

## CHAPTER 2

# Macroeconomic Policy and Performance

ECONOMIC PERFORMANCE DURING the past 3 years has been exceptional. The economy has grown fast enough to create nearly 8 million new jobs and reduce the unemployment rate sharply. Long-term interest rates have declined and remain relatively low. And inflation, at its lowest average level since the Kennedy Administration, is no longer the factor it once was in economic decisions. This strong performance has been helped by macroeconomic policies conducive to sustainable economic expansion.

A major part of this Administration's macroeconomic strategy has been its effort to reduce the Federal budget deficit. Reducing the deficit is important because government borrowing to finance budget deficits raises real interest rates, crowding out business investment that is vital for raising productivity and economic growth. And to the extent that budget deficits spill over into current account deficits, they lead to a transfer of national wealth abroad.

But reducing the deficit is not an end in itself. Rather, it is a way to create economic conditions favorable to this Administration's ultimate goal of raising economic growth and thus the standard of living of all Americans. Once we recognize that deficit reduction is a means to achieving higher living standards, it becomes apparent that *how* we reduce the deficit is important. This Administration has supported responsible deficit reduction that preserves and enhances investments in people, businesses, and the environment.

Thus far during the Administration's tenure, the reduction in the Federal budget deficit has been impressive. For the first time since the Truman Administration the deficit has declined for 3 years in a row. The deficit for the past 2 calendar years has been less than the interest paid on the national debt, so that, except for interest payments, the budget has been in surplus. And the structural budget deficit—the deficit adjusted for the effects of the business cycle—has declined since 1993. This reflects a sharp break with the failed attempts to reduce the budget deficit during the 1980s. The commitment to balance the budget over the next 7 years represents a continuation of efforts to get the government's fiscal house in order.

This chapter first considers the role the government plays in setting macroeconomic policy. It next reviews macroeconomic developments during 1995 and argues that all signs point to the current expansion continuing into the foreseeable future. The chapter then considers the effects on the economy and the implications for monetary policy of the move to a balanced budget over the next 7 years. The chapter ends with a brief analysis of the outlook for the economy and presents the Administration's forecast for the 1996–2002 period.

## THE TWIN ROLES OF MACROECONOMIC POLICY

Since the end of World War II, the Federal Government has played an important role in stabilizing fluctuations in the economy in the short run and in fostering a climate for maximum economic growth with low unemployment over the long run.

The government supports sound macroeconomic performance in two broad ways. First, its macroeconomic policies cushion the economy from the short-term ups and downs of the business cycle, helping to keep economic expansions from faltering. Both monetary policy and fiscal policy are important elements of these short-run stabilization efforts. Monetary policy stabilizes the economy through the adjustment of credit conditions, as reflected in interest rates and credit availability. Fiscal policy, in principle, can use changes in discretionary spending or the tax code to stabilize the economy, but in practice the time lags involved in legislating and implementing such changes tend to reduce their usefulness. Furthermore, in present circumstances, the commitment to eliminate the budget deficit limits any potential for using discretionary fiscal policy. As a result, the ability of fiscal policy to dampen economic fluctuations depends largely on its role as an “automatic stabilizer” whereby outlays and tax revenues change in a way that reduces the amplitude of the business cycle.

Second, the government's macroeconomic policies help lay the groundwork for the private sector to generate long-term growth with low unemployment. Policies that encourage businesses to invest can raise productivity, increasing the economy's potential output. As discussed below, the Administration's success at bringing down the deficit has helped redress the investment shortfall that developed during the 1980s. As the budget moves toward balance over the next 7 years and the government reduces its drain on national saving, real interest rates should fall and investment and growth should rise. Box 2–1 discusses how microeconomic policies designed to address market failures also can enhance long-run macroeconomic performance.

### **Box 2-1.—Microeconomic Policies Can Improve Long-Run Macroeconomic Performance**

Microeconomic policies can reinforce macroeconomic policies. Policies that support research and development, along with policies that encourage education and training, complement increased capital investment in raising potential output. Indeed, as noted elsewhere in this *Report*, public expenditures on research and development are complementary to private expenditures, so that these expenditures can actually induce increased private investments. Targeted tax policies—such as the research and experimentation tax credit and the targeted capital gains tax cut for small and emerging businesses included in the Administration's 1993 budget—can encourage research and development expenditures and increase the flow of capital to new enterprises.

Other microeconomic policies designed to make the labor market work more efficiently—such as training programs, the school-to-work program, and, more broadly, the Administration's reemployment policies—can help reduce frictional unemployment (unemployment caused by workers moving from job to job) and thereby lower the rate of unemployment associated with stable inflation. Accordingly, microeconomic policies have payoffs in terms of macroeconomic performance.

These twin roles are often complementary. For instance, macroeconomic policies that keep the economy on an even keel in the short run can also spur the economy's growth in the long run by creating an environment in which businesses and individuals are more certain about the future. Freed from having to worry about how to insulate themselves from short-term economic fluctuations, businesses and individuals can plan for the long term. They are thus more likely to make the investments that lead to increased productivity and higher output.

### **IMPLICATIONS OF THE POLICY MIX**

In pursuing these goals of short-run macroeconomic stabilization and long-run maximum growth, fiscal and monetary policy need to act in concert. Monetary policy must reflect changes in aggregate demand relative to the economy's potential output. For example, a shift to a more expansionary fiscal policy when the economy already is operating at full employment and full capacity would require monetary policy to offset the effects of the fiscal expansion. Should it fail to do so, the prospect of an overheated economy and rising inflation is likely to trigger an increase in long-term interest rates, as financial markets react to the change in the economic out-

look. In either case, the shift in fiscal policy will be met with a financial market response that generally cushions its effects on aggregate demand. But without deliberate monetary tightening, changes in interest rates may not be sufficient to stem a rise in inflation.

Although monetary policy can offset the effects on aggregate demand from a shift in fiscal policy, changes in the mix of fiscal and monetary policies will invariably alter the composition of output and its potential level in the long run. During the early 1980s, changes in fiscal policy put the country on a path to large and rising budget deficits (over and above what would have been expected given the cyclical weakness of the economy) and left the Federal Reserve little choice but to restrain the overheating economy by further tightening monetary policy.

The high real interest rates that resulted from the burgeoning deficits and tight money of the early 1980s were in large part responsible for skewing the composition of output away from fixed investment. Private fixed investment as a share of gross domestic product (GDP) fell from over 18 percent in 1979 to under 15 percent by 1989 (to compare 2 years when the economy was operating close to capacity). The relative decline in private fixed investment net of depreciation was even sharper, from about 8 percent to about 5 percent of GDP. At the same time, personal consumption expenditures increased as a share of GDP from 62 percent in 1979 to 66 percent in 1989. The effects on investment of the increase in the budget deficit likely would have been somewhat less marked if private saving over this period had risen so as to offset the decline in public saving. But instead both personal and business saving as a share of GDP fell over the 1980s, exacerbating the effects of deficits on interest rates and thus on investment.

High real interest rates during the early 1980s also contributed to a sharp rise in the value of the dollar as foreign investors, attracted by high yields, bought dollar-denominated assets. The appreciation of the dollar in turn caused a rapid swing of the current account balance into substantial deficit. Growing current account deficits quickly transformed the United States from the world's largest creditor country into the world's largest debtor by the late 1980s. Although access to foreign capital moderated the rise in interest rates and the decline in investment, the resulting buildup in our international indebtedness required that a portion of the economy's output be used to service the foreign debt. In addition, the appreciation of the dollar, combined with the decline in investment's share of output, had strong adverse effects on U.S. international competitiveness.

Today, with this Administration committed to eliminating the budget deficit—and with substantial deficit reduction already

achieved over the past 3 years—the environment is vastly different from that of the 1980s. The imbalances that resulted from the fiscal extremism of that decade can now be corrected. In contrast with earlier policies that raised interest rates, restrained investment, and impeded our international competitiveness, our progress in reducing the budget deficit has lowered interest rates, increased investment, and improved our competitiveness. As discussed later in this chapter, further deficit reduction over the next several years quite possibly will require monetary policy once again to stabilize short-run movements in the economy, this time to prevent a tightening fiscal stance from pushing the economy's growth rate below its potential. Such an accommodative stance of monetary policy should, in concert with deficit reduction, further enhance the climate for private investment and ensure that the economy remains on a healthier growth path over the long term.

## OVERVIEW OF 1995: RETURNING TO POTENTIAL GROWTH

Economic growth decelerated considerably in the first half of 1995 before regaining momentum in the third quarter. Some moderation in growth was anticipated because the robust expansion of the preceding 2 years had greatly reduced the slack in the economy. Between January 1993 and December 1994, the civilian unemployment rate fell from 7.1 to 5.4 percent, and capacity utilization in the industrial sector rose from 81.3 to 85.1 percent. Even after accounting for the economy's tightening capacity constraints, however, the moderation in growth was greater than expected. Following the rebound in the third quarter, evidence suggested that the economy was once again growing at its potential rate. This moderate pace of growth was fully reflected in the path of the unemployment rate, which, after falling by more than a percentage point over the course of 1994, remained virtually unchanged during 1995.

The moderate growth and reduced pace of job creation during 1995 were evidence that the economy had entered a new phase: it had moved from recovery following the 1990–91 recession to sustained growth. Thus, with the economy operating near full capacity by late 1994, significantly higher growth in the short term probably could not have been accommodated without a rise in inflation. The increase in short-term interest rates over the course of 1994 and early 1995 represented an attempt to restrain demand pressures and hold growth close to its long-run potential.

## EXPLAINING THE MODERATION IN GROWTH DURING THE FIRST HALF OF 1995

The moderation in economic growth during the first half of 1995 was to a large degree the consequence of the rise in interest rates during 1994 and, to a lesser extent, the result of the crisis in Mexico that began in December 1994. Higher interest rates caused a weakening in interest-sensitive spending and an associated buildup in inventory that led producers to restrain output. The economic crisis in Mexico induced a sharp deterioration in the U.S.-Mexico trade balance, further moderating growth.

At the beginning of 1994, and increasingly over the course of the year, many observers believed that the slack in the economy that had emerged during the recession of 1990–91 had disappeared. As already noted, this led to concern that continued growth at anywhere near the heated pace of 1993 would lead to an increase in inflation. These concerns were evident in rising yields on long-maturity bonds beginning late in 1993 and continuing through most of 1994. The Federal Reserve responded by raising the Federal funds rate by 3 percentage points between February 1994 and February 1995.

Despite these rate increases, the economy continued to grow at a rapid pace through the end of 1994, while the unemployment rate dropped another three-quarters of a percentage point in the last half of the year. Housing starts, one of the more interest-sensitive indicators, did not peak until December 1994. Similarly, motor vehicle sales continued at a rapid pace through year's end, and, anticipating continued strength, automakers boosted production in the first quarter of 1995.

Higher interest rates did not affect economic growth until the beginning of 1995, and then their impact was reinforced by the economic crisis in Mexico. The slackening economy was evident as housing starts dropped in the first 3 months of the year. Although housing activity stabilized and then moved higher over the balance of 1995, the fall in starts translated into declines in residential investment during both the first and the second quarter. Motor vehicle sales also weakened, resulting in a buildup of inventory that reached uncomfortable levels by the end of the first quarter. In response, automakers cut production sharply in the second quarter, restraining GDP growth by almost 1 percentage point at an annual rate.

The magnitude of the moderation during the first half of the year seems clear in retrospect but was harder to read at the time. The advance estimate of first-quarter GDP showed a 2.1 percent (chain-weighted) annual rate of growth—a decline from the pace of 1994, but not a dramatic one. First-quarter growth was not revised down to its current estimate of a 0.6 percent annual rate until the bench-

mark revisions of January 1996. (Box 2-2 presents an overview of the recently released benchmark revisions of the national income and product accounts.) Although scattered indications of weakness, such as the declines in motor vehicle sales and housing starts, were beginning to accumulate early in the year, the first solid evidence was the May employment report (published in June), which showed the first substantial drop in payroll employment in over 3 years.

Partly as a result of the moderation in growth, interest rates fell steadily throughout the year. In response, the housing and automobile sectors retraced much of their decline during the second half of 1995. By the end of the third quarter, reduced automobile production and a pickup in sales had worked off much of the inventory overhang. Home sales and housing starts also had returned to stronger levels.

A review of economic performance sector by sector provides a more detailed picture of the economy as the expansion continued during 1995.

## CONSUMPTION EXPENDITURES

During the first quarter of 1995, consumption expenditures grew by 0.8 percent at an annual rate, after averaging 3.0 percent during 1994. The drop in spending growth was concentrated in durable goods, which fell by nearly 9 percent at an annual rate, with weakening demand for automobiles fueling the decline. Higher interest rates, as discussed above, are likely to have been the primary reason for the retrenchment by consumers. Spending on durables recovered sharply in the second and third quarters, offsetting some weakening in spending on nondurable goods and pushing overall consumption growth back to a solid pace of about 3 percent at an annual rate for the second and third quarters of 1995.

As the year progressed, households continued to take on debt at a rapid rate, raising concerns that they might soon have to reduce their spending in order to meet debt obligations. Rising delinquency rates on consumer loans, especially credit card lending, suggested that an increasing number of households were encountering difficulties managing their debts. Household debt (consumer and mortgage debt) grew faster than disposable personal income, continuing the pattern of the past several years. The burden of this debt, as measured by debt service as a share of disposable personal income, also rose during the year, although it remained below the value reached during the late 1980s. The rise in the debt-service ratio during 1995 occurred despite a general decline in interest rates over the year, and reflected mainly the sharp rise in the overall debt level. As debt contracts are adjusted or renewed, however, the recent decline in interest rates should moderate the rise in debt service. Furthermore, consumption expenditures in the long term

### **Box 2-2.—The Comprehensive Revision of the National Income and Product Accounts**

Early in 1996, the Bureau of Economic Analysis released new estimates of the national income and product accounts. These comprehensive revisions have been done about once every 5 years and incorporate definitional changes, statistical changes, and updated source data in an effort to portray the evolving U.S. economy more accurately. The latest revision incorporates three major improvements:

- Measures of real output and prices are estimated using “chained dollars,” which more accurately account for the shifting mix of products purchased and sold in the economy (see *Economic Report of the President 1995* for a detailed discussion of chain-weighted GDP).
- Government investment is estimated separately from government consumption expenditures, allowing a more accurate description of government activities and improving the overall measurement of gross investment and national saving.
- Depreciation of fixed capital is estimated using a new methodology that better reflects the service lives of different types of assets.
- The revised estimates of real GDP show average annual growth of 3.2 percent over the period 1959 to 1994, 0.2 percentage point higher than had previously been reported using fixed (1987) weights. Between 1959 and 1987 growth averaged 3.4 percent per year, 0.3 percentage point higher than reported earlier, whereas between 1987 and 1994 it averaged 2.3 percent, 0.1 percentage point lower than reported earlier. Most of the change in growth rates for real GDP, as well as that of its components, is attributable to the shift from fixed weights to chain weights. Boxes 2-3 and 2-6 discuss other aspects of the revised data.

are related to overall net worth as well as to consumer indebtedness. Hence the stock market gain of over 30 percent during 1995 should help sustain consumer spending into 1996.

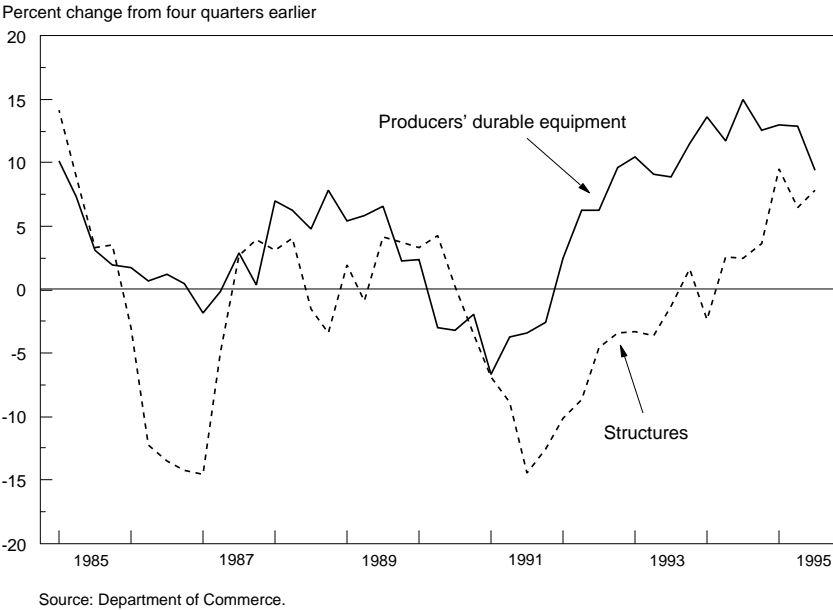
### **BUSINESS FIXED INVESTMENT**

Business fixed investment grew solidly during the first three quarters of 1995. The growth rate of business equipment investment fell back only slightly from its torrid pace in 1994 and was sustained by rapid investment in computers, which grew even fast-



er during the first three quarters of 1995 than in 1994. Investment in structures continued its recovery from the recession of 1990–91, and grew almost as fast as equipment investment in 1995 (Chart 2–1). The extremely slow recovery of structures investment following the recession appears to have been due in part to the over-supply of office buildings and retail space that characterized the runup and subsequent collapse of the real estate market during the late 1980s and early 1990s. The vacancy rate for office space has fallen for 3 years and is now at its lowest point in 8 years.

**Chart 2-1 Real Business Fixed Investment**  
Investment in durable equipment and in structures continued to grow robustly in 1995.



It has long been recognized that reported measures of gross investment for the U.S. economy understate actual gross investment because government investment in equipment and structures has always been treated in the same fashion as government consumption, with both reported together as government purchases. The recently revised national income and product accounts now report government investment separately from government consumption and thus provide a more complete view of investment in the economy (Box 2–3).

### INVENTORIES

The buildup of excess inventories during the first quarter of 1995 led some producers to cut back output in the second quarter so as

### **Box 2-3.—New Measures of Government Investment**

The Bureau of Economic Analysis now measures government expenditures for equipment and structures as investment, similar to the treatment of such expenditures by the private sector. Previously, government expenditures for fixed assets were considered to be “current account” purchases. This treatment understated gross investment and saving for the economy and ignored the service flow (or “output”) of these assets over their lifetimes. The new approach is more consistent with international standards and will permit more accurate comparison of U.S. data with those of other countries.

The new treatment of government investment has three important effects. First, it increases the share of GDP accounted for by gross investment expenditures. Second, it reduces the government deficit measured on a current account basis and thus increases measured saving of the public sector. Because of these effects, gross domestic investment and national saving as a share of GDP each are reported about 3 percentage points higher compared with the earlier approach, to 18 percent and 15 percent, respectively, over the period 1970 to 1995. Finally, the new approach partly accounts for services provided by the government capital stock and thus raises the measured output of the government sector and the economy. For recent years, GDP is about 1.8 percent higher, due to the service flow of the government capital stock.

A rough way of measuring the importance of government investment is to compare it to total investment. Between 1959 and 1994, total government investment as a share of private nonresidential fixed investment plus government investment fluctuated between 20 and 40 percent, while government nondefense investment varied between 14 and 23 percent. Thus, even leaving aside investment for defense purposes, the earlier approach to measuring the economy's fixed investment misclassified a significant portion of spending aimed at augmenting and maintaining the Nation's productive capacity.

The new approach does not measure government investment in human capital or the environment. Investments in education or a cleaner environment are hard to measure, but also yield returns over time just as certain as those from investments in highways and office buildings.

to reduce inventories relative to sales. Producers continued to pare inventories, especially in the automotive sector, during the third quarter. By late in the year much of the earlier overhang had been worked off. By year's end, however, automobile industry data showed the inventory-to-sales ratio moving back up, although it remained below the levels reached earlier in the year.

## RESIDENTIAL INVESTMENT

As alluded to above, a decline in residential investment during the first half of the year was a major factor in slowing the rate of economic growth. The rise in mortgage interest rates in 1994 had a lagged effect on the housing market, which began to lose its footing in early 1995 as housing starts and home sales both fell during the first quarter. Residential investment, which had shown hints of weakness toward the end of 1994, declined abruptly during the first half of 1995. By June, however, declining mortgage rates had revived the housing sector, as both starts and sales regained some ground. The improvement held firm over the summer and was reflected in a bounceback in residential investment during the third quarter.

## NET EXPORTS

After declining during the last quarter of 1994, the net export deficit (imports minus exports of goods and services) rose sharply during the first half of 1995. The rise was due in part to the severe contraction of the Mexican economy that began at the end of 1994 following the peso crisis, and which resulted in a sharp fall in U.S. exports to Mexico. The U.S. merchandise trade balance with Mexico deteriorated from a surplus of about \$1 billion in 1994 to a deficit over the first half of the year of about \$8 billion.

By the latter part of the year, however, other factors, notably strong U.S. competitiveness and the lagged effects of earlier movements in exchange rates reestablished the trend toward a shrinking external deficit (see Chapter 8 for further discussion of exchange rates and the current account balance). By the third quarter, exports of goods and services were once again growing briskly, outpacing a slowing rate of growth for imports of goods and services. As a result, net exports contributed importantly to growth during the third quarter.

## INFLATION

Inflation remained remarkably low and stable during 1995 (Table 2-1). The consumer price index (CPI) increased by 2.5 percent over the 12 months of 1995—down 0.2 percentage point from its year-earlier pace. Inflation as measured by the CPI has now run at less than 3 percent per year for the past 4 years, for the first

time since the 1960s. This impressive record suggests that a regime change has taken place, whereby households and businesses have come to expect low inflation for the foreseeable future.

TABLE 2-1.—*Measures of Inflation*

Measure	1994	1995
	Percent change	
GDP chain-type price index .....	2.3	<sup>1</sup> 2.7
Non-oil import prices .....	3.8	2.3
CPI-U:		
All items .....	2.7	2.5
All items less food and energy .....	2.6	3.0
PPI:		
Finished goods .....	1.7	2.2
Finished goods less food and energy .....	1.6	2.5
Intermediate materials less food and energy .....	5.2	3.1
Crude materials .....	-5	4.1
Employment cost index: <sup>2</sup>		
Total compensation .....	3.3	2.6
Wages and salaries .....	2.9	2.8
Benefits .....	4.0	2.1

<sup>1</sup> Preliminary.

<sup>2</sup> For private industry workers.

Note.—Inflation as measured by the GDP price index and the employment cost index is computed from third quarter to third quarter; by non-oil import prices, from November to November; and by the CPI-U and PPI, from December to December.

Sources: Department of Commerce and Department of Labor.

The increase in the CPI during 1995 was held down by a decline in energy prices and a slowing in the rise of food prices, which increased almost a percentage point less than a year earlier. Core inflation, as measured by the CPI excluding food and energy, increased at a 3.0 percent annual rate over the 12 months of 1995, up 0.4 percentage point from the year-earlier rate. Inflation seemed to be proceeding at a faster pace during the first 5 months of the year but eased off thereafter. The early runup and the subsequent moderation largely reflected the pattern of used car prices, airfares, and automobile finance charges.

Hourly compensation in the private sector, as measured by the employment cost index, increased 2.6 percent in the year ending in the third quarter, versus a 3.3 percent increase during the year-earlier period. A slowdown in benefit costs—especially for health insurance and retirement programs—accounted for almost all of the deceleration. The increase in wages and salaries, in contrast, was little changed from its year-earlier pace. Overall, the evidence suggested an absence of any wage pressures as the expansion continued. The absence of significant acceleration in inflation, either for prices or for wages, especially as the unemployment rate remained around 5.6 percent for the year, led some observers to suggest that the unemployment rate consistent with stable inflation had fallen (Box 2-4). A possible decline in the sustainable unem-

ployment rate raises important challenges for macroeconomic policymaking (Box 2–5).

**Box 2–4.—Has the Sustainable Rate of Unemployment Fallen?**

As the economic expansion continued during 1995, and unemployment remained well below 6 percent without sparking a rise in inflation, some economists suggested that the minimum sustainable unemployment rate or so-called NAIRU (Non-Accelerating-Inflation Rate of Unemployment) has declined.

During the 1980s, the core rate of inflation increased when the unemployment rate was below 6 percent and decreased when it was above 6 percent (Chart 2–2). In contrast, for over a year now the unemployment rate has fluctuated narrowly around 5.6 percent, yet the core rate of inflation has remained roughly stable rather than risen. (Wage inflation, as measured by the employment cost index, also has remained stable.) This recent evidence strongly argues that the sustainable rate of unemployment has fallen below 6 percent, perhaps to the range of 5.5 to 5.7 percent. The Administration's forecast falls on the conservative end of this range by projecting the unemployment rate at 5.7 percent over the near term.

Explanations for why the sustainable rate of unemployment may have fallen generally focus on structural changes in the U.S. economy that may have restrained increases in wages and prices. For example, increased domestic and international competition, a decline in unionization, and increased concern about job security are possible reasons why, at current levels of unemployment, wage and price pressures have been so subdued. In addition, since the sustainable unemployment rate is related to frictional unemployment, and since such job mobility is high among young workers, the recent fall in the labor-force share of young workers may have contributed to the possible decline in the sustainable rate, just as the increase in young workers during the 1970s contributed to its rise.

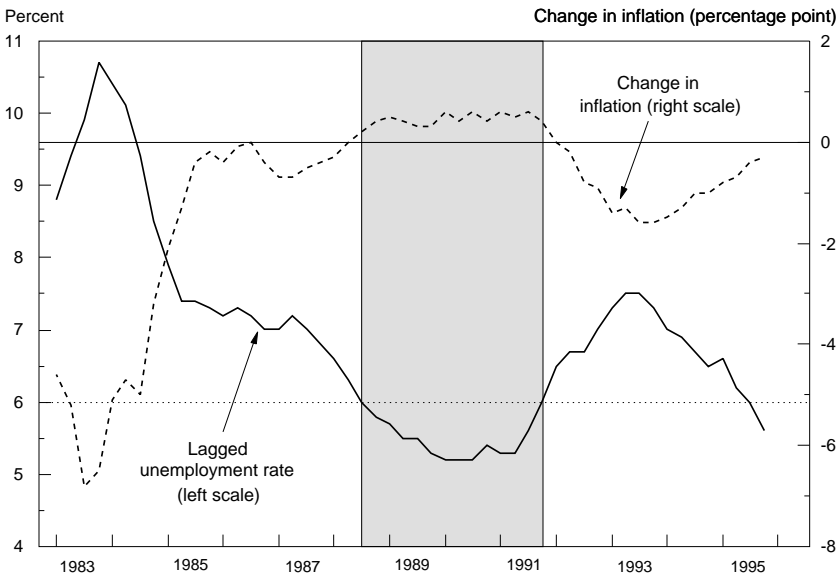
## EMPLOYMENT AND PRODUCTIVITY

During 1995, the economy managed to create enough jobs not only to replace those lost as a result of corporate restructuring and downsizing, but also to provide employment for new entrants. As a result, the unemployment rate remained roughly constant.

A deceleration in the pace of job creation accompanied the economy's move from economic recovery to sustained economic expansion. Growth in payroll employment dropped to 146,000 per month

**Chart 2-2 The Sustainable Rate of Unemployment in the 1980s**

In the 1980s, inflation picked up when the unemployment rate fell below 6 percent. For over 17 months now, unemployment has remained below 6 percent without sparking a rise in inflation.



Note: Change in inflation is the difference between the eight-quarter percent change in the CPI excluding food and energy and its eight-quarter lagged value. Unemployment rate is lagged four quarters.

Sources: Department of Labor and Council of Economic Advisers.

in 1995—down from 294,000 per month a year earlier. Coming on the heels of a strong fourth quarter of 1994, job gains remained solid in the first quarter, slowed in the second, and then averaged 138,000 per month during the third and fourth quarters. The moderate pace of job growth in the second half is about what can be expected as the economy grows at its potential rate.

Official statistics show that 7.7 million jobs have been created since this Administration took office, but the best estimate is considerably stronger. Analysis of forthcoming revisions to estimates of payroll employment indicates that the job gains between March 1994 and March 1995 were stronger than currently estimated. As a result, after the revisions are announced this June, measured job growth through the end of 1995 should exceed 8 million. Over 50 percent of job growth in the private sector during 1995 occurred in “high wage” industries—those with an average wage above an employment-weighted median for all industries in 1993. For the past 3 years, the share of employment growth concentrated in these industries has continually risen.

The unemployment rate fluctuated in a narrow band around 5.6 percent during 1995, as increases in the number of jobs fully absorbed increases in the labor force. The growth rate of the labor force from 1994 to 1995 differed little from the growth rate of the population—a pattern that has persisted since 1989. Over this pe-

### **Box 2-5. Macroeconomic Policy and the Sustainable Unemployment Rate**

A controversial issue in macroeconomic policy is whether the benefits from further reducing the unemployment rate when the economy is operating near full capacity outweigh the costs of possibly increasing the inflation rate. This controversy centers on how the sacrifice ratio (the change in unemployment associated with a given change in inflation) varies as inflation is reduced or increased. For example, in terms of output and unemployment, is the loss from reducing inflation by 1 percentage greater than the benefit from increasing inflation by 1 percentage?

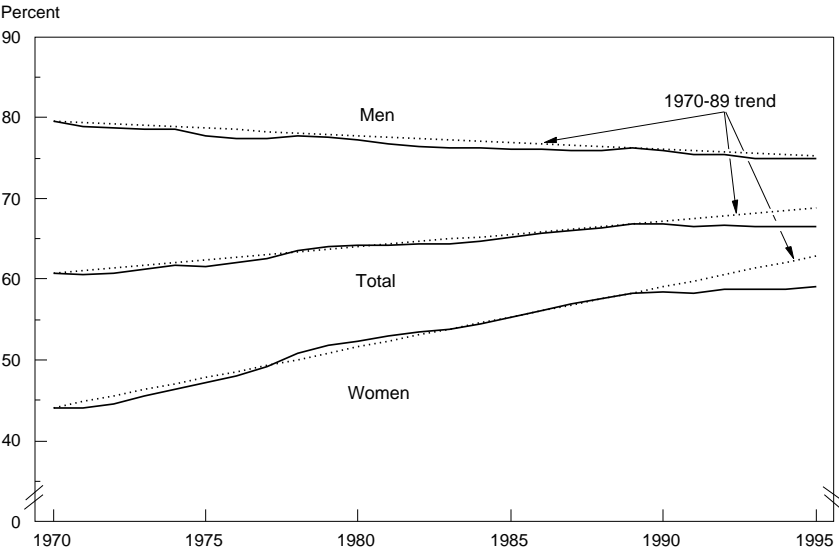
The view that the unemployment rate must change by more when inflation is reduced than when it is increased, and the related view that a small increase in inflation may spark runaway inflation, have been used as a basis for cautious policy. For instance, some economists urge waiting until the evidence is overwhelming that the sustainable rate of unemployment has fallen before allowing an additional decline in the actual unemployment rate. The argument is that the cost of returning to the initial low rate of inflation if the sustainable rate has not changed vastly outweighs the benefit of learning whether it has in fact changed.

Much empirical work suggests, however, that for small changes, increases and decreases in inflation exhibit the same sacrifice ratio. And, small increases in inflation historically have not triggered runaway inflation. Thus, if policymakers reduced unemployment in the belief that the sustainable rate had fallen but were wrong and inflation increased, inflation is unlikely to "take off," and the cost of returning inflation to its earlier level would roughly equal the benefit of having temporarily lowered the unemployment rate. The gain, of course, if policymakers were right and the sustainable rate had fallen would be lower unemployment with unchanged inflation.

Furthermore, the sustainable rate itself is determined, in part, by institutional arrangements that result from the overall economic environment. As the economy gradually moves to lower inflation, arrangements that tend to amplify wage and price movements, such as cost-of-living clauses, become less common. In such an environment, gradual reductions in the unemployment rate that cause little change in inflation can actually reinforce market participants' views that the sustainable rate has fallen.

riod the labor force participation rate has remained virtually flat, in sharp contrast to rising participation rates during the 1970s and 1980s (Chart 2-3). Because the participation rate is cyclical, rising toward the end of an expansion, one might have expected the earlier trend to reassert itself as the current expansion matured. Instead, the stagnant participation rate has been one of the more enduring features of this expansion.

**Chart 2-3 Labor Force Participation Rates**  
 The overall participation rate has recently fallen below its trend rate of increase. A slower rise in the rate for women accounts for most of this break from trend.



Note: Data refer to persons 16 years and over. Pre-1994 participation rates are corrected for effects of the revised Current Population Survey questionnaire.  
 Sources: Department of Labor and Council of Economic Advisers.

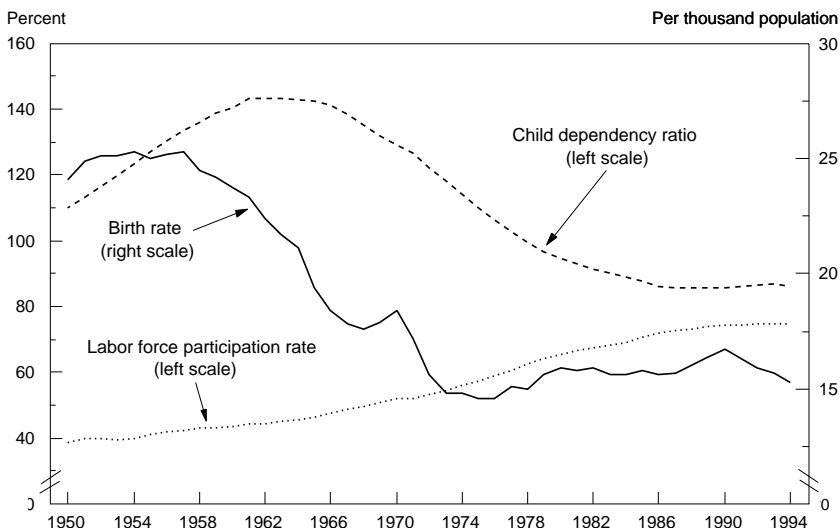
The stalling of the rise in the overall labor force participation rate is due mainly to a deceleration in the participation rate for women; the participation rate for men has fallen no faster than in earlier years. The flattening out of the female participation rate is probably the result of long-term demographic trends. As Chart 2-4 shows, the ratio of children per woman aged 20 to 54 fell between the late 1960s and the early 1980s, echoing the earlier pattern in the birth rate. The decline in this ratio allowed an increasing fraction of women to enter the labor force between the mid-1970s and mid-1980s, but its subsequent flattening in the late 1980s has limited further increases in participation.

While the increase in the overall labor force participation rate has slowed since the late 1980s, productivity growth appears to be little changed. Labor productivity has grown at an estimated 1.1 percent annual rate since the last business cycle peak in the second



**Chart 2-4 Women's Labor Force Participation Rate, Child Dependency Ratio, and Birth Rate**

The upward trend in women's labor force participation has stalled, as both the birth rate and the number of children per woman have leveled off.



Note: Labor force participation rate refers to women age 20 to 54. Pre-1994 participation rates are corrected for effects of the revised Current Population Survey questionnaire. The child dependency ratio is the ratio of children age 14 and under to the female civilian population age 20 to 54. The birth rate is the number of live births per thousand population.

Sources: Departments of Health and Human Services and Labor, and Council of Economic Advisers.

quarter of 1990, about the same as the trend rate during the entire post-1973 period (Chart 2-5). The figures discussed here are new estimates of productivity using the recently revised GDP data. See Box 2-6 for details about these estimates and Box 2-7 for a discussion of the relationship between productivity and real wages.

Table 2-2 shows the relative contributions of productivity and labor force growth to output growth, both over the past few decades and as projected for the next several years. In the past, the relative importance of these determinants of long-run growth have varied substantially across time periods. During the 1960-73 period, output growth was fueled by a rapid increase in both the working-age population and productivity. Productivity growth slowed dramatically after 1973, but was partially offset in the mid- and late 1970s by an increasing rate of labor force participation. From 1981 to 1995, the growth rate of the working-age population slowed dramatically, but was countered by stabilization in the length of the workweek and other factors. The Administration forecast of 2.3 percent average GDP growth for the next 7 years reflects projections of 1.2 percent average growth in productivity and 1.1 percent average growth in the labor force. Measured productivity is expected to grow a bit faster than in the recent past as further deficit reduction boosts investment, and planned adjustments to the CPI, which affect productivity measures, are implemented.

TABLE 2-2.—*Accounting for Growth in Real GDP, 1960–2002*

[Average annual percent change]

Item	1960 II to 1973 IV	1973 IV to 1981 III	1981 III to 1995 III	1995 III to 2002
1) Civilian noninstitutional population aged 16 and over .....	1.8	1.8	1.1	1.0
2) PLUS: Civilian labor force participation rate <sup>1</sup> .....	.2	.5	.3	.1
3) EQUALS: Civilian labor force <sup>1</sup> .....	2.0	2.4	1.4	1.1
4) PLUS: Civilian employment rate <sup>1</sup> .....	.0	−.4	.1	.0
5) EQUALS: Civilian employment <sup>1</sup> .....	2.0	2.0	1.5	1.1
6) PLUS: Nonfarm business employment as a share of civilian employment <sup>1 2</sup> .....	.1	.1	.1	.1
7) EQUALS: Nonfarm business employment .....	2.1	2.1	1.7	1.2
8) PLUS: Average weekly hours (nonfarm business sector) .....	−.5	−.7	.0	.0
9) EQUALS: Hours of all persons (nonfarm business) .....	1.6	1.3	1.6	1.2
10) PLUS: Output per hour (productivity, nonfarm business) .....	2.9	1.1	1.1	1.2
11) EQUALS: Nonfarm business output .....	4.5	2.5	2.8	2.4
12) LESS: Nonfarm business output as a share of real GDP <sup>3</sup> .....	−.3	.0	−.2	−.1
13) EQUALS: Real GDP .....	4.2	2.5	2.5	2.3

<sup>1</sup> Adjusted for 1994 revision of the Current Population Survey.

<sup>2</sup> Line 6 translates the civilian employment growth rate into the nonfarm business employment growth rate.

<sup>3</sup> Line 12 translates nonfarm business output back into output for all sectors (GDP), which includes the output of farms and general government.

Note.—Data may not sum to totals due to rounding.

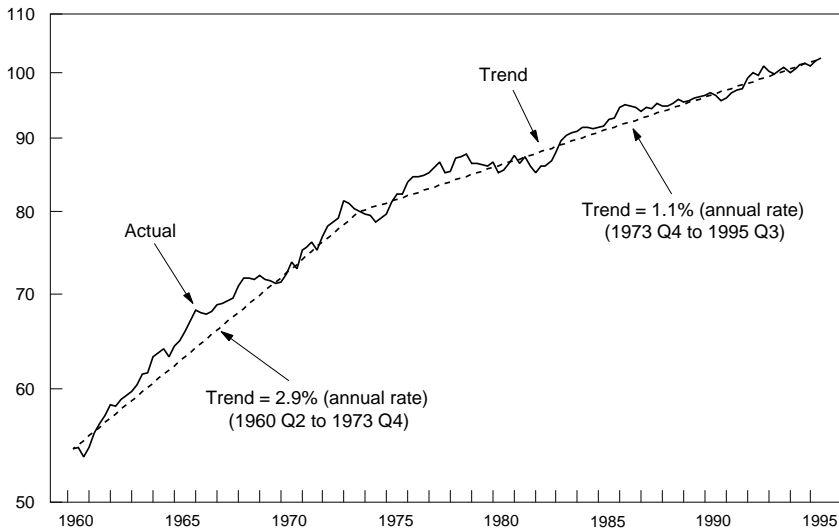
Except for 1995, time periods are from business-cycle peak to business-cycle peak to avoid cyclical variation.

Sources: Council of Economic Advisers, Department of Commerce, and Department of Labor.

#### Chart 2-5 **Actual and Trend Labor Productivity**

Smoothed for cyclical fluctuations, labor productivity has grown at a steady 1.1 percent average annual rate since 1973.

Index, 1992 = 100 (ratio scale)



Note: Data are for the nonfarm business sector.

Source: Provisional estimates calculated by the Council of Economic Advisers from data provided by the Departments of Commerce and Labor.

### **Box 2-6. New Productivity Estimates**

The estimates of productivity in Chart 2-5 use the new, chain-weighted measure of output and data from the product side rather than the income side of the national income accounts. The new estimates avoid the biases inherent in a fixed-weight measure of output. The previous fixed-weight measure biased productivity growth downward before the base year (1987) and upward thereafter, with larger biases in years further from the base year. These biases produce the illusion that productivity growth had improved from the 1970s to the 1980s and improved again to the 1990s. Still, many problems remain. For example, quality improvements often go unrecognized, especially in the service sector, biasing estimates of service-sector output downward. Although it is not clear that mismeasurement in services is more important today than in past decades, the increasing size of the service sector raises the suspicion that these problems are now relatively larger (see *Economic Report of the President 1995* for a discussion of the problems associated with measuring productivity).

## **INCOMES**

Income growth during the first three quarters of 1995 moderated a bit from its pace during 1994, reflecting mainly the deceleration in employment growth. Real disposable income increased at an annual rate of 2.4 percent for the first three quarters, just below the 2.6 percent rate over 1994. The slight decline from the year-earlier pace was due to a pause in income growth during the second quarter, which accompanied the overall moderation in economic growth.

Corporate profits increased in 1995, at about the same pace as 1994. The pattern over the year followed that of overall economic growth, with profits softening during the first half and rebounding strongly during the third quarter. Other components of national income likewise increased at more moderate rates during 1995, with the exception of rental income which declined through the third quarter.

## **MONETARY POLICY AND INTEREST RATES IN 1995**

Monetary policy changed little during 1995. After raising the Federal funds rate by half a percentage point (to 6.0 percent) in February, the Federal Reserve held it constant until July, when it lowered the rate by a quarter of a percentage point. In late December, the Federal Reserve cut the rate another quarter percentage point, so that 1995 ended with the Federal funds rate at 5.5 percent, exactly where it had begun the year. In line with the relative

### **Box 2-7. Productivity and the Real Wage**

Do employees benefit on average, either directly through an increase in compensation or indirectly through lower prices, from increases in their productivity? Conventional economic theory says that they should, at least over long periods. Historically, the evidence has borne this out. During the past few years, however, questions increasingly have been raised about whether the benefits of recent productivity gains have indeed gone to employees.

Some observers point out that hourly compensation (wages plus benefits) adjusted for changes in consumption prices has not kept pace with productivity in recent years. This “real consumption wage,” however, is not the appropriate measure for assessing whether firms are remunerating employees for increases in productivity. Because firms hire an additional employee only if the cost of doing so is less than or equal to the value of that employee’s output, a more appropriate measure to compare with productivity is compensation adjusted for output prices. This “real product wage” has tracked productivity in recent years (Chart 2-6).

The real consumption wage has risen recently by less than the real product wage because prices for goods and services that employees consume have risen by more than prices for goods and services they produce. A large part of this divergence likely is due to computer prices, which have fallen relative to most other prices. Because spending on computers represents a smaller share of personal consumption expenditures than computer production does of aggregate output, the decline in their price has restrained output prices by more than it has consumption prices.

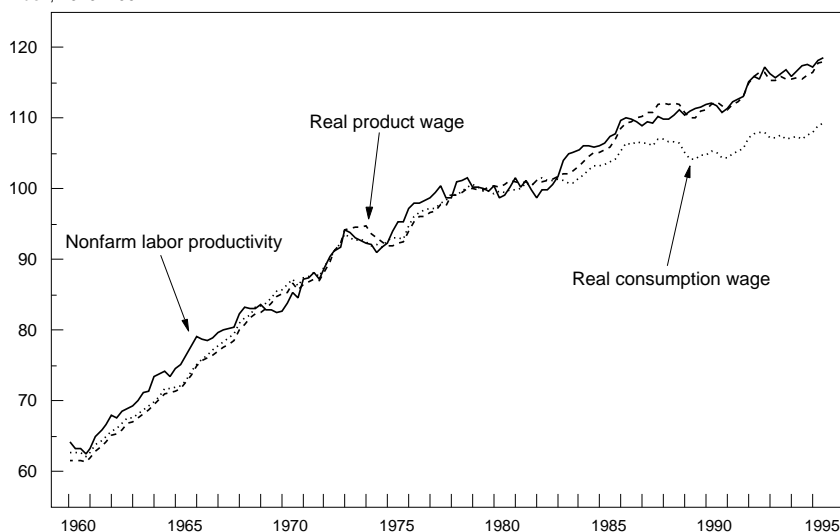
Although the divergence between consumption and output prices explains much of the gap between productivity and the real consumption wage, pre-benchmark data also had shown a small gap between productivity and the real product wage. The new GDP data eliminate this gap.

Employees, of course, care more about the purchasing power of their wages (the real consumption wage) than about any “wage-productivity gap.” And the stagnation of wages over the past two decades, particularly for the lower part of the income distribution, is cause for concern. Ultimately, however, the only way in the long run to raise real wages is to raise productivity.

### Chart 2-6 Measures of Real Compensation and Labor Productivity

The real product wage has kept pace with productivity, whereas the real consumption wage has not.

Index, 1979=100



Note: Wages are compensation per hour in the nonfarm business sector divided by the consumption deflator for the real consumption wage and by the nonfarm business deflator for the real product wage.

Sources: Departments of Commerce and Labor, and Council of Economic Advisers.

constancy of the Federal funds rate, other short-term interest rates declined only modestly during 1995, with the rate on 3-month Treasury bills dropping just half a percentage point compared with the end of 1994.

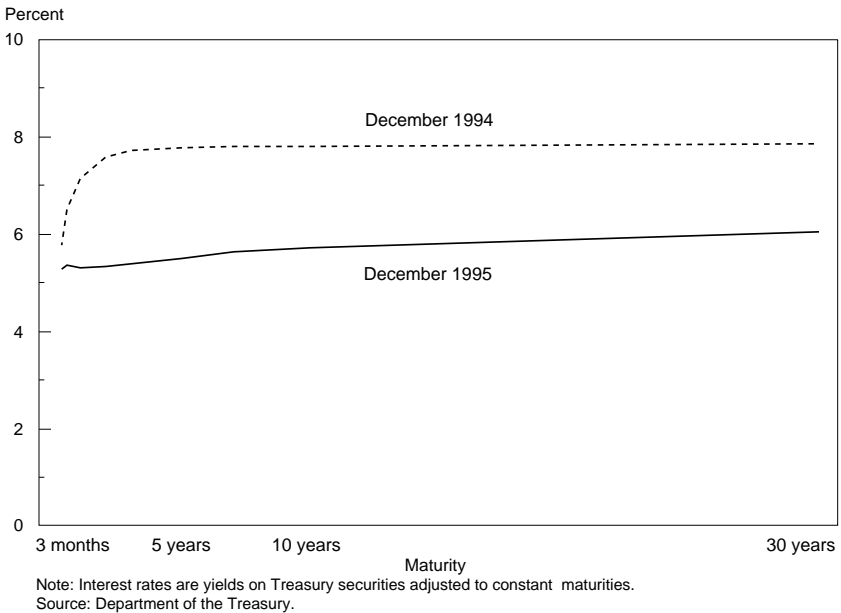
In contrast, longer term rates declined sharply over the course of the year. At the end of 1995, yields on 30-year, 10-year, and 3-year Treasury securities had fallen more than 2 percentage points from their peaks in late 1994. As a consequence, the spread between long- and short-term interest rates narrowed sharply, and the yield curve (which plots rates of interest for debt of different maturities) was remarkably flat at the end of 1995 (Chart 2-7).

The flatness of the yield curve is consistent with several explanations. The most probable is that investors expect short-term interest rates, including the Federal funds rate, to decline further. Certainly, evidence from the futures market for Federal funds supports this hypothesis and suggests that, as of February 5, 1996, investors expected a decline in the Federal funds rate on the order of half a percentage point to occur by July 1996 (Chart 2-8).

An expected decline in short-term nominal interest rates could reflect an expected decline in real interest rates or an expected decline in future inflation, or both. Real short-term interest rates might be expected to decline because the tightening stance of fiscal policy (as the deficit is reduced) increases the probability that eco-

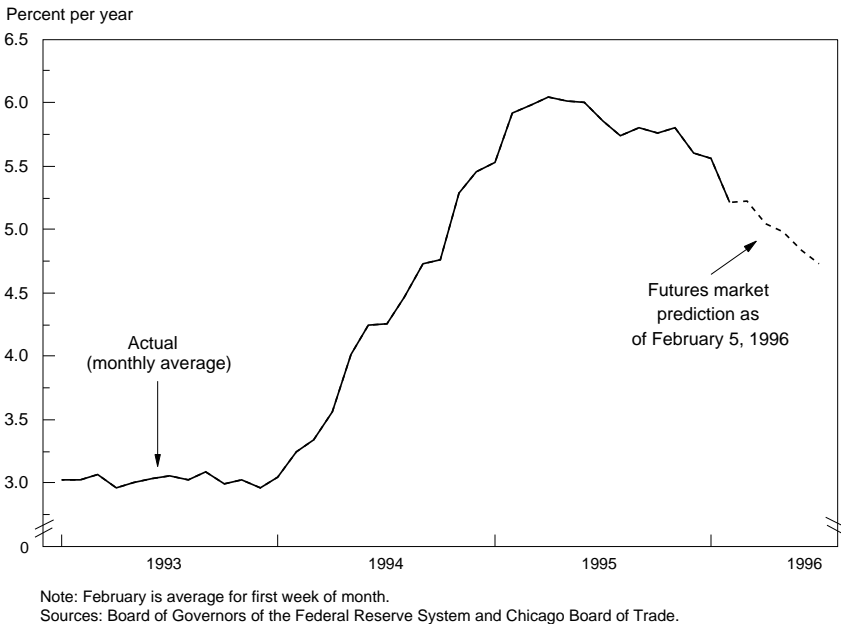
### Chart 2-7 The Yield Curve

The yield curve flattened in 1995 as long-term interest rates declined by more than short-term interest rates.



### Chart 2-8 Federal Funds Rate

The futures market for Federal funds anticipates a decline in the Federal funds rate over the first half of 1996.



nomie growth will slow in the short run, and thus makes it more likely that the monetary authorities would have to lower real short-term interest rates to stabilize output. On the other hand, if output is not fully stabilized and falls below its potential, the rate of inflation should decrease. In this case, much of the expected decline in future nominal interest rates would reflect a drop in the expected premium for inflation.

The superb performance of the stock market—both the Dow industrial average and the broader S&P 500 index rose by more than 33 percent during 1995—seems to favor the view that *real* short-term interest rates are expected to fall. In general, equity prices should move positively with the current level and expected real growth rate of dividends, and inversely with the real rate of interest. Although dividend growth was very strong over the year, these gains probably were not sufficient, even with an associated permanent shift upward in the level of expected future real dividends, to explain the phenomenal gains in stock prices during 1995. More likely, investors anticipated that a decline in real short-term interest rates would be forthcoming.

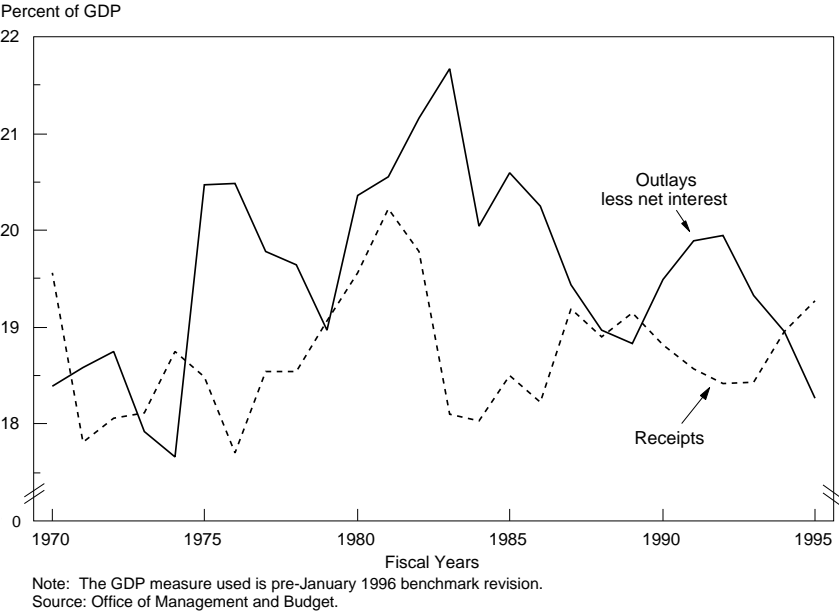
## FISCAL POLICY IN 1995

The budget deficit for fiscal 1995 was \$164 billion, substantially below estimates made earlier in the year. The budget deficit has now declined for 3 years in a row, for the first time since the 1940s. Were it not for the interest payments on debt accumulated during past Administrations, the budget last year would have been in surplus (see Chart 2–9). The sharp decline in the budget deficit has slowed the rise in the national debt sufficiently that the ratio of the national debt to GDP has remained roughly constant for the past 2 fiscal years.

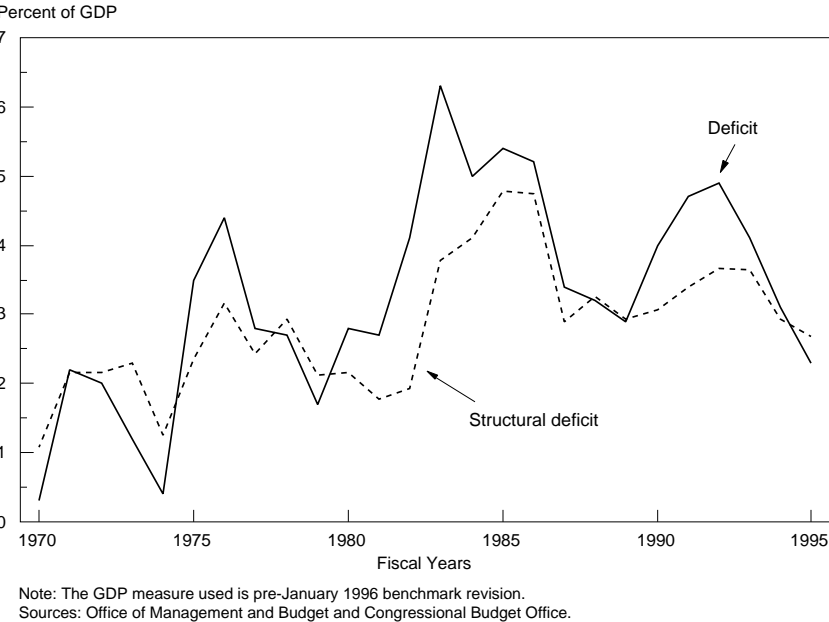
Part of the improvement in the deficit is likely to be associated with the state of the business cycle. Tax revenues relative to expenditures tend to rise during an expansion and fall during a recession. To assess changes in fiscal policy, economists adjust the budget deficit (or surplus) for economic conditions. On this basis, the Administration's progress in reducing the deficit also was evident during 1995, as the cyclically adjusted, or structural, budget deficit continued to decline (Chart 2–10).

The progress in reducing the deficit was made possible by the Omnibus Budget Reconciliation Act of 1993, which cut constant-dollar government purchases of goods and services over the past 2 years. Furthermore, as part of the ongoing efforts of this Administration to downsize government, the Federal workforce has been reduced substantially. Between January 1993 and November 1995, Federal civilian employment (excluding the Postal Service) has declined by about 215,000, leaving the Federal workforce smaller

**Chart 2-9 Federal Budget Receipts and Non-Interest Outlays**  
 The Federal budget excluding net interest payments was in surplus last fiscal year.



**Chart 2-10 Federal Budget Deficit**  
 As the Federal budget deficit has declined over the past 3 years, the deficit adjusted for the business cycle--the so-called structural deficit--also has fallen.





than at any time since the mid-1960s. Moreover, as the next few years unfold, the drop in employment should approach the target of 272,911 agreed to as part of the Federal Workforce Restructuring Act of 1994.

Two government shutdowns occurred late in the year and temporarily interrupted the disbursement of some Federal spending. Because most of this spending was restored once the shutdowns ended, the overall stance of fiscal policy was largely unaffected. However, the shutdowns did exact a significant budgetary cost and lowered real GDP growth by roughly 0.25 to 0.5 percentage point at an annual rate during the fourth quarter of 1995.

The Congress also failed to pass legislation acceptable to the Administration for an extended increase in the debt ceiling on Federal borrowing authority, forcing the Secretary of the Treasury to take extraordinary actions to ensure that the United States did not default for the first time in its history. As this *Report* went to press, the Congressional leadership had made a commitment in a letter to the President to pass a mutually acceptable debt limit increase by February 29. Passage of a straightforward long-term extension of the debt ceiling still is required to avoid a potential future default.

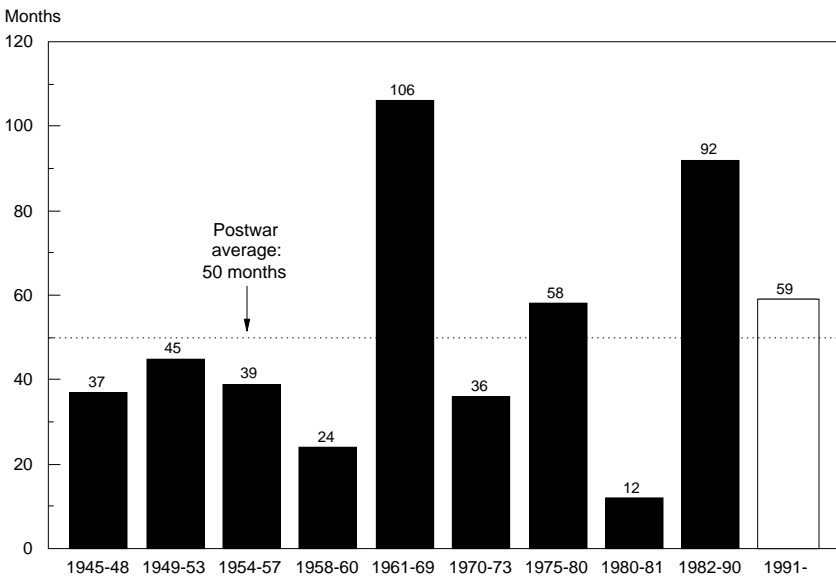
## WHAT CAUSES ECONOMIC EXPANSIONS TO END?

The current economic expansion began in March 1991 and, as of February 1996, had run for 59 months, a little longer than the 50-month average for expansions since the end of World War II and the third-longest of the 10 postwar expansions (Chart 2-11). As the expansion continued past the postwar average, some reports pointed to its age and raised the possibility that it might soon falter, with the economy dipping into recession. Expansions, however, do not end simply because they have somehow reached the end of their "normal" life span. Rather, expansions end because of changes in economic conditions or policies.

The length of postwar economic expansions has varied substantially, with the shortest one, in 1980-81, lasting only 12 months and the longest, that of 1961-69, 106 months. Such large differences make the average length of expansions a relatively uninformative guide to the life expectancy of the current expansion (Box 2-8). A far better way to judge whether the expansion is about to end is to assess whether the economic symptoms that often precede a downturn—rising inflation, rising interest rates, financial imbalances, banking sector troubles, or an inventory overhang—have begun to appear, and if so, whether monetary or fiscal policies could successfully offset these symptoms. In the early 1960s, for example, the Kennedy and Johnson Administrations ju-

**Chart 2-11 Length of Economic Expansions**

The current expansion has run for 59 months, slightly longer than the average postwar expansion.



Sources: National Bureau of Economic Research and Council of Economic Advisers.

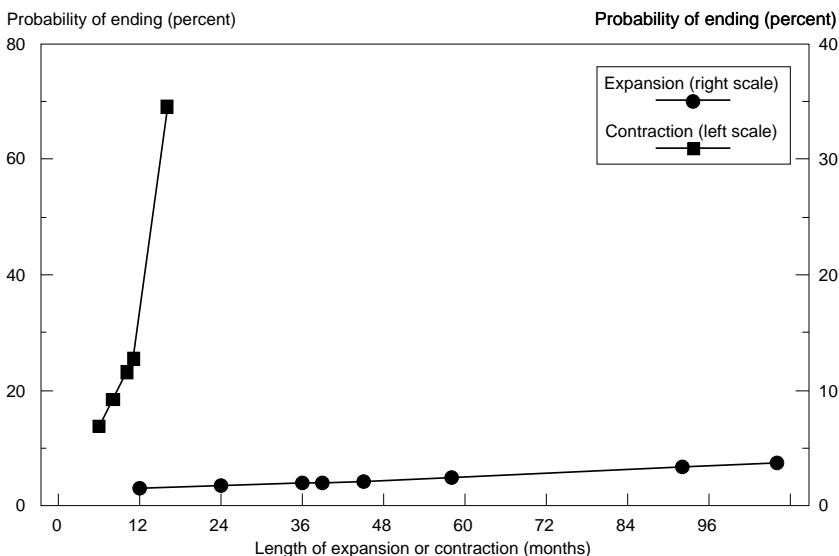
diciously applied tax policy as a tool of aggregate demand management to abort an impending downturn.

#### **Box 2-8.—Duration Analysis of Business Cycles**

Economists have used statistical methods to determine whether the end of an expansion or a recession becomes more likely the longer it goes on. Most findings show that, for business cycles since World War II, expansions are not significantly more likely to end simply because they get older, whereas recessions are (Chart 2-12). Although this difference between expansions and recessions is consistent with several explanations, the most likely reason is that policymakers since World War II have more actively engaged in countercyclical monetary and fiscal policies. With policymakers attempting to sustain expansions, events that precipitate downturns—such as oil price shocks or policy mistakes—are as likely to occur early as late in an expansion, so the length of an expansion does not affect the chance that it will soon end. On the other hand, if the pressure on policymakers to stimulate the economy grows stronger the longer a recession persists, then a recession that has lasted a while will be more likely to end in the next month than a recession that has just begun.

Chart 2-12 **Probability that an Expansion or a Contraction Will End**

The longer a contraction lasts, the higher the probability that it will end in the next month. This is not true for expansions--they do not exhibit "duration dependence."



Note: Each data point represents one or more post-World War II expansions or contractions.

Sources: Diebold, F., G. Rudebusch, and D. Sichel (1993), "Further Evidence on Business-Cycle Duration Dependence," in Stock, J. and M. Watson, eds., *NBER Studies in Business Cycles*, vol. 28, University of Chicago Press; National Bureau of Economic Research; and Council of Economic Advisers.

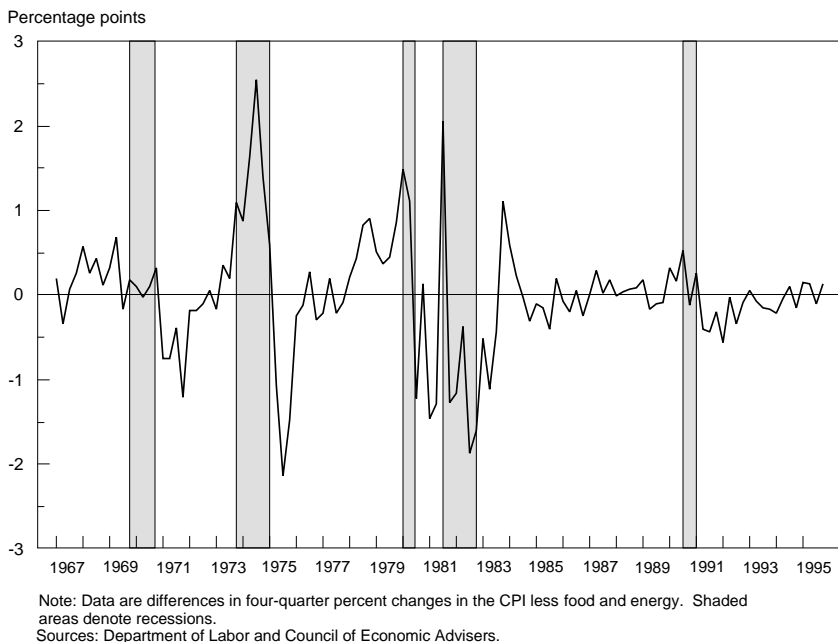
## ECONOMIC SYMPTOMS PRECEDING A DOWNTURN

The onset of most recessions since World War II has followed a sustained increase in the core rate of inflation (Chart 2-13). The rise in inflation sometimes has been precipitated by external events—such as foreign crises that have raised oil prices—and sometimes has resulted from overly stimulative fiscal or monetary policies. In the case of a foreign price shock, core inflation may rise if the foreign price increase gets incorporated into the process of setting domestic wages and prices. In the case of overly stimulative policies, core inflation may rise if the economy is pushed to operate at a level above full capacity (the unemployment rate is forced below its sustainable level).

A common pattern is that a sustained increase in the core rate of inflation eventually triggers an increase in short-term interest rates. In general, a greater ongoing acceleration of prices can lead to a sharper subsequent downturn. For example, during the late 1970s, although the Federal Reserve had begun to tighten policy just prior to the pickup in core inflation, the bulk of its tightening came only as inflation was rising rapidly. As a result, the subsequent tightening was much greater than it might have been if tightening had started somewhat earlier. Accordingly, one of the most important factors in assessing the chance that an expansion will end is the recent evidence on the core rate of inflation.

Chart 2-13 **Changes in Core Inflation**

A sustained rise in core inflation has preceded most postwar recessions.

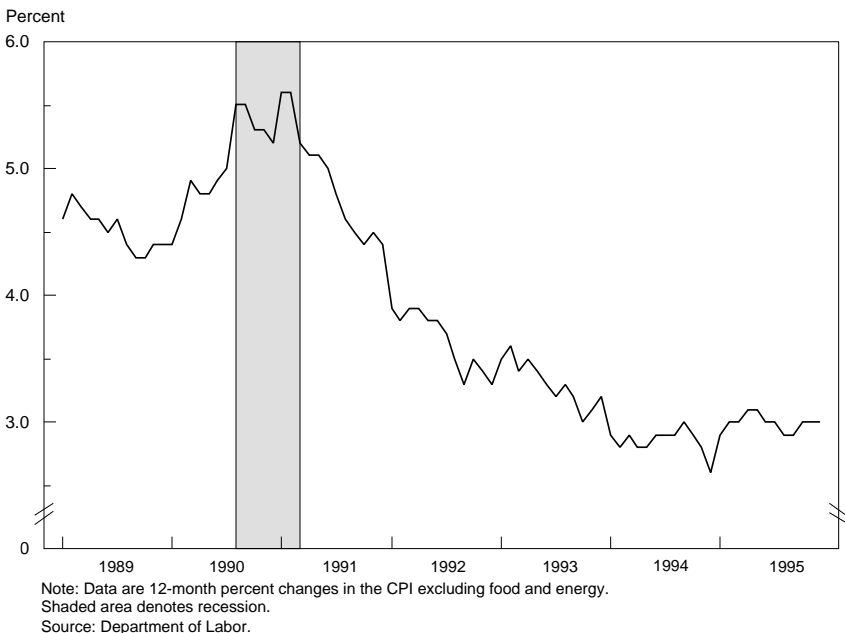


After trending downward from its recent peak in 1990, core inflation has been low and stable over the past 2 years (Chart 2-14). In addition, during 1995 interest rates fell, especially during the last part of the year. As they did so, the interest-sensitive housing and automobile sectors recovered from their slackening earlier in the year. Thus, with inflation stable and interest rates likely to decline further, the evidence strongly supports continuing economic expansion.

The 1990–91 recession, however, did not follow the typical pattern of rising interest rates preceding a downturn (although it did follow the pattern of a prior increase in core inflation). When that downturn arrived, some short-term interest rates had been falling for a full year. But a distinguishing feature of the period preceding that recession was the weakened condition of financial institutions, especially savings and loan associations and banks. Unlike in the late 1980s and early 1990s, when savings and loan associations and many banks were in financial difficulty due in part to the collapse of an overheated real estate market, banks today are on a more stable footing. The better financial situation of the banks suggests that the system should be able to adapt more easily today to any adverse shift in interest rates or real estate values, thereby limiting the consequences for the overall economy.

Chart 2-14 **Core Inflation Rate**

Core inflation has remained low and roughly stable for the past 3 years.



Finally, a sharp rise in inventories can often signal that spending has unexpectedly fallen, and can lead firms to cut production, possibly precipitating a recession. After a buildup of inventory during the early part of last year, the subsequent moderation in production helped to reduce the overhang. As a result, inventories presently are at more manageable levels.

## SHORT-RUN MACROECONOMIC EFFECTS OF REDUCING THE BUDGET DEFICIT

As the budget moves toward balance over the next 7 years, two factors will help to ensure that deficit reduction sustains economic growth in the short run. First, a forward-looking response of financial markets to deficit reduction can accelerate the decline in real long-term interest rates, bringing forward the investment dividend associated with balancing the budget. Second, an accommodative monetary policy can validate the market's response and reinforce its positive effects on short-run growth. But such a response by financial markets that is backed-up by monetary policy ultimately depends on the credibility of the deficit reduction itself.

### *The Response of Financial Markets*

Cutting the deficit reduces the government's claim on the output of the economy, either directly through lower purchases of goods

and services or indirectly through reduced transfer payments, freeing up resources for use by the private sector. Thus, the critical question for the outlook is whether or not spending by the private sector will rise and take advantage of the newly available resources, thereby sustaining growth in the short term. The answer depends largely on whether financial markets adjust sufficiently in response to deficit reduction so as to support the level of aggregate spending.

Adjustments in financial markets can stimulate spending in the economy in two major ways. First, deficit reduction raises private investment spending, primarily through a decline in real long-term interest rates, that is, long-term interest rates adjusted for expectations of future inflation. Second, deficit reduction spurs international competitiveness, leading to an improvement in the current account balance. Part of this improvement comes through expansion of exports to our trading partners and part comes through shifts by consumers and businesses away from imports and toward more competitive U.S. products. How much of the stimulus comes through investment and how much through net exports depends on the response of interest rates and interactions between interest rates and exchange rates. In the end, however, the stimulus will depend largely on the magnitude and timing of the decline in real long-term interest rates.

Some increase in spending could occur purely as a result of a fall in nominal interest rates that reflects entirely a drop in expectations about future inflation, leaving real rates unchanged. This might happen, for example, if qualifying standards for access to mortgage credit are specified in nominal terms, so that a decline in nominal interest rates allows more individuals or businesses to borrow even though real interest rates have not declined. Overall, though, a rise in aggregate spending due to this effect is likely to be far less important than the rise in spending accompanying a drop in real interest rates.

Deficit reduction can lower real long-term interest rates through three channels. First, a shrinking deficit directly lowers real long-term interest rates through a "portfolio" channel, as reduced government borrowing over time lowers the supply of government bonds relative to other assets. Second, a shrinking deficit lowers real long-term interest rates through an "aggregate demand" channel, as the shift to a contractionary fiscal policy weakens aggregate spending and money demand. Third, a shrinking deficit lowers real long-term interest rates through a "term-structure" channel. More prudent fiscal policy diminishes the likelihood that monetary policy in the future may have to restrain an overheating economy and lowers expected real short-term interest rates. Since long-term interest rates depend on the current and expected future levels of

short-term rates, an expected decline in future short-term rates will be reflected in a decline in long-term rates.

### *The Importance of Forward-Looking Expectations*

When market participants are forward-looking and anticipate (correctly) that the monetary authority will accommodate future credible deficit reduction, real long-term interest rates fall by more than when market participants either do not view future deficit reduction as credible or believe that monetary accommodation will not be forthcoming. To understand why credible deficit reduction accompanied by appropriate monetary accommodation leads to greater declines in long-term interest rates, we have to understand the relationship between short-term and long-term interest rates. Market participants investing their funds for say, 10 years, have a choice of buying a 10-year bond, or buying a 1-year bond, and rolling it over next year into another 1-year bond, and so forth. Adjusting for the differences in risk, the two investment strategies should yield the same return. In the absence of risk, this would mean that the long rate would simply equal the average of expected short rates over the 10-year period.

Deficit reduction that is viewed as credible and likely to be accompanied by future monetary accommodation leads investors to expect a future decline in short-term rates. Because long-term bonds must yield the same return (up to a risk premium) as a series of successive short-term bonds, long-term rates also will decline, typically by more than current short-term rates. In addition, credible deficit reduction that is accompanied by a more stable and certain fiscal policy, could further lower real long-term interest rates through a reduction in the "risk premium." With investors more certain about the future, long-term investments become less risky and the premium paid on such investments falls. On the other hand, if market participants believe the deficit reduction is not credible, then they will not expect additional future declines in real short-term interest rates and the risk premium will not fall, so that the decline in current real long-term rates will be less. In this case, a larger drop in current short-term interest rates would be necessary to lead to a sufficient decline in long-term rates so as to sustain aggregate spending and ensure full employment.

The evidence over the past 3 years, which witnessed deficit reduction combined with economic recovery, shows that interest rate declines can more than offset the contractionary effects when market participants are forward looking. In particular, the decrease in long-term interest rates occurred in anticipation of the deficit reduction, and had the desired effects of stimulating investment—not only in offsetting the shift to a contractionary fiscal stance, but in supporting the economic recovery.

The success thus far of financial markets in ensuring that deficit reduction does not compromise near-term growth does not mean that appropriate monetary policy is unimportant. Monetary policy—which operates with long and variable lags—needs to anticipate both the pattern of deficit reduction and other events which affect the level of aggregate economic activity. If monetary policy, for instance, follows a rule and responds to increases in the unemployment rate above its sustainable level only after the increases have occurred, then paths of more rapid deficit reduction would be accompanied by higher average levels of unemployment. But with a pre-announced schedule of credible deficit reduction, the shifting fiscal stance could be incorporated into monetary policymaking, taking account of normal lags. And, with investors expecting future deficit reduction, the market does much of the work of accelerating the decline in interest rates, so that relatively little change may be required in monetary policy to sustain growth in the short run.

Analysis using macroeconometric model simulations confirm these patterns. In one simulation, with monetary policy following a feedback rule (but not fully offsetting the effects of deficit reduction on the output gap) and with investors perfectly anticipating future changes in interest rates, long-term interest rates fall much more quickly than short-term interest rates—mirroring the pattern observed during 1995. In another simulation, investors are not forward-looking and monetary policy fails to accommodate the effects of deficit reduction and instead holds constant the rate of increase in the money supply. Although market forces lead to a decline in short-term and long-term interest rates and an associated increase in investment, in this simulation the decline in rates is not sufficient to sustain the economy at full employment. The message from this analysis is that the combination of credible deficit reduction and a well-designed monetary policy that anticipates future deficit reduction can avoid potential contractionary effects on the economy.

## FORECAST AND OUTLOOK

The economic expansion is forecast to continue throughout 1996, as the effects of recent declines in long-term rates boost spending. Over the 7-year forecast horizon, output is projected to track potential output and the rate of inflation is expected to remain roughly constant (Table 2–3).

Real GDP is projected to grow at its potential rate of 2.2 percent during 1996 (on a fourth-quarter-over-fourth-quarter basis), as investment in both the housing and the business sectors responds to lower interest rates and as consumption spending is supported by recent gains in stock market prices. Inflation, as measured by the



TABLE 2-3.—*Administration Forecast*

Item	Actual		1996	1997	1998	1999	2000	2001	2002
	1994	1995							
	Percent change, fourth quarter to fourth quarter								
Nominal GDP .....	5.9	<sup>1</sup> 4.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Real GDP (chain-type) .....	3.5	<sup>1</sup> 1.5	2.2	2.3	2.3	2.3	2.3	2.3	2.3
GDP price index (chain-type) .....	2.3	<sup>1</sup> 2.5	2.8	2.7	2.7	2.7	2.7	2.7	2.7
Consumer price index (CPI-U) .....	2.6	2.7	3.1	2.9	2.8	2.8	2.8	2.8	2.8
	Calendar year average								
Unemployment rate (percent) .....	6.1	5.6	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Interest rate, 91-day Treasury bills (percent) .....	4.3	5.5	4.9	4.5	4.3	4.2	4.0	4.0	4.0
Interest rate, 10-year Treasury notes (percent) .....	7.1	6.6	5.6	5.3	5.0	5.0	5.0	5.0	5.0
Nonfarm payroll employment (millions) .....	114.0	116.6	118.3	119.8	121.2	122.6	124.1	126.0	127.9

<sup>1</sup> Estimates.

Note.—The figures for 1994 and 1995 reflect the benchmark revisions to GDP announced in January 1996 and may differ from those used to prepare the Administration's 1997 budget.

Sources: Council of Economic Advisers, Department of Labor, Department of the Treasury, and Office of Management and Budget.

CPI, is expected to increase to 3.1 percent in 1996 from 2.7 percent in 1995, as food and energy prices, which had held down the overall rate of price increase last year, are expected to rise in line with overall inflation this year. The core rate of inflation is expected to remain roughly unchanged during 1996, consistent with our forecast that unemployment is likely to remain relatively unchanged, and that at current unemployment rates, pressures for increasing inflation are weak or nonexistent.

Although true inflation is expected to remain constant from 1996 onward, inflation as measured by the CPI is expected to edge lower as revised procedures gradually remove part of the upward biases in current CPI inflation figures. CPI inflation is likely to slow by 0.2 percentage point in 1997, when the Bureau of Labor Statistics (BLS) will implement procedures to correct for problems associated with bringing new stores into the survey sample. CPI inflation is expected to slow by another 0.1 percentage point in 1998, when the BLS updates the CPI market basket to reflect more recent data on expenditure patterns. As a result of these adjustments, CPI inflation is expected to fall from 3.1 percent in 1996 to 2.8 percent in 1998 and thereafter. Some of these CPI adjustments pass through to the GDP price index and, given the growth rate of nominal GDP,

raise estimates of real GDP growth. Consequently, real GDP growth is projected to rise to 2.3 percent from 1997 onward.

The impetus from the decline in interest rates in the second half of 1995 is expected to keep aggregate demand growing at the economy's potential rate for 1996. Over the medium term, interest rates are expected to edge lower as projected reductions in the Federal deficit reduce demands on capital markets. The projected decline in interest rates is expected to sustain growth at its potential rate as deficit reduction further restrains Federal spending.

The unemployment rate is projected at 5.7 percent in the near term and is expected to remain at that level throughout the forecast period. Economic growth of 2.3 percent over the forecast horizon is expected to generate enough jobs to employ all the new entrants implied by the expected 1.1 percent annual growth rate of the labor force. This unemployment rate is also expected to be consistent with long-term stability of the inflation rate.

As always, the forecast has risks. A basic assumption is that monetary policy will be calibrated to offset the ongoing effects of fiscal contraction. Obviously, monetary policy may not achieve this goal. Monetary policy has long lags, and so the course of fiscal policy must be properly anticipated. But fiscal policy depends on budgetary and other policy decisions of the Congress, and at present future Congressional action remains uncertain, despite bipartisan consensus toward achieving a balanced budget.

In the short term, the economy may hit a pothole in the first quarter of 1996, resulting at least in part from the effects of the government shutdown and bad weather in the eastern United States during January. But even if this should come to pass, the economy is expected to rebound, and the growth rate over the four quarters of 1996 is likely to be unaffected. The economy also faces the risk that foreign economic growth may stall, reducing foreign demand for U.S. exports. Still, the U.S. economy's export performance in 1995, in the face of economic weakening in three of our major trading partners, was impressive. Increased exports to strengthening economies in Canada, Japan, and Mexico would help offset any losses elsewhere.

## CONCLUSION

As the year 1995 ended, the economy was fundamentally sound. None of the imbalances that typically precede a recession were evident. All signs pointed to continued economic expansion at a sustainable pace. Unemployment was expected to stay low, the inflation rate was expected to remain low and stable, and business investment was expected to continue powering the economy as interest rates declined.

The economy during 1995 made the transition from economic recovery, during which growth was driven by removing slack from labor and capital markets, to a period where growth is and will continue to be determined by expansion of the economy's capacity. Although the transition to sustained growth was not entirely smooth, the economy rebounded smartly during the second half of 1995 from the earlier bump in the road and should continue to expand during 1996.

Perhaps the best news during the year was that inflation remained low and stable despite an unemployment rate that in the past was associated with rising inflation. The stability of inflation even as the unemployment rate was essentially unchanged at about 5.6 percent appears to signal a shift in the economic environment. The improved economic environment also was apparent in bond and stock markets, as long-term interest rates fell and stock prices soared, reflecting in part an outlook for inflation reminiscent of the early 1960s.

The bipartisan commitment to balance the budget over the next 7 years was the major macroeconomic policy event of the year, and represents a continuation of Administration efforts to redress the fiscal imbalance inherited from the past. As the deficit is further reduced, private investment should increase, helping to raise living standards. And, deficit reduction that is credible means that the decline in interest rates needed to sustain growth in the short run is likely to be forthcoming with only modest accommodation from monetary policy. A significant portion of the decline in long-term interest rates during 1995, particularly over the second half of the year, probably reflected investors' perception that credible further deficit reduction was on the horizon. The Administration's success in reducing the deficit over the last 3 years certainly demonstrates the firmness of its commitment to restoring balance to the Federal budget.