

CHAPTER 2

Macroeconomic Policy and Performance

The United States achieved record-breaking growth last year. In February the length of the expansion reached 107 months since the last business cycle trough in March 1991, eclipsing the previous record of 106 months set in the 1960s. Perhaps even more remarkable than the length of the expansion has been its strength. Driven by vigorous investment and accelerating productivity, real GDP grew a torrid 6 percent between the second quarter of 1999 and the second quarter of 2000, yet core inflation remained tame. It is probably not surprising that growth moderated in the second half of the year after such a surge, but the unemployment rate in November remained a relatively low 4.x percent. Strong and rising productivity growth well into an expansion and the prolonged coexistence of low unemployment and low inflation are features of the macroeconomy that have not been seen together before and justify the term “new.” But to accept that we are in a New Economy characterized by strong productivity growth and a high rate of investment in technology is not to conclude that the business cycle has been banished and there are no risks on the horizon. Oil prices have increased sharply in the past 2 years, for example, and oil price shocks were associated with the onset of a recession twice in the 1970s. But the fundamental soundness of today’s economy augurs well for our ability to weather the oil price storm just as we weathered the turmoil of the Asian financial crisis in 1997-98. Indeed, the U.S. economy appears to be at a unique point in its modern post-World War II history, reaping the benefits of sound policies and a rich technological environment.

This chapter describes the fruits of these policies and technological developments in the recent performance of the economy. But it also looks to the future. In particular, it discusses the

importance of preserving the fiscal discipline that has provided a policy environment conducive to investment and the strong performance of recent years. It also looks forward to the new issues for macroeconomic policy that would arise if we enter a world where the national debt has been paid down and the Federal government is a net creditor.

The chapter begins with a review of the year's macroeconomic developments. As in the past few years, the review identifies several positive indicators of a New Economy, such as high investment rates, strong productivity growth, and low unemployment with stable core inflation. But it also notes two less sanguine indicators: a low and falling private saving rate and a widening current account deficit. Although it could be a problem if either of these were to persist, each appears, in the short run at least, to be a side-effect of the economy's new features rather than an indicator of poor performance. Low private saving, as measured in the standard national income accounts, has been accompanied by large increases in wealth that are not part of saving as conventionally measured. In large part these increases in wealth reflect investor optimism about prospects for continued rapid growth in profits. Similarly, the widening current account deficit may well reflect not only our own low private saving out of current income but also, as discussed in Chapter 4, the attractiveness to foreigners of investing in the United States.

While evidence that there is something new about the economy is widespread, considerable uncertainty remains about how dramatically the basic parameters of macroeconomic performance have changed. Productivity growth has certainly been strong recently. But precisely how much of the recent increase in productivity growth is cyclical, and how much represents an improved long-term trend? The economy has been able to achieve

remarkably low unemployment rates without rising inflation. But what is the longer-term sustainable rate of unemployment consistent with stable inflation? Recently, New Economy developments have led forecasters regularly to revise upward their short-term forecasts. But does this mean that the approach used to make these forecasts was wrong? The discussion of the Administration's forecast and the short-term economic outlook addresses these questions and the problems the New Economy has posed for forecasters in general. Because the forecast plays such an important role in the budget process, this Administration has consistently been cautious about giving too much weight to recent deviations from longer-term trends. But if productivity continues to accelerate, such prudence could once more produce a forecast that turns out to be too pessimistic.

The second half of the chapter shifts the focus from the short-term performance of the economy to the long-term fiscal outlook. The remarkable turnaround in Federal government finances over the past 8 years has created a virtuous cycle in which fiscal prudence has helped keep interest rates attractive for investment, and strong, productive investment has generated a strong and growing economy with ever larger budget surpluses. As a result, the United States is on track to be free of public Federal debt in a little more than a decade. Even assuming that the economy continues to perform reasonably well, however, such an outcome is not guaranteed if we make unwise fiscal choices. As this chapter will document, demographic trends are pushing us toward a situation in the latter part of the century where expenditures will be growing faster than revenues and deficits could re-emerge. Maintaining fiscal discipline today is critical to building up the resources and economic strength needed to address these demographic pressures down the road.

With the Federal debt scheduled to disappear and surpluses to continue for a long time thereafter, the Federal government would become a net creditor. Wise investment and management of the resulting “national asset” could thus play an important role in addressing the long-term demographic pressures, and this chapter provides an analysis of the challenges posed by these investment and management decisions. The disappearance of the Federal debt raises a number of other issues as well. For example, Federal government securities will no longer provide benchmark interest rates to the private sector. In addition, without an outstanding stock of Federal government securities, the Federal Reserve will have to change the mechanics of how it conducts monetary policy. Of course, the need to address these problems would never have even arisen in the Old Economy.

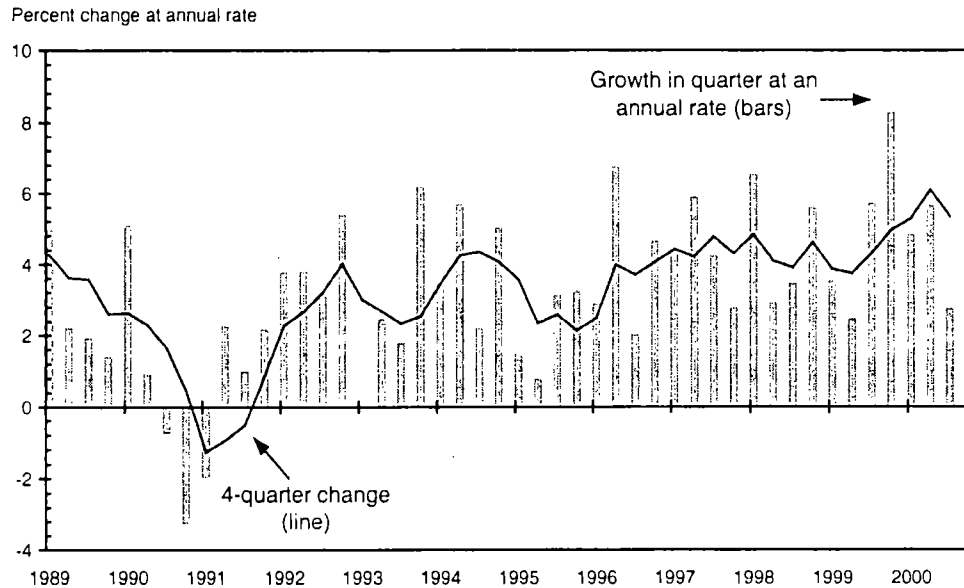
The Year in Review

After growing very rapidly between mid-1999 and mid-2000, the economy showed signs of moderating in the second half of 2000. Nevertheless, data for the full year, when they become available, are likely to show that 2000 was the fifth consecutive year in which growth exceeded 4 percent (chart 2-1). The pattern of spending in 2000 was similar to what it has been in the last few years (Table 2-1), with consumer expenditures growing faster than income, business investment in equipment and software growing robustly, and domestic spending outpacing domestic income to produce a large net exports deficit. With the economy operating at a very low level of unemployment, several measures of labor input showed little growth over the course of the year, including payroll employment, hours worked, and the labor force participation rate. Nevertheless, growth continued to be strong because of surging labor productivity (chart 2-2).

Although rising energy prices contributed to increases in overall inflation, core inflation increased only modestly, despite continued tight labor markets.

Chart 2-1 Growth in Real GDP

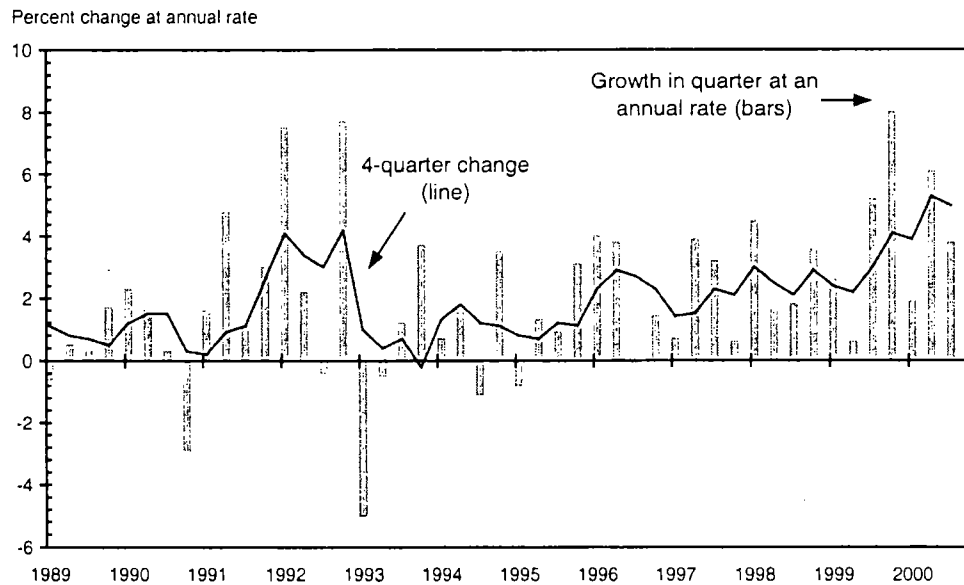
Economic growth was particularly strong between mid-1999 and mid-2000 and has averaged over 4 percent per year in each year from 1996 on.



Source: Department of Commerce (Bureau of Economic Analysis).

Chart 2-2 Growth in Output per Hour (Nonfarm Business Sector)

Productivity in the nonfarm business sector has accelerated in the past few years and growth exceeded 5 percent between mid-1999 and mid-2000.



Source: Department of Labor (Bureau of Labor Statistics).

Table 2-1--*Growth of Real GDP and Its Components During 1998-99 and 2000*

	Growth Rate		Contributions to growth	
	1998-99	2000	1998-99	2000
Gross domestic product	4.8	4.4	4.8	4.4
Final sales	4.7	4.4	4.7	4.4
Consumer expenditures	5.3	5.0	3.5	3.4
Residential investment	6.5	-1.7	0.3	-0.1
Business equipment and software	15.0	15.5	1.4	1.5
Business structures	1.6	9.1	0.0	0.3
Exports of goods and services	3.3	12.2	0.4	1.3
Imports of goods and services	11.6	14.8	-1.5	-2.0
Federal government consumption and gross investment	2.8	-3.3	0.2	-0.2
State and local government consumption and fixed investment	3.9	1.8	0.4	0.2
Change in inventories			0.1	0.0
Final sales to domestic purchasers	5.8	5.0	5.8	5.1
Net exports			-0.9	-0.7

Note: 1998-99 growth rates are from fourth quarter of 1997 to fourth quarter of 1999 at an annual rate; 2000 rates are from fourth quarter of 1999 to third quarter of 2000 at an annual rate.

In 2000, the economy had to negotiate several speed bumps. First, the very strong growth in the stock market that has fueled both consumer spending and investment in recent years came to a halt, though equity prices remain high by most measures. Technology stocks in general and Internet stocks in particular fell sharply after peaking in the spring and ended the year down from their 1999 close. This cooling off of the stock market most likely played a role in slowing the growth in consumer spending and business investment as the year progressed. Rising energy prices probably also played a role in slowing the economy as did increases in

interest rates associated with tightening by the Federal Reserve between June 1999 and May 2000. The challenge for policymakers has been to negotiate these speed bumps and keep the economy on a sustainable growth path with low unemployment and stable inflation. Success thus far has given the United States a record-breaking economic expansion that has lasted almost 10 years.

Private Domestic Spending

Substantial technological opportunities and a surging stock market are features of the New Economy that have affected the shape of aggregate demand in recent years. The effect of technological opportunities can be seen most directly in the very high rates of investment in business equipment and software. And expectations of substantial payoffs from those investments have fueled the stock market. Generally, consumer expenditures are driven primarily by factors such as growth in real wages and incomes and consumer confidence. Changes in wealth are not normally large enough to make much difference. But the surge in the stock market between 1994 and 1999 generated enough wealth to affect consumption noticeably. And even though the stock market stumbled in 2000, there was considerable momentum left from the recent buildup of wealth.

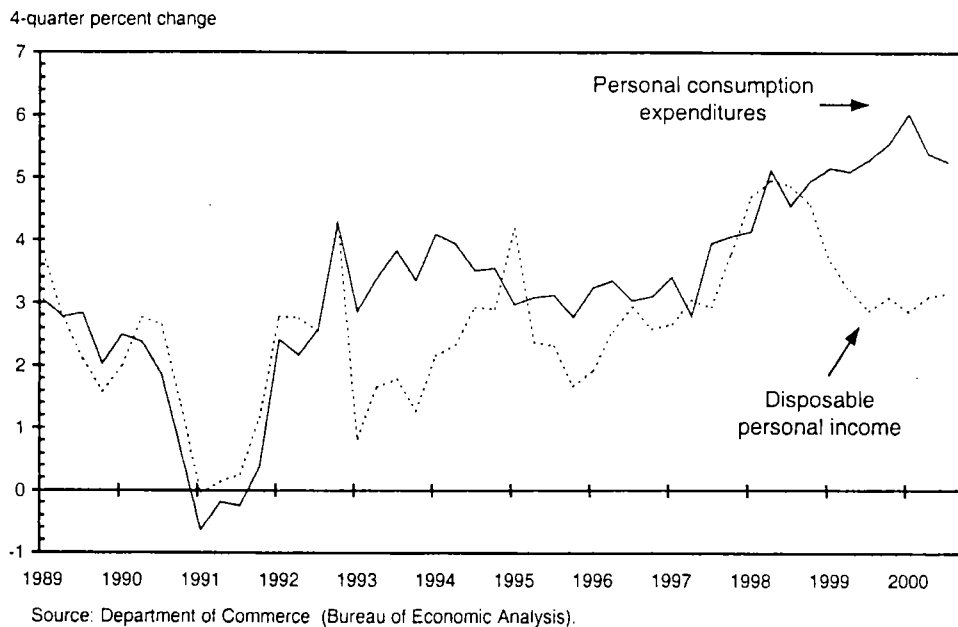
Households

Consumer spending was exceptionally strong in the first quarter of 2000 and then slowed somewhat in the second and third quarters. Nevertheless, consumer expenditures rose 5.3 percent between the third quarter of 1999 and the third quarter of last year, continuing to outpace

growth in disposable personal income (chart 2-3). Purchases of motor vehicles and parts, which grew more than 10 percent per year in 1998 and 1999 slowed after the first quarter and were up 5

Chart 2-3 Growth In Consumption and Disposable Income

Growth in personal consumption expenditures has been particularly strong in the past few years and has substantially outpaced growth in disposable personal income.



percent between the third quarter of 1999 and the third quarter of 2000. After growing at a very rapid pace in 1998 and 1999, residential investment was lower in the third quarter of 2000 than it was a year earlier. [anything else about consumption detail or housing?]

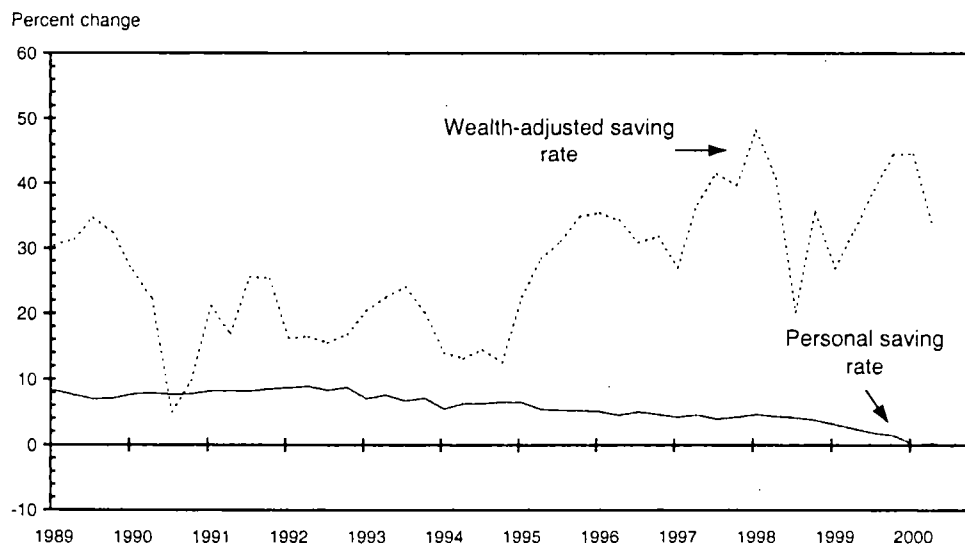
The substantial increase in consumption expenditures in 1999 and 2000 is generally explained by the sharp increase in household wealth since 1994. According to the standard “life-cycle” model of consumer behavior, an increase in wealth is not spent all at once; instead, people generally aim to raise their living standards over the remainder of their lives by spending only a portion each year. The evidence suggests that each dollar change in stock market wealth leads to a permanent change in the level of consumer spending in the future of about 3½ cents per year,

with the full response taking a few years to be realized. The rate of growth of consumption is affected during the transition from one permanent level to another, but persistent changes in the rate of growth of consumption require persistent changes in wealth. Estimates of the impact of the increase in stock market wealth on the rate of growth of consumption between 1996 and 2000 range as high as 2 percentage points per year^[E1]. The lagged effects of past increases in stock market wealth probably continued to boost consumption in 2000, but the modest changes in stock market wealth last year were unlikely to have had much additional impact.

Increased consumption due to the wealth effect reduces saving out of current income, and the household saving rate as conventionally measured in the national income and product accounts (NIPA saving) fell below zero in the third quarter of last year (Chart 2-4). However, NIPA saving does not include capital gains, because they do not represent income earned from

Chart 2-4 Personal Saving Rates

The personal saving rate(saving as a percent of disposable personal income) has fallen sharply recently, while a saving rate that includes capital gains has remained high.



Note: Personal saving is NIPA saving as a percent of disposable personal income. Wealth-adjusted saving is the average over 4 quarters of the change in household net worth as a percent of disposable personal income less saving plus the change household net worth.

Source: Department of Commerce (Bureau of Economic Analysis) and Federal Reserve Board.

current production. When income and saving are augmented by changes in net worth not related

to current saving (mainly capital gains), the picture is quite different and shows a jump in the household saving rate in 1995 that has persisted. To the extent that these changes in household net worth reflect revised views of the future productivity of the underlying assets, the low NIPA personal saving rate is not evidence that households are overextended or living beyond their means. It does mean, however, that households are contributing little or nothing to the pool of national saving available for new investment.

Looking more closely at the financial condition of households, there is little question that even with some stock market setbacks last year, the overall picture of household net worth remains strong. Within the household sector, however, some households are net creditors and others are net debtors. Information from the Federal Reserve's Survey of Consumer Finances suggests that some fraction of net debtors have substantial debts relative to their incomes. Other indicators of the financial condition of households, such as credit card delinquencies and bankruptcies also show some potential stress. While these indicators suggest that some households could be in trouble if economic conditions weakened sufficiently, they do not appear to be the kinds of credit imbalances that themselves could precipitate financial problems.

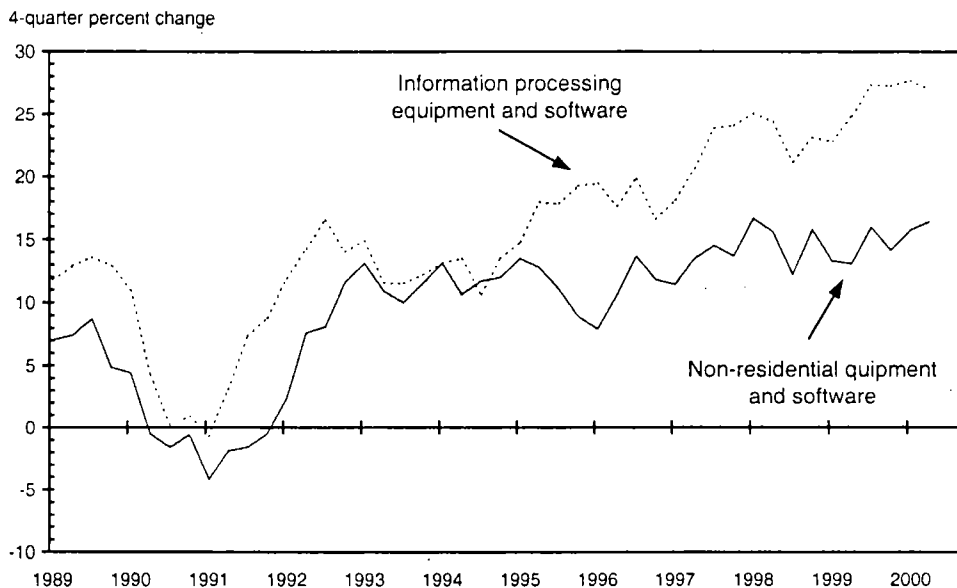
Businesses

Very strong growth in investment in equipment and software, especially information technology, is one of the hallmarks of the New Economy. In 1999-2000, investment in information technology equipment and software exceeded 25 percent at an annual rate (chart 2-5). An important component of this growth appears to reflect the replacement of the large but

rapidly depreciating stock of equipment that has been built up in recent years. Second, the relative price of new equipment has been low, in part because of the large stock market gains

Chart 2-5 Growth in Investment in Equipment and Software

Growth in business investment in equipment and software has been strong since 1993, with an acceleration in information processing equipment and software since 1995.



Source: Department of Commerce (Bureau of Economic Analysis).

between 1994 and the first part of 2000. As with consumption, these effects provided some momentum last year even without further gains in the stock market.

[discussion of structures] Construction of office buildings was strong in 2000, while industrial construction continued at a pace below rates seen earlier in the decade. In the third quarter, business construction was driven by drilling for oil and gas.

[discussion of inventories]. How much of the variation in quarterly growth over the past 2 years has been due to inventories? Have they been stabilizing. Lean inventory-to-sales ratio.

[some discussion of the financial condition of businesses focusing on the recent emergence of some concern about rising risk premiums and issues of financing. But basically the same argument as with households: these could be problems if the economy falters but they do appear to be the kind of imbalances that would precipitate a financial or economic crisis.]

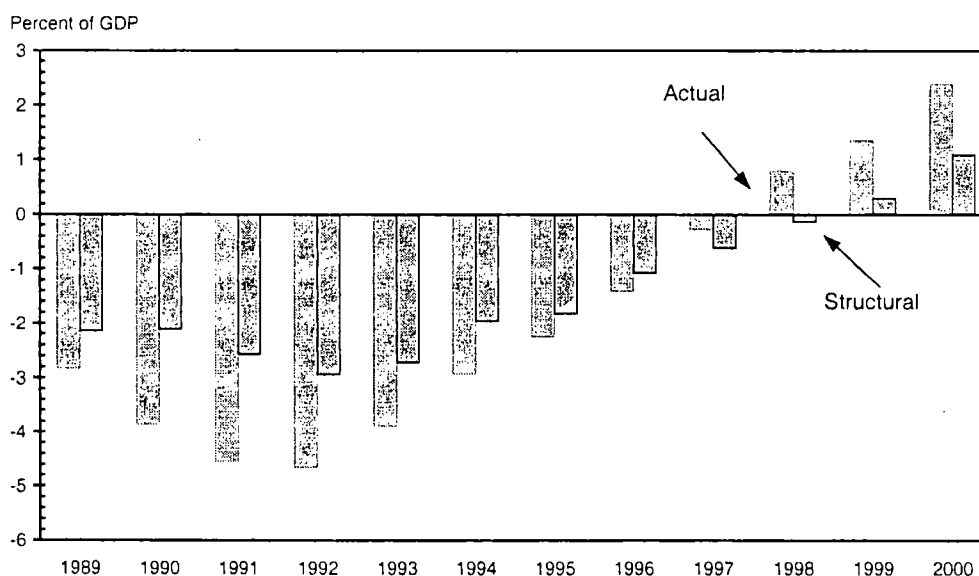
Government Spending and Fiscal Policy

Government expenditures for consumption and investment, and particularly Federal government expenditures, have grown more slowly than GDP during this expansion. In the first three quarters of 2000, Federal government expenditures fell at a 3.3 percent annual rate. [more discussion of government spending of different types?].

One measure of whether fiscal policy is stimulative or restraining of economic activity is the change in the standardized or structural budget balance. In contrast to the actual budget balance, the structural balance controls for the effect of economic activity by estimating what receipts and outlays would be at a constant level of economic activity. After 1995, the structural deficit shrank, though not as fast as the actual deficit (Chart 2-6), indicating that fiscal policy was

Chart 2-6 Actual and Structural Federal Budget Balances

The structural budget deficit shrank and turned into a surplus between 1995 and 2000, indicating that fiscal policy was restrictive.



Source: Office of Management and Budget.

restrictive. The structural balance turned positive in 1999 and is estimated to have increased further in 2000 as the fiscal restraint has continued.

International Influences

U.S. exports grew very strongly in 2000 as many of our trading partners continued to experience renewed economic growth. Nevertheless, the current account balance continued to widen and net exports continued to be a negative contributor to economic growth. As discussed in Chapter 4, however, the widening of the trade and current account deficits in the past few years most likely are signs of the strength of the new American economy.

A country runs a current account deficit when its domestic spending exceeds its domestic income and it borrows abroad to fund that extra spending. Another way of saying the same thing is to say that a current account deficit reflects an excess of domestic investment over domestic saving, with the extra investment funded by borrowing abroad (drawing on the saving of foreigners). The wealth effects on consumption discussed previously have generated substantial consumption, some of which has been met through imports. Moreover, as discussed in Chapter 4, imports represent a significant share of U.S. investment, including communications and information technology investment. At the same time, investment in the new economy of the United States has been attractive to foreigners, which has helped keep demand for the dollar strong. These developments appear to reflect the strength of the U.S. economy and the importance of new developments like rapid wealth accumulation and attractive investment opportunities. Arguably, the U.S. economy is in a transitory phase in which national saving is

held down by especially low private saving out of current income and by extraordinary investment opportunities in the United States, which is the frontrunner in making new economy investments.

Monetary Policy and Financial Markets

Monetary and financial market developments in 2000 were not particularly unusual for an economy experiencing a long expansion that had seen a period of extraordinary stock market gains. The stock market took a breather last year, and credit conditions reflected the monetary restraint being exercised by the Fed.

Equity Markets

As discussed earlier, wealth generated by a booming stock market has been an important driver of economic growth in the past several years. During the 1990s the broad stock market (measured by the Wilshire 5000 index) grew an average of 14.7 percent per year, while total market capitalization grew more than 400 percent between 199x and the end of 1999. Much of this growth was concentrated in the technology sector, which has transformed declining costs in computer manufacturing and rapid innovation into robust growth and product development. The technology-heavy NASDAQ index grew an average of 23.6 percent per year over the decade, and the technology sector accounted for roughly half of the increase in S&P 500 capitalization from the end of 1995 through 1999. Growth in Internet stocks exploded in the late 1990s. The market capitalization of Internet companies (defined as those in the Wilshire 5000 Internet index,

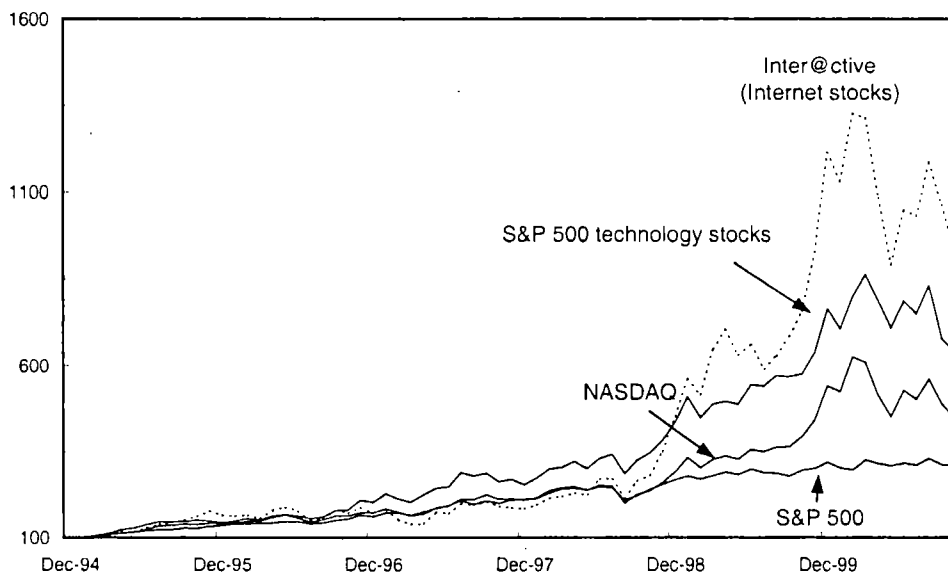
which tries to include all companies that derive a substantial fraction of their business from the Internet) increased from \$0.2 trillion in December 1997 to \$1.6 trillion in December 1999. These Internet stocks alone accounted for about 12 percent of the total increase in stock market wealth over this period.

The sharp increase in stock prices came to a halt in 2000 (Chart 2-7). The S&P 500 index finished the year down [3 percent as of November 1], while the NASDAQ Index (after climbing 24 percent between January and March) fell sharply to end the year down [17 percent as of November 1]. Total stock market wealth increased only 2.8 percent {updated Sep. 30}, compared with an average annual increase of around 17½ percent over the past decade. Growth subsided in many of the sectors that have performed well in recent years. Internet stocks were particularly notable for their roller coaster ride in 2000. Market capitalization of Internet stocks declined 4½ percent over the year, and 23 percent from its high in March. Meanwhile, the total

Chart 2-7 Equity Prices

After leading stock-market growth in recent years, internet and technology stocks fell this year. The S&P 500 index was flat.

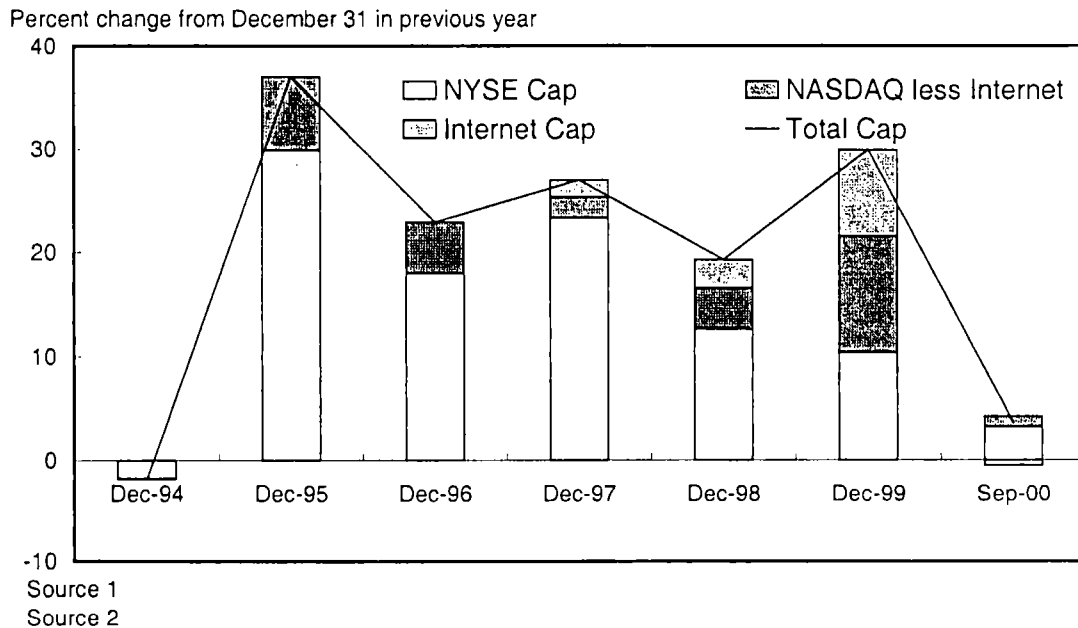
Index, December 31, 1994 = 100 (ratio scale)



Note:
Source:

value of technology companies in the S&P 500 fell xx percent. This performance of technology

Chart 2-8 **Contributions to Growth in Market Capitalization**
(Caption 1)
(Caption 2)



stocks in general and Internet stocks in particular stands in marked contrast to 1999, when Internet stocks were a major source of growth in stock market wealth (Chart 2-8). continue to expand and offer new products at an impressive pace, growth in their equity prices may be converging to a pace more in line with that of the broader market.

The rational basis for stock market prices is the discounted present value of future cash flows (typically proxied by dividends), where the discount rate includes a risk factor. Thus, rational reasons for the tepid performance of the stock market last year are likely to be found in the factors affecting such a valuation. For example, a rise in interest rates reduces the present value of future cash flows. Increasing expectations that the economy would slow as a result of Federal Reserve tightening and other factors could also reduce expectations of future profits and hence cash flows. Disappointing earnings reports could also reduce expectations of future

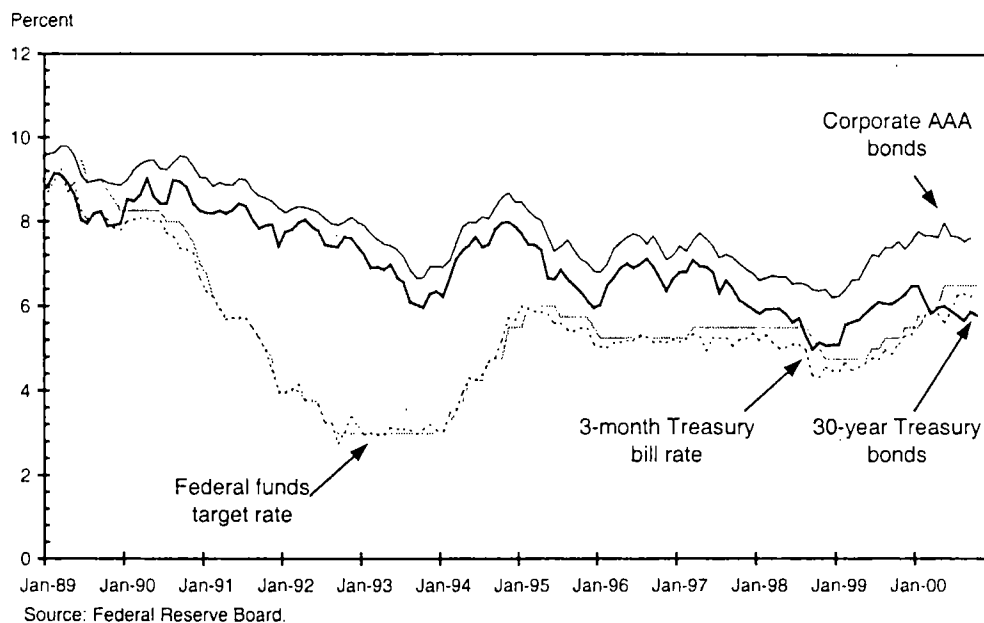
profitability. All of these factors seem to have been at work last year. High oil prices have also had an unfavorable impact on revenues, and profit expectations, particularly in energy-intensive industries such as transportation and basic materials. Finally, there is a possibility that the higher growth potential technology companies have enjoyed, and continue to enjoy has already been priced into the market, as growth in this sector ceased to outperform the rest of the market. [how have earnings expectations changed?]

Interest Rates

Between June 1999 and July 2000 the Federal Reserve raised its target for the Federal funds rate (the rate banks charge each other for overnight lending) by 175 basis points, from 4.75 to 6.5 percent. In the second half of 1999, when the Fed began its rate hikes, both Treasury yields and corporate bond yields rose as the Federal funds rate rose. Yields on Treasury and other fixed-income securities of all maturities increased. Beginning in early 2000, however, the Treasury yield curve began to exhibit unusual behavior. Instead of its normal upward-sloping shape, the yield curve for Treasuries became inverted, with yields on longer-term securities falling below those on shorter term securities (Chart 2-9). This development appears to have been determined mostly by supply conditions in the market for Treasury securities associated with the Department's initiation of a debt buyback program. In the fall of 1999 the Treasury Department announced it would begin buying back Federal debt. By January 2000 yields on longer-term Treasury's began to fall as investors anticipated a reduced supply of longer-term bonds. Over the year the Treasury bought back \$yyy of Federal debt.

Chart 2-9 **Selected Interest Rates**

Yields on long-term Treasury bonds fell relative to those on private bonds and other Treasury securities in 2000.



[discussion of inverted Treasury curve associated with supply issues compared with flat but not inverted swaps yield curve; perhaps a box on swaps in order to discuss the search for a new benchmark as the supply of Treasuries shrinks.]

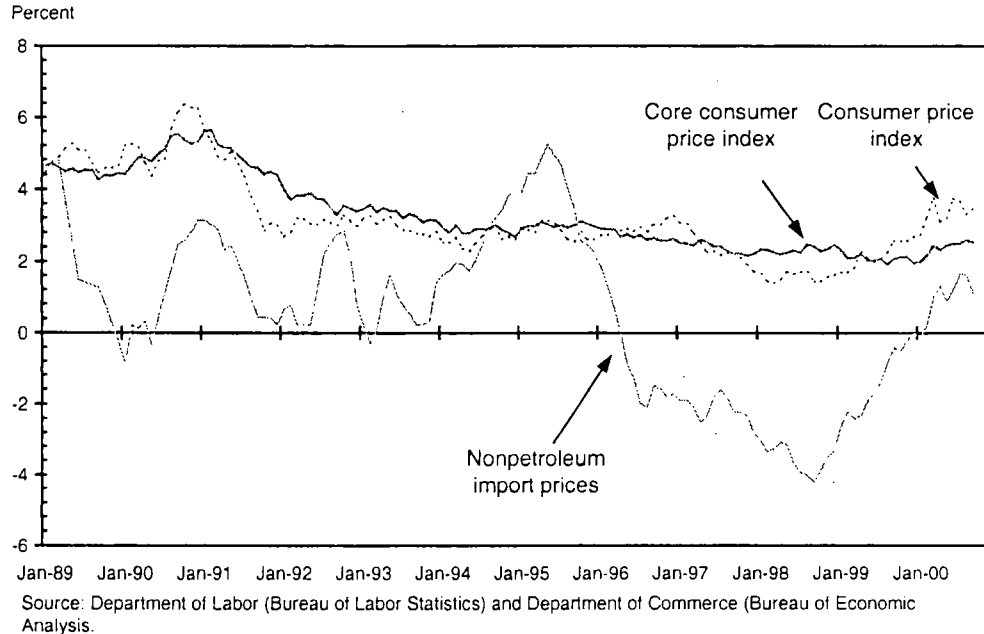
Despite the rise in interest rates since 1979, real Treasury yields on intermediate and longer term securities are currently at their lowest levels since [19xx]. Fiscal discipline in the 1990s has played an important role in achieving these reductions in real rates. After adjusting for inflation, yields on 10-year Treasury bonds declined an average of 10 basis points per year since 1992, while yields on 30-year bonds declined an average of 18 basis points per year. This favorable interest rate environment has been a critical ingredient in stimulating investment.

Labor Markets and Inflation

For the most part, 2000 marked another year in which the unemployment rate remained very low without generating excessive inflation or inflationary expectations. However, sharp increases in oil prices since the beginning of 1999 have been a potential inflationary force and have pushed up overall consumer price inflation. Until very recently, however, core inflation has not been affected much by the surge in oil prices, though uncertainty about oil was important in the last half of 2000. In contrast to earlier years when falling import prices (including oil prices prior to 1999) helped keep inflation in check, nonpetroleum import prices are no longer the restraint on overall inflation they once were (Chart 2-10).

Chart 2-10 Consumer Price Inflation

Excluding food and oil, consumer price inflation remained modest in 2000, but oil prices helped push up overall inflation and non-oil imports are not the restraint they once were.

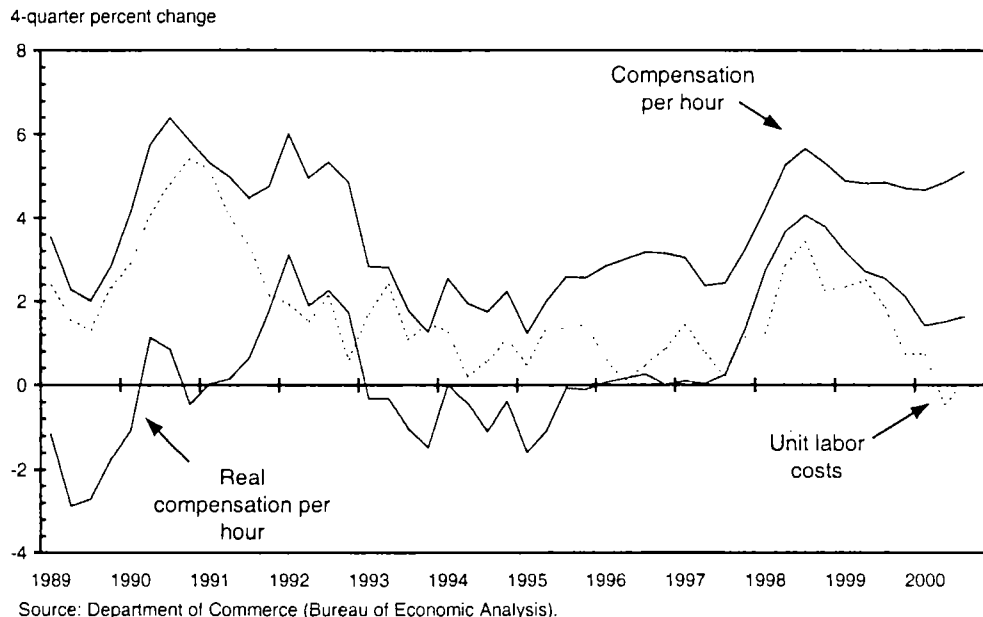


Wages and compensation increased solidly in nominal terms in 2000. From the standpoint of businesses, however, these wage increases were more than offset by strong productivity gains, with the result that unit labor costs did not put upward pressure on product

prices (Chart 2-11). From the standpoint of workers, increases in the consumer price index associated with higher energy prices have restrained increases in real wages and compensation.

Chart 2-11 **Labor Costs and Real Compensation**

Although growth in nominal compensation per hour has remained greater than 4 percent, growth in unit labor costs and real compensation per hour have slowed in the past 2 years.



The Economic Outlook

While economic performance remained strong in 2000, the resiliency of the new macroeconomy of rising productivity growth and a high pressure labor market could be tested in the coming year or so. While Chapter 3 provides ample reason to be optimistic about future productivity growth, it remains difficult to know how much of the recent spurt of productivity growth is temporary and how much is sustainable. Absorbing the effects of high oil prices and reduced restraint on inflation from non-oil import prices will certainly be easier if productivity

growth continues to be strong. In addition, the very low private saving rates of recent years are probably unsustainable, raising the question of whether the transition from a stock-market fueled consumption boom to a more sustainable consumption pace will be accomplished smoothly. Fortunately, the economy remains remarkably free of the kinds of imbalances that typically are associated with the end of expansions and the outlook for the U.S. economy remains good.

Productivity and the NAIRU

[a sketch] Inflation has been low because of the surprising growth of productivity (5 percent over the past 4 quarters, and 3.7 percent over the past 2 years.). This productivity surprise has lowered the unemployment rate consistent with stable inflation—a continuation of a pattern that has developed over the past 5 years. When productivity grows in excess of expectations, it lowers the rate of price inflation consistent with an initial rate of compensation inflation. The next year when wage setters look back at price inflation that is lower than what might have been expected and so nominal hourly compensation continues to grow slowly. (This story was discussed more completely in last year's *Economic Report of the President*). Most measures of growth in real compensation per hour have edged up only slightly or not at all during the past year (possible chart).

It is not clear however, whether continued high rates of productivity growth will shield us permanently from inflation pressures. The wage-setting process during the past two years does not seem to have built in elevated expectations of productivity growth. (evidence: a wage-price phillips curve fits the past 2 years data well without including a term for higher productivity

growth). But this situation may not persist in the long run. The labor share of National income has eroded over the past few years. And wage-setting agreements may yet begin to ask for higher nominal wages consistent with the spectacular rise in productivity. As a result, the drop in the NAIRU to around 4 percent is not expected to persist. The Administration projection shows the unemployment rate edging up to 5.1 percent during the next [] years.

The Stock Market and Saving

[another sketch]

Why is the saving rate so low and can it stay that way?

As discussed earlier, much of the decline in the personal saving rate is consistent with the enormous runup in the wealth-to-income ratio, which is largely a result of the rapid growth of stock market prices over the past several years.

The stock market could have increased either because of stronger dividend prospects or a decline in the equity risk premium

In any case the budget constraint implies that the present value of future consumption must equal the present value of future income. It follows that either consumption must grow more slowly than non-dividend income, or dividends must grow much faster than other forms of income—or some combination of these two.

It follows that the saving rate must rise over the long term.

Components of Long Term Growth

[Sketch awaiting completion of forecast]

As always, the growth of the supply-side components of GDP underlies the projection of long-term growth. In particular, the prospect for continued productivity growth is the key issue in the economic outlook and the source of many of the upside and downside risks to the Administration's projection.

Productivity

As discussed in chapter 1, it is reasonable to conclude that productivity growth since 1995 is outside the range of normal cyclical variation and stems from an increase in capital—especially computer and software capital—and productivity growth in the computer-producing sector. [whatever needs to be said here to amplify or repeat from chapter 1]

Fiscal Territory in the New Economy

The turnaround in the finances of the Federal government since 1993 has completely changed the fiscal outlook for decades into the future. Whereas the Nation just a few years ago faced deficits as far as the eye could see, the outlook now is for a substantial period of surpluses that will wipe out the entire outstanding public debt of the Federal government. Instead of being

a drain on the saving available to finance investment, the Federal government is providing an additional source of national saving that has offset the recent decline in private saving. A virtuous cycle has been created in which fiscal discipline has promoted strong economic growth and strong economic growth has increased the size of the surpluses.

Challenges lie ahead, however, and it will be important to preserve the fiscal discipline that was so hard-won. In particular, the aging of the population will put downward pressure on the surpluses in the years ahead, as the number of Social Security and Medicare beneficiaries rises relative to the number of workers paying into the system. Prudent decisions today about what to do with currently projected surpluses will help sustain the present strength of the economy and address the fiscal policy issues raised by an aging population. Committing to a strategy of fiscal responsibility requires restraint in the overall level of tax cuts and new spending programs, so that the debt will continue to fall. It also calls for flexibility in our policy priorities, as the composition and hence needs of our population change.

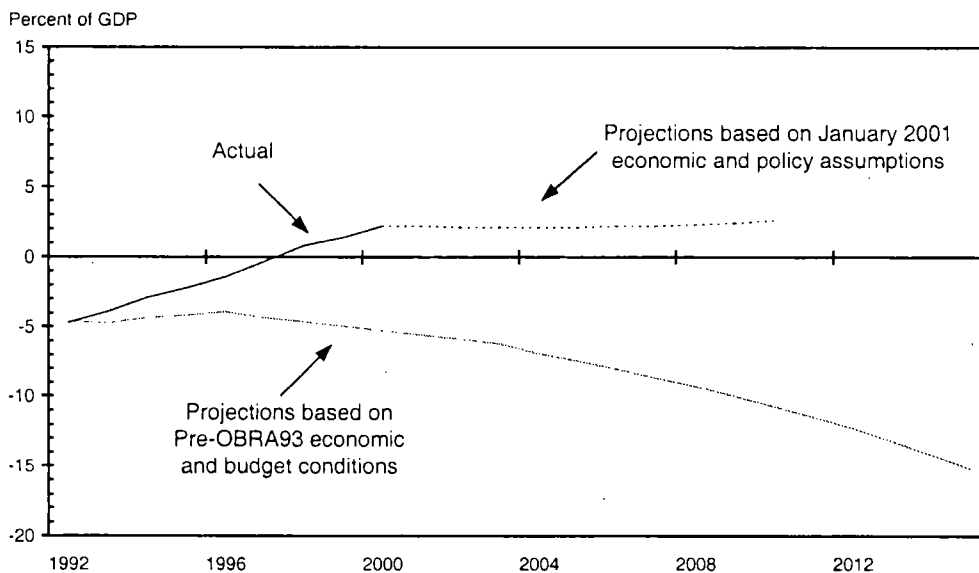
Strong Public Saving: the Payoff from Deficit-Reduction

Large Federal budget deficits emerged in the 1980s, and despite deficit reduction measures taken in the Omnibus Budget Reconciliation Act of 1990, the country faced a bleak budget outlook in 1993. But a succession of subsequent actions turned this situation around completely. The Omnibus Budget and Reconciliation Act of 1993 (OBRA93) reduced the deficit through progressive changes in the income tax structure and effective constraints on spending; welfare reform legislation changed programs in ways that encouraged work and hence reduced

spending needs; and the Balanced Budget Act of 1997 (BBA97) dramatically reduced real growth in Medicare expenses through effective rules on provider prices and payment systems. The difference between the pre-OBRA93 deficit path and the current situation is stunning, especially when extrapolated forward based on Administration medium-term economic projections. Where deficits were once projected to grow from 4.6 percent of GDP in 1992 to double-digit percentages by 2009, the current outlook is for surpluses in excess of 2 percent of GDP (Chart 2-12). The national debt, which had reached almost half of GDP in 1992 and was projected to be larger than GDP by 2009, has in fact begun to decline and is now projected to be eliminated by 2012 (Chart 2-13).

Chart 2-12 Actual and Projected Federal Budget Balances

Instead of the exploding deficits projected under pre-OBRA93 conditions, the budget has moved into surplus.

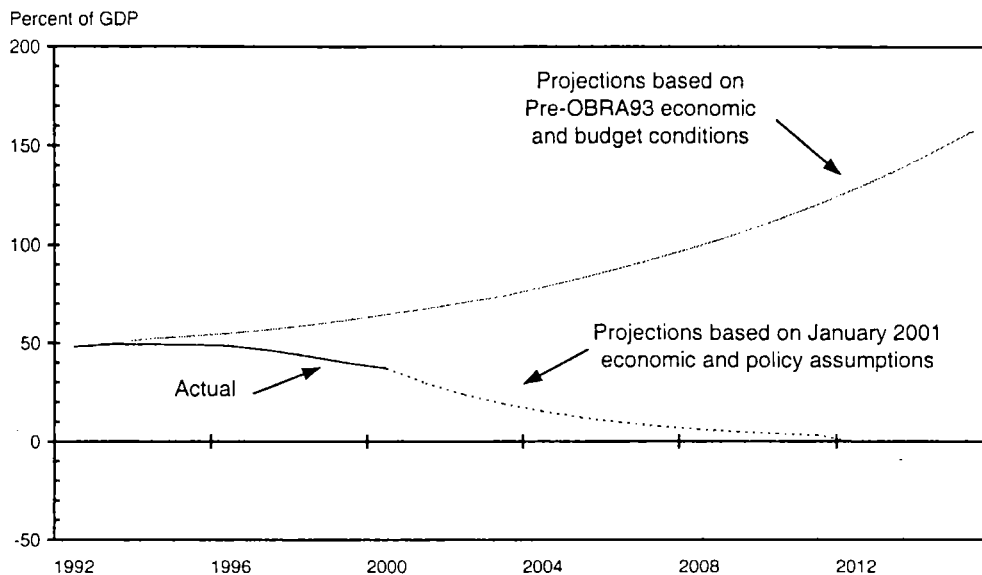


Note: Current policy projections will be based on latest available policies and forecasts.
Source: Office of Management and Budget.

One very important consequence of this turnaround has been increased national saving. Federal budget deficits in the 1980s and early 1990s were larger than the collective surpluses of state and local governments, and the public sector was a drain on the pool of national saving

Chart 2-13 Actual and Projected Federal Debt Held by the Public

Under pre-OBRA93 economic and policy assumptions, Federal debt held by the public exploded as a share of GDP but now it is projected to be eliminated by 2012



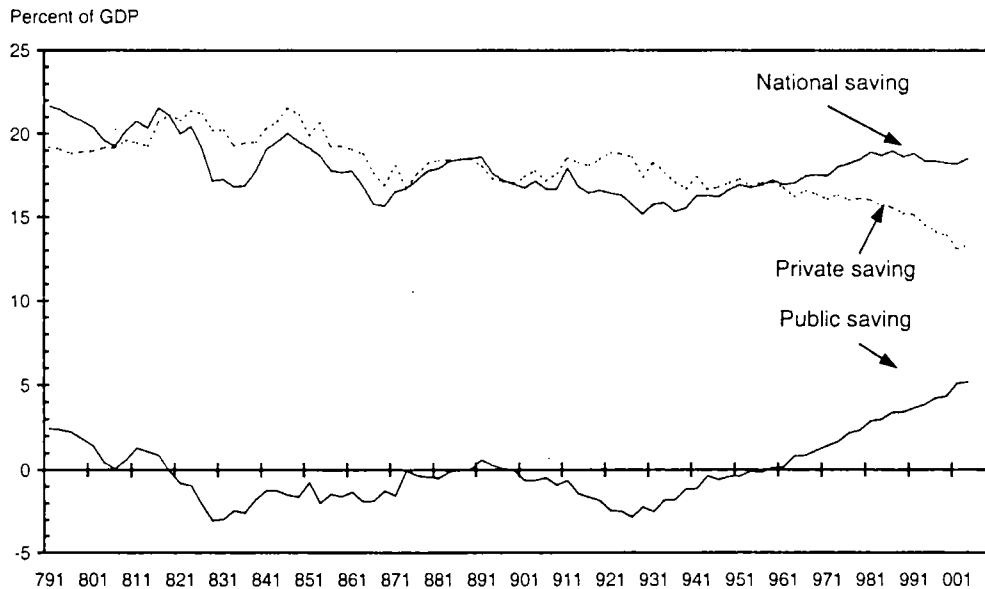
Note: Current policy projections will be based on latest available policy and economic projections
Source: Office of Management and Budget.

available for investment. The improvement in the Federal budget balance since 1993 has turned the public sector into a net saver. National saving (the sum of public and private saving) rose as a share of GDP in the 1990s (Chart 2-14). As discussed earlier, private saving has been particularly low recently, which has restrained national saving somewhat, and investment has grown even faster than saving, which has caused the current account deficit to increase. Nevertheless, without the improvement in the Federal budget balance since 1993, national saving would have been lower than it has been, interest rates would have been higher, and investment would have been constrained.

When the Federal government was running large budget deficits in the 1980s, the Federal Reserve was forced to keep interest rates high in order to offset the resulting fiscal stimulus. While such stimulus can be helpful in propelling an economy out of a recession, it is a source of inflationary pressure when the economy is close to full employment. Moreover, a mix of loose

Chart 2-14 **Public, Private, and National Saving**

The turnaround in the Federal budget balance since 1993 has led to an increase in public saving, which has boosted national saving despite a decline in private saving.



fiscal policy and tight monetary policy produces high interest rates that discourage investment.

In the 1990s, by contrast, an improved Federal budget outlook allowed the Fed to pursue an accommodative monetary policy that not only promoted an economic expansion but also was more conducive to keeping interest rates down and stimulating investment.

Lower interest rates and a declining national debt have important direct consequences for the budget. Interest outlays have fallen from their 1991 high of 3.3 percent of GDP to less than 2½ percent most recently. [and projected to fall to 1.5 percent by 2004] [add statement (based on OMB numbers) on cumulative dollar value of the saved interest on debt versus pre-OBRA93 baseline, just since '93 until present.]. Lower interest rates have also benefited household borrowers. At current levels, each 1-percentage-point reduction in interest rates saves households about \$860 per year in payments on a \$100,000, 30-year mortgage; \$70 per year on a

\$10,000, 4-year car loan; and \$140 per year on a \$20,000, 10-year student loan. A rough estimate is that interest rates would have been 2½ to 3 percentage points higher if we were still on the pre-OBRA93 debt path (with Federal debt held by the public projected to be about 1.3 times GDP in 2012) instead of the current path (with that debt projected to be zero in 2012).

What Caused the Surpluses?

The policy changes mentioned earlier played an important role in bringing down the budget deficit. Budget enforcement rules required that tax cuts or increased spending in one area be offset by deficit-reducing measures elsewhere in the budget. In addition, the changes taking place in the economy generated large increases in income that caused Federal tax revenues, particularly individual income tax receipts, to rise faster than GDP without any increase in statutory tax rates.

Controlling Expenditures

Spending discipline and a strong economy have combined to push Federal budget outlays to their lowest level as a share of GDP since 1974. Total outlays declined from 22.2 percent of GDP in fiscal year 1992 to 18.7 percent last year (see Table 2.x). The aforementioned changes in net interest outlays accounted for 0.9 percentage point of this 3.5 percentage point reduction. Declines in discretionary outlays for national defense accounted for another 2.1 percentage points. Non-defense discretionary spending also fell slightly as a share of GDP. (Discretionary outlays are for the programs subject to annual appropriations by the Congress and account for

about a third of total Federal budget outlays.) Discretionary spending has been subject to dollar caps since 1990[E2], and these caps were generally effective over the 1990s in limiting the growth of outlays[E3]. The rest of the budget besides interest and discretionary spending consists of mandatory outlays on programs such as Social Security, Medicare, and food stamps, the amount of which generally depends on the number of beneficiaries and the amount of benefits to which they are entitled by law. Budget enforcement provisions did not put specific limits on mandatory programs, but did require that any legislation that would increase the deficit needed to be offset by an equivalent amount of deficit reduction.

Table 2-x.—Components of Federal Budget Outlays
(Percent of GDP)

	1992	2000	Change
Total Outlays	22.2	18.7	-3.5
Total Discretionary	8.6	6.5	-2.1
National Defense	4.9	3.0	-1.9
Non-defense	3.7	3.4	-0.3
Total Mandatory	10.4	9.9	-0.5
Social Security	4.6	4.2	-0.4
Means Tested Entitlements	2.3	2.4	0.1
Other	4.1	3.8	-0.3
Undistributed Offsetting Receipts	-0.6	-0.4	0.2
Net Interest	3.2	2.3	-0.9

Some Federal government expenditures, such as unemployment compensation, are sensitive to the business cycle, so that overall spending might be expected to fall as the economy booms. In general, however, the cyclical component of spending is much smaller than that of revenues. In the past, spending for welfare was sensitive to the business cycle, but the welfare reform legislation enacted in 1996 ^{and decisions about spending this money} devolved control of program spending to the states, ~~and~~ (transformed Federal spending into fixed block grants) Thus, any cyclical fluctuations in these

that the President signed into law in

CLARIFY —
fluctuations in Federal \$ spent or in state/local \$? Since caseloads have dropped so much, gen. just more or less Federal \$ drawn down from block grant

programs are now more likely to occur at the state and local levels rather than at the federal level. The combination of low inflation and low unemployment has been especially helpful in keeping government spending down during this economic expansion, as both keep down the levels of indexed transfers. Changes to ^{entitlement?} ~~expenditure~~ programs during this Administration have also been a factor. ~~PRWORA~~ ^{The welfare reform law} in 1996 reduced welfare caseloads by ^{requiring + supporting} encouraging work, and BBA97 made changes to the Medicare payment system that have at least temporarily constrained the growth in health care spending.

WHY JUS
THESE
TWO?

Rising Incomes and Revenues

Federal government receipts vary with the business cycle, growing during booms and shrinking in recessions. In fact, receipts play an important automatic stabilizer role, falling faster than income during recessions, for example, and cushioning the impact of the recession on after-tax income. Thus, some of the improvement in the Federal budget since 1993 reflects a normal cyclical recovery. But growth in receipts, especially personal income tax receipts, has been especially strong in the past few years, even while tax rates have not increased.

Personal income tax receipts rose from less than 8 percent of GDP in 1994 to nearly 10 percent most recently, and that growth contributed an additional \$141 billion to deficit reduction over the 1994-98 period. The faster growth in revenue relative to GDP reflects two main factors: faster growth in taxable income than in income generally; and a rise in receipts arising from rising real incomes and the progressive structure of income tax rates.

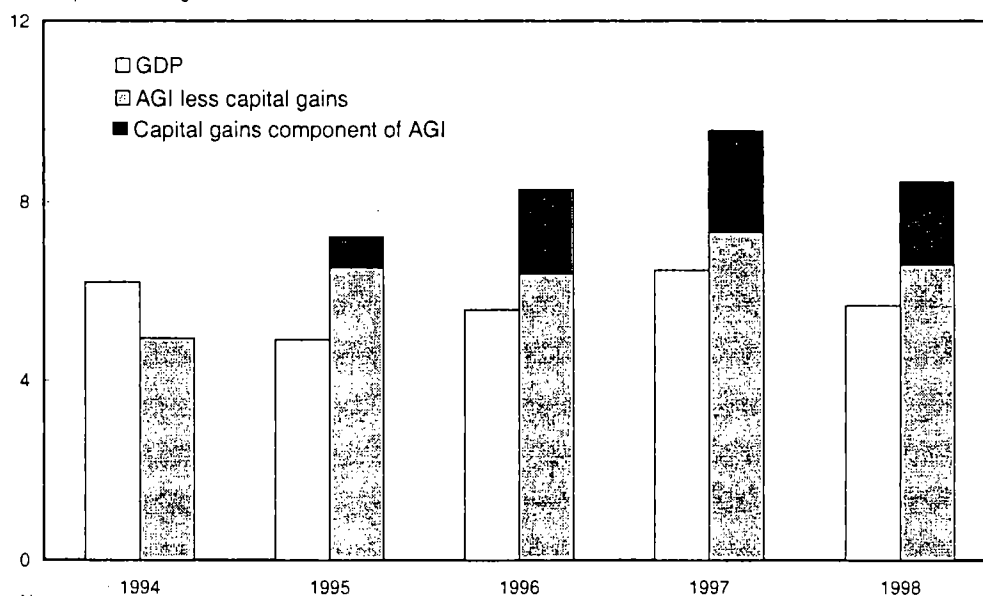
According to Congressional Budget Office estimates, 60 percent of the increase in individual income tax receipts relative to GDP arose from rapid growth in adjusted gross income (AGI) relative to GDP. Of this 60 percent, about 17 percentage points occurred because personal income grew faster than the other income components of GDP. The rest reflects strong growth in sources of AGI that are not included in GDP (because they are not earned as a result of current production), such as capital gains realizations and retirement benefits—with capital gains being particularly important (Chart 2-15),

Chart 2-15 Growth in Measures of Income

Caption line 1

Caption line 2

Annual percent change



Note:
Source:

The other 40 percent of the growth in individual income tax receipts relative to GDP reflects the growth of revenues that results from rising real incomes in a progressive tax system. Although statutory individual income tax rates have not increased since 1993, and some fell as a result of the 1997 Taxpayer Relief Act, the average tax rate on non-capital gains AGI has

increased. Two factors account for most of this increase, in roughly equal measure. First, for taxpayers in general, income has grown faster than the inflation-indexed adjustments to tax brackets. As a result, more aggregate taxable income is now taxed at the higher rates. Second, more taxable income is accruing at the top of the distribution of taxpayers, and hence more income is subject to the top tax rates. Tax return data indicate that the share of taxpayers with AGI above \$200,000 (in 1998 dollars) rose over the 1994-98 period, and those taxpayers experienced higher-than-average growth in income. Incomes grew even more for taxpayers with more than \$1 million in AGI.

The share of income taxes collected from taxpayers at the top of the distribution has increased, but that is because their pre-tax incomes have increased significantly. Moreover, the growth in their incomes has more than made up for the growth in their taxes, so that their share of total after-tax income has increased as well. The impressive growth in the stock market between 1994 and 1999 contributed to the taxable incomes of these households through higher capital gains realizations, greater taxable retirement benefits, and increased compensation in the form of stock options. Labor earnings that have increased the most for two-earner couples at the top of the income distribution have also contributed^[E4]. Despite the significant capital gains tax rate reductions that took place in the 1997 act, taxes paid on capital gains have continued to surge.

It bears repeating that the additional tax revenues that have contributed to an improved budget outlook have come during a period in which tax rates have not been increased at all for the overwhelming majority of taxpayers, and no tax rates have been increased since 1993.

OBRA93 raised marginal tax rates on only the highest-income households (1.x percent of all taxpayers^[E5]); the EITC was expanded several times in the 1990s, most significantly in 1994; and TRA97 reduced taxes substantially for lower-to-middle income families through the child tax credit and new education-related tax credits, which are phased out at higher income levels. TRA97 also reduced capital gains tax rates which benefited higher-income households. Thus, at any given level of real taxable income, average tax rates have been constant or falling after 1993. For a family of four earning the median income, real income has been rising while the average tax rate has been falling.

Thus, the strong revenue growth that has helped to produce growing budget surpluses and rising national saving has been associated with very strong increases in income. Indeed, real, after-tax incomes throughout the income distribution have risen strongly over the 1993-99 period even as tax revenues as a share of GDP has grown to a post-war high. The rising tide has lifted all boats, even *after* inflation and taxes, and even as government deficits were eliminated. This experience contrasts with that of the 1980s, when higher after-tax private incomes came at the expense of public saving, and increases in income were more concentrated towards the top of the income distribution. Moreover, if the capacity to pay taxes is measured by income *plus changes in wealth*, the tax burden has *not* increased, even on average and even with high-income households driving the average^[E6].

The Importance of Maintaining Fiscal Discipline

The improved budget outlook since 1993 reflects real changes in the economy and in policy, and represent a real achievement of budget discipline. The U.S. economy has reaped the benefits of public debt reduction and increased public saving. Nevertheless, there are many elements of uncertainty about the actual course of the budget and the economy in the years ahead. This makes it especially important to maintain fiscal discipline now, when the economy is strong and we can most afford it, just as a family would save extra income in good times in preparation for any future rainy days.

Economic and policy uncertainty

As discussed in the outlook section, the economic assumptions underlying future budget projections reflect a prudent view of whether recent favorable economic developments will continue. This is not to deny that a serious economic downturn or an adverse productivity shock would cut into the projected surpluses and slow the paying down of the debt. Also, the recent very strong growth in revenue relative to GDP is unlikely to be sustained because taxable income--and in particular the capital gains component--cannot continue to grow faster than GDP indefinitely. But the surplus projections in fact assume a leveling off of individual income tax collections relative to GDP, and a decline in total taxes relative to GDP. Even when uncertainties are acknowledged, the emergence of deficits like those of the 1980s remains unlikely if budget policy remains disciplined.

Maintaining that discipline requires that we adequately account for current policy priorities and at the same time preserve some of the remaining, available surpluses. Budget

projections are typically based on current law and practice, but some pressures to change current law can already be anticipated. For example, current projections assume that discretionary spending will grow only with inflation, that expiring tax provisions will indeed expire, and that policymakers will allow more and more taxpayers to become subject to the alternative minimum tax. The pressures to deviate from those assumptions do not prove that the projections of future surpluses are unrealistic, but they do remind us that part of the challenge of maintaining fiscal discipline will involve addressing these issues.

The demographic challenge

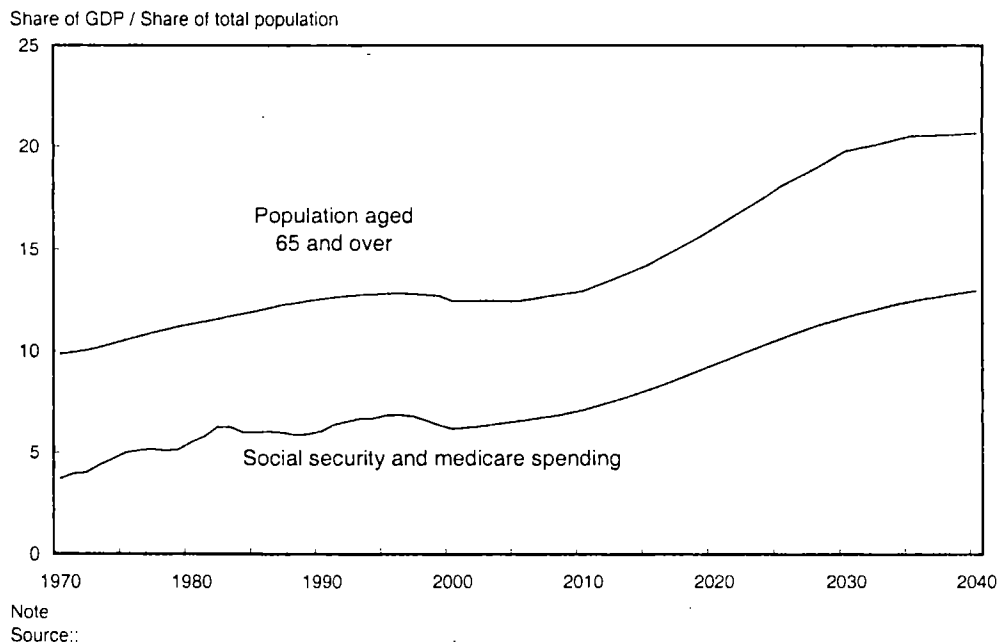
One force affecting future budget surpluses that does seem large and inevitable is the pressure that will be put on the budget by an aging population. Projections indicate that the population aged 65 and over will rise from its current share of about 12½ percent of the total population, to nearly 21 percent by 2040. As a result, the share of the population that is young or retired relative to that of the working age population (the so-called dependency ratio) will rise dramatically.

These demographic changes imply changes in the demands that certain government programs place on the nation's resources and in the role these programs play in the dynamics of the Federal budget. Currently, Federal outlays for health and retirement programs for the elderly are a large share of the budget, but payroll contributions tied to Social Security and Medicare are even larger than the corresponding outlays for these programs. Thus, the Social Security system is currently a net contributor to the surplus. Over time, however, as the population ages and the

dependency ratio rises, the surpluses in the Social Security system will shrink and eventually turn into deficits. At the same time, retirement and health programs for the elderly will take up an increasing share of Federal outlays. Moreover, the per-capita costs of both Social Security and Medicare are expected to rise in the future, implying an even more dramatic increase in spending on the elderly than population projections alone would suggest. The Medicaid program will also be affected through its coverage of nursing home care; over time it is projected to pay an increasing share of the health care bills of the elderly.

Long-term projections indicate that under current policies, spending on Social Security and Medicare as a share of GDP will more than double over the next 40 years, from around 6 percent of GDP in 2000 to nearly 13 percent in 2040 (Chart 2-16) [figures from CBO; replace later with OMB numbers.]. (Relative to total federal outlays, spending on these two programs

Chart 2-16 **Aging of the Population and Implications for Social Security and Medicare**
(Caption line 1)
(Caption line 2)



will grow from a current share of 33 percent to 45 percent by 2040; adding Medicaid, this share grows from under 40 percent to nearly 60 percent by 2040.) The Social Security trust fund has been growing since the 1980s and will continue to grow over the next several years. But current projections show that receipts will fall short of outlays by 2015 and the trust fund will be depleted by 2037, at which point receipts will cover only about 70 percent of outlays. In addition to the demographic challenge, Medicare faces the additional pressures associated with projected increases in health care costs. Outlays for the Hospital Insurance portion of Medicare are now expected to exceed receipts by 2010, and the HI trust fund is expected to run out by 2025. Finally, the long-term implications of this demographic change for national saving are aggravated by the fact the private saving is also likely to decline as the population ages. This is because older people tend to draw down private assets, i.e., dissave, during retirement.

The implication of this demographic challenge for the budget is that the projected erosion of the social security surpluses will most likely result in an erosion of the unified surplus as well. Developments in the economy that have produced a long expansion and accelerating productivity have improved the long-term budget outlook even more dramatically than they have improved the short-term outlook (primarily through the power of compound interest). Nevertheless, projections based on the Social Security Trustees' demographic assumptions and current Administration policy and economic assumptions suggest that the budget would go into deficit in 20xx (Chart 2-17, currently missing). Of course, considerable uncertainty surrounds such a projection. A lower fertility rate or longer life expectancy than is assumed by the Social Security Trustees would move this date forward. Increased immigration or more rapid productivity growth would postpone and possibly even prevent the return of deficits. Alternative policy or

technical assumptions (such as the rate of growth of discretionary spending or health care costs) could also affect the outcome. For example, the baseline projection assumes that discretionary spending only grows with inflation (and therefore declines in real per capita terms and as a share of GDP). A less stringent path of discretionary spending would lead to smaller surpluses in the near-term and hasten the time when deficits re-emerge.

Addressing the challenge

The projected increases in the older population relative to the working-age population suggest that the current Social Security and Medicare programs (with their pay-as-you-go method of financing) will not pay for themselves over the long run. Either Social Security and Medicare policies must be changed so that these programs demand less from the overall government budget, or society must decide how to go ahead and pay for the inevitably growing commitments. In aggregate, the growing economy will likely be able to handle these changes, even if they are postponed to the future. Choosing to at least partly address the challenge now means not leaving all of the burden of paying for demographic change on future generations.

The uncertainty surrounding budget forecasts, coupled with the certain future pressures on public spending through demographic change, point clearly to the need for fiscal policies that work toward maintaining adequate public saving. This healthy, New Economy gives us greater opportunity to continue paying down the debt and hence preserve prosperity over the longer run. But the New Economy is not without scarcity, or tradeoffs. New tax cuts or spending programs should be well thought out, and targeted to specific public needs in light of our long-term

obligations and goals. The most effective fiscal strategy to prepare for the future is to pursue policies that boost the productive capacity of the economy--by maintaining surpluses that directly contribute to national saving, and/or by pursuing public investments (and encouraging private investments) that promote economic growth. In whatever ways we end up changing policies to address the inevitable imbalances in the Social Security and Medicare programs, paying for those changes becomes a more affordable proposition if we have maintained a strong economy.

Investing in Infrastructure. Although public investments in infrastructure are counted as expenditures in the government budget, they have been increasingly recognized for their potential to improve the Nation's endowment and enhance prospects for a productive future. There is continued demand for the public provision of infrastructure. The Nation's growth has overwhelmed many of the sanitation, public transportation, and road systems whose original design dates back 50 to 100 years. Investments in this infrastructure can improve health outcomes, reduce pollution, ease congestion, and enhance job prospects for workers. To the extent that such investments increase real incomes, they reduce government transfers and increase revenues in the future. In knowledge-based economies, investments in infrastructure have increased the focus on education. Emphasizing supply of the public goods with greatest return private value added returns. As described in Chapter 5, there is current evidence of erosion in the Nation's public school capital stock yielding an aggregate \$127 billion dollars of needed repair to building infrastructure at present. Clean, safe schools are better learning environments that can pay dividends well into the middle of this century. Of course, fiscal prudence dictates we be thoughtful when making any public expenditure. The risk with public infrastructure is that

it may fail to be as productive as any comparable private endeavor. Public investment in physical capital must be careful not to crowd out private business investment.

Investing in Human Capital. Investments in human capital provide another means of maintaining prosperity and preparing for the future. Since World War II, the US government has employed various programs to encourage post-secondary education. The current student loan program has been especially successful during this Administration. In 1993 the default rate on student loans was 22.4 percent, more than 3 times the current level. The Administration's efforts to improve loan repayments have saved taxpayers more than \$14 billion, even as the program has grown and made college more affordable for more students. In addition, a fiscally responsible Federal government has allowed an easing of interest rates, which along with lower default rates have reduced repayment expenses on these loans. The Administration's College Opportunity Tax Credit goes further, by allowing some education expenses to be deducted from income, and helping improve the affordability of college. While tax credits reduce current government revenue, investment in human capital adds significantly to private income and future income tax receipts. In 1998, the mean earnings of a high school graduate age 18 or older were \$22,895, compared with \$40,478 for those with a bachelor's degree. This income differential generated an estimated tax liability that was 2.4 times larger for the bachelor's degree recipient, suggesting that funding education can be good for the fiscal integrity of the Nation as well as for personal incomes^[E7].

Protecting Surpluses. Finally, one way for the Federal government to spend its budget responsibly is to not spend it all. Maintaining some amount of budget surplus, above the amounts needed to satisfy current policy commitments, allows public saving to continue to

contribute to national saving, increases the amount of capital available in the economy, and supports continued economic growth. Continued surpluses would allow continued paying down of the public debt, perpetuating the virtuous circle that has been so good for this New Economy. Debt reduction also helps reduce the demands on the federal budget as interest payments are reduced and eventually eliminated. The interest savings alone could pay for a big portion of the added expenses associated with demographic change.

One way to emphasize the importance of not spending the surplus is to create a “lock box” for the Social Security and Medicare trust fund surpluses. Funds placed in a lock box could not be used to pay for other programs but instead must be saved. Although the precise amount that the government should save in an optimal plan is not necessarily equal to the amount that would accumulate in the Social Security and Medicare trust funds, the lockbox concept might be an effective way to insure that some saving does occur.

The Congressional Budget Office has recently estimated that when compared with a “save no surpluses” scenario, saving off-budget surpluses would boost GDP by \$4.5 trillion in 2040 (\$51.1 trillion versus \$46.6 trillion). Demographic change would still put the government back into debt eventually (by 2030, similar to baseline projections that assume surpluses are maintained), but the debt by 2040 would be only a third the size it would be if no surpluses were saved. [Can we replace this paragraph with similar analyses from OMB?]

Life After Debt

In the year 2000, the U.S. Treasury began actively buying back the public debt; we should all appreciate the tremendous achievement this represents for the Nation as a whole. As the previous section described there are good reasons for our current fiscal discipline and the public savings that accompany it to continue. We must realize however, that a sharp reduction in Federal debt and the possible accumulation of a Federal asset raises at least three important issues. First, investors looking for an asset free of credit risk can no longer count on an abundant supply of U.S. Treasury securities, and Treasury securities may no longer provide a reliable benchmark for other interest rates. Second, the Federal Reserve may have to change the mechanisms by which it conducts monetary policy. Third, continued surpluses after the public debt has been paid off will require the Federal government to acquire assets, either directly or through the Social Security Trust Fund. This raises issues about what kinds of assets might be acquired, and the best way to manage this task.

Benchmark Issues

The financial services industry has grown tremendously in this country over the past eight years, and done a very good job of handling growth and the increased risks that accompany it. The industry accomplishes this task most fundamentally by separating risks by type, making them easier to evaluate and price. Most investors, creditors and businesses face exchange rate risk, real interest rate risk, and default risks daily. US Treasuries are considered free of default risk by investors the world over. Because of this reputation, one of the services provided by the Treasury in financing US Government debt has been that of providing a benchmark asset to the financial community. The remarkable liquidity of Treasuries is also a result of the full faith and

credit of the United States Government. Holding a liquid asset is valuable because it affords an assurance of convertibility, and thus fast and easy access to capital. Private investors, the Federal Reserve and many foreign central banks have used Treasuries to fulfill their need for a riskless, performing asset with liquidity second only to currency. Together the liquidity and risklessness of Treasuries enable their use as a benchmark to compare and price other, riskier investments. If Treasuries should disappear, markets will look for a substitute to fill these roles.

In fact, since the Treasury's buy back program began, the Swaps market has taken on some of the benchmark role of Treasuries in providing a benchmark interest rate for relative comparisons. A Swap allows a holder of a stream of variable interest rates payments to convert this into a stream of fixed payments for fee. The Swaps market is remarkably liquid, since swaps are agreements between parties and supplies are not limited by the issuance of any one entity. Many financial intermediaries participate in the market at present, allowing a fully articulated yield curve and a vibrant market. In this environment Swaps, which by design deal explicitly with uncertainty, are capable of acting as a partial substitute for the Treasury benchmark. Because Swaps are not US Treasury issues, they will not fully substitute for the Treasury Instrument, they are however highly tradable across parties as the houses that issue them maintain exemplary credit ratings in order to maintain liquidity and thus market share.

Of course it is possible to keep both the benchmark Treasury and allow fiscal surpluses to continue to pay down the national debt. This would require that we diversify the Social Security Trust Fund (investment options and concerns are described below). Under such a scenario, the trust fund would invest in something other than Treasuries, while the federal government could maintain its current fiscal policy and the public market for Treasury instruments. Because the

Trust funds would no longer purchase the same quantity of Treasury instruments, the federal government would face declining OASI receipt pass through and a decrease in this finance. The federal government's effective expenditure to receipts ratio would rise.

The Treasury could solve the Fed's short-term problem without involving the Social Security Trust Fund by creating a further Federal investment fund to save for future financial demands- as described later in this section. In several important ways, Treasury securities still represent an ideal instrument for monetary policy. First, current Treasury markets are generally very liquid, so that the Fed can easily purchase and sell securities at market prices. Second, price information is widely available, making these markets highly transparent. Third, the full faith and credit of the U.S. government back Treasury securities; hence, the Fed takes on no credit risk in owning them. By acting soon the federal government can preserve a public debt market through purchases of assets in excess of what is required to soak up present surpluses. In lieu of an increased need to finance the federal budget with Treasury issues, the Federal Reserve will be faced with the dilemma of how to implement Monetary Policy.

Conducting Monetary Policy

The debt held by the public comprises holdings by the Federal Reserve, foreign governments, and private investors; this is the debt scheduled for elimination by 2012. At current the Fed buys and sells Treasuries to conduct open market operations, through which the Fed to affect bank reserves, short term interest rates, and the money supply. The Fed's conduct of open market operations has been a key to our economic success with strong growth and low inflation so it is important that they have a strategy as the amount of public debt declines. Even

before 2012, the Fed will come up against a self-imposed constraint on purchases. On July 5th, 2000, in order to help preserve the market for Treasuries, the Federal Reserve placed caps on the amount of individual Treasury issues it would purchase. These caps further limit the Fed's ability to use Treasuries to finance open market operations. If the Fed continues to expand the money supply at the current annual rate of 6 percent its caps may be hit as early as 2003¹—long before the market for publicly traded Treasuries vanishes.

In principle, the Fed can conduct open market operations on any number of assets including corporate bonds, agency debt, sovereign debt, and even equities.² While these assets are feasible instruments for open market operations, none is as liquid as Treasury instruments. It is true that as long as the Fed need not increase or decrease the money supply beyond its supply of Treasuries with great rapidity, the instrument holdings of the Fed need not consist exclusively of Treasury assets. Over time however, as the Economy grows and the Fed's stock of Treasuries mature, the percentage of Treasuries in the Fed's portfolio will decline, requiring a change in Fed procedure for increasing or damping liquidity with rapidity.

There is a well-respected argument³ that liquidity is self-referential, that the increase in demand for any asset that becomes the new benchmark will yield increased liquidity. There is a concern though, that this liquidity will perhaps further yield an implicit guarantee for any instrument chosen (the logic being that the either the Fed or government might be unwilling to allow the issuer to go bankrupt). Historically Treasuries gained liquidity as a result of this

¹ The exact date depends on the frequency and composition of Treasury issues.

² Of course, the difficulty with using private securities is that one might wish to impose minimum prudential requirements – e.g., corporate debt might be required to be above junk rate. Alternatively, suppose the Fed listed the corporations that were allowed for OMO's; this action might be taken as a signal of approbation. Delisting would take on a heightened importance.

³ See Reinhart and Sack (2000) for one reference.

guarantee, opposite to the order suggested above. The Federal Reserve is currently not amenable to letting agency debt become the new benchmark for exactly this reason.⁴ The issue is broader than this however, as any private asset which is used to conduct monetary policy will enjoy a large increase in liquidity, an issue the Fed takes quite seriously.

With respect to agency debt, there is a further concern regarding liquidity. A monetary policy conducted with Government Sponsored Enterprise debt would be constrained by the size of the enterprises themselves. In order to provide sufficient issuance to meet the demands of the Fed for a liquid market these Enterprises would have to grow considerably. It's unclear that they would be able to do so within their traditional markets. It is further unclear whether GSEs could effectively enter other financial markets and what kind of interactions between these entities and private institutions in these markets might result. Conducting monetary policy with an instrument that is effected by absolute liquidity constraints, and uncertainty would have its challenges.

The Fed, if granted authorization could use private securities to conduct monetary policy. Private institutions could provide a relatively sanitary solution to the Fed's problem of replacing Treasury securities in the conduct of monetary policy by creating new, very low-risk securities constructed from a pool of private debt securities. Such securities would be packaged in a way similar to mortgage-based securities currently issued by Government Sponsored Enterprises like Freddie Mac and Fannie Mae, but would not be as liquidity constrained and would be better

⁴ Reinhart and Sack (2000) actually note costs as well as benefits from disappearing debt. Using a Blanchard overlapping generations model, they show that disappearing debt, financed through taxes, will induce crowding in of private capital. On the other hand, the switch away from Treasuries as a benchmark will mean, in their view, a disappearance of an infrastructure that lessens the US government's borrowing costs. Hence, when the deficit reappears, borrowing costs would be higher than they would be if Treasuries had remained a benchmark asset.

diversified against certain market risks. To package the new instrument, a financial institution could buy a set of high-quality corporate bonds. It would then offer to sell a coupon bond called the Triple-A Plus bond that pays a fixed annual interest rate for the life of the bond. The Triple-A Plus Fund would put up its equity capital and take on the default risk of the underlying corporate bonds. Although not completely risk-free, bonds like the Triple-A Plus bond would entail very little credit risk and would be close substitutes for Treasury securities. With the advent of such an instrument, liquid and transparent markets should develop, given the value of just such a low-risk security to both private markets and the Fed.

The Fed could also supply reserves to the financial sector via discount window lending to banks. This would mark a return to the reserve management strategies used by the Fed many decades ago. In fact the special Y2K lending program of last year was a recent and significant modern use of the discount window to infuse liquidity in to the banking system quickly and effectively. The advantage to this strategy is that the Federal Reserve does not have to make choices concerning which securities to purchase in order to affect open market operations, instead it need only concern itself with what constitutes an acceptable form of collateral for loans.

Before the Fed settles on a policy option, we are likely to witness ever-greater use of short-term operations such as Repos and matched purchases to make temporary adjustments to the money supply, we'll have to wait and see what strategy the Fed takes moving forward.

Underpinning their view is the presumption that there are nonlinearities in the market's decision to opt for one benchmark versus another.

Regardless of how the Fed proceeds, by 2012 the public debt will be retired according to current projections, leaving the government with net receipts above its expenditures. In order to deal with financial obligations mid century, the government may choose to save, and indeed invest this surplus.

Accumulating a Federal Asset

As discussed earlier, one prudent strategy for addressing the long-term demographic challenge is to continue paying down the deficit and eventually build up a Federal asset from which we can meet future obligations. But what specific kinds of investments should the Federal government hold, and what issues of management are likely to be important? The experiences of state governments and the governments of other countries may provide some guidance.

Investing in Public Fixed Income Securities:

State and local bonds are exempt from federal taxes. Federal purchases of these obligations that displaced private purchase would therefore increase federal tax revenue all else equal. Another consideration however is that historically state and local bonds have sometimes earned lower returns than their federal counterparts as a result of their tax advantaged status. There is as well a dynamic risk to such a strategy as described by previous experience in Canada.

In 1966, the Canadian Federal government began to invest pension surpluses in non-marketable provincial debt, at the federal long-term bond rate. This interest rate subsidy to the provinces may have encouraged provinces to overextend themselves. There is some further evidence states or provinces may treat such debt purchases as transfers rather than as obligations. For example, although it never actually defaulted, Ontario flatly declared in the late 1970s that it

would not repay. Such an approach should raise an additional concern presently. The US Federal government will most likely need to draw down these assets in the face of the demographic pressures mentioned above, just as states and local municipalities face similar fiscal pressures.

Investing in Private Fixed Income Securities

One vehicle for investment that might be appealing as an asset is the "Triple A" bond described above. Such a bond would be relatively risk free and be could be constructed in relative abundance. Mortgage backed securities are another option as well. The two largest Government Sponsored Enterprises, Freddie Mac and Fannie Mae together account for nearly half of all of the mortgages issued in the United States home mortgage market. Any private instrument we consider will carry some risk. The housing market is unique; by providing substantial liquidity to a fundamentally supply constrained market, the housing market could experience substantial increases in demand and price. Sweden embarked on a similar course of action in the past with mixed results. In the 1960's the Swedish government purchased debt holdings of government-owned mortgage corporations. This subsidized the housing market with positive consequences for both homeownership rates and household wealth. However, the financial system was very tightly regulated during this time. A subsequent deregulation led to a real estate price bubble that burst in the early 1990s. This fall in asset prices had a significant negative effect on the economy; bad loans were subsequently collected into a special public corporation as part of a government rescue package for the Swedish financial system in the 1990s.

Investing in equities

Other governments have pursued a strategy of investing in equities and other financial market offerings, domestically and internationally. Just as the absence of benchmark US debt would, an accumulation and investment of surpluses in financial markets by the US could significantly affect markets both at home and abroad. Of course significant and legitimate concern revolves around governments' ability to passively invest sizable sums in private ventures. The experiences of California and Norway highlight the concerns, especially over time. Any investments should therefore be diversified and clearly regulated. Management must be independent of the government, to avoid any possible conflicts between the interests of the government as a financial investor and its broader public goals. Norway's Petroleum Fund is an endowment to help fund government. Current guidelines set limits on the magnitude of risk the Fund can incur from exchange rates, markets, interest rates, or credit risk. In addition, there are limits to the shares of the Fund to be invested in stocks or bonds and in the allocation of investments by region. Interestingly, none of the funds can be invested in Norway. Even with such strict guidelines, political concerns have surfaced regarding allocation and management of the Petroleum Fund including critique of specific investments in companies for their lack of environmental standards or abuses of human rights. In addition, there is significant pressure to use the fund to subsidize domestic investment.

Closer to home, the California Public Employees' Retirement System (CalPERS) follows a strategic asset allocation policy that identifies the percentage of the System's funds to be invested in each asset class. It invests in equities and bonds both domestically and worldwide. CalPERS has 9 percent of its total assets invested in California; earmarked through programs

such as the CalPERS Single Family Housing Program, Member Home Loan Program, and private equity investments through limited partnership. Equity investments reach beyond state borders and CalPERS is one of the largest private equity investors in the world. CalPERS is well regarded as an investor by stakeholders and market participants alike; however as its state-specific programs illustrate, the investment of funds has not been entirely free from political consideration

Conclusion, is there life after debt ?

Given the described concerns with a debt pay-down, many may ask, “is a pay-down still worthwhile?” The answer depends on relative costs and our priorities. If the United States wishes to preserve the public market for debt, then one or more of the investments above can achieve that end. Of course there is value to paying the debt down as quickly as possible as well – in the form of lower interest expenses. The linchpin cost issue compares the savings from mitigated interest payments to the cost of reestablishing a market for public debt.

Like many nations at present the US faces a demographic shift that precipitates a pension finance shortfall. For this reason we intuitively believe that “*Fiscal policy should avoid optimistic assessments about the room for future tax cuts or spending increases in order to avoid undue stimulus to the economy in the near term and the need for large reversals later on, as the population ages.*” How the Nation will accomplish financing this future shortfall remains to be seen, but is worthy to consider in the current period of surplus.

about a third of total Federal budget outlays.) Discretionary spending has been subject to dollar caps since 1990^[E2], and these caps were generally effective over the 1990s in limiting the growth of outlays^[E3]. The rest of the budget besides interest and discretionary spending consists of mandatory outlays on programs such as Social Security, Medicare, and food stamps, the amount of which generally depends on the number of beneficiaries and the amount of benefits to which they are entitled by law. Budget enforcement provisions did not put specific limits on mandatory programs, but did require that any legislation that would increase the deficit needed to be offset by an equivalent amount of deficit reduction.

Table 2-x.--Components of Federal Budget Outlays
(Percent of GDP)

	1992	2000	Change
Total Outlays	22.2	18.7	-3.5
Total Discretionary	8.6	6.5	-2.1
National Defense	4.9	3.0	-1.9
Non-defense	3.7	3.4	-0.3
Total Mandatory	10.4	9.9	-0.5
Social Security	4.6	4.2	-0.4
Means Tested Entitlements	2.3	2.4	0.1
Other	4.1	3.8	-0.3
Undistributed Offsetting Receipts	-0.6	-0.4	0.2
Net Interest	3.2	2.3	-0.9

Some Federal government expenditures, such as unemployment compensation, are sensitive to the business cycle, so that overall spending might be expected to fall as the economy booms. In general, however, the cyclical component of spending is much smaller than that of revenues. In the past, spending for welfare was sensitive to the business cycle, but the welfare reform legislation enacted in 1996 devolved control of program spending to the states and transformed Federal spending into fixed block grants. Thus, any cyclical fluctuations in these

programs are now more likely to occur at the state and local levels rather than at the federal level. The combination of low inflation and low unemployment has been especially helpful in keeping government spending down during this economic expansion, as both keep down the levels of indexed transfers. Changes to expenditure programs during this Administration have also been a factor. PRWORA in 1996 reduced welfare caseloads by encouraging work, and BBA97 made changes to the Medicare payment system that have at least temporarily constrained the growth in health care spending.

Rising Incomes and Revenues

Federal government receipts vary with the business cycle, growing during booms and shrinking in recessions. In fact, receipts play an important automatic stabilizer role, falling faster than income during recessions, for example, and cushioning the impact of the recession on after-tax income. Thus, some of the improvement in the Federal budget since 1993 reflects a normal cyclical recovery. But growth in receipts, especially personal income tax receipts, has been especially strong in the past few years, even while tax rates have not increased.

Personal income tax receipts rose from less than 8 percent of GDP in 1994 to nearly 10 percent most recently, and that growth contributed an additional \$141 billion to deficit reduction over the 1994-98 period. The faster growth in revenue relative to GDP reflects two main factors: faster growth in taxable income than in income generally; and a rise in receipts arising from rising real incomes and the progressive structure of income tax rates.