

**THE ANNUAL REPORT
OF THE
COUNCIL OF ECONOMIC ADVISERS**

LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS,
Washington, D.C., January 24, 1979.

MR. PRESIDENT:

The Council of Economic Advisers herewith submits its 1979 Annual Report in accordance with the provisions of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Cordially,



Charles L. Schultze
Chairman



Lyle E. Gramley



William Nordhaus

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CHAPTER 1

Progress and Problems in 1978

THE U.S. ECONOMY LAST YEAR maintained substantial momentum in its fourth year of expansion. Output and employment rose and unemployment fell. But the year was marred by a serious acceleration in the rate of inflation and a decline in the value of the dollar that was sharper than fundamental economic conditions warranted. Although economic growth slowed from 5½ percent over the 4 quarters of 1977 to 4¼ percent during 1978, real income rose in all sectors, and all demographic groups experienced employment gains. A reasonable balance was maintained among sectors of real spending. Business fixed investment grew vigorously and residential construction remained strong despite sharply rising interest rates.

During the years immediately preceding 1978, the rapid growth associated with economic recovery had absorbed many of the capital and labor resources idled by the 1974–75 recession. Thus it became appropriate that growth should slow to a pace more in line with the long-term potential of the economy. The decline in the growth rate during 1978 was the first step in that transition.

Much remains to be done to provide adequate employment opportunities for those who cannot find jobs even in a high-employment economy. This task cannot be accomplished solely through aggregate demand policy, however, without risking further acceleration of inflation. Aggregate demand management must now aim at a more moderate rate of economic expansion to combat inflation while structural measures are developed to attack remaining pockets of unemployment.

AN OVERVIEW OF THE YEAR

The quarterly pattern of growth during the year was once again uneven. Unusually severe winter weather and a major strike in coal mining reduced output growth to zero in the first quarter. Both consumer spending and construction activity were curtailed by the adverse weather. In the second quarter, both of these sectors rebounded strongly, and virtually all of the sales and production lost in the first quarter were regained. Taking a 2-quarter average, real gross national product (GNP) rose at a 4¼ percent annual rate in the first half of the year. In the second half of the year, there was again substantial disparity between the 2 quarters. Growth slowed

in the third quarter and accelerated in the final quarter. Over the 2 quarters together the annual rate of growth of real GNP averaged $4\frac{1}{4}$ percent, the same as for the first half.

The increase in employment over the 4 quarters of last year was slightly less than in 1977—3.3 million compared to 3.9 million. It remained very large by historical standards, however, as the growth of productivity slowed significantly. The unemployment rate continued the marked decline begun in the latter part of 1977, falling from 6.6 percent in the fourth quarter of 1977 to 5.8 percent by the final quarter of 1978.

All sectors achieved further increases in real income in 1978. Aside from the farm sector, however, the gains were more modest than in the previous 3 years of stronger fiscal stimulus and rapid recovery in real output. The growth of real per capita disposable income, for example, slowed from 4.6 percent in 1977—a year when personal income taxes were reduced—to 2.5 percent over the 4 quarters of 1978. During the 3 years since the first year of cyclical recovery from the 1974–75 recession, the growth rate has averaged 3.2 percent, slightly above the $2\frac{1}{2}$ percent trend for the two decades from 1953 through 1973. Corporate profits, in 1972 dollars, rose moderately further in 1978, following larger gains earlier in the recovery. Rising capacity utilization has lifted real profits at an average annual rate of 18 percent since the cyclical low in 1975. Both the rise in capacity utilization and the improvement in profitability helped to spur a recovery of business capital investment to a 10 percent share of GNP.

Farm income is, of course, less sensitive to fluctuations in overall economic growth but very sensitive to other factors such as weather, foreign demand, and agricultural policy. Farm income rose to an exceptionally high peak in 1973–74 from which it drifted down until 1977. A sharp recovery occurred last year, with farm proprietors' income reaching \$25.1 billion for the year as a whole (national income and product accounts basis). In 1972 dollars, farm income in 1978 was \$16.5 billion, or 14 percent higher than a year earlier.

The division of income among employee compensation and other shares has remained relatively constant during the most recent 3 years of expansion, as shown in Table 1. The share received by employees as wages and fringe benefits has risen slightly from the earlier part of the decade and is up substantially from the 1960s. The corporate profits share has improved significantly from recession lows although it remains well below the high level of the preceding decade.

One of the most discouraging developments of 1978 was the very slow growth of productivity. Output per hour in the private nonfarm business sector grew by only three-fourths of 1 percent during the year. (The reasons are explored in Chapter 2.) Weakness in productivity growth did much to exacerbate inflation. Since increases in nominal wage costs were offset to a lesser degree by productivity gains, unit labor costs rose more rapidly than was anticipated, and prices were pushed up faster. Furthermore, labor de-

TABLE 1.—Shares of national income, 1959–78

[Percent]

Item	1959–68 average	1969–73 average	1974–78 average ¹	1976	1977	1978 ¹
Compensation of employees.....	71.2	75.3	76.5	76.3	76.1	76.4
Proprietors' income: ²						
Farm.....	2.3	2.0	1.6	1.4	1.3	1.5
Nonfarm.....	8.1	6.2	5.2	5.2	5.2	5.2
Corporate profits ²	12.3	9.4	8.8	9.3	9.5	9.4
Other ³	6.1	7.0	7.9	7.9	7.8	7.6

¹ Preliminary.² With inventory valuation and capital consumption adjustments.³ Rental income of persons (with capital consumption adjustment) and net interest.

Note.—Detail may not add to 100 percent because of rounding.

Source: Department of Commerce, Bureau of Economic Analysis.

mand strengthened more rapidly than it would have done if productivity growth had been better, and this may have been a factor in the acceleration in hourly earnings early in the year.

Unlike earlier years of the recovery, when price indexes excluding food and energy rose at a fairly steady rate of around 6 to 6½ percent, 1978 witnessed a pervasive acceleration of prices and labor compensation. Compensation per hour in the fourth quarter of last year was almost 10 percent higher than a year earlier, in contrast to the 8 to 8½ percent rate of increase during the preceding 3 years. And price increases were larger in 1978 than in earlier years for almost all categories of goods and services. The GNP deflator increased 8.3 percent over the 4 quarters of 1978, compared to 6.1 percent in 1977. The consumer price index (CPI) rose by 9.2 percent over the 12 months ending in November compared with 6.8 percent in 1977. This more rapid rise of prices, especially consumer prices, was attributable not only to poor productivity performance but also to adverse developments in particular markets.

Food prices rose sharply, since supplies of red meats were even more limited than had been expected and adverse weather damaged fruit and vegetable crops. Moreover, the substantial depreciation of the dollar in international exchange markets was accompanied by higher prices of imports and of competing domestic products.

In view of the worsening of inflation, the Administration in May postponed the effective date for its proposed tax reduction from October 1978 to January 1979 and reduced the proposed cut from \$25 billion to about \$20 billion. Growth in Federal outlays was also slower than had been estimated. For fiscal 1978, unified budget outlays were \$12½ billion below the estimate contained in last January's budget, and the estimate for fiscal 1979 has been revised down by \$7.6 billion. Real purchases of goods and services by all levels of government rose 2 percent over the 4 quarters of 1978, in contrast to the 3¾ to 4¼ percent that had been anticipated at this time last year.

Both domestic and international conditions in 1978 also prompted a more restrictive monetary policy. The Federal funds rate increased from 6½ percent to about 10 percent during the year. Other short-term interest rates rose commensurately. As is typical, long-term rates rose less than those on short-term securities.

Tightening fiscal and monetary policies were one cause of the slower economic growth in 1978 than in 1977. The postponement of the tax cut and slower growth of Federal purchases contributed to a more moderate rise in consumer incomes and expenditures during 1978 than had been foreseen a year earlier. The inflation itself also played a part in slowing growth. Increases in food and import prices siphoned purchasing power away from most domestic consumers.

The largest single reason for the slower growth in 1978 than in 1977 was the leveling out of residential construction after a prolonged rise in housing starts beginning early in 1975. This leveling may have been partly the result of the increased restraint that developed in financial markets over the year. The more important influences were probably a filling of backlogs of demand and the fact that the home-building industry was operating at nearly full capacity.

The economy at the end of 1978 still showed substantial momentum, but the serious inflation problem and its interaction with the international value of the dollar have created a marked degree of uncertainty. Nominal interest rates are approaching historically high levels, to some extent as a result of the necessary steps taken at the beginning of November as part of the dollar support package. Financial restraint has not yet had significant adverse effects on spending, but it is difficult to predict how consumers and businesses will respond to rising interest rates in the current environment. Furthermore, the continuation of inflation casts a shadow on the economic horizon. Compliance with the anti-inflation program announced by the President in October is fundamental to maintaining a strong economy. This program is discussed in detail in Chapter 2.

If success is achieved in containing inflation this year, the prospects are favorable for maintaining a satisfactory growth rate and avoiding a recession. There are no major imbalances plaguing us. Capacity bottlenecks are relatively rare; capacity has been growing at a sustainable pace; inventories in most lines of business are reasonably balanced with sales; and liquidity positions, although declining, are not severely strained. The international trade position has been improving.

Continued strength in the near term seems assured. Employment and output rose strongly in the fourth quarter. Orders for durable goods have increased substantially. And the January 1 tax cut will help to sustain consumer spending early in the year. But the outlook for the latter part of 1979 will depend heavily on moderating inflation and on careful coordination between fiscal and monetary policies.

THE MAJOR SECTORS OF AGGREGATE DEMAND IN 1978

Private demand sustained the economic expansion through its fourth year. The continued strength of business fixed investment last year was a notable aspect of the composition of demand (Table 2). Housing starts demonstrated remarkable resilience; despite tightening credit conditions they remained near the high level that had been reached at the end of 1977. Consumption expenditures grew somewhat faster than disposable income during the year, and the saving rate declined from its already relatively low level at the end of 1977. In contrast, growth in State and local spending over the 4 quarters of 1978 was at a slower pace than in 1977; the effects of the 1977 economic stimulus measures—many channeled through the State and local sector—gradually diminished. Federal purchases in real terms declined slightly due to a variety of special factors.

TABLE 2.—*Growth in the major components of real gross national product, 1975–78*

[Percent change, seasonally adjusted annual rate]

Component	1975 IV to 1976 IV	1976 IV to 1977 IV	1977 IV to 1978 IV ¹	1977 IV to 1978 II	1978 II to 1978 IV ¹
Gross national product.....	4.6	5.5	4.3	4.2	4.3
Personal consumption expenditures.....	5.7	4.8	3.8	2.2	5.4
Nonresidential fixed investment.....	8.6	9.1	8.3	12.4	4.3
Residential investment.....	23.6	15.3	-8	-1.3	-3
Government purchases:					
Federal.....	.2	6.3	-3	² -12.2	13.2
State and local.....	-2.7	4.3	3.5	4.6	2.3
Domestic final sales ³	5.0	5.7	3.7	2.2	5.2

¹ Preliminary.

² Largely attributable to fluctuations in Commodity Credit Corporation expenditures.

³ Gross national product excluding change in business inventories and net exports of goods and services.

Source: Department of Commerce, Bureau of Economic Analysis.

PERSONAL CONSUMPTION EXPENDITURES

Personal consumption is typically a major source of stimulus in the early stages of recovery. The current expansion is no exception. Between mid-1975 and the end of 1976 the personal saving rate declined substantially, and the fraction of disposable income spent on durable goods rose. Consumption subsequently became a less important source of stimulus, but it remained an expansionary factor in 1978. The increase in consumption came to 3.8 percent in real terms during the last year, one-half percentage point more than the increase in real disposable income.

Since 1975 the household sector has significantly increased its stocks of durable goods. In the process, outstanding consumer debt rose enough to lift the ratio of debt repayments to disposable income from a 1975 low of 15.6 percent to 16.8 percent at the end of 1977. It is therefore not surprising that the rate of growth of spending (in 1972 dollars) for durable goods declined substantially to 5.0 percent in 1978, compared to 11.3 per-

cent in 1977. Nonetheless, durable goods purchases in real terms held at about 15 percent of real disposable income, the level reached late in 1977. Auto sales remained at a high rate of 11¼ million units a year but did not rise further. Despite steep price increases for foreign cars, the foreign car share of the new car market declined relatively little during the year.

With durable goods sales remaining comparatively high, the volume of outstanding consumer installment credit rose substantially further in 1978; during the year the net increase amounted to \$44 billion. In the fourth quarter, repayments of consumer installment debt had reached 17.7 percent of disposable personal income, four-tenths of a percentage point above the 1971 peak (the earliest available data for the present series). Total repayments, including mortgage repayments, amounted to almost 23 percent of disposable income in the third quarter.

The high fraction of consumers' income absorbed by debt repayment has created some concern that a downturn in consumer demand might ensue. Survey data on the use of consumer installment credit suggests, however, that the increase in the ratios of installment credit extensions and repayments to disposable income may have been due to rapid growth in the number of households in the age bracket associated with relatively heavy credit usage. Rapid growth has occurred in the number of young adults in the 18- to 34-year age bracket; this group uses credit the most heavily. An absence of excessive debt burdens is also suggested by the fact that delinquency rates on installment loans did not rise during the year.

At the start of last year the Administration forecast a rise of real consumption of about 4½ percent, measured fourth quarter to fourth quarter, or about three-fourths percentage point more than the 3.8 percent actually realized. The reason for this difference was slower growth of real disposable income. This slowdown, in turn, is partly explained by the postponement of the effective date of the proposed tax cut from October 1, 1978, to January 1, 1979. A more important cause, however, was the increase in the rate of inflation that occurred during the course of 1978. Effective tax rates were increased as households were moved into higher tax brackets. Furthermore, the 11 percent rise in food prices reduced the growth of real incomes for most consumers, as did the price increases associated with the decline of the dollar's value in foreign exchange markets.

In the past, sharp unexpected increases in the rate of inflation have increased the personal saving rate. Inflation generally tends to raise the cost of borrowing and curtail the growth of real wealth. In addition, consumers may become less confident of their future prospects. In contrast, the saving rate declined in 1978. The continued strength of consumer expenditures in the face of high actual inflation rates and rising nominal interest rates may to some extent have stemmed from anticipatory buying in advance of expected price increases. Evidence from surveys suggests that some consumers considered the present time to be propitious for buying because they expected

prices to rise further. This may have helped sustain the already high level of durable goods purchases.

Relative price changes appear to have contributed to changes in the composition of consumption during 1978. For example, real purchases of transportation services and clothing and shoes rose more sharply than total consumption. In these areas, price increases were below the average for all consumer goods and services. A shift in the composition of food consumption, as a result of the rapid rise in food prices, was probably the major reason for the decline in the measured real value of food consumption. Whenever food prices rise steeply consumers tend to shift toward less costly foods, although they do not necessarily eat smaller quantities of food. For example, the sharp reduction in supply and sharp increase in the price of red meats generated a significant shift of consumption to poultry and dairy products.

HOUSING

Housing activity remained on a plateau throughout last year, following nearly 3 years of steady advance. Real residential construction, on a calendar year basis, was 3.5 percent above that in 1977, and there were 2.0 million housing starts last year. The number of single-family starts was just below the 1½-million record level of 1977, while multiunit starts rose to 592,000. Over the 4 quarters of 1978, however, residential construction in real terms declined slightly, in contrast to a rise of 15 percent in the previous 4 quarters. This flattening out of residential investment outlays was a dominant element in the slower growth of real GNP in 1978.

In the first quarter, housing starts fell about 20 percent as a result of the inclement winter in the North Central and Northeast regions. The shortfall was largely made up in the second quarter; then housing starts leveled out at an annual rate of around 2 million units.

This leveling of housing starts and residential construction in 1978 was not surprising. Three years of strongly rising building activity had filled backlogs of demand created by the depressed level of new construction during the 1973-74 period of credit restraint and low income. Moreover, the sharp rise in prices of a wide range of building materials suggests that the building industry was operating at close to capacity in 1978. Indeed, the striking feature of the housing sector last year was its continued high level of activity in the face of sharply rising interest rates.

The resilience of housing in a year of tightening financial markets is largely attributable to the ability of specialized mortgage lenders to compete more effectively for savings. Beginning in June, new regulations permitted commercial banks and thrift institutions to issue 6-month certificates of deposit on which rates paid are tied to those on 6-month Treasury bills. These new money market certificates sustained the supply of mortgage credit, but they did not prevent interest rates on mortgages from rising along with other rates. The national average effective mortgage rate for new houses

reached 10 percent by the end of the year. The strength of demand, particularly for single-family units, in the face of such high mortgage interest rates results partly from the large number of people who were born in the baby boom of 1946-57 and are now reaching age brackets where the rate of homeownership is traditionally high. Demand may also be stimulated by the expectation that houses will continue to be a good inflation hedge. Over the past 7 years purchase prices for new homes, adjusted for changes in quality and size, have risen at an annual rate about one-third faster than other prices. The tax deductibility of mortgage interest and the favorable tax treatment of capital gains from home sales add to the attractiveness of such investment.

Multifamily housing starts rose 2.9 percent in 1978. They were still about 400,000 below the 1972 peak of 1 million, which included close to 200,000 publicly subsidized starts. The number of subsidized starts last year was almost 165,000, up substantially from the lows of 1975 and 1976. For all rental housing the vacancy rate remained close to 5 percent through the third quarter of last year, a historically low figure. Rents rose 7.3 percent, almost 1 percentage point more than in 1977. This probably contributed to an improvement in profits and helped to stimulate multiunit building.

BUSINESS FIXED INVESTMENT

A year ago there was widespread concern that business fixed investment was not demonstrating its usual cyclical response to improvement in such basic determinants as the rate of growth of output, business profits and cash flow, and the cost of capital. In fact, revised data for 1977 that became available last July showed a much stronger rise of investment than had appeared earlier, and growth last year continued to be relatively strong. The rate of real growth of business fixed investment over the 4 quarters of last year was 8.3 percent (Table 3). For the year as a whole investment rose to 10 percent of GNP, close to its share in the high investment periods of the 1960s and early 1970s.

Investment in structures, which had been disturbingly weak earlier in the recovery, climbed 12.7 percent in 1978, and by year-end it ex-

TABLE 3.—*Changes in real business fixed investment, 1975-78*
[Percent change, fourth quarter to fourth quarter]

Component	1975	1976	1977	1978 ¹
Nonresidential fixed investment.....	-9.9	8.6	9.1	8.3
Structures.....	-7.2	3.0	7.0	12.7
Producers' durable equipment.....	-11.2	11.4	10.1	6.4
Autos and trucks.....	2.9	21.5	27.0	11.0
Other.....	-14.8	8.3	4.2	4.5

¹ Preliminary.

Source: Department of Commerce, Bureau of Economic Analysis.

ceeded its previous peak reached in the fourth quarter of 1973. Growth of real spending for producers' durable equipment, on the other hand, slowed to 6.4 percent during the year, in contrast to 10.1 percent during the preceding year. Business purchases of autos and trucks grew much less rapidly than earlier. Strength in investment was greatest in durable goods manufacturing—particularly in machinery and in stone, clay, and glass—and also in electrical utilities and petroleum refineries.

The increased strength in investment during the past 2 years reflected a response to growth in profits and increases in capacity utilization in manufacturing during the course of the recovery. Corporate profits (with inventory valuation and capital consumption adjustments) rose 6.7 percent over the 4 quarters ending in the third quarter of last year and amounted to $7\frac{3}{4}$ percent of GNP at the end of the period. This shows a substantial improvement from the 6 percent average ratio in 1974–75 though little change from 1977.

Capacity utilization in manufacturing rose from 83 percent in the latter part of 1977 to almost 86 percent at the end of 1978. In general, utilization rates were higher in the primary processing industries than in the advanced processing industries. Utilization in basic metals industries, which had been relatively low at the beginning of the year, rose dramatically and greatly improved profits in those industries.

Thus the rate of investment has been relatively high in the past 2 years, and the structure of investment has begun to shift toward longer-lived assets. Nevertheless, a further rise in the share of GNP directed to business fixed investment would be desirable, in order to maintain growth of the capital stock in line with the rapidly rising labor force and to meet environmental and other regulatory requirements. This issue is discussed further in Chapter 3.

NET EXPORTS

Real net exports fell substantially during the first 2 years of the current expansion. During 1977 net exports in 1972 dollars appeared to be leveling out at about \$11–\$12 billion, a little less than 1 percent of real GNP. Late in 1977 and early last year, however, our net export position deteriorated further, although the magnitude of this deterioration was exaggerated by the effects of the East Coast dockworkers' strike.

Throughout much of the 1977–78 period exports grew slowly while imports of both oil and other goods increased sharply. By mid-1978, however, reversals of these trends became evident; net exports in 1972 dollars in the last half of 1978 were \$3 billion higher than in the first half.

Agricultural products were once again one of the leading export sectors. Agricultural exports, in 1972 dollars, reached a relatively high level of \$15.8 billion in 1978, well above the \$12.9-billion average in 1977. Poor crops in the Southern Hemisphere last spring and income growth in the rest of the

world were the main reasons for the increased demand for U.S. farm products.

The volume of nonagricultural exports in the second quarter rebounded from depressed levels early in the year and continued to rise strongly through the rest of 1978. Accelerating growth in other countries made a significant contribution to this advance. The depreciation of the dollar in late 1977 and early 1978, which lowered U.S. export prices in foreign currencies, also encouraged exports, but its principal effect on exports will occur in 1979.

Import volume grew at an annual rate of 11.6 percent from the beginning of the expansion until the end of 1977. This is somewhat more rapid than past experience would suggest, given the growth of U.S. income. That trend has since been reversed. Oil imports were 5.6 percent lower in 1978 than in the year before. The startup of 1.2 million barrels per day of Alaskan oil production displaced imported oil and more than offset the increase in U.S. oil consumption last year. The volume of non-oil merchandise imports grew more slowly during 1978 than in 1977, because of less rapid U.S. growth and higher import prices due to dollar depreciation.

INVENTORY ACCUMULATION

The cautious inventory policy that has characterized the current expansion continued in 1978. This caution was reinforced by sharply rising short-term interest rates, which increased the cost of holding inventories. The rate of inventory accumulation in 1972 dollars last year was about three-fourths of 1 percent of GNP. The ratio of inventories to final sales (in 1972 dollars) for the nonfarm sector was nearly constant. The stability of the inventory-to-sales ratio is especially noteworthy in the face of the 10 percent share of GNP absorbed by business fixed investment. Such a high investment share tends to raise the ratio of stocks to sales by virtue of its significant contribution to inventories of work in progress.

One exception to this stability of inventory-to-sales ratios was at general merchandise stores. The ratio of real inventories to sales in this sector, which has shown a slight uptrend in the past decade, appeared to be moving up sharply during the summer and early fall months. A stronger pace of sales at these stores late in the year helped to alleviate this problem.

GOVERNMENT SPENDING

Government purchases rose less during 1978 than was expected a year ago. In real terms the actual increase was 2.0 percent.

Slower than expected growth was confined principally to the Federal sector, where the real value of purchases declined 0.3 percent. Commodity Credit Corporation purchases had been expected to decline. The shortfall in other purchases was about evenly divided between delays in the buildup of the Strategic Petroleum Reserve and shortfalls in numerous other categories of nondefense purchases, which rose, in nominal terms, 4 percentage

points less than anticipated. The slow accumulation of petroleum reserves meant lower oil imports and, on balance, had no effect on aggregate demand, in contrast to the other shortfalls.

State and local government purchases, in real terms, grew rapidly in the first half of last year but slowed in the second half. From the second quarter of 1977 through the second quarter of 1978—a common fiscal year for these units of government—the real value of State and local purchases rose by 4.9 percent. This was a significant contrast to the virtual stability in 1975–77. In nominal terms compensation of employees rose by 10.2 percent over this period while other purchases rose by 16.4 percent. Construction activity in this sector (about one-third of other purchases) had been declining in real terms between the last quarter of 1975 and the first quarter of 1977, but it appears to have risen substantially in 1978. In the 3-month period ending in October the real value of street and highway construction was 5 percent higher than a year earlier, sewer system construction was up 14 percent, and water supply construction was up 33 percent.

The acceleration of spending by State and local governments in 1977–78 primarily reflects two forces: the rise in revenues during the economic expansion and a sharp increase in Federal aid. A substantial part of the 1977–78 stimulus package was funneled through State and local governments, augmenting special countercyclical programs that had been initiated earlier. The principal components of the package were an expansion of public service employment, authorization of a second round of local public works grants, and expansion of antirecession fiscal assistance grants to State and local governments. Public service employment exceeded its target of 725,000 jobs by the spring of 1978 and subsequently declined somewhat. Local public works grants were fully committed by the end of 1977, but the expanded value of outlays followed with a lag. Distribution of antirecession fiscal assistance peaked in the third quarter of 1977 and ended a year later.

Real growth slackened in the second half of last year, in part because States and localities entered new fiscal years in an environment influenced by public sentiment for tax reductions and restraint in government spending.

As a result of the increased growth in purchases and the pressure for tax reduction, the aggregate budget surplus in the State and local sector declined sharply in 1978. The surplus on current and capital account (but excluding social insurance trust accounts) fell from a peak of \$12.8 billion (annual rate) in the third quarter of 1977 to \$1.8 billion a year later. Of the \$7.5-billion decline that occurred between the second and the third quarters, roughly \$5¼ billion is attributable to California's Proposition 13, which mandated a reduction of about 50 percent in local property taxes, or about one-fourth in total local revenues. This local tax cut was followed by a substantial redistribution of funds from the State government, which had been incurring a surplus, to the local governments.

Proposition 13 and similar measures in other States suggest the likelihood of significantly slower growth in State and local spending in the near future and an approximate balance or a deficit in the aggregate current and capital account of this sector. In the fall elections, 11 States had proposals on their ballots that would immediately limit State and local taxes or expenditures or both. Such measures passed in eight of these States. Referenda mandated substantial reductions of property taxes in Idaho and personal income taxes in North Dakota. The measures in other States differ in their form and the degree to which they will constrain taxes and expenditures, but their enactment—by large margins in some cases—clearly indicates public sentiment for budgetary restraint. This is likely to put downward pressure on both spending and the current and capital account surplus.

Movements in this aggregate State and local surplus or deficit are dominated by national trends but conceal great diversity across States and among cities and areas within States. Per capita personal income—perhaps the best single measure of taxable resources—varies widely among States, but the growth trends in various regions have been narrowing these differentials throughout the twentieth century. The regions with the highest income levels have tended to experience the slowest growth. These same regions have the highest per capita public sector expenditures, the highest tax effort, and the highest level of per capita Federal aid. Many forces help to create this pattern: high-income localities may choose to spend more on public services as well as on private goods and services; where the cost of living is high, more must be spent to obtain the same level of services; and some high-income areas also contain significant concentrations of poverty and have greater needs. Extreme care must therefore be used in drawing general conclusions about the fiscal condition of the State and local sector, or of individual areas within it, from the aggregate surplus or deficit.

The social insurance accounts of State and local governments continued to show a moderately growing surplus throughout last year. By the end of the year the surplus had risen to \$22.8 billion, up \$3.7 billion from a year earlier. Growth in this surplus has been augmented by strong earnings on investments as well as the excess of contributions over benefit payments. Continued growth in this surplus is likely as States and localities move to provide actuarially sound funding of these trusts.

LABOR MARKET DEVELOPMENTS

Demand for labor continued to be unusually strong in 1978. Despite another sharp increase in the labor force participation rate, the creation of new jobs exceeded the growth of the labor force by a substantial margin, and the rate of unemployment declined further. The proportion of the working-age population employed continued to climb in 1978, reaching 59.0 percent in the fourth quarter.

The civilian labor force rose by $2\frac{3}{4}$ million over the 4 quarters of 1978. This is a 2.8 percent annual growth rate, well above the long-term trend rate of $2\frac{1}{4}$ percent per year, which results from population growth and a long-term upward drift in labor force participation rates.

Women, teenagers, and blacks contributed most to the growth of the labor force; their participation rates rose to new highs. The participation rate for adult women increased 1.5 percentage points to 50.1 percent, passing the 50 percent mark for the first time. The teenage participation rate jumped 1.6 percentage points to 58.5 percent, and that for blacks and other racial minorities increased 1.2 percentage points to 62.0 percent.

Employment increased by 3.3 million from the fourth quarter of 1977 to the fourth quarter of 1978, a smaller gain than in 1977 but still large by historical standards. The growth in employment was surprisingly large in relation to the rise in real GNP, reflecting the year's poor productivity performance. The employment gain was broadly based across industries, with service-oriented and typically cyclical industries showing the largest gains.

Among manufacturing establishments, most nondurable goods industries showed little or no growth in employment. Employment was reduced in such industries as apparel, textiles, leather products, and tobacco manufactures. Some of the durable goods industries—particularly those related to construction and transportation—showed sizable gains. Among these were nonferrous primary metals, fabricated metal products, nonelectrical machinery (particularly construction and related equipment and computers) and aircraft.

Employment also increased in other major sectors during the year. Of these, construction employment grew at the fastest pace, with gain of 11.6 percent. Other large gains in employment were registered by finance, insurance, and real estate (5.3 percent); retail trade (4.1 percent); and services (4.4 percent).

Employment gains were greatest among women, blacks, and teenagers, the groups that led the labor force expansion. The employment increase among adult women (aged 20 and over) accounted for more than half of the total; the percentage increase in their employment was more than double that of their male counterparts. Blacks and members of other racial minorities filled about one-third of the new jobs. Employment in these groups grew more than twice as fast as that of whites.

Overall, unemployment declined from 6.6 percent of the labor force in the final quarter of 1977 to 5.8 percent in the fourth quarter of 1978. Most of the decline occurred early in the year. The unemployment rate for adult white women fell to 5.0 percent, but the white teenage unemployment rate showed little change, since in that age bracket the growth in the labor force was as rapid as the rise in employment (Table 4).

Earlier in the recovery the unemployment rate for blacks had declined more slowly than that for whites, widening the gap between the two. In

TABLE 4.—Unemployment rate and growth in employment and labor force, by demographic group, 1978

Group	Unemployment rate (percent) ¹ 1978 IV	Employment	Civilian labor force
		Percent change from 1977 IV to 1978 IV ²	
Total.....	5.8	3.6	2.8
White.....	5.1	3.2	2.5
Both sexes 16-19 years.....	14.0	1.8	2.0
Males 20 years and over.....	3.5	2.1	1.4
Females 20 years and over.....	5.0	5.2	4.4
Black and other.....	11.5	7.0	5.2
Both sexes 16-19 years.....	35.3	12.1	6.0
Males 20 years and over.....	8.3	6.1	4.7
Females 20 years and over.....	10.2	7.3	5.5

¹ Percent of civilian labor force in group specified; seasonally adjusted.

² Adjusted for the increase of about 250,000 in employment and labor force in January 1978 resulting from changes in the sample and estimation procedures introduced into the household survey.

Source: Department of Labor, Bureau of Labor Statistics.

1978 some progress was made in reversing that pattern. The unemployment rate for blacks declined by 1.7 percentage points to 11.5 percent, compared to the 0.5 percentage point decline for whites to 5.1 percent.

Since mid-1975 there has been a fairly steady reduction in the percentage of unemployed persons who report job loss as the reason for their unemployment. The percentage of unemployed who are reentrants to the labor force has been increasing fairly rapidly, while the percentage who are new entrants and the percentage who quit their last job have both increased moderately. These typical cyclical patterns continued in 1978.

PRICES AND WAGES IN 1978

Price developments last year were a major source of disappointment and concern. The consumer price index rose by 9.0 percent from November 1977 through last November; producer prices of finished goods rose by 9.1 percent from December 1977 to December 1978, and the GNP deflator rose by 8.3 percent during the 4 quarters of the year. In all cases the increases were considerably greater than in each of the preceding 2 years.

As shown in Table 5, the acceleration of prices was widespread. Energy prices, which had been a major factor contributing to high inflation rates in the 1973-75 period, did not play a large role last year. Food prices, however, were once again an important influence. Even if one eliminates food and energy prices from the price indexes—thus removing the effects of external shocks to supply—the remaining prices show an acceleration in 1978.

The upward movement in these other prices was a response to a wide variety of forces—including the pass-through of higher import prices associated with depreciation of the dollar, the effects on home prices of in-

TABLE 5.—*Alternative measures of inflation, 1976–78*

[Percent change, December to December, except as noted]

Measure	1976	1977	1978 ¹
Consumer price index: ²			
All items.....	4.8	6.8	9.0
Food.....	.6	8.0	11.3
Energy ³	6.9	7.2	7.0
All items less food and energy.....	6.1	6.4	8.6
Producer price index for finished goods:			
All finished goods.....	3.3	6.6	9.1
Consumer goods.....	2.1	6.4	9.5
Foods.....	-2.5	6.6	11.9
All other.....	4.9	6.1	8.3
Capital equipment.....	6.4	7.2	8.0
Implicit price deflator for gross national product⁴:			
Food consumption.....	.7	5.7	11.7
Other goods and services.....	5.3	6.2	7.9

¹ Consumer price changes are from November 1977 to November 1978. Changes for price deflators are preliminary. ² Data beginning January 1978 relate to all urban consumers; earlier data relate to urban wage earners and clerical workers.

³ Gas (piped) and electricity; fuel oil, coal, and bottled gas; and gasoline, motor oil, coolant, etc.

⁴ Changes are from fourth quarter to fourth quarter.

Sources: Department of Commerce (Bureau of Economic Analysis) and Department of Labor (Bureau of Labor Statistics).

centives to invest in land and houses as an inflation hedge, and some supply bottlenecks in construction materials. A particularly troublesome phenomenon, however, was the slow growth in productivity. This added directly to costs of production and may indirectly have affected wage rates by increasing the demand for labor.

Table 6 shows the acceleration in hourly earnings and in total compensation per hour, the slower growth in productivity for the nonfarm private business sector, and the effects of both of these forces on unit labor

TABLE 6.—*Measures of wage rates and costs, 1973–78*

[Percent change, fourth quarter to fourth quarter, except as noted]

Item	1973	1974	1975	1976	1977	1978 ¹
Adjusted hourly earnings index ²	6.4	9.1	7.5	7.4	7.5	8.2
Union wage changes (total effective adjustment) ³	7.0	9.4	8.7	8.1	8.0	7.5
Private nonfarm business sector, all persons:						
Compensation per hour.....	8.2	10.9	8.6	8.5	7.6	9.8
Contribution of:						
Wages and salaries and private fringes.....	(⁴)	10.0	8.0	7.7	6.9	8.7
Employer payments to social insurance.....	(⁴)	.9	.6	.8	.7	1.1
Productivity.....	-.7	-3.4	4.4	2.6	1.3	.8
Unit labor costs.....	9.0	14.9	4.0	5.8	6.3	8.9

¹ Preliminary.

² Adjusted for overtime in manufacturing and for interindustry employment shifts.

³ Agreements covering 1,000 workers or more. Changes are for the four quarters ending in December through 1977 and ending in September for 1978.

⁴ Not available.

Source: Department of Labor, Bureau of Labor Statistics.

costs last year. Table 7 indicates that the rise in prices in the nonfinancial corporate sector was less than the increase in unit labor costs. Nevertheless profits per unit of output still continued to increase, although much less rapidly than in 1977.

TABLE 7.—*Changes in price, costs, and profits, per unit of output, private nonfinancial corporate sector, 1973–78*

[Percent change, fourth quarter to fourth quarter, except as noted]

Item	1973	1974	1975	1976	1977	1978 ¹
Labor costs.....	8.6	16.3	2.1	7.3	5.6	8.7
Nonlabor payments.....	2.2	8.6	18.7	1.5	6.1	3.3
Corporate profits.....	-6.3	-26.0	66.9	.5	16.4	1.2
Other nonlabor costs ²	6.3	23.1	6.5	1.9	2.1	4.2
Implicit price deflator.....	6.4	13.8	7.3	5.3	5.8	6.8

¹ Changes are measured from third quarter 1977 to third quarter 1978.

² Interest, rent, depreciation, and indirect business taxes.

Source: Department of Labor, Bureau of Labor Statistics.

Chapter 2 develops in considerably more detail the relation between wages, productivity, and prices. The following sections describe some of the special factors adding to inflation last year.

FOOD PRICES IN 1978

Retail food prices for the 12 months ending in November 1978 rose 11.3 percent—well above the 8.4 percent increase for all items excluding food. Most of the increase in food prices occurred during the first half of the year and was very broadly based. Prices for meats, poultry, fish, and eggs rose 18.9 percent (Table 8), and the index for fruits and vegetables was up 11.5 percent. The index for all food consumed at home was 12.0 percent higher. Prices of imported food rose less than in 1977, however, because coffee prices declined from the record highs of 1977.

TABLE 8.—*Changes in retail food prices, 1977–78*

[Percent change, seasonally adjusted annual rate]

Consumer price index component	1978				Nov. 1977 to Nov. 1978 ²
	I	II	III	IV ¹	
All food.....	12.4	20.0	7.0	6.8	11.3
Food away from home.....	10.7	10.9	10.8	7.9	10.0
Food at home ³	13.7	24.2	5.2	6.3	12.0
Meats, poultry, fish, and eggs.....	28.4	46.8	-4.9	11.2	18.9
Dairy products.....	2.5	15.8	12.3	7.4	9.5
Fruits and vegetables.....	12.2	22.6	14.3	6.7	11.5
Sugar and sweets.....	14.0	22.4	11.7	-1.8	11.6

¹ Based on October–November data.

² Based on unadjusted data.

³ Includes items not shown separately.

Note.—Data beginning 1978 relate to all urban consumers; earlier data relate to urban wage earners and clerical workers.

Source: Department of Labor, Bureau of Labor Statistics.

Increases of this magnitude in food prices were not anticipated as the year began, and price forecasts for food had to be revised repeatedly in the following months. There were a number of reasons for the unfavorable developments: hog production failed to expand despite favorable grain prices; cattle marketings continued to decline; adverse weather curtailed some crops here and abroad; government farm programs and price support levels were changed; prices of major grains rebounded from abnormally low levels in 1977; costs of food processing and marketing went up; and the increase in the minimum wage raised labor costs both for food marketing and for restaurant meals.

The cattle cycle has always been a major determinant of U.S. meat prices. When ranchers become optimistic about future beef prices, they hold back cows and heifers for breeding purposes. Over a period of years, cattle numbers rise until overexpansion of the herd occurs and the large supplies lead to a fall in beef prices. The cycle then enters its liquidation phase until the herd is reduced enough to make the longer-term price outlook more promising. At that point the cycle begins again.

The past 4 years have witnessed a prolonged liquidation phase. The number of cattle and calves on farms in the United States declined from 132 million head in January 1975 to about 111 million head at the end of last year. This represents a 16 percent drop, the sharpest ever recorded. With fewer cattle available in 1978, slaughter was down by 5 percent, and per capita beef consumption declined by more than 4 percent to 120 pounds.

It was expected that lower beef production in 1978 would be largely offset by a higher output of pork and poultry. Analysis of the intentions of hog producers in late 1977 indicated a probable 10 percent increase in pork production in the following year, but the severe winter weather radically changed the outlook. Conception rates fell, abortions increased, and the average number of pigs per litter dropped 6 percent below normal. Disease, rising feed costs, uncertainty over government regulation of feed additives and use of nitrites in processing, and structural changes in the industry also kept hog production from reaching expected levels. When it became evident that pork production was not expanding, meat prices began to rise very rapidly, with strong consumer demand adding further pressure.

Adverse weather in 1978 also affected other food prices. Heavy rains in California delayed spring plantings last year and fresh vegetable prices rose dramatically. Most fruit crops were also reduced by bad weather, apples being the only major exception. In December 1978, freezing temperatures in southern California and Arizona once again hurt citrus and fresh vegetable crops.

In contrast, weather conditions during the growing season for grain were very favorable in the major producing areas. The corn crop reached a record of 7.1 billion bushels, and the national average corn yield exceeded 100 bushels per acre for the first time in history. Other major grain harvests were also fairly ample.

Changes in government farm programs and increased price support levels for agricultural products also led to retail price increases for some food products in 1978. In January, import fees on foreign sugar were raised in order to guarantee the effectiveness of the domestic price support program. In March, land diversion programs were expanded to improve grain prices. The grain reserve programs, which were instituted last year to provide some insurance against the price-raising consequences of a crop failure, led to higher wheat and flour prices while the reserves were being built up. Dairy price support levels rose automatically in April and October, as required by statute, but lower production and strong demand kept prices of milk and dairy products above those higher support levels.

Increasing costs and prices in the rest of the economy also affected food prices. The value of farm commodities, together with the cost of imported foods such as coffee and cocoa, accounts for 43 percent of retail food expenditures. The other 57 percent represents the cost of transporting, processing, and marketing the commodities. Thus, when the costs of labor, transportation, packaging, and other inputs increased last year, the food sector was affected as were other sectors. Approximately one-half of the food price increase in 1978 was attributable to higher prices for these marketing services.

The 15.2 percent increase in the (nonfarm) minimum wage at the beginning of 1978 may have had a particularly large effect on restaurant and institutional food prices and on food marketing costs. Since many workers in these industries are paid the minimum wage, an increase in that wage would quickly translate into higher costs. For food consumed away from home, which represents about one-fourth of total food consumption, prices rose 10 percent during the year.

DEPRECIATION OF THE DOLLAR

Another source of inflationary pressure in the U.S. economy during 1978 was the decline in the value of the dollar relative to other currencies. An index of the value of the dollar relative to the currencies of 10 other industrial countries—computed by using the percentage of world trade of each country as its weight (multilateral basis)—shows a 13.8 percent decline in the dollar from September 1977 to September 1978. Weighted by each country's share of U.S. trade (bilateral basis), the decline was 8.9 percent. The difference between the two indexes is largely caused by the high share of Canadian trade in the latter index and by the 8.0 percent decline of the Canadian dollar relative to the U.S. dollar.

Changes in the relative value of the dollar affect the price of imported goods and thus the cost of living. Over the 4 quarters of 1978, prices of non-fuel imports rose 15½ percent. This was substantially less than the 24.3 percent rise in foreign prices in dollar terms in the 10 largest countries of the Organization for Economic Cooperation and Development (OECD). The difference between these two price movements indicates that foreign producers absorbed a substantial amount of the fall in the dollar by reducing

their profit margins on exports. Such behavior is consistent with historical experience.

The rise in the prices of imported goods has a further effect on domestic prices by raising wage demands and by allowing price increases for goods that compete with imports. The econometric evidence suggests that over a 2-year period these indirect effects might amount to about twice the direct effects on prices of final products. A 10 percent depreciation will generally result in a roughly 1½ percent increase in prices by the end of a 2- to 3-year period, with approximately half of the effect coming in the first year.

The impact of the decline of the dollar on domestic prices is limited by the denomination of oil prices in dollars. As a result, the price of imported fuel does not rise as the dollar falls. In addition, the Organization of Petroleum Exporting Countries (OPEC) did not raise its prices in 1978. The large increase in OPEC prices announced on December 17 for 1979 means that this moderating influence will not be repeated this year.

Inflation affects the depreciation of the dollar as well as being affected by it. Countries with low inflation rates tend to have strong currencies, and the appreciation of their currencies helps to hold down the rise of their domestic price levels (Table 9). Relative inflation rates are by no means the only factors that influence the relative value of currencies. Indeed, in the short run, factors such as relative interest rates, differences in real growth, the size of the current account balance, and expectations of traders in foreign exchange markets are likely to be dominant influences.

TABLE 9.—*Changes in currency values and consumer prices, by country, third quarter 1977 to third quarter 1978*

[Percent change]		
Country	Dollar exchange rate	Consumer price index
Canada.....	-6.4	9.3
France.....	11.6	9.3
Germany.....	15.0	2.4
Italy.....	5.4	11.9
Japan.....	38.1	4.0
United Kingdom.....	11.3	7.8

Sources: Board of Governors of the Federal Reserve System and Organization for Economic Cooperation and Development.

HOUSING COSTS

Housing is the largest single component of the consumer price index, comprising over one-third of the expenditures covered by this measure. This component encompasses many items, such as rent, utilities, and home purchase costs. Most of these costs have been rising very rapidly.

Housing is one sector in which a classical demand-pull inflation seems to have been occurring in 1978. The strong demand for houses has raised the price of both land and materials. The average price of a new single-

family house rose by 13½ percent in the 12 months ending in October. Demands for construction materials have strained the capacity of some supplying industries, and prices of building materials have risen strongly. Lumber prices, for example, have risen 33 percent in the last 2 years, and shortages of gypsum products have been common. The increase in energy prices since 1974 has also affected prices of building materials, particularly the prices of insulation and asphalt products such as shingles.

If housing starts taper off this year as expected, some of these problems should become less severe. Energy conservation tax credits enacted late in 1978, however, may keep pressure on prices of insulation.

Some have questioned whether the widely used consumer price index appropriately measures the real burden of rising housing costs in periods of rapid inflation. Capturing the magnitude of rising housing costs in the index is indeed difficult. Rental costs in multifamily dwellings are, in principle, fairly easy to measure. Owner occupancy poses different problems, however, because of the distinction between the costs of owning a house and the costs of using its services.

During the most recent revision of the consumer price index, the Bureau of Labor Statistics reviewed the conceptual basis for the home purchase portion of the index. In principle, there are two ways to measure the cost of owner-occupied housing. The first is to measure the home prices, mortgage interest rates, and other cost elements faced by those buying a home during the period in question. This is the method that has been used historically in the CPI. A second approach would be to price the flow of services from housing, using rents on equivalent units as a measure of the true cost of living in a house. This method is used in the national income and product accounts and in the implicit deflators for GNP and its components.

When home prices move up, rents on comparable units will tend to rise. Unless vacancy rates are very low, however, rents will adjust upward only gradually to a level that fully reflects the new and higher price of homes. Rent controls in some areas may contribute to the slowness of the process of adjustment. Consequently in a period when housing prices are rising rapidly the measurement technique now used in the CPI will show a faster increase in the cost of home-ownership than the alternative index based on equivalent rents. Conversely, when the increase in home prices slows, rents may keep rising for some time in order to close the gap, and the current CPI technique will show a slower price increase than the alternative.

Under either method of measurement, however, a period of rapid rise in housing prices would increase the housing cost index faster than the rise in out-of-pocket costs paid by homeowners who had earlier purchased their homes at lower prices and contracted for mortgages at lower interest rates. An important part of the total rise in the CPI last year stemmed from the homeownership component. New home prices rose by 11 percent and mort-

gage interest rates by 9 percent. Only about 10 percent of homeowners—those who actually bought a house last year—were directly affected by the resulting increases in the cost of homeownership.

MEDICAL CARE

Medical care costs have added significantly to inflation for most of the past decade. Except for the period of mandatory wage-price controls from 1971 through early 1974, medical care costs have risen much more rapidly than other prices. From 1973 through 1977 the cost of medical care rose at an average annual rate of 10.2 percent, compared to 7.7 percent for the total consumer price index. During 1978 the increase in medical care prices slowed to 8.8 percent, about the same rate as the total CPI.

The reason for this moderation is not completely clear. Prospects for mandatory cost containment legislation may have been partly responsible; the success of some of the State cost containment programs may also have been influential. It should be noted, however, that total hospital expenditures continued to increase as a share of GNP since the deceleration early in 1978 in the prices of many hospital services was partially offset by greater use of these services. A significant reacceleration of hospital costs also occurred late in 1978. These developments point out the need for some more permanent means of containing the rise of hospital costs. The Administration will resubmit legislation with this aim in 1979.

AGGREGATE DEMAND MANAGEMENT IN 1978

The focus of aggregate demand policy changed during the past year, as inflation accelerated and unemployment fell faster than had been expected. The acceleration of inflation in the context of continued large employment gains prompted a lowering of the target for output growth. Fiscal and monetary policies shifted toward restraint.

In the fourth quarter of 1977, during the budget planning period, the unemployment rate stood at 6.6 percent. With normal increases in productivity a 1978 economic growth rate well above the long-run trend would have been needed to achieve a further significant reduction in unemployment. Fiscal policy was designed to meet that objective by continuing, though gradually reducing, the stimulative effects of the Federal budget.

The stimulus measures adopted in 1977 were expected to have a dwindling effect in the course of 1978. A reduction in income taxes, to take effect in the final quarter of the year, was proposed to offset the dampening effect on real growth of increases in social security taxes and of the higher effective tax rates resulting from inflation. Some normal cyclical rise in interest rates was anticipated, but it was expected that monetary policy would be generally accommodative.

During the early months of the year, however, it became apparent that the slow growth in productivity, and the associated sharp increases in the

demand for labor, were contributing to a serious acceleration of inflation. For this reason, it became appropriate to slow the growth of the economy to preclude the emergence of excess demand. This slowing would provide an environment in which structural anti-inflation measures and the dollar support program could be effective.

FISCAL POLICY

Shifts in the high-employment budget offer a useful way to summarize changes in fiscal policy. The adjustments made to obtain the high-employment budget remove from actual receipts and expenditures the effects of fluctuations in the economy. Consequently, this budget shows the surplus or deficit as it would be if the economy were moving smoothly along its potential growth path. Changes in the high-employment surplus or deficit reflect the effects on receipts attributable to inflation and to growth in potential real GNP as well as to discretionary changes in Federal expenditures and tax rates. Short-run changes in the high-employment surplus or deficit are relatively insensitive to assumptions regarding the level of potential GNP.

Table 10 shows that fiscal policy shifted toward restraint in 1978. For the calendar year as a whole, the high-employment deficit was reduced by almost one-half from 1977 and declined continuously through 1978. The tax cut at the beginning of 1979 will temporarily increase the high-employment deficit, but the high-employment budget will be about in balance by mid-1980.

The 1978 reduction in the high-employment deficit occurred for four reasons. First, the effects of the 1977-78 stimulus package gradually dissipated: public service employment peaked slightly above 725,000 jobs in the spring,

TABLE 10.—*Actual and high-employment Federal receipts and expenditures, national income and product accounts, calendar years 1973-78*

[Amounts in billions of dollars; quarterly data at seasonally adjusted annual rates]

Calendar year or quarter	Actual				High-employment			
	Receipts	Expenditures	Surplus or deficit (-)		Receipts	Expenditures	Surplus or deficit (-)	
			Amount	Percent of GNP			Amount	Percent of GNP ¹
1973.....	258.3	265.0	-6.7	-0.5	256.8	265.1	-8.4	-0.6
1974.....	288.6	299.3	-10.7	-1.8	301.1	298.6	2.6	.2
1975.....	286.2	356.8	-70.6	-4.6	320.5	350.1	-29.6	-1.8
1976.....	331.4	385.2	-53.8	-3.2	356.9	380.3	-23.4	-1.3
1977.....	374.5	422.6	-48.1	-2.5	394.5	419.0	-24.6	-1.3
1978 ²	431.6	461.0	-29.4	-1.4	446.6	459.6	-12.9	-.6
1977: III.....	374.3	430.7	-56.4	-2.9	392.2	427.4	-35.3	-1.8
IV.....	385.5	444.1	-58.6	-3.0	403.4	441.4	-38.0	-1.9
1978: I.....	396.2	448.8	-52.6	-2.6	417.5	447.0	-29.5	-1.4
II.....	424.7	448.3	-23.6	-1.1	438.1	447.1	-9.0	-.4
III.....	441.7	464.5	-22.8	-1.1	455.2	463.0	-7.9	-.4
IV.....					475.8	481.2	-5.4	-.2

¹ High-employment surplus or deficit as percent of high-employment gross national product.

² Preliminary.

Note.—Detail may not add to totals because of rounding.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of the Treasury, Office of Management and Budget, and Council of Economic Advisers.

and antirecession fiscal assistance to State and local governments ceased at the end of the third quarter. Second, inflation and real growth moved individuals into higher tax brackets during the year.

Third, Federal spending rose less rapidly than had been anticipated. The increase in total expenditures as measured in the national income and product accounts was \$38.2 billion from the end of 1977 to the end of 1978. This increase amounts to only 8.6 percent in nominal terms in a period when the GNP deflator rose 8.3 percent. The substantial shortfall in fiscal 1978 from the rate of spending anticipated in the January budget came to \$12½ billion on a unified budget basis, or 2.8 percent of total outlays. The prospect of a shortfall became apparent fairly early last year, but no attempts were made to offset it, since additional fiscal restraint was a desirable outcome in view of unfolding economic circumstances.

For fiscal 1979, which began last October, budget projections were similarly scaled down; on a unified basis, fiscal 1979 Federal spending is now expected to be \$493.4 billion or \$7.6 billion below the original estimates made last January (adjusted to include earned-income tax credits in excess of taxpayers' liabilities, which are now treated as outlays).

The fourth element in the shift toward fiscal restraint was the President's decision to revise his tax reduction proposal. Originally the Administration had requested a \$25-billion tax reduction effective on October 1, 1978. In May the President asked that the net reduction be scaled back to \$20 billion and its effective date postponed to January 1, 1979. Reduction was still needed to offset the fiscal drag stemming from the changes in effective tax rates occasioned by inflation and real growth, from increases in social security taxes previously enacted, and from the \$6.6-billion increase in social security taxes legislated in 1977 to take effect in 1979. Nevertheless, a smaller and later reduction appeared appropriate in view of the need for greater fiscal restraint. The Congress ultimately enacted a \$20.6-billion reduction of personal and business taxes plus a \$0.7 billion increase in outlays for the earned income tax credit. This package yields a net revenue loss of \$18.9 billion when allowance is made for the expiration of \$2.5 billion in employment tax credits. These tax measures are discussed in Chapter 3.

These adjustments to fiscal policy moved the budget more quickly toward two previously stated objectives of the Administration: reducing Federal outlays to 21 percent of GNP and achieving a balanced budget in the context of reasonable economic growth (Table 11). Fulfillment of these objectives is a major challenge because it will require offsetting the upward pressure on Federal outlays from rising prices and from automatic increases in entitlement programs under current law.

MONETARY POLICY

Two major developments dominated monetary and financial conditions during 1978. The first was a substantial rise in interest rates. The second was the introduction of new financial instruments through which thrift

TABLE 11.—Federal unified budget outlays as percent of gross national product, and budget surplus or deficit, fiscal years 1955–80
[Current dollars]

Fiscal years	Budget outlays as percent of GNP			Budget surplus or deficit (-) (billions of dollars)
	Total ¹	Income security	National defense	
1955–59 average.....	18.3	3.0	10.0	-2.3
1960–64 average.....	19.2	4.1	8.8	-4.2
1965–69 average.....	19.9	4.0	8.5	-7.2
1970–74 average.....	20.3	5.6	6.7	-13.8
1975.....	22.4	7.5	5.9	-45.2
1976 ²	22.5	7.8	5.4	-63.5
1977.....	22.0	7.5	5.3	-45.0
1978.....	22.1	7.2	5.1	-48.8
1979 (estimate).....	21.6	6.9	5.0	-37.4
1980 (estimate).....	21.2	7.1	5.0	-29.0

¹ Includes other outlays not shown separately.

² Transition quarter averaged with fiscal year 1976.

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

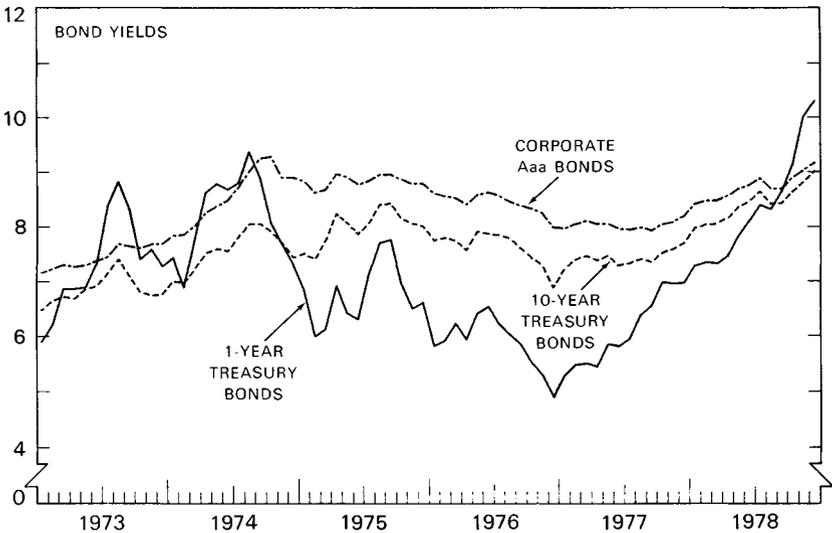
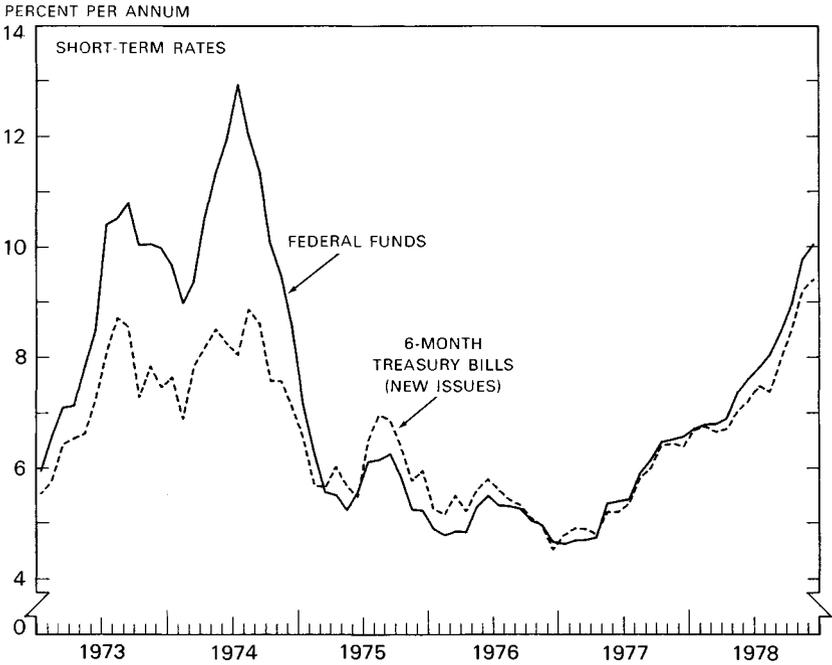
institutions could continue to attract funds, an innovation that moderated significantly the degree to which high short-term interest rates depressed housing construction.

Chart 1 shows the rise in both short- and long-term interest rates. These increases came in several phases. A small upward movement in short-term rates occurred early in the year after the Federal Reserve raised the discount rate in January in response to international developments. This was followed by a period of relative stability through mid-April as the slow pace of economic activity in the first quarter led to quite moderate growth in the monetary aggregates. Very rapid growth in the aggregates began in the second quarter and persisted into the summer. The efforts of the monetary authorities to moderate the growth of the aggregates resulted in substantial increases in short-term interest rates. The Federal funds rate rose by 2 percentage points between March and the middle of October. Most other short-term rates rose in an approximately parallel fashion. Measures to defend the dollar, announced at the beginning of November, prompted a further dramatic increase in rates. The discount rate was raised by a full percentage point, from 8½ to 9½ percent, on November 1; between then and the end of the year the Federal funds rate rose by another three-fourths of a percentage point to about 10 percent.

The movement of long-term interest rates was determined by current developments in short-term rates, by anticipations of future interest rate and price developments, and by supply and demand considerations in capital markets. Long-term rates drifted up somewhat during the first quarter, when demands for business credit remained strong, but leveled out subsequently as expectations developed that rates might be nearing cyclical peaks. With short-term rates continuing to increase, the yield curve by October had become inverted; that is, long-term rates were below short-term rates.

Chart 1

Selected Interest Rates and Bond Yields



NOTE: TREASURY BONDS ARE CONSTANT MATURITIES.
SOURCES: DEPARTMENT OF THE TREASURY, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, AND MOODY'S INVESTORS SERVICE.

Behavior of the Major Monetary Aggregates

During the first half of the year the behavior of the monetary aggregates paralleled fluctuations in the real economy. Growth of M_1 (demand deposits and currency) and M_2 (including, in addition to M_1 , time and savings deposits other than negotiable certificates at large commercial banks) was quite slow in the first quarter and much faster in the second quarter. Growth of these two monetary aggregates continued to be relatively strong in the third quarter, despite rising interest rates and slowing growth of real GNP.

Between the final quarter of 1977 and the third quarter of last year, M_1 grew at an 8.2 percent annual rate, well above the upper end of the Federal Reserve's long-term target growth range of 4 to 6½ percent. Studies that relate the real value of M_1 to real GNP and to short-term interest rates indicate that the usual historical relationship held up fairly well through this period. The continuation of rapid growth of the monetary aggregates through the third quarter appears to have been largely attributable to the rapid increases in nominal GNP which raised transactions demands. There was virtually no growth in M_1 during the fourth quarter when interest rates were rising sharply.

In the latter half of the year, two major innovations in financial markets tended to change the usual relation between the monetary aggregates on the one side and economic activity and interest rates on the other. The first innovation was the new regulation permitting commercial banks and nonbank thrift institutions on June 1 to begin issuing money market certificates (MMCs) of 6-month maturity in minimum denominations of \$10,000. Commercial banks were permitted to pay a maximum yield on these certificates equal to the discount rate on 6-month Treasury bills, but interest could be compounded if the bank chose to do so. The maximum rate for nonbank thrift institutions is one-fourth of a percentage point above the rate payable by commercial banks.

The second innovation, introduced on November 1, was a regulation permitting commercial banks to offer individual customers an automatic transfer service whereby funds are automatically transferred from a customer's savings account to cover needs for funds in the customer's checking account. By the end of the year it is estimated that there were \$3.2 billion in 420,000 accounts covered by this service. Use of these services can be expected to grow over the future.

The introduction of MMCs influenced the growth of M_2 by enabling banks to retain time and savings deposits that they would otherwise have lost. Growth in M_2 remained very strong in the third quarter, at a 10.8 percent annual rate, but slowed significantly in the fourth quarter to 4.5 percent.

The introduction of the automatic transfer service began to have a significant effect on the growth of M_1 in the last 2 months of 1978. During November and December, M_1 declined \$0.6 billion. In the absence of the new deposit services, M_1 probably would have risen by about \$1 billion.

In response to this effect on the behavior of the conventional aggregates, the Federal Reserve defined a new aggregate, M_1+ . It includes, in addition to M_1 , all passbook savings accounts at commercial banks and all checkable deposits at nonbank thrift institutions (negotiable order of withdrawal accounts, demand deposits at mutual savings banks, and share draft accounts at credit unions). This aggregate thus includes all transactions accounts plus those accounts from which transfers to the automatic transfer service accounts are most likely to occur. The annual rate of growth of this aggregate dropped from 6.1 percent in the first half of 1978 to 2.4 percent in the second half.

Role of MMCs in Monetary Restraint

The new money market certificates played a critical role in the way the economy responded to monetary restraint in 1978. Experience would have led one to expect that the large rise in interest rates would sharply curtail the availability of mortgage credit during 1978, with strongly adverse effects on home building. The growth of mortgage credit did taper off somewhat during the year and residential construction activity did flatten out. The magnitude of these responses was very small, however, compared with past periods of tight financial markets.

In previous periods of sharply rising market interest rates, individuals began at some point to divert funds from deposits in thrift institutions to market securities because of the low ceiling rates on deposit instruments. The growth of thrift deposits usually slowed to a 4–6 percent range in such periods, and net new inflows (excluding crediting of interest) fell to around zero. This necessarily slowed the acquisition of mortgages by these institutions, and consequently housing credit dried up.

During late 1977 and early 1978 this same pattern began to emerge. After the introduction of MMCs in the middle of the year, however, the pattern was dramatically reversed. As a result, mortgage acquisitions declined much less than in previous periods of rapidly rising market interest rates.

The introduction of these instruments does not wholly resolve the disintermediation problem or entirely buffer the housing market from credit restraint. Home buyers are affected by the higher *cost* of credit, although they are affected much less than before by the reduced *availability* of credit. Furthermore, since mortgage rates do not rise commensurately with short-term rates, the thrift institutions are confronted with reduced cash flow for two reasons. First, the spread between the cost of new deposits and the return from new mortgages narrows. Second, the composition of deposits becomes more heavily weighted by the higher-interest certificates. Since this is occurring faster than the mortgage portfolio is rolled over, the average cost of deposits is rising relative to the average yield on mortgages. In early 1978, however, the spread between the return on the mortgage portfolio and the cost of deposits had become quite large and the narrowing that occurred

in the second half of the year was relatively small. Therefore—barring a prolonged period of very narrow spreads between mortgage rates and short-term rates—savers, the thrift institutions, and the housing market will all benefit from the new instrument.

The reduced sensitivity of mortgage credit availability to rising market interest rates smooths the adjustment of the economy to credit restraint. It also implies, however, that interest rates must move through somewhat larger cyclical swings to achieve the effect on aggregate demand that would formerly have resulted from variations in both credit availability and interest rates. Such a change also means that the distribution and timing of the response of the economy to monetary restraint will be different. The period ahead will require adroit reading of the signals to judge the degree of restraint that is occurring and is appropriate.

CREDIT FLOWS IN 1978

Credit flows had been very strong at the end of 1977 and remained so through the first part of last year. The ratio of total funds raised in credit markets (exclusive of corporate equities) to GNP reached a record peak in the third quarter of 1977 and moved only slightly lower in the following 2 quarters. Some decline developed in the second and third quarters of last year. The ratio of total private funds raised to private GNP remained on a record high plateau from the third quarter of 1977 through the first quarter of last year but then began to decline.

The composition of credit flows shifted during the year. Mortgage credit flows peaked late in 1977 and then moderated somewhat. With the dollar value of residential construction continuing to rise, the ratio of net home mortgage extensions to household investment in residential construction turned downward last year from a very high peak. The large volume of mortgage credit that was being used in late 1977 and early 1978 relative to residential construction suggested that homeowners were realizing capital gains on houses when ownership changed hands and were using the funds to finance other types of expenditures.

Consumer credit continued to grow strongly through the first half of the year, reflecting the strength of new car sales and sales of other durables. The rate of installment credit extensions leveled out, however, in the second half of the year on a plateau slightly below the June peak.

Federal Government borrowing also declined relative to the total of funds raised in credit markets. The moderation in Federal borrowing from domestic sources resulted from the shift in fiscal policy previously discussed and also from an increase in official foreign purchases of U.S. securities with dollars obtained through intervention in foreign exchange markets.

The nonfarm, nonfinancial corporate business sector borrowed heavily in the fourth quarter of 1977 and the first quarter of last year. Indeed, credit market funds raised in the first quarter were more than a third greater than

a year earlier. The amount of funds raised leveled out subsequently at an annual rate below this peak but exceeded all previous years except 1974. Business borrowing from commercial banks, in particular, was exceptionally heavy in the first half but slowed in the second half of the year. The strength of capital spending relative to internal funds is the primary reason for the rapid growth in business credit demands. The ratio of external funds raised to capital expenditures rose to slightly under one-half in 1978, which is a high though not unprecedented figure.

Efficiency of Financial Markets

Both of the innovations in financial markets described above work to provide individuals with a competitive return on their savings. The automatic transfer services perform another valuable function: they reduce the loss of efficiency associated with substantial shifts of funds from one type of deposit to another in response to interest rate differentials. Furthermore, to preserve the competitive position of nonbank thrift institutions, the Federal Home Loan Bank Board is considering giving nonbank thrift institutions authority to receive deposits from which third-party payments may be made. Such a move might further stabilize their deposit flows.

These changes, however, entail cumbersome bookkeeping and transactions procedures. A further consolidation of the institutional changes initiated this year would be to move toward a uniform structure for commercial banks and nonbank thrift institutions under which all of these institutions would have authority to accept household checking deposits and to pay interest on them. The bill proposed by the Administration in the last Congress to authorize negotiable order of withdrawal accounts for all U.S. banks and thrift institutions was one approach to this reform.

CHAPTER 2

Reducing Inflation

ECONOMIC POLICY IN THE UNITED STATES faces a formidable challenge in the years immediately ahead. Inflation must be brought under control if the strength of the economy is to be maintained and if the significant gains in employment and output over the past 4 years are not to be jeopardized. Unwinding an inflation that has been building for more than a decade will require monetary and fiscal restraint to moderate the pace of economic growth. We will have to learn to achieve social objectives within the constraints of tight government budgetary policies. Widespread compliance with the President's standards for wage and price behavior will be essential.

This chapter presents a diagnosis of our inflationary problem and explains what the Administration is doing about it. Special factors were partly responsible for the acceleration of inflation during 1978, as Chapter 1 indicated, but there was also a substantial increase in the underlying rate of inflation. Unit labor costs rose sharply, reflecting some acceleration of wage inflation and a deterioration in the growth of productivity. These developments, along with their important implications for economic policy, will be analyzed in the following discussion.

THE 1978 ACCELERATION OF INFLATION

The current inflation has been gathering momentum for over 10 years. The acceleration began in the late 1960s, when the economic stimulus of the Vietnam war added pressures to an economy already approaching high employment. With the economy operating at very high rates of resource utilization, the rate of inflation rose from less than 2 percent in 1965 to about 6 percent in 1969.

In 1969, policies of monetary and fiscal restraint were applied to cool the overheated economy, but the results were disappointing. The economy headed into recession, and unemployment rose from 3½ percent of the labor force in 1969 to over 6 percent by the end of 1970. Nevertheless, inflation continued at a rapid pace. The rise of consumer prices, excluding food, continued unabated in 1970, and the rate of increase of average hourly earnings remained unchanged. When inflation failed to respond significantly to macroeconomic policy, a 90-day wage and price freeze was announced on

August 15, 1971; it was followed by a period of mandatory wage and price controls.

Relaxation of the controls began in 1973 in response to distortions and inequities that had begun to develop in the economy. The relaxation coincided with a second acceleration of prices, which was in part a consequence of rapid economic growth. Between the fourth quarter of 1971 and the first quarter of 1973, real gross national product (GNP) increased at an annual rate of $7\frac{3}{4}$ percent, unemployment dropped sharply, and capacity utilization rose. The major inflationary pressures, however, came from a series of large external shocks to the American economy. A simultaneous expansion in virtually all the industrial countries and the 20 percent depreciation of the dollar between mid-1971 and mid-1973 raised the cost of foreign goods. A worldwide crop shortage caused food prices to soar. Finally, the oil embargo by the Organization of Petroleum Exporting Countries (OPEC) and the subsequent rise in oil prices contributed to a nearly 60 percent increase in the energy component of the consumer price index (CPI) from the end of 1972 to the end of 1975.

In early 1975 the rate of inflation fell substantially from the double-digit rate of 1974. The severity of the 1974–75 recession was partly responsible. But smaller increases in food and energy prices and the end of the price bulge associated with the lifting of controls were important contributing factors. By the middle of 1975 the underlying rate of inflation was down to the 6 to $6\frac{1}{2}$ percent range. There was no further improvement during the early stages of the recovery, despite continued high unemployment and much excess capacity.

Each of the two major episodes of accelerating inflation in the last decade was fed in part by relatively stimulative fiscal and monetary policies, and each was followed by a recession stemming in part from more restrictive policy actions. But in neither case did the increases in unemployment and excess capacity bring inflation down to the levels that preceded the acceleration.

Once under way, a high rate of inflation generates responses and adaptations by individuals and institutions that perpetuate the wage-price spiral, even in periods of economic slack. Expectations develop that wages and prices will continue to rise at a rapid rate. In response, an increasing proportion of income is adjusted to inflation by indexation arrangements. Employee groups attempt to match the wage gains of other workers in order to avoid declines in their own relative earnings. And multiyear collective bargaining agreements, which now cover over 97 percent of the workers in large collective bargaining units, provide pay increases that are more likely to reflect past conditions than the actual economic environment prevailing during the term of the agreement.

The formal and informal adaptations to a long-standing inflation exert a powerful force tending to sustain inflation even after the originating causes have disappeared. Braking the momentum of past inflation would therefore

have been a serious problem for economic policy makers even without the acceleration of prices and wages during 1978. The price and wage developments of this past year have made the task even more difficult.

INFLATION IN 1978

The rate of price increase rose markedly in 1978. Some of the acceleration was the result of special factors discussed in the previous chapter: the sharp rise in food prices early in the year and the fall in the value of the dollar that exceeded the depreciation warranted by underlying economic conditions. A minor offset to this was the stability of world oil prices after OPEC elected not to raise oil prices in the face of the sluggish world economic recovery and the consequently weak demand for oil.

The larger part of the 1978 acceleration, however, came from an unexpected increase in the underlying rate of inflation. The rise in consumer prices, excluding food and energy, quickened from 6.4 percent in 1977 to 8.6 percent in 1978, as shown in Table 12. This is the development that has posed the most serious challenge to economic policy.

The behavior of the underlying rate of inflation is related to movements in costs. In 1978 the increase in unit labor costs in the private nonfarm sector stepped up considerably, from 6.3 percent in 1977 to 8.9 percent

TABLE 12.—Annual rate of change in selected consumer and producer prices and employment costs, 1960–78

[Percent ¹]

Item	Relative importance, December 1977 (percent)	1960 to 1965	1965 to 1970	1970 to 1975	1976	1977	1978 ²
<u>Consumer prices</u>							
All items.....	100.0	1.3	4.5	6.9	4.8	6.8	9.0
Food.....	17.7	1.5	3.7	9.4	.6	8.0	11.3
Energy.....	8.6	.4	2.5	10.9	6.9	7.2	7.0
All items less food and energy.....	73.7	1.4	5.0	5.7	6.1	6.4	8.6
<u>Producer prices for finished goods</u>							
All finished goods.....	100.0	.6	2.8	8.6	3.3	6.6	8.7
Finished goods less foods.....	75.1	(³)	(³)	7.6	5.5	6.6	7.8
<u>Private nonfarm business, all persons</u>							
Compensation per hour.....		4.0	6.4	8.2	8.5	7.6	9.8
Contribution of:							
Wages and salaries and private fringes.....		3.8	5.9	7.3	7.7	6.9	8.7
Employer contributions to social insurance.....		.2	.5	.9	.8	.7	1.1
Output per hour.....		3.9	1.1	1.6	2.6	1.3	.8
Unit labor costs.....		.0	5.2	6.5	5.8	6.3	8.9
Implicit price deflator.....		1.1	4.2	6.6	5.2	5.9	7.9

¹ Preliminary.

² Through 1977, changes are measured from December to December for prices and from fourth quarter to fourth quarter for private nonfarm business data. For 1978, changes are from November to November for prices and from fourth quarter to fourth quarter for private nonfarm business data.

³ Not available.

Sources: Department of Labor (Bureau of Labor Statistics) and Council of Economic Advisers.

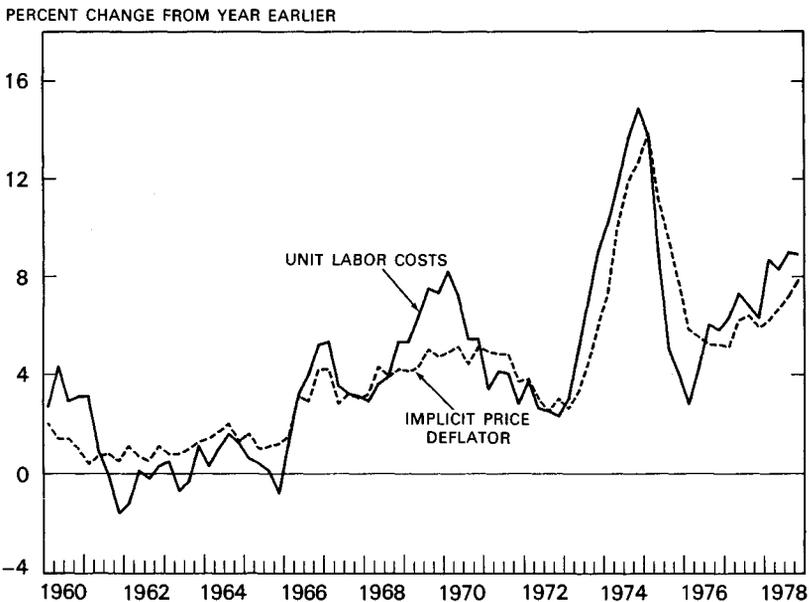
in 1978. Both of the determination factors of unit labor costs contributed to the acceleration. Compensation per hour went up from a 7.6 percent rate of increase in 1977 to a 9.8 percent rate during 1978. Productivity, which had risen only 1.3 percent for nonfarm business in 1977, advanced even more slowly—at a 0.8 percent rate in 1978.

The acceleration of cost pressures during 1978 was unevenly distributed. In manufacturing, unit labor costs, which had risen 5.8 percent in 1977, increased at an annual rate of 6.0 percent in 1978. Productivity in manufacturing rose more rapidly in 1978 than in 1977 (3.5 compared to 3.0 percent in 1977). However, the most substantial rise in the rate of increase of unit labor costs was in nonmanufacturing, where productivity actually declined.

Most econometric analyses of the relation between prices and wages conclude that fluctuations in productivity growth that are expected to be temporary are not usually translated into similar fluctuations in prices. For that reason price movements in the nonfarm sector are less volatile than year-to-year changes in unit labor costs. And in 1978 the sharp acceleration in unit labor costs, stemming in part from the very poor productivity record, was not fully matched by an acceleration in prices charged by nonfarm producers. Even so, the rise in unit labor costs was still a major factor in the acceleration of inflation (Chart 2).

Chart 2

Unit Labor Costs and Deflator, Nonfarm Business



NOTE: DATA RELATE TO ALL PERSONS.
SOURCE: DEPARTMENT OF LABOR.

EXPLAINING THE 1978 INFLATION

The worsening in the underlying rate of inflation during 1978 raises a fundamental question for macroeconomic policy: Has the U.S. economy reached full employment of its labor and capital resources? The question involves three issues concerning demand and unit cost pressures that are analyzed in the remainder of this section. The first is whether capacity utilization became so tight that there was excess demand in product markets, driving up prices relative to costs. The second has two aspects: How much did the wage acceleration that occurred in 1978 reflect excess demand in labor markets, and do those markets now approximate conditions in which further reductions in aggregate unemployment would raise the inflation rate? The third issue relates to productivity: To what extent is the recent disappointing behavior an aberration and to what extent does it reflect a more fundamental slowdown in the potential growth of the economy during the years immediately ahead?

How Tight Were Product Markets in 1978?

During the course of the recovery, rates of capacity utilization have increased significantly, and they rose still further in 1978. At the end of 1978 the 86 percent rate of capacity utilization in manufacturing indicated by the Federal Reserve index was still well below the highs of the early 1950s and mid-1960s, and somewhat below the highs of the 1972-74 period (Chart 3). In the materials-producing industries, where high rates of capacity utilization in 1973 were an important source of inflation, current rates of utilization have remained substantially below the 1973 peaks (Chart 3).

Statistical measures of capacity utilization offer only an imperfect guide to the presence or absence of excess demand in product markets. There is other evidence, however, that industrial capacity was not under severe pressure. Typically, periods of capacity strain lead to sharp increases in unfilled orders, especially in the durable goods industries. But ratios of unfilled orders to shipments have remained far below earlier highs, both for durable goods industries as a whole and for the nondefense capital goods industries (Chart 4).

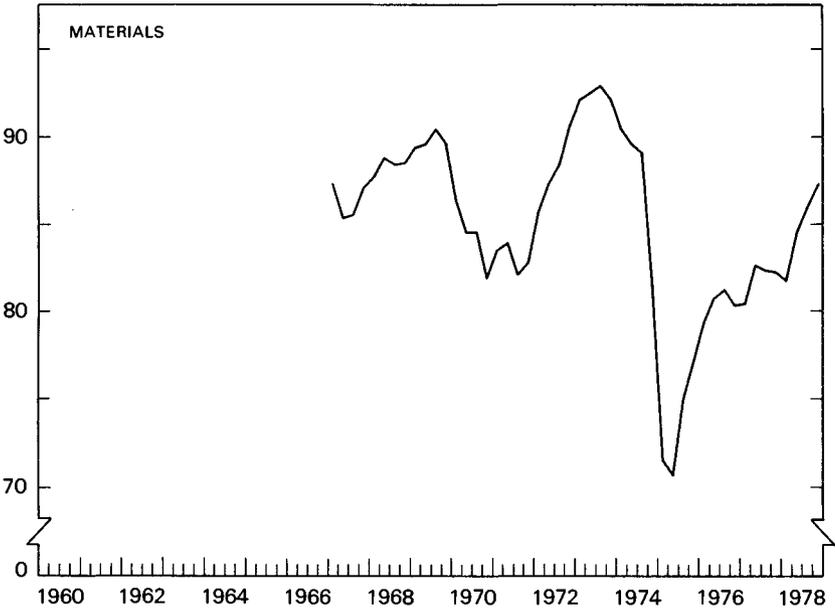
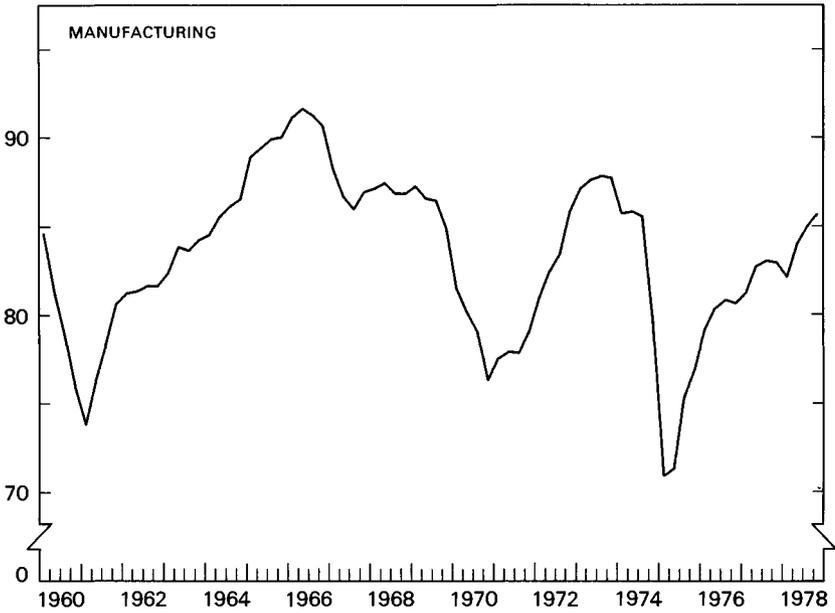
At the same time, excess demand developed in a few industries. For example, the building materials industry appeared to be under demand pressure because of capacity limitations. The very high and sustained level of single-family home building, combined with a rapid growth in home installation of energy-saving measures, led to a sharp increase in demand for building materials and thus to strained capacity. As a consequence, prices of lumber, wallboard, cement, insulation, and related products rose steeply.

Moreover, although productive capacity was not generally strained over the past year, continued growth of industrial production at rates experienced

Chart 3

Capacity Utilization Rates

PERCENT^{1/}

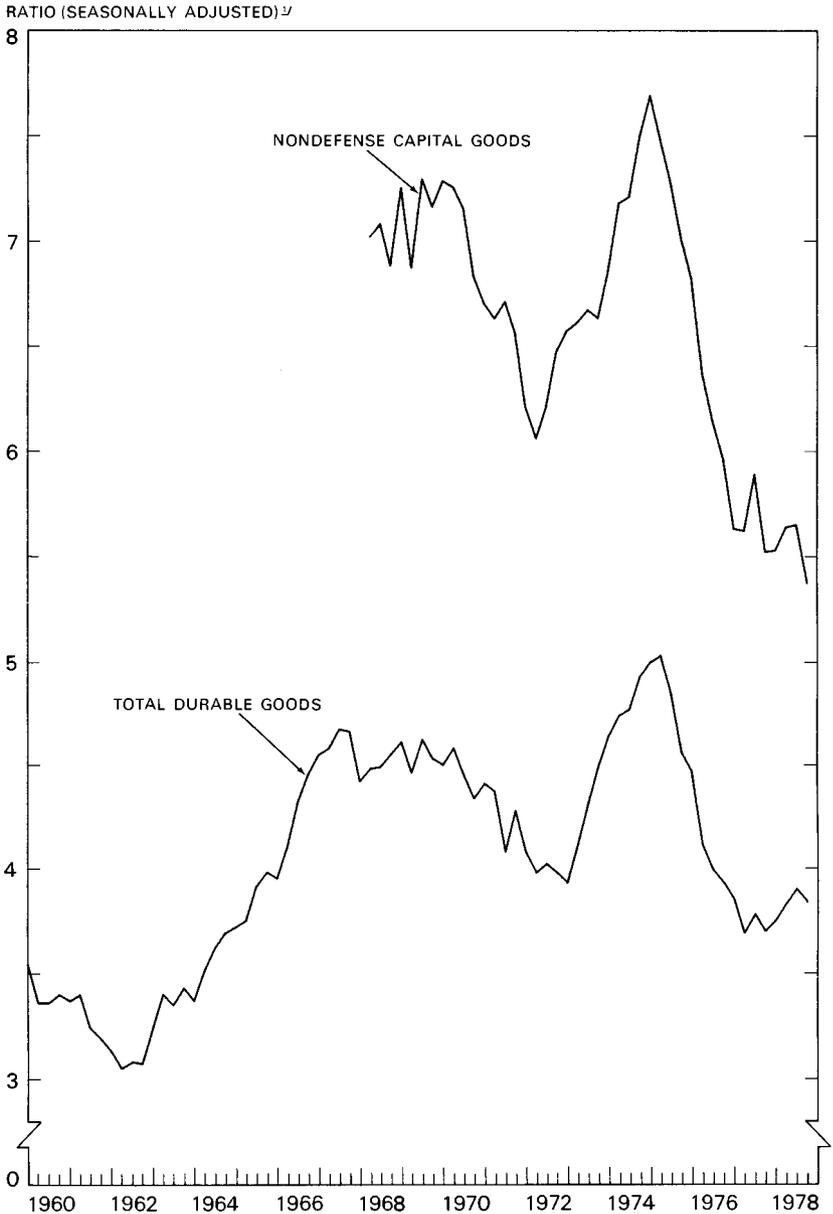


^{1/} SEASONALLY ADJUSTED.

SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM.

Chart 4

Unfilled Orders-Shipments Ratio, Durable Goods Manufacturing



SOURCE: DEPARTMENT OF COMMERCE.

in 1978 would move utilization rates into the range associated with excess demand pressure on prices.

Pattern of Wage Behavior

Wages began to accelerate early in 1978. The exact quarterly pattern and degree of acceleration vary according to the measure of the rate of wage increase, but all broad indicators show a similar pattern of wage acceleration in late 1977 and early 1978 (Table 13). For the second half of the year, wage increases were lower than in the first, but still above the 1976 and 1977 experience.

TABLE 13.—*Selected measures of the rate of wage increase, private nonfarm economy, 1976–78*

[Percent change; quarterly data are annual rates]

Measure	1976	1977	1978 ¹	1978			
				I	II	III	IV ¹
Average hourly earnings ²	7.6	7.7	8.8	8.4	10.1	7.8	8.9
Adjusted hourly earnings index ^{2,3} ...	7.4	7.5	8.2	9.2	8.4	7.3	7.9
Employment cost index ⁴	7.2	7.0	8.0	7.8	8.7	8.2	(⁵)
Union.....	8.1	7.6	7.9	6.6	8.2	8.7	(⁵)
Nonunion.....	6.8	6.6	8.0	9.1	9.1	7.8	(⁵)

¹ Preliminary.

² Annual changes are measured from fourth quarter to fourth quarter; quarterly changes for 1978 are from preceding quarter. Data are seasonally adjusted.

³ This index, unlike the average hourly earnings series above it, excludes overtime pay in manufacturing and is adjusted to eliminate the effects of interindustry employment shifts.

⁴ Changes for 1976 and 1977 are measured from December to December; change for 1978 is from September 1977 to September 1978; quarterly changes are within quarter. Data are not seasonally adjusted.

⁵ Not available.

Source: Department of Labor, Bureau of Labor Statistics.

The pattern of acceleration and subsequent deceleration in the first 3 quarters of the year was dominated by the behavior of wages of nonunion workers. In early 1978, for the first time in several years, nonunion wage rates increased faster than union rates. This development is normal in labor markets when unemployment falls, and the 15.2 percent increase in the minimum wage for nonfarm workers on January 1, 1978, undoubtedly contribute to the high rate of nonunion wage increases in the first half of the year.

The difference between union and nonunion wage changes in 1978 was also influenced by the collective bargaining calendar: comparatively few major contracts (those covering 1,000 or more workers) were scheduled for renegotiation in 1978. Since increases tend to be largest in the first year of a collective bargaining contract, years of light bargaining generally are years of lower average wage increases for union members. Wage adjustments for union workers may be attributed to three different sources: current settlements, past settlements (those that provide for deferred increases), and automatic cost-of-living escalators (Table 14). For the first 9 months of 1978, the portion attributable to current settlements was down sharply from its

1977 level, while that attributable to past settlements and automatic cost-of-living escalation was greater than in 1977. The decrease in the current settlement portion came about solely because there were fewer new labor agreements, not because the average wage increases granted in new settlements were smaller. As the lower part of Table 14 shows, the new settlements reached in 1978 in major contracts provided for somewhat larger first year increases than settlements in 1977 had done.

TABLE 14.—*Mean wage and benefit adjustments in major collective bargaining agreements, 1976–78*

[Percent]

Type of change	1976	1977					1978 ¹			4 quarters ended	
		I	II	III	IV	Year	I	II	III	Sept. 1977	Sept. 1978 ¹
Effective wage-rate changes:²											
Total effective adjustments.....	8.1	1.2	2.9	2.7	1.1	8.0	1.3	2.6	2.5	8.3	7.5
Adjustment resulting from:											
Current settlement ³	3.2	.3	1.0	1.3	.5	3.0	.5	.6	.5	3.5	2.1
Prior settlement.....	3.2	.5	1.4	1.0	.3	3.2	.6	1.4	1.1	3.3	3.4
Escalator provision.....	1.6	.3	.6	.5	.3	1.7	.3	.5	.9	1.7	2.0
Increases in new settlements:⁴											
Wage rate settlements (1,000 or more workers):											
First-year adjustment.....	8.4	7.7	7.9	7.8	7.8	7.8	9.9	6.9	7.5	7.7	7.8
Average over life of contract.....	6.4	6.7	5.9	5.5	5.8	5.8	7.3	6.1	6.3	5.6	6.3
Wage and benefit settlements (5,000 or more workers):											
First-year adjustment.....	8.5	9.0	8.9	10.2	9.5	9.6	14.6	6.7	7.0	8.8	9.1
Average over life of contract.....	6.6	7.5	6.0	6.2	6.3	6.2	8.5	5.9	5.7	6.0	6.5

¹ Preliminary.

² Effective wage rate changes are wage rate changes actually going into effect per worker under major contracts in the respective quarters. Detail may not add to total because of rounding.

³ Changes resulting from collective bargaining settlements made that calendar year.

⁴ Quarterly data are at annual rates.

Note.—Quarterly data are not seasonally adjusted.

Source: Department of Labor, Bureau of Labor Statistics.

In comparison with 1977 settlements, labor contracts concluded in 1978 show an acceleration in wages over the life of the contract. Wage rate adjustments in new settlements averaged 7.8 percent for the first year and 6.3 percent annually over the life of the contract during the year ending in the third quarter of 1978, compared to 7.7 percent for the first year and 5.6 percent over the life of the contract for the same period a year earlier. (These measures exclude cost-of-living adjustments tied to the future rate of price inflation.)

There is considerable evidence that the responsiveness of wages to overall changes in economic conditions is significantly greater in nonunion than in unionized labor markets. Changes in average wage rates paid to union members are not significantly related to the contemporaneous unemployment rate or alternative measures of labor market pressure, although they are sensitive to price changes because of cost-of-living adjustments. Most of the inertia in average union wages is a by-product of multiyear labor agree-

ments, in which the size of agreed wage increases is more closely tied to economic conditions during and immediately preceding the renegotiation of a contract than to conditions during the term of the agreement.

Wage increases during the first year of a collective bargaining agreement are about as responsive to labor market pressures as nonunion wages. Increases over the life of the agreement, however, are much less strongly related to underlying market pressures prevailing at the time the contract is signed, and deferred increases are essentially independent of prevailing market conditions. Consequently new inflationary pressures show up much more gradually in union than in nonunion wages. Conversely, when the initial causes of inflation subside, the moderating effect is less evident in union wage increases than in nonunion. Multiyear collective bargaining agreements can therefore be an important source of wage inertia.

How Tight Were Labor Markets in 1978?

With unexpectedly slow growth of labor productivity, labor demand was strong, and the reduction in the unemployment rate early in the year exceeded expectations. Nevertheless the 6.2 percent unemployment rate experienced in the first quarter of 1978 was higher than most estimates of the rate of unemployment at which inflation will begin to accelerate. In the remaining quarters of 1978 the rate was lower but relatively stable within a range of 5.8 to 6 percent.

One approach to the question of labor market pressure is to examine how closely labor markets in late 1978 resemble those of earlier periods of accelerating wages. During 1978 the overall unemployment rate was above the levels associated with accelerating wages in the late 1960s and mid-1970s (Chart 5). Such a comparison could be deceptive, however, because the demographic composition of the labor force has changed. Certain demographic groups have higher rates of turnover and therefore higher rates of unemployment, and these groups now make up a larger proportion of the labor force than in the past.

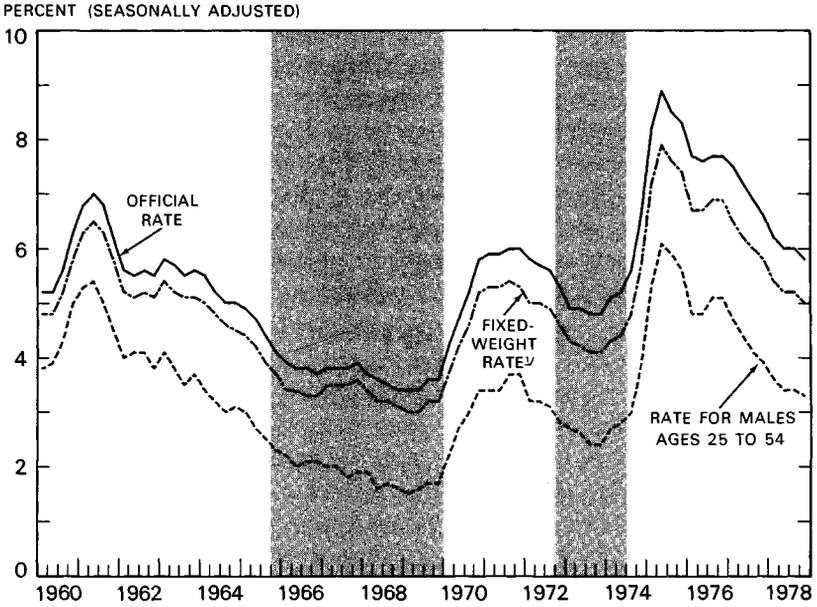
A better indicator of labor-market pressure is a fixed-weight index, constructed so that each demographic group has the same amount of influence in each year as it had in a high-employment period like 1956, when the aggregate unemployment rate was 4.1 percent. The fixed-weight unemployment rate has fallen relative to the official rate over the past decade, but in 1978 the fixed-weight rate was still somewhat above the levels of earlier periods of tight labor markets.

A third measure of labor market pressure is the unemployment rate of a group of experienced workers with continuous labor force attachment, such as the rate for men between the ages of 25 and 54. That rate, too, is still somewhat above the levels associated with prior wage accelerations.

Tight conditions in labor markets also affect labor turnover rates. As the number of job vacancies rises relative to the number of unemployed, employers first call back former jobholders; but when these are no longer avail-

Chart 5

Selected Unemployment Rates



THE FIXED-WEIGHT UNEMPLOYMENT RATE IS CONSTRUCTED UNDER THE ASSUMPTION THAT THE COMPOSITION OF THE LABOR FORCE WITH RESPECT TO SEVEN DEMOGRAPHIC GROUPS REMAINS UNCHANGED OVER THE PERIOD SINCE 1956.

NOTE: SHADING INDICATES PERIODS OF ACCELERATING WAGES.

SOURCES: DEPARTMENT OF LABOR AND COUNCIL OF ECONOMIC ADVISERS.

able, vacancies are filled by hiring from the pool of unemployed and by bidding workers away from other employers with offers of higher wages and other benefits. In response to these incentives, a larger number of workers quit their current jobs and take better-paying ones. As a result, both the new hire and quit rates in manufacturing tend to rise as labor markets tighten and wages accelerate. Both rates have reached postwar peaks in periods of very tight labor markets during the past decade. As seen in Chart 6, however, the rate of new hiring in late 1978 was below these levels.

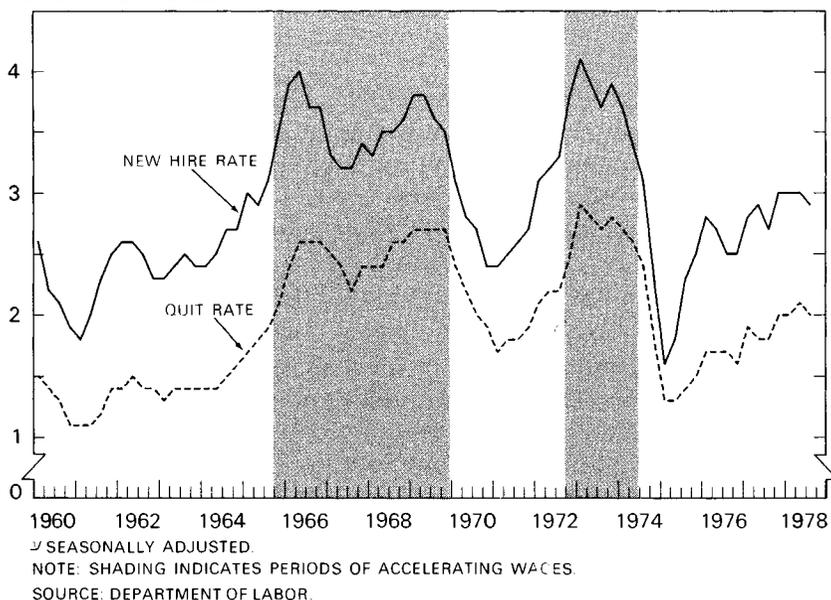
Over the past decade the composition of the work force has shifted toward young and inexperienced workers, who tend to quit their jobs more frequently in the search for better employment. The quit rate associated with a given degree of labor market pressure has therefore drifted up over the past decade. Although measured quit rates were relatively high in late 1978, they do not necessarily imply as much labor market pressure as they would have done at these levels in the mid-1960s.

Although the measures of labor market tightness examined above did not reach levels associated with accelerating wages in the past, that fact alone is not sufficient to determine that excess demand was absent from

Chart 6

New Hire and Quit Rates In Manufacturing

RATE PER 100 EMPLOYEES^{1/}



labor markets during 1978. There is some evidence, for example, that even the fixed-weight and prime-age male unemployment rates associated with accelerating inflation have moved upward over time (Chart 5). Some analysts have suggested that increases in the level, duration, and availability of unemployment benefits and other transfer payments have raised the unemployment rates for some groups in the labor force by facilitating longer and more frequent periods of job search. These factors, together with changes over time in the structure of labor markets, in rates of productivity growth, and in the reaction of wages to past and expected rates of inflation, make it difficult to estimate the rate of unemployment below which wage acceleration is likely to occur. A number of studies have attempted to determine that rate, but have produced a wide range of results.

Although it is impossible to estimate the precise rate of unemployment below which wages begin to accelerate, an analysis by the Council of Economic Advisers and a review of the available studies do identify a range of estimates that encompasses the consensus of most observers. The evidence suggests that under current labor market conditions the danger of accelerating wages begins to mount as the rate of unemployment falls significantly below 6 percent. During 1978 the unemployment rate moved into the top of the range. The economy also underwent an acceleration of wages. But since the range itself is uncertain, we cannot automatically conclude that the lower unemployment rate caused the acceleration. A more careful look at developments is necessary.

CAUSES OF WAGE ACCELERATION

The pattern of union and nonunion wage increases in 1978 is consistent with the view that tightening labor markets were a partial source of wage acceleration. But the moderation of the rate of increase in wage rates after the first quarter casts doubt on the hypothesis that the unemployment rate had declined to levels producing a sustained acceleration of wages and prices. It suggests that the acceleration of wages in early 1978 may derive from other factors.

To explore these issues the Council conducted an econometric analysis of several potential explanations for the 1978 wage acceleration. The analysis examined two aspects of labor market pressure: the general balance between the demand for and supply of labor resources represented by the level of the unemployment rate, and the more transitory pressures generated by the rapidity with which unemployment decreases as employment gains exceed labor force growth.

The rapid drop in unemployment in late 1977 and early 1978 was accompanied by a sharp growth of employment. It is quite possible that a very rapid rise in the demand for labor relative to the increase in the labor force may cause an acceleration in wages, even though the level to which unemployment falls does not imply excess demand for labor. A large increase in hiring, occurring in a short period and spread across a large number of industries, causes many workers to leave low-wage jobs as high-wage vacancies appear. Employers in low-wage industries face a special difficulty when they must not only add to their work force but replace those who have quit to accept higher-paying jobs. Wage rate increases may therefore be particularly large in low-wage industries. While ultimately the pool of unemployed might be enough to fill the new jobs without putting added pressure on wage rates, the attempt to hire large numbers of workers quickly sets up temporary imbalances in labor demand and supply that accelerate wage increases.

The Council's analysis confirmed that the *level* of the unemployment rate early in the year played a limited role in the 1978 wage acceleration. However, pressures associated with the *speed* of the decline in unemployment were an important source of increased wage inflation. The rapidity of the reduction in the unemployment rate added about 0.1 percent to the adjusted hourly earnings index during the fourth quarter of 1977 and another 0.3 percent during the first half of 1978, according to estimates made by the Council. During the second half the unemployment rate held fairly steady, and the absence of further pressure from this source contributed to deceleration of wage increases late in the year.

A second important factor in the wage acceleration was the minimum wage increase in January 1978. According to the Council's analysis, between 0.2 percent and 0.4 percent was added to the adjusted hourly earnings index in the first quarter by the change in the minimum wage. If the minimum had not been raised, the index would have risen at an annual rate of around

7.9 percent in the first quarter instead of the 9.2 percent that actually occurred. Thus, over two-thirds of the acceleration of the index in the first half of the year can be explained by the combined effects of the speed with which unemployment declined and the increase in the minimum wage.

In summary, in late 1977 and early 1978 a marked but temporary acceleration of wages followed a rapid fall in unemployment. The acceleration reflected the influence of minimum wage increases and the unusual growth of demand for labor during late 1977 and early 1978. The acceleration also occurred at a time when productivity growth was very low, and the two developments together added strong impetus to cost and price increases. Although the rapidity of the drop in unemployment put some transitory pressure on wage rates, the level of the unemployment rate during that period was still above most estimates of the range associated with a sustained increase in inflation. Later in the year, however, the recovery clearly brought the unemployment rate into the top of that range. In view of the acceleration in inflation which has occurred, a further reduction of the unemployment rate during 1979 would run some risk of generating excess demand and creating inflationary pressures in labor markets.

THE PRODUCTIVITY SLOWDOWN

Productivity growth in 1978 showed a very marked slowdown from accustomed rates, adding substantially to inflationary pressures and raising fundamental concerns about underlying trends. With real GNP growth of about 4 percent over the year, exceeding the normal trend rate of growth, most observers expected that productivity in the private nonfarm sector would grow at least 2 percent. Instead, as seen in Table 15, productivity showed essentially no improvement, increasing only 0.6 percent in the course of the year. The slowdown was concentrated in the nonfarm, nonmanufacturing sector, where productivity actually declined 0.3 percent during 1978. Productivity growth in manufacturing, on the other hand, was strong.

The slow productivity growth over the past 2 years adds to the accumulating evidence that the underlying trend in productivity growth since 1973 has been substantially lower than in earlier periods. Between 1948 and 1965, productivity growth in the private nonfarm sector averaged 2.6 percent per year. In 1965-73 this rate declined to 2.0 percent. Since 1973, private nonfarm productivity growth has averaged less than 1 percent per year. In the following examination of recent evidence on productivity growth and the discussion of its implications for the growth of potential output, the key questions raised by recent experience are these: Was the recent poor performance a nonrecurrent extraordinary event, from which we will soon bounce back? Or does the recent lag in productivity indicate that the U.S. economy has entered a period of very slow productivity growth?

Productivity Determinants

During most of the postwar period the economy produced productivity gains exceeding 3 percent annually, as shown in Table 15. However, a number of the factors generating the strong productivity growth between World War II and the mid-1960s have since been reversed.

TABLE 15.—*Labor productivity growth, 1948–78*
[Percent change per year]

Sector	1948 to 1955	1955 to 1965	1965 to 1973	1973 to 1977	1977 to 1978 ¹
Private business economy.....	3.4	3.1	2.3	1.0	0.4
Nonfarm.....	2.7	2.6	2.0	.9	.6
Manufacturing.....	3.3	2.9	2.4	1.5	2.5
Nonmanufacturing.....	2.4	2.4	1.7	.6	— .3

¹ Preliminary.

Note.—Data relate to output per hour paid for, for all persons.

Source: Department of Labor, Bureau of Labor Statistics.

For example, between 1948 and 1973 high rates of private investment led to a growth in the capital-labor ratio (measured by the ratio of the net nonresidential capital stock to aggregate hours worked in the private non-farm sector) amounting to almost 3 percent per year. Since 1973, as a result of low rates of investment, that growth rate has dropped to 1¾ percent per year. Although the precise effect of slower growth in the capital stock is hard to measure empirically, analytical studies estimate that it could well have reduced productivity growth by up to one-half of a percentage point per year from earlier trends.

Productivity growth has also been reduced by a dramatic shift in the age-sex composition of employment. Starting about 1965, the children of the postwar baby boom attained working age, adding many young and inexperienced workers to the labor force. Rapid increases in the labor force participation of women also added to the supply of less experienced workers. If average earnings of each age-sex group are used as a rough approximation of the relative productivity of its members, losses in productivity growth due to increases in the proportion of young and inexperienced workers in the labor force may be calculated. Such demographic shifts in employment can explain a reduction of 0.4 percentage point in the annual growth rate of productivity between 1965 and 1973. Since 1973 this trend has slowed as the new workers that entered the labor force between 1965 and 1973 have become older; and, for the more recent period, the reduction has been closer to one-third of a percentage point.

Increased economic and social regulation has aggravated the productivity slowdown in a number of ways. Productivity is a measure of output produced per unit of resources used in production. Economic regulation, as in transportation, precludes labor and capital from flowing to those uses that

have a relatively high value. The effects of social regulation are more complicated. The gains from social regulation—in such forms as reduced pollution and greater safety—are generally not included in measured output. When an increasing fraction of society's labor and capital resources is diverted to producing these gains, measured productivity growth is reduced.

In addition, important indirect costs are generated by social regulation. The implementation of new regulatory statutes is often associated with considerable litigation and uncertainty which tends to reduce innovation and investment. Moreover, some regulations specify or suggest the technology to be used to meet new standards, rather than prescribing a level of performance to be attained. As a consequence, innovations that could meet the standards at lower cost are not encouraged.

On an aggregate basis one private study estimates that for 1968–73 the direct costs of compliance with environmental, health, and safety regulations may have reduced the annual growth of output relative to total inputs in the private nonfarm sector by 0.1 percentage point. Similar estimates for 1973–78 are incomplete, because of lags in the compilation of data, but according to preliminary estimates these restrictions may have subtracted an additional 0.3 percentage point from annual growth of output relative to inputs since 1973.

Productivity growth has fallen significantly in many industries over the past several decades. (See Table 16.) The costs of regulations have increased substantially in some of these industries but not in others. For example, from 1950 to 1965 labor productivity in mining grew 4.3 percent per year, but since 1973 it has declined at an annual rate of 6.1 percent. In the late 1960s and early 1970s stringent mine safety laws began to take effect. Some part of the productivity decline in mining can be attributed to other factors, and there have been such measurable benefits as lower accident rates, but regulation has undoubtedly been very costly in terms of real output per hour worked. In the utilities sector, growth in output per hour worked fell successively from 6.1 to 3.5 to 0.2 percent per year in 1950–65, 1965–73, and 1973–77. While a number of influences have been at work to reduce productivity growth in this industry, the increase in environmental regulation had an important bearing.

The loss of productivity growth as a consequence of increasing social regulation does not itself imply that the costs of regulation exceed its benefits. It has already been noted that the output measures generally used to calculate productivity do not include environmental improvements and other benefits of regulation. Nevertheless, the magnitude of the productivity effects does highlight two facts: regulation is very costly; and benefits should be closely compared with costs in the design of regulatory legislation and specific regulations.

Some have suggested that a decline in the intensity of research and development in the United States may be a significant cause of the productivity slowdown. The evidence for such a view lies in the falling ratio of research

and development expenditures to total output; this ratio reached a peak of 3.0 percent in 1964, but has since dropped to an estimated 2.2 percent in 1978. Most of the reduction can be attributed to a substantial cutback in military and space-related research—research that may have a somewhat less direct effect in increasing aggregate output per hour worked in the private sector than basic research or private research and development. Private industry has consistently provided about 1 percent of GNP for research and development since the mid-1960s. In the course of time, however, the direction of industry's research and development activity may have shifted away from basic research and new product development in response to such influences as the changed regulatory environment.

Little of the 1965–73 decline in private nonfarm labor productivity or the further reduction in 1973–78 seems to stem from shifts in the industrial composition of employment. Although movement out of the farm sector added a sizable productivity bonus in the early postwar years, this process had ended by the mid-1960s. Further, even though the proportion of the work force engaged in manufacturing has grown smaller since 1965, the level of manufacturing productivity has been about the same as that of the private nonfarm sector as a whole; the sectors of the economy employing larger proportions of the work force include some with higher and some with lower levels of productivity, and hence the shift has left aggregate productivity more or less unchanged.

Productivity Growth Since 1973

Productivity growth in the nonfarm business sector since 1973 has been unusually erratic. Although growth during 1976 was in line with the 1965–73 trend, there were abnormally low growth and even declines in 1973–74 and 1977–78. The productivity decline in 1973–74 was particularly striking. Labor productivity in the nonfarm business sector fell in every quarter from the second quarter of 1973 to the fourth quarter of 1974, dropping a total of 4.2 percent in a 7-quarter period. On the basis of the usual relationship between fluctuations in productivity and fluctuations in output, no more than 1 percentage point of that decline could be attributed to the sharp recession during the period. The additional drop of 3.2 percentage points accounts for much of the difference between the expected 2 percent annual growth rate between 1973 and 1977 and the 0.9 percent rate that actually occurred.

In both 1977 and 1978, productivity growth was again disappointing. Although private nonfarm productivity was expected to increase at least 2 percent per year, it grew instead at only 1.3 percent in 1977 and 0.8 percent in 1978. This latest deterioration in productivity indicates that the slowdown in 1973–74 was not just a temporary aberration and adds to the accumulating evidence that the secular trend in productivity growth may be considerably less than 2 percent per year.

Recent deviations of productivity from its postwar trend have been so pronounced that one is tempted to search for the influence of special factors. Some suggest that the oil embargo of 1973-74 and the subsequent quadrupling of oil prices had an adverse impact on productivity growth. However, it is difficult to find a mechanism by which an oil crisis could have such an immediate and severe effect on the economy. Widespread declines in productivity growth rates would only occur as adjustment of production methods to economize on energy took place. Actually, adjustment to the new oil prices has been extremely slow. Moreover other countries in which energy prices rose more than in the United States did not show such large productivity declines. In general, possible productivity-reducing effects occur as firms substitute labor or cheaper fuels for oil, or as energy-inefficient plant and equipment are replaced, but these effects will be spread very gradually over a long period.

There is no obvious set of special factors that could explain the poor productivity record of 1978. Year-to-year variations, however, have always been substantial, and deviations from trend of as much as 1 percentage point are not unusual. If the long-term growth rate of productivity has fallen well below earlier rates, as now seems likely, a year with a very small increase in production should occasion little surprise.

Part of the decline in the growth of private nonfarm productivity between 1965 and 1973 was attributable to reduced productivity gains in the con-

TABLE 16.—*Productivity growth by industry, 1950-77*

[Percent change per year]

Industry	1977 output share (percent) ¹	1950 to 1965	1965 to 1973	1973 to 1977
Agriculture.....	2.9	4.9	3.6	3.0
Mining.....	1.5	4.3	1.9	-6.1
Construction.....	4.3	3.4	-2.1	.3
Manufacturing:				
Nondurable.....	9.9	3.2	3.3	2.2
Durable.....	14.4	2.5	2.2	1.2
Transportation.....	3.9	3.0	2.9	1.0
Communication.....	3.2	5.3	4.6	6.7
Utilities.....	2.3	6.1	3.5	.2
Trade:				
Wholesale.....	7.3	2.6	3.4	-.8
Retail.....	10.0	2.3	2.1	.8
Finance, insurance, and real estate.....	15.4	1.6	.2	2.3
Services.....	12.0	1.2	1.7	-.3
Government.....	12.5	.4	.5	.1
All industries:				
Current weights.....	100.0	2.7	2.0	1.1
Fixed weight (1977 output weights).....		2.6	1.9	1.1

¹ Detail may not add to 100 percent because of rounding.

Note.—Growth data relate to output per hour worked for all persons.

Sources: Department of Commerce (Bureau of Economic Analysis) and Council of Economic Advisers.

struction and financial sectors. Statistics on productivity in these sectors (and those in the government sector) are notoriously bad, and so it could be argued that the apparent reduction in productivity growth during this period was a statistical artifact. However, the further widespread decline since 1973 lends no support to that interpretation.

Table 16 shows the pattern of labor productivity growth (gross product originating per hour worked) for 13 major industries. In almost every sector of the economy the growth of productivity has slowed appreciably. Data for 1978 are not yet available; but, given the aggregate productivity performance last year, sectoral averages for 1973–78 will be even lower than for 1973–77, except perhaps in manufacturing.

POTENTIAL GNP

Behavior Since 1973

The erratic productivity performance of the last 5 years raises serious questions about earlier estimates of the economy's productive potential. Potential GNP is defined as the level of real output that the economy could produce at high rates of resource utilization. The *level* of potential output is less meaningful than its *rate of growth*. The latter gives the best estimate of how much the economy can actually grow over the next few years without putting additional pressure on labor or product markets. Before making a judgment of the future trend for potential output, it is useful to review the growth of potential over the last 5 years and to examine recent behavior of the unemployment rate.

The Council of Economic Advisers has undertaken several reexaminations of the conceptual as well as the empirical basis of potential output over the last 3 years. These studies led to a significant reduction in 1977 in the estimate of the growth of potential, lowering the estimate to 3½ percent annually for the period from the fourth quarter of 1968 onward. Previously, the growth rate of potential had been estimated to be 4 percent for the period from the fourth quarter of 1968 to the fourth quarter of 1975 and 3¾ percent thereafter. The 1977 revision, discussed in the 1977 and 1978 *Economic Reports*, puts the potential GNP in 1978 at \$1,462 billion (1972 prices), about 5.6 percent higher than actual GNP.

The 1977 and 1978 estimates were based on a higher benchmark unemployment rate and on the optimistic assumption that the productivity decline in 1973–74 was an aberration that would be subsequently corrected. The underlying productivity trend was therefore assumed to be equal to that observed between 1965 and 1973. For that assumption to prove correct, strong increases in productivity would have had to occur since 1974. Productivity growth in 1975 and 1976 did show substantial improvement, keeping open the possibility that productivity would return to the level indicated by the 1965–73 trend; and early in 1978 initial productivity statistics suggested a sizable 3 percent gain for 1977. However, the subsequent down-

ward revision of the productivity statistics for 1977 and the very poor productivity performance of 1978 make the earlier view untenable. It no longer seems reasonable to assume that the exceedingly poor productivity growth in 1973-74 and 1977-78 represented statistical aberrations or one-time events, implying no reduction in the long-term trend. Downward revisions of our estimate of long-term productivity growth and of potential GNP are clearly necessary.

The uncertainty about the growth of potential output over the 1973-78 period requires one to distinguish three factors affecting productivity: its long-term trend, its cyclical movements, and the erratic declines from trend that occurred in 1973-74 and to a lesser extent in 1977-78.

It is possible to place rough bounds on the range in which the 1973-78 trend of productivity growth must lie by examining two separate views. The optimistic view holds that 1973-74 was a period in which productivity and potential output dropped as a result of nonrecurring factors affecting the level of productivity, after which the long-term trend of productivity growth resumed its earlier pace. On this basis we calculate the long-term trend rate of growth in productivity from 1973 to 1978 to be about 2 percent per year and the growth of potential GNP over this period to be 3.5 percent per year. Such a view of productivity behavior interprets the 1977-78 performance as another marked aberration, which has temporarily reduced productivity well below its long-term trend.

The pessimistic view holds that the 1973-74 period was not extraordinary. According to this view long-term productivity growth began to slow substantially after the mid-1960s, although unexpectedly favorable developments in late 1972 and in early 1973 disguised the fact. The poor average performance of productivity since early 1973 reflects that slowdown, and the particularly disappointing episodes in 1973-74 and 1977-78 are fluctuations around a greatly reduced long-term trend. According to this interpretation the estimate of potential should be based on a long-term growth of productivity which follows a much slower pace after 1973. This pessimistic version produces an estimated long-term trend rate of productivity growth during the past 5 years of around 1 percent a year, and a growth of potential GNP of only 2.5 percent annually over the 1973-78 period.

Placing an exact number on recent potential growth is extremely difficult. The growth of potential from 1973 to 1978 probably falls between the two extremes. The 1973-74 productivity shock was to some extent nonrecurrent. But the deceleration in productivity in recent years is too striking to ignore in estimating the long-term trend.

Unemployment Forecasts

Another way of analyzing the growth of potential output over the 1973-78 period is to examine the actual behavior of real GNP and unemployment in this same period. Particularly since mid-1977, the behavior of the unemployment rate has been a puzzle. In the economic forecasts underlying

the 1979 budget, for example, real GNP was forecast to rise 4.7 percent over the 4 quarters of 1978 and an additional 4.7 percent in 1979. On the basis of estimates that assumed a potential growth of 3.5 percent per year, the unemployment rate was forecast to reach 5.8 percent in the fourth quarter of 1979. In fact, it reached that level a year earlier, even though real GNP growth in 1978 was less than expected.

The most common method of forecasting the unemployment rate relates that rate to the gap between actual and potential GNP—the relationship known as Okun's law. Over the postwar period a cyclical coefficient of $2\frac{1}{2}$ has been observed; that is, a reduction of $2\frac{1}{2}$ percentage points in the gap between potential and actual GNP could be expected to lower the unemployment rate by about 1 percentage point. Although aggregate data may be unreliable, there is some suggestion that the cyclical coefficient was closer to 3 in early years and may have declined to near 2 in the 1970s.

The use of this relationship and previous estimates of potential GNP produced substantial overestimates of the unemployment rate in 1977 and 1978. For example, from the fourth quarter of 1976 to the fourth quarter of 1977, real GNP grew 5.5 percent, reducing the estimated GNP gap by 2 percentage points under the old definition of potential. The expected reduction in the unemployment rate was 0.8 percentage point; the unemployment rate actually fell by 1.2 percentage points.

Last year produced a similar surprise: a 4.3 percent increase in real GNP with a 3.5 percent growth of potential output should have lowered the unemployment rate from 6.6 to 6.3 percent from the fourth quarter of 1977 to the fourth quarter of 1978. Instead, the unemployment rate was reduced to 5.8 percent, 0.5 percentage point more than expected. Given the unemployment rate at the end of 1976 and the actual path of output since then, unemployment by the end of 1978 was 0.9 percentage point lower than was expected, if it is assumed that potential GNP grew at 3.5 percent per year. By revising downward our estimate of the growth of potential GNP from 3.5 to 3.0 percent per year, about half the unanticipated drop in the unemployment rate can be explained. The remainder is within historical error margins for the output-unemployment relationship.

Revised Estimates

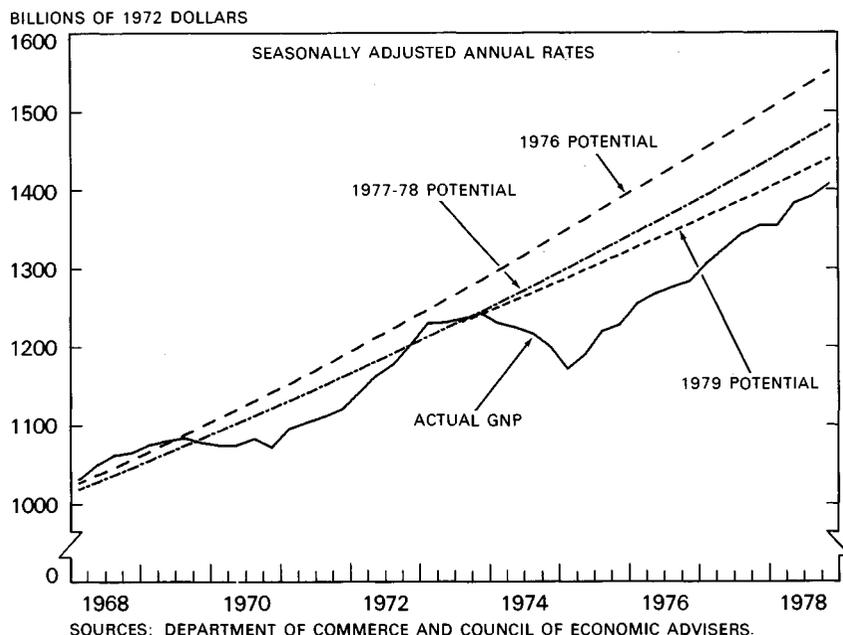
Weighing recent trends in productivity and labor force growth, as well as the unemployment-output relation, one can form a rough judgment about the trend in potential output over the 1973–78 period. Clearly, placing an exact number on potential growth is very difficult. On balance the Council's view is that potential output has grown at an average rate of 3 percent during the last 5 years.

The 3 percent overall growth rate of potential between 1973 and 1978 can be broken down into the following components: a 2.5 percent annual growth in potential employment, a 0.5 percent per year decline in annual hours per employee, and a 1 percent per year growth in productivity. Reflect-

ing the large decline in 1973-74, the 1 percent productivity growth during the past 5 years was about one-half of 1 percentage point below our estimate of the long-term trend (discussed below). But its effect in depressing potential GNP was offset by an annual growth in the labor force about one-half of 1 percent above its long-term trend.

Chart 7

Actual and Potential Gross National Product



The latest estimate puts potential GNP at \$1,423 billion in 1978. Chart 7 shows the latest revision of potential output (labeled 1979 potential) along with the two earlier versions. The revised data are in Table 17. Actual GNP in 1978 was only about $2\frac{3}{4}$ percent below its potential level.

TABLE 17.—Potential gross national product and benchmark unemployment rate, 1973-78

[Billions of 1972 dollars, except as noted]

Year	Potential GNP	Actual GNP	GNP gap (potential less actual)	Benchmark unemployment rate (percent)
1973.....	1,227.0	1,235.0	-8.0	4.9
1974.....	1,264.2	1,217.8	46.4	5.0
1975.....	1,302.1	1,202.3	99.8	5.1
1976.....	1,341.1	1,271.0	70.1	5.1
1977.....	1,381.4	1,332.7	48.7	5.1
1978.....	1,422.9	1,385.1	37.8	5.1

¹ Preliminary.

Sources: Department of Commerce (Bureau of Economic Analysis) and Council of Economic Advisers.

Future Trends

Projecting potential GNP growth into the future is subject to large errors. Growth of the labor force in recent years has varied substantially. In the past 5 years, the surprisingly low productivity growth has been offset, as noted above, by higher than expected increases in the labor force, producing more growth in potential output than would have seemed likely from the low productivity statistics alone.

The wide variation in productivity growth rates since 1973—and our inability to determine precisely the underlying trend of such growth during these years—make predicting future rises in private nonfarm productivity unusually hazardous. Improved growth in investment during the past 2 years should help to improve productivity growth over the next 5 years. At the same time, labor force growth should decline when the young people born in the baby boom have entered the labor force. This demographic reversal should also add to productivity growth, as the drop in the average age and experience of the labor force tapers off. These positive developments, however, may well be offset to some extent by increased regulatory burdens.

Studies by the Council of Economic Advisers indicate that the range of estimates of productivity growth per hour lies between $1\frac{1}{4}$ and $2\frac{1}{4}$ percent annually over the next 5 years. These estimates are based on the alternative hypotheses about the 1973–74 period discussed earlier. Taking account of recent disappointing productivity developments, our forecast is for a productivity growth of $1\frac{1}{2}$ percent annually over the next 5 years. This projection is based on the view that some part—less than half—of the 1973–74 drop in productivity represents nonrecurrent events; in addition, it does not assume any rebound of productivity growth from recent trends back toward those experienced in the 1950s or 1960s.

Other components of anticipated potential growth over the next 5 years are these: an expected fall in hours per employee of one-half of 1 percent annually; an average rise in the labor force participation rate of three-fourths of 1 percent annually; and a rise in the relevant population averaging $1\frac{1}{4}$ percent annually.

Taken together these components imply a growth in potential output over the 1978–83 period of 3 percent annually, the same as the revised estimate for 1973–78. It is recognized that we are in a period of adjustment to new trends in energy, regulation, and international competition, that an attempt to estimate the underlying trend is therefore extremely hazardous, and that estimates of productivity growth are particularly subject to large margins of error.

ECONOMIC POLICY IN AN INFLATIONARY ENVIRONMENT

In recognition of the need for a balanced approach to the problem of inflation, the Administration announced a three-part anti-inflation program

in October 1978. The program sets out the basic objectives for economic policy in 1979. As the first element of the program, fiscal and monetary policy will be used to achieve and maintain a balance between aggregate demand and supply that is conducive to a reduction in inflation. The second element is a set of explicit, voluntary wage and price standards designed to reduce inflation. The third consists of an effort to reduce the direct contribution of government to inflation by reducing the cost of regulatory actions. In the remainder of this chapter the policy initiatives associated with each element of the anti-inflation program are discussed.

AGGREGATE DEMAND POLICY

During the course of an economic recovery, a stage is reached at which the emphasis of macroeconomic policy must switch from efforts to strengthen growth in economic activity to measures that restrain inflation. The U.S. economy passed through that stage during 1978. The disappointing performance of productivity, the related sharp drop in unemployment, and the acceleration of inflation brought the economy to that position somewhat earlier and more abruptly than had been expected. Reducing inflation must be the top priority of economic policy in 1979. Unless we bring inflation under better control, the progress made during the past several years toward recovering full employment of our economic resources will be jeopardized.

Since the trough of the recession in early 1975, total real output of goods and services has grown at an annual rate of 5 percent, or about 2 percentage points per year faster than the economy's long-term potential. The gap between actual economic performance and the level made possible by our resource base has therefore steadily diminished.

Job creation during this recovery has proceeded at an extraordinarily rapid pace, especially during the past 2 years. Overall unemployment has therefore declined substantially despite record increases in the civilian labor force. Nevertheless, unemployment rates remain extremely high for some major segments of the population. Both here and abroad, structural unemployment represents an unacceptable waste of economic resources and a severe social problem. But the problem cannot be dealt with by an expansive aggregate demand policy without generating further inflationary pressures. As pointed out in Chapter 3, the task must be addressed with measures such as targeted employment tax credits and training and jobs programs aimed directly at those who cannot find jobs even in a relatively fully employed economy.

Earlier in this chapter evidence was cited that excess demand pressures in most labor and product markets were not a dominant factor in the recent acceleration of inflation, except for a period in late 1977 and early 1978 when the rapidity of decline in unemployment contributed to an acceleration of wage increases. But the analysis also indicated that the economy has approached the point where the overall margin of unused resources is very slim. By late 1978 the cyclical component of unemployment was down to relatively small proportions, as evidenced by various measures of labor

market tightness, and the gap between the economy's actual and potential output had shrunk from 7.7 percent of potential in 1975 to 1.8 percent in the fourth quarter of 1978. Moreover, the outlook for growth in productivity is very uncertain. Since we are not yet able to say precisely why productivity gains were so weak last year, we cannot be confident that our estimate of the GNP gap and our forecast of growth of potential GNP are correct.

For all of these reasons it is essential that economic policies be restrained. Economic growth must slow to a moderate and sustainable pace—one that avoids adding the effects of excess demand to existing inflationary forces.

As Chapter 3 describes in detail, the Administration is forecasting a growth rate of real GNP amounting to 2¼ percent over the 4 quarters of 1979 and 3¼ percent in 1980. The average growth rate over the 2 years, 2¾ percent, is slightly below the estimated long-term growth potential of 3.0 percent. If growth in the labor force and productivity is about in line with long-term trends, the margin of slack between actual and potential GNP will increase slightly over the next 2 years, and market forces can work together with the pay and price standards announced by the President on October 24 to moderate inflation.

Restrained fiscal and monetary policies are an essential ingredient of the Administration's strategy for combating inflation. Monetary and fiscal restraints alone, however, are not equal to the task of unwinding an inflation that has been under way for more than a decade and has become deeply embedded in expectations and in the normal way of doing business by consumers, workers, labor unions, and business establishments. Experience since the late 1960s, reviewed at the beginning of this chapter, amply bears out that conclusion.

The stubborn resistance of inflation to the traditional remedies reflects the fact that the rate of wage and price increase is relatively inflexible in the face of slack demand. As last year's *Economic Report* discussed in more detail, there is some evidence that wage rates over the past quarter century have become progressively less responsive to the balance between aggregate demand and supply in labor markets. Reductions in output and major increases in unemployment are no longer as effective in slowing the rate of wage and price increase. The resulting loss of output, of jobs, and of human dignity pays only modest dividends in lower inflation.

A political consensus exists in our country today that inflation is the Nation's most serious economic problem, and that fiscal and monetary discipline is needed if inflation is to be reduced. The inflationary problem can be dealt with most successfully by persisting with the discipline of anti-inflation policies for an extended period even if economic growth for a time should fall below the path that is now forecast. The chances of maintaining the necessary consensus long enough to make real gains against inflation will be much greater if we avoid an overdose of restraint that leads to sharp increases in unemployment, reductions in output, and stagnation of investment.

The Roles of Fiscal and Monetary Policies

The objective of aggregate demand policies for 1979 and 1980 is thus clear. To avoid creation of excess demand, economic growth needs to slow to a pace at, or somewhat below, the long-term potential rate of expansion. Fiscal and monetary restraint is needed to accomplish that aim. The restraint, however, must be applied in a measured way, to moderate growth without producing a recession.

As Chapter 1 indicated, the course of fiscal policy began to shift toward restraint during 1978. In fiscal 1979, the year beginning in October 1978, the budget deficit will decline to about \$37 billion, or \$11 billion less than in the prior fiscal year. In fiscal 1980 the deficit will drop an additional \$8 billion to a level of \$29 billion. Further reductions are expected in succeeding fiscal years. To reach these results we must keep a very tight rein on the growth of expenditures. In fiscal 1980, Federal outlays will decline to 21 percent of GNP from 22 percent in fiscal 1978.

Given the course of fiscal policy being pursued by the Administration, the task of reducing inflation will not fall on monetary policy alone. Success in the struggle against inflation will require that monetary and fiscal policies work together; the objective of slowing economic growth while avoiding a recession will necessitate very careful coordination and balance between fiscal and monetary policies.

The task of mapping the appropriate course of monetary policy will not be easy. Monetary restraint in 1978 did not affect aggregate demand in the way that past history would have suggested, nor will it do so in 1979 and 1980. As discussed in Chapter 3, institutional changes in financial markets, by altering the availability of credit to private borrowers, have reduced the degree to which changes in monetary policy affect spending. In today's economy, monetary and credit policies increasingly influence private investment and consumption through fluctuations in interest rates and associated movements in financial asset prices, rather than through changes in nonprice terms of credit.

This development has both negative and positive aspects from the standpoint of economic stabilization policy. On the negative side, monetary policy is likely to affect aggregate demand with even longer lags than it once did. Since our ability to forecast future developments is very limited, the task of identifying the appropriate course of monetary policy has become more difficult. On the positive side, however, monetary policy has been changed from a very harsh and selective tool of economic stabilization to one whose influence on aggregate demand is more gradual and evenly distributed. Working together with fiscal policy, monetary restraint, prudently applied, can be used more successfully than before to reduce economic growth to a modest but sustainable pace and thus create a favorable climate for an unwinding of inflation.

The American people and the Administration look forward to a decline in nominal interest rates from their present very high levels. It must be

clearly recognized, however, that a significant and lasting drop in interest rates cannot be expected until inflation begins to recede. When that happens, interest rates can and should decline. In a less inflationary environment it will also be possible to support adequate real growth with a slower expansion in the monetary aggregates than is currently required.

STANDARDS FOR WAGE AND PRICE BEHAVIOR

General macroeconomic policies can create an appropriate market environment for unwinding inflation. However, 10 years of inflation preclude achievement of a given deceleration of prices solely through aggregate demand policy without much more demand restraint and loss of growth than would have been the case in earlier periods. Unless ways are found to brake the momentum of self-perpetuating wage and price increases that have acquired a prominent place in our private behavior, inflation will continue at an unacceptably high rate.

In recognition of this fact the Administration at the beginning of 1978 called for a slowing of wage and price increases. Each company was asked to hold its 1978 price and wage increases below the average of the prior 2 years. Although some individuals and groups did make an effort to meet the standard, the program was not generally effective. The deceleration standard was not specific enough to provide a clear guide for wage and price decisions.

The Administration therefore incorporated more explicit standards into the anti-inflation program announced in late October. The voluntary program now includes an explicit numerical ceiling for wage and fringe benefit increases as well as a price deceleration standard for individual firms. The potential effectiveness of the program is heightened by expanded monitoring, by relating Federal procurement actions to the standards, and by an innovative program of real wage insurance designed to encourage compliance. The pay and price standards were published in preliminary form on November 7, followed by a 30-day period for public comment. On the basis of the comments offered, and after consultation with business and labor groups, some modifications in the detailed specifications were announced on December 13. The final standards were published in the *Federal Register* on December 28.

The pay standard limits the increase in hourly wages and private fringe benefit payments to a maximum of 7 percent for each employee group in a company. Employee groups subject to the pay standard are: (1) individual groups covered by major collective bargaining agreements; (2) other non-management personnel; and (3) management personnel. This grouping takes account of the differing institutional arrangements for setting wage rates and prevents an inequitable distribution of wage moderation. It also permits considerable flexibility in distributing wage changes among individuals within a group in response to economic circumstances, equity, and other factors, so long as the average increase for the employee group meets the standard.

In collective bargaining situations a newly negotiated contract in which wage and fringe benefit increases average no more than 7 percent annually over the life of the contract is consistent with the pay standard, provided that the increase is no greater than 8 percent in any year of a multiyear agreement. In determining compliance with the pay standard, provisions for cost-of-living adjustments will be cost out on the assumption of a 6 percent annual rate of inflation in the consumer price index over the life of the contract. The standard therefore leaves room for complete flexibility in allocating the pay increase between wage and fringe benefits, and between fixed increases and cost-of-living adjustments. Formal collective bargaining agreements signed before the announcement of the anti-inflation program and (for nonunion employee groups) annual pay plans in operation by October 1, 1978, are not subject to the pay standard.

In determining compliance with the pay standard, employers' contributions that are required to maintain the existing level of health and pension benefits are distinguished from contributions made to improve the level of benefits. Increases above 7 percent in the costs of maintaining existing health benefits are not counted in judging compliance. Special provisions also apply to pension plans that pay specified benefits at retirement. Changes in employers' costs resulting from changes in funding methods, amortization periods, actuarial assumptions, and plan experience are not included as pay-rate changes, but changes in employers' costs resulting from plan amendments, changes in the benefit structure, or the effect of wage and salary changes on benefit levels are included. Further details on the application of the pay standard to various pay plans can be found in the regulations issued by the Council on Wage and Price Stability on December 28, 1978.

In the interest of equity and improved productivity, some exemptions from the pay standard are allowed. First, workers who earned an hourly wage below \$4.00 on October 1, 1978, are exempt from the standard. Second, wage increases in excess of the standard are acceptable if they are offset by explicit changes in work rules and practices that demonstrably improve productivity to a matching or greater degree. Third, wage increases above the standard are justifiable to preserve a historically close tandem relationship with another employee group. Finally, where several explicit and tightly defined criteria show that pay rate increases above the pay standard are necessary to attract or retain employees in a particular job category because of an acute labor shortage, the amount of the excess may be exempted from the standard.

Rates of price increase tend to vary considerably more from industry to industry than rates of wage increase. This occurs because rates of productivity growth and the relative importance of nonlabor costs differ across industries. Realistic standards must recognize this inherent variation and its significance as an allocational device in a market-oriented economy. At the same time, it is important to avoid a variable price standard based upon

a simple pass-through of costs, since such rules can weaken the incentive to improve productivity.

The Administration's approach to the deceleration of inflation avoids these pitfalls. The price standard requires that individual firms limit their cumulative price increases over the next year to one-half of a percentage point below the firm's average annual rate of price increase during 1976-77. Some industries had abnormally high or low rates of price increase during this base period. These extremes are taken into account by limiting the price increase for an individual firm to no more than 9.5 percent, and by regarding any increases of 1.5 percent or less as complying with the standard. If increases in hourly labor costs within a firm decelerate by more than one-half of a percentage point relative to the 1976-77 rate of increase, the deceleration of prices must be commensurately greater to be in compliance with the standard. Certain categories of goods and services, specified in the price standard regulations issued by the Council on Wage and Price Stability, are excluded from the calculation of a company's average price change.

A company that is unable to comply with the price deceleration standard because its average price change cannot be calculated, or because of uncontrollable price increases in the goods and services it buys, is asked to satisfy a two-part profit limitation. The company's profit margin during the program year should not exceed the average profit margin for 2 of the company's last 3 fiscal years prior to October 2, 1978. Besides this, however, program-year profit should not exceed base-year profit by more than 6.5 percent plus any positive percentage growth in physical volume from the base year to the program year.

Finally, a percentage margin standard is available to companies in the wholesale and retail trade and in food manufacturing and processing industries as an alternative to the price standard. Details on this alternative are provided in the regulations issued by the Council on Wage and Price Stability.

Real Wage Insurance

One of the obstacles to the success of voluntary wage and price standards is fear on the part of each group of workers that their observance of the wage standard could lead to a loss of real income if others do not cooperate, or if uncontrollable events, such as a serious crop shortage, result in price increases. Faced with such uncertainty, and basing their price expectations on recent patterns of inflation, many workers might be reluctant to cooperate with the standards program. To improve the acceptability of the standards, the Administration is proposing to the Congress an innovative program of real wage insurance for those who observe them.

Under the real wage insurance proposal, employee groups that meet the 7 percent pay limitation would receive a tax credit if the consumer price index increased by more than 7 percent over the year. The rate of the tax

credit would be equal to the difference between the actual increase in the consumer price index and 7 percent, up to a limit of 3 percentage points (10 percent inflation). This rate will be applied to each employee's wages up to a maximum of \$20,000 per job. Employee groups that are exempt from the pay standard (low-wage workers and those under existing collective bargaining contracts) will qualify for real wage insurance if their average pay rate increase is 7 percent or less during the program year.

The most important factors determining the cost of the wage insurance program are the rate at which workers participate in it and the rate of inflation. Compliance with the standards by firms and employees will reduce labor costs, and price increases should move down correspondingly. But there are other, less predictable factors that influence the overall rate of inflation, such as changes in the prices of food and fuel, in exchange rates, and in productivity. The uncertainty surrounding the behavior of these factors means that the cost of the program itself is uncertain.

With reasonable assumptions concerning participation and the likely behavior of other economic factors influencing inflation, we can arrive at general estimates of the program's cost. Some 87 million workers are potentially eligible for the program, although not all are likely to qualify for the wage insurance. For example, low-wage workers and those covered by existing contracts are exempt from the pay standard. Given expected 1979 wage increases for these groups, most workers who are exempt from the pay standard are unlikely to qualify for real wage insurance. Estimates of the cost of the program thus depend in part on assumptions concerning the likely compliance of workers who are not exempt from the standard.

If three-fourths of those workers are in compliance, the real wage insurance program would result in a budget cost of approximately \$5 billion for each percentage point of inflation in excess of 7 percent. Lower compliance by nonexempt employee groups would raise the expected inflation rate but lower the number of workers eligible for the tax credit. In this sense the potential budgetary impact of the insurance program is self-limiting.

As noted above, the expected budgetary cost of the program will also depend importantly on productivity growth and the behavior of food and energy prices. Estimates of the budgetary impact, adjusted for the expected response of the consumer price index to the oil price decisions reached by the OPEC cartel in December 1978, appear in Table 18.

With three-fourths compliance by employee groups who are not exempt, the expected budgetary cost of real wage insurance would vary principally with productivity and food price developments, as shown in Table 18. With full compliance, the most likely payout would be zero, since price increases should be less than 7 percent under each combination of food price and productivity assumptions in the table. As a result, even without the incentive provided by real wage insurance, substantial compliance with the standards would yield a significant reduction of inflation and a gain in real wages.

TABLE 18.—*Estimated annual budgetary cost of real wage insurance proposal*

(Billions of dollars)

Assumed food price increase	Assumed productivity growth	
	0.6 percent	1.1 percent
8 percent.....	2.5	0
10 percent.....	4.5	2.0

¹ This is the estimate in the fiscal year 1980 budget and is based on the current forecast for food price increases and productivity growth.

Note.—Calculations assume three-fourths compliance by nonexempt employee groups.

Source: Council of Economic Advisers.

Real wage insurance is a novel use of incentives to foster wage and price restraint. The tax credits are not designed to compensate, on a straight dollar-and-cents calculation, those who might have received higher wage increases but chose to observe the standards. Even with real wage insurance in effect, observance of the standards by particular groups of employees requires a recognition of the national interest in individual wage and price decisions and an awareness of the long-run gains that everyone can enjoy if inflation is reduced. Real wage insurance offers to groups of employees not a cash “buy-out” of higher pay increases, but an important protection against the major risks associated with compliance.

Although the proposed program would rely on the tax system to provide refunds if inflation exceeds 7 percent in 1979, it is different in purpose, design, and effect from proposals to index the general revenue system in such a manner that the connection between inflation and tax revenues would be reduced or eliminated. The overriding purpose of the plan is to reduce inflation directly by inducing cooperation with the pay and price standards of the anti-inflation program. Tax indexation proposals, on the other hand, seek to insulate the tax payments of individuals and corporations from the effects of inflation, but they do not reduce inflation.

Sectoral Problems

The pay and price standards are designed to be guides for decision-making agents who have discretionary power in wage and price determination. Even with widespread compliance, however, it will be necessary to supplement the standards with special programs tailored to unique inflationary problems in some sectors.

Prices of health care, for example, have generally outpaced overall inflation, and expenditures for such care constitute a steadily escalating share of our national output. Yet the health care industry is not one in which market forces can be expected to provide an adequate restraint on price increases. The Administration has taken measures to strengthen health planning and to encourage growth in Health Maintenance Organization programs, which embody incentives to promote cost consciousness. The Administration is also seeking a substantial deceleration in the growth of hospital charges,

which are the largest and fastest growing component of medical care costs, through voluntary standards for hospital cost increases. For 1979 the ceiling on such increases is 9.7 percent, which implies a deceleration of over 2 percentage points from current rates of hospital cost increases. The President will propose to the Congress a legislative initiative on hospital cost containment that would establish a hospital cost standard in law.

Professional workers in the health industry are also subject to the general standards for professional fees, which apply to companies providing professional services on a fee-for-service basis. A company will be in compliance with the standard if the average rate of change in its fees does not exceed 6.5 percent and if the increase in the fee for any single service does not exceed 9.5 percent.

Food price changes have accounted for a major part of the recent inflation and in general follow a more erratic year-to-year course than other prices. At the farm level, price changes are usually the result of weather conditions and other supply-side shocks beyond the control of individual farming units. The monitoring of these prices will therefore focus on overall market trends. Where price increases in particular commodity markets exceed the overall inflation rate and are not justified by changes in costs, administrative actions to expand supply will be considered.

At the retail level, individual firms in the food processing and distribution sectors will be expected to adhere to the price standards with respect to increases in margins. The Department of Agriculture and the Council on Wage and Price Stability will cooperate in a joint effort to monitor cost, price, and marketing margins. Efforts will be made to ensure that lower commodity prices at the farm level are quickly reflected in retail prices. Moreover, decisions on 1979 support and import levels have been made with careful attention to their impact on inflation.

REGULATORY POLICY

Most of the regulatory activities of the Federal Government can be classified into two main groups. *Social regulation* seeks to control threats to the environment and to human health and safety that arise as an undesirable by-product in the production and use of goods and services. *Economic regulation* controls the prices, wages, conditions of entry, or other important economic characteristics of particular industries. While the Administration's efforts toward regulatory reform cover many areas, their essential aim is to minimize the costs and improve the effectiveness of social regulation and to reduce the scope and rigidity of economic regulation.

Economic Regulation

The 1978 *Economic Report* discussed in some detail the current problems with economic regulatory programs, indicating that in many industries the regulatory structure established in the past is no longer suited to present economic conditions.

The President recognized this difficulty in the case of the airline industry, and the Congress agreed by initiating the first deregulation of a major industry by legislative action in recent history. Under the Airline Deregulation Act of 1978, entry and price regulation of domestic airlines will be phased out by 1982 and 1983 respectively. During the transition, the act provides much greater freedom and flexibility in entry and fares than was previously the regulatory norm. The new law strengthens the already substantial impetus to competitive forces that the industry was given last year by the Civil Aeronautics Board. The board's liberalizing actions on fares and entry produced markedly lower fares along with sharp increases in air travel, load factors, and airline earnings. The provisions of the new legislation should lower prices even more and broaden the variety of services to consumers.

In the coming year the Administration will support legislation that will extend the principles and benefits of airline deregulation to the surface transportation industry. The inefficiencies produced by price and entry regulation of the trucking industry are well known: empty return trips, restrictions on peak-offpeak pricing, anomalous commodity class rates, and lack of price competition. For example, in New Jersey and California, where such restrictions do not apply, trucking rates for unregulated intrastate traffic undercut comparable interstate rates by 10 to 15 percent.

The current problems with rail regulation are different. Rates of return for the rail industry fall below the all-industry average, and the number of bankruptcies in the industry has historically been above normal. At the same time, the principal rationale for government regulation—protection from monopoly—has been eroded by competition from trucks and shifts in population. The financial difficulties thus created have been compounded by Interstate Commerce Commission regulation that tends to slow or prevent rail abandonments and to inhibit railroads from reducing rates to meet competition from trucks and water carriers. The adverse effects of competition from other means of transportation and the Interstate Commerce Commission's regulation of railroad earnings have been offset up to now by substantial Federal subsidies. Unless regulation of the rail industry is relaxed, the inefficiencies and necessary subsidies are likely to continue to grow.

Social Regulation

In recent years social regulation has greatly extended its scope and increased its complexity. Much of this heightened activity has been in response to growing public concern about an ever-widening range of environmental, health, and safety problems. It has also been spurred by our increasing ability to detect potentially harmful health effects from chemicals or chemical reactions. Controlling the harmful side effects of economic activity produces substantial benefits to society. But it also imposes costs, and these have mounted significantly as the scope and stringency of regulation have increased.

Our measurement of regulatory costs and benefits is highly imperfect. In addition, measures of the benefits from regulatory provisions—such as improvements in the environment and in health and safety—are generally excluded from the current national income and product accounts. The resources devoted to producing those benefits are not available for producing other outputs. As a society, we accept a tradeoff of lower *measured* output for increases in *unmeasured* output in the form of general environmental quality.

Once incurred, the costs of regulatory actions enter into the wage- and price-setting mechanisms of the economy. Most of the costs of regulatory action show up not as governmental budget expenditures, but as increased costs to industry. Acceptance of higher prices relative to wages and other money incomes is the way in which society pays for the benefits of social regulation. In fact, however, our economic institutions and measures of prices do not distinguish between these sources of price increases and others. Individuals and groups try to escape paying the costs of regulation by increasing wages and other forms of income to match the higher prices. The result is an additional round of price increases. But the costs of regulation cannot be avoided, and widespread attempts to do so simply add to inflation.

Both the large impact of government regulation, measured by its costs and benefits, and the way in which the costs add to inflation, highlight the responsibility of all branches of government to make sure that regulations are both necessary and efficiently designed. This Administration has undertaken a number of steps toward that goal.

Present Efforts

Effectively managing the regulatory functions of government entails two tasks. The first is to improve the design of individual regulations. They should be confined to situations where they are necessary; they should set standards that will meet statutory objectives without being needlessly stringent; and they should minimize the costs of meeting those standards. The second task is to view the regulatory process comprehensively to judge how all the regulations being issued will affect costs and prices, the use of national resources, and the economic situation of particular industries and sectors.

The effort to improve the cost effectiveness of individual regulations began in 1974 with the requirement that regulatory agencies of the executive branch analyze the costs and benefits of major new regulatory proposals, as part of the process of preparing regulations. In 1978 the President broadened this requirement and also took steps to ensure that these analyses were reviewed not only by the regulatory agencies, but by the other economic agencies of the executive branch as well. The Regulatory Analysis Review Group was created, with representatives from both regulatory and economic agencies, to review several of the most important regulatory proposals each year.

During its first year, the review group submitted for the public record analyses of five major regulatory proposals having substantial economic effects: the acrylonitrile standard and generic carcinogen policy of the Occupational Safety and Health Administration, the ozone standard proposed by the Environmental Protection Agency, the Department of Transportation's regulation to provide equal access for the handicapped, and the Department of the Interior's surface mining regulations. Analyses of the Environmental Protection Agency's new source performance standards for steam electric plants and the Department of Energy's proposed coal conversion regulations for electric utilities and general industry were in progress at year-end.

The task of ensuring that regulations do not impose undue costs extends beyond the analysis of newly proposed regulations. On March 23, 1978, the President issued an executive order requiring agencies to establish a "sun-set" procedure for regulations previously issued by the regulatory agencies of the executive branch. Under this executive order, each agency must periodically review its existing regulations with a view to eliminating those that are unnecessary and improving and simplifying others. Agencies must publish a semiannual agenda that sets forth the list of regulations to be reviewed, including at least one regulation whose economic impact is substantial.

Effective management of the regulatory process must go beyond measures dealing with individual regulations. Although the scope of social regulations has been expanding rapidly for over a decade, the Federal Government has had no process by which the combined social and economic effects of its regulatory actions could be assessed. Because of the complexity of the problems involved, development of analytical techniques and procedures to make such overall assessments and to utilize them constructively will have to occur gradually. But in 1978 the Administration took several steps in this direction.

In March 1978 the President ordered the executive branch agencies to publish semiannual agendas of forthcoming significant regulatory proposals and actions. In October he created a Regulatory Council charged with improving and using those agendas to create a government-wide calendar of scheduled regulations. The council is composed of all executive departments and agencies with regulatory responsibility as well as a large number of independent regulatory agencies. The calendar itself will present, for the first time, not only a timetable of new regulatory proposals and issuances, but preliminary data on their objectives and potential costs. As procedures, data bases, and analyses are improved, the calendar can provide both the regulatory agencies and the Executive Office of the President with a body of information for use in examining and assessing the effects of regulations and improving overall regulatory management. Using the information and analyses developed in producing the calendar, the Regulatory Council itself can address problems of coordination and thus eliminate conflicts and dupli-

cation. In addition, it will begin to examine the problems that have arisen in particular industries or sectors from the combined effects of regulations imposed by different agencies.

The measures to improve the regulatory process outlined above are already making major contributions, not only increasing the cost effectiveness of individual regulations but improving the overall coordination and integration of regulatory programs. Additional progress will depend, however, on developing satisfactory approaches to a number of other complex and difficult problems.

Balancing Costs Against Benefits

The statutes authorizing the various social regulatory programs vary widely in the degree that they allow the regulatory agencies to balance benefits against costs in setting regulatory standards. Some statutes dealing with the control of damaging health effects from chemicals or other substances appear to be based on the proposition that effects are harmful above some threshold of concentration but not below it. These statutes, in effect, require the regulatory agency to set standards at or just below the presumed threshold without regard to costs. In fact, scientists are increasingly questioning the existence of the presumed thresholds; many believe that health hazards diminish continuously down to zero concentration. Since in many cases flatly prohibiting the substance is far too costly or disruptive, any standards that set the level of concentration above zero must implicitly take into account a balancing of economic and social costs against the prevention of health risks.

Some regulations are issued under statutes which do not mention balancing economic costs against benefits, but do require that the regulatory standard be "feasible." Still other statutes not only permit but require economic costs to be taken into account. And finally there are cases where regulatory costs are ignored. For example, the "Delaney Amendment" to the Food, Drug, and Cosmetic Act, flatly bans substances used as food additives if they have been found carcinogenic in animal tests, regardless of their potency as carcinogens or the economic costs that such a ban would impose.

There is obviously no all-purpose formula for reaching sound decisions about the stringency of environmental health and safety standards, given the need to take into account both the prevention of health risks and the costs of such prevention. Uncertainty is always present in determining the specific nature and degree of the health risks from exposure to various substances, though the uncertainties in some cases are substantially greater than in others. The same is true of costs. In each regulation, a decision must be made about how to deal with these uncertainties. Regulators sometimes encounter situations where exposure to health risks is very high but occurs among a small number of people; at other times one finds very low exposure among a large number of people. Although circumstances thus vary considerably from case to case, a generally consistent approach to these and similar problems by the different regulatory agencies would do much to make the needed

regulations better and more cost effective. Developing such an approach will require coordination among regulatory agencies as well as a careful analysis and review of the statutory background behind the different regulatory programs.

Overall Management of the Regulatory Process

Despite many differences, social regulation shares some of the characteristics of the budgetary programs of the Federal Government. Both are designed to provide economic and social benefits: such things as educational services, highways and dams in the case of the budget; and environmental improvements and health protection in the case of social regulation. Both use national resources that could be diverted to other uses. For the budget the resource costs show up as Federal expenditures, which are paid for by taxes. The costs of regulations are less visible, since they are imposed on industry and paid for by consumers in the form of higher prices.

The Nation has long had a set of procedures to consider the Federal budget as a whole: Costs of particular programs and of the total budget are estimated in order to make the best possible qualitative judgments about benefits, and priorities among programs are established. Regulatory programs have no such established procedures, and as a consequence there is no good estimate of the overall cost of regulation. The difficulties of developing such a process are formidable. Since program costs in the budget represent money actually spent by the government, there is a firm basis for finding out how much programs have actually cost, however difficult it is to estimate future costs.

Most regulatory costs, however, are not directly borne by the Federal Government but by private parties. Moreover, some of these costs, while very real, can only be roughly estimated even after they have actually occurred. What, for example, are the costs of requiring a firm to locate at point M instead of point N, or of requiring that chemical Z no longer be used as a pesticide? Such estimates are necessarily subject to dispute. And, not unnaturally, people who place a high value on the benefits of the particular regulation tend to arrive at low estimates, while those who must pay the costs tend to make high estimates.

In addition, social regulation is carried out under a large number of statutes, many of which state quite specifically the objectives to be reached, the deadlines for reaching them, and the factors that must be considered in setting regulatory standards. The executive branch has much less flexibility in asserting priorities and deferring or speeding up the issuance of regulations on the basis of economic conditions and social needs than in managing many budgetary programs.

More generally, the relationship between the Congress and the executive branch in the case of budget programs is quite different from that in the regulatory process. Although the President has flexibility in determining the priorities among budget programs and the size of the recommended expendi-

tures each year, the Congress must pass on the appropriations to carry out those programs. Once a regulatory statute is passed, the executive branch agencies do not have to come back to the Congress each year, and they may issue regulations that confer important benefits and impose large costs without congressional approval. On the other hand, the statutes under which most regulation occurs tend to be extremely specific, often limiting the ability of the President and the heads of executive agencies to determine priorities and otherwise balance costs against benefits among and within the various regulatory agencies.

For all of these reasons the development of procedures and techniques to improve the overall management of the Federal regulatory process, to achieve social gains at minimum cost, and to reduce the inflationary consequences of regulatory activities will have to be a long and carefully executed process. It should proceed step by step and involve both the Congress and the executive branch. Several important gains have already been made. According to polls, the public continues to believe that improvements in the environment, in health, and in safety are an important national goal. But recently this sentiment has been accompanied by a growing recognition of the very large costs and the inflationary effects of regulation. The effort to improve both the cost effectiveness of individual regulations and the overall management of the regulatory process will continue to be a top priority of this Administration.

CHAPTER 3

The Economic Outlook

IN 1979 THE ECONOMY will enter its fifth consecutive year of economic growth, making this the second longest recovery in postwar history. As a recovery matures, sustaining a satisfactory pace of expansion becomes more difficult. Housing, in which starts have more than doubled since early 1975, is only one example. Given current demographic trends, a high level of starts is sustainable, but housing could not be expected to add much to growth even under the most favorable circumstances in financial markets. The saving rate has fallen to very low levels by historical standards, and the rise of consumption may consequently drop behind the growth of disposable income. In addition, business fixed investment in real terms has already regained its prerecession ratio to gross national product (GNP), and hence a slower growth of business capital expenditures is likely. All these factors will combine to check the pace of economic expansion next year.

As Chapter 2 makes clear, a reduction in economic growth from the rate of the last 2 years is needed both because idle labor and capital resources have been cut considerably and because inflation has accelerated. The task for aggregate demand policies will be to provide a climate in which inflationary pressures can begin moderating, but to avoid restraint so severe as to generate a recession.

THE ECONOMY IN 1979 AND 1980

Real growth is projected to average about $2\frac{1}{4}$ percent for the 4 quarters of 1979, a lower growth rate than in 1978 but positive throughout the year. If the anti-inflation program succeeds, as is anticipated, the rate of growth of consumer prices should slow to less than $7\frac{1}{2}$ percent over the 4 quarters of 1979, and to an annual rate of slightly under 7 percent by the end of the year. According to initial indications, business and labor groups are taking the President's voluntary standards seriously, but success cannot yet be assured. Widespread compliance with the anti-inflation program is essential to maintenance of a strong and healthy economy.

In 1980, real growth is expected to rise to a rate of $3\frac{1}{4}$ percent over the 4 quarters, largely as a result of an upturn in housing, while inflation will continue to slow, dropping below $6\frac{1}{2}$ percent. Here also success in the fight against inflation will contribute materially to sustaining economic growth by reducing the pressures on credit markets and strengthening confidence among consumers and businesses.

Employment is expected to rise by about 2 million a year in both 1979 and 1980. Productivity is expected to grow at about the same rate in 1979 as in 1978, with some improvement in 1980. It is likely to remain well below its trend rate of increase of about $1\frac{1}{2}$ percent. With the labor force expected to continue growing at a rate above the long-term trend and real growth slowing, the unemployment rate is likely to increase to $6\frac{1}{4}$ percent by the end of 1979 and remain near that level in 1980.

FISCAL POLICY FOR 1979 AND 1980

The course of fiscal policy that is appropriate for 1979 and 1980 was described generally in Chapter 2. In specific terms, Federal outlays are projected to be \$493 billion in fiscal 1979, an increase of over 9 percent from the previous year. In fiscal 1980 the President's budget calls for outlays of \$532 billion, an increase of less than 8 percent. This 1980 figure includes a small real increase in defense spending, a constant level of real spending for domestic programs, and restraint in or deferrals of new spending initiatives. Because existing legislation mandates continued real growth in some programs, such as health care and social security, zero real growth in domestic spending can be achieved only through reductions in real outlays for a number of other programs. Holding outlays to \$532 billion will require strenuous efforts by government agencies as well as cooperation from the Congress.

Over a year ago forecasts of economic activity suggested that the current economic expansion would slow too much unless the burden of rising taxes was eased. Inflation and economic growth were pushing people into higher tax brackets, and substantial increases in social security taxes had been legislated for 1979 and later years. To prevent too great a check on the expansion, these tax increases would have to be offset by a tax cut. A tax cut was also needed to encourage the investment that would provide the productive capacity for future economic growth and improve the prospects for greater growth in productivity.

Last January, the President therefore proposed a tax cut of \$25 billion to take effect October 1, 1978. Since inflation was higher than expected, this was scaled back in May to a cut of \$20 billion to take effect January 1, 1979. The size of the tax bill passed by the Congress is close to this request with a stimulus of \$18.9 billion in 1979. The bill contains a \$14.1-billion cut in personal taxes, a \$6.5-billion cut in business taxes, and a \$0.7-billion increase in outlays for the earned income tax credit, but allows \$2.5 billion in jobs credits to expire.

The Revenue Act of 1978

The Revenue Act of 1978 achieves cuts in individual income taxes largely by lowering the schedule of tax rates. It replaces the general tax credit, which was due to expire at the end of 1978, with an increase in the personal exemption from \$750 to \$1,000. The legislation also expands the earned income tax credit for the working poor and lowers the tax rates on capital gains. Its provisions include some of the tax reform proposals made by the President in his tax package.

In general the Revenue Act of 1978 will have relatively little effect on the after-tax distribution of income. Most households will receive a cut in tax liability of about 7 percent. Households with incomes above \$200,000 and those with incomes below \$10,000 will receive larger cuts. These distributional effects contrast sharply with those of the President's tax proposal, which called for larger tax cuts for those with incomes below \$30,000 and smaller reductions for those with incomes above \$30,000. In its effects the 1978 legislation will also differ markedly from income tax legislation enacted between 1964 and 1978, which increased the progressivity of the tax system.

The business tax cuts in the 1978 Revenue Act are attained primarily by lowering corporate income tax rates. The maximum rate is dropped from 48 to 46 percent, and a new tax schedule, with more income brackets and lower tax rates, is introduced. The tax rate on corporate income between \$50,000 and \$75,000 is cut the most, from 48 percent to 30 percent. The legislation also extends and expands the investment tax credit, providing a \$500-million tax cut for business in 1979. Both of these cuts were in the package proposed by the President. Capital gains tax rates were also lowered in the 1978 legislation, reducing revenues by nearly \$2 billion in 1979.

MONETARY POLICY

The combined effects of rising inflation and efforts by the Federal Reserve to hold down the growth of the monetary aggregates carried interest rates last year to near record levels. More restrained growth of the monetary and credit aggregates is an appropriate complement to the other parts of the anti-inflation program. It will help to moderate the rate of economic expansion. Additionally, higher U.S. interest rates make dollar-denominated assets more attractive than those denominated in foreign currencies and thus contribute to sustaining the value of the dollar in exchange markets.

Many private forecasters anticipate a recession in 1979, partly because they expect that current high interest rates will substantially depress housing and business investment. High interest rates are likely to dampen aggregate demand in 1979, but to a lesser degree than one would expect from past experience because of institutional changes in financial markets. Our judgment that economic growth in 1979 will be sustained reasonably well and that a recession will be avoided depends in part on our analysis of why the effect of monetary restraint is different from what it used to be.

During most of the postwar period, intervals of substantial monetary restraint were followed by recessions. Curbing aggregate demand through the use of monetary restraint disrupted financial markets because the depository institutions experienced a large outflow of deposits when interest rates on market instruments rose above the rates these institutions were permitted to pay to attract consumer savings. This disintermediation sharply reduced the availability of credit for those borrowers most dependent on commercial banks and thrift institutions for credit. These included small businesses and some units of State and local government, but the sector most severely hit was the mortgage market. As mortgage credit became not merely more expensive but unavailable, residential construction dropped precipitously, and this sharp drop was often important in tipping the entire economy into recession.

Table 19 shows periods of such cyclical declines in acquisitions of mortgages by financial institutions and the associated declines in single-family and multifamily housing starts. In the 1965-66 period the sharp decline in residential construction contributed to a slowing of overall economic growth, but the expansion of Federal outlays was sufficiently strong to maintain economic expansion. The 1959-60, 1969-70, and 1972-74 episodes were all followed by recessions. Of course, factors other than the decline in housing were also involved in each of these recessions, but the speed with which the decline in housing occurred had a destabilizing effect for which it was difficult to compensate elsewhere in the economy.

TABLE 19.—*Cyclical contractions in mortgage credit and housing starts, 1959-74*

[Percent change at seasonally adjusted annual rate, except as noted]

Period	Interest rate ¹	Mortgage acquisitions ²	Housing starts	
			Single-family	Multifamily
1959 II to 1960 II.....	1. 27	-12. 7	-17. 3	-16. 4
1965 III to 1966 IV.....	1. 41	-28. 9	-28. 5	-36. 1
1969 I to 1970 I.....	1. 35	-28. 2	-23. 1	-30. 1
1972 IV to 1974 IV.....	3. 36	-24. 8	-22. 9	-53. 2

¹ Percentage point change in the quarterly average market yield on 6-month Treasury bills from the beginning of the period to the peak reached during the period.

² Acquisitions by financial institutions.

Sources: Department of Commerce (Bureau of the Census), Board of Governors of the Federal Reserve System, and Federal Home Loan Bank Board.

The first half of last year was somewhat like earlier periods of credit restraint. Short-term market interest rates rose well above rates payable on deposits. As shown in Table 20, deposit inflows at thrift institutions slowed, and so did their mortgage lending. In the second half of the year, however, deposits again began to grow rapidly.

TABLE 20.—Growth in deposits, 1977–78

[Percent change, seasonally adjusted annual rate ¹

Type of deposit	1977				1978			
	I	II	III	IV	I	II	III	IV ²
Commercial banks, total	9.5	8.7	9.8	12.1	10.0	10.4	10.5	7.7
Demand	7.6	7.5	8.9	5.5	3.9	12.6	9.2	-3.1
Passbook	17.3	5.6	11.3	1.5	2.6	1.3	4.6	-6.9
Other time	8.4	13.1	11.3	14.2	12.0	11.9	18.1	20.4
Large certificates of deposit (CDs)	-3.2	7.3	3.2	81.0	50.8	25.0	6.6	47.0
Nonbank thrift institutions, total	14.0	12.5	17.7	12.8	8.1	8.2	14.6	11.6
Savings and loan associations	20.9	14.8	15.4	10.7	13.3	10.0	12.0	-----
Passbook	13.8	8.4	8.5	3.6	7.3	-4.3	-6.9	-----
Other	25.8	19.3	20.0	15.4	17.1	19.3	24.0	-----

¹ Changes are measured from end of quarter to end of quarter.² Preliminary.

Sources: Board of Governors of the Federal Reserve System and Federal Savings and Loan Insurance Corporation.

As discussed in Chapter 1, the principal reason for this higher growth was the new regulation that permitted the issuance of money market certificates beginning last June. This change followed upon similar, but much smaller, steps taken in 1970 and 1973. In those instances interest ceilings were raised on longer-term certificates of deposit, thus reducing somewhat the vulnerability of thrift institutions to deposit outflows. (Passbook and shorter-term certificate ceilings were also raised slightly in 1970 and 1973.)

Other less obvious institutional changes have also modified the response of the economy to credit restraint. One of these is the expansion of secondary mortgage market activity. The Federal Home Loan Mortgage Corporation, established in 1970, issues its own mortgage-backed securities and purchases mortgages from the thrift institutions. The Government National Mortgage Association has developed a procedure whereby it guarantees securities that are issued by private institutions and backed by pools of mortgages insured by the Federal Housing Administration or guaranteed by the Veterans Administration. These securities have been purchased by a broad range of investors, many of whom were not previously in the mortgage market. Some thrift institutions have also begun issuing their own bonds, for which mortgages serve as collateral.

Institutional changes have also occurred in other financial markets. Commercial banks no longer depend primarily on liquidating U.S. Government securities to obtain funds for business lending, as they had done through the early part of the postwar period. The advent of liability management (exemplified by the issuance of negotiable certificates of deposit and the use of nondeposit sources of funds) has enabled most banks to obtain the funds they want for lending, provided they are willing to pay going rates of interest. Moreover, large firms can increasingly shift their borrowing between commercial banks and open market commercial paper, and between foreign and domestic sources, in response to differences in the cost and availability of funds. Their direct access to credit markets makes them less dependent on intermediation by institutional lenders. The expan-

sion of trade credit provides a mechanism through which large firms extend this benefit to smaller customers and suppliers.

The result of these institutional changes has been to smooth the response of the economy to increased restraint in financial markets. In place of sharp changes in availability of credit, there is now a more gradual response of credit users to changes in the cost of credit. Measured application of monetary restraint has become more feasible. The degree of restraint required to achieve the desired growth in private demand is difficult to judge, however, because the response of the private sector is likely to occur more slowly and to be diffused more widely than in the past. Moreover, the indicators showing the degree of restraint have changed, and experience in implementing monetary policy under present circumstances will come only gradually.

Over the near future, nominal interest rates are likely to remain relatively high by historical standards. It will take time to reduce the rate of inflation and the inflation premiums contained in interest rates. As inflation recedes, the maintenance of a restrained monetary policy will be consistent with a decline in nominal interest rates.

THE ECONOMIC FORECAST

The economy is entering 1979 with substantial momentum, and economic expansion will be bolstered by the recently enacted tax bill, which will help to sustain consumer expenditures during the first half of the year. Later in the year, as the effect of the tax cut wears off, a slower expansion of consumer purchases is foreseen. Partly as a response to current high interest rates, housing starts are expected to decline and the growth of business fixed investment to diminish during the year (Table 21).

TABLE 21.—*Economic outlook for 1979*

Item	1978 ¹	Forecast range 1979
Growth rates, fourth quarter to fourth quarter (percent):		
Real gross national product.....	4.3	2 to 2½
Personal consumption expenditures.....	3.8	1¾ to 2¼
Nonresidential fixed investment.....	8.3	4 to 4½
Residential investment.....	-8	-8½ to -9½
Federal purchases.....	-3	¾ to 1¼
State and local purchases.....	3.5	1¾ to 2¼
GNP implicit price deflator.....	8.3	7¼ to 7½
Compensation per hour ²	9.8	8¼ to 8¾
Output per hour ².....	.5	¼ to ¾
Level, fourth quarter: ³		
Unemployment rate (percent).....	5.8	6 to 6½
Housing starts (millions of units) ⁴	2.1	1½ to 1¾

¹ Preliminary.

² Private business sector; all persons.

³ Seasonally adjusted.

⁴ Annual rate.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), and Council of Economic Advisers.

Growth is likely to be stronger in the first half of the year than in the second half. Housing starts are expected to bottom out during the fourth quarter of 1979 and begin to move up in 1980 as pressures in money and credit markets ease with the decline in the rate of inflation. The upturn in housing is a principal reason for the anticipated increase in the rate of economic growth in 1980.

The rate of increase of the GNP deflator is expected to decline from 8.3 percent in 1978 to slightly under 7½ percent during the 4 quarters of 1979; a further drop to just under 6½ percent is probable during 1980, partly as a result of a tightening of the pay and price standards. Inflation is likely to remain high during the first half of 1979, however, because of the minimum wage increase in January, the delayed effects on import prices of the decline in the value of the dollar, the oil price increases by the Organization of Petroleum Exporting Countries (OPEC), and the continued rise in food prices. As the year proceeds, these factors will put less upward pressure on prices, and the effects of the President's anti-inflation program should be increasingly felt. Consequently the increase in consumer prices is expected to fall to an annual rate of below 7 percent by late in the year.

Consumption

Consumption has been a major source of strength in the current expansion. Consumers have increased their spending by more than the rise in their after-tax incomes, reducing the saving rate from almost 8 percent in 1975 to under 5 percent in the last quarter of 1978. Some of the possible reasons for this low saving rate were discussed in more detail in Chapter 1.

In 1979 the saving rate is expected to rise moderately but remain well below its 6 percent average of the 1950s and 1960s. Much of this increase will reflect less intensive use of consumer credit, which expanded sharply during 1978. Automobile sales in particular are not likely to rise further in 1979 and may fall slightly from the high level of the 1978 model year. Purchases of furniture and household equipment may also decline as a result of the expected reduction in residential construction.

Continued growth in purchases of nondurables and services should allow personal consumption expenditures to rise in real terms at a rate of about 2 percent, close to the projected rate of growth of real GNP but below the rate of increase in real disposable income.

As inflation abates during 1979, consumer confidence in the economy should improve and thus strengthen consumer markets in 1980. The saving rate is consequently expected to decline in 1980. During that year, however, rising effective tax rates will tend to slow the growth of disposable income; the increase in consumer spending is thus likely to be somewhat less than the rise in real GNP.

Business Fixed Investment

Business fixed investment in 1972 dollars should grow at a rate of about 4 percent during 1979, measured from fourth quarter to fourth quarter. This estimate represents a slowdown from the 8.3 percent increase for 1978, but the increase is still above the expected growth in real GNP. Investment is foreseen to remain relatively strong in the first half of 1979 but to slow later in the year with the rest of the economy. Moderate improvement from the less rapid rate of the second half of 1979 is expected during the course of 1980.

Indicators of the probable pace of investment next year are mixed. Higher rates of capacity utilization are encouraging new and replacement investment, and contracts and orders for plant and equipment are rising rapidly. Orders for nondefense capital goods in October and November were 12½ percent above their third quarter level. Unfilled orders for nondefense capital goods at the end of November stood 6 percent above their September level.

Moreover the Revenue Act of 1978 should provide some encouragement for business fixed investment. Profits seem likely to remain relatively high throughout the next year, falling only marginally from their current share of GNP. The confidence of investors with regard to future inflation should improve as the Administration's anti-inflation initiatives take hold.

Not all the forces influencing business investment decisions are positive. Expectations of a slowdown in economic activity next year are widespread and may already be holding back investment plans. Nominal interest rates have risen to very high levels, and their effects will be felt increasingly as 1979 progresses. Some reduction in investment in motor vehicles may also follow the recent large purchases of cars and trucks by businesses. This drop in sales may restrain discretionary capital spending by the auto industry, although the industry will still have to maintain a high level of capital outlays to meet the requirements of government regulations.

The latest Commerce Department survey of business investment intentions found that businesses are planning to increase their outlays for new plant and equipment in 1979 by 11.2 percent in current dollars. This compares with an actual rise of 12.7 percent in 1978. If capital goods prices rise in 1979 by the 8 percent figure expected by survey respondents, the real increase in outlays for plant and equipment in 1979, measured on a year-over-year basis, would be about 3 percent. Measured from fourth quarter to fourth quarter, the increase would be less.

In the past 3 years total outlays for business fixed investment in the national income and product accounts have exceeded the amount included in the plant and equipment survey by a large and widening margin, even after allowance has been made for conceptual differences in coverage of the two series. This margin may well persist in 1979. The results of the Department of Commerce survey thus seem consistent with our forecast, which calls for a moderate slowdown this year in this key element of aggregate demand.

Housing

The number of housing starts and the real volume of residential construction are likely to decline in 1979 from the high levels of last year, in large part because prospective home buyers will be deterred by the high level of mortgage interest rates. In areas where mortgage rates are limited by usury ceilings, some constraints have developed on the availability of credit. This should not greatly affect the national total of housing starts, but it may restrain housing sales and residential construction in some parts of the country. By the fourth quarter of 1979 housing starts are expected to fall to an annual rate of around $1\frac{3}{4}$ million or somewhat less, a decline that is significant but less steep than in most postwar periods of tight money.

The prospects for housing this year will depend importantly on whether thrift institutions continue to attract funds through money market certificates and to make the proceeds available to potential home buyers. Margins between mortgage yields and the cost of issuing the certificates have narrowed. Some thrift institutions may therefore pay less than the maximum permissible yield on money market certificates and in other ways market them less aggressively. Moreover, there may be some diversion of funds from mortgages to higher-yielding short-term liquid assets. The potential for strengthening longer-term earnings by issuing money market certificates and acquiring long-term, high-yield mortgages in such a period is nonetheless attractive.

The effect of these new money market certificates in reducing current earnings of thrift institutions is a matter of concern. However, the certificates still represent a small proportion of total deposits (less than 10 percent at year-end). Moreover, at least half of the money going into the money market certificates appears to be coming from outside the thrift institutions, and some of the remainder is being converted from high-yielding certificates rather than from low-yielding passbook accounts. In view of the high level of earnings on the mortgage portfolio—about $8\frac{1}{2}$ percent in the second half of last year—thrift institutions in general are in a favorable position to cope with higher deposit costs for a limited time, although the earnings and cost positions of individual institutions undoubtedly vary considerably.

Given reasonable prospects for the availability of mortgage credit, the primary determinant of the volume of housing starts will be the response of home buyers and builders to the higher level of mortgage interest rates. The rate on new mortgage commitments had risen sharply to nearly 11 percent by the end of last year.

Virtually all of the projected decline in housing starts is likely to be in single-family units. Following last year's upturn, construction of multifamily units will probably level out in 1979 in response to the high costs for building loans, which often have to be carried a long time. But the decline in the rental vacancy rate from a peak of 6.2 percent in 1974 to a historically

low level of 5.0 percent late last year implies a strong demand that should sustain multifamily construction.

The demand for single-family homes will also be supported by demographic factors. Between 1973 and 1978 the number of people in the 25–29 age group grew by 16 percent, and the 30–34 group grew 22 percent. By 1983, population in these two age groups is expected to rise nearly 14 percent, somewhat below the rate of the last 5 years but far above the rates prevailing before 1970. In fact the population in this age group will grow more in the next 5 years than it did in the 15 years up to 1970. The largest number of first-time home buyers is in the 25–34 age bracket. More than half of the married couples aged 25 to 29 and nearly three-fourths of those between 30 and 34 own their own homes. Although the proportion of married couples in the total number of U.S. households has been declining, this change has been offset by the rise in homeownership among single persons.

Given the favorable demographic trends and low vacancy rates, it is quite likely that housing starts will begin to rise as inflation and nominal interest rates ease late next year. The forecast anticipates a rise in housing starts to about 1.9 million units by the fourth quarter of 1980. Residential construction is expected to add nearly as much to real GNP growth in 1980 as it subtracted in 1979. This projected turnaround in housing activity is the principal reason for expecting somewhat stronger economic growth in 1980.

Inventories

Businesses throughout this recovery have pursued a cautious policy on inventory accumulation, as noted in Chapter 1. Ratios of inventories to sales have been kept relatively low for this stage of the recovery, and there are no major inventory imbalances that would depress economic activity this year. Since growth in final sales is expected to moderate in 1979, however, the rate of inventory investment may decline slightly if businesses continue to pursue their conservative inventory policies, as seems likely. Heightened inventory accumulation may occur in 1980 as final sales again become stronger.

Net Exports

During 1978, for the first time in this recovery, the foreign sector provided some support to the expansion of GNP. The volume of exports rose, and the growth of import volumes slowed from its rapid pace at the beginning of the year. The foreign sector should continue to contribute to growth in 1979.

In many foreign countries, growth of domestic demand began to pick up during the course of 1978, and this movement should increase somewhat more this year, chiefly because of a shift toward more expansionary fiscal policies in Germany and Japan in late 1978. More rapid growth of foreign demand will help to raise demands for U.S. exports. At the same time, the

deceleration of growth in the United States is acting to reduce the growth of import volumes. In 1979, for the first time since 1975, growth rates in the major foreign countries are likely, on average, to exceed growth in the United States.

The marked depreciation of the dollar from September 1977 through October 1978, which has been only partially reversed since then, will also help to improve our net exports in 1979. Since trade volumes adjust only slowly to changes in relative prices, the principal effects of the dollar depreciation on imports and exports are not yet evident.

U.S. exports tend to respond more strongly to relative price shifts than imports do, but with longer lags. Exports of nonagricultural merchandise in 1972 dollars are expected to grow by 7 to 10 percent in 1979; agricultural exports, on the other hand, are not likely to increase from current high levels. Slower economic growth in 1979 and last year's depreciation of the dollar should limit the rise in the volume of non-oil imports this year. Despite an expected rise in the volume of oil imports, the merchandise trade balance should improve in 1979.

An important development in the structure of our foreign balance over recent years has been a marked surplus in net exports of services, especially fees, royalties, and earnings of American enterprises abroad. In the early years of this decade the United States was near balance on services, but in 1977 the service component of the current account showed a surplus of \$16 billion, and the surplus rose to an annual rate of \$18 billion in the first 3 quarters of 1978. In the near future this trend should continue, since the comparative advantage of a mature industrial country like the United States will increasingly lie in exporting capital and technology.

Government Demand

Purchases of goods and services by both the Federal and the State and local sector will rise in 1979 and 1980, but the amount of growth will be relatively small in real terms.

The President's budget calls for Federal outlays of \$493 billion in fiscal 1979 and \$532 billion in the next fiscal year. Purchases of goods and services, comprising roughly one-third of these expenditures, are concentrated in defense outlays, where Federal expenditures are projected to rise in real terms. Total real Federal purchases are expected to increase 1 percent during 1979 and to fall slightly during 1980. The 1979 increase follows a small decline in real Federal purchases during 1978.

Although State and local purchases will continue to grow in real terms during 1979 and 1980, two recent developments indicate a slowing in the rate of increase from the 3½ percent rate of 1978. First, as Chapter 1 noted, sentiment among voters appears to favor limiting the growth of State and local taxes and expenditures, as evidenced by the passage of Proposition 13

in California and successful budget-cutting referenda in eight other States in 1978. Second, Federal aid to State and local governments, which had been growing rapidly, will level off over the next 2 years.

These developments suggest that the rate of growth in real State and local purchases may moderate to about a 1½ to 2 percent annual rate over the next 2 years. The operating balance of the State and local sector, which was in surplus by about \$6.6 billion in 1978, is expected to shift to a small deficit in 1979 and 1980.

Labor Force and Employment

Growth in the labor force and in employment cannot be expected to continue at the exceptionally rapid rates of the past 3 years. The slower rate of real economic growth foreseen for 1979 and 1980 and trends in the age structure of the population make it reasonable to expect growth rates for both labor force and employment to decline toward their long-term trend.

The civilian labor force has grown at an annual rate of about 2¾ percent over the past 3 years, up from an average around 2¼ percent in the first 5 years of the decade. This recent pace is much more rapid than the average annual growth of 1.7 percent during the past 30 years. There have been two principal reasons for the relatively high growth of the labor force lately. The number of persons between the ages of 16 and 24, the normal age for entering the labor force, is large because of the peak birth rates in the late 1950s; and a higher proportion of women and teenagers have joined the labor force. Reductions in the size of the Armed Forces were also a factor in the earlier part of the decade. In the past 3 years the labor force participation rate has gone up a full 2 percentage points. The rapid expansion of employment opportunities during this period has undoubtedly had an important bearing on this striking increase.

In 1979 and 1980 the factors outlined above are expected to have less effect on labor force expansion. The rate of growth in the noninstitutional population at ages 16 and older will decline from the 1.7 percent per year average of the early and middle 1970s to 1.5 percent in 1979 and 1.4 percent in 1980. Slower growth of real output will cause the participation rate to rise less rapidly, but it may remain above its long-term average annual growth of 0.2 percentage point. The growth rate for the civilian labor force is expected to average about 2¼ percent per year in 1979 and 1980.

The rate of increase in employment will be limited by slower growth in real aggregate demand. Average employment in the fourth quarter of 1979 should be about 2 percent above that in the fourth quarter of 1978. Employment growth during 1980 is expected to be about 2¼ percent, compared to an average annual employment growth in the preceding 3 years of over 3½ percent.

These projections concerning employment and the labor force imply a small rise in the unemployment rate. Unemployment is expected to increase to about 6¼ percent of the labor force by late 1979 and to remain near that level in 1980. Forecasts of unemployment rates must be regarded as highly uncertain, however, because of the difficulties inherent in predicting growth in the labor force, in productivity, and in output.

PRICE AND WAGE DEVELOPMENTS

The outlook for prices and wages in 1979 is affected in important ways by the Administration's anti-inflation program. A significant reduction of inflation will require widespread cooperation and compliance with the wage and price standards.

The wage standard limits increases in compensation generally to 7 percent, but even with full compliance by groups not exempt the rise in private compensation is likely to exceed 7 percent. Equity and flexibility require some groups to be exempt from the pay standard, including workers who are covered by collective bargaining agreements negotiated before the announcement of the anti-inflation program on October 24, 1978, and those who were earning less than \$4.00 per hour on October 1, 1978. Many workers qualifying for the low-wage exemption received substantial increases on January 1, when the minimum hourly wage was raised from \$2.65 to \$2.90 as a result of the 1977 amendments to the Fair Labor Standards Act. Others in this group may be indirectly affected if wages slightly above \$2.90 are raised to maintain normal wage differentials. On average, wages and private fringe benefits of those qualifying for the low-wage exemption are expected to increase between 8½ and 8¾ percent.

Deferred increases in compensation due in 1979 under existing collective bargaining agreements are also exempt. These increases vary considerably, but the average, including allowance for cost-of-living provisions, is likely to be in the 8¼ to 8½ percent range.

New labor contracts will play an important role in wage changes in 1979 when a new round in the 3-year collective bargaining cycle begins. For these contracts, an employee group is in compliance if the agreement provides for pay increases that do not exceed 7 percent per year over the life of the contract. But increases in any one year may be as large as 8 percent. Industries where major multiyear agreements will be negotiated in 1979 include petroleum, trucking, rubber, electrical equipment, meatpacking, and automobiles. In all, the wages of almost 4 million workers in bargaining units with 1,000 or more workers, and of a similar number in smaller units, will be determined for the next 2 to 3 years. In the previous 1976-77 round of negotiations many of these agreements provided for double-digit annual rates of pay increase. A repetition of such large increases would have serious inflationary consequences not only in 1979 but in subsequent years.

Despite the large number of exempt workers, a high rate of compliance by those not exempt—who account for about two-thirds of the entire wage

and salary bill—will still produce significant deceleration. Substantial compliance would limit the rate of increase of total private wages and fringe benefits to about 8 percent. Total employee compensation per hour, including employer payroll taxes, would then increase by about 8½ percent in 1979, a significant deceleration from the 9¾ percent increase in 1978.

Because of the continued rapid escalation of food prices, increases in the minimum wage and social security taxes, the rise in OPEC oil prices, and the continued pass-through of higher prices for other imports, inflation is likely to remain relatively high in the first part of 1979. As the year progresses, the rise in consumer prices should fall somewhat below a 7 percent annual rate, a rate consistent with the underlying rise in labor costs.

A deceleration of wage and price increases during 1979 will be an important first step in braking the momentum of inflation. Expectations of continuing inflation would then begin to give way to the prospect of smaller increases in wages and prices. Further progress could be made more certain in 1980 by adjusting the pay and price standards. The special factors boosting inflation in 1978 and 1979—food price increases, payroll taxes, medical costs, depreciation, and energy prices—may also have less effect in 1980. We can reasonably expect further gains in reducing inflation. The rate of increase of consumer prices is projected to fall to just under 6½ percent during 1980.

Food prices over the 4 quarters of 1979 are expected to rise between 7 and 8 percent, significantly below last year's 11 percent. During the first half of the year, however, food price increases may be larger than during the second half, as the food processing and marketing system reacts to increased costs for labor, energy, packaging, and transportation, as well as to higher prices for wheat, cocoa, and sugar. Prices of dairy products and the cost of food consumed away from home are projected to rise considerably in the first half of the year.

An important reason for higher food prices in 1979 is likely to be a continued reduction in supplies of beef. Because of a decline in the number of cattle, total beef production in 1979 is likely to be lower than in 1978. Production of pork and poultry is expected to rise significantly, however, especially in the second half of the year, and per capita consumption of all meats is therefore likely to decline by less than 1 percent.

Some encouraging signs for food prices can be discerned. After increasing very sharply in the first half of 1978, the index of prices that farmers receive for crops remained quite stable during the second half of the year. This suggests that, with normal winter and spring weather, no immediate inflationary pressure should appear at the retail level because of abnormal increases in farm crop prices. The favorable prospects for the grain and soybean crops that will be harvested in the Southern Hemisphere this spring and the higher level of world stocks of these commodities are also reassuring. Hog and poultry producers are geared to expand production significantly, helping to offset lower beef supplies. As the Administration's

anti-inflation program begins to show tangible results, pressure on processing and marketing margins is also expected to moderate.

Energy prices will rise substantially in 1979, in large part as a result of the 14½ percent increase in oil prices announced by OPEC. This OPEC increase will add almost 0.4 percent to the consumer price index by the end of 1979 (compared to what would have happened if OPEC oil prices had remained stable), and some further effect will be felt in 1980. Domestic energy prices will also increase. The deregulation of natural gas will add to the price of energy, and further rises in coal prices can also be expected.

Mortgage interest costs are likely to rise less rapidly in 1979 than in 1978 as nominal mortgage interest rates level off and as the housing market weakens. In 1978 mortgage interest costs, which include the effects of rising prices for homes and higher mortgage interest rates, rose about 20 percent.

Import prices have already risen significantly in conjunction with the decline in the dollar on foreign exchange markets during 1978. To the extent that foreign exporters do not absorb the effects of this depreciation, some further price rises are likely in 1979.

Hospital costs, which for several years have increased at nearly twice the rate of overall consumer prices, moderated somewhat in 1978. Further moderation is expected in 1979 and 1980 in response to official action at two levels: hospital cost containment legislation to be proposed by the Administration, and State cost containment programs.

ECONOMIC OBJECTIVES AND POLICY FOR THE LONGER RUN

During the past 2 years this Administration has developed its economic policies within the context of longer-term objectives for the economy. That approach was embedded in law during 1978 by the planning procedures incorporated in the newly enacted Humphrey-Hawkins Full Employment and Balanced Growth Act. This act establishes procedures for developing and reviewing economic policies within the government, requires the government to set 5-year goals for the American economy, and challenges it to formulate policies to achieve them.

For the past three decades the Employment Act of 1946 has been the basic guide for the President and the Congress in the development of economic policies. The Employment Act charged the government with responsibility to promote maximum employment, production, and purchasing power through the use of the policy tools at its disposal. Since 1946 the instruments of fiscal and monetary policies have been used in ways that contributed to economic prosperity. In recent years, however, the view has become widespread that amendments to the Employment Act would be an appropriate response to the changed economic circumstances and the serious new difficulties that we face in today's economy. The Full Employment and Balanced Growth Act of 1978 was designed to address these difficulties.

THE HUMPHREY-HAWKINS ACT

The new law strengthens the Employment Act in three essential respects. It explicitly identifies national economic priorities and objectives; it directs the President to establish, and the Congress to consider, goals based on those priorities and objectives; and it creates new procedures and requirements for the President, the Congress, and the Federal Reserve to improve the coordination and development of economic policies.

The priorities and objectives set forth in the new act are varied, reflecting the nature of today's economy. The act establishes as a national goal "the fulfillment of the right to full opportunities for useful paid employment at fair rates of compensation of all individuals able, willing, and seeking to work." The new act also specifies "reasonable price stability" as a national objective and recognizes the need to improve government policies for dealing with inflation. Emphasis is placed on encouraging private and public capital formation to promote full employment, growth in productivity, and price stability. The act responds to the widespread desire for reduced governmental intervention by calling for steady reductions in the share of the Nation's output accounted for by governmental spending and by relying primarily on the private sector to meet the act's objectives. It also specifies that a balanced Federal budget, consistent with the achievement of other goals, is to be an objective of national policy. Finally, the act stresses the position of our economy in international markets. Those who make public policy are called on to work to improve the trade balance of the United States as well as its competitive position in world trade, while promoting fair and free international trade and a sound and stable international monetary system.

To provide a better focus for the government in its effort to achieve these general objectives, the Full Employment and Balanced Growth Act requires that the Administration set annual numerical goals for key indicators in the economy over a 5-year period, including employment and unemployment, production, real income, productivity, and prices. Goals for the first 2 years of the 5-year period are considered short-term objectives, and the President is required in his budget to recommend levels of outlays and receipts consistent with them. Goals for the final 3 years are known as medium-term goals, and projections of outlays and receipts consistent with them are to be included in the President's budget.

The act establishes new procedures for developing economic policies within the Federal Government. Each year the President is to present a program for achieving the economic goals he has set. As a matter of general guidance, the act provides that the government should rely as far as possible on growth in the private sector to meet goals for employment and output. At the same time, it calls the President's attention to a variety of governmental measures for dealing with unemployment, inflation, inadequate capital formation, and other problems. No new programs are specifically required or author-

ized in the act, however, and the President would need additional legislation to put new programs into effect.

To improve the coordination of fiscal and monetary policies, the act requires the Federal Reserve Board to report to the Congress twice each year on its objectives and plans with respect to monetary policies. The Board, in its reports, is required to comment on the relation between its plans for monetary policy and the short-term economic goals established by the President.

The policies of the President and the Federal Reserve Board will be considered jointly by the Congress. The act directs the Joint Economic Committee of the Congress to review reports from the President and the Federal Reserve Board, together with submissions from the committees of the Congress, and to offer its findings regarding the economic situation to the Budget Committee in each House prior to development of the First Concurrent Resolution on the Budget. Four hours during the debate on that resolution in each House will be reserved for debate on economic policies and goals and specific budgetary plans for achieving economic objectives. Through this process of reports and debate, the new act aims to improve economic decisions by providing better ways of arriving at them and better information on which to base them.

The Full Employment and Balanced Growth Act stipulates that in the first *Economic Report* published under the act the goal for unemployment in 1983 should be 4 percent for workers aged 16 and over and 3 percent for workers aged 20 and over. The act also requires that the goal for the rate of increase in the consumer price index in 1983 should be 3 percent.

Beginning with the 1980 *Economic Report of the President*, the President is authorized under the new act to change the timetable for achieving the goals if he determines that such a change is necessary. If the President changes the 4 percent and 3 percent unemployment goals, however, his *Economic Report* must state the year that he expects the unemployment goals to be reached.

GOALS FOR THE ECONOMY TO 1983

Lower unemployment and inflation rates are basic objectives, but they are not, of course, the only economic aims of the Administration or the new act. As noted earlier, the Humphrey-Hawkins Act places a high priority on improving the competitive position of the U.S. economy in the world, encouraging the growth of investment and capital formation, reducing the share of Federal spending in the Nation's output, and balancing the budget. In formulating economic policies for the next 5 years, these additional concerns have been taken into consideration.

Economic goals consistent with those specified in the act are shown in Table 22. The short-term goals for 1970 and 1980 represent a forecast of how the economy will respond over the next 2 years not only to the budgetary policies proposed by the President for fiscal 1979 and 1980 but to the anti-inflation program announced on October 24. The medium-term goals for

1981 to 1983 are not forecasts. They are projections of the economic performance that would be required to reach the 1983 unemployment and inflation goals specified in the act.

TABLE 22.—*Economic goals, 1979–83*

Item	1979	1980	1981	1982	1983
	Level, fourth quarter ²				
Employment (millions).....	97.5	99.5	102.6	105.5	108.3
Unemployment (percent).....	6.2	6.2	5.4	4.6	4.0
	Percent change, fourth quarter to fourth quarter				
Consumer prices.....	7.5	6.4	5.2	4.1	3.0
Real GNP.....	2.2	3.2	4.6	4.6	4.2
Real disposable income.....	2.8	2.3	4.4	4.4	4.0
Productivity ¹.....	.4	1.1	1.8	2.0	2.0

¹ Based on total real GNP per hour worked.

² Seasonally adjusted.

Source: Council of Economic Advisers.

The rate of GNP growth for the 1981–83 period that will be needed if unemployment is to be reduced to 4 percent by 1983 will depend on the growth rates of the labor force and productivity. Trends in these variables are hard to predict, as experience in the past 2 years indicates.

Over the next 5 years, growth in the population aged 16 and over will decline significantly, from about 1.6 percent in 1978 to about 1.0 percent in 1983. The rate of increase in the labor force participation rate (the ratio of persons in the civilian labor force to the total number within the working-age range) also seems likely to slow. During recent years the participation rate has increased by at least 0.8 percentage point annually, well above the long-term trend. With slowing growth both in the working-age population and in the participation rate, increases in the labor force will taper off from current rates of 2 to 3 percent a year to perhaps 1¾ to 2 percent 5 years from now.

This slowing of labor force expansion will reduce the GNP increase that will be needed to achieve any given reduction in the unemployment rate. At the same time, however, it is reasonable to expect productivity growth to improve somewhat over that of 1978. The slowing of labor force expansion will be accompanied by a shift in the age distribution of the labor force toward more mature workers, and the average experience of the labor force will also be lengthened by a reduction in the number of new entrants. These developments will help to stimulate greater productivity growth. Strong growth of investment could also improve the outlook for productivity.

These considerations suggest that potential GNP over the next 5 years might continue to increase at about the 3 percent rate of the past 5-year

period. There may be some slowdown in the growth of potential output during the next 5-year period as increases in the working-age population taper off, but information on labor force and productivity trends is not sufficient to permit a forecast of when it will happen.

In developing the projections in Table 22 for 1981 to 1983, a potential GNP growth of 3 percent was therefore assumed. The trend rate of increase in productivity underlying this estimate is $1\frac{1}{2}$ percent, while the trend rate of increase in the labor force is 2 percent; these two numbers add to more than the 3 percent increase in potential GNP since average hours worked are expected to keep declining, as they have done through most of the postwar period. The yearly increases in the labor force and productivity shown in the table vary from the long-term trend because they will be influenced by the actual growth rate of real GNP in that year.

Jobs and training programs to reduce structural unemployment might make it possible to achieve the goal of a 4 percent overall unemployment rate, and 3 percent for adults, with a somewhat lower rate of growth of real output. Although such programs are primarily aimed at reducing the unemployment rate that is consistent with stable prices, they may, at least in the short run, tend to increase the level of employment and reduce the unemployment rate that is consistent with any given level of real output.

The increase in real disposable income from 1981 to 1983 is derived from historical relationships between that variable and real GNP, assuming no major changes in income shares between personal income and corporate profits.

REQUIREMENTS TO ACHIEVE THE ECONOMIC GOALS

By any criterion these are very ambitious goals. Achieving all of them simultaneously would demand not only a performance by the American economy that is unprecedented in peacetime history, but also government programs that can deal effectively with some of our most intransigent problems, particularly inflation and structural unemployment. The fact that the aims are ambitious makes it all the more important to consider carefully and realistically the obstacles to achieving them.

The difficulties likely to be encountered in moving the economy along the path set out in Table 22 follow two broad lines. First, will aggregate demand for goods and services be great enough to propel the economy along a relatively fast growth track from 1981 to 1983? What kind of budgetary policies would be required over the next several years to achieve this kind of economic growth? Second, if real economic growth did proceed at the pace needed to reduce the unemployment rate to 4 percent by 1983, what are the prospects that the inflation rate would decline to 3 percent by that year, and what are the principal obstacles to such a decline?

Answers to these two groups of questions are related. The likelihood of achieving rapid and sustained economic growth while inflation remains high is very small. Inflation gives rise to forces that raise interest rates and

discourage investment. It also increases the uncertainties facing businesses and consumers, and at times in the past it has severely weakened their propensity to spend. Because inflation reduces confidence abroad as well as at home, it can undermine the value of the dollar, giving rise to further inflationary pressures. The new act recognizes that inflation and growth are not separable concerns, and that public policy must seek ways both to achieve low unemployment and to control inflation.

Adequacy of Aggregate Demand

The growth rates of real GNP that will be needed in 1981–83 to reach the goal of a 4 percent unemployment rate by the end of that period are quite high by past standards, but they are not unprecedented. The average rate of growth for those 3 years, 4½ percent, is actually somewhat lower than the average rate of economic expansion from the last quarter of 1975 to the last quarter of 1978, which was 4.8 percent. In evaluating the difficulties in maintaining a 4½ percent average yearly growth rate of real GNP, however, one should recall that the current expansion will soon be entering its fifth year.

The course of economic policies that would ensure sufficient aggregate demand growth to permit the economy to grow at a 4½ percent rate from 1981 through 1983—and still avoid excess demand that would interfere with the unwinding of inflation—can only be described in very general terms. Our ability to foresee economic developments and to design appropriate policies to deal with emerging problems over a 5-year period is extremely limited. The outlook for 1979 is uncertain, the prospects for 1980 are much more so, and the probable course of later developments can be foreseen only dimly. The best we can do is to rely on past experience to indicate possible future patterns of economic activity and tell us the kinds of economic policies most likely to contribute to a strong economy over the next 5 years.

One way to evaluate the prospects for maintaining strong economic growth is to consider the distribution of saving and investment by sector. Defined in terms of the national income and product accounts, a sector is a net saver if its income receipts exceed its expenditures. If expenditures exceed receipts, the sector has engaged in dissaving, that is, in net investment. For the economy as a whole, expenditures and receipts are two sides of the same coin, and hence measured saving and investment must always be equal. What one sector saves, another must invest.

This equality of saving and investment in the aggregate is, of course, an accounting identity. There is no reason why decisions to save and invest should lead to a balance in each of the various sectors of the economy, and generally they will not. But when desired amounts of saving and investment do not match, adjustments occur in the economic system—such as changes in interest rates, levels of economic activity, or prices—that force saving and investment into balance.

The relation between saving and investment and the level of economic activity can be seen by comparing the distribution of net saving by sector in 2 recent years, 1973 and 1975 (Table 23). In 1973, a year of relatively full employment, investment incentives in the private sector were strong. Gross private investment—including residential construction and business outlays for plant, equipment, and additions to inventories—was large enough that it more than offset gross private saving. The governmental sector was close to balance: a small deficit in the Federal sector (as measured in the national income and product accounts) was offset by a surplus in State and local governmental budgets. In 1975, a year of recession, investment propensities were comparatively weak. Gross private investment was far below the volume of private saving, even though the latter was not much larger in relation to GNP than it had been in 1973. The counterbalancing item was a deep governmental deficit mainly due to the fact that Federal receipts were depressed below the levels that would have occurred in a more fully employed economy.

TABLE 23.—*Net saving by sector, 1973 and 1975*

Sector	[Net saving, or investment (-)]			
	1973		1975	
	Billions of dollars	Percent of GNP	Billions of dollars	Percent of GNP
Private sector:				
Personal	70.3	5.4	83.6	5.5
Business ¹	-77.2	-5.9	-7.4	-.5
Government sector:				
Federal	-6.7	-.5	-70.6	-4.6
State and local	13.0	1.0	6.2	.4
Foreign sector ² .....	.6	(*)	-11.9	-.8

¹ Gross business saving plus the statistical discrepancy minus gross private domestic investment.

² Net capital grants received by the United States less net foreign investment.

³ Less than 0.05 percent.

Source: Department of Commerce, Bureau of Economic Analysis.

Maintaining relatively strong growth from 1981 through 1983 will require that the excess of private investment over private saving be large enough to offset the net saving by both the governmental sector and the foreign sector in a high-employment economy. Large governmental surpluses would tend to make that task more difficult, as would large net saving by the foreign sector.

Prospects for State and Local Budgets

During recent years the aggregate surplus in the State and local sector, as measured in the national income and product accounts, has been fairly large, as much as 1.6 percent of GNP in 1977. The magnitude of this surplus is mainly the result of net payments into social insurance funds for

State and local employees. But in 1976 and 1977 the aggregate operating and capital budget of State and local governments was also in surplus because of slow growth of capital expenditures and substantial increases in Federal grant programs. During 1978 the operating and capital accounts have returned to approximate balance; given the strong demands by citizens to reduce State and local taxes, a return to surpluses seems unlikely over the next 5 years. The amount of net saving in the State and local sector between now and 1983 is therefore likely to depend mainly on the accumulation rate of the social insurance funds.

That accumulation rate has been moving up rapidly in the past decade, from about one-half of 1 percent of GNP in the middle 1960s to about 1 percent at present. This buildup derived from the relatively rapid increase of State and local employment during the period and the effort by State and local governments to fund their pension liabilities. The upward trend in the ratio to GNP is not likely to continue. Growth of employment in State and local governments no longer exceeds the national average, and a good deal of funding of existing pension liabilities has already been accomplished. Projections by several prominent private forecasting services put the accumulation rate of State and local social insurance funds in 1982 and 1983 at around three-fourths of 1 percent of GNP.

Net Foreign Saving

The measure of net saving by the foreign sector in the national income and product accounts is conceptually similar to the current account deficit in the balance of payments. (The principal difference between them is that the unrepatriated earnings of U.S. firms abroad are counted as an export of services in the current account balance, but not included as part of net saving by the foreign sector.) A projection of net foreign saving or of the current account balance in 1983 or any single year would be extremely hazardous. In the past 2 years, net foreign saving has been about 1 percent of GNP; in 1975, on the other hand, the foreign sector showed net dissaving—that is, net investment—by an amount equal to 0.8 percent of GNP. Relative growth rates in economic activity here and abroad, differences in the rate of wage and price increases, changes in exchange rates, and other factors can cause large movements from one year to the next in our current account balance and hence in net foreign saving.

Looking at trends over a 5-year period, it would be reasonable to expect market forces to bring receipts and payments on current account close to balance, and the net amount of foreign saving close to zero. A tendency in that direction is already under way. This year the current account deficit is forecast to decline significantly, and a further reduction in 1980 is expected. By 1982 and 1983, therefore, a reasonable forecast of net saving by the foreign sector would be zero.

The Federal Budget

Prospects for the Federal budget, of course, depend importantly on the fiscal policies pursued in the years from 1981 to 1983. If there were no further changes in tax laws or Federal expenditure programs other than those recommended in the fiscal 1980 budget, and if the economy grew as described in Table 22, Federal receipts would rise much faster than outlays. With such a "current policy" budget (Table 24), Federal outlays would decline as a share of GNP to under 20 percent by 1983; but Federal receipts would rise as a proportion of GNP, reaching nearly 22 percent by 1983. This rise in receipts results from inflation and real growth, which push individuals into higher tax brackets, and from the impact of large increases in social security taxes scheduled under current law, particularly in calendar years 1981 and 1983. The unified budget would therefore move from a deficit of \$29 billion in fiscal 1980 to a surplus of \$73 billion by fiscal 1983.

TABLE 24.—Federal unified budget receipts and outlays under current policy budget, fiscal years 1979–83

[Fiscal years]					
Item	1979	1980	1981	1982	1983
Billions of dollars:					
Receipts.....	456.0	502.6	576.8	652.6	718.3
Outlays.....	493.4	531.6	578.0	614.9	645.6
Surplus or deficit (—).....	-37.4	-29.0	-1.2	37.8	72.7
Percent of GNP:					
Receipts.....	19.9	20.1	20.9	21.6	21.9
Outlays.....	21.6	21.2	21.0	20.3	19.7
Surplus or deficit (—).....	-1.6	-1.2	(°)	1.2	2.2

° Less than 0.05 percent.

Sources: Department of the Treasury and Office of Management and Budget.

A 1983 Federal surplus of that size, combined with a State and local surplus of three-fourths of 1 percent of GNP, would imply an overall government surplus equal to 3 percent of GNP, which is much larger than we have usually seen during periods of high employment. Maintaining a strong growth of economic activity under such circumstances would require a substantially larger excess of private investment over private saving than has been typical of past periods of high employment.

Table 25 shows the balance between investment and saving in the private sector for selected periods of relatively high employment: 1952–53, 1955–56, 1965–66, 1972–73, and the past 2 years. The forecast for 1979–80 is also presented. The difference between private saving and investment in periods of high employment has varied considerably, but the excess of private saving over investment has not been more than 1¼ percent of GNP. A large surplus in the governmental sector would of course provide ample funds for financing investment outlays, and thus tend to encourage a high rate of private invest-

ment. But past experience suggests that an excess of private investment over private saving equal to 3 percent of GNP would not be realized even under the best circumstances.

TABLE 25.—*Private net saving and investment and the unemployment rate, 1952–80*

Period	Personal saving		Business net investment		Excess of business investment over personal saving		Unemployment rate (percent)
	Billions of dollars	Percent of GNP	Billions of dollars	Percent of GNP	Billions of dollars	Percent of GNP	
1952–53 average.....	16.5	4.6	12.2	3.4	-4.3	-1.2	3.0
1955–56 average.....	17.3	4.2	20.7	5.1	3.5	.8	4.2
1965–66 average.....	31.6	4.4	28.3	3.9	-3.3	-.5	4.2
1972–73 average.....	59.8	4.8	66.4	5.4	6.6	.5	5.2
1977.....	66.9	3.5	69.2	3.7	2.3	.1	7.0
1978 ¹	76.7	3.6	99.9	4.7	23.2	1.1	6.0
1979–80 average ²	87	3.6	109	4.4	22	.9	6.1

¹ Preliminary.

² Forecast.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), and Council of Economic Advisers.

Viewing the issue from a somewhat different vantage point, the rise in Federal tax receipts from 20 percent of GNP in fiscal 1980 to nearly 22 percent 3 years later would represent a record peacetime increase in the burden of taxation on the private economy. Maintaining strong growth in private consumption and investment in the face of such an increased fiscal drag would be virtually impossible. Adjustments of fiscal policy from the current Administration policy budget would be needed to keep the economy moving forward steadily and strongly.

In principle, a lessening of restraint through fiscal policy adjustments could be accomplished either by increasing Federal outlays above the current policy base or by cutting tax rates. Relying mainly on reductions in taxes to promote growth in the private sector would be consistent with the objectives of the Humphrey-Hawkins Act and with the goals of this Administration. It would also prevent tax burdens from reaching an unprecedented level.

The appropriate magnitude and timing of such adjustments cannot, however, be determined now. The fiscal policy needed to maintain a smoothly functioning economy from 1981 through 1983 will depend on spending propensities of consumers and businesses, the amount of stimulus or drag on the economy from the foreign sector as well as from State and local government budgets in those years, developments affecting wages and prices, the course of monetary policy, and so on. The stronger the autonomous growth in the non-Federal sectors of the economy, the smaller the fiscal policy adjustments needed to keep the economy growing along the path

described in Table 22, and the more rapid the progress toward a balanced budget. Achieving a balanced budget is consistent with the principles of the new legislation. But the speed with which that objective can be realized will depend on developments that cannot now be foreseen.

Achieving a balanced Federal budget and at the same time maintaining a high growth rate of real GNP do not appear to be inherently conflicting aims. If the Federal budget were in balance in 1983, the excess of private investment over saving in 1983 would have to be roughly 1 percent of GNP, about equal to the probable magnitude of the State and local surplus. Such a relationship is within the boundaries of historical precedent. It occurred in 1955-56 and again last year. And the forecast for 1979 and 1980 implies a continuation of private investment at a rate that would exceed private saving by only a little less than 1 percent.

Factors Affecting Investment and Saving

Demographic factors are likely to favor relatively strong investment growth over the next 5 years. As noted earlier in this chapter, the postwar baby boom will give rise to very large increases during the next 5 years in the prime home-buying age group (25-34 years). The demand for housing is therefore likely to be robust in the years immediately ahead.

Demographic factors will also work somewhat to keep the personal saving rate low compared to the early 1970s. The 1972-73 Consumer Expenditure Survey data (Table 26) indicate that personal saving rates are about the same between the ages of 25 and 54, but persons in the 55-64 age group save a considerably higher proportion of their income than others. The number of people in this age group will be rising at a much slower rate than the 1.5 percent average increase for the group aged 20 and over. Moreover, the group aged 65 and over will be growing somewhat more rapidly than the average, and the typical saving rate for this group is comparatively low. It is true that the population under 25 will be declining during the next 5 years, and households with heads under 25 tend to be dissavers. But the proportion of total income and saving accounted for by this group is not large.

TABLE 26.—*Saving rate and population growth, by age of household head*

[Percent]			
Age of household head (years)	Saving rate, ¹ 1972-73	Distribution of disposable personal income, 1972-73	Projected annual population growth rate, 1980 to 1985
Under 25.....	-6.9	5.3	-0.3
25-34.....	9.4	20.4	1.8
35-44.....	9.7	21.0	4.1
45-54.....	9.2	24.5	-.2
55-64.....	11.2	17.0	.5
65 and over.....	6.1	11.8	1.8

¹ Saving as percent of disposable personal income.

Sources: Department of Commerce (Bureau of the Census) and Department of Labor (Bureau of Labor Statistics).

A substantial increase in business investment in the period ahead would be required to improve productivity. Growth in the ratio of capital to labor inputs has been declining since the late 1960s; in recent years, in fact, the ratio of capital to labor inputs has not increased at all: the labor force has expanded rapidly while growth in the capital stock has slowed. This decline in capital intensity has been one cause of the lower rate of productivity growth typical of this period. Over the next 5 years, business fixed investment will have to increase rapidly if the aggregate capital-to-labor ratio is not to fall even further.

High investment requirements do not, of course, translate directly into incentives for businesses to press forward with investment programs to ensure satisfactory growth in the stock of capital. Making certain that the incentives to invest in plant and equipment will encourage the needed rate of capital expansion must be a fundamental aim of economic policy. Policies toward this end are discussed more fully later in this chapter.

Perhaps the most important single contribution to this objective would be lower inflation. Expectations that the inflation rate will decline steadily over the next 5 years would directly attack one of the obstacles to the recovery in business investment, since the uncertainty faced by business has been an important deterrent to investment planning. Indirectly, reduced inflation would have even larger effects on financial markets. With declining inflation, we could look forward confidently to a marked fall in short- and long-term interest rates, to strongly rising stock prices, and hence to a reduction in the cost of both debt and equity capital. Thus, if inflation can be steadily reduced over the next 5 years, prospects would be much improved for achieving a healthy growth in business investment.

ATTAINING THE GOALS FOR UNEMPLOYMENT AND INFLATION

The most difficult problem we as a Nation will face in reaching the goals of the Humphrey-Hawkins legislation is to reduce unemployment to 4 percent and simultaneously lower the rate of inflation to 3 percent. Although our economy was operating at a level somewhat below potential in 1978, intensified pressures on wage rates and prices have already appeared.

The Humphrey-Hawkins Act recognizes that we cannot reach the goals for unemployment and inflation simultaneously by relying solely on monetary and fiscal policies. The Administration shares this view. As Chapter 2 indicated, the anti-inflation program announced by the President on October 24 is based on the premise that braking the momentum of inflation will require widespread compliance by business and labor in reducing the rate of private price and wage increases. Success in that endeavor is critical to our ability to attain the unemployment goals of the Humphrey-Hawkins Act as well as the inflation goal. As noted earlier, continuation of inflation at a high rate could seriously jeopardize the prospects for maintaining a strong economy.

Unwinding the inflation inherited from the past will not remove the risk that new inflationary forces might develop in the future. Prudent fiscal and monetary policies will be needed to avoid an emergence of excess demand. Improved structural policies will also be required. It will be particularly important to find ways to curb the inflationary effects of substantial future reductions in unemployment from present levels.

The current structure of labor markets in our economy makes it especially hard to reach 4 percent unemployment and reduce inflation substantially at the same time. Unemployment varies widely across demographic groups. Measures to address the structural sources of unemployment have been an ingredient of government economic policies for more than a decade, but differential unemployment ratios among groups in the labor force are greater today than they were 10 years ago. Unless these differentials can be reduced, the prospects are dim for making substantial further reductions in the unemployment rate without creating additional inflationary pressures.

The uneven incidence of unemployment among groups in the labor force is shown in Table 27 for the fourth quarter of 1978 and the fourth quarter of 1972. In the earlier period the unemployment rate for adult white males (aged 20 and over), the most experienced group of workers in the labor force, was about the same as it was in late 1978. Over the past 6 years the unemployment rate for almost every other group has risen relative to the rate for adult white males. This widening of unemployment rate differentials has been caused in part by the fact that other groups, which have relatively high unemployment rates, are growing faster as a share of the labor force than adult white males.

TABLE 27.—*Selected unemployment rates, fourth quarter 1972 and fourth quarter 1978*

[Percent; seasonally adjusted]

Group	1972 IV	1978 IV
All civilian workers.....	5.3	5.8
White 20 years and over.....	3.9	4.1
Males.....	3.4	3.5
Females.....	4.7	5.0
Black and other 20 years and over.....	7.3	9.2
Males.....	6.0	8.3
Females.....	8.9	10.2
Teenagers (16-19 years).....	15.7	16.3
White.....	13.3	14.0
Black and other.....	35.4	35.3
Males 20 years and over.....	3.7	4.0
Females 20 years and over.....	5.2	5.8
Veterans 20-34 years.....	6.1	5.0
Both sexes 55 years and over.....	3.1	2.9

Source: Department of Labor, Bureau of Labor Statistics.

In well-functioning labor markets some differences among the unemployment rates of various demographic groups can always be expected.

Teenagers and young adults tend to change jobs more frequently than older workers as they try new occupations and search for long-term careers. Short spells of unemployment when they first enter the labor market or while they look for better jobs keep their overall unemployment rate above the average for older workers. Women, particularly during child-bearing years, tend to move into and out of the labor market more frequently than men.

The proportion of women and teenagers in the labor force has grown substantially since the earlier postwar years, and both of these groups have higher unemployment rates than average. In 1956 the overall unemployment rate was 4.1 percent. If the unemployment rates of each of the various age and sex groups in the labor force today were the same as in 1956, the overall rate would be 4.6 percent. Changes in the demographic composition of the labor force since 1956 have thus added about one-half of 1 percentage point to the unemployment rate. Between now and 1983 the structure of the labor force is likely to change somewhat, bringing a lower proportion of teenagers and a higher proportion of women. However, the effect of this change on the overall unemployment rate will not be large. If unemployment rates of each major demographic group in 1983 were the same as in 1956, the overall rate in 1983 would still be 4.6 percent. Achieving an overall unemployment rate of 4 percent at any time within the next 5 years would therefore require that the jobless rates of many groups within the labor force be brought well below the levels associated with full employment in earlier years.

Although part of the difference in unemployment rates can be explained by differences in voluntary job turnover and entry and reentry into the labor market, major structural obstacles also confront many groups of workers—especially, but not exclusively, minorities. Many potential imbalances in labor markets disappear as workers move from sectors offering relatively poor prospects for employment and earnings to sectors offering better opportunities. But in many instances this process may be blocked by the difficulty of acquiring skills, wage rigidities that discourage employers from hiring less productive workers, and various sorts of discrimination. As pointed out in Chapter 2, the structural rigidities and uneven incidence of unemployment make it very hard under current circumstances to reduce the overall rate of unemployment substantially below the present level without encountering labor shortages in some markets. As the overall unemployment rate declines, demand for skilled, prime-age workers exceeds supply of those workers and puts upward pressure on their wages, even though unemployment among minorities, teenagers, and women may remain unacceptably high. The inflationary pressures in the tight labor markets carry over into the rest of the economy, contributing to general inflation.

Chapter 2 also noted that improvements in various income maintenance programs may have increased the time during which individuals search for

better jobs, thus raising the unemployment rate associated with excess demand in labor markets. The primary focus of labor market policies in the United States has been on manpower training programs, public service employment, and the provision of labor market information. This Administration has maintained a strong emphasis on these traditional programs, but it has also provided resources for new programs aimed specifically at creating work and training opportunities for youths and the poor.

Achievement of substantially lower rates of overall unemployment in a noninflationary environment will hinge on whether governmental policies can effectively reduce the structural sources of unemployment. Toward that end the Administration is pursuing several strategies.

First, strong efforts are being made to target public service employment programs and to reduce the degree of substitution. In the past, the net employment gains attributable to public service employment programs have been considerably smaller than the number of available jobs because some government units used funds from that source to pay for work that would have been done in any case. Amendments to the Comprehensive Employment and Training Act (CETA) in late 1976 were designed to direct public service jobs more effectively toward the unemployed. As the number of these jobs was expanded in 1977 and early 1978, the Department of Labor took steps to create as many net new jobs as possible with available funds, and to eliminate fraud in the program. In 1978 a new structural employment component was added under Title II of the act, establishing a category of public service jobs specially targeted for the disadvantaged and the long-term unemployed. Under the new Title II program, State and local governments are prohibited from supplementing the wages of public service employees.

During 1977 and 1978 the Administration emphasized the use of public service jobs to promote recovery. With the economy now closer to high employment, the Federal budget for 1980 provides funds to support 467,000 public service jobs under CETA at the end of fiscal 1980. An increased share of the jobs, however, are being designated for the structurally unemployed under Title II. The more specific targeting and the prohibition of supplementation should improve the net job-creating impact of the program.

Second, in 1979 the Administration will propose a major incremental welfare reform plan. If enacted promptly, this plan will be fully effective in fiscal 1982. The Administration's plan will reform cash assistance programs and further develop the use of CETA to combat structural unemployment. The plan will expand Title II of CETA and direct more of the jobs to principal earners in families eligible for cash assistance. The exact number of new Title II jobs in 1982 will depend in part on what we learn about CETA in the next 2 years and in part on the budgetary and economic situation in 1982.

Third, special employment programs that are established for youths under the Youth Employment and Demonstration Projects Act and other legisla-

tion will continue to pay particular attention to the needs of the disadvantaged. Total funding for these programs in fiscal 1980 will be held constant at the fiscal 1979 level.

Fourth, the Administration has devoted substantial new resources in 1979 and 1980 to promoting employment opportunities for the disadvantaged in the private sector. As requested by the President, the 1978 CETA legislation provides authority for a special private sector employment and training initiative that will finance 10,000 new job training slots in private business. Under this program, private business will join with the Federal Government, State and local CETA programs, and the U.S. Employment Service to increase permanent private sector jobs for the disadvantaged. In addition, funding is being sought to create about 500,000 opportunities for training and work experience that will be available to the disadvantaged under other parts of CETA. The targeted employment tax credit, which was enacted in the Revenue Act of 1978, provides an income tax credit of 50 percent of the first \$6,000 of wages in the first year of employment and 25 percent in the second to encourage the employment of disadvantaged persons, particularly youths between the ages of 18 and 24. Although this approach to structural unemployment is new to the United States, selective employment subsidies have been tried in a number of European countries, including France, West Germany, Sweden, and the United Kingdom.

In various ways these programs directed toward the problem of structural unemployment can reduce the labor market shortages and inflationary pressures that would otherwise be associated with achieving a low overall rate of unemployment. To the extent that training programs provide skills for disadvantaged groups, they increase the supply of workers available to fill some of the skilled and semiskilled jobs that are created in a rapidly growing economy. Evaluations of the success of Federal training programs for the disadvantaged provide mixed results. But there is some evidence that training programs increase the employability and earning power of trainees by an amount that exceeds the cost of the programs. The extent to which these programs could be expanded significantly and still retain their effectiveness is uncertain.

Public service employment programs can in principle help the unemployment-inflation tradeoff. If carefully concentrated on the structurally unemployed, they can add to total employment without substantially increasing upward wage pressures in the labor market. And to the extent that they inculcate better working habits and skills among those who would otherwise be chronically unemployed, they act as a training program with the advantages described above. But several limitations restrict the usefulness of public service employment in dealing with the unemployment-inflation tradeoff. In periods of tight labor markets—when the tradeoff problem is most serious—a public service jobs program that pays relatively attractive wages may encourage workers who would otherwise be available for private

employment to take public service jobs, thereby adding to upward wage pressures. On the other hand, if public service jobs paid relatively low wages they might attract very few workers during periods of tight labor markets. While carefully designed public service employment programs can help provide jobs to the disadvantaged, reduction of structural unemployment by enough to achieve the Humphrey-Hawkins unemployment and inflation goals will require the use of other programs as well.

The more recent additions to our armory of weapons against structural unemployment are the special private sector employment initiative and the targeted tax credit. These have the advantage of directing the structurally unemployed to the private sector where the bulk of new jobs will be forthcoming. They may make an important contribution to improving the trade-off between unemployment and inflation, but they are too new to have been fully evaluated.

Industrial Capacity and Sectoral Problems

At the present time the utilization of industrial capacity is below, but not far below, the peak levels reached in 1973. At that time pressure on capacity, especially in raw materials industries, began to develop, adding to inflationary pressures. To avoid similar problems in the future, industrial capacity over the next 5 years would have to expand about as fast as output.

Last year the Council of Economic Advisers investigated the relation between output, investment, and capacity expansion. The conclusion was that a fairly rapid expansion of output—4.8 percent a year between 1977 and 1981—would raise the capacity utilization rate. The rate would remain, however, below inflationary levels if there were a substantial expansion of investment similar to that in 1962–66, when both capacity and output grew rapidly. In 1979 and 1980, the growth of output is forecast to be slower than in 1978. Capacity utilization over the next 2 years is therefore unlikely to rise, and it might fall somewhat. As a consequence, there appears to be little risk of widespread major capacity shortages in this period. But in the subsequent 3 years, achievement of the Humphrey-Hawkins goals for unemployment would require growth in output averaging about 4½ percent a year, or only slightly below the 4.8 percent growth rate analyzed in last year's capacity utilization study.

In general, therefore, the conclusions reached in last year's study are applicable to the 1981–83 period. If real GNP grew at a 4½ percent average rate, a rapid growth in investment would be necessary to hold the capacity utilization ratio to levels that did not threaten inflation.

An earlier section of this chapter discussed the relationships between saving, investment, and the government budget that would be needed to achieve the Humphrey-Hawkins goals for output and employment and still move toward a balanced Federal budget. The analysis showed that a substantial expansion in private investment relative to private saving would be needed. Investment would have to grow at rates approximating those of

the 1962–66 period—a difficult but not unattainable goal. If that occurs, the requisite capacity expansion would be forthcoming.

There are other ways in which aggregate demand could expand rapidly in the 1981–83 period. Large consumption-oriented tax cuts, for example, would result in a faster expansion of consumer outlays but a slower growth in private investment than if tax cuts were oriented more toward stimulating capital formation. Consumption-led growth would create a danger that capacity would not expand fast enough to avoid inflationary pressures. Such an outcome would not only defeat the Humphrey-Hawkins goal of reducing inflation, but also threaten the possibility of maintaining satisfactory economic growth and achieving a substantial reduction in the rate of unemployment.

SUMMARY

The aspects of economic performance that are critical for the achievement of our longer-run economic objectives were discussed above. Growth in aggregate demand sufficient to reduce unemployment to the levels set forth in the act would require fiscal policy adjustments after 1980, which could be accomplished within the framework of balancing the budget and reducing Federal outlays as a share of GNP by reducing taxes. A strong growth in private investment would be needed. Business investment would have to be particularly strong, but not out of line with performance during other times in the postwar period. Without progress in reducing inflation, however, this outcome is unlikely to be realized.

The most difficult obstacle to achieving the 1983 goals arises from the potential inconsistency between the objectives for growth and unemployment and the need to reduce inflation. Aggregate demand policies must be framed to take this problem into account. Economic policies for the next 2 years are designed to avoid any acceleration of inflation from the demand side, and to use macroeconomic instruments together with the pay and price standards to unwind the inflation inherited from the past. It is clear, however, that the task of reducing inflation to an acceptable pace will not be completed by 1980. We should not commit ourselves now to highly stimulative macroeconomic policies in the years after 1980; to do so might result in an acceleration of inflation, thereby threatening the maintenance of stable economic growth.

Our prospects for achieving the 1983 goals depend upon finding ways to reduce the divergence of unemployment rates among various demographic groups. With the current structure of labor markets, reducing the overall unemployment rate to 4 percent, and the unemployment rate for adults to 3 percent, would require that unemployment rates for experienced adult workers be brought down to extremely low levels. There would be a very substantial excess demand for those workers, giving rise to inflationary wage and price increases. The Federal Government has a number of programs in place,

and is inaugurating several new ones, aimed at reducing structural unemployment. At the present time, however, we cannot be sure that continuing or even rapidly expanding these programs would make possible an overall 4 percent unemployment rate without accelerating inflation. Much work needs to be done to improve existing employment programs and discover new approaches to structural problems if the goals of the act are to be realized.

INVESTMENT POLICY REPORT

The Humphrey-Hawkins Act puts considerable emphasis on the importance of capital formation in achieving our national economic goals. One of its requirements is the inclusion of an Investment Policy Report in this *Economic Report*.

Private investment during the coming years will play two important roles in shaping economic developments. A strong rise in business fixed investment will be required to achieve sustained economic growth and declining unemployment. Substantial growth in the capital stock will also be needed to expand our capacity to produce. Only by devoting a significant share of current production to replace, modernize, and expand the capital stock can we hope to maintain adequate growth in productivity.

Growth in the capital stock will be of strategic importance in particular sectors of the economy. If growth of productive capacity were to lag in sectors producing supplies that were of critical importance in other industries, bottlenecks would develop, restricting overall growth and adding significantly to inflationary pressures in periods of high demand. This is particularly true of the basic materials and energy-producing industries where substitutes, exclusive of imports, may be difficult to find.

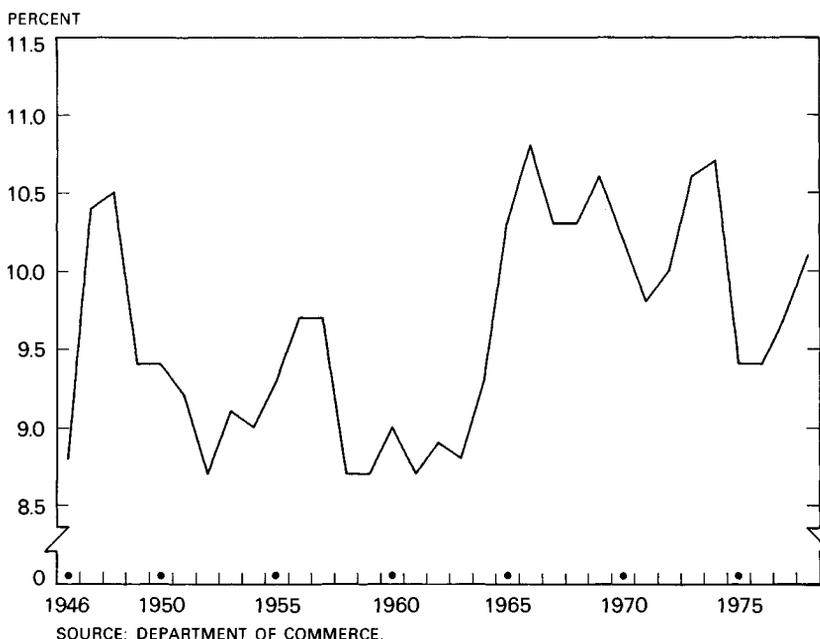
Our competitive position in world markets will also depend heavily on whether or not business fixed investment grows at an adequate pace. Most other industrial countries devote a larger share of output to investment than the United States does, and their growth rates of productivity have also been higher than ours. Increasing the growth of productivity in the United States would help significantly to improve the outlook for our foreign trade balance and to strengthen the dollar in foreign exchange markets.

POSTWAR TRENDS IN INVESTMENT AND CAPITAL FORMATION

Business fixed investment has been quite volatile historically—fluctuating in absolute level and as a percentage of GNP in response to a number of factors: prospects for future output growth and profits, the degree of uncertainty about the future, growth rates of population and the labor force, relative costs of capital and labor, and the speed of innovation. As shown in Chart 8, business fixed investment since 1946 has ranged between 8½ and 11 percent of real GNP. Although there is no obvious sustained trend in this ratio, it tended to hover close to 9 percent in the 1950s and early 1960s, and then moved somewhat above 10 percent from 1965 to 1974.

Chart 8

Real Nonresidential Fixed Investment as Percent of Real GNP



The recovery of investment from the 1974-75 recession was slow. The 9.7 percent investment share for 1977, the third year of recovery, was only midway between the low of 8.7 percent registered in 1952, 1958, 1959, and 1961 (all but 1952 being recession years), and the high of 10.8 percent scored in 1966. Last year investment regained a 10 percent share of GNP.

If a rough estimate of the investment contributed by the public sector is added to private investment, the investment share of GNP is increased. Although differences in statistical measurement and in industry structure make international comparisons imprecise, the evidence (Table 28) suggests that the share of investment in gross domestic product is lower in the United States than in other industrial countries. In the years following World War II such differences were explainable by the need in Japan and in European countries to replace productive capital destroyed in the war. More than 30 years after the war, this explanation can no longer be valid.

International comparisons are not the only, or even the most important, indicator of the adequacy of investment. Achieving the objectives of the Humphrey-Hawkins Act over the next 5 years would require strong investment to support the expansion of private demand, to equip an increasing number of workers, to improve productivity growth, and to meet environmental and social goals. The precise amount of capital required to equip a

TABLE 28.—*Real nonresidential fixed investment as percent of real gross domestic product, 1966–76*

Country	Percent of GDP
United States.....	13.5
Canada.....	17.2
France ¹	16.7
West Germany.....	17.4
Japan.....	26.4
United Kingdom.....	14.9

¹ 1970–75.

Note.—Data are on an OECD basis.

Source: Organization for Economic Cooperation and Development.

worker is, of course, variable. Alternative technologies exist or can be devised to produce the same output with differing ratios of capital to labor, and shifts between industries can also change the overall ratio, since capital-labor ratios differ across industries. Because growth in the civilian labor force over the past decade has been more rapid than in the preceding 10 years (28 percent compared to 16 percent), an acceleration in investment would have been needed to maintain the rise in the capital-labor ratio achieved earlier. More rapid growth of employment in less capital-intensive sectors (government, trade, finance, insurance and real estate, and some services) than in manufacturing, utilities, communication, and transportation, however, has perhaps reduced the need for this acceleration.

The capital-labor ratio has typically shown a long secular upward trend in all the major industrial countries. This has coincided with improvements in the health and education of the work force and substantial technological change. The precise roles and interactions between these forces in contributing to the secular growth in productivity remain subject to considerable debate and are difficult to verify quantitatively. It is worth noting, however, that the U.S. capital-labor ratio grew at an average annual rate of nearly 3 percent between 1948 and 1973. Since then the growth of this ratio has declined more than 1 percentage point. These developments coincided with a decline in the trend rate of growth of productivity in the private nonfarm economy from 3 percent between 1948 and 1973 to under 1½ percent over the past 5 years. Restoring the earlier trend in the ratio of capital to labor input would make an important contribution to greater productivity growth, but such an increase will require devoting a larger share of our national output to business investment than has been characteristic of recent years.

A number of other considerations suggest that society would benefit from stronger investment than has occurred in much of the recent past. To expand our production of domestic energy, at least in part from new sources, will require large outlays at some future time. In addition, society is demanding protection from environmental pollution, occupational hazards, and product

deficiencies. Achieving these social goals, which are not part of output as conventionally measured, entails additional investment. Business expenditures for pollution abatement have risen to a significant fraction of total business fixed investment in recent years, an estimated 5 percent in 1977 and 4.7 percent of total planned investment in 1978. Table 29 illustrates the substantial variation among industries in these outlays. For some, the percentage of total investment is more than twice the national average. Investments for pollution abatement and other social objectives may, to some degree, displace investment that would expand capacity. Consequently higher total investment will be needed if we are to meet both output goals and social objectives.

TABLE 29.—*Capital expenditures by business for pollution abatement, by industry, 1976-78*

[Percent of total capital outlays by business]

Industry	1976	1977	1978 planned			
			Total	Air	Water	Solid waste
All industries.....	5.6	5.1	4.7	2.4	1.9	0.4
Manufacturing.....	8.3	7.0	6.2	2.9	2.8	.5
Durable goods.....	6.6	5.9	5.5	3.0	2.1	.3
Primary metals.....	15.7	15.7	14.4	9.4	4.6	.5
Electrical machinery.....	5.6	3.4	3.4	1.1	1.9	.4
Machinery, except electrical.....	1.6	1.8	1.8	.7	1.0	.1
Transportation equipment.....	3.4	3.1	4.0	1.5	1.9	.6
Stone, clay, and glass.....	6.1	7.3	7.3	4.9	2.1	.3
Other durables.....	3.9	3.6	2.9	1.3	1.4	.1
Nondurable goods.....	9.6	8.0	6.8	2.7	3.4	.6
Food, including beverage.....	4.5	4.2	4.7	1.7	2.5	.5
Textiles.....	4.4	3.8	3.5	1.0	1.9	.7
Paper.....	14.7	13.8	9.6	3.6	5.3	.7
Chemicals.....	11.4	10.2	9.2	3.5	5.1	.7
Petroleum.....	10.9	8.2	7.0	3.0	3.3	.8
Rubber.....	3.4	3.3	3.0	1.9	1.0	.1
Other nondurables.....	1.4	1.2	1.0	.6	.3	.1
Nonmanufacturing.....	3.5	3.5	3.6	2.1	1.2	.3
Mining.....	2.2	2.2	3.1	1.1	1.0	.9
Railroad.....	1.1	1.0	1.4	.0	1.3	.0
Air transportation.....	1.2	.8	.9	.6	.2	.0
Other transportation.....	1.1	1.0	.9	.2	.6	.1
Public utilities.....	9.1	8.8	8.7	5.4	2.8	.5
Communication, commercial, and other ¹.....	.5	.5	.5	.2	.2	.1

¹ Consists of communication, trade, service, construction, finance, and insurance.

Note.—Excludes agricultural business; real estate; medical, legal, educational and cultural services; and nonprofit organizations. Pollution abatement operating costs are also excluded.

Data for 1976 are based on the survey conducted in November and December 1976. Data for 1977 and 1978 are based on the survey conducted in November and December 1977.

Source: Department of Commerce, Bureau of Economic Analysis.

INVESTMENT INCENTIVES

The most important inducement for investors is the prospect of future profits from future sales. These profits may come from increased sales activity, reductions in production costs, or improvements that allow a higher price for the product or attract more buyers of the product. The principal

indicators of the profitability of investment are the rate of growth of output, the percentage of current capacity that is utilized, and the rate of return on the existing capital stock. Costs of investment are also important, of course. These include the price of physical units of capital and the costs of financing investments. Financing costs depend on the after-tax real rate of return required in capital markets by those who provide funds for investment. Various measures are used for this required rate of return. One is the long-term corporate bond rate, adjusted for inflation. The required rate of return could, alternatively, be captured by the earnings-price ratio in the stock market. The price of physical capital and the effective rate of return required by investors can be combined into a single measure, the ratio of the stock market value to the replacement cost of corporate net assets. When investors' required rate of return rises relative to firms' current earnings, the market value of corporate stock declines relative to its replacement cost. Some of the major measures of the profitability and cost of investment are summarized in Table 30.

TABLE 30.—*Determinants of business fixed investment, 1955-78*

Year	Ratio of real investment to real GNP	Capacity utilization rate in manufacturing ¹	Nonfinancial corporations			
			Cash flow as percent of GNP ²	Rate of return on depreciable assets ³	Rate of return on stockholders' equity ⁴	Ratio of market value to replacement cost of net assets ⁵
1955	9.3	87.0	9.3	15.0	6.0	0.932
1956	9.7	86.1	8.9	13.2	5.2	.921
1957	9.7	83.6	8.9	11.6	4.9	.853
1958	8.7	75.0	8.6	9.5	3.8	.874
1959	8.7	81.6	9.2	12.2	4.8	1.044
1960	9.0	80.1	8.9	11.1	5.0	1.019
1961	8.7	77.3	8.8	11.0	4.4	1.147
1962	8.9	81.4	9.4	12.7	5.8	1.092
1963	8.8	83.5	9.6	13.6	6.3	1.204
1964	9.3	85.7	10.0	14.8	7.5	1.295
1965	10.3	89.5	10.4	16.3	9.0	1.360
1966	10.8	91.1	10.3	16.2	8.8	1.205
1967	10.3	86.9	9.9	14.2	7.7	1.217
1968	10.3	87.0	9.4	14.2	7.6	1.257
1969	10.6	86.2	8.6	12.8	6.9	1.124
1970	10.2	79.2	7.9	10.1	4.4	.911
1971	9.8	78.0	8.2	10.3	5.2	1.000
1972	10.0	83.1	8.6	11.5	6.4	1.076
1973	10.6	87.5	8.0	12.3	8.7	1.016
1974	10.7	84.2	6.9	11.4	8.4	.756
1975	9.4	73.6	8.7	9.3	5.2	.725
1976	9.4	80.2	9.1	10.4	4.8	.825
1977	9.7	82.4	9.0	10.6	6.2	.768
1978 ⁶	10.1	84.2	9.9	10.6	8.9	.703
1962-66 average	9.6	86.2	9.9	14.7	7.5	1.231
1955-70 average	9.6	83.8	9.3	13.0	6.1	1.091

¹ Federal Reserve Board index.

² Cash flow calculated as after-tax profits plus capital consumption allowance plus inventory valuation adjustment.

³ Profits before taxes plus capital consumption adjustment plus net interest paid divided by the stock of depreciable assets valued at current replacement cost.

⁴ After-tax profits corrected for inflation effects divided by net worth (physical capital component valued at current replacement cost).

⁵ Equity plus interest-bearing debt divided by current replacement cost of net assets.

⁶ Preliminary.

Sources: Department of Commerce (Bureau of Economic Analysis), Board of Governors of the Federal Reserve System, and Council of Economic Advisers.

A year ago the *Economic Report* noted that the 1974–75 recession and the period of price controls in 1971–73 had severely depressed investment incentives. As was also noted, measures of investment incentives were re-covering, and continued expansion and rising utilization rates held the promise of further improvement.

Table 30 presents preliminary data for 1978 indicating substantial further gains in capacity utilization and in the rate of return on stockholders' equity. The latter measure, the ratio of after-tax economic profits to net worth, was boosted by the effect of inflation in reducing the real burden of corporate debt. Furthermore, the improvement in the rate of return on stockholders' equity relative to earlier periods partly reflects a shift in the structure of corporate financing of investment from equity to debt issues.

The rate of return on all depreciable assets (profits before tax plus capital consumption adjustments and interest paid) maintained the level it had achieved in 1977 but did not increase further. The rate of corporate cash flow was slightly depressed because profit growth slowed somewhat; although profits measured in book value terms were strong, a significant part of this strength was attributable to capital gains on inventories and to underestimation of depreciation, both resulting from the increase in inflation.

The weakest of the determinants of investment in 1978 was the ratio of market value to replacement cost of capital, which fell in response to the weakness in stock prices. Equity values have risen relatively little during this cyclical recovery for many reasons: uncertainties engendered by the depth of the 1974–75 recession, the sharp disruption caused by higher energy costs, fluctuations in the exchange value of the dollar, and a volatile inflation rate.

Of the four measures of profitability shown in Table 30, only one, the rate of return on stockholders' equity, has regained the 1955–70 average. The other three are well below the 1955–70 average and still further below the average for 1962–66, when investment outlays rose very strongly.

In view of the possible increase in the perceived risks of investment since the early 1970s, one might surmise that businesses have begun to respond differently to the usual measures of investment incentives. During the past year the Council of Economic Advisers extended its earlier analysis of this subject. Economists have suggested several alternative formulations, or models, of the determination of investment, which emphasize to various degrees the influence on investment of growth of output, variations in capacity utilization, changes in cash flow and in the rental price of capital, and the ratio between the market value of capital and its replacement cost. All involve substantial margins of error.

The Council has not attempted to choose between these different formulations. It has tested, for each model, whether the statistical relation between investment and those factors that determine investment in the model differ significantly in the various periods covered by the examination.

This analysis suggests that the behavior of investment in equipment has not changed significantly during the years since 1973 in comparison with

earlier years. Variations from year to year in the strength of investment in equipment, relative to the forces expected to determine it, have remained within the normal margin of error. Indeed, if there has been any point in recent years at which the pattern of investment in equipment seems to have changed, the most likely time would have been in 1968–69. This period also marked the beginning of a slowdown in the growth of the capital-labor ratio.

Most formulations indicate that investment in structures was unusually slow following the 1974–75 recession and that the substantial recovery last year was not explained by reference to previous relationships. Quite possibly, special factors affecting particular industries may underlie this structural change. For example, early in the recovery the impact of environmental regulations on the steel industry was very heavy at a time when capacity utilization and profits were exceptionally low both here and abroad, and foreign competition was particularly severe. Similarly, uncertainties about energy prices may have had a perverse effect on investment by utilities before the enactment of the energy bill.

This analysis suggests tentatively that some weakening of the demand for equipment may have occurred at the end of the 1960s or early in the 1970s in response to greater perceived risks, and that a variety of special factors may have disrupted the normal pattern of investment in structures. Moreover, as noted above, the profitability of investment has not yet regained the high level prevailing in the early 1960s. If the investment needed to reach our economic goals in 1983 is to be realized, policy actions are required that will strengthen investment incentives and reduce investment costs and risks.

Tax policy is one instrument that can encourage investment by lowering the rental cost of capital, or raising its after-tax rate of return. The Revenue Act of 1978 contained important measures toward achieving this end. The corporate tax rate was reduced by lowering the top rate from 48 percent to 46 percent and by scaling the rate up more gradually, across four brackets instead of two, so that the top rate is paid on earnings over \$100,000 rather than \$50,000. The act also made the investment tax credit permanent. The limitation on the amount of tax liability that could be offset by the credit is to be raised from 50 to 90 percent by 10 percentage point increments from 1980 to 1982; the credit is extended to cover rehabilitation of nonresidential structures and single-purpose agricultural and horticultural structures; and it is liberalized for certain pollution control facilities. Selected tax treatment of small businesses was also liberalized. Finally, taxes on capital gains were reduced. The proportion of net long-term capital gains that can be excluded from an individual's taxable income was raised from 50 percent to 60 percent. The alternative tax of 25 percent was dropped, and the excluded portion of capital gains will no longer be counted as a preference item subject to the minimum tax. A new alternative minimum tax was introduced, however, with a maximum rate of 25 percent. These changes reduce the effective tax rate on capital gains by about one-third.

All of these tax changes result in a lower rate of taxation on returns to corporate capital—the key sector for productivity-raising investment, since it produces 75 percent of total private output. The corporate rate reduction and the investment tax credit will have the greatest effect because they are concentrated directly on the corporate sector and on the relatively heavily taxed, capital-intensive industries in that sector. The reduction in the capital gains tax may also be helpful in encouraging the supply of risk capital, but lowering capital gains taxes is not an efficient means of promoting investment. Only one-third of taxable capital gains accrue on corporate stock or on assets owned by corporations. Only two-thirds of capital gains accrue on reproducible long-lived assets used in production. The part of the tax advantage that accrues to other sectors (for example, capital gains on land) may have no investment effect. Furthermore, a significant fraction of gains accrue in already lightly taxed industries. As a result, this tax change conflicts with the objective of equalizing taxation across industries and thus distorts the efficiency with which markets allocate resources.

Further tax reductions designed to strengthen investment incentives may well be needed in the years ahead to encourage a high rate of investment in new plant and equipment. Given the budgetary constraints required in the near future to reduce inflation, there is no room for additional tax cuts now. Over the longer term, however, opportunities for further general tax reduction will emerge. As they do, reductions carefully designed to strengthen incentives for business investment should be given high priority.

Other public policies have a substantial influence on investment incentives. Pollution abatement requirements and other forms of social regulation pertaining to health and safety impose costs on private industry—both current operating costs (for example, by requiring extra workers for waste treatment processes) and capital costs (covering such items as extra equipment for safety and pollution control). Industries like steel, coal, chemicals, and electric utilities have been especially affected.

As discussed in Chapter 2, the Administration is working to make the regulatory process more rational. A strong and successful effort in this direction offers promise of reducing significantly the costs of regulation relative to its social benefits. In turn, this should reduce the effective capital costs of investment projects and thereby strengthen investment incentives. Furthermore, removing some of the uncertainty regarding future regulations will facilitate business investment decisions.

Other policy measures should also help to reduce the risks faced by those responsible for making investments. The energy legislation enacted last year will make the relative prices of various types of fuels more predictable. Coordination of Federal efforts to improve productivity is being undertaken by the National Productivity Council, a cabinet-level group. A major effort is also under way to promote more rapid innovation through increased emphasis on research and development.

RESEARCH AND DEVELOPMENT

Research and development expenditures are a form of investment on which the returns are very uncertain, especially in the case of basic research. In some instances society as a whole may benefit from research that adds nothing to an individual investor's profits: for example, when it is discovered that a theory does not work. Moreover the investor is usually unable to capture all of the returns from research even when the results are directly useful. The limited life of a patent and uncertainties about patent rights and the enforcement of patents have deterred investment in research and innovation.

The slow growth of research and development expenditures in this country in recent years may account for a part of the low productivity growth of the 1970s. After correction for inflation, expenditures for research and development in 1975 were only 2.6 percent above their level in 1965. This slow growth was largely due to the decline in space-related research; private expenditures for research and development grew at roughly the same pace as the economy. In contrast to the trend over the past decade, real Federal support for research and development rose by 4.2 percent in 1977 and by 2.6 percent in 1978, while total spending for this purpose increased to 4.4 and 2.8 percent respectively in these 2 years. This amounts to a 2-year gain almost three times as great as the rise in the previous 10 years.

Recognizing the importance of basic research to innovation and the high risks of conducting such research in the private sector, the Administration initiated a significant expansion of obligating authority and outlays for basic research and development in the fiscal 1979 budget. Outlays this year in current dollar terms will rise by almost 18 percent from fiscal 1978 levels, and they are scheduled to increase by an additional 10 percent in fiscal 1980.

The President has also begun a comprehensive interagency review, under the leadership of the Secretary of Commerce, of all Federal policies bearing on the process of industrial innovation. This review will rely on assistance from relevant Federal agencies, representatives from business and labor, and other interested parties. Its scope is not limited to the influence the Federal Government exerts through direct expenditures and grants for research; it will also consider the effect of patent, antitrust, procurement, and other governmental policies that bear indirectly on research and innovation.

THE SUPPLY OF INVESTMENT CAPITAL

The supply of resources available for business fixed investment is limited by the capacity of the economy to produce goods and by the amounts of those goods that are preempted for other public and private uses. When substantial slack remains in the economy, expansion of public spending or private consumption has little or no adverse impact on the supply of investment goods. In fact, an expansion of public spending or consumer demand

is likely under those circumstances to increase investment by improving the perceived profitability of investment.

When the economy is operating close to capacity, however, increases in public demand or private consumption will adversely affect business fixed investment, because prices of capital goods are bid up and the cost of borrowing rises. One aim of Federal policy must be to avoid excess aggregate demand and the inflation and credit market tightness that it generates. A second aim must be to analyze carefully the social costs and benefits of Federal programs, in order to control the share of the Nation's output absorbed by the government. Achieving this goal in the context of favorable tax and monetary policies will help provide the real resources, credit market conditions, and incentives needed for rapid growth of the capital stock.

As the Federal budget is moved toward balance in the context of continued economic expansion, and as growth in the government share of total output is curbed in the years ahead, more resources will be available for business fixed investment. The combination of this fiscal policy with successful steps to reduce inflation will create the environment in which monetary policy can offer more encouragement to investment.

Financial capital in recent years has been available at attractive real interest rates, although nominal rates have remained high. Nonfinancial corporations have raised substantial amounts of funds in credit markets. The ratio of funds raised in credit markets to total capital expenditures began to rise rapidly in late 1976 and reached a peak in the first quarter of last year, after which it tapered off. The 1978 first quarter peak was surpassed historically only in 2 isolated quarters during the 1972-73 investment boom.

A similar pattern appears in the nonfarm, noncorporate sector. For farm business, on the other hand, growth of credit use was more modest than in other sectors during 1977, but it accelerated sharply in the second and third quarters of last year to a pace more than 25 percent above the 1977 average.

These relatively high rates of business credit expansion were facilitated by the steady flows of funds to those financial intermediaries that are important for business lending, particularly life insurance companies and pension funds. Growth in pension fund reserves—a means by which households indirectly provide loans to businesses and governments—rose by a dramatic 46 percent between 1975 and 1977. In the second and third quarters of last year the average growth in these reserves was 8.6 percent above the 1977 pace.

The cost and availability of equity capital are more volatile than is true of debt capital, since they depend on the expectations of the public as reflected in stock prices and on the willingness of private and institutional investors to accept equity market risks. In periods when credit markets are weak, firms may thus be forced to accept a higher debt-equity ratio than they would prefer. This is particularly likely in periods when the flow of internal funds is small relative to desired investment. It probably happens also to firms in cyclically sensitive industries that do not have exceptionally strong growth trends, and to newer businesses that have not yet established strong earnings

records. In 1977 and the first half of 1978, new issues of common and preferred stock accounted for only 23 percent of the gross proceeds of stock and bond issues. The lagging recovery of the stock market during the current expansion is undoubtedly a major reason why this ratio is lower than in the mid-1960s, when stock prices were high.

SMALL BUSINESSES

The availability of capital, and particularly equity capital, to small businesses is a fundamental concern. The data at hand suggest persistently higher debt-equity ratios for small corporations (those with assets under \$5 million) manufacturing nondurable goods than for larger ones. For small manufacturers of durable goods the ratio of debt to equity has been higher than for large corporations in all years since 1959, except in the period from 1967 to 1971, when borrowing by large corporations rose sharply.

These higher debt-equity ratios and a corresponding heavier reliance on bank credit are partly due to the fact that small businesses tend to have a higher proportion of assets invested in inventories and a lower proportion in plant and equipment. This, in turn, may be caused by a differing distribution of large and small firms within various industries. It may also, however, be a symptom of imperfections in capital markets that limit the availability of equity capital.

Programs of the Small Business Administration (SBA) are designed to increase the financial capital available to small firms. In 1977 the number of direct loans approved by the SBA rose 25 percent, and the dollar value of new loans rose 70 percent. In addition to the direct loan program, the SBA also licenses, regulates, and provides financial assistance to small business investment companies (SBICs). The privately owned SBICs pool public and private funds in order to provide equity and long-term debt capital to newer small businesses. These latter firms, in contrast to those financed by other SBA programs, tend to operate in new markets or with new technology. At the end of 1977 there were 273 SBICs, making use of \$428 million of private capital and \$537 million of funds from the SBA. The volume of new financing arranged during fiscal 1977 was \$197 million, a 68 percent increase from the preceding year. In order to provide special attention to the needs of businesses owned by socially or economically disadvantaged persons, the SBA administers a parallel program of SBICs for minority enterprises. The volume of loans under this program grew 72 percent in fiscal 1977.

CHAPTER 4

The World Economy—Managing Interdependence

FROM THE EARLY 1950s THROUGH THE LATE 1960s, growing economic interdependence provided the major impetus toward sustained, rapid growth in the world economy. Just 10 years ago, in his last *Economic Report*, President Johnson wrote:

In the past two decades, enormous progress has been made in building a closely knit international economy. Remarkable growth in the volume of international commerce has gone hand in hand with sustained world prosperity; each has contributed to the other. At times, deep and obvious strains in the international monetary system have imperiled this progress, but these financial difficulties have been weathered without a serious setback in economic growth or world trade.

Much has changed throughout the last decade. In some areas the momentum of the 1960s has continued: an ever-growing share of world production is devoted to international trade. Financial markets have become more integrated internationally and have adapted to the task of recycling unprecedented flows of funds from surplus to deficit countries. For a few countries of the Third World and the southern tier of Europe, rapid export growth—and particularly the shift in the composition of exports toward manufactured goods—have occasioned rapid rises in income growth and production.

There have also been fundamental changes in the international economic system. The most dramatic change, of course, was the breakdown of the Bretton Woods system of pegged exchange rates, and its replacement by a system of market-determined flexible exchange rates. This change has, by and large, helped the world economy to adjust to the severe problems confronting it in the past 5 years—the rise in oil prices and the poor harvests of 1973–74, the subsequent serious recession, persistently high and divergent rates of inflation in most industrial countries, and the hesitant economic recovery outside the United States.

The evolution of the floating rate regime has given individual countries more elbow room for steering their economies in different directions. The extent of independence, however, is limited and the need for some coordina-

tion of economic policies remains. Indeed, to some extent the major lesson of 1977 and 1978 is that policy divergences produce severe strains: the rapid expansion in the United States relative to other major industrial countries triggered a large and potentially destabilizing depreciation of the dollar during 1978. The rise in U.S. inflation and the depreciation of the dollar led the United States to implement a policy of monetary and fiscal restraint, in coordination with a cooperative action to deal with exchange-market disturbances.

A second major change from the picture 10 years ago—and one which has been appreciated only slowly—is the pronounced decline in growth dynamism of the industrial world. Growth of potential output has been retarded, but growth of actual output has fallen even further. Aggregate demand has been sluggish throughout the industrial world outside of the United States since 1973. Weak investment and cautious consumers generally slowed private demand. Yet the need to reduce inflation and the large external and public deficits made policy makers cautious. As a result, the overall growth in the countries making up the Organization for Economic Cooperation and Development (OECD) slowed to an average of 3.0 percent over the 1973–78 period, compared to 4.9 percent in the preceding decade.

The reasons for the slowdown of potential output are not fully evident. The slowing of investment virtually everywhere has resulted in an aging capital stock. The growth of trade has slowed, and the earlier economic gains from economic integration have not been repeated. In many countries the hidden unemployment in agriculture has largely disappeared, leaving little of the productivity bonus that accompanies a declining primary sector. Clearly the sharp rise in the cost of energy has led to some costly substitution. To a lesser extent, generally higher and more volatile commodity prices may have retarded some productive sectors.

Finally, both actual and potential output growth has probably been restrained because of new views concerning the value of change and economic growth. Occasionally, a new spirit of “preservationism” has created pressures to protect the existing structure of jobs and wages and bolster weak sectors. In part, this spirit is a reaction to acute problems in key industries: excess capacity in steel, shipbuilding, and textiles, for example, burdens many economies. But a more cautious attitude has also increased the difficulties of shifting resources from declining to expanding sectors. Preservationist pressures encourage protectionist trade measures or internal subsidies that could make the world economy even less dynamic and more prone to inflation. The adventurous spirit that once characterized much industrial activity and is vital to rapid structural and economic change may have been suppressed at least temporarily by the uncertainties of the recent past.

Managing interdependence today is a major challenge. We have been through a period in which—in contrast to the robust postwar expansion—growth potential has declined and inflationary pressures have increased. To

some extent these conditions may prevail for a number of years. In the past, numerous structural factors favored rapid expansion and rising productivity: relative commodity and energy prices fell, trade barriers were lowered, new technologies came in quickly, and economies of scale were realized. These favorable factors have been weakened or reversed. The challenge to policy—at home and abroad—is twofold: to steer our economies safely through these more hazardous waters and to create conditions that favor sustained economic growth. Improved international coordination of domestic policies will be essential to accomplish both of these tasks.

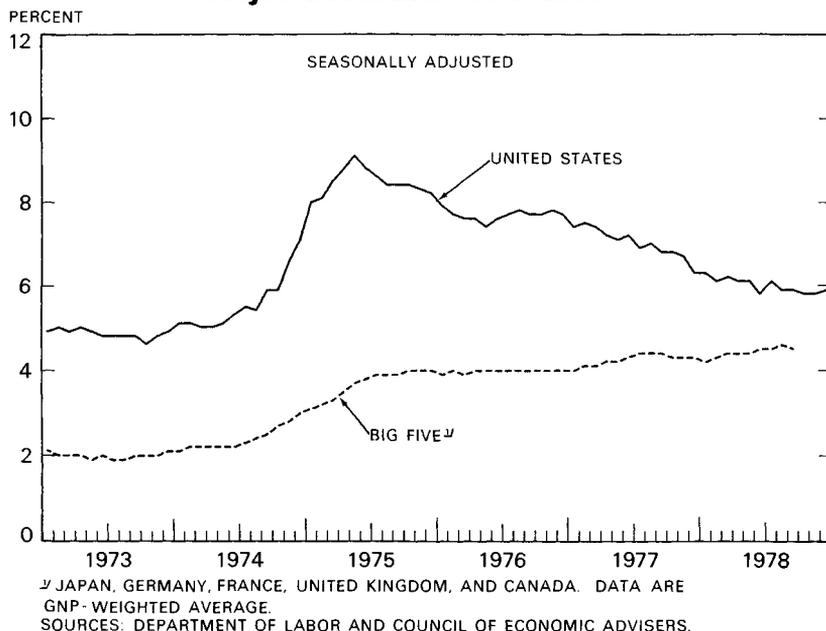
THE GLOBAL ECONOMY: DEVELOPMENTS AND PROSPECTS

In many ways 1978 can be seen as a year of transition for industrial countries. Here in the United States economic growth began to slow after a strong recovery earlier. In the other major industrial countries, where recovery had been hesitant, growth accelerated somewhat, though not enough to reduce excess capacity substantially or to prevent a continued upward drift in unemployment (Chart 9).

The inflation rate accelerated in the United States. In most other industrial countries, inflation rates, which on average exceeded those in the United States during 1974–77, continued to decline. As a result, the rate

Chart 9

Unemployment in the U.S. and Five Major Industrial Countries



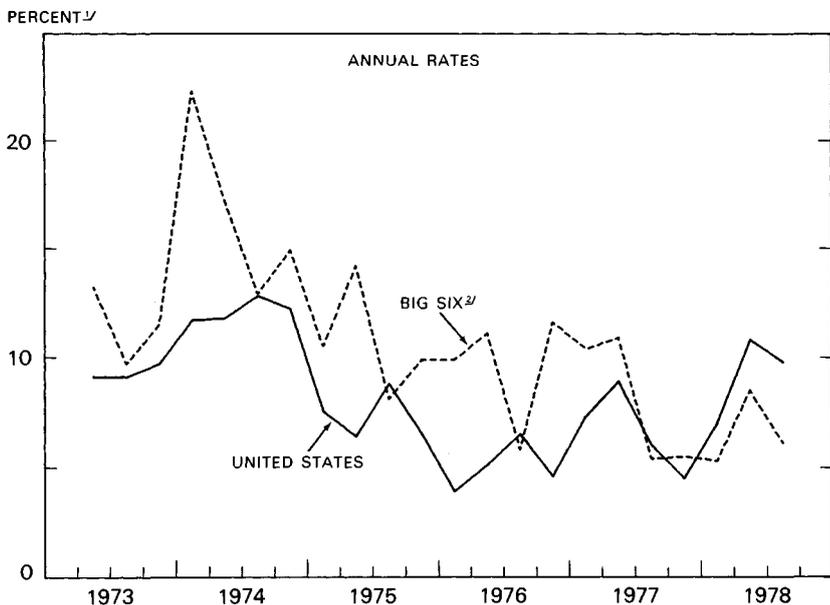
of inflation in the United States in 1978 was higher than the average level for the major foreign countries (Chart 10).

External positions also changed markedly during 1978. For the OECD countries as a group the combined current account deficit declined sharply. The deficit of the United States widened somewhat, but this was more than offset by the large rise in the combined surplus of the other major countries, especially Japan, and a marked decline in the combined deficit of the smaller OECD members. Nevertheless as the year progressed there were increasing indications that the major imbalance between the positions of the United States and Japan was beginning to be reversed. Both the Japanese surplus and the U.S. deficit were smaller in the second half of 1978 than in the first half.

The year 1979 should see some correction in the cyclical divergence that has arisen since the oil crisis. As shown in Table 31, the anticipated slowing of growth in the United States is matched by an expected slight rise of growth abroad. For the first time since 1975, growth abroad is likely to exceed growth in the United States. (It should be noted that the growth rates presented here are year over year, rather than fourth quarter over fourth quarter as generally presented elsewhere in this *Report*.)

Chart 10

Consumer Price Inflation Rate in the U.S. and Six Major Industrial Countries



∇ PERCENT CHANGE FROM PRECEDING QUARTER AT ANNUAL RATE.

∇ JAPAN, GERMANY, FRANCE, UNITED KINGDOM, CANADA, AND ITALY. DATA BASED ON 1977 GNP/GDP WEIGHTS AND EXCHANGE RATES.

SOURCES: DEPARTMENT OF LABOR AND NATIONAL SOURCES.

TABLE 31.—Annual growth in real GNP in the United States and other major industrial countries, 1960–79

[Percent change]						
Country	1960–74 average	1975	1976	1977	1978 ¹	1979 ²
United States.....	3.6	-1.3	5.7	4.9	3.9	3.3
Big Six ³	5.8	- .3	5.4	3.3	3.8	3.9

¹ Preliminary.

² Forecast.

³ Japan, Germany, France, United Kingdom, Canada, and Italy; OECD estimates. For 1960–74 average, based on 1970 GNP/GDP weights and exchange rates; for 1975–79 based on 1977 GNP/GDP weights and exchange rates.

Sources: Organization for Economic Cooperation and Development and Council of Economic Advisers.

Inflation rate differentials are also expected to narrow somewhat during 1979, in line with the anticipated slowing of inflation in the United States and a possible increase in inflation in some foreign countries. Trade and current account imbalances are expected to diminish further as a result of the shift in relative growth and of the large exchange rate movements during 1978.

GROWTH AND INFLATION

In the major foreign countries there was a modest rise in the growth of gross national product (GNP) in 1978. Table 32 records the growth rates of GNP during 1977 and 1978 for each of the major foreign countries and the United States. Also included are two columns showing the average annual growth of GNP prior to 1974 as well as the average rate of growth since then.

TABLE 32.—Annual growth in real GNP in major industrial countries, 1960–78

[Percent change, except as noted]

Country	1977	1978 ¹	1960–73 average	1974–78 average ¹	GNP shortfall in 1978 (percent) ²
United States.....	4.9	3.9	3.9	2.3	8.1
Japan.....	5.2	5.8	10.5	3.7	37.3
Germany.....	2.6	3.0	4.8	1.7	16.0
France.....	3.0	3.0	5.7	2.8	14.7
United Kingdom.....	1.6	3.0	3.2	1.0	11.5
Canada.....	2.7	3.5	5.4	3.4	10.2
Italy.....	1.7	2.0	5.2	1.9	17.1

¹ Preliminary.

² Difference between actual GNP and the level that would have been reached if growth since 1973 had equaled its 1960–73 trend rate, expressed as a percent of actual GNP.

Sources: Organization for Economic Cooperation and Development and Council of Economic Advisers.

The final column shows the percentage difference between the actual GNP in 1978 and the level of GNP that would have existed in 1978 if growth had proceeded after 1973 at its 1960–73 trend rate. The gap recorded in the last column is not meant to indicate the precise difference between actual and potential output. Few deny that potential output growth has slowed everywhere in recent years, and in some cases sharply, although considerable uncertainty remains about the current underlying trend for potential output. What the gap does indicate is that, for whatever reasons, the major indus-

trial countries outside the United States have witnessed a dramatic reduction in growth since the oil crisis.

Evidence that at least part of the slower growth is due to a slowdown in potential growth is shown in Table 33. Each of the large industrial countries has shown significantly lower productivity growth in the last 5 years compared to the earlier period. Clearly, part of the poor productivity performance is due to low utilization rates. Even after correcting for utilization

TABLE 33.—*Annual growth in GNP per employed worker in major industrial countries, 1964–78*

[Percent change]

Country	Average	
	1964–73	1974–78 ¹
United States.....	1.8	0.1
Japan.....	8.9	3.2
Germany.....	4.7	3.0
France.....	4.5	3.0
United Kingdom.....	3.2	.8
Canada.....	2.4	.6
Italy.....	5.4	1.1

¹ Estimate.

Source: Organization for Economic Cooperation and Development.

and recognizing analytical shortcomings in the productivity measure, however, some slowdown is evident. The largest absolute decrease occurred in Japan, where growth in GNP per worker slowed from 8.9 to 3.4 percent annually.

Whatever the new rates of potential growth may be, the actual GNP growth outside the United States was apparently not above the underlying potential growth in 1977 and 1978. In the fifth year after the onset of recession, recovery toward a fuller utilization of potential among countries outside the United States continues to be extremely hesitant and incomplete.

To some extent the slowing of potential growth and the weakness of actual growth relative to potential since 1975 are tied together. In Japan, for instance, the sharp fall in potential growth reduced capital requirements and hence reduced required investment as a share of output. Because this fall was not matched by a decline in the personal saving rate, a problem of excess saving emerged. This imbalance was absorbed partly by the rise in the external surpluses and government budget deficits and partly by the decline in income and production relative to potential output. In Japan, as in other countries, low rates of actual investment constitute a major reason for the hesitant recovery of demand. At the same time, as mentioned earlier, sluggish investment has led to a marked aging in the capital stock and has further checked the growth of potential output by limiting productivity increases.

The principal factors constraining more expansionary policies during the current recovery have been persistently high rates of inflation in most countries and the resulting judgment that relatively cautious fiscal and monetary

policies were needed. Even in those countries making notable progress in reducing inflation by 1977—particularly Germany and Japan—fear of renewing inflation continued to dampen enthusiasm for more expansionary fiscal and monetary policies.

In 1978 constraints on policies eased somewhat outside the United States as rates of inflation declined almost everywhere (Table 34). For the United Kingdom and Italy, where the rates had been highest, the decline was impressive. As a result of relaxed constraint, fiscal policies also tended to

TABLE 34.—*Changes in consumer prices in major industrial countries, 1976–78*
[Percent ¹]

Country	1976	1977	1978 ²
United States.....	5.8	6.5	7.6
Japan.....	9.3	8.0	3.9
Germany.....	4.6	3.9	2.7
France.....	9.6	9.5	9.2
United Kingdom.....	16.6	15.8	8.3
Canada.....	7.5	8.0	9.0
Italy.....	16.8	17.0	12.2

¹ Changes measured from year average to year average.

² Estimate.

Sources: Department of Labor, Board of Governors of the Federal Reserve System, and Council of Economic Advisers.

become significantly more expansionary in the major foreign countries: according to OECD estimates, the direct impact of fiscal policy shifts in 1978 amounted to over one-half of 1 percent of GNP for the major foreign countries, excluding Japan, and to over 2 percent for Japan.

The 1978 pattern of changes in growth and inflation rates was heavily influenced by the marked decline of the dollar and the consequent appreciation of most other major currencies. In countries where exchange rates appreciated, it is broadly true that GNP growth lagged behind the growth of domestic demand and that inflation rates declined. In this environment fiscal policy became more expansionary during the course of the year. These shifts in fiscal policy were both necessary and appropriate. They were necessary because extra stimulus was required to offset the negative effect on GNP of the adverse shift in real net exports. And they were appropriate because the reduction in inflation due to currency appreciation gave policy makers breathing room to shift toward more expansionary policies. Moreover in Germany, and even more in Japan, a reduction in the current account surplus required a shift in policy to make sure that shifts in export and import volume would eventually become large enough to offset the effects of the currency appreciation on terms of trade.

For the United States the opposite set of circumstances prevailed. A weak external sector, accelerating inflation, rapidly declining unemployment, and a depreciating currency made it necessary to shift toward a more restrictive fiscal and monetary policy. Indeed, this shift occurred during the year.

The need to realign and coordinate economic policies, both in the United States and abroad, so as to promote external adjustment and reduce diver-

gences in economic performance across countries was increasingly recognized during 1978. In the course of meetings that culminated in the Economic Summit at Bonn in July 1978, a significant degree of coordination was realized. At the Bonn meeting the leaders of the seven largest industrial countries discussed the major goals and problems in the world economy, and a Concerted Action Program was devised in which each country made appropriate specific commitments.

The Bonn Summit marked a turning point, particularly for the United States. The United States noted that curbing inflation has become the top priority of economic policy. The President therefore pledged to take specified actions to reduce the U.S. inflation rate, obtain a more rapid reduction in our current account deficit, and adopt an energy policy which would, by 1985, cut our imports of petroleum by 2.5 million barrels per day.

In addition, Germany and Japan proposed steps to increase growth and thus reduce external surpluses: Germany to provide additional fiscal stimulus totaling 1 percent of GNP; Japan to achieve a 7 percent growth in real GNP between March 1978 and March 1979. The other participating countries (France, Italy, the United Kingdom, and Canada), whose high rates of inflation provided less scope for specific action, made broadly complementary commitments. At the same time, each country recognized the overriding importance of not allowing sluggish growth, sectoral difficulties, or trade imbalances to serve as pretexts for actions that would undermine the framework of free trade among nations. A joint commitment, covered more fully later in this chapter, was adopted to secure a rapid and successful outcome for the Multilateral Trade Negotiations.

Considerable progress has been made in meeting these commitments. As discussed earlier in this *Report*, the United States has in place a major anti-inflation program and has shifted both fiscal and monetary policies toward restraint. The 1978 National Energy Act, signed at year's end, establishes a comprehensive framework for rationalizing energy policy and reducing oil imports along the lines discussed at Bonn. Germany completed legislation in December 1978 that fully implements its own commitment. Although Japan began in September to carry out a supplementary fiscal program to stimulate growth, it now seems likely to fall well below the 7 percent growth target.

The Concerted Action Program adopted at Bonn marks an important step in international economic cooperation. On a substantive plane, the measures taken helped put the major economies onto more balanced and sustainable paths. More important is the symbolic significance: it is now clearly recognized at home and abroad that, in a world where countries are interdependent, policy choices by one nation directly affect economic performance in others. If some countries grow very slowly, their trading partners will be forced to abandon dynamic export industries; if one country attempts to protect its industries, at the border or by domestic

subsidies, others will have to retrench; if one nation pursues extremely rapid growth or inflationary policies, the resulting exchange rate depreciation may lead to uncertainties and market disorders. Increasing awareness of these linkages and acceptance of the responsibilities they imply represent the goal of policy coordination exemplified by the Summit.

PROSPECTS

Although the shift toward more rapid growth abroad is a welcome development, the world economy continues to face difficult challenges. GNP growth, while expected to maintain the 1978 rates, will remain low by the standards of the 1960s, and it will be hard to generate enough jobs to reduce unemployment. In some countries more extensive use of specific job programs and special incentives to reduce structural unemployment of young workers must effectively supplement demand management policies if further increases in unemployment are to be avoided.

Most economies also face excess capacity in basic industries such as steel, textiles, and shipbuilding. The consolidation of these sectors by reducing capacity, and the resulting loss of jobs, aggravate labor market problems. Ways must therefore be found to smooth the transfer of workers from declining to expanding sectors. Securing a more rapid rate of job creation is made harder by continued low rates of investment in plant and equipment. While some growth in investment occurred in 1978, the basic circumstances have not changed substantially. Excess capacity remains large and prospects indicate only a moderate growth in demand. In this environment a sharp acceleration of investment during 1979 is not foreseen.

While faster growth would greatly benefit most foreign economies, inflation rates in all but a few OECD countries remain too high for governments to pursue policies that are significantly more expansionary. Even relatively restrictive macroeconomic policies will bring only a gradual decline in inflation. In some countries inflation may accelerate again as the favorable effects of exchange rate appreciation and commodity price declines wear off.

Thus, despite some easing of constraints on policy in countries outside the United States, the economic environment presents difficulties. Few easy solutions are available; and according to an increasing number of observers, it will take a continued effort to bring about conditions more favorable to sustained economic growth.

CURRENT ACCOUNT DEVELOPMENTS AND PROSPECTS

In 1978 there were marked changes in global payments positions (Table 35). First, the large current account surplus of the countries making up the Organization of Petroleum Exporting Countries (OPEC) diminished sharply and unexpectedly from about \$32 billion in 1977 to an estimated \$11 billion in 1978.

TABLE 35.—*World current account balance,¹ 1975–78*
 [Billions of dollars]

Country	1975	1976	1977	1978 ²
OECD countries.....	0.3	-19.0	-27.5	0.5
United States.....	18.4	4.3	-15.3	-17.0
Big Six ³ and Switzerland.....	-3.8	-3.7	13.5	33.5
Other OECD.....	-14.3	-19.4	-25.7	-16.0
OPEC countries.....	27.3	37.0	31.5	11.0
Non-oil developing countries.....	-38.5	-26.0	-24.0	-34.0
Other ⁴	10.9	8.0	20.0	22.5

¹ OECD basis.

² Estimate.

³ Japan, Germany, France, United Kingdom, Canada, and Italy.

⁴ Reflects errors and asymmetries, as well as balances with omitted country groups.

Sources: Organization for Economic Cooperation and Development and Council of Economic Advisers.

This remarkable decline resulted from volume and price effects in about equal measure. The volume of OPEC oil exports actually fell somewhat in 1978, a consequence of the slackened pace of growth in energy demand in the industrial countries and the rapid 1978 expansion of other sources of oil. North Sea, Alaskan, and increased Mexican production, accounted together for a rise in production of 1.2 million barrels per day, or roughly 4 percent of total OPEC production.

At the same time, the volume of imports into OPEC countries continued to grow at a significant though slowing rate, a result of the momentum of on-going development plans in a number of OPEC countries. Price movements have also been important in reducing the OPEC surplus. The dollar price of oil remained roughly constant, while import prices rose.

Second, in the so-called non-oil developing countries (that is, the poorer countries outside of OPEC and the OECD) the combined deficit expanded considerably last year. The terms of trade, which had been generally favorable in 1977, turned against such countries in late 1977 and early 1978. Late last year, however, the terms of trade again strengthened appreciably. Borrowing conditions for most of these developing countries remained favorable, and many of them borrowed substantial amounts to service outstanding debt, maintain the growth of their imports, and increase their gross reserves for the third consecutive year.

The most striking change in 1978, however, was the disappearance of the OECD deficit. The aggregate deficit of the OECD countries, \$28 billion in 1977, gave way to a small surplus in 1978. This turnaround was the second largest recorded year-to-year change in the OECD external position; it was exceeded only by the large shift from surplus to deficit which followed the OPEC price rise. It was surprising that the decline passed virtually unnoticed and had little effect on developments during the year compared to those occurring in the 1974–75 period.

The OECD can be usefully divided into three groups. The first comprises countries in surplus; the second contains small countries, chiefly in deficit;

and the United States is the third. Starting with the surplus countries, one should note that the largest part of the decline in the OECD deficit is accounted for by the rise in the combined surpluses of Japan, Germany, France, Italy, and Switzerland. These countries, along with the United Kingdom, experienced strong gains in their terms of trade—that is, the prices received for exports rose more rapidly than prices paid for imports, principally because of appreciation in their exchange rates.

A gain in the terms of trade affects the favored country in two ways. First, it increases income and thus tends to have a stimulating effect on aggregate demand similar to that of a tax cut. Second, after some time, however, the higher export prices tend to depress the volume of exports, while the lower import prices tend to raise the volume of imports, thereby reducing aggregate demand. Table 36 records the movement in current account balances for each of the countries named above, except Switzerland, and shows the relative size of the two different effects in 1978: the ratio between the gain in terms of trade and domestic demand, and the ratio between the change in the volume of net exports and GNP.

TABLE 36.—*Current account balances for selected major industrial countries, 1976–78*

Country	Current account balance ¹			Gain in terms of trade as percent of domestic demand, 1978 ^{2,3}	Change in volume of net exports as percent of real GNP, 1978 ²
	1976	1977	1978 ²		
	Billions of dollars			Percent	
Japan	3.7	10.9	20.0	1.9	-0.3
Germany	3.8	3.7	6.0	.6	-.3
France	-6.1	-3.3	2.0	.8	.3
United Kingdom	-2.0	.5	-5	1.2	-1.0
Italy	-2.8	2.3	5.5	.4	.8

¹ OECD basis.

² Estimate.

³ The gain in terms of trade is the percent change in export prices times 1977 export value minus the percent change in import prices times 1977 import value.

Sources: Organization for Economic Cooperation and Development and Council of Economic Advisers.

Even though estimation of gains in terms of trade is subject to a considerable margin of error because of serious measurement difficulties, the results are striking. These five countries experienced very large gains in income from the terms of trade in 1978 and, excepting the United Kingdom, had little or no offset from the declining volume of net exports. The income gains, however, do not appear to have been matched by a corresponding rise in the growth of real output, especially when allowance is also made for the expansionary shifts in fiscal policy. A possible explanation for this relatively weak multiplier effect is that, because these income gains were perceived to be transitory, they were largely absorbed in increased household and corporate saving, rather than in increased expenditures.

The second group of OECD countries, comprising the smaller nations, in the aggregate reduced their deficits in 1978 by about \$10 billion. This

reduction was especially welcome in view of the very large deficits these countries had run from 1974 to 1978, when their net indebtedness grew by close to \$80 billion. Indeed, external positions had become unsustainable for a number of countries in this group and severe retrenchment was necessary. Stabilization programs were developed in connection with upper credit-tranche drawings from the International Monetary Fund for Portugal and Turkey. Governments in the Scandinavian countries acted to forestall further accumulation of debt that might well have become a source of difficulty in a few years. For still others, the extent of improvement in their current account was limited by adverse shifts in the terms of trade stemming from the fall in a number of raw materials prices. For the group as a whole, the decline in current account deficits can be explained almost entirely by the reduction in import volumes relative to export volumes.

The United States stands alone in the third category. Throughout the postwar period the growth of U.S. imports tended to be greater in relation to domestic growth than the growth of exports in relation to growth abroad. Until 1975 a rough balance between import and export growth was maintained by the fact that growth abroad tended to exceed U.S. growth. From 1975 through 1978, however, growth in the United States surpassed the average growth abroad. As a result, the current account of the United States shifted sharply. In 1977, a year in which U.S. economic growth exceeded that of its trading partners by about 1½ percentage points, the U.S. current account shifted by almost \$20 billion, from a surplus of \$4.3 billion to a deficit of \$15.3 billion. Roughly three-fourths of this shift is accounted for by the more rapid growth of merchandise import volumes compared to export volumes. The remainder of this shift reflected changes in the terms of trade and in the composition of trade, only partly offset by gains in service transactions.

On the basis of preliminary estimates the current account shifted toward deficit in 1978 by a further \$1.7 billion. There was, however, substantial improvement from the first half of the year to the second, when growth in export volume picked up and import growth began to moderate. Despite the depreciation of the dollar during this period, the expected adverse shift in the terms of trade was restrained to a significant degree by the constancy of the price of oil imports and by the general increase in the prices of manufactured goods relative to the prices of primary commodities.

The shifts that occurred in 1978 in current account positions among the countries of OPEC, the non-oil developing countries, and the OECD countries are not likely to be reversed in 1979. The large oil price increase announced by OPEC last December will seriously complicate the task of economic management in the industrial and non-oil developing countries. This price increase is not expected to result in a substantial widening of the OPEC surplus from 1978 levels, however, since imports by OPEC will also continue to rise. It can be said that the industrial countries are now paying the "OPEC oil tax" largely in current goods and services rather than

I O Us. As a result, the so-called recycling problem has become much less troublesome—though the surpluses of a few individual OPEC countries will continue for years to come. More generally, the traditional pattern of resource flows between countries, in which the major industrial countries are net capital exporters to the developing countries and to other poorer countries within the OECD, appears to have been firmly reestablished.

Barring a substantial run-up in commodity prices, the deficits of the non-oil developing countries are likely to rise somewhat in 1979. Such a rise in deficits would appear to be consistent with the strong liquidity positions of many countries in this group, the ability of a growing number of countries to borrow successfully on international financial markets at lower interest spreads and longer maturities, and the apparent willingness of banks to increase their lending to developing countries despite a few isolated debt rescheduling problems during 1978.

Among industrial countries of the OECD, a more balanced distribution of surpluses and deficits is likely to emerge in 1979. The U.S. current account deficit is expected to decline considerably from the levels at the end of 1978, dropping to about an annual rate of \$2–\$8 billion by the end of 1979. This reduction will result from two conditions: first, the effects of slower U.S. economic growth on imports; and second, a steady and vigorous growth in exports as markets continue to adjust to the improved price competitiveness of American goods and services that resulted from last year's depreciation of the dollar.

Some decline, too, is anticipated in the surpluses of Japan and Germany. Expectations for the decline of the Japanese surplus are grounded primarily in the anticipation of a further fall in the volume of Japanese exports. Import volumes rose only moderately in 1978 after allowance for large accounting transactions made under the emergency import program. They are unlikely to accelerate strongly this year, despite the appreciation of the yen, because of the relatively closed structure of many Japanese import markets. This one-sidedness in adjustment by Japan is likely to intensify the difficulty of reducing the Japanese surplus to a sustainable level over a longer period. The need for a sustained reduction of barriers in Japanese import markets is well recognized by Japanese officials, and extensive discussion between Japan and the United States during 1978 has laid the groundwork for progress toward this end.

INTERNATIONAL FINANCIAL DEVELOPMENTS

For the international financial markets 1978 was a year of unusual instability. Serious questions were raised at home and abroad about the functioning of foreign exchange markets, culminating at year-end with the charter of the new European Monetary System and with the dollar support measures of the United States. These developments were responses to increased volatility and to disorderly conditions in the foreign exchange mar-

kets. In the case of the European Monetary System they arose also from concern about the undesirable side effects of a system of floating exchange rates for closely integrated economies and from the need to foster closer economic integration in Europe.

THE OPERATION OF FLEXIBLE EXCHANGE RATES

The developments of 1978 must be seen as a part of the continued evolution of international financial arrangements. It is therefore appropriate to begin this discussion by reviewing the role of floating exchange rates in macroeconomic adjustment over the 1973–78 period.

Floating Rates in Principle

The role of floating exchange rates can best be seen in the need for adjustment among national economies. All countries are continually subjected to shocks that lead both to internal imbalances (excessive or deficient utilization of domestic resources) and to external imbalances (foreign trade or capital flows at unsustainable levels). A system of flexible, market-determined exchange rates (or, in short, “floating” rates) allows more automatic external adjustment than a system of fixed parities, and thus leaves more scope for domestic macroeconomic policies to adapt to the changing requirements for internal balance.

External adjustment occurs as exchange rates move to equilibrate trade and net capital flows. More precisely, for a given change in official holdings, the rate will move to a level that either brings the value of goods and services exported and imported into balance or induces changes in private asset holdings to finance the discrepancy.

The equilibrating mechanism works on both the capital and current accounts. For a country incurring a large current account deficit, the currency depreciates to reduce the current account deficit by increasing the country’s price competitiveness. That process, however, takes time. In the interim, currency movements will induce private holders of wealth to accumulate the country’s assets to the extent necessary to finance the deficit.

The second feature of an idealized system of floating exchange rates can be seen as a consequence of the first. Because floating rates tend to assure external equilibrium, countries can enjoy greater independence of macroeconomic policies and performance. Under a regime of fixed exchange rates, the extent to which a country’s macroeconomic policies could diverge from those of its trading partners was limited in important ways. Divergent policies would lead to trade imbalances, with expansionary countries moving toward deficit and restrictive countries toward surplus. There was no automatic mechanism to generate the needed capital movements to support the imbalances. Indeed, outflows of capital from countries pursuing relatively expansionary policies to countries pursuing restrictive policies sometimes exacerbated disequilibria in overall balance of payments positions. A coun-

try's freedom to engage in independent macroeconomic policies was thus constrained by its capacity to absorb or lose reserves.

Under a floating rate regime, however, wide divergences of macroeconomic policies would, in principle, be possible. For those countries pursuing rapid growth through expansionary macroeconomic policies or those accepting high inflation, the presence of a depreciating currency would allow the balance of payments to remain close to equilibrium.

Critiques of Floating Rates

For more than 5 years the major economies have functioned under a floating rate regime. The new regime has been successful in permitting the industrial economies to absorb shocks that were unprecedented in the post-war period. At the same time, overall economic performance and exchange market behavior have been much less satisfactory than was expected, leading many to wonder whether the exchange rate regime was at least partly responsible for the poor performance.

Critics have argued that floating rates have had four failings: they have not eliminated balance of payments disequilibria; they have not allowed the degree of policy independence that had been anticipated; they have proved inflationary; and they have introduced major new elements of instability and uncertainty to financial markets.

First, floating rates clearly have not eliminated current account surpluses and deficits. These deficits and surpluses have not, in general, fallen from the levels of the late 1960s and early 1970s and, on many occasions, some have been even higher.

Such an observation, however, does not imply a failure of floating rates to perform their adjustment function. The imbalances that have occurred have not usually resulted from floating per se, but from the greater divergence of macroeconomic performances and from the exceptionally large shocks to the international system, such as OPEC price rises and large increases in agricultural and commodity prices. Exchange rate changes have generally responded well to these deficits and surpluses and have helped to move economies back toward external equilibrium, even if not as quickly or as smoothly as originally hoped. A balance of payments equilibrium, moreover, does not necessarily require that the current (or trade) account should be balanced, only that the current or trade account deficit or surplus be willingly financed. In fact, deficits or surpluses on current account may well represent the equilibrating counterpart to structural or "autonomous" capital inflows or outflows.

In contrast, during the final years of the Bretton Woods system, balance of payments disequilibria that resulted at least partly from divergent macroeconomic performances led to several serious and protracted balance of payments crises. Normal trade and investment patterns were disrupted as governments responded to these disequilibrium situations by imposing trade

and capital controls and other emergency measures before they were finally forced to change their exchange rate parities.

A second cause of concern exists because floating has led to less policy independence than had been anticipated. To be sure, countries have been significantly more independent than in prior years, especially in the realm of monetary policies. A good example lies in the ability of Germany, during the early phase of the current expansion, to pursue a relatively restrictive monetary policy, while that of the United States was relatively expansionary.

Although independence has been greater than with fixed rates, it has by no means been complete under floating. There have been obvious limitations to policy flexibility, partly because exchange rate changes cannot insulate national economies from their partners' performance or from international economic shocks. We have learned that in an increasingly interdependent international economic system floating exchange rates do not free countries from the effects of their neighbors' economic policies and performances. Similarly, countries must recognize their responsibility to act in ways that do not inflict excessive adjustment costs on others.

The third major criticism of the floating rate system has been that it contains an inflationary bias. Two lines of argument have been presented to support this view: first, that floating generates inflation because it fails to impose needed discipline on the conduct of fiscal and monetary policies; second, that because of asymmetries and ratchets the increased inflationary pressures associated with depreciation are not matched by commensurate downward price pressures in countries whose exchange rates are appreciating. Thus, it is argued, the net effect of exchange rate changes is inflationary for the world as a whole.

Neither of these arguments is entirely convincing. Regarding the first argument—presumed lack of discipline—it is important to note that even without external pressures there are clearly powerful internal forces which oppose inflation. Recent experience in the United States and some countries of Europe, where large current account deficits and currency depreciations have led to quite restrictive economic policies, indicates the extent to which difficult stabilization policies will be undertaken even in a flexible exchange rate system.

Moreover, a regime of fixed rates allows inflation to spill over the borders. Price rises originating in one country spill over into other countries directly if exchange rates cannot shift. Indeed, to the extent that inflation originating in one country is shared by others when exchange rates are fixed, discipline in the conduct of fiscal and monetary policies may be weaker than under floating rates, where the full inflationary impact of inappropriate policies is felt domestically.

The evidence to support the second argument—that there are asymmetries in the effects of exchange rate changes on inflation—is mixed. While it is true that there exists considerable evidence of increasing downward rigidity in the levels of prices and wages in a number of countries, there is

no comparable evidence that rates of inflation are less responsive to currency appreciation than to depreciation.

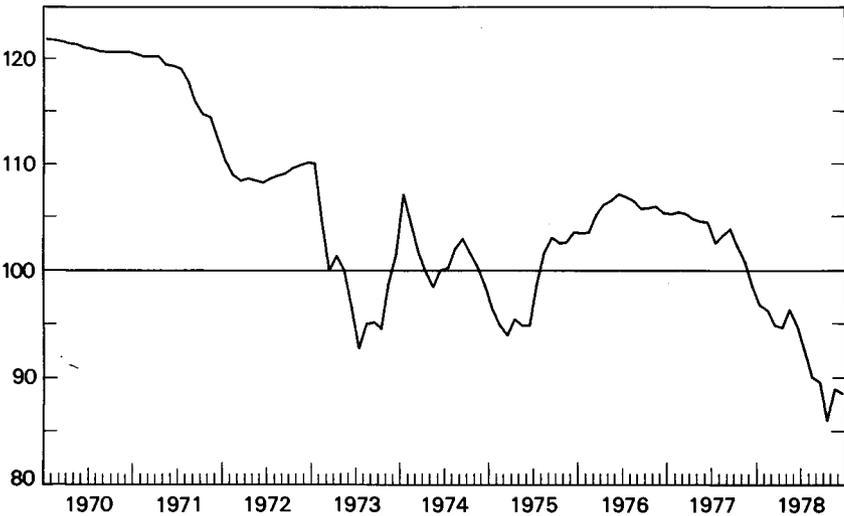
Finally, factors other than floating exchange rates provide a more compelling explanation for the high and persistent inflation in the industrial countries: slower productivity growth, excessive demand pressures, external shocks such as those created by OPEC, and structural changes and rigidities in domestic labor and product markets.

A final criticism of floating has been that it induces excessive volatility in exchange rate movements. Chart 11 presents the path of the trade-weighted dollar since 1970, using an index of dollar movements against the 10 major currencies, and 1972-76 total multilateral trade shares as weights. In addition to these longer-run swings in rates, it is certainly true that day-to-day movements in exchange rates have been larger in the float than in the preceding Bretton Woods era. It is difficult to determine whether these movements have been excessive. In a fixed rate system such as Bretton Woods, day-to-day variability is sharply reduced by the active intervention of central banks to keep the rate within a narrow range. Furthermore, for as long as the range remains credible, private actions tend to keep the rate within the range whenever transient factors lead to a rate movement to the upper or lower limit. Day-to-day variability is thus largely eliminated. On the other hand, the fixing of exchange rates while economic conditions are changing makes it likely that exchange rates will increasingly

Chart 11

Weighted-Average Exchange Value of the U.S. Dollar

INDEX, MARCH 1973=100



SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM.

diverge from levels that would be consistent with underlying economic factors. Eventually the credibility of the range is challenged by market participants, and potentially disruptive speculative attacks can then occur until rates are forced to new, more appropriate levels.

In a floating rate system, day-to-day variability of exchange rates is inevitable as market participants respond to new information about economic developments that alters their perceptions about appropriate exchange rate patterns. Indeed, these day-to-day movements in principle constitute the means of accomplishing longer-run adjustment of exchange rates to changing economic circumstances. This fundamental role of exchange rate movements raises the question whether the observed short-run variability of exchange rates has been larger than was required to allow the necessary medium-term flexibility. This question is complex and has not been thoroughly addressed. A preliminary examination of recent experience and related studies by the Council of Economic Advisers has uncovered mixed evidence. In some cases, short-run variability over the last 5 years has been broadly commensurate with longer-run changes, while in other cases short-run changes have been less than might be consistent with the longer run. No cases of persistent, excessive volatility were found.

There is a sense in which the floating rate system itself may have led to excessive volatility—through the relaxed constraints on macroeconomic behavior. As noted above, a floating rate system allows greater divergence in macroeconomic experience. Unfortunately, when greater scope for divergent policies and performance is allowed, market uncertainty about appropriate exchange rates is also increased. The uncertainty, in turn, can cause market exchange rates to move in an erratic and disorderly fashion as market participants react, and overreact, to transitory bits of information and rumors.

Greater exchange rate noise and uncertainty are among the costs of a floating rate system. Achievement of greater stability in exchange rate markets is dependent on the closer and more effective coordination of macroeconomic policies among countries and on the continuing efforts of each country to sustain macroeconomic policies that are consistent with internal and external adjustment.

In general, however, the evidence, although not conclusive, does indicate that floating has worked well over the long run, especially considering the magnitude of the shocks to the international financial system. In fact, given these shocks, it is not clear that any system other than generalized floating would have been viable during the period. Exchange rate movements, while large, have broadly responded to economic fundamentals, have facilitated adjustment, and have tended to move the system toward rather than away from greater stability. If exchange rates are at present too volatile for some countries, steps to increase the coordination of macro-

economic policies could be helpful. Recognition of the current level of interdependence through improved coordination across countries may help to bring greater stability to the foreign exchange markets as well as to provide an international environment that is favorable to domestic policy goals.

IMPORTANT 1978 DEVELOPMENTS

The summer and fall of 1977 marked the beginning of a protracted fall in the value of the dollar and an increase in the day-to-day volatility of exchange rates in general. Both of these trends continued through the first 3 quarters of 1978.

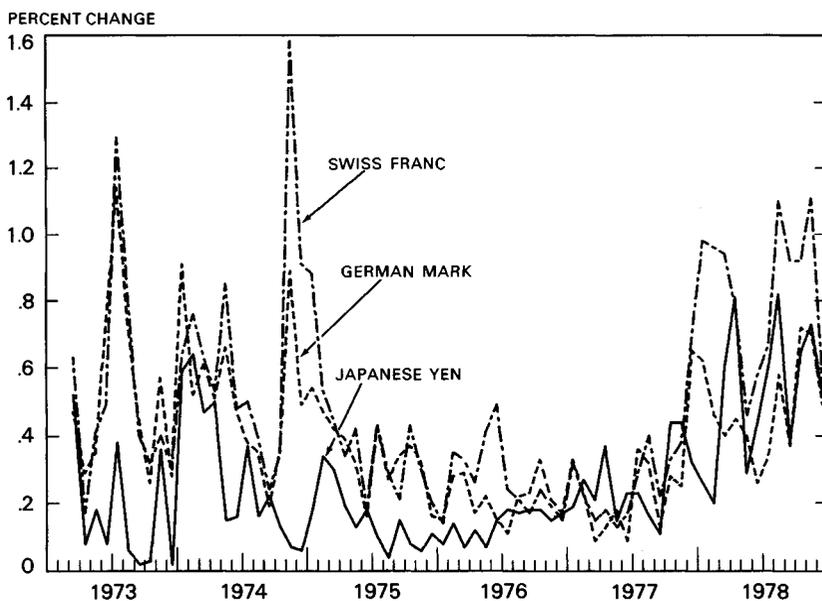
The Variability of Exchange Rates and Depreciation of the Dollar

The extent of exchange rate variability can be seen in the average day-to-day change of major currencies. In general the daily variation in exchange rates decreased between 1973 and 1975, remained comparatively small from 1975 to about the middle of 1977, and then increased markedly in the second half of 1977 and in 1978 (Chart 12).

The decline in variability from 1974 to the 1975-77 period is probably due to a lessening of shocks to the world economy and the gradually growing ability of market participants to work with a regime of floating rates. The

Chart 12

Monthly Average of Daily Exchange Rate Changes



source of the sudden increase since late 1977 is less clear. Only to a small extent can it be explained by the fact that the computed variability is somewhat amplified when the level of the exchange rate is moving sharply in one direction rather than fluctuating around a steady trend. A more plausible explanation was the heightened uncertainty about the dollar's future equilibrium level in view of the growing current account deficit, a subsequent acceleration in inflation in the United States, and, for a time, uncertainty about the response of U.S. economic policies to these developments.

The value of the dollar also began to change dramatically in late 1977. Chart 11 shows the trade-weighted value of the dollar against the major currencies for 1970-78. Two distinct periods can be identified during the recent experience. From September 1977 through March 1978 the dollar fell by 8.7 percent on a weighted average basis against other currencies. During this period the markets tended to focus on the rapid widening of the U.S. trade and current account deficits and their expected persistence. Even though a substantial portion of the deficits could be accounted for by the cyclical position of the United States relative to its major trading partners, growth forecasts suggested that this cyclical divergence would not soon be eliminated.

After a brief period of leveling off in April and May 1978, a second dollar decline began in early June and carried through until the end of October. Some part of this renewed decline can be accounted for by the acceleration and persistence of inflation in the United States, which aroused much concern in international financial circles. From a purely technical point of view, this is not a sufficient explanation, however, since the inflation rate in the United States, while substantially higher than that in Germany, Switzerland, and Japan, was not much higher than the average level among all our major trading partners. And the parallel shift in interest rate differentials in favor of the dollar was more than sufficient to offset the change in underlying inflation in the United States. Finally, the dollar's fall came in the face of increasing evidence that the U.S. current account position was improving markedly.

By the end of October, then, there was considerable evidence that the primary reason for the dollar's fall was the uncertainty in foreign exchange markets. Little attention was paid to the anti-inflation message on October 24. Market participants continued to shift out of dollars despite an apparent consensus of market expectations that the dollar was undervalued from a long-run point of view. Almost all market participants commenting in the press or in discussions during the fall of 1978 expected an eventual turnaround of the dollar. Only the timing and the duration of the expected recovery were uncertain. Market participants, however, were highly uncertain about the future course of U.S. macroeconomic policy, and this uncertainty encouraged shifts out of dollars because it made the dollar a riskier, and hence less attractive, asset.

THE NOVEMBER 1 INITIATIVE

On November 1 the Administration and the Federal Reserve implemented a strong dollar support program. Its basis was the judgment that, whereas some of the earlier 1977-78 dollar decline had been necessary to correct the external disequilibrium, the continued decline of the dollar had become disorderly and was not justified by fundamental economic conditions. On the contrary, all the econometric evidence, the government forecasts, and the private forecasts indicated that the U.S. current account deficit was likely to narrow sharply in 1979. Indeed, it had already fallen from the levels reached in the first half of 1978.

The dollar depreciation from September 1977 through the summer of 1978, combined with U.S. economic policies recently put in place—the National Energy Act, a new national export policy, the shift toward more restrictive monetary and fiscal policies, and the other elements of the anti-inflation program—was thought likely to be effective in slowing inflation at home and bringing about a more appropriate external balance. Further dollar depreciation, especially that induced not by fundamental economic factors but by uncertainty about future exchange rates or policies, was therefore unnecessary for adjustment and would have led to a misallocation of resources at home and abroad, possibly even to serious instability in the financial system. Such movements would have added further to U.S. inflationary pressures and thus harmed the prospects for the anti-inflation program. They could also create the kind of instabilities in exchange markets that could threaten economic prospects in other countries.

In the light of these considerations, the United States announced a dollar support package that contained two parts. First, the United States mobilized \$30 billion in resources as its share of a joint intervention program with Germany, Japan, and Switzerland. Second, the Federal Reserve tightened domestic monetary policy by raising the discount rate from $8\frac{1}{2}$ to $9\frac{1}{2}$ percent and by imposing a 2 percent supplementary reserve requirement on large time deposits. The Federal funds rate also rose from $9\frac{3}{8}$ to $9\frac{7}{8}$ percent on November 1.

The \$30-billion intervention package comprised several different items: (1) the Treasury's drawings on our International Monetary Fund reserve position of \$2 billion and \$1 billion in Deutschmarks and yen respectively; (2) the Treasury's sales of a total of \$2 billion of special drawing rights to Germany, Japan, and Switzerland; (3) a doubling of the Federal Reserve swap lines with Germany, Japan, and Switzerland—to \$6 billion, \$5 billion, and \$4 billion respectively; and (4) the Treasury's commitment to issue up to \$10 billion in foreign currency denominated securities in foreign private markets.

The markets responded favorably to the dollar support policy. By the end of the first week of the program, the trade-weighted dollar was 7.7 percent higher than it had been at its low point at the close of business on October 30. By November 30 it had risen an additional 2.4 percent; and, while some

declines occurred in December and early January—principally with the news of the OPEC price increases and the instabilities in Iran—by the middle of January it was again roughly 7.7 percent above its October low. Thus the foreign exchange markets at the beginning of 1979 were clearly in a different condition from what they were in the summer and fall of 1978. The one-way speculation had largely ended, and economic fundamentals appeared to be much more important market factors than they had been 2 or 3 months before. Market participants, who had been primarily concerned about preventing further foreign exchange losses and uncertain about the specific timing of an expected dollar upturn, were now taking a more healthy wait-and-see attitude about the future course of market fundamentals. The November 1 action, bolstered by the greater certainty that it generated, appears to have achieved its basic purpose. In the period ahead the value of the dollar should depend on sustained progress in the U.S. trade and current accounts and on the success of the new anti-inflation program, rather than on the level of market uncertainty.

While the dollar's decline in the fall of 1978 was an instance of a malfunctioning of exchange markets, the overall history of exchange rates in recent years does not suggest that such malfunctions are chronic. Rather, they are temporary but acute symptoms that are most likely to develop when general macroeconomic conditions are diverging, or in transition, thereby generating greater uncertainty about future economic conditions and policies and an increased dispersion in expectations about future exchange rates. Conversely, as general macroeconomic conditions and policy directions become better established, exchange markets can be expected to perform more smoothly their function of adjusting rate levels to such economic divergences as remain between countries. Such a calming of exchange markets may take time and may require considerable further efforts toward coordinating macroeconomic policies across countries. Excessive market sensitivity, built up during periods of disorderly movement, is likely to induce continued higher than normal variability in rate movements until accumulated evidence of greater underlying stability becomes firmly established.

THE EUROPEAN MONETARY SYSTEM

The members of the European Economic Community reached agreement on a new European Monetary System expected to be implemented in 1979. The development of this system is consistent with the Community's continued efforts to work toward economic and political unification and with its members' concern about the negative effects on economic activity and investment of what they consider increasingly excessive and unnecessary volatility in exchange rates.

In the short run this new agreement amounts to adding France, Ireland, and Italy to the Snake arrangement of the Benelux nations, Denmark, and West Germany, with Norway dropping out. There will be expanded credit arrangements and increased margins around parity changes (up to 6 percent