CHAPTER 1

The Economy in 1979

THE ECONOMY OF THE UNITED STATES was dealt a heavy blow by rising OPEC oil prices in 1979. Inflation increased sharply; real earnings of American workers declined and economic growth slowed. Employment continued to rise, however, while productivity fell, and the unemployment rate remained relatively stable at between 5.7 and 5.9 percent. Most major demographic groups shared in the rise in employment; the gains for blacks and adult women were particularly notable.

The economy's resilience in the face of the dramatic increase in oil prices and the attendant worsening of inflation was one of the more surprising features of economic developments in 1979. Forecasts of impending recession were becoming frequent by late 1978, long before the magnitude of the 1979 increase in oil prices by the Organization of Petroleum Exporting Countries (OPEC) was perceived. By the middle of 1979 such predictions were common. Growth did slow markedly, but the characteristics of cumulating recession were still not in evidence at the close of the year.

Developments on the inflation front were the most significant disappointment in the 1979 economic performance. At the beginning of the year it was widely expected that inflation would moderate. Those hopes were destroyed, however, by skyrocketing energy prices.

The inflation and energy problems plaguing our economy seriously threaten our ability to achieve the economic goals to which the Carter Administration is firmly committed: maintaining healthy economic growth, providing job opportunities for an expanding labor force, and reducing the unacceptably high unemployment among minorities. It is urgent that we increase our energy independence and reduce the rate of inflation as soon as possible. These are the central objectives of the Carter Administration's economic policies for the period immediately ahead.

AN OVERVIEW OF THE YEAR

It was evident at the beginning of 1979 that economic growth would slow from the 5 percent average annual rate of the preceding

3 years. Most of the resources idled by the deep recession of 1974–75 had been brought back into productive use, and monetary and fiscal policies had been shifted toward restraint in an effort to slow inflation.

The 0.8 percent growth of real gross national product (GNP) actually recorded over the 4 quarters of last year was well below the 2.2 percent forecast by the Administration at the beginning of 1979. The impact of huge energy price increases on consumers' real incomes was largely responsible.

Personal consumption expenditures for goods declined slightly in real terms, but higher outlays for services kept total personal consumption rising. Residential construction also fell last year, but about in line with expectations at the beginning of the year. The expansion of business fixed investment slowed substantially, to less than 2 percent, in 1979. Businesses continued to pursue cautious inventory policies, as they had earlier in the recovery, and the rate of inventory accumulation in the fourth quarter was well below its level a year earlier.

Net exports of goods and services increased substantially in real terms last year, and by the fourth quarter they reached the highest level since 1975. The volume of exports rose, while the volume of imports leveled off. The slowing of U.S. economic expansion, increased growth abroad, and the decline of the dollar during 1978 all contributed to these developments.

The pace of economic expansion in the United States was uneven during 1979. Real GNP declined in the second quarter, when personal consumption expenditures fell sharply in response to long gas lines, but it rebounded in the summer with the resumption of normal shopping patterns. Growth in the fourth quarter was at a more moderate rate; the rise in final sales slowed and inventory accumulation declined. Output in the industrial sector did not closely follow the quarterly pattern of GNP growth, but over the 4 quarters of 1979 industrial production rose 0.9 percent, about the same as the increase in real GNP.

Both total employment and the civilian labor force grew by about 2 million in 1979. Adult women accounted for about 70 percent of the total increase in employment. The proportion of the working-age population employed rose to 59.3 percent, a slight gain.

Very large advances in energy prices and in the costs of home purchase and finance were dominant factors in the 13 percent rise in the consumer price index (CPI) during 1979. Wholesale prices of finished goods sold by producers rose by 12.5 percent over the 4 quarters of 1979, compared with 8.7 percent in the previous year. Energy prices were primarily responsible for the larger increase last year.

Sharp movements in prices for food, energy, and houses and in mortgage interest costs can have a large influence on the overall rate of inflation recorded in a given year. It is therefore useful to trace the movements of other prices as one means of ascertaining longer-term trends in prices—that is, in the underlying inflation rate.

Consumer prices excluding energy, home purchase and finance, and the farm value of food rose by 8.1 percent last year, less than 1 percentage point above the 1978 pace (Table 1). The rate of increase in producers' prices for finished goods excluding food and energy rose somewhat more, from 7.9 percent in 1978 to 9.0 percent in 1979. By these measures the underlying inflation rate has moved up by about 2 to 3 percentage points since 1976.

TABLE 1.—*Changes in consumer prices and in producer prices of finished goods, 1976–79*

[Percent change, fourth quarter to fourth quarter]

Item	1976	1977	1978	1979
Consumer prices, total	5.0	6.6	9.0	12.7
Farm value of food	−13.3	6.8	20.1	5.8
Energy [1]	6.2	8.2	7.5	36.5
Home purchase and finance [2 3]	3.8	8.9	13.4	19.8
All other [3]	6.4	5.9	7.3	8.1
Producer prices of finished goods, total	2.7	6.9	8.7	12.5
Food	−4.4	7.4	11.6	7.7
Energy	5.0	9.2	6.4	62.0
All other	5.6	6.4	7.9	9.0

[1] Includes only prices for direct consumer purchases of energy for the home and for motor vehicles.
[2] In both the table and the text, "home purchase and finance" consists of home purchase and financing, taxes, and insurance on owner-occupied homes.
[3] Estimates.

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

Another measure of the underlying inflation rate is found in the rise of unit labor costs adjusted for cyclical variations in productivity growth. Businesses tend to calculate costs on the basis of longer-term trends in productivity and to set their prices accordingly. When nominal wage increases exceed estimated long-term productivity gains, businesses will pass the resulting cost increases through to higher prices if market conditions permit.

The rate of increase in compensation per hour for all employees in the private nonfarm business sector declined in 1977, then rose again. The 1979 increase of 8.8 percent was only slightly more than the 8.5 percent recorded in 1976. Increases in actual productivity have slackened considerably, from 2.2 percent in 1976 to minus 2.2 percent in 1979, but this is partly attributable to cyclical developments. In 1976 the economy was emerging from a deep recession and was growing strongly. In 1979 the recovery was in its fifth year and economic growth slowed.

It is not clear what rate of productivity growth is now being incorporated in business estimates of longer-term trends in costs. Studies by the Council of Economic Advisers suggest that the current trend rate of increase in productivity is only about 1 to 1½ percent; productivity growth in 1979, even allowing for a cyclical slowdown, was much less than this. With compensation per hour in the private nonfarm business sector rising at about 9 percent, the long-term rate of increase in unit labor costs—and thus in this measure of the underlying rate of inflation—appears to be around 7½ to 8 percent, compared to about 6 percent in 1976. If heavier weight is given to the especially poor productivity experience of 1979, the underlying rate may now be in the 8 to 9 percent range.

Wage restraint played an important role in limiting the increase in the underlying rate of inflation during 1979. Aggregate measures of wage performance indicate that growth in nominal wages did not increase last year.

Real disposable income rose temporarily in the first quarter, when the personal income tax cut provided by the Revenue Act of 1978 took effect, but it fell in the spring. Over the final 3 quarters of 1979 real disposable income remained at about the level reached in the fourth quarter of 1978. Higher oil prices were the main cause of this stagnation in real income. Inflation, by moving individuals into higher tax brackets, added further to the drag on disposable incomes, as did overwithholding of personal income taxes. Despite the leveling off of real income, personal consumption expenditure rose by about 1½ percent over the 4 quarters of 1979, as the personal saving rate fell.

The distribution of national income among major classes of income recipients changed little in 1979. The shares accruing to corporations as profits and to nonfarm proprietors declined somewhat, as one would expect in a year of weak economic growth and declining productivity. The share of rental income in the total continued its long-term descent. Compensatioin of employees rose slightly as a share of the total, as did the income of farm proprietors. The net interest component of business costs also increased as a proportion of total national income, reflecting both rising interest rates and the rapid pace of business borrowing.

The greater share of farm income in the total was due primarily to the rapid increase in cattle prices early in the year and a late spring strengthening in grain prices. Cattle price increases were a consequence of reduced marketings and higher consumer demand for beef; grain prices increased as the extent of a crop shortfall in the Soviet Union became known. Through the first half, the income of farm proprietors was 23 percent higher than in 1978. Livestock prices declined during the summer and autumn as a result of large supplies of pork and poultry and seasonal increases in beef slaughter. Grain prices also dropped from their early summer peaks, while farm production costs continued to increase at about the rate of inflation. Farm proprietors' income in the fourth quarter was 6 percent below that recorded a year earlier. For the year as a whole, farm income equalled the 1973 record.

Why the Economy Was So Resilient

The fact that the economy did not tip into recession in 1979 has received widespread comment and attention. Periods of economic expansion since World War II have typically come to an end when inflation accelerated and monetary and fiscal policies shifted toward restraint. In 1979, despite rising inflation, restraint on aggregate demand from monetary and fiscal policies, and a huge "oil tax" levied by OPEC, the economy continued to move forward.

Fiscal policy began to shift toward restraint in 1978, but the degree of restraint was lessened somewhat in early 1979 by the tax cut provided in the Revenue Act of 1978. Thereafter the Federal budget became moderately more restrictive. The high-employment budget (discussed later in the chapter) shifted from a $7 billion deficit in the second half of 1978 to a $13 billion surplus in the second half of 1979.

Added to the restraint from the budget was the enormous drain on consumer purchasing power resulting from the 1979 rise in oil prices. The oil drag at year's end was reducing consumer spending power by almost $55 billion at an annual rate, or about 3 percent of personal after-tax income. Fiscal and oil price restraint together were thus draining large amounts from consumer incomes by the fourth quarter of last year. The magnitude of this restraint has no parallel in any postwar year—including 1974, when the first big OPEC price increase rocked the economy.

Monetary policy also moved toward restraint over the course of last year. Growth of the major monetary aggregates slowed slightly. Growth of M_1 moderated to 5.5 percent in 1979 from 7.2 percent in 1978; however, shifts to ATS and New York NOW accounts (see below) are estimated to have reduced M_1 growth by 1½ percentage points in 1979. The rise in M_2 dropped back to 8.3 percent from 8.7 percent in the preceding year. Interest rates shot upward in the second half. Short-term market interest rates at year-end were approximately 3 percentage points higher than a year earlier, while long-term rates were up about 1½ percentage points.

The reasons why the economy was able to absorb these shocks without going into a steep decline may not be fully understood for

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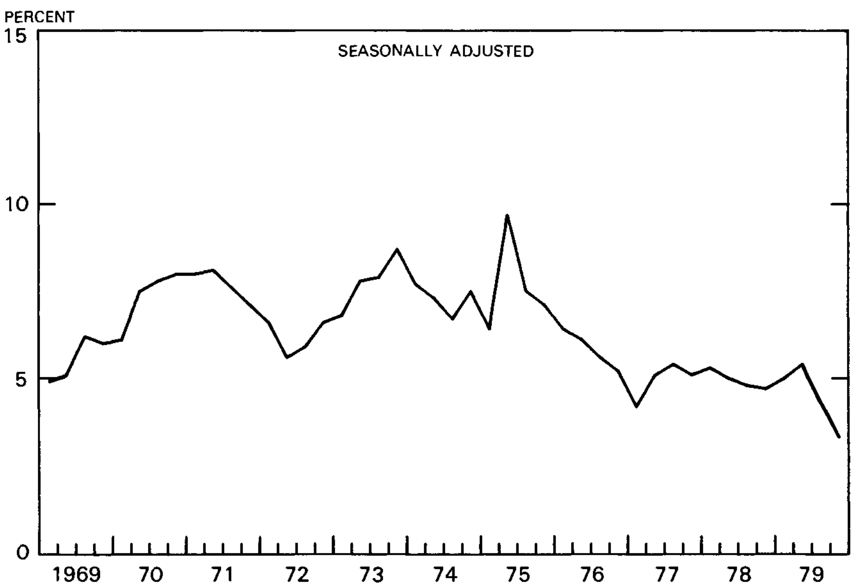
some time. Three factors, however, clearly played a role. First, individuals as consumers and home buyers appear to be more strongly affected by inflationary expectations now than in the past. Surveys of consumers' attitudes indicate that until fairly recently most people expected that an increase in inflation would be temporary. When actual inflation rates were rising, expected rates of inflation lagged well behind. After two episodes of double-digit inflation, a different response is now elicited. When inflation increases, expected inflation rates move up at the same time. As a result, consumers are now more likely to accelerate purchases when inflation increases. When inflation accelerated markedly in 1973, for example, the personal saving rate rose sharply, even after allowance is made for a large increase in the share of total income accruing to farm proprietors. In 1979, however, consumers responded to the squeeze on real incomes resulting from inflation by continuing to borrow heavily and by reducing their saving as a fraction of disposable income (Chart 1). Although the ratio of household borrowing to disposable income declined over the course of last year, it remained well above 1973 levels.

Chart 1

Personal Saving Rate



SOURCE: DEPARTMENT OF COMMERCE.

Expected price increases probably exert more influence on decisions to buy houses than on purchases of other durable goods. Prices of new and existing homes have risen considerably faster than prices of other consumer goods and services over the past decade, and that fact has not been lost on most individuals. With demographic factors also supporting demand, sales of new and existing homes remained very strong until late last year, despite a rise of mortgage interest rates to unprecedented heights.

Second, monetary restraint no longer produces the abrupt changes in availability of credit that used to be instrumental in bringing an end to economic expansion. Changes in financial markets over the past 20 years have removed or reduced constraints which used to limit the availability of credit to certain borrowers during periods of monetary tightness. For example, the legal and constitutional barriers that once prevented States and their political subdivisions from paying market rates of interest have been raised or eliminated. Usury ceilings have also been liberalized. Commercial banks and thrift institutions have been given more freedom to bid for funds and are hence better able to provide credit to borrowers willing to pay going rates of interest for loans. In particular, the 6-month money market certificates (MMCs) issued by banks and thrift institutions, on which rates are tied to market yields on Treasury bills, have been a major factor sustaining mortgage credit flows since mid-1978.

Changes such as these have altered the way in which restrictive monetary policies influence aggregate demand. Monetary restraint now works more through changes in interest rates that influence a borrower's willingness to incur debt, and less through changes in a borrower's ability to obtain credit. For this reason, monetary restraint now tends to affect aggregate demand less abruptly and with a less uneven impact across major economic sectors. As events in financial markets late in the year attest, however, significant changes in monetary policy may still lead to constraints on the availability of credit, particularly for housing.

Third, the resilience of the economy last year reflects the relative absence of cyclical imbalances characteristic of earlier periods of economic expansion. Most notable in this regard is the comparatively balanced relationship of inventories to sales after nearly 5 years of economic expansion. Better inventory controls and very cautious inventory policies prevented a buildup of inventories relative to sales during the expansion. In fact the aggregate ratio of real nonfarm inventories to sales was lower in late 1978 and early 1979 than it was throughout most of the preceding 10 years (see Chart 2 on page 45).

When consumer spending weakened in the second quarter of last year, therefore, businesses did not find themselves seriously overstocked. To be sure, auto inventories, particularly for large cars, increased substantially, and major auto producers are still trying to redress the balance between stocks and sales. In other industries, however, production cutbacks to reduce excess stocks have been modest.

As Chapter 2 indicates, the economy may head into a recession in early 1980. The factors that sustained growth in 1979 should help to make the recession moderate in depth and duration. But it is unlikely that they will cushion the economy's response to shocks to the same extent that they did in 1979. This fact increases the uncertainty surrounding forecasts of economic performance this year.

THE VOLUNTARY STANDARDS

On October 24, 1978, the President announced a comprehensive anti-inflation program that included actions by the Federal Government to reduce the relative size of the Federal budget, rationalize and improve the regulatory process, and work together with State and local governments to reduce the inflationary impact of government actions on the economy. Business and labor were asked to adhere to voluntary wage and price standards designed to reduce the rate of price increase over the following 12 months.

The President announced that the Administration would consider noncompliance with the standards to be a sign of inflationary pressure in the markets concerned and would reconsider Federal Government programs and policies affecting those markets. The Federal Government would avoid purchasing from noncompliant firms where feasible. The President also proposed a program of real wage insurance to help protect workers who complied with the program from suffering losses of real income. This innovative proposal was not adopted by the Congress.

THE OPERATION OF THE STANDARDS

The anti-inflation standards administered by the Council on Wage and Price Stability were designed to minimize administrative burdens and provide maximum flexibility to the private sector. Firms were asked to group their employees into "compliance units": for example, employees covered by collective bargaining agreements, other nonmanagerial personnel, and business managers. The rate of pay increase for each group was to be limited to 7 percent during the first program year, October 1978 through September 1979. The composition of that increase between wages and fringe benefits was left to private decisions, as was the distribution of increases among employees within each subgroup. An assumed 6 percent rate of inflation was used to evaluate cost-of-living adjustment clauses in labor contracts.

Each firm was asked to restrain its average price increase to one-half of 1 percentage point below its average annual rate of increase during 1976–77 (the "price-deceleration" standard). Firms were left free to allocate the allowed price increase among their various product lines, so that they could respond to market conditions for particular products while adhering to the overall anti-inflation goal. Exempted were prices determined in auction markets, such as prices of agricultural commodities and industrial raw materials; those set by regulation, such as prices of crude oil and natural gas; and most imports. New product lines were also exempt.

For some industries with special characteristics, specific alternative standards were constructed. For example, since the volatility of agricultural prices would make it difficult to apply the price-deceleration standard to food manufacturers and processors, they could instead choose to follow a gross-margin standard, limiting the total markup over raw food prices.

Firms unable to meet the price-deceleration standard, or the special alternative industry standards, because of uncontrollable cost increases were allowed to achieve compliance by meeting a test based upon a limitation of profit margins.

Compliance with the standards was widespread during 1979. Nevertheless the circumstances in which the program operated made it impossible to prevent overall inflation from increasing. Energy prices rose very sharply, and prices of both farm products and internationally traded raw materials increased substantially in late 1978 and early 1979. The jump in U.S. prices of internationally traded commodities stemmed partly from the earlier depreciation of the dollar. These price increases led many firms to shift from the primary price-deceleration standard to the profit-margin limit, so that price increases in primary commodities were passed through to prices of final products. Declining productivity also added substantially to business costs.

PRICES OF FOOD, RAW MATERIALS, AND ENERGY

Food. Pressures on food prices were greatest during the first half of the program year. Declining supplies of beef and strong consumer demand pushed cattle prices up. Higher prices encouraged farmers and ranchers to begin rebuilding their herds, thus reducing current marketings further and putting even more pressure on prices. Prices of pork and poultry, which are competitive with beef, joined in the upward move. In addition, harsh winter weather and a strike in the West were chiefly responsible for shortages of fruit and vegetables that resulted in rapid price increases for these commodities in early 1979.

Consumer food prices rose less rapidly during the second half of the program year, when farm prices of food declined. Meat supplies increased, particularly for pork and poultry, and vegetable supplies were also more ample.

Increased marketing costs contributed to rising consumer food prices in 1979, as did gains in the net earnings of food distributors. Marketing spreads for food—the difference between retail costs and farm value—ordinarily narrow when farm commodity prices increase rapidly. Early last year, however, these marketing spreads widened while farm prices were rising sharply (Table 2).

TABLE 2.—*Changes in farm and food prices, September 1978 to September 1979*

[Percent change [1]]

Item	Farm value		Marketing spread		Retail cost	
	Sept. 1978 to Mar. 1979	Mar. 1979 to Sept. 1979	Sept. 1978 to Mar. 1979	Mar. 1979 to Sept. 1979	Sept. 1978 to Mar. 1979	Mar. 1979 to Sept. 1979
Market basket [2]	13.0	−6.0	5.2	6.5	8.2	1.4
Meat products	21.2	−12.4	5.9	13.4	14.8	−2.5
Dairy products	7.3	6.2	6.1	3.4	6.7	4.9
Poultry	5.2	−18.6	8.8	6.5	6.7	−8.0
Fresh vegetables	31.1	−32.9	12.5	−5.4	18.2	−14.6
Processed fruits and vegetables	3.1	1.4	6.0	4.0	5.4	3.5
Cereal and bakery products	7.1	16.8	4.4	3.8	4.8	5.7

[1] Not seasonally adjusted, and not at an annual rate.
[2] Includes items not shown separately.

Source: Department of Agriculture.

When farm prices for foods began to decline in April, the marketing spread widened still more. The President met with representatives of the food industry in August and asked them to translate changes in farm prices more quickly into price changes at the retail level.

Increases in retail food prices during the fourth quarter were somewhat below the rate of inflation elsewhere in the economy. At year-end, retail food prices were about 10 percent above their level a year earlier.

Raw materials. Pressures on prices of internationally traded raw materials were also greatest during the first half of the program year. During this period the industrial sector of the U.S. economy was operating at high rates of capacity utilization, and growth abroad was strengthening. Demand pressures in markets for basic materials therefore intensified. For example, wholesale prices of crude commodities other than agricultural products and energy rose 24 percent from September 1978 to March 1979. Pressures in these markets eased in the spring, when growth of the U.S. economy began to be adversely affected by energy developments. Prices of some internationally traded goods began to climb steeply in the early autumn, when speculation in gold threatened to spill over into other commodities. Those pressures were short lived and confined largely to metals, but international political tensions led to a renewed surge in gold and silver prices in December.

Energy. It was the runup in world oil prices that most seriously aggravated inflation during 1979. Early in the year cutbacks in Iranian production and efforts here and abroad to rebuild oil inventories created a tight balance between world supply and demand for oil. These developments led in the second quarter to rapidly rising spot market prices of crude petroleum and refined products and contributed to local shortages of gasoline in the United States. Premium prices were imposed by many oil-exporting countries, and supplies moved from long-term contracts to the spot market, where much higher prices prevailed. The Saudi benchmark price of crude oil was raised three times: in April, July, and December. By early January 1980 the world price of oil reached about $28 per barrel, more than double the level a year earlier.

Phased decontrol of domestic oil prices, which was announced in April and began to take effect on June 1, added only marginally to average crude oil prices in the second half of last year, though decontrol will have larger effects in 1980. Wider refining and marketing margins were a relatively important factor in the increase in prices of gasoline and home heating fuel.

Gasoline prices at the pump rose 35 cents per gallon over the 4 quarters of 1979, compared to an increase of 5 cents that would have been needed to keep up with the general rate of inflation. Approximately 14 cents of this increase stemmed from higher prices for imported crude oil and products, and 11 cents came from widening gross margins of refiners, retailers, and distributors. About 10 cents resulted from higher domestic crude oil prices, only a part of which was due to decontrol.

Rising energy prices added directly about 2¼ percentage points to the overall rate of consumer price inflation in 1979, considerably more than they added in 1974.

PRODUCTIVITY AND WAGES

Declining productivity added substantially to business costs during the first program year, compounding the difficulties businesses encountered in complying with the basic price-deceleration standard. For all private nonfarm businesses, productivity decreased 2.2 percent from the fourth quarter of 1978 to the fourth quarter of 1979.

As a consequence the rise in unit labor costs jumped to 11.3 percent over the same 4 quarters, compared with 7.8 percent during 1978.

Slower growth of real GNP in 1979 contributed to last year's poor productivity, but the decline was too large to be explained by cyclical factors alone. Generally businesses would try to pass cost increases resulting from lower productivity through to higher prices if they considered the decline to be permanent. Last year, however, prices in the broad industrial and service sectors rose significantly less than unit labor costs. Businesses may have absorbed part of the increased costs because they believed the productivity decline to be temporary; on the other hand, either market resistance or the standards may have prevented businesses from raising prices further.

Under the circumstances that prevailed in 1979, it is hardly surprising that the overall inflation rate increased despite fairly widespread compliance with the standards. What is surprising is the modest acceleration of inflation that occurred in the broad range of industrial and service prices. As noted earlier, the increase in consumer prices—excluding energy, home purchase and finance, and the farm value of food—was less than 1 percentage point higher in 1979 than in the previous year. The standards played an important role in preventing greater acceleration of prices.

Continued restraint in private wage and price decisions will be important this year. In September 1979 the Administration and the leaders of the American labor movement reached a National Accord recognizing the need to continue an effective and equitable anti-inflation program. (The National Accord and the pay and price standards for the second program year are discussed in Chapter 2.)

Measures of Wage Performance

The long-term trend of prices of goods and services produced in the private nonfarm sector of the economy closely follows the rise of business costs. Wages, salaries, and fringe benefits account for roughly two-thirds of the total costs of production. If last year's sharp increases in energy prices and the cost of homeownership had led to an accelerated rise of wages and fringe benefits, the long-term outlook for inflation would have greatly worsened. Operation of the pay standard during the first program year helped to prevent that outcome.

The 7 percent pay standard provided a guideline to be used in establishing pay policies for nonunion employees and in collective bargaining. By and large, businesses followed those guidelines and American workers cooperated by complying with the program.

Aggregate measures of wage performance indicate that wage and salary increases did not accelerate during 1979 (Table 3). For example, the rate of increase in the adjusted average hourly earnings index fell from 8.4 percent in 1978 to 8.0 percent in 1979, and the growth of compensation per hour in private nonfarm business declined slightly from 9.0 percent to 8.8 percent.

TABLE 3.—*Measures of changes in compensation and employment costs, 1977–79*

[Percent change]

Measure	1977	1978	1979[1]
Fourth quarter to fourth quarter:			
Adjusted hourly earnings index	7.5	8.4	8.0
Compensation per hour [2]	7.5	9.0	8.8
Contribution of:			
Private wages, salaries, and fringes	6.9	8.3	8.0
Employer contributions for social insurance	.6	.7	.8
Third quarter to third quarter:			
Employment cost index [3]	7.2	8.0	7.7
Union	7.7	7.9	8.4
Nonunion	6.9	8.0	7.3
Union wage changes (total effective adjustment) [4]	8.6	7.9	8.3
Adjustment resulting from:			
Current settlement	3.5	2.1	2.4
Prior settlement	3.3	3.5	3.0
Escalator provision	1.7	2.2	2.6

[1] Preliminary.
[2] Data relate to private nonfarm business sector, all employees.
[3] Changes are measured from September to September.
[4] Agreements covering 1,000 workers or more.

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

Some deceleration in wage increases occurred last year in the nonunion sector. However, both the employment cost index for union workers and the effective wage change in collective bargaining units covering 1,000 workers or more showed a greater increase in the 4 quarters through September 1979 than in the preceding 4 quarters.

New collective bargaining agreements were concluded in five major industries in 1979: petroleum, trucking, rubber, electrical machinery, and autos. Increases in wages over the life of the contract are shown in Table 4, with cost-of-living adjustment clauses evaluated at three different rates of inflation.

Without the pay standard, the increases in wages granted in all of these contracts might well have been larger. When evaluated at an 8 percent inflation rate (the average prevailing over the previous contract period) all of the major contracts concluded last year provided for smaller increases in wages than those in the previous contracts.

TABLE 4.—*Wage increases under major collective bargaining contracts*

[Percent increase]

Industry	Prior contract[1]	1979 contract assuming		
		6 percent inflation	8 percent inflation	10 percent inflation
Petroleum:[2]				
First year of two-year term	8.9	8.2	8.2	8.2
Trucking:				
Three-year increase	30.5	24.0	27.4	30.9
Annual rate	9.3	7.4	8.4	9.4
Rubber:				
Three-year increase	45.5	27.6	33.4	39.4
Annual rate	13.3	8.5	10.1	11.7
Electrical:				
Three-year increase	32.9	20.0	24.5	28.8
Annual rate	9.9	6.3	7.6	8.8
Autos:				
Three-year increase	29.4	24.1	27.9	32.0
Annual rate	9.0	7.5	8.5	9.7

[1] The previous petroleum contract was signed in 1977; all others were signed in 1976.
[2] The petroleum contract is a two-year agreement but it was reopened in the second year.

Source: Council on Wage and Price Stability.

Studies by the Council of Economic Advisers reinforce the view that the President's program aided in keeping wage rates from accelerating. Estimates from models of wage and price determination, those developed at the Council as well as others, suggest that wage increases during the first program year were about 1 to 1½ percentage points lower than would be expected, given the basic determinants of wages. To be sure, many influences could account for the shortfall, the effect of the pay standard being but one. For example, a shift in the composition of the work force toward less experienced and lower-paid workers occurred during the year. However, this demographic shift could not have accounted for more than a small part of the difference between actual and expected wage increases, since available evidence indicates that percentage wage increases for lower-paid workers were larger than those for higher-paid workers.

Real Wages

Increases in wage rates during the first program year were below the rise in consumer prices and hence workers' real incomes declined. The rise in prices relative to wages did not result from a general increase in business profit margins, however, but from other sources. The rise in energy prices, stemming in large measure from increased world oil prices, was the major cause.

The magnitude of the decline in real wages last year is itself difficult to estimate. Conclusions differ according to the measure of price change to which the rise in wages is compared. The average hourly earnings index for the private nonfarm sector rose by 8.0 percent over the 4 quarters of last year. Since the consumer price index for urban consumers climbed 12.7 percent, the average hourly earnings index deflated by the CPI declined by 4.2 percent, compared to the decline of 0.6 percent in 1978 indicated in Table 5.

TABLE 5.—*Alternative deflators for earnings and compensation, 1978–79*

[Percent change, fourth quarter to fourth quarter]

Item	1978	1979[1]
Average hourly earnings index		
Deflated by:		
Consumer price index (CPI)	−0.6	−4.2
CPI with rent substituted for homeownership	.5	−2.4
CPI with rent substitution and excluding energy	.5	.1
Fixed-weight deflator for personal consumption expenditures (PCE)	.4	−2.5
Fixed-weight deflator for PCE excluding energy	.3	([2])
Compensation per hour[3]		
Deflated by:		
Consumer price index (CPI)	.1	−3.5
CPI with rent substituted for homeownership	1.2	−1.6
CPI with rent substitution and excluding energy	1.2	.9
Fixed-weight deflator for PCE	1.0	−1.8
Fixed-weight deflator for PCE excluding energy	.9	.8

[1] Preliminary.
[2] Less than 0.05 percent.
[3] Data relate to private nonfarm business, all employees.

Note.—Consumer price index for all urban consumers used.

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

The appropriateness of using the CPI as a measure of the inflation confronting the average consumer has been called into question in recent years because of the way this index treats the purchase of homes and the associated costs of home financing. The CPI is a price index of goods and services that consumers buy; it is not a cost-of-living index. A home is an investment as well as a good purchased by consumers for current consumption. An increase in home prices is thus as much a return on savings to the homeowner in his role as an investor as it is a rise in the cost of living to the individual in his role as a consumer. Furthermore relatively few individuals purchase homes in any given year and pay the associated current mortgage interest rates; for others the rise in the home purchase and finance components of the CPI does not represent an increase in current living costs. Conversely this year's increase in the costs of home purchase and finance, unless reversed, would affect future buyers even if this component of the CPI showed no subsequent rise.

During recent years the Bureau of Labor Statistics has reviewed intensively the treatment of homeownership in the CPI. Several approaches were developed, but none dealt with the complexities in a manner satisfactory to the major users of the CPI. One alternative is to use a rent index to represent the costs of using the services of a house. This may give a better measure of changes in the cost of living to the average consumer, particularly during periods when the costs of homes and home finance move very sharply. When average hourly earnings are deflated by the CPI with the rent index substituted for homeownership, real earnings still show a drop in 1979, as Table 5 indicates, but it is more moderate.

Another measure which uses the CPI rent index to represent housing costs is the fixed-weight price index for personal consumption expenditures in the national income and product accounts. Average hourly earnings show a decline of about the same size when deflated by this index.

In either case, the source of the decline was the sharp increase in energy prices. Without this rise in energy prices, real average hourly earnings would have been approximately unchanged in 1979, compared with a small increase in the previous year.

The lower part of the table shows compensation per hour deflated by each of these measures of consumer price change. Compensation per hour includes wages, fringe benefits, and employers' contributions to social insurance, and it has generally increased faster than wage rates. The broad pattern of change that emerges when this measure is deflated by the various price indexes is similar to that for average hourly earnings.

There is no doubt that real earnings of American workers declined in 1979. Sharp increases in energy prices made that decline inevitable. The decline in real wages would have been larger if businesses had fully passed through to higher prices the rise in unit labor costs resulting from declining productivity. Larger increases in nominal wages would at best have improved real wages only temporarily. By increasing business costs, they would eventually have led to a still more rapid rise in prices.

The Distribution of National Income

Another way of appraising the impact of the standards is to consider the changes that occurred during the program year in the distribution of total national income among major income groups.

In the third quarter of 1978, the last quarter before the standards went into effect, employee compensation excluding employer contributions to social insurance accounted for 69.9 percent of total national income (see Table 6). One year later the ratio had risen slightly to 70.2 percent. Over the same year the corporate profit share fell from 10.0 percent to 9.3 percent. Such changes in the share of national income going into employee compensation and profits are typical of a period in which economic growth slows. Since productivity declined and the increased costs were not passed through fully to prices, corporate profit margins fell. The share of employee compensation in national income was larger than it would have been had the higher costs been passed through fully to higher prices.

TABLE 6.—*Shares of national income, 1976–79*

[Percent of total]

Item	1976	1977	1978	1979 [1]	Third quarter	
					1978	1979
Compensation of employees	76.3	75.8	75.7	75.8	75.4	75.8
Employer contributions for social insurance	5.2	5.3	5.5	5.7	5.4	5.7
Wages, salaries, fringe benefits, and other	71.1	70.5	70.2	70.2	69.9	70.2
Proprietors' income [2]	6.6	6.6	6.8	6.8	6.7	6.7
Nonfarm [2]	5.2	5.3	5.2	5.1	5.2	5.1
Farm [2]	1.3	1.3	1.6	1.7	1.5	1.6
Rental income [3]	1.6	1.6	1.5	1.4	1.5	1.4
Corporate profits [2]	9.3	9.8	9.7	9.3	10.0	9.3
Net interest	6.2	6.2	6.4	6.7	6.4	6.8

[1] Preliminary.
[2] With inventory valuation and capital consumption adjustments.
[3] Rental income of persons, with capital consumption adjustment.

Note.—Quarterly figures based on seasonally adjusted data.
Detail may not add to 100 percent because of rounding.

Source: Department of Commerce, Bureau of Economic Analysis.

The decline in the corporate profit share occurred despite significant increases in the profit margins of oil companies. For other nonfinancial businesses, the squeeze on profit margins stemming from the decline in productivity growth was larger than the overall numbers indicate.

Table 7 shows employee compensation and corporate profits as a share of gross product originating in nonfinancial businesses, excluding petroleum and coal companies. From the third quarter of 1978 to the third quarter of 1979 the profit share declined by 1½ percentage points, while the share of employee compensation rose by almost that much.

TABLE 7.—*Shares of gross product originating in nonfinancial corporate business excluding petroleum and coal companies, 1976–79*

[Percent of total]

Item	1976	1977	1978	1978				1979		
				I	II	III	IV	I	II	III
Compensation of employees	68.2	68.5	69.1	69.8	68.9	68.9	68.8	69.8	70.1	70.2
Corporate profits [1]	10.9	10.9	10.7	9.4	10.8	11.0	11.2	10.3	9.8	9.5

[1] Corporate profits with inventory valuation adjustment but without capital consumption adjustment, which cannot be distributed by industry.

Note.—Figures in this table cannot be compared directly to those in Table 6.

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

Demand in nearly all major sectors of the economy was weaker in 1979 than in the previous year (Table 8). In real terms domestic final sales declined during the first half, largely because of the pronounced drop in consumers' purchases of goods in the second quarter, when long gas lines discouraged shopping. Declining residential construction also contributed to the reduction in final sales. The fall in real GNP in the first half was cushioned by a sizable rise of inventory investment, primarily traceable to involuntary accumulation in the second quarter.

TABLE 8.—*Growth in major components of real gross national product, 1978–79*

[Seasonally adjusted annual rate]

Component	1977 IV to 1978 IV	1978 IV to 1979 II	1979 II to 1979 IV [1]
Percent change:			
Real gross national product	4.8	−0.6	2.3
Personal consumption expenditures	4.5	−1.1	4.5
Business fixed investment	10.5	1.9	1.5
Residential fixed investment	−.2	−10.7	−5.9
Government purchases of goods and services	1.7	−2.6	2.9
Federal	−2.5	−2.4	4.7
State and local	4.0	−2.6	1.8
Real domestic final sales [2]	4.3	−1.5	3.4
Change as a percent of real GNP:			
Inventory accumulation	([3])	.9	−2.1
Net exports of goods and services	.5	([3])	1.0

[1] Preliminary.
[2] GNP excluding change in business inventories and net exports of goods and services.
[3] Less than 0.05 percent.

Source: Department of Commerce, Bureau of Economic Analysis.

Final sales strengthened in the second half of the year, when consumer spending picked up noticeably, and government purchases also increased. However, continued cautious inventory policies and efforts to reduce swollen stocks of new cars led to a large decline in inventory accumulation.

Purchases by State and local governments declined slightly in 1979 after a large increase in 1978 that came partly from the effects of the stimulus package introduced by President Carter in 1977.

Net exports were a source of strength in 1979, particularly in the second half. In volume terms, exports of goods and services increased by 9 percent, while imports of goods and services rose only 2 percent.

PERSONAL CONSUMPTION EXPENDITURES

Growth of real personal consumption expenditures over the 4 quarters of 1979 was the smallest since 1974, when a decline in real consumer buying occurred. The 1979 increase would have been still smaller if consumers had not been willing to reduce their current saving as a proportion of after-tax income and to increase their indebtedness. The personal saving rate, already low at 4.7 percent of disposable income in the fourth quarter of 1978, declined further to a very low level of 3.3 percent by the fourth quarter of last year.

The pattern of consumer spending over the year was uneven. The steep second-quarter drop was followed in the summer by a marked pickup that carried into the fourth quarter. While sales of new cars weakened in the fourth quarter, purchases of other goods and services remained relatively strong despite the continued squeeze on consumer purchasing power.

Purchases of durable goods fell 4 percent in real terms; unit auto sales in the fourth quarter were 11 percent below their level a year earlier. The mix of new car sales changed as consumers became increasingly concerned about the cost and availability of gasoline. Purchases of medium-size and larger cars plummeted in the second quarter. Some strengthening occurred in the third quarter in response to very heavy price discounts, but sales fell again later in the year. Sales of recreational vehicles, vans, and light trucks were also hit hard. In contrast, more imported models, chiefly fuel-efficient vehicles, were purchased in 1979 than in 1978; by the end of last year imports had captured one-fourth of the domestic market. Although sales of the new small American models were limited severely by availability, domestically produced compact and subcompact cars accounted for one-third of total auto sales late last year.

Sales of nondurable goods increased by only 1 percent in real terms during 1979. Declines occurred for energy commodities—gasoline, fuel oil, and coal—as a result of rising energy prices since 1973 and the improved fuel efficiency of automobiles. In 1972, before the first large OPEC price rise, consumers' outlays for energy amounted to 6.8 percent of total personal consumption expenditures. Adjusted for price changes, the ratio in the fourth quarter of 1979 was a full percentage point lower.

HOUSING

The decline in residential construction in 1979 was about in line with expectations at the beginning of the year, although interest rates increased much more than had been anticipated. For the year as a whole, real residential construction was 6 percent below the high 1978 level, and new housing starts fell to about 1.74 million units from 2 million in the previous year. A decline in single-family starts to below 1.2 million units accounted for most of the overall reduction. Multifamily starts were only slightly below 1978 levels.

A severe winter led to a drop of more than 20 percent in housing starts in the first quarter. Making up the resulting shortfall helped to sustain construction activity over the next 2 quarters, when housing starts exceeded an annual rate of 1.8 million. During the fourth quarter, housing starts dropped sharply to a rate of about 1.6 million in response to a marked increase in mortgage interest rates and reduced availability of mortgage credit.

The rising cost of mortgage and construction financing depressed housing sales and starts only moderately until late in the year. Interest rates on mortgage loans rose a full percentage point—to about 11 percent—from late 1978 to September 1979. Nevertheless sales of both new and existing homes continued at a fairly high rate. While this strength was partly attributable to demographic trends, the perception of housing as a good hedge against inflation was a major factor sustaining demand. The average price of new homes, adjusted for changes in quality, increased by about 15 percent last year.

Following Federal Reserve action in early October to tighten monetary policy, mortgage interest rates rose sharply, reaching levels well above usury limits in many States. In some cases these usury limits resulted in severe disruptions in local housing markets. In other States potential home buyers found mortgage credit less readily available as mortgage lenders raised down payments, made loans only to established depositors, and took other steps to reduce their lending. Housing starts fell by 14 percent in November to a 1.5-million annual rate and remained at that level in December.

BUSINESS FIXED INVESTMENT

Real business fixed investment in the current expansion began to rise strongly in early 1976, led by increased outlays for producers' durable equipment, especially vehicles (Table 9). Investment in industrial plant and other structures lagged behind, but it too turned upward in the middle of 1977. From then until the end of 1978 rising business investment provided strong support for new jobs, higher incomes, and increased total real output. From the end of 1975 to the fourth quarter of 1978 the share of real GNP devoted to business capital formation rose from 9.1 to 10.2 percent, although it remained below the high level attained in late 1973 and early 1974.

TABLE 9.—*Changes in real business fixed investment, 1975–79*

[Percent change, fourth quarter to fourth quarter]

Component	1975	1976	1977	1978	1979 [1]
Nonresidential fixed investment	−9.9	9.6	7.5	10.5	1.7
Structures	−7.2	3.2	4.4	16.0	6.0
Producers' durable equipment	−11.2	12.7	8.8	8.1	−.2
Autos, trucks, and buses	2.9	22.6	20.3	8.0	−23.0
Other	−14.8	9.7	4.8	8.1	8.9

[1] Preliminary.

Source: Department of Commerce, Bureau of Economic Analysis.

Over the 4 quarters of last year, growth of real business fixed investment fell to 1.7 percent, compared with 10.5 percent in the previous 4 quarters. Last year's slowdown in the rise of business fixed investment was partly caused by the gradual increase in excess capacity and the squeeze on profit margins that accompanied the reduced pace of economic expansion. Purchases of cars and trucks declined sharply. Excluding the vehicle component, the growth of business investment in equipment during the past 4 quarters was 8.9 percent, compared with 8.1 percent in 1978.

Investment in structures was curtailed in the first quarter because of adverse weather, but it recovered in the second quarter and increased somewhat further in the second half. Growth during 1979 was 6 percent in real terms, well below the increase in 1978.

INVENTORY ACCUMULATION

Inventory investment in 1972 dollars was just under 1 percent of real GNP in the first quarter of 1979, about the same ratio as in the preceding 2 years. In the second quarter the drop in auto sales led to marked increases in stocks of large cars, trucks, and recreational vehicles; inventories of small cars declined, however. Involuntary accumulation occurred in other industries also, but in moderate amounts. The ratio of real inventories to final sales rose in the first half of the year but declined in the second half. Auto stocks were reduced in the late summer, and other industries adjusted production to avoid undesired increases in inventories.

Because cautious inventory policies continued in 1979, the cyclical imbalances that often occur during economic expansion have been avoided (Chart 2). As a consequence the slower pace of final sales did not lead to the magnified reduction in output that would have occurred if inventory liquidation had been extensive.

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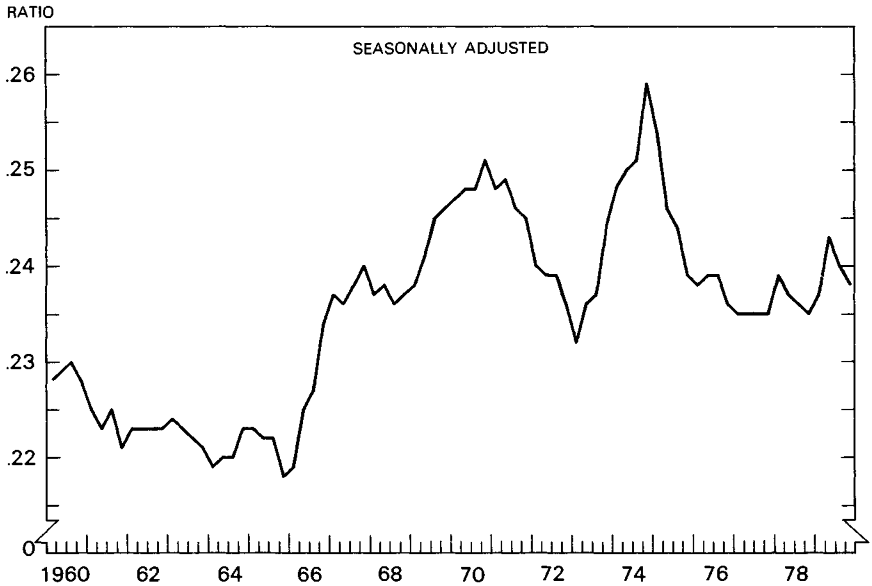
Chart 2

Real Inventory/Sales Ratio, Nonfarm Business



NOTE: RATIO OF REAL INVENTORIES AT END OF QUARTER TO ANNUAL RATE OF REAL FINAL SALES FOR QUARTER.
SOURCE: DEPARTMENT OF COMMERCE.

THE FOREIGN SECTOR

The volume of U.S. merchandise exports began to grow rapidly in the first half of 1978 after several years of near stagnation, and this rapid growth continued through 1979. Over the 4 quarters of last year the volume of merchandise exports is estimated to have risen by about 12 percent.

Although more rapid economic growth abroad helped boost U.S. exports, the most important factor accounting for this surge in foreign sales was the depreciation of the dollar during late 1977 and 1978. Depreciation of the dollar makes U.S. goods more competitive abroad by lowering their prices in foreign currency. Since trade flows respond to changes in relative prices only after a considerable lag, export volumes continued to be affected throughout 1979 by the depreciation that had occurred earlier.

Growth in agricultural exports to a record level also contributed to the rising volume of merchandise exported during 1979, particularly in the second half. A crop shortfall in the Soviet Union resulted in a significant increase in grain exports and higher domestic grain prices. The price rise was moderated, however, by farmer-held reserves and excellent domestic crops of corn, wheat, cotton, and soybeans. In January 1980 the President announced a suspension of agricultural exports to the Soviet Union. At the same time the President took steps to channel the 17 million metric tons of grain exports which had been interrupted by this action into the Nation's grain reserves.

The volume of merchandise imports, which had grown strongly during 1978, is estimated to have increased by less than 3 percent last year. Earlier depreciation of the dollar, weak growth of domestic demand, and reduced energy consumption in the United States were all contributing factors.

The deficit on merchandise trade narrowed during 1978 from a $48-billion annual rate in the first quarter to about $24 billion in the fourth. This improving trend did not continue in 1979 because of the rise in oil prices. In the fourth quarter of 1979 payments for imported oil were about $30 billion higher (at an annual rate) than a year earlier, even though the volume of oil imports was lower. Net gains in other components of merchandise trade were strong, but they did not quite offset this rise in oil payments.

The current account position of the United States, after posting deficits for 7 consecutive quarters, improved sharply to show a small surplus in the fourth quarter of 1978. For the year 1979 the current account may have been in near balance, compared with a deficit of $13.5 billion in 1978. This improvement was greater than the year-over-year decline in the merchandise trade deficit because the surplus on service transactions, particularly net investment earnings, rose substantially. Overseas earnings were an estimated $9 billion larger in 1979 than in 1978. Revival of growth abroad, exceptionally strong earnings by U.S. oil companies on their foreign operations, and the increase in the dollar value of foreign currency earnings due to the depreciation of the dollar all contributed to this rise.

Net exports, as measured in the national income and product accounts, rose about $8 billion in 1972 dollars over the 4 quarters of 1979.

GOVERNMENT PURCHASES OF GOODS AND SERVICES

Federal purchases of goods and services, measured in constant dollars, rose by slightly more than 1 percent over the 4 quarters of 1979. In real terms Federal purchases declined in 1978, and their level at the end of 1979 was still somewhat below the figure posted 2 years earlier. Most of the 1979 increase reflected purchases for defense. In current dollars, defense purchases increased by 13 percent over the 4 quarters of 1979.

The real value of State and local purchases fell in the first quarter of last year because public construction was curtailed by harsh winter weather in the Midwest and along the Atlantic Coast. These purchases recovered somewhat in the second and third quarters of 1979; but over the 4 quarters of the year they declined slightly compared with a 4-percent rise in 1978. This turnaround partly reflects the ending of the 1977–78 step-up of Federal assistance. Grants-in-aid from the Federal Government rose moderately during 1979, after a large increase in 1978. The aggregate operating account of all State and local governments swung from a small surplus at the end of 1978 to a small deficit by the close of 1979. Receipts grew more slowly than expenditures, partly because the slowdown in economic expansion limited the rise of taxable incomes.

LABOR MARKET DEVELOPMENTS

Employment growth remained strong in 1979, although well below the substantial gains of recent years. Despite a continued fairly rapid expansion of the labor force, amounting to 2.2 percent during the 4 quarters of 1979, the overall unemployment rate remained within a fairly narrow range of 5.7 to 5.9 percent. The unemployment rates for most major population groups were also relatively stable throughout 1979 (Table 10). The proportion of the working-age population that was employed rose slightly last year.

Women contributed most to the growth of the labor force. The participation rate of adult women rose to a new high of 51.0 percent,

TABLE 10.—*Labor market developments, 1976–79*

Component	1976 IV	1977 IV	1978 IV	1979 IV
	Percent change from year earlier [1]			
Increase in civilian employment, total	3.4	4.4	3.6	2.1
Males 20 years and over	2.6	3.3	2.5	1.3
Females 20 years and over	4.6	5.2	5.4	3.9
Both sexes 16–19 years	3.0	8.0	2.6	−.9
White	3.3	4.3	3.2	2.0
Black and other	4.2	4.7	7.0	2.9
	Percent [2]			
Unemployment rate, total [3]	7.7	6.6	5.8	5.9
Males 20 years and over	6.0	4.7	4.0	4.2
Females 20 years and over	7.4	6.7	5.7	5.7
Both sexes 16–19 years	19.0	16.5	16.2	16.1
White	7.0	5.7	5.0	5.1
Black and other	13.2	13.2	11.5	11.2
Participation rate, total [4]	61.8	62.6	63.5	63.8
Males 20 years and over	79.9	79.9	79.8	79.6
Females 20 years and over	47.3	48.6	50.1	51.0
Both sexes 16–19 years	54.4	56.9	58.5	58.2
White	62.1	62.9	63.7	64.1
Black and other	59.6	60.7	61.9	61.8

[1] Changes for 1978 IV 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.
[2] Seasonally adjusted.
[3] Unemployment as percent of civilian labor force.
[4] Civilian labor force as percent of civilian noninstitutional population.

Source: Department of Labor, Bureau of Labor Statistics.

up almost a full percentage point over 1978 and about 4 percentage points over 1976. The participation rates of teenagers and adult men declined slightly last year.

The increase in employment among adult women accounted for about 70 percent of the rise in total civilian employment; the percentage increase was about three times that of adult males. Blacks and members of other racial minorities accounted for over 15 percent of the employment increase. Employment for these groups grew one and a half times faster than that for whites.

Nonfarm payroll employment increased 2.4 million from the fourth quarter of 1978 to the fourth quarter of 1979, a smaller gain than the 4-million rise in 1978. This increase was concentrated in nonmanufacturing industries; in particular, mining, construction, and services showed large gains. In the manufacturing sector, most nondurable goods industries continued to show little or no growth in employment. Employment declined in the apparel, leather products, and tobacco industries. Some producers of durable goods, notably manufacturers of electrical and electronic machinery, showed strong gains in employment.

After a fairly steady drop since mid-1975, the number of persons reporting layoffs as the reason for their unemployment leveled off in the first half of last year and rose in the second. The number of unemployed persons who were new entrants or reentrants into the labor force fell for the second consecutive year after having risen quite rapidly through 1977.

ECONOMIC POLICY IN 1979

The principal objective of economic policy in 1979 was to stem accelerating inflation. Restraining aggregate demand with fiscal and monetary policies was a key element of the government's anti-inflation program. It was recognized, however, that monetary and fiscal restraint could not do the job alone. As discussed earlier, the voluntary standards for prices and wages helped to hold down the rise of prices in the broad industrial and service sectors of the economy and to maintain wage restraint.

FISCAL POLICY

Federal outlays for fiscal 1979 were $494 billion, an increase of 9.5 percent over fiscal 1978 but well below the 12.1 percent average annual rate of increase from fiscal 1973 through 1978.

The Revenue Act of 1978 provided for tax relief amounting to $18.9 billion in calendar 1979, with a $14.1-billion reduction 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. An employment tax credit of $2.5 billion was allowed to expire. The tax package offset the increase in individual income tax rates caused by inflation, and it also encouraged investment in the new and modern plant and equipment needed to improve productivity.

These tax and spending programs yielded a unified budget deficit of $28 billion in fiscal 1979, $21 billion less than the fiscal 1978 level. The deficit was $10 billion less than had been originally forecast. Outlays were close to original projections, while receipts were $10 billion greater than expected. The excess of actual over projected receipts reflected not only the impact of inflation, but also substantial unanticipated overwithholding.

The High-Employment Budget

Changes in Federal expenditures, receipts, and the deficit are often misleading indicators of fiscal policy because they reflect cyclical changes in economic activity as well as changes in fiscal policy. This problem does not arise with the high-employment budget. The adjustments made to obtain the high-employment budget remove from

TABLE 11.—*Actual and high-employment Federal receipts and expenditures, national income and product accounts, calendar years, 1973–79*

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

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	255.1	264.9	−9.8	−0.8
1974	288.6	299.3	−10.7	−.8	307.0	297.7	9.3	.6
1975	286.2	356.8	−70.6	−4.6	327.7	345.9	−18.2	−1.1
1976	331.4	385.0	−53.6	−3.1	361.5	374.9	−13.4	−.7
1977	375.4	421.7	−46.3	−2.4	395.0	413.6	−18.6	−1.0
1978	432.1	459.8	−27.7	−1.3	444.2	455.7	−11.6	−.5
1979 [2] [3]	498.3	508.0	−9.7	−.4	515.0	505.2	9.8	.4
1977:								
III	375.8	429.4	−53.6	−2.8	391.6	422.1	−30.5	−1.5
IV	388.2	441.8	−53.6	−2.7	404.9	434.9	−30.0	−1.5
1978:								
I	397.8	447.3	−49.4	−2.5	417.2	442.1	−24.9	−1.2
II	424.8	449.4	−24.6	−1.2	437.1	445.2	−8.0	−.4
III	442.1	462.6	−20.4	−.9	452.1	458.9	−6.8	−.3
IV	463.5	479.7	−16.3	−.7	470.2	476.8	−6.6	−.3
1979:								
I [2]	475.5	486.8	−11.3	−.5	483.8	484.1	−.4	([4])
II [2]	486.3	492.9	−6.6	−.3	504.5	490.3	14.3	.6
III [2]	505.3	516.1	−10.8	−.5	524.8	513.3	11.5	.5
IV [2]					546.9	533.1	13.8	.5

[1] High-employment surplus or deficit as percent of high-employment gross national product.
[2] Includes proposed tax increases involving foreign tax credits which are retroactive to 1979 and not included in data published by the Bureau of Economic Analysis.
[3] Preliminary.
[4] Less than 0.05 percent.

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.

actual receipts and expenditures the effects of cyclical 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. It is therefore a better, although still imperfect, measure of discretionary fiscal policy.

Estimates of high-employment budget expenditures and receipts, as measured in the national income and product accounts, indicate a substantial shift of fiscal policy toward restraint over the past year—from a deficit of $7 billion, annual rate, in the second half of 1978 to a surplus of about $13 billion in the second half of 1979 (Table 11). The procedure for estimating the high-employment budget is discussed in Supplement I to this chapter.

Fiscal and Oil Price Restraint

The shift of the high-employment budget into surplus was less important in restraining aggregate demand in 1979 than were the rising prices of oil and refined petroleum products. To help assess the effects on aggregate demand of these two factors taken together, the Council of Economic Advisers has calculated the combined restraint from fiscal policy and price developments in the oil sector. These estimates are at best an approximate measure, but they indicate the unexpectedly severe restraint placed on aggregate demand in 1979. Over the 4 quarters of the year, fiscal and oil price restraint increased by about $60 billion, or about 2½ percent of GNP. (A more detailed discussion of the procedures used by the Council to measure the restraint from higher oil prices is provided in Supplement II to this chapter.)

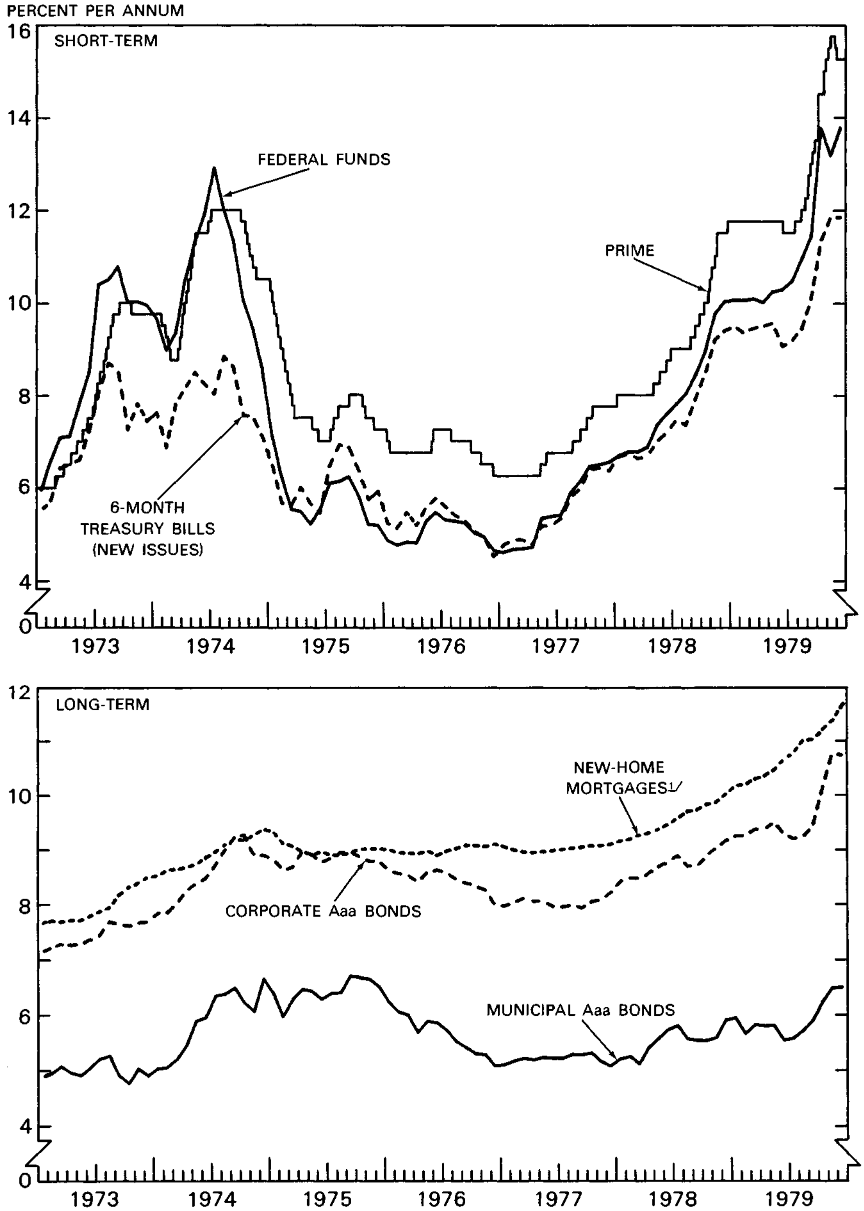
MONETARY POLICY AND FINANCIAL MARKETS

The principal objective of monetary policy in 1979 was to help check accelerating inflation by limiting the growth of money and credit. In an environment of sharply expanding demand for money and credit, implementation of that policy required a pronounced rise in interest rates. The pattern of increases was uneven: rates fell slightly on balance in the first half but advanced rapidly thereafter (Chart 3).

In submitting to the Congress the annual monetary policy report required under the Full Employment and Balanced Growth Act of 1978, the Federal Reserve set forth its objectives with regard to increases in the monetary and credit aggregates during 1979. For the period from the fourth quarter of 1978 to the fourth quarter of 1979 the Federal Reserve established a target range of 1½ to 4½ percent for M_1 (demand deposits and currency). The range for M_2 (M_1 plus time and savings deposits other than negotiable certificates of depos-

Chart 3

Selected Interest Rates and Bond Yields



1/ EFFECTIVE RATE ON CONVENTIONAL MORTGAGES IN THE PRIMARY MARKET.

SOURCES: DEPARTMENT OF THE TREASURY, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, FEDERAL HOME LOAN BANK BOARD, AND MOODY'S INVESTORS SERVICE.

it at large commercial banks) was set at 5 to 8 percent. For M_3 (M_2 plus time and savings deposits at savings and loan associations, mutual savings banks, and credit unions) a range of 6 to 9 percent was established. Commercial bank credit was projected to increase between 7½ percent and 10½ percent during the year. In setting the initial M_1 range, the Federal Reserve staff estimated that the introduction of automatic transfer services (ATS) and negotiable order of withdrawal (NOW) accounts in New York State (discussed below) would reduce growth in M_1 by about 3 percentage points over the course of 1979. In October the target for M_1 was revised upward to a range of 3 to 6 percent because ATS and NOW accounts had grown much more slowly than anticipated.

In the first quarter of 1979, M_1 actually declined, while M_2 rose at an annual rate of about 2 percent. This leveling off in the monetary aggregates reflected both slower economic growth and shifts of funds from bank deposits to other financial assets because of the higher interest rates established late in 1978. Balances in money market mutual funds jumped from $11 billion in December to $18 billion in March, and households substantially stepped up their purchases of government securities. The contraction in M_1 was also due to the rapid growth in ATS and NOW accounts during the first quarter.

The decline in real GNP in the second quarter, combined with uncertainties about the energy situation, led to a widespread belief that an economic downturn had begun. In this environment the Federal Reserve kept monetary policy approximately unchanged. The 9½ percent discount rate established in November 1978 was maintained until July; the Federal funds rate was raised 25 basis points to 10¼ percent in May and then held at that level until July.

Growth of the monetary aggregates surged in the second quarter despite the decline in real GNP. From March to June both M_1 and M_2 increased at an annual rate of almost 12 percent. This pickup in money growth was partly attributable to special factors. Large increases in demand balances occurred just before the April and June tax dates. In addition, after mid-March thrift institutions were no longer permitted to pay a higher interest rate than banks on the popular 6-month money market certificates. As a result commercial banks captured half of the net increase in MMCs in the second quarter, compared to one-third in the first quarter, and this raised the growth rate of M_2.

In July monetary growth continued at a rapid pace, and market interest rates began to move up. At first the Federal Reserve kept its target for the Federal funds rate unchanged, but it soon became apparent that maintenance of the funds rate was resulting in a rapid expansion in bank reserves and the monetary aggregates. Although the expansion of the monetary aggregates slowed considerably in August, rapid growth of money and credit resumed in September, when economic statistics were indicating a rebound of activity in the third quarter and the continuation of a very high rate of inflation.

During the third quarter the Federal Reserve took steps that led to higher interest rates. The discount rate was moved up in several stages to 11 percent in mid-September, and the Federal funds rate was raised to 11½ percent. From the end of June to mid-September most short-term rates had climbed by almost 200 basis points. Nevertheless both M_1 and M_2 were growing rapidly, and it was clear that the Federal Reserve's 1979 target ranges would be breached if such high growth rates continued.

During the first 9 months of last year, growth in bank credit was well above earlier projections and consistently outstripped the expansion in bank deposits. To satisfy expanding demands for credit, banks substantially increased their reliance on nondeposit sources of funds, which rose from $85 billion in December 1978 to about $130 billion in September.

It was—and still is—difficult to assess the degree of restraint exerted by monetary policy in the first 3 quarters of 1979. The spread of active liability management among banks, the advances in cash management techniques used by firms, and the growing financial sophistication of households have produced a marked shift in the normal relationships between economic activity and the monetary aggregates. The new MMCs have played a particularly important role in cushioning the effects of monetary restraint on housing. Moreover the effects of interest rates on aggregate demand may also have changed because of heightened inflationary expectations. In any event, by September the growth of money and credit, developments in the real economy, and signs in commodity markets of an apparent worsening of inflationary expectations were giving unambiguous signals that more monetary restraint was needed. Pressures on the dollar reinforced those signals.

Monetary Policy in the Fourth Quarter of 1979

On October 6 the Federal Reserve announced a major shift in its technique for implementing monetary policy. Previously it had attempted to control the expansion of the monetary aggregates by adopting a target for the Federal funds rate. Under the new approach the object of open market operations would be to supply the volume of bank reserves consistent with desired rates of monetary growth. Much greater variation in the Federal funds rate was to be permitted.

The Federal Reserve also raised the discount rate to 12 percent and established a marginal reserve requirement of 8 percent on increases in the total of managed liabilities of member banks, Edge Act corporations, and U.S. agencies and branches of foreign banks. Managed liabilities subject to this requirement include large-denomination time deposits with maturities of less than a year, Eurodollar borrowings, repurchase agreements, and borrowings of Federal funds from lenders not subject to the requirement. This added reserve requirement raised the effective cost to banks of obtaining funds through these sources.

Interest rates climbed to record levels in the first few weeks after October 6 but then declined through late November. In December rates rose again but remained below October peaks. On average, short-term rates during the final month of 1979 were about 1¾ percentage points above September levels, while long-term rates had risen about 1 percentage point. With the prime bank loan rate at 15¼ percent at the end of December, businesses faced short-term borrowing costs that greatly exceeded the rate of inflation in the industrial sector, about 9 percent for producer prices of finished goods other than food and energy.

Money and credit growth decreased markedly in the wake of the Federal Reserve's action. During the final quarter of last year M_1 rose at an annual rate of only 3.1 percent, while growth of M_2 dropped to a 7.1 percent rate. Consequently, growth of M_1 and M_3 fell within the target ranges established for 1979, while the increase in M_2 was just above the upper end of its range.

Thrift Institution Deposits and Mortgage Credit

Although short-term interest rates nearly doubled from December 1977 to December 1979, both thrift institution deposits and the flow of mortgage credit proved more resilient than in earlier periods of high rates.

During past periods of high interest rates, depositors had shifted their funds from accounts at banks and thrift institutions, where deposit ceilings were fixed by regulation, to market instruments giving a higher rate of return. The introduction in June 1978 of 6-month money market certificates enabled both thrift institutions and banks to compete more effectively for funds. Commercial banks are permitted to pay an interest rate on these certificates, which require a $10,000 minimum deposit, equal to the discount rate on 6-month Treasury bills. Initially thrift institutions were able to pay one-fourth of 1 percent more, but in March 1979 that differential was eliminated whenever the 6-month bill rate was 9 percent or higher.

Thrift institutions captured 70 percent of the net increase in MMC balances from June 1978 to March 1979, and 50 percent of the growth in MMCs over the last 3 quarters of 1979. By the end of 1979 MMCs accounted for about one-fourth of all deposits at thrift institutions.

Certificates of deposit sold in amounts of $100,000 or more, which are not subject to rate ceilings, were also important in maintaining thrift flows during 1979. Those large-denomination certificates accounted for about one-third of the increase in deposits with savings and loan associations last year, compared to only 12 percent in 1978. Regulations were issued in December authorizing federally chartered savings and loan associations to tap the Euromarkets by issuing large-denomination certificates to foreign investors.

In July 1979 a floating ceiling was established for deposits with a maturity of 4 years or more. Thrift institutions were permitted to pay an interest rate 1 percentage point below the yield on 4-year Treasury issues, and the ceiling for commercial banks was set 25 basis points below that for thrift institutions. The 4-year certificates did not play an important role during 1979; short-term rates remained well above medium-term Treasury yields throughout the latter part of the year, and the 4-year certificates were less attractive to depositors than MMCs and money market mutual funds. Minimum deposit requirements were also eliminated in July for all deposit categories except MMCs, and penalties for early withdrawal were reduced.

On January 1, 1980, the floating ceiling was extended to cover deposits with a maturity of 2½ years or more. Under these new regulations thrift institutions can pay an interest rate on such accounts that is one-half of a percentage point less than the 2½-year Treasury yield, while the ceiling for banks is 25 basis points less than that for thrift institutions. (Floating ceilings apply only when they exceed the previously established fixed ceilings for a given class of deposits.)

Secondary mortgage markets, which have expanded rapidly in recent years, also helped sustain the flow of mortgage credit during 1979. The Government National Mortgage Association (GNMA) guarantees mortgage-backed securities issued against pools of FHA and VA mortgages. Only $5 billion of such securities were issued during 1974, when the GNMA market was just developing. By 1979 more than two-thirds of all FHA and VA mortgages were being packaged in pools guaranteed by GNMA, and new issues of these securities rose to almost $25 billion. The secondary market for conventional mortgages has also expanded in recent years. By making mortgages attractive to a wider group of investors, the development of secondary markets has further reduced the degree to which the availability of mortgage credit depends on the flow of deposits to thrift institutions.

Despite these developments the October 6 actions of the Federal Reserve caused a severe shock in the mortgage credit markets. Thrift institutions were confronted with greater uncertainty regarding their ability to attract funds. They also faced the prospect of sharp reductions in earnings because the cost of attracting funds had risen so much relative to revenues from their loan portfolios, which consist largely of loans made at lower rates of interest prevailing in earlier years. In the light of these uncertainties substantial numbers of thrift institutions stopped making new mortgage loan commitments altogether, and many others tightened their lending policies by raising required down payments or by lending only to long-standing depositors. Mortgage interest rates increased sharply in all States where usury ceilings were not binding. Where such ceilings prevented mortgage rates from rising, many mortgage lenders withdrew from the market.

Potential home buyers in late 1979 were therefore confronted with sharply higher costs of home financing and tighter nonprice terms. Some were unwilling to pay the higher rates, others could not make the higher down payment required, and still others found it difficult to qualify for loans because of the higher monthly payments. With both higher costs and reduced availability of credit driving buyers out of the market, housing starts declined substantially in October and in November before leveling off in December.

What the developments in late 1979 imply for the mortgage market in 1980 cannot yet be fully evaluated. Initially the market may have overreacted to uncertainties prevailing in October and November. Since late October, interest rates on market securities have declined, as have rates on new mortgage loan commitments in some regions of the country. Late last year legislation was enacted that permanently exempted FHA and VA loans from State usury limits and temporarily exempted other residential mortgage lending from these ceilings. This should bolster home sales and construction in States where usury limits had been binding. Nevertheless the outlook for housing construction in early 1980 has been dimmed by conditions prevailing in mortgage markets late in 1979. This weakness in housing makes it more likely that the economy will slide into recession this year.

ATS and NOW Accounts

Two regulatory changes introduced late in 1978 had an important bearing on the financial services offered to individuals by banks in 1979. On November 1, 1978, commercial banks were authorized to offer customers automatic transfer services whereby funds are shifted automatically from savings to demand deposit accounts to cover checks. With ATS the customer need not keep money in his checking account, and his funds can earn interest at the passbook rate in his savings account. In the same month, banks and thrift institutions in New York State were authorized to offer NOW accounts. Negotiable orders of withdrawal may be used like checks to make current payments, but they are drawn against an interest-bearing savings account. NOW accounts have been available in all six New England States for several years.

Both ATS and NOW accounts, as well as credit union share drafts, provide checking privileges on a deposit that earns interest. Since all of these accounts are classified as savings deposits, shifts from regular demand deposits to these accounts reduce the growth of M_1.

In the 5 months through March 1979 the increase in ATS accounts and in NOW accounts at New York banks totaled more than $6 billion. In mid-April, however, a U.S. Court of Appeals ruled that ATS and similar accounts, such as credit union share drafts, were illegal and could not be maintained after January 1, 1980, unless the Congress enacted appropriate legislation. After this ruling the spread of ATS was curtailed sharply.

In December the Congress enacted legislation extending authority for credit union share drafts and bank ATS systems through March 31, 1980. The Senate bill had also included provisions to phase out regulatory interest ceilings on bank and thrift institution deposits over a period of 10 years and to give federally chartered savings and loan associations and credit unions greater consumer and commercial lending authority. Decision on these steps was deferred until 1980. In May the President had sent a message to the Congress strongly supporting such measures, which would enable small savers to earn a market rate of return on their deposits and give thrift institutions the flexibility they need to pay market interest rates and yet maintain adequate earnings. The Administration also proposed granting thrift institutions authority to offer variable rate mortgages. Regulations were issued in July by the Federal Home Loan Bank Board permitting all federally chartered savings and loan associations to issue variable rate mortgages. Federally chartered associations in California and some State-chartered associations were already offering such mortgages before July.

CREDIT FLOWS

Borrowing by the private nonfinancial sector of the economy (including State and local governments) continued to expand during the first 3 quarters of 1979, although somewhat less rapidly than private GNP. The increase in private credit flows was about offset by a reduction in Federal borrowing that reflected the decline in the Federal budget deficit. The aggregate flow of credit to all nonfinancial borrowers thus remained close to its 1978 pace.

The increase in private borrowing stemmed from the business sector. The annual rate of borrowing by nonfinancial businesses during the first 3 quarters of 1979 was one-fourth larger than in 1978. Although the increase cut across most types of borrowing by business, commercial bank loans accounted for most of the acceleration. The strength of business credit demands reflected the slow growth of internal funds relative to capital spending. For nonfinancial corporations the ratio of external funds raised to expenditures for fixed capital and inventories increased from 48 percent in 1978 to 55 percent during 1979 but remained well below the peak rate of 61 percent recorded in 1974.

Borrowing by households over the first 3 quarters of 1979 as a whole remained close to the 1978 pace, but the rate of borrowing tended to decline as the year went on. Growth in consumer installment credit subsided, and so did the volume of mortgage borrowing. The moderation of growth in installment credit derived primarily from the slower pace of auto sales after the first quarter. The slower expansion of household mortgage debt may have stemmed from higher mortgage interest rates and the somewhat more limited availability of mortgage credit. During 1978 the increase in household mortgage debt amounted to 113 percent of household expenditures for new residential construction. By the third quarter of 1979 the ratio was down to 107 percent.

In earlier periods of economic expansion, rising interest rates generally led to sharp changes in the sources of credit supplied to borrowers. Constraints on the ability of depository institutions to attract and hold deposits resulted in a marked decline in the share of credit supplied through financial intermediaries. Correspondingly a higher share was supplied directly to credit markets by households, businesses, and State and local governments. As a result of the innovations in financial markets discussed earlier, this shift in sources of credit did not occur in the first 3 quarters of 1979, when the proportion of funds advanced through private financial intermediaries was actually somewhat higher than in 1978. During the first half of the year, the proportion advanced directly by the public also increased while supplies from foreign sources declined, reflecting substantial intervention sales of dollars by foreign central banks as the U.S. currency strengthened in exchange markets.

The Consumer Debt Burden

The ratio of consumer debt repayments to disposable income has risen steadily in recent years, reaching a record peak of 18 percent in the third quarter of 1979. The increase in this ratio has created concern that consumers are becoming overextended and has also raised fears that a high repayment burden might act as a strong constraint on consumer spending during an economic downturn. Repayments were equal to 17 percent of disposable income at the top of the last cycle in 1972–73.

The increase in the debt repayment burden from the last cyclical peak to the present is completely accounted for, however, by an increase in monthly payments on revolving credit lines. The revolving credit figures cover all charges and repayments on credit cards issued by banks, gasoline companies, and retail stores, including transactions of consumers who use credit cards only as a convenience and pay their outstanding balances in full each month. Bank credit cards accounted for most of the increase in revolving credit charges and repayments relative to income. While revolving credit repayments have risen rapidly relative to income in the past 6 years, the ratio of debt outstanding on revolving credit lines to income has risen only slightly. Most of the recorded increase in the debt repayment burden for this category of consumer credit can thus be attributed to a greater use of credit cards, particularly bank cards, for convenience only.

The monthly repayment burden on fixed-term consumer loans has not risen over this period. On the contrary, during the last half of 1979 such repayments, which include those on auto loans, were actually somewhat lower in relation to income than they were in 1972–73. Debt outstanding on these loans, however, has increased substantially as a proportion of after-tax income. Consumers were able to increase their debt without raising required repayments as a share of income, because average maturities have lengthened considerably. The average repayment period on new car loans, for example, has increased from almost 3 years in 1974 to about 3 years and 9 months in the third quarter of 1979. Maturities on other fixed-term installment loans have also lengthened, reflecting the easier terms provided by most categories of lenders.

Consumer indebtedness from auto loans and other fixed-term installment credit declined substantially relative to disposable personal income during 1974 and 1975 and then increased rapidly in the upturn. Outstanding balances on revolving credit lines, however, have been a fairly constant proportion of after-tax income throughout the past decade. Last year net borrowing on revolving lines rose at about the same pace as disposable income, while net fixed-term borrowing dropped from about 2½ percent of disposable income in the fourth quarter of 1978 to less than 1½ percent in the final quarter of 1979.

Consumers are indeed more indebted today than they were at the peak of the past cycle, but their fixed-term repayments are actually somewhat lower compared to their disposable income than was the case in 1972–73. While the burden of repayments can be expected to restrain consumer spending as the economy heads into recession, the impact will probably be no greater than during the last downturn and might well be less.

SUMMING UP

Huge oil price increases dominated economic developments in 1979. Economic growth slowed much more than expected. The decline in inflation anticipated at the beginning of the year did not materialize; on the contrary, inflation increased sharply. The fact that the increase in inflation was confined largely to energy (and as measured in the CPI, to housing) was a distinct positive element in the economic record, but there is still a danger that last year's sharp rise of energy and housing prices may spill over into this year's wages and costs and thus become built into the underlying inflation rate. Fighting inflation must therefore remain the top priority of economic policy.

SUPPLEMENT I

Improvements in the Method for Estimating the High-Employment Budget

Beginning with the publication of the 1978 *Report*, the Council's approach in calculating the high-employment budget changed. In the method used earlier, high-employment receipts were determined as the product of real potential GNP, the price level, and estimates of income shares and effective tax rates at high employment. Comparisons of actual receipts—those collected at actual employment levels—with high-employment receipts often yielded an implausible elasticity of receipts with respect to the change in income between actual and potential GNP.

The source of the problem is that estimates of high-employment income shares and effective tax rates made with this approach do not reflect all of the structural characteristics of the tax system or the economy that are embodied in the short-term behavior of actual income shares and effective tax rates. These estimates are unlikely to incorporate such features because they rely completely on trends of income shares and effective tax rates. Hence estimates of actual and high-employment budgets can be inconsistent.

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The revised approach ensures consistency by basing the high-employment estimates on actual receipts and adding to these receipts the extra revenues that would be collected if the gap between actual and high-employment GNP were closed. Estimates of these additional revenues are based on the average historical behavior of income shares and marginal tax rates or tax elasticities over the business cycle. In this way the implied elasticity of receipts with respect to the change in income between actual and potential GNP is more consistent with past experience.

During 1979 the Council worked with other Federal agencies to improve the estimates of income shares, marginal tax rates, and tax elasticities used in this approach, integrating as fully as possible the Council's work on potential GNP. Cyclical adjustments of expenditures were made for the first time for several additional Federal expenditure programs, and separate cyclical adjustments were made for regular and extended unemployment insurance benefits.

Income Shares

The principal improvement last year to estimates of cyclically adjusted income shares was the joint estimation of equations explaining the shares of *all* major components of national income and the difference between national income and GNP. Because the equations were estimated jointly, the sum of the gaps between actual and high-employment values for income components equals the gap between actual GNP and its high-employment level. To facilitate the calculation of the difference between actual and high-employment tax bases for different revenue aggregates, national income was disaggregated into six components: wages and salaries, other forms of compensation, nonfarm proprietors' income, farm proprietors' income, corporate profits, and rent plus net interest.

Tax Elasticities

Efforts were made on several fronts in 1979 to improve estimates of the personal income tax elasticity. Time series analyses related personal tax receipts adjusted for changes in tax law to adjusted personal income (defined as wages and salaries, proprietors' income, rental income, dividends, and personal interest income). Cross-sectional analyses using a model from the Department of the Treasury's Office of Tax Analysis were also performed for several years in the 1970s. Inputs to this model included estimates of changes in the components of adjusted personal income that would occur in closing the gap between actual and potential GNP. The estimated number and type of additional income tax returns filed by the extra persons employed in closing the gap were also used by the model. These studies suggest that estimates of the personal tax elasticity obtained in moving between actual and potential GNP are particularly sensitive to assumptions about productivity, the income distribution, and the filing status of the extra employed persons. For the calculation shown in this *Report,* an elasticity of 1⅓ was used. It is recognized that this estimate is subject to a substantial margin of error.

The study of the marginal corporate tax rate used a time series analysis of the relationship of corporate profits tax receipts to the product of the statutory tax rate and a tax base adjusted for Federal Reserve profits, profits from foreign operations, and State and local taxes. The investment tax credit was also an explanatory factor in the analysis. While it is difficult to control accurately for the effects that changes in these factors exert on corporate tax revenues, most specifications suggested a marginal corporate tax rate near 40 percent in recent years.

During 1979, estimates of the additional contributions for social insurance brought about by closing the gap between actual and high employment were refined in several ways. Social insurance revenues were disaggregated into four subcategories: social security taxes, excluding those paid by the self-employed, and railroad retirement taxes; social security contributions by the self-employed; unemployment insurance taxes; and other taxes (including Federal employee retirement contributions, supplemental medical insurance premiums, veterans' life insurance payments, and workmen's compensation). This disaggregation was particularly important because the relative weight of social security taxes in the total has increased materially since the 1950s.

Estimates were made of the cyclical sensitivity of tax bases for each category of social insurance receipts (except the tax base of other contributions, which was assumed to be insensitive to cyclical influences). Separate tax elasticities were then applied to each of these bases. The tax elasticities were calculated as a weighted average of an employment elasticity (assumed to be 1.0) and an average wage elasticity. For example, the average wage elasticity for social security taxes (except those paid by the self-employed) and railroad retirement taxes has increased during the 1970s from an estimated 0.57 in 1971 to 0.78 in 1979 because of the increase in the taxable earnings base relative to average earnings. The weights are based on the proportion of the difference between actual and high-employment wages and salaries attributable to the change in employment, and the proportion attributable to the change in average wages per worker, in moving from actual to potential GNP.

Estimates of the elasticity of indirect business taxes with respect to changes in real GNP were revised last year on the basis of studies that analyzed the behavior of indirect business taxes since the 1950s, after allowing for changes in tax law. According to these studies the elasticity of total indirect business taxes with respect to real GNP is less than 1, since most of the taxes are on products for which demand is inelastic in relation to income. This elasticity has declined from a peak of 0.9 in the mid-1960s to nearly 0.6 in recent years as a consequence of the repeal of several cyclically sensitive excise taxes, particularly the automobile excise tax.

Expenditure Adjustments

Separate estimates were made of the cyclical sensitivity of regular and extended unemployment insurance benefits. The estimates suggest that expenditures for regular unemployment insurance benefits currently rise about \$2.5 billion for each 1 percentage point increase in the unemployment rate. The cost of extended benefits is estimated to rise smoothly as a percentage of the cost of regular benefits when the actual unemployment rate rises to about 7½ percent from the benchmark unemployment rate of 5.1 percent. This rise occurs as extended benefits payments are triggered in an increasing number of States. Near an unemployment rate of 7½ percent, the cost of extended benefits jumps sharply, because these benefits are triggered for the Nation as a whole.

During 1979, cyclical adjustments were made for six additional Federal expenditure programs: food stamps, aid to families with dependent children, old age and survivors' insurance, disability insurance, medicaid, and veterans' readjustment benefits (the GI bill). These adjustments were based on a survey of research on these programs, most of it conducted within the Federal Government during the last decade. The increase in expenditures for a 1 percentage point rise in the unemployment rate is about 1 percent of total expenditures on these programs, or \$1.4 billion at 1979 expenditure levels. The total cyclical adjustment for these programs was \$0.9 billion in 1979.

Further improvements are planned in the estimates of income shares and tax elasticities used in calculating the high-employment budget. During 1980 these refinements and historical estimates of the high-employment budget will be reported in the *Survey of Current Business*; and the Bureau of Economic Analysis of the Department of Commerce will then regularly publish updates and revisions of these historical estimates.

SUPPLEMENT II

Measuring the Restraint from Oil Price Increases

In analyzing the economic consequences of higher oil prices the Council has found it useful to estimate the magnitude of the "oil price drag," which has effects on real output and employment that are analogous to those of fiscal drag.

Oil price increases affect the broad performance of the economy in two principal ways. First, the overall price level is raised because of the higher prices of petroleum products and the higher costs of products incorporating petroleum. Second, income is transferred from users of petroleum to foreign and domestic producers and also to the government through increased tax collections.

The effect of higher oil prices on users of petroleum is similar to the impact of a higher excise tax. Both raise prices directly, reduce real purchasing power, and thus depress aggregate demand. But when oil prices rise, oil producers receive higher net revenues and expand their demands for goods and services.

The calculations of oil price drag are based on average prices for imported and domestically produced oil and on estimated changes in refining and marketing margins. The gross impact of a price increase for imported or domestic crude oil used in the United States is calculated by multiplying changes in average oil prices by the quantities of oil from each source, after allowing for the reduction in oil consumption induced by higher prices. To estimate the effect of higher margins, price increases at each stage in the processing and distribution of refined products are taken into account, along with the quantity of each product used. Where crude oil or refined products are used as inputs in producing other goods, the increased costs are assumed to be passed through to prices on a dollar-for-dollar basis.

In calculating the drag attributable to higher crude oil prices and increased refining and marketing margins, only the increase that exceeds the general rate of inflation is taken into account. Estimates for 1980 assume no further rise in real prices of imported oil above the level prevailing in early 1980 and no further widening of real margins.

Gross oil price drag is defined simply as the gross value of changes in the cost that users of oil and refined products must pay. To calculate a net oil price drag, estimates of respending on American products from the increased revenues of OPEC countries and those of domestic oil producers are subtracted. Increased exports of American products resulting from higher world oil prices are estimated to equal 20 percent of the increase in the U.S. oil bill after 1 year and 50 percent after 2 years. It is assumed that 30 percent of the incremental after-tax revenue of domestic sellers of oil is respent for goods and services after 1 year and 75 percent after 2 years.

According to the Council's estimates, gross oil drag increased over the 4 quarters of 1979 by $59 billion and is expected to rise by an additional $41 billion over the 4 quarters of this year. Over the same two 4-quarter periods the net oil drag is expected to increase by just under $53 and $24 billion respectively. By the end of 1980 the net drag will have increased by an amount approximately equal to 3 percent of GNP.