage pool securities.
    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

[^8]:    1. Foreign GDP aggregates calculated using shares of U.S. exports. Harmonized data for euro area from Eurostat. 4. CPI excluding mortgage interest payments, which is the targeted
[^9]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, computers, and semiconductors.
[^10]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, computers, and semiconductors.
[^11]:    1. Merchandise exports excluding computers and semiconductors.
    2. Merchandise imports excluding oil, computers, and semiconductors.
