



U.S. performance is dominated by high-tech sector

## THE OUTLOOK FOR THE U.S. ECONOMY: SOFT OR HARD LANDING?

BARRY BOSWORTH\*

The U.S. economy performed extremely well over the period of 1995-2000; but it appears to have hit a wall at the end of 2000 and its poor performance in the first few months of this year has elicited talk of recession. The slowdown also seems to have caught policymakers unprepared: as recently as mid-December, the Federal Reserve professed to be leaning toward further interest rate increases. Yet in early January the Open Market Committee convened by telephone and decided to cut interest rates by 50 basis points, and followed that with another 50 basis point cut in less than a month. The prior restrictive policy has now been fully reversed; and when combined with a similar set of dramatic policy changes in 1998, there should be some concern about whether policy itself has

become the source of the instability that it seeks to combat.

However, the most striking feature of the economy in recent years is the extent to which its performance was dominated by developments in the high-technology sector, both during the boom and now during the slowdown. Thus, the overall economy is being driven by cyclical developments in the high-technology sector. During the boom period, the growth of aggregate demand was spurred by a surge in domestic investment, which we can attribute to purchases of high technology products, and a binge of consumer spending which I will argue can be largely attributed to the wealth effects of the boom in high-technology equity prices. High-technology products also had a large impact on the supply side of the economy, providing for a surge in productivity growth that allowed the U.S. to accommodate the demand side boom without inflation (see Table 1).

With the bursting of the high-technology bubble in equity markets and the consequent loss of wealth, consumer spending has slowed; but the most substantial change has been a sharp drop in demand

\* The Brookings Institution.

**Table 1**  
**Annual Rates of Change in Prices, Wages and Productivity**  
December to December percent changes

	1993	1994	1995	1996	1997	1998	1999	2000
Consumer Price Index	2.8	2.6	2.6	3.3	1.7	1.6	2.7	3.4
ex. Food and fuels	3.1	2.7	3.0	2.6	2.2	2.5	1.9	2.6
Producer prices								
Crude	0.4	-0.6	5.6	14.7	-11.7	-7.4	15.7	31.4
Finished	0.2	1.7	2.2	2.9	-1.2	-0.2	3.0	3.6
ex. Food and fuel	0.4	1.6	2.6	0.6	0.1	0.3	0.9	1.2
Employment cost - Private Sector								
Total compensation	3.6	3.1	2.7	2.9	3.3	3.4	3.4	4.4
Wages and salaries	3.1	2.8	2.9	3.3	3.8	3.7	3.5	3.9
ex. Sales occupations	3.0	2.9	2.8	3.3	3.7	3.1	3.6	3.9
Hourly earnings	2.6	2.7	2.9	3.9	3.7	4.0	3.5	4.3
Productivity growth								
Nonfarm	0.1	1.3	1.0	2.7	2.0	2.8	2.9	3.4
Manufacturing	2.2	3.1	3.9	4.1	5.0	4.8	6.4	6.5
Unemployment rate (annual average)	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0

Source: Bureau of Labor Statistics, U.S. Department of Labor.

for high-technology capital. The implosion of internet start-up firms has left the industry with excess capacity, there has been a slowing of the pace on new product innovations, and financial strains have led other firms to slow the pace of their purchases of high-technology capital. The result is likely to be a transitory slowing of GDP growth to an annual rate of about one percent in the first half of 2001, and a return to growth at 3 percent or above in the last half of the year. However, the effect on government policy may be more long-lasting, as the Chairman of the Federal Reserve has used the slowdown as an occasion to actively support a previously unpopular proposal for a large multi-year tax reduction. Thus, it will likely mark the end of a policy mix of fiscal restraint and monetary ease that was in effect for most of the 1990s.

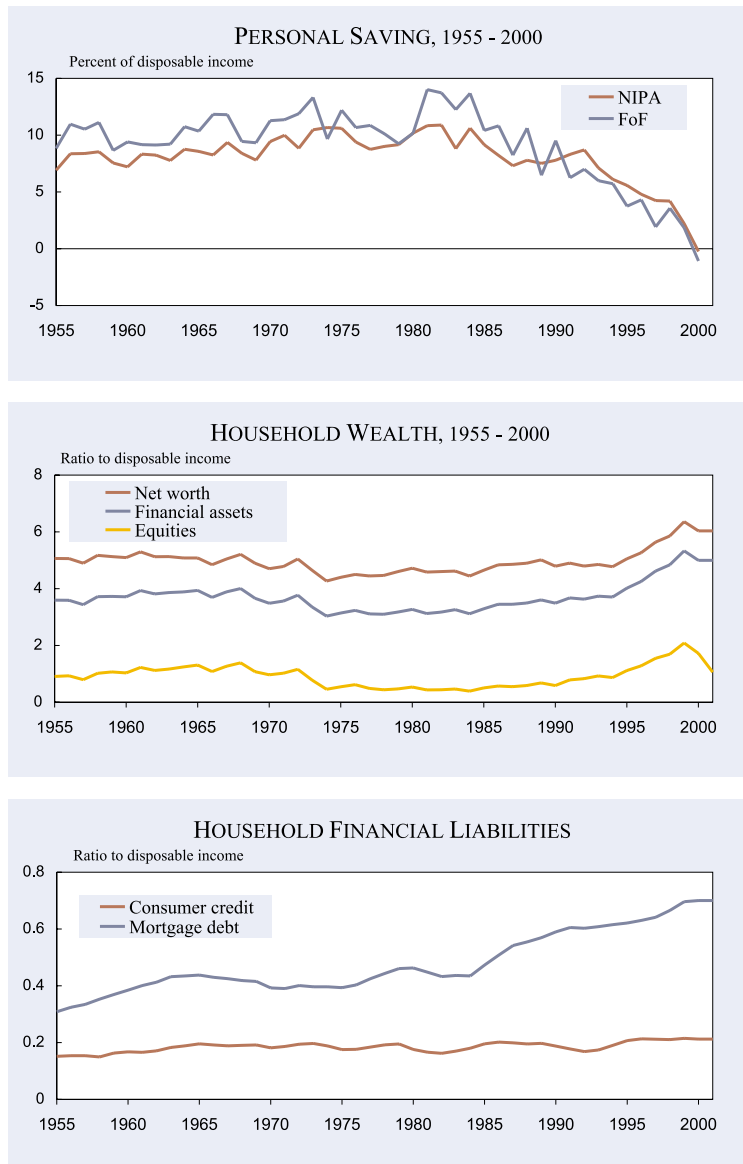
In what follows, I would like to discuss the underlying cause of the boom in somewhat more detail before turning to the current economic outlook. In addition, the economic boom has had a profound affect on the U.S. fiscal situation and transformed the debate in ways we never would have anticipated a few years ago. Finally, the combination of a boom in investment and a sharp drop in saving has generated a very large current account deficit. The deficit in turn has stimulated concerns, more outside than inside the United States, about the sustainability of the expansion in future years.

### The Role of the New Economy

As shown in Fig. 1, there has been a remarkable collapse of household saving in the United States over the past 15 years. I believe that decline can be traced to two phenomena: innovations in the mar-

ket for home mortgages and the rise in the wealth-income ratio. Most Americans finance their homes with 30-year mortgages. Prior to the 1970s, these were truly long-term contracts that were binding on both the borrower and the lender. But under political pressure from homeowners, the government eliminated prepayment penalties for borrowers who wanted to repay the loan at an earlier period. Thus, borrowers have both the flexibility of short-term borrowing and the security of long-term credit. In addition, the costs of refinancing a mortgage have been dramatically reduced by other regulatory changes, innovations in the mortgage mar-

**Figure 1**



Saving (NIPA) is from the national accounts; Saving (FoF) includes the net accumulation of consumer durables.

Source: Federal Reserve System, Flow of Funds (FoF) Statistics.

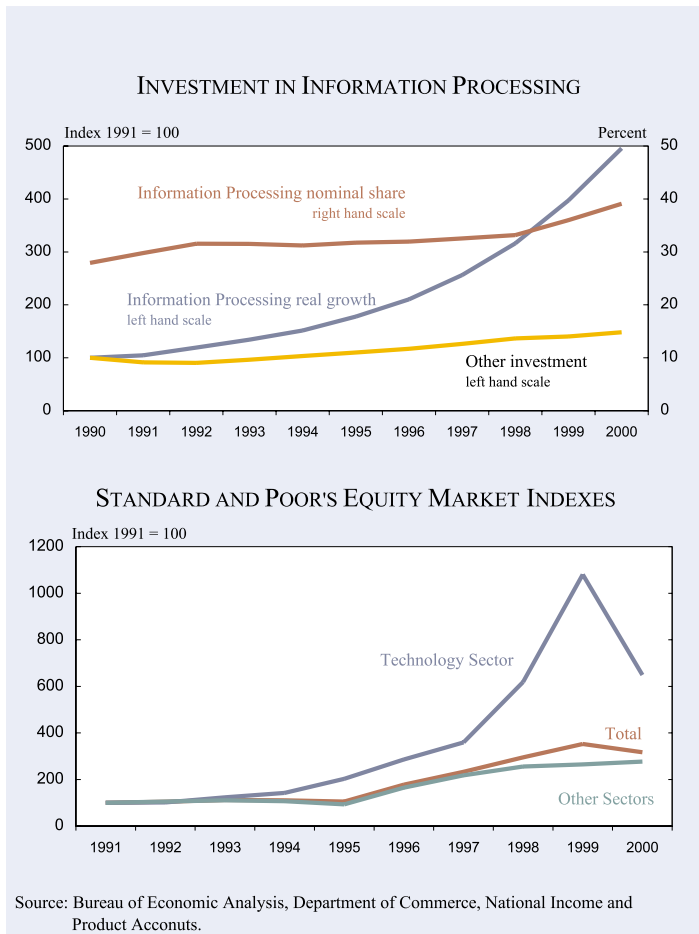
Adjustment in high-tech sector leads to growth slowdown in the first half of 2001

ket, and expanded competition among mortgage lenders.

As a result of these innovations, periods of decline in mortgage rates now trigger episodes of mass refinancing of mortgages. If it were simply a roll over of debt at a lower interest rate, it would be of little economic consequence. But most homeowners cannot avoid the temptation to increase the mortgage amount, converting gains in their home equity to cash, and repaying their consumer credit. Mortgage interest is tax-deductible and the rates are much lower than for consumer credit. Note in the charts that consumer credit is an unchanging ratio to disposable income, whereas mortgage debt continues to rise. This is a relatively new mechanism for translating real estate gains into immediate gains to consumer spending; but it is also very sensitive to variations in interest rates, because it is only attractive when interest rates are declining.

Consumer spending boosted by mortgage borrowing and rising wealth-income ratio

Figure 2



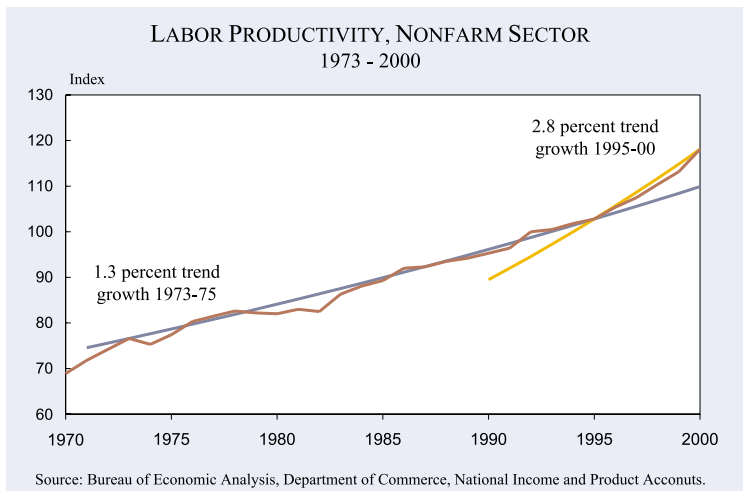
The second factor behind the growth of consumer spending is the rise in the wealth-income ratio; and as can be seen in the figures, the wealth gains can be traced to increases in equity prices. Much of this wealth is held in retirement accounts, but with the conversion to defined-contribution accounts whose value goes up and down with the market, more Americans are aware of the short-term changes in their retirement situation, and a large proportion borrow against those retirement accounts to finance more immediate expenditures. In addition, the proportion of American households with equity market investments had increased to about 50 percent by the end of the 1990s.

Investment in information processing dominated investment growth

Over the past decade, the net wealth of the household sector has increased from 5 times disposable income to 6.5 in mid-2000. The increased value of equity holdings, both direct and indirect through pension funds, represented 85 percent of that increase. The increase in equity values, in turn, was dominated by the performance of the technology sector. Even though technology stocks accounted for only 10 percent of the S&P

index in 1991, they rose 10-fold over the following eight years to the point where they represented a third of the overall index in early 2000. Non-technology stock rose by 150 percent over the same period.

Business investment has had a long and remarkable expansion during the 1990s, admittedly from very depressed levels at the beginning of the decade. Again, as shown in Fig. 2, investments in information processing capital completely dominated that growth. High-technology capital is conventionally defined to include computers, computer software, and communications capital. While these components are an increasing share of nominal investments, their spectacular growth is the result of large reductions in quality-adjusted prices. It is important to note that part of the differences in the reported rates of growth and investment between the United States and Europe can be traced to differences in how we measure the real value of such investments; but in any case the production of high-technology capital is a more important part of the U.S. economy.

**Figure 3**

On the supply side, the rate of productivity growth has accelerated over the last five years by about 1½ percentage points, from 1.3 percent in the 1973-95 period (see Fig. 3). We can also factor that improvement among three components. About one-third of the gain can be traced to productivity gains in the production of high-technology products; another one-third is the result of the large rise in the capital-labor ratio (as previously mentioned, largely the result of high-technology investments.); and one-third reflects gains in multifactor productivity outside of the high-technology sector.

The source of the last one-third of the gains remains controversial. Some analysts want to attribute it to supra-normal returns to information technology (network and similar effects), while others maintain that much of this improvement will prove to be cyclical or transitory in its effect. Interestingly, the current slowdown will provide a partial test of the importance of the cyclical factor. In either case, high-technology would appear to be the dominant source of the improvement in productivity growth. Just as it was the primary story behind the boom on the demand side of the economy.

### The Slowdown

So what happened at the end of 2000? First, a restrictive monetary policy cut the growth of residential spending and a reduction in the refinancing of mortgages was a factor behind the growth of consumer demand. But the rise in interest rates also played a role in pricking the bubble of equity prices, particularly in the high-technology domi-

nated NASDAQ. Much of the rise of the NASDAQ in late 1999 was clearly unsustainable, as price-earnings ratios reached absurd levels; and the U.S. experience with internet startups seems to have been built largely on exaggerated hype. In any case, the resulting wealth losses have had an impact on consumer spending.

The abrupt turnaround in capital spending was more surprising. Real expenditures on information capital fell at a 5 percent annual rate in the 4<sup>th</sup> quarter,

in dramatic contrast to the double-digit rates of growth in prior years. More generally, capital good orders also plunged in the final few months. To some extent the NASDAQ collapse may have been an occasion that led firms to reevaluate their budgets for high-technology products. In addition, the lack of new developments in computer hardware and software made it unnecessary to replace computers at the pace of past years. This is reflected in a much slower rate of quality improvement in the government price indexes for computers during 2000. Also, a decade of rapid growth in investment outlays has pushed up corporate indebtedness, and financing restrictions are becoming of increasing importance.

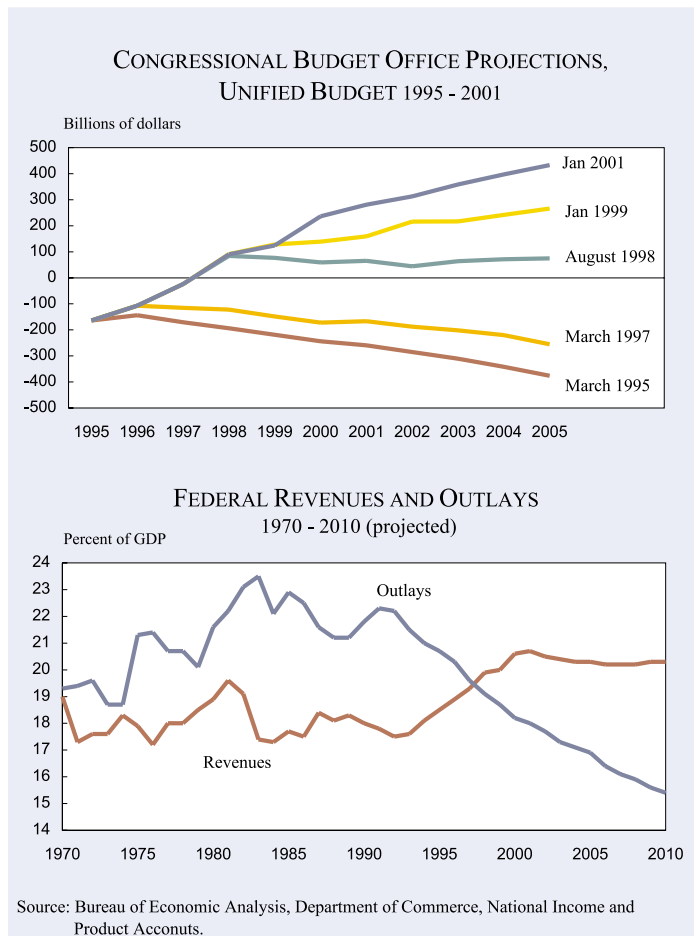
The Federal Reserve has responded to these developments in a very confusing fashion that may reflect a lack of consensus on future policy. Rates were cut very quickly and by large amounts, and some of Greenspan's remarks seemed designed to promote recession fears. For a while, it looked like the new Administration and the Fed were trying to generate a recession to strengthen the case for tax reductions. But more recently Greenspan has backed off and argues that there is no immediate need for further actions.

Outside the government, there are expectations of further interest rate cuts. Primarily, this reflects a view that the economy is fundamentally in very good condition, that there is no economic reason for a recession, and therefore the Fed should do everything it can to be sure that a recession does not occur. Certainly, the Fed has the power to prevent a recession should it desire to do so. Thus, nearly all of

Burst of equity price bubble depresses capital spending

Monetary policy was eased sharply

Figure 4



Large and growing budget surpluses to be scaled back by tax cuts

the forecasts show a V-shaped slowdown in which growth is not negative for more than one quarter, and it recovers to a trend growth rate of 3–3½ percent. This outlook is based on a continuation of modest inflation pressures, and as shown in the attached table, there are still few indications of a significant rise in the inflation indicators.

### The Changing Fiscal Situation

Among the most dramatic developments of recent years has been the disappearance of the budget deficit as the dominant issue of political conflict in Washington (see Fig. 4). In just three years, the fiscal outlook went from large and growing deficits as far as the eye could see to large and growing surpluses equally far out into the future. In just the two years from March of 1997 to January of 1999, the projected fiscal balance for the year 2005 shifted from a deficit of \$200 billion to a surplus of \$300 billion; and this year the projected surplus was increased to over \$400 billion. According to the lat-

est forecasts of the CBO, the fiscal surplus would reach 5 percent of GDP by 2010 and the government would retire all of the publicly-held debt. Most surprising, this changed budget situation is the product of little or no legislative action.

Instead the fiscal turnaround is the result of a higher rate of projected growth, based on a continuation of the pickup in productivity growth, and a sharp rise in the effective rate of personal income taxation. The increase in the effective tax rate, in turn, largely caught the budget forecasters by surprise, with large unanticipated revenue inflows beginning in 1997. It reflects an unusual concentration of the income gains of recent years among the highest income groups who pay the highest marginal rates and very large revenue windfalls from the taxation of capital gains realizations. The income gains of the lowest income groups have been surprisingly modest throughout the expansion. In the short

run, the realization of capital gains will continue, even in a declining market, but the sustainability of the high revenue yield rate is a critical area of conflict in the argument over the long-term fiscal outlook. Furthermore, the projections assume continued strong restrictions on spending that reduce the ratio of federal government expenditures to GDP to levels not seen for the past half century.

The current argument over fiscal policy is primarily a political dispute with little role for economic factors. Conservatives have learned over the past quarter century that deficits can serve as the most effective restraint on new expenditure proposals, and advocacy of tax reductions is far more popular than opposing new programs as being too costly. Thus, they will seek to eliminate the surpluses as a means of maintaining pressures for scaling back expenditure programs in future years. Similarly, liberals would like to use the funds to finance new programs, particularly expanded health care for the elderly. Advocates of saving the surplus as a means of offsetting a portion of the decline in private sav-

ing or to improve the financing of the old-age retirement programs are in a distinct minority.

The most reasonable projection is that President Bush will achieve most of his tax reduction program, and that his own proposals for defense expenditures and a compromise with the Democrats on nondefense spending will eliminate the projected surpluses on the budget exclusive of the public Social Security programs. I would expect projections for the non-Social Security budget to return to rough balance within the next two budget cycles.

### The Current Account

The economic concern with these budgetary outcomes lies with their implications for rates of national saving in future years and the pressures that will be placed on the current account. Over the past decade, improvements in public sector saving have fully offset the decline in private saving. Thus, the rise in the current account deficit to near five percent of GDP can be traced to increases in domestic investment (see Table 2 and Fig. 5). With the scaling back of public sector surpluses, there would seem to be a potential future problem of inadequate national saving. Barring a stock market collapse that would reverse the wealth gains of the past decade, there is little basis for projecting improvements in private saving rates. That implies, in turn, a continued large reliance on capital inflows from the rest of the world; or a substantial decline in the rate of domestic investment.

Much of the external discussion has centered around the sustainability of the foreign capital inflows; but the issue generates surprisingly little concern within the United States. Because of the improvement in public sector saving, most of the growth of the current account deficit has been a reflection of very positive investment opportunities in the United States, and the fact that a booming U.S. economy has been the engine of growth in an otherwise weak and fragmented world economy. While Europe has been doing fairly well with a focus on its own internal economic concerns, the countries of Asia and Latin America have become increasingly dependent on exports to the United States to sustain their economies. That situation is unlikely to change in the near future, given the continued deterioration of the Japanese economy, financial sector weaknesses in the rest of Asia, and a decidedly mixed situation in Latin America.

In an increasingly global capital market, national balances seem less relevant as long as countries, like the United States, are unconcerned about foreign ownership of their production facilities. At present, we can see no evidence of a rising risk premium for investments in the United States, and U.S. governments and corporations still find it advantageous to borrow in their own currency.

Even if foreign investment capital should find alternative outlets, the implication for the United States would seem to be a declining real exchange rate and improved export opportunities. Only if the capital outflow should generate a

Inadequate national saving offset by foreign capital inflows

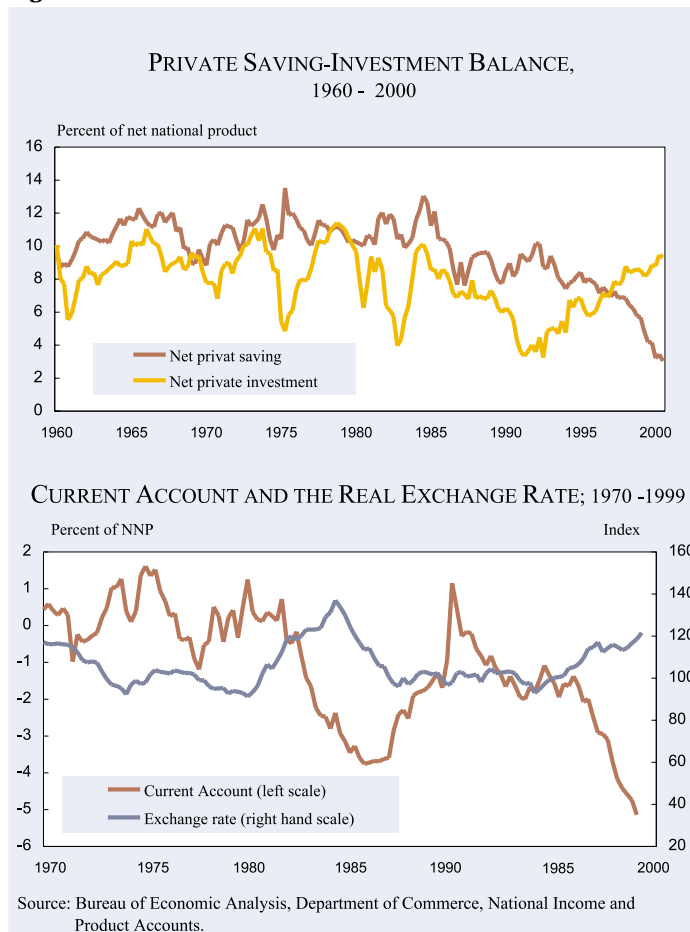
**Table 2**  
**Net Saving and Investment by Sector, 1960–2000**  
Percent of net national product

Sector	1960–69	1970–79	1980–89	1990–95	1996	1997	1998	1999	2000
Saving	12.0	9.6	6.7	4.7	5.7	6.7	7.5	6.9	6.7
Private	10.9	10.9	10.2	8.6	7.4	7.0	6.3	4.7	3.2
Household	6.4	7.6	7.6	6.1	4.0	3.5	3.4	1.8	0.1
Government	1.1	- 1.3	- 3.5	- 3.9	- 1.7	- 0.3	1.2	2.1	3.5
Investment	12.5	10.7	7.3	5.4	6.2	7.1	7.2	6.0	5.7
Private	9.4	9.0	7.5	5.1	6.7	7.6	8.6	8.5	9.2
Government	2.6	1.4	1.5	1.3	1.1	1.1	1.2	1.3	1.4
Net foreign	0.4	0.2	- 1.7	- 1.0	- 1.6	- 1.7	- 2.6	- 3.8	- 4.8
Statistical discrepancy	0.6	1.0	0.5	0.7	0.5	0.4	- 0.3	- 0.9	- 1.0
Capital consumption	10.9	12.3	14.2	14.1	13.9	13.9	14.0	14.3	14.4

2000 is average of three quarters. – Net saving excludes capital consumption allowances.

Source: Bureau of Economic Analysis, Department of Commerce, National Income and Product Accounts.

Figure 5



The current economic expansion will continue

precipitous decline in the dollar, with resulting inflation pressures, would the implications be particularly negative for growth. While a current account adjustment may be an important issue in the long-term outlook for the U.S. economy, it does not seem to be determining the near-term outlook. I would conclude that the United States still has room to continue the current economic expansion; and, while there are some signs of increasing strains, they do not signal a recession in the near term.